

Customer will need to provide core for overhaul in the event that our supplier does not have cores available to overhaul

#### REPLACEMENT CARBURETORS FROM MARVEL-SCHEBLER

Carburetor exchange program covers all popular Marvel Schebler/Facet general aviation carburetors. The carburetors are overhauled to the strictest industry standards and carry a full 6 month warranty (from date of installation). Most carburetors are available from stock or within a week and are furnished complete with

gaskets.

Due to the various configurations of carburetor installations, we suggest you retain your carburetor core until receiving the exchange unit. This will enable you to transfer all external fittings and installation hardware to the new exchange unit. All cores being returned for credit shall be, as removed from the engine, complete and not disassembled. A reduction in core credit is charged for missing or damaged parts.

- **Precision Carburetors**
- · TCM Fuel Systems
- Flow Dividers
- · Fast Turn Time on Overhauls
- Unmatched Quality
  100% calibration of fuel pumps and servos.
- Precision Fuel Servos
- · Romec Fuel Pumps
- · FAA/PMA Approved Replacement Parts
- · Carburetor Overhaul Quick Kits
- · Highly skilled/trained technicians

#### LYCOMING CARBURETORS

Carb. Model	Lycoming P/N	Vendor P/N	Our P/N	Price
MA-3A	61547	10-3103-1	10-03103-1	
MA-4SPA	69250	10-3678-12	08-06325	
MA-4SPA	72394	10-3678-32	08-06326	
MA-4-5	71098	10-3878	08-06372	
MA-4-5	71710	10-4164-1	08-06373	
MA-4-5	66458	10-2827	07-01405	
MA-4-5	66869	10-3323	07-01411	
MA-3SPA	62830	10-3565-1	07-01413	
MA-4-5	69540	10-3634	07-01415	
MA-4-5	71546	10-3856-1	07-01417	
MA-4-5	71685	10-3856-12	07-01418	
MA-4-5AA	71684	10-4025-12	07-01421	
MA-6AA	72407	10-4218-1	07-01424	
MA-4-5	72386	10-4329	07-01426	
MA-4-5	74121	10-4404-1	08-06376	
MA-6AA	73899	10-4438-1	07-01428	
MA-4-5AA	73257	10-4495	07-01429	
MA-5	20671	10-4865	07-01430	
HA-6	LW-15957	10-5219	08-06394	
MA-3PA	LW-16073	10-5220	08-06395	
MA-3PA		10-5220-E	07-01464	
HA-6	LW-16066	10-5221	07-01465	
HA-6	LW-15958	10-5224	08-06396	
MA-4SPA	77279	10-4910	08-06381	

Carb. Model	Lycoming P/N	Vendor P/N	Our P/N	Price
MA-4SPA	LW-16559	10-4910-1	08-06382	
MA-3A	77585	10-4953	08-06383	
MA-6AA	77888	10-4975	07-01434	
MA-3PA	77939	10-4978-1	07-01435	
MA-4-5	LW-10064	10-5034	08-06385	
MA-4-5	LW-10196	10-5042	07-01438	
MA-3PA	LW-10619	10-5050	08-06386	
MA-4-5	LW-10540	10-5054	08-06387	
MA-3PA	LW-13133	10-5126	08-06388	
HA-6	LW-13757	10-5189	07-01447	
MA-4-5	LW-15380	10-5193	08-06390	
HA-6	LW-15504	10-5200	07-01450	
HA-6	LW-15626	10-5206	07-01453	
HA-6	LW-15674	10-5211	07-01460	
HA-6	LW-15985	10-5211-1	07-01461	
MA-4-5	72740	10-4404	08-06375	
MA-4SPA	78728	10-5009	08-06384	
MA-4SPA	13659	10-5135	08-13873	
MA-3A	15496	10-5199	08-06391	
MA-4SPA	15986	10-5217	08-06392	
MA-3SAP	0-290-D	10-3346-1	07-00870	
\$600.00	LW-16206	10-5227	07-01467	
\$699.00	LW-15959	10-5230	08-06397	
HA-6	LW-15960	10-5235	08-06398	

#### \*\*\*NOTE\*\*\*

Customer will need to provide core for overhaul in the event our supplier does not have cores available to overhaul. If you do not see your model # here please contact Aircraft Spruce Sales Department for pricing and availability . \*All prices shown are with factory acceptable exchange carburetor.

Send exchange carburetor core to Aircraft Spruce. Upon factory approval of core, you will be refunded the core charge.

BE CERTAIN ALL FUEL IS REMOVED FROM THE CORE.

If Carburetor is not in stock we can have yours overhauled in 5-7 working days. Please call or email for more information.

#### **CONTINENTAL CARBURETORS**

Part No.	Carb. Model	O.E.M. P/N	Our Part No.	Our Price
10-3168	MA-4-5	520120	07-01369	
4895-T	MA-3SPA	530490	08-06380	
10-3859-1	MA-4-5	538872	08-06371	
10-3965-12	MA-4-5	539883	10-03965-12	
10-4171	MA-4-5	626789	07-01351	
10-4191	MA-4-5	626859	07-01375	
10-4233	MA-3SPA	627365	08-06374	
10-4240	MA-3SPA	627637	07-01377	
10-4457	MA-3SPA	629175	07-01378	
10-4893-1	MA-4-5	641139	08-06378	
10-4894	MA-3SPA	633028	08-06379	
10-5067	MA-3SPA	-	07-01381	
10-5082	MA-3SPA	637035	07-01382	
10-5128	MA-3SPA	640416	07-01385	
10-5192	MA-3SPA	641860	07-01386	
10-5284	MA-4-5	646232	08-06404	

<sup>\*</sup>All prices shown are with factory acceptable exchange carburetor. Add core charge on all models to each price shown. Send exchange carburetor core to Aircraft Spruce. Upon factory approval of core, you will be refunded the core charge.

BE CERTAIN ALL FUEL IS REMOVED FROM THE CORE.
FRANKLIN ENGINE CARBURETORS ALSO AVAILABLE. ADVISE EXACT ENGINE AND CARBURETORS ALSO AVAILABLE. ADVISE ENGINE

AND CARBURETOR MODEL NUMBERS AND REQUEST QUOTATION

#### MARVEL-SCHEBLER NEW CARBURETORS



Note: Customer will need to provide core for overhaul in the event our supplier does not have cores available to overhaul.

Note: All Rebuilt & Overhauled Carb Purchases will be Charged an Additional Fee for Core.

#### PLEASE CHECK WITH AIRCRAFT SPRUCE ON AVAILABILITY OF CORES AT MARVEL-SCHEBLER.

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Carb. Model No.	OEM Part No.	Our Part No.	Our Price	Tempest Carb. Model No.	OEM Part No.	Our Part No.	Our Price
MA-4SPA™	10-3678-12F	08-06304		MA-4SPA™	10-3678-32F	08-06305	
MA-4-5™	10-3859-1F	08-06327		MA-4-5™	10-3878F	08-06306	
MA-4-5™	10-4164-1F	08-06307		MA-3PA™	10-4233F	08-06328	
MA-3SPA™	10-4240-1F	08-06329		MA-4-5™	10-4404-1F	08-06308	
MA-4-5™	10-4893-1F	08-06309		MA-3SPA™	10-4894-1F	08-06311	
MA-3SPA™	10-4895-1F	08-06312		MA-4SPA™	10-4910-1F	08-06332	
MA-4SPA™	10-5009F	08-06315		MA-4-5™	10-5034F	08-06335	
MA-4SPA™	10-6110-F	07-26829					
MA-3PA™	10-5050F	08-06336		MA-4-5™	10-5054F	08-06337	
MA-3SPA™	10-5082F	08-06338		MA-3PA™	10-5126F	08-06339	
MA-3PA™	10-5142F	08-06340		MA-4-5™	10-5193F	08-06341	
МА-ЗА™	10-5199F	08-06316		MA-4SPA™	10-5217F	08-06317	
HA-6™	10-5219F	08-06342		MA-3PA™	10-5220F	08-06343	
HA-6™	10-5224F	08-06344		HA-6™	10-5230F	08-06345	
HA-6™	10-5235F	08-06346		HA-6™	10-5253F	08-06347	
HA-6™	10-5255F	08-06348		MA-3PA™	10-5257F	08-06349	
MA-3PA™	10-5267F	08-06353		HA-6™	10-5283F	08-06354	
MA-4-5™	10-5284F	08-06356		MA-4-5™	10-5288F	08-06357	
HA-6™	10-6001F	08-06358		HA-6™	10-6019F	08-06359	
MA-4-5	10-6035-11-F	07-26832					
MA-4-5™	10-6045F	08-06366		MA-4-5™	10-6050F	08-06368	
MA-4-5™	10-6054F	08-06369		MA-4-5™	10-6102F	08-06370	

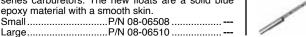
#### MARVEL-SCHEBLER REBUILT & OVERHAULED CARBURETORS

Model Number	OEM Part No.	Rebuilt Part No.	Rebuilt Price	Overhaul Part No.	Overhaul Price
MA-4SPA™	10-3678-12	08-06325-1		08-06325	
MA-4SPA™	10-3678-32	08-06326-1		08-06326	
MA-4-5™	10-3859-1	08-06371-1		08-06371	
MA-4-5™	10-3878	08-06372-1		08-06372	
MA-4-5™	10-4164-1	08-06373-1		08-06373	
MA-3PA™	10-4233	08-06374-1		08-06374	
MA-4-5™	10-4404-1	08-06376-1		08-06376	
MA-4-5™	10-4404	08-06375-1		08-06375	
MA-4-5™	10-4893-1	08-06378-1		08-06378	
MA-3SPA™	10-4894-1	08-06379-1		08-06379	
MA-3SPA™	10-4895-1	08-06380-1		08-06380	
MA-4SPA™	10-4910-1	08-06382-1		08-06382	
MA-4SPA™	10-4910	08-06381-1		08-06381	
MA-4SPA™	10-6110	07-26830		07-26831	
MA-3A™	10-4953	08-06383-1		08-06383	
MA-4SPA™	10-5009	08-06384-1		08-06384	
MA-4-5™	10-5034	08-06385-1		08-06385	
MA-3PA™	10-5050	08-06386-1		08-06386	
MA-4-5™	10-5054	08-06387-1		08-06387	
MA-3PA™	10-5126	08-06388-1		08-06388	
MA-4-5™	10-5193	08-06390-1		08-06390	
MA-3A™	10-5199	08-06391-1		08-06391	
MA-4SPA™	10-5217	08-06392-1		08-06392	
HA-6™	10-5219	08-06394-1		08-06394	
MA-3PA™	10-5220	08-06395-1		08-06395	
HA-6™	10-5224	08-06396-1		08-06396	
HA-6™	10-5230	08-06397-1		08-06397	
HA-6™	10-5235	08-06398-1		08-06398	
HA-6™	10-5253	08-06399-1		08-06399	
HA-6™	10-5255	08-06400-1		08-06400	
MA-3PA™	10-5257	08-06401-1		08-06401	
MA-3PA™	10-5267	08-06402-1		08-06402	
HA-6™	10-5283	08-06403-1		08-06403	
MA-4-5™	10-5284	08-06404-1		08-06404	
MA-4-5™	10-5288	08-06405-1		08-06405	
HA-6™	10-6001	08-06406-1		08-06406	
HA-6™	10-6019	08-06407-1		08-06407	
HA-6™	10-6030-1	08-06408-1		08-06408	
MA-4-5™	10-6035-11	08-06409-1		08-06409	
MA-4-5™	10-6054	08-06410-1		08-06410	



#### MARVEL-SCHEBLER FLOAT KIT

A new float has been developed for the small MA series carburetors. The new floats are a solid blue epoxy material with a smooth skin.





#### THROTTLE SHAFT MINOR **REPAIR KIT 778-1007-F**

Tempest MSA throttle minor repair kit (778-1007--F). All parts contained in this kit are covered under FAA/PMA PQ0111NM and/or PQ1296CE.

P/N 08-06539 ..... ---

#### REPLACEMENT PARTS FOR MARVEL-SCHEBLER CARBURETORS

Mfg. Ref.	Description	Part No.	Price	Mfg. Ref.	Description	Part No.	Price	Mfg. Ref.	Description	Part No.	Price
16-A39	-	08-06627		60-260	Bushing	08-06821		82-14	Cotter Pin	08-06881	
16-A42		08-06628		60-A160	bushing	08-06824		99-44	Plug	08-06896	
16-A48		08-06629		778-1003	Throttle	08-06535		47-852	Nozzle	08-06771	
16-A56	Gasket	08-06630		778-1004	moule	08-06536		778-1005		08-06537	
16-B44		08-06635		15-483		08-06590		778-1006	Throttle Cheft	08-06538	
16-B45		08-06636		15-58		08-06585		778-1007	Throttle Shaft	08-06539	
16-B85		08-06641		15-A23	Screw	08-06598		778-1008		08-06540	
17-372	Rod	08-06649		15-B108	Sciew	08-06609		78-121		08-06842	
17-383	Hou	08-06650		15-B109		08-06610		78-388		08-06847	
194-580		08-06938		15-B98		08-06607		78-A109		08-06853	
194-591	Duma Diumana	08-06939		16-222		08-06617		78-A110	Washer	08-06854	
194-593	Pump Plunger	08-06940		16-224		08-06619		78-A111		08-06855	
194-605		08-06941		16-625		08-06413		78-A40		08-06851	
233-614	Valve & Seat	08-06971		16-646		08-06415		78-A97		08-06852	
233-615	Float Valve	08-06972		16-653		08-06416		81-311	Nut	08-06877	
24-262		08-06651		16-676		08-06417		13-1519		08-06568	
24-A10		08-06655		16-696		08-06419		13-1520		08-06569	
24-A115	Spring	08-06656		16-713		08-06422		13-1521		08-06570	
24-A30		08-06659		16-735	Gasket	08-06425		13-1522	Throttle Shaft	08-06571	
24-A33		08-06660		16-A107		08-06631		13-1523		08-06572	
29-182	Clip	08-06669		16-A108		08-06632		13-1531		08-06575	
32-32	Shaft	08-06675		16-A16		08-06621		13-1533		08-06576	
32-35	Shait	08-06676		16-A28		08-06622		155-226	Lever	08-06912	
34-72	Valve	08-06679		16-A30		08-06623		155-307	Level	08-06914	
34-91	vaive	08-06680		16-A31		08-06624		15-126	Screw	08-06587	
44-220		08-06696		16-A32		08-06625		43-648		08-06691	
44-223	Packing O-Ring	08-06699		16-A36		08-06626		43-564	Needle	08-06690	
44-224	racking O-Hing	08-06701		82-1	Cotter Pin	08-06878					
44-49		08-06695		82-11	Collei Fill	08-06880					

SEE WWW.AIRCRAFTSPRUCE.COM FOR COMPLETE PARTS LIST.

## REPLACEMENT CARBURETOR

**VENTURI'S (ONE PIECE)**These one piece Venturis replace old type primary and main Venturis in Marvel-Schebler carburetors. Order by new Venturi part number.

Old Main Venturi	New 1-Piece Venturi	Our Price
46-462	46-F7	
46-A2	46-F10	
46-A70	46-F12	



#### **FLOAT NEEDLE SEAT DRIVER**

This Float Needle Seat Driver is applicable to Marvel-Schebler MA3 and MA4 carburetors and is quality made of alloy steel. It facilitates the easy removal of needle valve seats, prevents damage to the main casting and the new seat during installation, and insures proper torque application. Features 7/16" hex drive fitting......P/N 12-30190 .....

#### **BENDIX/PRECISION RSA FUEL SERVOS & FLOW DIVIDERS**

• (RSA-5, RSA-7da1, RSA-10 Overhaul/Exchange) • (Flow Dividers Overhaul / Exchange • TMC Complete Fuel Injection Systems (IO-360, IO-550, L/TSIO-360, TSIO-520, GTSIO-520, TSI Overhaul Exchange) • TCM Individual Fuel Injection Components Throttle Assemblies, Control Assemblies (without throttle Pumps, Manifold Valves, Pressure Regulators, No Assemblies (cleaning, rejetting, calibrating) • FAA/PMA Replacement Parts.

Call or visit our website at: www.aircraftspruce.com for more info.



### REPLACEMENT CARBURETORS PARTS BY MARVEL-SCHEBLER

Needle and Seats.

MA3-4 #233-615.....P/N 08-06972.....-----MA4-5 #233-614.....P/N 08-06717.....----

#### REPAIR KITS & PARTS FOR COMMON MARVEL-SCHEBLER CARBURETORS

NOTE: Many Marvel-Schebler replacement parts are no longer available from Facet. These are manufactured by Powerup.

Lycomina No	Marvel-	Major Repair	
Lycoming No.	Kit Part No.	Carb Part No.	Kit Price
62830	286-1630	10-3565-1	
LW-11222	286-1622	10-5062	
LA-16907	286-1783	10-5267	
71098	666-660	10-3878	
LW-15380	286-1719	08-06466	



#### **MARVEL-SCHEBLER MS80-430** FLOAT KIT FOR BING CARBURETOR

Rotax® Engine Bing Carburetor Upgraded Replacement Float Set of Two - MS80-430. These solid, one-piece blue epoxy floats will not leak, absorb fuel or break apart like the micro-bubble foam float competitors. These floats can withstand extreme temperature changes and are truly unsinkable when exposed to the elements! The Marvel Schebler MS80-430 blue floats are direct replacements for the existing Bing floats. P/N 861-184 ......P/N 07-25509 .....-



#### CARBURETOR HEAT BOX PARTS

Unique Elastomer Bearing Replaces Needle Bearing - McFarlane's elastomer bearing is assembled with tension between the mating surfaces. This tension prevents micro-movement and its related metal erosion. The bearing contact area that transfers vibration motion from the heat box to the butterfly shaft is hundreds of times greater than that of the original needle bearing. This large surface effectively prevents localized metal erosion. • Absorbs shaft and butterfly vibration • Eliminates needle bearing failures · Increases service life of all components • Direct replacement for original parts.

Proven Design: • Tested to over 700,000 cycles while exposed to avgas, heat and vibration without any change in performance • Extremely rugged and wear resistant in high temperature and fuel environments. Convenient: Discontinued part numbers through the factory are now manufactured by McFarlane • Also available in kits containing the shaft, arm, bearing housings, monel rivets, and roll pin. **Shafts and bearings sold separately.** 

CESSNA SHAFT					
Description	Part No.	Price			
Cessna Shaft MC0450068-2 Model: FA152 Serial No: FA1520337 thru FA1520425	05-04430				
Cessna Shaft MC0550180-16 Model: 172B,C Serial No: 17247747 thru 17249544	05-04431				
Cessna Shaft MC0550180-28 Model: F172D,E,F, G Serial No: F172-0001 thru F172-0319	05-04432				
Cessna Shaft MC0509068-6 Model: 172Q Serial No: 17275869 thru 17276516	05-04433				
Cessna Shaft MC1752078-4 Model: 177A,B Serial No: 17701165 thru 17702752	05-04434				
Cessna Shaft MC0750112 Model: 180* Serial No: 30000 thru 32150	05-04435				
Cessna Shaft MC0750126-19 Model: 180*, 180A,B Serial No: 32151 thru 50661	05-04436				
Cessna Shaft MC0750133-8 Model: 175, 175A Serial No: 55001 thru 56777	05-04437				
Cessna Shaft MC0750173-3 Model: 185, 185A,B, C,D,E/A185E* Serial No: 185-0001 thru 185-1300	05-04438				
Cessna Shaft MC0750173-4 Model: A185E* Serial No: 185-1301 thru 18501832	05-04439				

#### \*Partial model eligibility.

CESSNA ARM			
Description	Part No.	Price	
Cessna Arm MCS2280-8-00 Model: 152, A152, F152, FA152 Serial No: 15279406 thru 15286033 A152 A1520735 thru A1521049 F152 F15201429 thru F1520198 FA152 FA1520337 thru FA1520425	05-04440		
Cessna Arm MC0750111-19	05-04441		
Cessna Arm MCS2280-3-157	05-04442		

CESSNA BEARING				
Description	Part No.	Price		
Serial No: MC0/50113-1	05-04443			
Cessna Bearing HSG MC0750113-3 Model: 172Q Serial No:MC0750113-3	05-04444			

## CARBURETOR OVERHAUL QUICK KITS



his image is for reference only: Kit contents may differ per kit

Marvel-Schebler "Quick Kits" are easy to use, and are designed to save you time and money. Quick Kits include not only the recommended replacement parts used in every overhaul, but the additional parts used by all fuel professionals to insure the job is done right.

Kits include (where applicable): Throttle shaft lever, throttle shaft, throttle adjusting screw, throttle valve screws, inlet strainer screws, throttle body screws, mixture control lever screw, gasket kit, pump connection rod, throttle adjustment spring, throttle opening spring, idle adjustment spring, float lever shaft, pump stem, throttle shaft bushings, inlet strainer washer, pump stem retainer washer, mixture control lever washer, throttle body washers, throttle lever lock nut, float shaft cotter pin, throttle nut cotter pin, pump lever, pump plunger assembly and float valve seat assembly.

Kit Part Number	Price
286-00	
286-01	
286-02	
286-03	

Kit Part Number	Price
286-04	
286-05	
286-06	

Kit Part Number	Price
286-07	
286-08	
286-09	

Kit Part Number	Price
286-10	
286-11	
286-12	

#### SEE WHICH PART NO. IS FOR YOUR APPLICATION BELOW

Franklin Carburetors		
Part No.	"Quick Kit" P/N	
10-2971-P	286-02	
10-3007	286-06	
10-3063-2	286-06	
10-3148-1	286-06	
10-3479	286-06	
10-5069	286-02	
10-5093	286-00	
Continen	tal Carburetors	
Part No.	"Quick Kit" P/N	
10-2848	286-02	
10-2948	286-02	
10-3168	286-05	
10-3237	286-03	
10-3649-1	286-05	
10-3759	286-05	
10-3859	286-05	
10-3859-1	286-05	
10-3965	286-05	
10-3965-1	286-05	
10-4171	286-05	
10-4191	286-05	
10-4233	286-02	
10-4240	286-02	
10-4240-1	286-02	
10-4252	286-02	
10-4439	286-03	

9EE MUI	CH PART NO. IS FO		
Continental Carburetors			
Part No.	"Quick Kit" P/N		
10-4457	286-02		
10-4893	286-05		
10-4893-1	286-05		
10-4894	286-02		
10-4894-1	286-02		
10-4895	286-03		
10-4895-1	286-03		
10-5067	286-02		
10-5082	286-02		
10-5128	286-02		
10-5192	286-05		
10-5284	286-05		
Lycomin	g Carburetors		
Part No.	"Quick Kit" P/N		
10-2827	286-07		
10-2983	286-00		
10-3103-1	286-00		
10-3323	286-07		
10-3346-1	286-02		
10-3391-1	286-06		
10-3565-1	286-02		
10-3634	286-06		
10-3678-12	286-04		
10-3678-32	286-04		
10-3729	286-02		
10-3856	286-06		

TUUR APPLICATION BELOW.			
Lycoming Carburetors			
Part No. "Quick Kit" P/I			
10-3856-1	286-06		
10-3856-11	286-06		
10-3856-12	286-06		
10-3878	286-08		
10-4057	286-09		
10-4057-1	286-09		
10-4164	286-08		
10-4164-1	286-07		
10-4404	286-09		
10-4404-1	286-09		
10-4910	286-04		
10-4910-1	286-04		
10-4953	286-00		
10-4978-1	286-01		
10-5009	286-04		
10-5009N	286-04		
10-5034	286-07		
10-5042	286-00		
10-5045	286-10		
10-5045-1	286-10		
10-5050	286-01		
10-5054	286-09		
10-5062	286-04		
10-5092	286-10		
10-5126	286-01		
10-5135	286-04		

Lycoming Carburetors		
Part No. "Quick Kit" P/N		
10-5142	286-01	
10-5180	286-10	
10-5189	286-10	
10-5193	286-08	
10-5199	286-00	
10-5206	286-10	
10-5206-1	286-10	
10-5206-11	286-10	
10-5210	286-10	
10-5217	286-04	
10-5219	286-11	
10-5220-E	286-01	
10-5220	286-01	
10-5221	286-12	
10-5224	286-11	
10-5227	286-12	
10-5230	286-11	
10-5235	286-11	
10-5253	286-11	
10-5255	286-11	
10-5257	286-01	
10-5267	286-01	
10-5282	286-11	
10-5283	286-11	
10-5288	286-08	
10-6014	286-11	

### **BENDIX STROMBERG NA-S3A1** CARBURETOR OVERHAUL PARTS FOR **NA-S3A1 CARBURETOR**



The NA-S3A1 carburetor is no longer in production. Only the parts listed are carried in stock. Others may be special ordered. Originally used on Cont. A-65, A-75, A-80, C-75, C-85 and C-90 engines. Gasket & Ring Set

(Incl. gaskets for under seat)	P/N 07-02200
Metering Jet (C-85)	P/N 07-00684
	P/N 07-00685

Throttle Shaft (Ref. #34 in Manual) not available.

## MARVEL-SCHEBLER CARB GASKETS

MC16-A36 GASKET FUEL INLET FAA-PMA Marvel-Schebler Fuel Inlet Screen Gaskets for many Carbureted Aircraft The copper gaskets should be changed when finger screens are inspected at each annual inspection. P/N 07-01387 .....

Marvel-Schebler / Facet	Eligible Engine Model Series	
Carburetor Models Eligible	Continental Model	Lycoming
for Installation	Series	Model Series
MA-3, MA-3PA, MA-3A,	A-65, A-75, C-85, C-90,	O-235, O-290,
MA-3SPA, MA-4SPA	O-200, C-125, C-145, O-300	O-320

## MC16-A108 GASKET FUEL INLET FAA-PMA

Marvel-Schebler Fuel Inlet Screen Gaskets for many Carbureted Aircraft The copper gaskets should be changed when finger screens are inspected at each annual inspection. P/N 07-01389 .....----

Marvel-Schebler / Facet	Eligible Engine Model Series	
Carburetor Models Eligible	Continental Model Lycoming Mode	
for Installation	Series	Series
MA-4-5, MA-4-5AA, MA-5,	GO-300. O-470	O-340, O-360,
MA-6AA, HA-6	GO-300, O-470	O-435, O-540



## MC16-A48 GASKET FUEL INLET FAA-PMA

Marvel-Schebler Fuel Inlet Screen Gaskets for many Carbureted Aircraft The copper gaskets should be changed when finger screens are inspected at each annual inspection. Sold as a 5 pack......P/N 07-01388-5......----

Marvel-Schebler / Facet	Eligible Engine Model Series	
Carburetor Models Eligible for Installation	Continental Model Series	Lycoming Model Series
MA-4-5, MA-5AA, MA-4-5AA, MA-5, MA-6, MA-6AA, HA-6	GO-300, O-470	O-340, O-360, O-435, O-540

## STAR CARBURETORS



AvStar Overhaul Exchange for Fuel Servo.

AvStar is a proud supplier to Lycoming Engines for both their NEW, REMANUFACTURED & OVERHAULED Factory Engines. The engines are built to the latest Lycoming flow curves. AvStar's expertise of 50 years experience in fuel control technology. The best quality and price in the industry.

Avstar Part Number	Our Part Number	Description	Price
2576630-4 RSA-10AD1	07-20717	Avstar Avstar O/H Exchange Fuel Servo	
2576536-2 RSA-5AD1	07-21053	Avstar O/H Exchange Fuel Servo	
10-6035-11 MA-4-5	10-06698	Avstar O/H Exchange Carburetor	
10-6019 HA-6	07-21036	Avstar O/H Exchange Carburetor	
10-5235 HA-6	10-06691	Avstar O/H Exchange Carburetor	
10-6102 MA-4-5	07-21038	Avstar O/H Exchange Carburetor	
10-6054 MA-4-5	07-21037	Avstar O/H Exchange Carburetor	
10-4404 MA-4-5	10-06676	Avstar O/H Exchange Carburetor	
10-4164-1 MA-4-5	10-06673	Avstar O/H Exchange Carburetor	
10-3878 MA-4-5	10-06672	Avstar O/H Exchange Carburetor	
10-5193 MA-4-5	10-06685	Avstar O/H Exchange Carburetor	
10-5217 MA-4SPA	10-06688	Avstar O/H Exchange Carburetor	
10-4894-1MA-3SPA	07-21012	Avstar O/H Exchange Carburetor	
10-5054 MA-4-5	10-06683	Avstar O/H Exchange Carburetor	
10-3678-32 MA-4SPA	10-06671	Avstar O/H Exchange Carburetor	
10-5267 MA-3PA	10-06695	Avstar O/H Exchange Carburetor	
10-5009MA-4SPA	10-06680	Avstar O/H Exchange Carburetor	
10-3678-12 MA-4SPA	10-06670	Avstar O/H Exchange Carburetor	
10-5199 MA-3A	10-06686	Avstar O/H Exchange Carburetor	
2576526-1	07-21068	Avstar O/H Exchange Flow Divider	
AV666-915	07-21486	Avstar Float Kit For Carburetor MA3 & MA4	
AV2522004	07-21284	Avstar Lever-Mixture	
AV30-764	07-20776	Avstar Float-Assembly	
AV194-605	07-20773	Avstar Accelerator Pump	
AV194-800	07-21135	Avstar Accelerator Pump	
AV2521196	07-21274	Avstar Lever-Throttle	
AV2526388	07-21323	Avstar Diaphragm	
AV2524864-2	07-21003	Avstar Nozzle Assembly New Outright	
AV12-B57	07-21078	Avstar Lever-Throttle, Carburetor	
AV367547	07-21424	Avstar Screw-Assembly	
AV132906	07-21259	Avstar Plug-Threaded	
AV951437	07-20782	Avstar Packing	
AV951790	07-20783	Avstar Packing	
AV16-B75	07-20771	Avstar Gasket	
AV16-A36	07-17832	Avstar Gasket	
AV951787	07-21459	Avstar Packing	
AV78-A122	07-20780	Avstar Locktab	
AV16-A48	07-20770	Avstar Gasket	
AV16-A108	07-21117	Avstar Gasket-Fitting, Fuel Inlet	
AV951789	07-21460	Avstar Packing	
AV951391	07-21454	Avstar Packing-Preformed	
AV82-11	07-20781	Avstar Pin, Cotter	
AV953541-10	07-21462	Avstar Packing	
AV901200	07-21448	Avstar Pin	

NOTE: CORE CHARGES APPLY TO ALL EXCHANGE UNITS. SEE OUR WEBSITE FOR COMPLETE LIST OF AVSTAR PRODUCTS!

#### **COMPLETE CARBURETORS – TYPE 54**

To Order, Specify:

- 1. Model indicated by engine number 277, 377, 447, 503, or 532.
- With intake silencer or Without intake silencer. 3. Single Carb or Dual Carb.
- 4. Hand Choke or Remote Choke.

Model # 54/36/2040

P/N 07-00303 .....--------------------------

#### TYPE 54 REBUILD KIT

• #7 Air Screw O Ring • #10 Sieve Sleeve (Screen) • #17 Top O Ring • #21 Cable Grommet • #25 Hinge Pin • #26 Float Needle • #29 Bowl Gasket • #56 Jet Needle Ring P/N 07-00304 ..

## **TYPE 54 FIX-IT KIT**

• #11 Clip • #12 New Spring Cup • #56 Jet Needle O Ring P/N 07-00305 .....



#### **COMPLETE CARBURETORS – TYPE 84**

- To Order, Specify:

  1. Model indicated by engine number 277, 377, 447, 503, or 532.
- With intake silencer or Without intake silencer.
- Single Carb or Dual Carb.
   Hand Choke or Remote Choke.

Model # 84/32/3437 P/N 07-00306.

#### TYPE 84 REBUILD KIT

• #7 Air Screw O Ring • #10 Sieve Sleeve (Screen) • #17 Top O Ring • #21 Cable Grommet • #25 Hinge Pin • #26 Float Needle • #29 Bowl Gasket...... P/N 07-00307 .....



## **ROTAX FLOAT CHAMBER 261-010**

This Float Chamber replaces a single float bowl. For dual carb applications, order two.

#### P/N 261-010 .....

#### BING CARBURETOR ACCESSORIES

Remote Choke Kit (w/8' cable)	P/N 07-00308
Remote Choke Kit (w/o cable)	P/N 07-00309
Aircraft Parts manual	P/N 07-00310

#### **BING JUNCTION BLOCKS**



Bing junction block for dual Carb linkage on any Rotax engine. Three gang outlet can be used dual Carbs or with three way oil

injection and dual Carbs. Converts a single throttle line into as many as three lines.



CARBURETOR SYNCHRONIZATION
CARBMATE - Quick & easy synchronizing by direct comparison of a set of carbs / Fuel Injector throttle bodies. Range adjustable from 2 to 0,05cmHg per LED. Hook up 2 or 5 cylinder with 



#### **4-CHANNEL ADAPTER KIT**

Converts the SynchroMate or CarbMate into a 4 carb/throttle valve synchronizer. This easy-to-mount & easy-to-use kit allows connection of SynchroMate's or CarbMate 2 channels (tubes) to 4 carbs / throttle valves at once.

P/N 07-01267 .....--------------------------

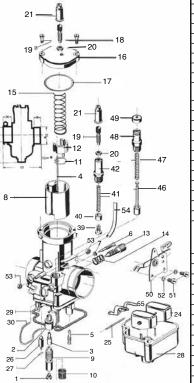
Accessories	Part No.	Price
4-channel adapter kit TS-220	07-01267	
Rotax adapter w/ 2X6 ft hose TS-400	07-01889	
Rotax accessory kit TS-400 KIT	07-01890	
Rotax black nylon storage case TS-222	07-01893	
Rota rubber black holster TS-223	07-01894	
Rotax replacement 6 ft rubber hose	07-01895	



#### ROTAX THROTTLE SPRING

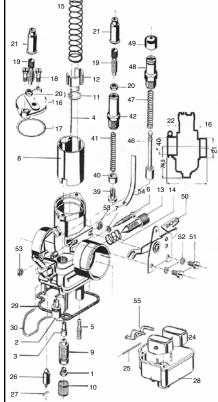
Alternate throttle return spring for Rotax 912/914 series engines ... P/N 08-06858 .....

#### REPLACEMENT PARTS - TYPE 54



1 268-978-998 Main Jet	No.	Part No.	Description	Price
3 963-691-699   Needle Jet   4 963-711-719   Jet Needle   5 963-140-147   Idler Jet   6 963-679   Piston   9 963-700   Mixing Tube   10 261-625   Sieve Sleeve   11 963-500   Clip	1		Main Jet	
4 963-711-719 Jet Needle 5 963-140-147 Idler Jet 6 963-155 Air Screw 7 831-710 O Ring 8 9963-679 Piston 9 963-700 Mixing Tube 10 261-625 Sieve Sleeve 11 963-500 Clip 12 827-347 Spring Cup 13 963-160 Mix Screw 14 938-640 Spring 15 938-655 Slide Spring 16 963-720 Cover Plate 17 831-450 O Ring 18 241-430 Screw 19 241-440 Adjuster 20 942-541 Nut 21 260-370 Grommet 24 861-181 Indep. Float 26 261-705 Float Needle 27 261-710 Clip 28 261-010 Gasket 29 830-720 Gasket 30 963-180 Bowl Kit (bowl, 24-27, 55) *Float Needle Valve not incl. 29 830-720 Gasket 30 963-180 Bowl Clip 29 830-720 Gasket 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 43 963-750 Housing 44 261-770 Housing 45 261-701 Screw (51) & 27 261-770 Housing 28 261-770 Housing 29 945-750 Washer (52) 29 945-750 Washer (52) 20 945-750 Vent Tube 20 945-750 Vent Tube 20 945-750 Float Arm				
5         963-140-147         Idler Jet            6         963-155         Air Screw            7         831-710         O Ring            8         963-679         Piston            9         963-700         Mixing Tube            10         261-625         Sieve Sleeve            11         963-500         Clip            12         827-347         New Style            Spring Cup             13         963-160         Mix Screw            14         938-640         Spring            15         938-655         Slide Spring            16         963-720         Cover Plate            17         831-450         O Ring            18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep.	3			-
6 963-155 Air Screw 7 831-710 O Ring 8 963-679 Piston 9 963-700 Mixing Tube 10 261-625 Sieve Sleeve 11 963-500 Clip 12 827-347 New Style Spring Cup 13 963-160 Mix Screw 14 938-640 Spring 15 938-655 Slide Spring 16 963-720 Cover Plate 17 831-450 O Ring 18 241-430 Screw 19 241-440 Adjuster 20 942-541 Nut 21 260-370 Grommet 24 861-181 Indep. Float 24 861-181 Indep. Float 25 261-705 Float Needle 27 261-710 Clip 28 261-705 Float Needle 29 830-720 Gasket 30 963-180 Bowl Kit (bowl, 24-27, 55) "Float Needle Valve not incl. 29 830-720 Gasket 30 963-180 Bowl Clip 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 45 261-701 Rousing 46 268-847 Piston 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 2945-750 Washer (52) 53 261-200 Nut 55 861-190 Float Arm				
7 831-710 O Ring 8 963-679 Piston 9 963-700 Mixing Tube 10 261-625 Sieve Sleeve 11 963-500 Clip 12 827-347 Spring Cup 13 963-160 Mix Screw 14 938-640 Spring 15 938-655 Slide Spring 16 963-720 Cover Plate 17 831-450 O Ring 18 241-430 Screw 19 241-440 Adjuster 20 942-541 Nut 21 260-370 Grommet 24 861-181 Indep. Float 24 861-181 Indep. Float 25 261-705 Float Needle 27 261-710 Clip 28 261-705 Float Needle 29 830-720 Gasket 30 963-180 Bowl Kit (bowl, 24-27, 55) Float Needle Valve not incl. 29 830-720 Gasket 30 963-180 Bowl Clip 39 963-740 Piston 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 45 260-490 Rubber Cap 50 261-705 Float Needle 51 240-791 Screw (51) & 51 240-791 Screw (51) & 55 861-190 Float Arm	5	963-140-147		
8         963-679         Piston            9         963-700         Mixing Tube            10         261-625         Sieve Sleeve            11         963-500         Clip            12         827-347         New Style Spring Cup            13         963-160         Mix Screw            14         938-640         Spring            15         938-655         Slide Spring            16         963-720         Cover Plate            17         831-450         O Ring            18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            27         261-710         Clip            28         261-010         24-27, 55)         *           40				
9 963-700 Mixing Tube 10 261-625 Sieve Sleeve 11 963-500 Clip 12 827-347 New Style Spring Cup 14 938-640 Spring 15 938-655 Slide Spring 16 963-720 Cover Plate 17 831-450 O Ring 18 241-430 Screw 19 241-440 Adjuster 20 942-541 Nut 21 260-370 Grommet 24 861-181 Indep. Float 24 861-181 Indep. Float 27 261-710 Clip 28 261-010 Row Kit (bowl, 24-27, 55) Float Needle Valve not incl. 29 830-720 Gasket 30 963-180 Bowl Clip 39 963-740 Piston 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 45 239-730 Spring 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 55 2461-500 Float Arm				
10         261-625         Sieve Sleeve            11         963-500         Clip            12         827-347         New Style            13         963-160         Mix Screw            14         938-640         Spring            15         938-655         Slide Spring            16         963-720         Cover Plate            17         831-450         O Ring            18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         361-181         Indep. Float            24         361-181         Indep. Float            28         261-705         Float Needle            27         261-710         Clip            28         261-701         Gasket            30         963-780         Bowl Kit (bowl, 24-27, 55)            24-27				
11         963-500         Clip            12         827-347         New Style Spring Cup            13         963-160         Mix Screw            14         938-640         Spring            15         938-655         Slide Spring            16         963-720         Cover Plate            17         831-450         O Ring            18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            27         261-710         Clip            28         261-010         24-27, 55)            19         24-17         Sch            29         830-720         Gasket            29         830-720         Gasket            30         963-180			Mixing Tube	
12 827-347   New Style Spring Cup   13 963-160   Mix Screw				
Spring Cup   Spring Cup   Spring Cup   Spring   Spring	11	963-500	Clip	
14         938-640         Spring            15         938-655         Slide Spring            16         963-720         Cover Plate            17         831-450         O Ring            18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            27         261-710         Clip            28         261-010         Bowl Kit (bowl, 24-27, 55)            29         830-720         Gasket            29         830-720         Gasket            30         963-180         Bowl Clip            39         963-740         Piston            40         288-850         Sleeve            41         661-050         Spring            42 <t< td=""><td></td><td></td><td>Spring Cup</td><td></td></t<>			Spring Cup	
15 938-655 Slide Spring 16 963-720 Cover Plate 17 831-450 O Ring 18 241-430 Screw 19 241-440 Adjuster 20 942-541 Nut 21 260-370 Grommet 24 861-181 Indep. Float 25 261-705 Float Needle 27 261-710 Clip 28 261-010 Float Needle 29 830-720 Gasket 30 963-180 Bowl Kit (bowl, 24-27, 55) 40 268-850 Sleeve 41 661-050 Spring 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 43 239-730 Spring 44 239-730 Spring 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 245-750 Washer (52) 53 261-200 Nut 55 861-190 Float Arm	_			-
16         963-720         Cover Plate            17         831-450         O Ring            18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            27         261-710         Clip            28         261-701         Clip            29         830-720         Gasket            29         830-720         Gasket            30         963-180         Bowl Clip            39         963-740         Piston            40         268-850         Sleeve            41         661-050         Spring            42         963-750         Housing            45         268-847         Piston            47         239-730         S				
17         831-450         O Ring            18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            26         261-705         Float Needle            27         261-710         Clip            28         261-010         Bowl Kit (bowl, 24-27, 55)            42         28-30         Sasket            30         963-180         Bowl Clip            39         963-740         Piston            40         28-850         Sleeve            41         661-050         Spring            42         963-750         Housing            45         268-847         Piston            47         239-730         Spring            48         261-770				
18         241-430         Screw            19         241-440         Adjuster            20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            27         261-710         Clip            28         261-010         Bowl Kit (bowl, 24-27, 55)            29         830-720         Gasket            30         963-780         Bowl Clip            39         963-740         Piston            40         268-850         Sleeve            41         661-050         Spring            42         963-750         Housing            45         268-847         Piston            47         239-730         Spring            48         261-770         Housing            49         260-490         Rubber Cap            50         261				
19 241-440 Adjuster 20 942-541 Nut 21 260-370 Grommet 24 861-181 Indep. Float 25 261-705 Float Needle 27 261-710 Clip 28 261-010 24-27, 55) 28 261-010 Gasket 29 830-720 Gasket 30 963-180 Bowl Clip 39 963-740 Piston 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 45 288-47 Piston 47 239-730 Spring 48 261-770 Housing 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 945-750 Washer (52) 53 261-200 Nut 55 861-190 Float Arm				
20         942-541         Nut            21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            27         261-710         Clip            28         261-701         Clip            29         830-720         Gasket            30         963-780         Bowl Clip            39         963-740         Piston            40         268-850         Sleeve            41         661-050         Spring            42         963-750         Housing            45         268-847         Piston            47         239-730         Spring            48         261-770         Housing            49         260-490         Rubber Cap            50         261-755         Choke Lever            51         240-791         Screw (51) &            52         945-750				
21         260-370         Grommet            24         861-181         Indep. Float            26         261-705         Float Needle            27         261-710         Clip            28         261-010         Bowl Kit (bowl, 24-27, 55) *Float Needle Valve not incl.            29         830-720         Gasket            30         963-180         Bowl Clip            39         963-740         Piston            40         268-850         Sleeve            41         661-050         Spring            42         963-750         Housing            42         963-750         Housing            47         239-730         Spring            48         261-770         Housing            49         260-490         Rubber Cap            50         261-755         Choke Lever            51         240-791         Screw (51) &            52         945-750         Washer (52) <td></td> <td></td> <td></td> <td></td>				
24     861-181     Indep. Float        26     261-705     Float Needle        27     261-710     Clip        28     261-010     Bowl Kit (bowl, 24-27, 55)        29     830-720     Gasket        30     963-780     Bowl Clip        39     963-740     Piston        40     268-850     Sleeve        41     661-050     Spring        42     963-750     Housing        46     268-847     Piston        47     239-730     Spring        48     261-770     Housing        49     260-490     Rubber Cap        50     261-755     Choke Lever        51     240-791     Screw (51) &        52     945-750     Washer (52)        53     261-200     Nut        54     256-035     Vent Tube        55     861-190     Float Arm				
26         261-705         Float Needle            27         261-710         Clip            28         261-010         Bowl Kit (bowl, 24-27, 55) "Float Needle Valve not incl.            29         830-720         Gasket            30         963-180         Bowl Clip            40         268-850         Sleeve            41         661-050         Spring            42         963-750         Housing            46         268-847         Piston            47         239-730         Spring            48         261-770         Housing            49         260-490         Rubber Cap            50         261-755         Choke Lever            51         240-791         Screw (51) &            52         945-750         Washer (52)            53         261-200         Nut            54         256-035         Vent Tube            55         861-190         Float Arm </td <td></td> <td></td> <td></td> <td></td>				
27         261-710         Clip            28         261-010         Bowl Kit (bowl, 24-27, 55)            *Float Needle Valve not incl.             29         830-720         Gasket            30         963-180         Bowl Clip            39         963-740         Piston            40         268-850         Sleeve            41         661-050         Spring            42         963-750         Housing            42         239-730         Spring            46         268-847         Piston            47         239-730         Spring            48         261-770         Housing            49         260-490         Rubber Cap            50         261-755         Choke Lever            51         240-791         Screw (51) &            52         945-750         Washer (52)            54         256-035         Vent Tube            55			Indep. Float	
Bowl Kit (bowl, 24-27, 55)				
Valve not incl.  29 830-720 Gasket 30 963-180 Bowl Clip 39 963-740 Piston 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 945-750 Washer (52) 53 261-200 Nut 55 861-190 Float Arm	27	261-710	Clip	
30 963-180 Bowl Clip 39 963-740 Piston 40 268-850 Sleeve 41 661-050 Spring 42 963-750 Housing 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 945-750 Washer (52) 53 261-200 Nut 55 861-190 Float Arm	28	261-010	Bowl Kit (bowl, 24-27, 55) *Float Needle Valve not incl.	
39         963-740         Piston            40         268-850         Sleeve            41         661-050         Spring            42         963-750         Housing            46         268-847         Piston            47         239-730         Spring            48         261-770         Housing            49         260-490         Rubber Cap            50         261-755         Choke Lever            51         240-791         Screw (51) &            52         945-750         Washer (52)            53         261-200         Nut            54         256-035         Vent Tube            55         861-190         Float Arm	29	830-720	Gasket	-
40     268-850     Sleeve        41     661-050     Spring        42     963-750     Housing        46     268-847     Piston        47     239-730     Spring        48     261-770     Housing        49     260-490     Rubber Cap        50     261-755     Choke Lever        51     240-791     Screw (51) &        52     945-750     Washer (52)        53     261-200     Nut        54     256-035     Vent Tube        55     861-190     Float Arm				-
41         661-050         Spring            42         963-750         Housing            46         268-847         Piston            47         239-730         Spring            48         261-770         Housing            50         261-755         Choke Lever            51         240-791         Screw (51) &            52         945-750         Washer (52)            53         261-200         Nut            54         256-035         Vent Tube            55         861-190         Float Arm	39	963-740	Piston	-
42 963-750 Housing 46 268-847 Piston 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 945-750 Washer (52) 53 261-200 Nut 54 256-035 Vent Tube 55 861-190 Float Arm			Sleeve	
46 268-847 Piston 47 239-730 Spring 48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 945-750 Washer (52) 53 261-200 Nut 54 256-035 Vent Tube 55 861-190 Float Arm	41	661-050	Spring	-
47     239-730     Spring        48     261-770     Housing        49     260-490     Rubber Cap        50     261-755     Choke Lever        51     240-791     Screw (51) &        52     945-750     Washer (52)        53     261-200     Nut        54     256-035     Vent Tube        55     861-190     Float Arm	42	963-750	Housing	-
48 261-770 Housing 49 260-490 Rubber Cap 50 261-755 Choke Lever 51 240-791 Screw (51) & 52 945-750 Washer (52) 53 261-200 Nut 54 256-035 Vent Tube 55 861-190 Float Arm	46	268-847	Piston	-
49     260-490     Rubber Cap        50     261-755     Choke Lever        51     240-791     Screw (51) &        52     945-750     Washer (52)        53     261-200     Nut        54     256-035     Vent Tube        55     861-190     Float Arm	47	239-730	Spring	-
50     261-755     Choke Lever        51     240-791     Screw (51) &        52     945-750     Washer (52)        53     261-200     Nut        54     256-035     Vent Tube        55     861-190     Float Arm	48	261-770		
51     240-791     Screw (51) &       52     945-750     Washer (52)       53     261-200     Nut       54     256-035     Vent Tube       55     861-190     Float Arm	49	260-490	Rubber Cap	
52 945-750 Washer (52)	50	261-755	Choke Lever	
52 945-750 Washer (52)	51		Screw (51) &	
54 256-035 Vent Tube 55 861-190 Float Arm	52		Washer (52)	-
54 256-035 Vent Tube 55 861-190 Float Arm	53	261-200		
		256-035	Vent Tube	
EC 921 71E let Needle O Ding	55	861-190	Float Arm	
DO   OO 1-7   DELINEEDIE O HIND	56	831-715	Jet Needle O Ring	

#### **REPLACEMENT PARTS – TYPE 84**



No.	Part No.	Description	Price
1	268-980	Main Jet 135	
2	261-692	Atomizer	
3	261-606	Needle Jet 262	
4	261-643	Jet Needle 8H1	
5	963-140	Idler Jet 50	
6	963-155	Air Screw	
7	831-710	O Ring	
8	261-635	Piston	
9	963-130	Jet Stock	
10	261-625	Screen	
11	261-650	Holding Plate	
12	227-635	Spring Cup	
13	963-160	Mix Screw	
14	938-640	Spring	
15	239-700	Slide Spring	
16	261-660	Cover	
17	261-670	O Ring	
18	241-430	Screw	
19	241-440	Adjust. Screw	
20	942-541	Nut	
21	260-370	Grommet	
26	261-705	Float Needle	
27	261-710	Clip	
28	963-170	Bowl	
29	830-720	Gasket	
30	963-180	Bowl Clip	
39	963-740	Piston	
40	268-850	Sleeve	
41	661-050	Spring	
42	963-750	Housing	
46	268-847	Piston	
47	239-730	Spring	
48	261-770	Housing	
49	260-490	Rubber Cap	
50	261-750	Lever	
51	240-791	Screw (51) &	
52	945-750	Washer (52)	-
53	261-200	Nut	
54	256-033	Vent Tube	

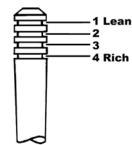
## RBURETOR PARTS



#### CARBURETOR JETTING CHART FOR **ROTAX® UL ENGINES**

Use this chart to identify part number you need, then use bottom chart to select correct part number to order.

ROTAX® ENGINE	 MAIN JET	 IDLER JET	 NEEDLE JET	JET NEEDLE	CLIP POSITION	AIR SCREW
2771	148	45	2.72	8L2	2	1
2772	140	45	2.72	8L2	2	1
3771	165	45	2.70	802	2	.5
3772	155	45	2.70	802	2	.5
4471	165	45	2.70	15K2	2	.5
4472	155	45	2.70	15K2	2	.5
447DC1	135	50	2.70	6G1	3	1
447DC3	128	50	2.68	15K2	2	1
503SC1 Up to #3785371	180	45	2.74	8G2	3	.5
503SC2 Up to #3785371	158	45	2.74	6H2	3	.5
503SC1 From #3785372 Up	185	45	2.72	15K2	3	.5
503SC2 From #3785372 Up	165	45	2.70	15K2	3	.5
503DC1	158	45	2.74	8L2	1	.5
503DC3	148	45	2.68	11K2	2	1
532SC1	195	55	2.74	15K2	3	1
532SC3	170	55	2.74	15K2	3	1
532DC1	165	55	2.72	11G2	3	1
532DC3	145	55	2.68	15K2	3	1
5821	165	55	2.72	11G2	3	1
5823	145	55	2.68	15K2	3	1



1 = Without Rotax® intake silencer kit, with K&N RC1200 air filter, with or without Rotax® after muffler kit.

2 = With Rotax® intake silencer kit, with K&N CM0300 air filter, with or without Rotax® after muffler kit.

3 = With Rotax® dual intake silencer kit, with K&N RC1200 air filters, with or without Rotax® after muffler kit.



#### MAIN JET

125 = Part No. R268-978

128 = Part No. R261-085 130 = Part No. R268-979 135 = Part No. B268-980 138 = Part No. R268-998 140 = Part No. R268-981 145 = Part No. R268-982

148 = Part No. R268-995 150 = Part No. R268-983 155 = Part No. R268-984 158 = Part No. R268-996

160 = Part No. R268-985 162 = Part No. R268-990 165 = Part No. R268-986 170 = Part No. R268-987

175 = Part No. R268-988 180 = Part No. R268-989 185 = Part No. R261-080 190 = Part No. R261-084 195 = Part No. R268-992

200 = Part No. B261-082 205 = Part No. R261-087 220 = Part No. R261-081

JET NEEDLE



2H2 = Part No. R963-717 4E2 = Part No. R963-716 6G1 = Part No. R261-642 6H2 = Part No. R963-719

6P2 = Part No. 15-05029 8G2 = Part No. R963-712 8H1 = Part No. R261-643

8L2 = Part No. R963-714 802 = Part No. R963-711

10 = Part No. R961-045 11G2 = Part No. R961-043 11K2 = Part No. R961-044

15K2 = Part No. R963-718

#### **IDLER JET**

30 = Part No. R963-141 35 = Part No. R963-143 40 = Part No. R963-142 45 = Part No. R963-144 50 = Part No. R963-140 55 = Part No. R963-147 60 = Part No. R963-145 65 = Part No. R963-146

#### NEEDLE JET



2.62 = Part No. R261-606 2.68 = Part No. R963-691 2.70 = Part No. R963-698 2.72 = Part No. R963-697 2.74 = Part No. R963-699 2.76 = Part No. R963-693 2.78 = Part No. R963-696 2.80 = Part No. R963-695 2.82 = Part No. R963-694 2.94 = Part No. R961-022

#### NEEDLE CLIP



P/N 07-00693 .....

Lower numbers indicate smaller jet size or opening. Low numbers = lean.

High numbers = rich.

First needle number denotes mixture above half-throttle.

Needle letter denotes mixture below half-throttle.

# 00 00

#### **BING DUAL CARB GASKET KIT ROTAX**

Quantity: 2 Carbs. "O" Rings: Biggest - Jet Stock, Next Down - Throttle Shaft, Green - Choke Disk, 4 small - Idle Jet & Idle Air Screw, and Smallest - Jet Needle. For 912.....P/N 15-09421.....-

For 914.....P/N 15-09422....---



### **KWIK TUNE FOR ROTAX ENGINES**

The handy Kwik Tune, a timesaving tool launched at Sun 'n Fun. Kwik Tune helps remove and reinstall the aircraft throttle cable, cover, spring, and slide in a Bing carburetor.

P/N 08-05206 .....--------------------------

#### CARB CLEANING BRUSH

3/16" Tube, .005 Nylon, 2" BP, 6" OAL Can be used in the cleaning of internal bores and cylindrical cavities. Good for light duty jobs applying either wet or dry ingredients or cleansers. Sturdy twisted wire handles feature loop for easy grip......P/N 15-08286 ......



## MIKUNI FUEL PUMP

Genuine Mikuni fuel pumps. Replace original parts on Rotax®, Hirth, & many other engines. Single Pump......P/N 07-00777 .....---Dual Pump......P/N 07-00778.....---

**Fuel Pump** 



#### MIKUNI REBUILT KIT FOR SINGLE/DUAL FUEL PUMPS

Single Pump ......P/N 07-01011 .....----Dual Pump .......P/N 07-01010 .....----

Rebuild Kits



## MIKUNI FLOAT CHAMBER PLUG



#### **NYLON STARTER ROPE**

The perfect replacement rope for worn-out manual starters ...... P/N 13-03922 ..... --- per ft.



engines is that the throttle return springs are too strong. McFarlane stocks a variety of springs so you can choose the

one that best fits your application. All McFarlane throttle controls for Rotax engines include P/N 6822 spring. Less than half the strength of the original stock Rotax springs. Prevents throttle "creep" due to excessive return spring force. Requires 1 per carburetor (2 per engine) Note: Installer is responsible for determining whether this spring is an appropriate substitution for their application. For use on non-certified aircraft.

P/N 05-12477 ..... --- ea.



#### PRECISION AIRMOTIVE

Precision Airmotive now feature's competitively priced OEM factory overhauled RSA Fuel Injection Servo's & Flow Dividers. As the OEM manufacturer, they ensure 'out of the box' performance of these overhaul units by completing both full flow dynamic and static analysis, verifying fuel delivery performance from idle to full throttle. Since 1988, Precision Airmotive has set the industry standard for fuel injection systems by supporting the general aviation industry with time tested quality products that meet the highest standards.

Note: Aircraft Spruce carries Precision Airmotive replacement parts and accessories, contact us for pricing and availability.

#### **FUEL INJECTION SERVOS**

Model No.	Part No.	Engine	Airframe	New Ex	change	Rebuilt E	xchange	Overhaul	Exchange
	2576536-2	IO-360-L2A	Cessna 172	07-02770		07-02772		07-02773	
	2524054-11	IO-360/540 & various	Mooney 201& others	07-02775		07-02776		07-02777	
RSA-5AD1	2576544-3	IO-540-AB1A5	Cessna 182	07-02778		07-02779		07-02780	
	2524450-9	IO-360-AB1/C1C/C1C6	Piper, Arrow, Cherokee, Lake Buccaneer	07-02781		07-02782		07-02783	
	2524500-9	LTIO-540-F2BD/J2B/J2BD TIO-540-F2BD/J2B/J2BD	Piper Navajo PA-31-325 Chieftain PA-31-350	07-02784		07-02785		07-02786	
RSA-10ED1	2524273-12	IO-540-K1A5/K1A5D/K1G5	Piper Saratoga/Lance	07-02787		07-02788		07-02789	
	2576562-4	TIO-540-AJ1A	Cessna T206	07-02791		07-02792		07-02793	
	2576630-4	IO-540-AE1A5	Robinson R44	07-02794		07-02795		07-02796	



#### **FLOW DIVIDERS**

Precision Airmotive stands proudly as a world leader in the manufacturing of fuel controls for general aviation. By providing fuel injection systems for certified aircraft and electronic engine management systems for experimental aircraft, Precision Airmotive is leading the way in general aviation.

Part No.	Engine	Configuration	New Ex	change	Rebuilt E	xchange	Overhaul	Exchange
2524232-2	IO-320, IO-360, IO-540	2 PSI spring, no vent tube	07-02799		07-02801		07-02983	
2576526-1	IO-540	4 PSI spring, no vent tube	07-02802		07-02981		07-02803	
2576564-1-F	IO-320, IO-360, IO-540		07-02797		07-02798		07-24458	

FOR TURBO APPLICATIONS, UNLISTED SERVOS, & FLOW DIVIDERS CALL OR EMAIL AIRCRAFT SPRUCE FOR PRICING.



#### PRECISION CF631282 PLUNGER

The Precision CF631282 Plunger is for Continental Motor's Fuel Manifold.....P/N 07-21651.....

#### PRECISION AIRMOTIVE SEALS

Precision Airmotive Seal CFLR47101 ......P/N 07-27022 .....----Precision Airmotive Seal CFLR47108 ......P/N 07-27023 .....

#### PRECISION AIRMOTIVE BUSHING. THROTTLE BODY

Bushing, Throttle Body CF630455P/N 07-27	010
Bushing, Throttle Body CF630455-2P/N 07-279	011
Bushing, Throttle Body CF630455-3P/N 07-27	012
Bushing, Throttle Body CF630455-4P/N 07-27	013
Bushing, Throttle Body CF631183-2P/N 07-27	014
Bushing, Throttle Body CF631183-3P/N 07-27	015

### PRECISION AIRMOTIVE VALVE. **NEEDLE AUTO 2537860-F**

Valve, Needle Auto 2537860-F ......P/N 07-27004 .....----



#### PRECISION AIRMOTIVE **GASKET CF649983**

Precision Airmotive Gasket CF649983 P/N 07-25725 .....

#### PRECISION AIRMOTIVE THROTTLE STOP PIN

Throttle Stop PIN CF626812......P/N 07-27009..... Throttle Stop PIN CF655791 ......P/N 07-27021 .....

#### PRECISION AIRMOTIVE VALVE **& HOUSING ASSY**

Precision Airmotive Seal CFLR47101 ......P/N 07-27024 ..... Precision Airmotive Seal CFLR47108 ......P/N 07-27025 .....----

#### PRECISION AIRMOTIVE LEVER ASSEMBLY. IDLE 2537857B-F

Lever Assy, Idle 2537857B-F......P/N 07-27003 ......----

#### EST REBUILT FUEL SERVOS/EXCHANGE



Available only from the factory. These units are also built to factory new specifications and bench checked on an air-box flow bench to OEM original specifications and drawings. Note: A body or a center body may be used in a rebuilt servo; however, these components must meet factory new specifications and drawings.

CF P/N	Model No.	Part Number	Price
2524145-12RSA	-5AD1	07-00403	
2524147-13RSA	-5AD1	07-00404	
2524189-11RSA	-5AD1	07-00407	
2524213-11RSA	-5AD1	07-00408	
2524307-10RSA	-5AD1	07-00458	
2524335-10RSA	-5AD1	07-00460	
2524592-B	RSA-5AD1	07-00470	

#### TEMPEST FUEL SERVO QUICK KITS

The next time you rebuild your fuel components, don't spend time on the phone chasing parts, just order a "Quick Kit" and take the hassle out of your rebuilt. Quick Kits include the mandatory replacement parts, plus the parts used by fuel professionals to insure the job is done right!

Fuel Servo #	Model No.	Our Part No.	QuickKit#	Price
RSA-5AD1	All Models	07-00563	CFK-5AD1	

#### TEMPEST A76284 FLUID TICKER PUMP



#### **FUEL PUMP BLADE**

Fuel Pump Blade 2617-1 .P/N 07-24459 .....-----

#### LYCOMING & CONTINENTAL FUEL PUMPS



Proven to be a trouble-free mechanical pressure pump. Original equipment on numerous airframe installations and adaptable to most applications with one of 3 dual diaphragm types. Overboard vent of this design provides operating assurance throughout all flights.

Engine Type	Engine Model No.	Our P/N	Lycoming Part No.	Our Price
Lycoming	O-235, O-290, O-320, O-340, O-360, HO-360, GO-480, O-540, VO-540	07-00704	LW15472 41271 4-6 PSI	
	IO-320, IO-360, AIO- 360, HIO-360, IVO- 360, IO-540, IGO-540, IO-720	07-00705	LW15473 41234 (old 40296) 25-30 PSI	
Continental	Can be used on A/C who formerly used medium pressure 15 PSI (PS5)	41272 (old 40595) 25-30 PSI	LW15473	
	C-90 (-16F), 0-200	05-19050	AF631391	

Lycoming Fuel Pump Gasket For LW15473 ...... P/N 60096 ......----

Adapter pump thread to AN fittings using AC Fuel pump adapters: Fitting...P/N 75505 ... --- Fitting & O-Ring .......P/N 75505-1 ......

#### LYCOMING/AC FUEL PUMP FITTINGS









07-00783

07-00782

07-00780

07-00781

These fittings are designed to fit mechanical fuel pumps used on Lycoming engines. These fittings feature 3/8" AN flare outlets for connection to aircraft hoses, and are available in straight, 45° and 90° angle versions. Note: These fittings are not certified.

Straight fitting	P/N 07-00780
45° fitting	
90° fitting	
Tee fitting w/1/8" pipe thread tapping for	
fuel pressure	P/N 07-00783



#### LYCOMING FUEL PUMP GASKET **FOR LW15473**

Gasket for Lycoming Gasket LW15473. P/N 60096 .....

## LYCOMING FUEL PUMP ADAPTER GASKET



Lycoming fuel pump adapter gasket. 69164. Dimensions (w x I x h): 2.75 in. X 3.19 in. X 0.07 in. Superior......P/N 08-11839.....---

### ACS FUEL PUMP COOLING SHROUD



Designed to keep the fuel pump cooler in the hot engine compartments, and reduce the risk of fuel vapor lock. The cooling shroud will fit carbureted or fuel injector Lycoming engines using a diaphragm style pump. Made in the .....P/N 08-06097 ..... U.S.A.

## **AEROTAR LEFT LYCOMING FUEL** MANIFOLD BRACKET

Aerotar Left Lycoming Fuel Manifold Bracket (07A22996) P/N 08-15786 .....----

### PIPER FUEL PUMP CA62220-004



Unconditional one year warranty. Internal check valve to prevent backflow. Modern solid state pump - More dependable and uses less current than the old breaker point pumps. When this pump is installed the existing

connector in the aircraft is re-used. 24 Volt system. The 3 amp circuit protection kit is not included with this pump. This pump will not operate from a battery charger. It must have a battery DC current. Replacement filter kit p/n CA42370. \* Not approved for use in fuel injection aircraft.

P/N 05-28839

#### LYCOMING & TCM FUEL PUMPS



**OVERHAULED LYCOMING FUEL PUMPS** 

All internal parts are replaced with new certified parts. The actuating arms are magnetic particle test inspected; cast parts are inspected for wear, corrosion and cracks. Both the older laminated and newer channel style fuel pumps are overhauled for normally aspirated, pressure carburetor, and fuel injected systems.

Note: Customer will need to provide core for overhaul in the event

	r does not have cores		
ММО	Description	Part No.	Price
Overha	auled Lycoming & TCM Diap	hragm Fuel F	Pumps
40174	Fuel Pump - Overhauled	05-02530	
40296	Fuel Pump - Overhauled	05-02531	
40595	Fuel Pump - Overhauled	05-19015	
41234	Fuel Pump - Overhauled	05-02532	
41270	Fuel Pump - Overhauled	05-02533	
41271	Fuel Pump - Overhauled	05-02534	
41272	Fuel Pump - Overhauled	05-02536	
41452	Fuel Pump - Overhauled	05-02537	
41812	Fuel Pump - Overhauled	05-02539	
75246	Fuel Pump - Overhauled	05-02540	
75247	Fuel Pump - Overhauled	05-02541	
103396-01	Fuel Pump - Overhauled	05-02542	
103586-01	Fuel Pump - Overhauled	05-02543	
LW14282	Fuel Pump - Overhauled	05-02544	
LW15399	Fuel Pump - Overhauled	08-15399	
LW15472	Fuel Pump - Overhauled	05-19000	
LW15473	Fuel Pump - Overhauled	05-19010	
LW16335	Fuel Pump - Overhauled	05-02545	
LW16775	Fuel Pump - Overhauled	05-02546	
LW16947	Fuel Pump - Overhauled	05-02547	
R00253-1	Fuel Pump - Overhauled	05-02549	
R00253-2	Fuel Pump - Overhauled	05-02551	
R00253-501	Fuel Pump - Overhauled	05-02552	
R00253-502	Fuel Pump - Overhauled	05-02554	
AF1572	Fuel Pump - Overhauled	05-19000	
AF15473	Fuel Pump - Overhauled	05-02556-1	
	New Lycoming Diaphragm		
AF15472	Fuel Pump - New	05-02555	
AF15473	Fuel Pump - New	05-02556	
	Overhauled TCM Centurion	Fuel Pumps	
4036/9076	Fuel Pump - Overhauled	05-19030	
6861	Fuel Pump - Overhauled	05-19035	
9051	Fuel Pump - Overhauled	05-19025	
9867	Fuel Pump - Overhauled	05-21694	
40585	Fuel Pump - Overhauled	05-02557	
40695	Fuel Pump - Overhauled	05-02558	
AF40585	Fuel Pump - Overhauled	05-02557	
AF631391	Fuel Pump - Overhauled	05-19050	
	New TCM Centurion Fu	el Pumps	
AF6561	Screen Kit	05-02560	
AF16335	Fuel Pump - New	05-02561	
AF40585	Fuel Pump - New	05-02564	
AF40695	Fuel Pump - New	05-02565	
AF631391	Fuel Pump - New	05-19050	

**CORE CHARGE ON TEMPEST OVERHAULED FUEL PUMPS.** 



TEMPEST PLATINUM ELECTRONIC FLUID PUMPS

Tempest Platinum Electronic Fluid Pumps - from the brand you trust for quality and innovation. These new pumps have been designed from the ground up and will replace many of the Facet Gold-Flo fluid pumps that are no longer available to the aviation market. The Tempest Platinum electronic fluid pumps are FAA/PMA certified and designed with the modern 14 to 28 volt system in mind. These pumps use an internal high-flow filter element that can be easily replaced when specified by aircraft maintenance manuals.

Tempest® Part No	Facet Part No	OEM Part Number	Pump Description	Volts	PSI	Airframe Eligibility	Part No.	Price
				В	eechcra	ft		
A76284	476284	476439 or 58-920054-11	Fuel Pump, Heater	28	6-8	95-55, 95-A55, 95-B55, 95-C55, D55, E55, B95, B95A, D95A, E95, E55, 56TC, A56TC, 58, 58P, 58TC, G58, 60, A60, B60	05-27357	
A76284	476284	476439 or 58-920054-11	Pump, Alcohol/Anti-Ice	28	6-8	95, B95, B95A, 95-55, 95-A55, 95-B55, 95-B55A, D95A, E95, D55, D55A, E55, 58, G58, A65, 65-B80 and 70	05-27357	
A76284	476284	476439 or 58-920054-11	Pump, Fuel Return	28	6-8	99, 99A, A99A, B99, 100, A100, 200, 200C and 200T	05-27357	
A76284	476284	476439 or 58-920054-11	Fuel Pump, Aux Engine	28	6-8	C90, C90A, C90GT, E90, F90, and C99	05-27357	
A76411	476411	58-920054-9	Fuel Pump, Aux Engine	28	4-5	95, B95, B95A and D95A	05-27358	
A80591	480591	477983 and 58-920054-3	Fuel Pump, Aux Engine	14	5-6	B19	05-27503	
					Cessna			
A76284	476284	C291506-0101, 9910088-3 or 9910004-3, -12	Fuel Pump, Heater	28	6-8	310P, 310Q, 320, 340, 414, 421 and 421B	05-27357	
A76284	476284	C291506-0101, 9910088-3 or 9910004-3, -12	Fuel Pump, Tip Tank	28	6-8	401, 402 and 414	05-27357	
A76411	476411	5118721-1, 6508091-1 or 6508092-1, -4	Fuel Pump, Heater	28	4-5	335	05-27358	
A76411	A76411	5118721-1, 6508091-1 or 6508092-1, -4	Fuel Pump, Tip Tank	28	4-5	310Q, 310R, 340, 401, 402, 402B and 414	05-27358	
A76411	476411	5118721-1, 6508091-1 or 6508092-1, -4	Pump, Alcohol/Anti-Ice	28	4-5	335, 402, 404, 421, 425, 441, 500, 501, 525, 550, 560 and 650	05-27358	
A80564*	480564	480563	Fuel Pump, Aux Engine	28	4-5	152, A152, F152, FA152, 172N, 172P, 172Q, 310K, 310L, 310N, 310P, 310Q, 310R, T310P, T310Q, T310R, 320D, 320E, 320F, 340, 340A, 401, 401A, 401B, 402, 402A, 402B, 411, 411A, 414, 421, 421A, 421B or 421C	05-27502	
*All A8056	4 Pumps	Must Use The Ap	propriate Griggs Stc. The	y Can l	Be Four	nd On Pma #Pq1206ce.*		
			Ame	erican C	eneral	(Grumman)		
A76411	476411	n/a	Fuel Pump, Aux Engine	28	4-5	AG-5B	05-27358	
A78360	478360	TAES2100-3	Fuel Pump, Aux Engine	14	4-5.5	AA-1, AA-1A, AA-1B and AA-1C	05-27500	
				Pip	er Aircr	aft		
A76088	476088	62220-004, 481-678	Fuel Pump, Aux Engine	28	4- 5.5	PA-23, PA23-160, PA-23-235, PA-E23-250, PA-23-250 (Navy UO-1)	05-27499	
A76088	476088	461-740, 622204-004	Fuel Pump, Aux Engine	28	4- 5.5	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-235	05-27499	
A78360	478360	35328-800, 481-666	Fuel Pump, Aux Engine	14	4- 5.5	PA-23, PA-23-160, PA-23-235, PA-E23-250, PA-23-250 (Navy UO-1)	05-27500	
A78360	478360	481-666	Fuel Pump, Aux Engine	14	4- 5.5	PA-24-250	05-27500	
A78360	478360	481-666	Fuel Pump, Aux Engine	14	4- 5.5	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28R-180, PA-28-181, PA-28-235	05-27500	
A78360	478360	481-666	Fuel Pump, Aux Engine	14	4- 5.5	PA-38-112	05-27500	
A80543	480543	481-701	Fuel Pump, Aux Engine	14	6.5-8	PA-28-236	05-27501	
A80543	480543	481-701	Fuel Pump, Aux Engine	14	6.5-8	PA-32-260 and PA-44-180	05-27501	
A80543	480543	481-842	Fuel Pump, Heater	14	6.5-8	PA-44-180	05-27501	
A80564*	480564		Fuel Pump, Aux Engine	28	4-5	PA-31, PA-31-325, PA-31-350 and PA-34-220T	05-27502	



IMPORTANT: FACET FUEL PUMPS ARE NOT FAA APPROVED AND ARE NOT INTENDED FOR AIRCRAFT USE.

#### FACET SOLID STATE ELECTRIC FUEL PUMPS

These pumps measure less than 3" in any direction and weigh only 18 oz. Fuel is supplied as soon as the ignition is turned on so the engine will start faster at colder temps. Built-in pressure relief prevents flooding and assures fast re-starts on hottest days. The all-steel plated case is water tight. Mounts with two bolts. For best results, mount the pump close to the fuel tank and below the liquid level.

The tank is self-priming to 12" to 36" Lift min dry. Standard 12 V models require only 1 amp at max. delivery.

Facet No.	Volts	PSI Max-Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Positive Shut Off Valve	Description	Part No.	Price
40100N	12	7.0-4.0	32	1/8 - 27 INT	36"	N	N	40106 Kit - Nuts, Washers, Bolts, Fittings	05-10771	
40102N	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	Kit - Nuts, Washers, Bolts, Fittings	05-10773	
40104	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	Facet Solid State	05-00799	
40105	12	4.5-3.0	30	1/8 - 27 INT	12"	N	N	Facet Solid State	40105	
40106	12	7.0-4.0	32	1/8 - 27 INT	36"	N	N	Facet Solid State	40106	
40163	12	2.5-1.5	17	1/8 - 27 INT	24"	Υ	N	Facet Solid State	40163	
40164	24	6.0-4.5	32	1/8 - 27 INT	12"	N	N	Facet Solid State	40164	
40171	12	3.5-2.0	15	1/8 - 27 INT	12"	Υ	Υ	Facet Solid State	05-40171	
40178	12	3.5-2.0	15	1/8 - 27 INT	36"	Υ	Υ	Facet Solid State	05-10781	
40185	12	11.5-9.0	32	1/8 - 27 INT	36"	Υ	N	Facet Solid State	05-10782	
40288	12	4.5-3.0	30	1/8 - 27 INT	36"	Υ	N	Facet Solid State	05-06860	
40289	12	7.0 - 4.0	30	1/8 - 27 INT	36"	Υ	N	Facet Solid State	05-06861	
FEP-42SV	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	40104 Kit-Fuel Filter, Fuel Fitting, 2 Bolts & 2 Nuts	05-00809	
FEP-42SV	12	4.0-1.5	25	1/8 - 27 INT	12"	N	N	40104 Kit-Fuel Filter, Fuel Fitting, 2 Bolts & 2 Nuts	05-00809	



#### **FACET GOLD-FLO INTERRUPTER TYPE PUMPS**

Fuel Compatibility: All models of the Facet High Performance Gold-Flo Solid State Fuel Pumps are compatible with gasoline, diesel, biodiesel, blended alcohol fuels and fuel additives.

Reliability: The new Gold-Flo Solid State Fuel Pump is an enhanced version of our Interrupter model. It has Solid State circuitry and will meet or exceed all performance specifications and is totally interchangeable. (These pumps have demonstrated an endurance life almost double that of the nearest competitor, according to our test data).

Easy to Install-Easy to Service: Two bolt mounting makes installations easy. Nothing to adjust. For best results, mount the pump close to the fuel tank and below the fuel level. The pump is self-priming to 24 inches vertical fuel lift. Vertical mounting is preferred to assure maintenance of rated pressures. An installation kit is available for replacement applications. The only service normally required is a simple cleaning of the filter and fuel inlet cavity.

Eliminates Vapor Lock: When properly installed on most vehicles a constant, smooth, dependable supply of fuel under pressure is assured in the hottest weather or in high altitudes.

Facet No.	Volts	PSI Max- Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Part No.	Price
40007E	12	5.5-4.0	36	1/4"-18 Int.	24"	N	05-10842	
40131E	12	5.5-4.0	34	1/8"-27 Int.	24"	N	480545	
476088	24	5.0-4.0	32	1/8"-27 Int.	24"	N	476088	
476087E	12	5.5-4.0	36	1/8"-27 Int.	24"	N	05-10832	
476459E	12	8.0-6.5	32	1/8"-27 Int.	24"	N	05-10833	
477060E	12	4.0-2.75	34	1/8"-27 Int.	24"	N	05-10835	
480534E	12	8.0-6.0	45	1/4"-18 Int.	24"	N	05-00802	



#### **AEROQUIP FITTING FOR FACET PUMPS**

On the recommendation of Rutan Aircraft Factory, we now stock Aeroquip #2071-6-6S fitting which is a steel elbow with a swivel nut which fits the 37 flares on the Facet 40108 and 40154 fuel pumps. This Aeroquip fitting makes installation of the pumps easy & economical.

P/N 04-05800 .....

#### FACET POSI-FLO SOLID STATE FUEL PUMPS



· Fuel Compatibility: All models of the Facet Posi-Flo Pumps are compatible with gasoline, diesel, biodiesel, blended alcohol fuels and fuel additives. · Reliability: Proven on thousands of original equip-

ment applications. No bearings, electrical contacts, or diaphragms to wear out or fatigue. Lasts four to five times longer than many other electric pumps. · Easy to Install-Easy to Service: Two bolt installa-

tion plus the small size makes installation easy. For best results, mount the pump close to the fluid or fuel tank and below the liquid level

Eliminates Vapor Lock: When properly installed on most vehicles a constant, smooth, dependable supply of fuel under pressure is assured in the hottest weather or in high altitudes.

Facet No.	Volts	PSI Max-Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Part No.	Price
60106	12	7.0-4.0	32	1/8 - 27 INT	12"	N	05-10856	
60245	12	4.0-1.5	23	1/8 - 27 INT	12"	N	05-10880	
60300	12	4.0-2.5	20	1/8 - 27 INT	50"	Υ	05-06862	
60301	12	5.0-3.5	30	1/8 - 27 INT	50"	Υ	05-06863	
60302	12	7.0-5.0	32	1/8 - 27 INT	50"	Υ	05-06864	
60303	12	10.0-7.0	34	1/8 - 27 INT	50"	Υ	05-10881	
60304	12	2 0-1 0	15	1/8 - 27 INT	24"	Υ	05-10882	



### FACET DURA-LIFT FUEL PUMPS

- · Application: Refrigeration trucks, marine generator sets, diesel filtration systems, industrial applications, and other diesel lift applications. These pumps are rated for diesel fuel, gasoline, blended alcohol fuels, and fuel additives.
- Solid State Reliability: Proven on many original equipment applications No electrical contacts. No bearings or diaphragms to wear out or fatigue. Endurance life almost doubles that of our nearest competitor.
- Easy to Install-Easy to Service: Two bolt mounting makes installations easy. Nothing to adjust. The pump

is self-priming to 120 inches (3.0 m). Vertical mounting is preferred to assure maintenance of rated pressures. The transparent housing allows for visual capability to monitor the cleanliness of the stainless steel filter. Eliminates Vapor Lock: When properly installed on most vehicles a

constant, smooth, dependable supply of fuel under pressure is assured in the hottest weather or in high altitudes.

Facet No.	Volts	PSI Max-Min	GPH	Fitting Size	Lift Min. Dry	Check Valve	Part No.	Price
40222	12	11.5-9.0	33	1/8-27 Int.	120"	Υ	05-10884	
40285	12	7.0-4.0	33	1/8-27 Int.	120"	Υ	05-10886	



WELDON NEW FUEL PUMPS

Over eighty years of reliable pump design, manufacturing, and support for aviation and military communities; we stand by the history of our quality and the quality of our history. Our AS9100 Registered and FAA PAH approved systems ensures quality and provides superior performance - making Weldon the choice of manufacturers and pilots.

Aircraft Make	Applicable Model	Weldon PMA Part No.	OEM Part No.	PMA Replaces Part No.	Part No.	Price
0	C212-CB, C212-CC, C212-CD, C212-CE, C212-CF, C212-DE, C212-DF	C4033-E	AC520068	N/A	08-10718	
Casa	C212-CB, C212-CC, C212-CD, C212-CE, C212-CF, C212-DE, C212-DF	4049-A	AC520068A	N/A	08-10717	
Cessna	Numerous Single Engine - Visit our website for all parts.	18000-A	C291504-0101	4140-00-17	08-07082	
Cessna	Numerous Single Engine - Visit our website for all parts.	18000-B	C291504-0201	4140-00-15	08-07083	
Cessna	Most All Eligibilities As 18000-B Plus the T182 (S/N 18267716 and Up)	XC18000-B	C291504-0201, C291504-0202	4140-00-15, 1515-00-1NV	08-16345	
Cessna	172R, 172S, 182S/T, T182T	18002-B8	5100-00-4	5100-00-1,-3,-4	08-10719	
Cessna	172Q (S/N 17275869 thru 17276516), 172RG (S/N 172RG0891 and up), R182 (S/N R18201629 and up)	XC18025-B	C291504-0203, C291504-0204	1500-00-31, 1500-00-35	08-16346	
Cessna	182	A8160-D	A8160-D	N/A	08-10720	
Cessna	T182	A8185-B	A8185-B	N/A	08-10725	
Cessna	206H	A10056-B	A10056-B	N/A	08-10721	
Cessna	T206H	A10055-B	A10055-B	N/A	08-10726	
Cessna	210N, T210N, 210R, T210R, P210N (S/N P21000761 thru P21000834), P210R	18000-B8	C291504-0205	1500-00-38	08-16347	
Cessna	310, 320, 340 & 400 Series	18013-B	4140-00-153	4140-00-153	08-10722	
Cessna	340A, 414, 421B	8150-B	8150-B	N/A	08-10723	
Cessna	Cessna/Columbia LC40, LC-41, LC42 (14 VDC Only)	18055-2A8	5173-00-3	5173-00-3	08-17190	
Cessna	Cessna/Columbia T240, LC41, LC42 (28 VDC Only)	18055-2B8	5544-00-1	5544-00-1	08-17191	
Cirrus	SR20, SR22, SR22T	18050-2B8	11839-004	5217-00-3, 5217-00-9	08-16348	
Commander	CPAC (Commander) 112, 112B	A8120-C	A8120-C	N/A	08-10727	
Beechcraft (Textron Av.)	A23-24 (S/N MA-1 through MA-363), A24 (S/N MA-364 through MA-368), A24R (S/N MC-2 through MC-150), B24R (S/N MC-152 through MC-448, MC-450, MC-451), C24R (S/N MC-449, MC-452 through MC-673)	18035-A	1816-00-1, 1816-00-1NV, 1171-00-1	1816-00-1, 1816-00-1NV, 1171-00-1		
Beechcraft (Textron Av.)	C24R (S/N MC-674 through MC-795)	18035-B	1817-00-1, 1817-00-1NV, 1420-00-1	1817-00-1, 1817-00-1NV, 1420-00-1		
Beechcraft (Textron Av.)	A36 (S/N E-1946, E-2104, E-2111 thru E-3629, E-3631 thru E-3635, G36 (S/N E-3630, E-3636 and after)	18053-2B	"4613-00-5, 4613-00-3NV, 4613-00-3"	"4613-00-5, 4613-00-3NV, 4613-00-3"	08-17081	
Beechcraft (Textron Av.)	J35 (S/N D-5062, D-5331 through D-5725), K35 (S/N D-5726 through D-6161), M35 (S/N D-6162 through D-6561), N35 (S/N D-6562 through D-6841), P35 (D-6842 through D-7309 - except D-7140), 35-33 (S/N CD-1 through CD-224, CD-233, CD-234, CD-236, CD-241, CD-246 through CD-250), 35-A33 (S/N CD-225 through CD-232, CD-235, CD-237 through CD-240, CD-242 through CD-245, CD-251 through CD-387) 35-B33 (S/N CD-388 through CD-813) 35-C33 (S/N CD-814 through CD-1118, except CD-982), E33 (S/N CD-1119 through CD-1234), F35 (S/N CD-1235 through CD-1254)	18026-A	4140-00-1, 4140-00-1NV, 4140-00-7, 4140-00-7NV	4140-00-1, 4140-00-1NV, 4140-00-7, 4140-00-7NV	08-16170	
Beechcraft (Textron Av.)	S35 (S/N D-7310 through D-7976), V35 (S/N D-7977 through D-8598), V35A (S/N D-8599 through D-9068), V35B (S/N D-9069 through D-10119 except D-10097), 35-C33A (S/N CE-1 through CE-179), E33A (S/N CE-180 thru CE-289), E33C (S/N CJ-1 thru CJ-25), 36 (S/N E-1 through E-184), A36 (S/N E-185 through E-1240 except E-1111), F33A (S/N CE-290 through CE-771 except CE-748), F33C (S/N CJ-26 through CJ-148), and G33 (S/N CD-1255 through CD-1304)	18021-A	4140-00-39, 4140-00-39NV	4140-00-39, 4140-00-39NV	08-14014	
Beechcraft (Textron Av.)	V35B (S/N D-10097, D-10120 and after), A36 (S/N E-1111, E-1241 through E-2110 except E-1946 and E-2104), F33A (S/N CE-748, CE-772 and after), and F33C (S/N CJ-149 and after)	18021-B	1296-00-1, 1296-00-1NV	1296-00-1, 1296-00-1NV	08-14015	
Beechcraft (Textron Av.)	36 (S/N E-1 through E-184), A36 (S/N E-185 through E-1240, except E-1111)	18021-A8	4258-00-15, 4258-00-15NV	4258-00-15, 4258-00-15NV		
Beechcraft (Textron Av.)	B55 (S/N TC-1608 and after), E55 (S/N TE-938, TE-943 and after), 58 (S/N TH-1 through TH-2124), G58 (S/N TH-2125 and after)	XC18054-2B8	4404-00-7NV	4404-00-7NV	08-17082	
Beechcraft (Textron Av.)	95-B55 & 95-B55A (S/N TC-955 thru TC-1607, except TC-1393 thru TC-1396 & TC-1402), 95-C55 & 95-C55A (S/N TC-350, TE-1 thru TE-451, except TE-50), D55 & D55A (S/N TE-452 thru TE-767), E55 & E55A (S/N TE-768 thru TE-942, except TE-938)	XC18054-2B8	4404-00-1, 96- 380020-1	4404-00-1	08-17082	

CORE CHARGES APPLY. SEE OUR WEBSITE FOR APPLICATION CHART.

## WELDON OVERHAULED FUEL PUMPS

Aircraft Make	Applicable Model (cont'd)	Weldon PMA Part No.	OEM Part No.	PMA Replaces Part No.	Part No.	Price
Beechcraft (Textron Av.)	95-B55 & 95-B55A (S/N TC-1608 thru TC-1969, TC-1971 thru TC-2002), E55 & E55A (S/N TE-938, TE-943 thru TE-1080, TE-1082 thru TE-1083), 58 & 58A (S/N TH-1 thru TH-2124), G58 (S/N TH-2125 and after)	XC18054-2B8	4404-00-7NV, 4404-00-1	4404-00-7NV, 4404-00-1	08-17082	
Beechcraft (Textron Av.)	95-B55 & 95-B55A (S/N TC-1970, TC-2003 and after), E55 & E55A (S/N TE-1081, S/N TE-1084 and after), 58 & 58A (S/N TH-766, TH-773 thru TH-1535)	XC18054-2B8	4404-00-7NV, 4404-00-7	4404-00-7NV, 4404-00-7	08-17082	
Beechcraft (Textron Av.)	95-A55, 95-B55, 95-B55A	XC18054-2B	96-380020	4613-00-1, 4613-00-1NV	08-17082	
Beechcraft (Textron Av.)	D95A, E95, 95-55, 95-A55	18026-B	"4140-00, 4140- 00NV"	"4140-00, 4140- 00NV"	08-17188	
Daher	TBM 700	2022-B	6097727225	N/A	08-10728	
Diamond	DA20-C1 (S/N 0002 and up)	18052-2A	18052-2A	5367-00-1	08-16349	
Diamond	DA-40, DA-42	18002-B	18002-B	5100-00-9	08-10729	
Enstrom	F28-A, 280	A8110-G	A8110-G	N/A	08-10730	
Enstrom	F-28C, 280C,F-28F, 280F, 280FX	A10019-D	A10019-D	N/A		
Enstrom	F-28A, 280C, F-28F, 280F, 280FX	A10019-E	A10019-E	N/A	08-10732	
Gippsland	GA8 AirVan S/N: GA8-00-004 through GA8-06-107 Service Bulletin SB-GA8-2005-30 Issue 3	8172-A	8172-A	4140 Series	08-10733	
Gippsland	GA8 AirVan S/N GA8-00-004 through GA8-06-107 Service Bulletin SB-GA8-2005-30 Issue 3	A8172-A	A8172-A	4140 Series	08-10734	
Found	FBA-2C1, FBA 2C2	A8120-D	A8120-D	N/A		
Fuji	Fuji Heavy Industries FA-200-180 (14 vdc only)	18026-A	4140-00-1, 4140-00-1NV, 4140-00-7, 4140-00-7NV	4140-00-1, 4140-00-1NV, 4140-00-7, 4140-00-7NV	08-16170	
Fuji	Fuji Heavy Industries FA-200-180 (28 vdc only)	18026-B	4140-00, 4140- 00NV	4140-00, 4140- 00NV	08-17188	
Lake	Lake LA-4-200 (Revo, Inc)	18020-A	18020-A	18020-A	05-11890	
Maule	(With Lycoming IO-540 engines and 14 VDC only) M-5-235C, M-6-235, M-7-235, MT-7-235, M-8-235, M-7-235A, M-7-235B, M-7-235C, MX-7-235, M-7-260, MT-7-260, M-7-260C, M-9-235	18021-A	1471-00-1, 1471-00-3, 1471-00-3CJ	1471-00-1, 1471-00-3, 1471-00-3CJ	08-14014	
Maule	(with Lycoming O-320/-360/-540 engines and 14 VDC only) M-5-235C, M-5-180C, M-6-235, M-6-180, M-7-235, MX-7-235, MX-7-180, MXT-7-180, MX-7-180, MXT-7-160, MXT-7-180A, MXT-7-180A, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C, MX-7-180C, MX-7-180V, MX-7-180V	18036-A	1184-00-1, 1184-00-3, 1184-00-3CJ	1184-00-1, 1184-00-3, 1184-00-3CJ		
Mooney	M20C, M20D, M20G	8164-A	8164-A	N/A	08-14018	
Mooney	M20C, M20D, M20G	18024-A	4140-00-21A	4140-00-21A	08-16169	
Mooney	M20J (SN 24-0001 thru 24-2999)	A8163-A	A8163-A	N/A	07-00785	
Mooney	M20J S/N thru 24-2999, M20K S/N thru 25-0999	18020-A	4140-00-19A	4140-00-19A	05-11890	
Mooney	M20J (SN 24-3000 and up)	A8163-B	A8163-B	N/A	08-10735	
Mooney	M20K Serial #25-001 to 25-0999	10054-A	10054-A	N/A	08-10736	
Mooney	M20K Serial #25-1000 & up	10054-B	10054-B	N/A	08-10737	
	M20M	A10051-D	A10051-D	N/A	08-10738	
Mooney	M20R, M205	A8152-B	A8152-B	N/A	08-10739	
Mooney	M20R, M20TN, M20U, M20V	18057-2B8	5791-00-1	5791-00-1	08-17192	
	Moravan (Zin Z-143L)	A8150-B1	A8150-B1	N/A	08-10740	
	Moravan (Zin Z-242L)	D8100-F	D8100-F	N/A	08-10741	
Piper	Piper PA-23-160, PA-23-235, PA-23-250 Aztec	B8001-H	33959-2	N/A	08-10743	
Piper	Piper PA23-235 Apache, PA-23-250 Aztec	B8001-G	33959-3	N/A	08-10742	
Piper	Piper PA-24-250 Comanche (with IO-540-C1B5 only), PA 24-260 (with IO-540-D4A5 Only), PA-24-260 (with IO-540-D4A5 Only), PA-24-260	18023-A	481-740	4140-00-218	08-14016	
Piper	Piper PA-28R-180 PA28R-200 PA-28R-201, PA-28R-201T PA-28RT-201, PA-28RT-201T Arrow & Turbo	8120-G	481-780	N/A	08-08120	
Piper	Piper PA-28R-201 Arrow	B8120-G	461-758	N/A	08-10744	
Piper	Piper PA-31-P Pressurized Navajo	B10007-D	48885-2	N/A	08-10749	
Piper	Piper PA-31-325, PA-31-300 Navajo	A10014-D44	42113-6	N/A	08-10746	
Piper	Piper PA31-325, PA31-300, PA-31-350, PA31-350 (T-1020) Navajo	A10014-D40	42113-5	N/A	08-10748	
Piper	Piper PA31-325, PA-31-350, PA31-350 (T-1020) Navajo	2B6-63WP	481-802	2B6-63		
Piper	Piper PA31-325, PA-31-350, PA31-350 (T-1020) Navajo	2B6-64WP	481-801	2B6-64		
Piper	Piper PA-31-350 Chieftain	A10014-D	53050-2	N/A	08-10747	
•	Piper PA-32-301T PA-32R-301T PA-32RT-300T	10080-B	481-807	N/A	08-10750	
Piper		+		<u> </u>		
- '	Piper PA-32R-301T Saratoga Serial #'s 3257001 & up	10080-D	461-750	l N/A	08-10/51	
Piper	Piper PA-32R-301T Saratoga Serial #'s 3257001 & up Piper PA-42 1000 Cheyenne 400LS	10080-D 4049-A	461-750 4049-A	N/A N/A	08-10751 08-10717	
· ·	Piper PA-32R-301T Saratoga Serial #'s 3257001 & up Piper PA-42 1000 Cheyenne 400LS Pilatus B/N BN2A-2, 2A-3, BN2A-20, 21, BN2B-20, 21				08-10751 08-10717 08-10752	

CORE CHARGES APPLY. SEE OUR WEBSITE FOR APPLICATION CHART.



#### WELDON FACTORY OVERHAULED FUEL PUMPS

Weldon offers our pumps as a factory overhaul. With a weldon factory overhaul, we ensure proper technique and approved parts are utilized to return the pump to service.

Most popular factory overhauled pumps. All weldon pumps available as overhauled - see spruce website.

Description	Part Number	Price
2003-B OH Pump	08-14396	
4049-A OH Unfeathering Pump	08-14229	-
8120-G/OH MAIN Aux Boost Pump	08-14248	
81250-H OH Pump	08-14249	
8150-B OH AUX Transfer Pump	08-14296	-
8163-A OH Pump	08-14306	
8163-B OH Pump	08-14307	
8172-A OH Pump	08-14313	
10080-B OH Pump	08-14386	
10080-D OH Pump	08-14387	
18000-A OH MAIN Aux Boost Pump	08-14202	
18000-B OH MAIN Aux Boost Pump	08-14203	
18002-B OH MAIN Aux Boost Pump	08-14204	
18002-B8 OH MAIN Aux Boost Pump	08-14205	
18013-B OH FUEL Transfer Pump	08-14214	
18020-A OH MAIN Aux Boost Pump	08-14217	
18021-A OH MAIN Aux Boost Pump	08-14218	
18021-A8 OH Pump	08-16168-1	
18021-B OH MAIN Aux Boost Pump	08-14219	
18022-B8 OH Pump	08-14220	
18023-A OH MAIN Aux Boost Pump	08-14221	
18028-B8 OH Pump	08-14222	
19001-B OH Pump	08-14397	
A8122-A OH Pump	08-14295	
A8123-H/OH Pump	08-14264	
A8150-B OH Pump	08-14326	

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#### **WELDON FACTORY DUKES PUMP** REPLACEMENT GUIDE

The preferred replacement by OEMs and Pilots alike. Made for continuous duty. The Choice for Performance, Safety, Durability – and we back it up!

PMA Replaces Part No.	Weldon PMA	Spruce	Spruce OH	Price
PINIA Replaces Part No.	Part No.	Part No.	Part No.	Price
1184-00-3, 1184-00-3CJ	18036-A			
1171-00-1	18035-A			
1184-00-1	18036-A			
1296-00-1, 1296-00-1NV	18021-B	08-14015	08-14219	
1420-00-1	18035-B			
1471-00-1	18021-A	08-14014	08-14218	
1471-00-3, 1471-00-3CJ	18021-A	08-14014	08-14218	
1500-00-31	XC18025-B	08-16346		
1500-00-35	XC18025-B	08-16346		
1500-00-38	18000-B8	08-16347		
1515-00-1NV	XC18000-B	08-16345		
18020-A	18020-A	05-11890	08-14217	
1816-00-1, 1816-00-1NV	18035-A			
1817-00-1, 1817-00-1NV	18035-B			
4140-00, 4140-00NV	18026-B	08-17188		
4140-00-1, 4140-00-1NV	18026-A			
4140-00-15	18000-B	08-07083	08-14203	
4140-00-153	18013-B	08-10722	08-14214	
4140-00-17	18000-A	08-07082	08-14202	
4140-00-19A	18020-A		08-14217	
4140-00-218	18023-A	08-14016	08-14221	
4140-00-21A	18024-A			
4140-00-39, 4140-00-39NV	18021-A	08-14014	08-14218	
4140-00-7, 4140-00-7NV	18026-A			
4258-00-15, 4258-00-15NV	18021-A8		08-16168-1	
4404-00-1	XC18054-2B8	08-17082		
4404-00-7, 4404-00-7NV	XC18054-2B8	08-17082		
4613-00-1, 4613-00-1NV	XC18054-2B	08-17082		
4613-00-3, 4613-00-3NV	18053-2B	08-17081		
4613-00-5	18053-2B	08-17081		
5100-00-1	18002-B8	08-10719	08-14205	
5100-00-3	18002-B8	08-10719	08-14205	
5100-00-4	18002-B8	08-10719	08-14205	
5100-00-9	18002-B	08-10729	08-14204	
5173-00-3	18055-2A8	08-17190		
5217-00-3	18050-2B8	08-16348		
5217-00-9	18050-2B8	08-16348		
5367-00-1	18052-2A	08-16349		
5544-00-1	18055-2B8	08-17191		
5791-00-1	18057-2B8	08-17192		

**CORE CHARGES APPLY.** SEE OUR WEBSITE FOR APPLICATION CHART.

Description	Part Number	Price
A8150-B1 OH Pump	08-14327	
A8160-D OH Pump	08-14333	
A8172-A OH Pump	08-14341	
A8185-B OH Pump	08-14350	
A10014-D OH Pump	08-14375	
A10014-D40 OH Pump	08-14376	
A10014-D42 OH Pump	08-14377	
A10014-D44 OH Pump	08-14378	
A10050-D OH Pump	08-14360	
A10051-D OH Pump	08-14361	
A10055-B OH Pump	08-14364	
A10056-B OH Pump	08-14365	
A10063-A OH Pump	08-14366	
B8001-G OH AUX Pump	08-14272	
B8001-H OH AUX Pump	08-14273	
B8110-F OH Pump	08-14276	
B8110-G OH Pump	08-14277	
B8120-G OH MAIN AUX Pump	08-14278	
B8120-H OH Pump	08-14279	
B10000-F OH Pump	08-14382	
B10010-F OH Pump	08-14384	
C8100-E OH Pump	08-14285	
C8100-F OH Pump	08-14286	
D8100-E OH Pump	08-14289	
D8100-F OH MAIN AUX Pump	08-14290	
T18009-B8 OH Pump	08-14223	



#### **TEMPEST REBUILT FUELPUMP RG-9080J4A/M**

Tempest rebuilt fuel pump RG-9080J4A/M for engine model TIO-360-A3B6 ......P/N 05-15063 .....

### TEMPEST ROMEC / CRANE FUEL PUMP REBUILT QUICK KITS

The next time you rebuilt your fuel components, don't spend time on the phone chasing parts, just order a "Quick Kit" and take the hassle out of your rebuilt. Quick Kits include the mandatory replacement parts, plus the parts used by fuel professionals to insure the job is done right!

Fuel Servo No.	Model Number	Our Part No.	Quick Kit No.	Price
RG-9080	2, F1, F2, G1, G2, J1, J2, J3, J4, J5, J7A, J4A	07-09080-0	CFK- 9080-0	
RG-15980	A, B, B1, C, D, E, F, G, N, N1, P, P1, R, R1, S, S1	07-15980	CFK- 15980	



#### SAFE-T SYPHON

The Safe-T Syphon works with a 1/2 inch hose and the "pump" is made from copper tubing with a glass marble. This makes it ideal for high capacity siphoning of almost any liquid, including fresh and salt water, gasoline, diesel fuel, oil, etc. P/N 05-22001 .....----

#### ROTARY FUEL PUMI

Industry Standard for Rotary pumps; these are by far the heaviest duty, for severe outdoor use in extreme weather conditions. Deliver media with a head / lift up to 20' solid cast iron construction, fully CNC machined to close tolerances. Pump handle rotates a high quality sintered powder metal 3

vane rotor inside a highly finished pumping chamber. The graphite veins are self lubricating & non wearing with high quality graphite seal that allows the pump to be used with a wide variety of fluids including diesel with up to 15% ethanol blend. This pump has self priming operation with discharge up to 38 LPM (10 GPM). Also supplied complete with 2" Bung, Telescopic Suction Tube with Strainer for use with 15 gallons (50 litre) 55 gallons (205 litre) barrels. DO NOT USE With Water Based Media. P/N 08-07611 .....



#### **7GPM SIPHON PUMP FOR DRUMS**

7 gpm bellow action siphon pump includes 4ft. discharge hose and 2" bung, fits 15-30-55 gallon barrels. Pump, Siphon, 7 GPM Drum Pump, Siphon, 500 SSU, Outlet Size 1 Inch Outside Diameter, Suction Design Tube, Suction Pipe Size Outside Diameter 1 In, Adapter Type 2 Inch NPT Bung, Fits 15, 30 and 55 Gallon Drums, Piston Polyethylene, Pump Body Material Polyethylene, 



### CJ AVIATION NEW AND NEW EXCHANGE FUEL PUMPS

New FAA-PMA Direct Replacement Fuel Boost Pumps for Cessna, Beech, Diamond, Navion, Maule, Mooney, Lake and Diamond Aircraft. These certified drop in replacement pumps have a new improved check valve and more efficient motor. There are no Service Bulletins which eliminates the 10 year overhaul requirements. Pumps are warrantied for two years or 300 hours. Exchange pumps are in stock and CJ Aviation, Inc. is willing to drop ship on behalf of Aircraft Spruce for quicker delivery. All pumps come with 8130's and technical support from the manufacturer.

#### **NEW OUTRIGHT FUEL PUMPS**

Model No.	OEM No.	Description	Part No.	Price
4140-00-15CJ	4140-00-15	CJ Fuel Pump New	05-07962	
4140-00-17CJ	4140-00-17	CJ Fuel Pump New	05-07974	
5100-00-9CJ	5100-00-9	CJ Fuel Pump New	05-10550	

#### NEW EVOLANCE FILE DIMES

NEW EXCHANGE FUEL PUMPS					
Model No.	OEM No.	Description	Part No.	Price	
1184-00-3CJ	1184-00-3	CJ Fuel Pump New Exchange	05-07965		
1296-00-1NVCJ	1296-00-1NV	CJ Fuel Pump New Exchange	05-07966		
1471-00-3CJ	1471-00-3	CJ Fuel Pump New Exchange	05-07967		
4140-00-153CJ	4140-00-153	CJ Fuel Pump New Exchange	05-07983		
4140-00-15CJ	4140-00-15	CJ Fuel Pump New Exchange	05-07969		
4140-00-17CJ	4140-00-17	CJ Fuel Pump New Exchange	05-07976		
4140-00-17NCJ	4140-00-17N	CJ Fuel Pump New Exchange	05-07977		
4140-00-19ACJ	4140-00-19A	CJ Fuel Pump New Exchange	05-07978		
4140-00-21ACJ	4140-00-21A	CJ Fuel Pump New Exchange	05-07979		
4140-00-39NVCJ	4140-00- 39NV	CJ Fuel Pump New Exchange	05-07981		
4140-00-400CJ	4140-00-400	CJ Fuel Pump New Exchange	05-07986		
4140-00-401CJ	4140-00-401	CJ Fuel Pump New Exchange	05-07987		
4140-00-57CJ	4140-00-57	CJ Fuel Pump New Exchange	05-07982		
4140-00-7NVCJ	4140-00-7NV	CJ Fuel Pump New Exchange	05-07968		
4258-00-15NVCJ	4258-00- 15NV	CJ Fuel Pump New Exchange	05-07988		
4404-00-7NVCJ	4404-00-7NV	CJ Fuel Pump New Exchange	05-07989		
4613-00-3NVCJ	4613-00-3NV	CJ Fuel Pump New Exchange	05-07991		
4613-00-5NVCJ	4613-00-5NV	CJ Fuel Pump New Exchange	05-07992		
5100-00-4CJ	5100-00-4	CJ Fuel Pump New Exchange	05-07993		
5100-00-9CJ	5100-00-9	CJ Fuel Pump New Exchange	05-07994		

NOTE: A CORE CHARGE APPLIES TO ALL EXCHANGE FUEL PUMPS. REFER TO OUR WEBSITE FOR DETAILS ON THE CJ AVIATION CORE POLICY.

#### **OVERHAULED EXCHANGE FUEL PUMPS**

Model No.	Description	Part No.	Price
1184-00-3	Fuel Pump O/H Exchange	05-07997	
1296-00-1NV	Fuel Pump O/H Exchange	05-07999	
1500-00-31	Fuel Pump O/H Exchange	05-08003	
4140-00-11NV	Fuel Pump O/H Exchange	05-08007	
4140-00-135	Fuel Pump O/H Exchange	05-08018	
4140-00-184	Fuel Pump O/H Exchange	05-08019	
4140-00-19B	Fuel Pump O/H Exchange	05-08012	
4140-00-1NV	Fuel Pump O/H Exchange	05-08006	
4140-00-21A	Fuel Pump O/H Exchange	05-08013	
4140-00-218	Fuel Pump O/H Exchange	05-08021	
4140-00-400	Fuel Pump O/H Exchange	05-08022	
4140-00-47	Fuel Pump O/H Exchange	05-08016	
4140-00-57	Fuel Pump O/H Exchange	05-08017	
4404-00-7NV	Fuel Pump O/H Exchange	05-08023	
4613-00-3NV	Fuel Pump O/H Exchange	05-08024	
4140-00-39NV	Fuel Pump O/H Exchange	05-08014	
4140-00-7NV	CJ O/H Dukes Pump Exchange	05-12622	

#### WELDON PUMP OVERHAUL/EXCHANGES

JC LIP SEAL					
Model	Part No.	Price	Model	Part No.	Price
8150-B	08-14296		8163-A	08-14306	
8159-A	08-14304		8163-B	08-14307	
	JC FACE SEAL				
Model	Part No.	Price	Model	Part No.	Price
A8150-B	08-14326		A8163-B	08-14366	-
A8150-B1	08-14327		A8164-A	08-14337	-
A8163-A	07-00785				
		J LIP	SEAL		
Model	Part No.	Price	Model	Part No.	Price
33959-2	08-14233		A8110-G	08-14263	
33959-3	08-14234		B8001-G	08-14272	
8120-H	08-14249		B8001-H	08-14273	
			C8100-E	08-14285	
			C8100-F	08-14286	
		J FAC	SEAL		
Model	Part No.	Price	Model	Part No.	Price
B8110-G	08-14277		B8120-G	08-14278	
			B8120-H	08-14278	
	JA SERIES				
Мо	del	Part	No.	Pri	ce
A81:	20-C	A81:	20-C	Call Fo	r Quote



These aviation pumps are only intended to be groundbased or vehicle mounted. Do not use or mount in or on the aircraft. For use with aviation gasoline (AVGAS 100LL) and kerosene grade (JET A). User should consult NFPA 407 Standard for aircraft fuel servicing for safety requirements during ground fuel servicing of aircraft using liquid petroleum fuels. This product has no actual or implied compliance with this standard. Manufacturer warranty is 2 years.

PUMP MODELS THAT MAY BE USED IN AVIATION REFUELING (PO/PX MODELS) ARE NOT SUPPLIED WITH APPROPRIATE HOSE, NOZZLE, AND SUCTION PIPE. THESE ITEMS MUST MEET NFPA 407 GUIDELINES. For ground-based refueling only. Do not use in or on the aircraft. For use with aviation gasoline (AVGAS 100LL) and kerosene grade (Jet A). User should consult NFPA 407 Standard for Aircraft Fuel Servicing for safety requirements during ground fuel servicing of aircraft using liquid petroleum fuels. This product has no actual or implied compliance with this standard.









M-1	50S-	PO
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V25-012PO

PRO20-115PO

PRO35-115PO

PUMPS					
Model No.	Volt	Flow Range	Description	Part No.	Price
M-150S-PO	12-Volt	15 GPM / 57 LPM	GPI Aviation Refueling Pump	08-07463	
V25-012PO	12-Volt	25 GPM / 95 LPM	GPI Aviation Refueling Pump	08-07464	
PRO20-115PO	115-Volt	20 GPM / 76 LPM	GPI Aviation Refueling Pump	08-07434	
PRO35-115PO	115-Volt	35 GPM / 132 LPM	GPI Aviation Refueling Pump	08-07466	
Use With		For use with gasoline blends (up to E15), diesel fuel blends (up to B20), kerosene. Aviation gasoline (AVGAS 100LL) and kerosene grade (Jet A).			



METERS				
Model No.	Flow Range	Description	Part No.	Price
QM40-G8N	2-40 GPM (Gallon)	GPI Aviation Refueling Meter	08-17435	
QM40-L8N	8-150 LPM (Liters)	GPI Aviation Refueling Meter	08-07468	
Use With  For use with gasoline blends (up to E15), diesel fuel blends (up to B20), kerosene.  Aviation gasoline (AVGAS 100LL) and kerosene grade (Jet A).				



COMBOS				
Model No.	Description	Part No.	Price	
PRO20-115PO/QM40G8N	Combo Pump / Meter - Calibrated in Gallons	08-07436		
PRO35-115PO/QM40G8N	Combo Pump / Meter - Calibrated in Gallons	08-07471		
PRO20-115PO/ QM40LBN	Combo Pump / Meter - Calibrated in Liters	08-07437		
PRO35-115PO/ QM40LBN	Combo Pump / Meter - Calibrated in Liters	08-07438		

#### HARTZELL FUEL PUMPS

FAA/PMA Approved 202F series Fuel Pumps for Lycoming Engines from Hartzell Engine Technologies. HET 202F series are a direct replacement for the Crane/Lear Romec RG9570 series engine driven fuel pumps. Applicable for use on a wide variety of Lycoming engines. The 202F series fuel pumps include two part numbers covering specific installations:

Description	Lear/romec Replacement	Lycoming Replacement	Beech Replacement	Part No.	Price
202F-1001	RG9570k1, RG9570k1/M	62E22586	Beech 50-389141-1	07-03534	
202F-1002	RG9570p1, RG9570p1/M	62E22585, LW-19012		07-03537	



### HARTZELL ENGINE TECH NEW FUEL PUMP 201F

The OEM pump on fuel injected Lycoming engines with high flow and pressure requirements. The **201F** series are also available as FAA-PMA approved replacements for the Lear Romec RG17980 series of fuel pumps. Medium capacity engine driven positive displacement fuel pump Carbon vanes for improved wear characteristics. Tightly toleranced for improved pump performance and low pressure fluctuation.

Description	Lear/romec Replacement	Lycoming Replacement	Part No.	Price
201F-5001	RG17980/M	62D22565	07-01751	
201F-5003	RG17980D/M	62D22567	07-01753	
201F-5005	RG17980J/M	62D22569	07-01755	
201F-5006	RG17980K/M	62D22570	07-01756	
201F-5007	RG17980P/M	62D22572	07-01757	
201F-5008	RG17980U/M	62D22573	07-01758	



#### HARTZELL ENGINE TECH NEW FUEL PUMP 200F

The OEM pump on fuel injected Lycoming engines with high flow and pressure requirements. The 200F series are also available as FAA-PMA approved replacements for the Lear Romec RG9080 series of fuel pumps. High capacity engine driven positive displacement fuel pump Carbon vanes for improved wear characteristics. Tightly toleranced for improved pump performance and low pressure fluctuation.

Description	Lear/romec Replacement	Lycoming Replacement	Part No.	Price
200F-5001	RG9080F2/M	62E22580	07-01746	
200F-5002	RG9080J4A/M	62E22581	07-01747	
200F-5003	RG9080J6A/M	62E22582	07-01748	
200F-5004	RG9080J7A/M	62E22583	07-01749	
200F-5005	RG9080J8A/M	62E22584	07-01750	

#### **ANDAIR FUEL BOOST PUMPS**



PX375-TC Boost Pump for 3/8" Fuel Lines: • Integral bypass and pressure relief valve • 11-14V DC, 6 amps max • Weight: 460g (16.23 oz) • Fittings: 1/4 NPT input, AN-6 male output • 1/4 NPT to AN-6 adapter included • Suitable for injection engines such as Lycoming IO320, IO360, IO540 etc. It is strongly recommended that a filter is fitted upstream of the pump. The output of this FX375-MK filter can be fitted directly to the input of this pump.

PX500-TC Boost Pump for 1/2" Fuel Lines: • Integral bypass and pressure relief valve • 11-14V DC, 6 amps max • Weight: 470g (16.23 oz) • Fittings: 3/8 NPT input, AN-8 male output • 3/8 NPT to AN-8 adapter included • Suitable for injection engines such as Lycoming IO540 etc. It is strongly recommended that a filter is fitted upstream of the pump. The output of this FX500-MK filter can be fitted directly to the input of this pump.

PX375-TC Pump for 3/8" Fuel Line	sP/N 05-12559
PX500-TC Pump for 1/2" Fuel Line	sP/N 07-01334
ANDAIR FILTERS	
FX375-MK for 3/8" Lines	P/N 05-12560
FX500-MK for 1/2" Lines	P/N 05-12561

#### RAPCO DUKES OVERHAULED FUEL PUMPS

Model No.	Part No.	Price
4140-00	08-13508	
4140-00-103	08-13509	
4140-00-153	08-13510	
4140-00-17	08-13511	
4140-00-191	08-13512	
4140-00-19A	08-13513	
4140-00-1	08-13514	
4140-00-11	08-13515	
4140-00-218	08-13516	
4140-00-21A	08-13517	
4140-00-220	08-13518	
4140-00-301	08-13519	
4140-00-311	08-13520	
4140-00-39	08-13521	
4140-00-47	08-13522	
4140-00-57	08-13523	
4140-00-7	08-13524	
4258-00-15	08-13525	
4404-00-7	08-13526	
4404-00-8	08-13527	
4613-00-1	08-13528	
4613-00-3	08-13529	
4613-00-5	08-13530	
1171-00-1	08-13531	
1184-00-3	08-13533	
1420-00-1	08-13535	
1429-00-1	08-13536	
1458-00-1	08-13537	
1471-00-3	08-13538	
1499-00-19	08-13539	
1499-00-21	08-13540	
1500-00-22	08-13541	
1500-00-35	08-13542	
1500-00-38	08-13543	
1500-00-65	08-13544	
1500-00-67	08-13545	
1515-00-1	08-13546	



### **DUKES OVERHAULED FUEL PUMPS**

Dukes Aerospace Fuel Pumps are available on an overhaul exchange basis. All fuel pumps are overhauled in accordance with factory specifications and contain 100% OEM parts.

Attention: There will be an additional Core Charge per order.

	1	<u> </u>
Model No.	Part No.	Price
1184-00-1	08-07563	
1296-00-1	08-07565	
1458-00-1	08-07567	
1471-00-3	08-07568	
1499-00-21NV	08-07569	
1500-00-35	08-07571	
1500-00-38	08-07572	
1515-00-1	08-07573	
1521-00-1	08-07574	
1816-00-1NV	08-07575	
4140-00-153	08-07576	
4140-00-19A	08-07578	
4140-00-1	08-07579	
4140-0-218	08-07580	
4140-00-21A	08-07581	
4140-00-39	08-07582	
4140-00-57	08-07583	
4150-00-1	08-07584	
4258-00-15	08-07585	
4404-00-404	08-07586	
4613-00-5NV	08-07589	
5100-00-19	08-07590	
5217-00-3	08-07592	
1499-00-19	08-07593	
1500-00-42	08-07594	
4140-00-7	08-07595	
4140-00-11	08-07596	
4140-00-17	08-07597	
4140-00-67	08-07598	
4140-00-198	08-07599	
4140-00-311	08-07600	
4258-00-21	08-07601	
4634-00	08-07602	
5100-00-9	08-07603	
5288-00-1	08-07604	
5367-00-1	08-07605	
5596-00-1	08-07606	
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Utilizing over 35 years of manufacturing FAA/PMA replacement magneto parts, PowerUp is proud to introduce an ALL NEW direct magneto replacement for general aviation. Performance improvements including coil, capacitor, breaker points, and impulse coupling make the PowerUp magneto the superior quality option for General Aviation. A core charge applies to these magnetos.

PowerUp Aircraft Ignition Systems magneto series with both non-impulse and impulse coupled units, with both 4 and 6 cylinder.

#### **POWERUP NEW BENDIX MAGNETOS - 4 CYLINDER**

Model	Part Number	Price
ES-51360-29	07-27123	
ES-600644-1	07-27126	
ES-600644-3	07-27127	
ES-51360-37	07-27133	
ES-51360-41	07-27134	
ES-51360-46	07-27135	
ES-51360-54	07-27136	

Model	Part Number	Price
ES-500514-1	07-27137	
ES-500514-2	07-27138	
ES-500514-3	07-27139	
ES-500514-4	07-27140	
ES-500514-5	07-27141	
ES-600614-1	07-27158	
ES-600644-201	07-27167	

#### **POWERUP NEW BENDIX MAGNETOS - 6 CYLINDER**

Description	Part Number	Price
ES-51365-33	07-27124	
ES-51365-46	07-27125	
ES-600646-1	07-27128	
ES-600646-2	07-27129	
ES-600646-4	07-27130	
ES-600656-1	07-27131	
ES-600656-3	07-27132	
ES-51365-32	07-27142	
ES-51365-34	07-27143	
ES-51365-35	07-27144	
ES-51365-39	07-27145	
ES-51365-47	07-27146	
ES-51365-54	07-27147	
ES-500516-2	07-27148	
ES-500516-3	07-27149	
ES-500516-4	07-27150	
ES-500516-5	07-27151	
E3-300316-3	07-27151	

Description	Part Number	Price
ES-500516-6	07-27152	
ES-500516-7	07-27153	
ES-500516-9	07-27154	
ES-500516-10	07-27155	
ES-500556-1	07-27156	
ES-500556-3	07-27157	
ES-600616-3	07-27159	
ES-600616-4	07-27160	
ES-600616-5	07-27161	
ES-600616-7	07-27162	
ES-600616-9	07-27163	
ES-600606-1	07-27164	
ES-600606-3	07-27165	
ES-600646-201	07-27166	
ES-500556-101	07-27168	
ES-500556-103	07-27169	
ES-500556-203	07-27170	

LYCOMING 66K4A3SN-01 EIS ELECTRONIC IGNITION SYSTEM

The Lycoming EIS is a drop-in capable replacement for magnetos and provides easy installation and engine startability. Lycoming EIS is designed to go to TBO and does not include a Lycoming-scheduled maintenance requirement. It meets the ever-growing performance requirements of modern-day aircraft design, including less maintenance, lower weight, and more spark control than a traditional magneto.

The Lycoming EIS was developed by SureFly Partners, Ltd. with input from Lycoming's engineering teams to meet Lycoming's exacting specifications. With over two years of research and development, including exhaustive endurance and durability testing, the Lycoming EIS is the only electronic ignition system on the market with the proven performance necessary to bear the Lycoming name. The Lycoming EIS utilizes a solid-state design that has no moving parts and nearly eliminates scheduled maintenance requirements.

EM PN	Cylinders	Drive Type	Degrees	Part Number	Price
66K4A3SN-01	4 Cylinders	Plain Drive	20	07-25424	
66K4A3SN-02	4 Cylinders	Plain Drive	25	07-25425	
66K4F3SN-01	4 Cylinders	Impulse Drive	20	07-25426	
66K4F3SN-02	4 Cylinders	Impulse Drive	25	07-25427	
66K4D3SN-01	6 Cylinders		20	07-25428	
66K4D3SN-02	6 Cylinders		25	07-25429	
66K4D3SN-03	6 Cylinders		23	07-25430	
66K4D3SN-04	6 Cylinders		20	07-25431	
66K4A3SN-04	6 Cylinders	-	20	07-25433	

### **POWERUP OVERHAULED BENDIX MAGNETOS**



Overhauled Bendix Magnetos By Powerup.

Note: Accessories include the TCM/Bendix IMPULSE Couplings (core charge applies) and the TCM/Bendix CAM Couplings (core Note: Please verify P Lead end before ordering. Contact sales for more information.

#### Core charges apply to all Overhauled Magnetos.

Model	Part Number	Price	Model	Part Number	Price	Model	Part Number	Price
10-51360-29	10-51360-29		10-349310-4DR	07-01584		10-682605-13R DU	07-01672	
10-51360-37R	10-51360-37R		10-349310-5R	07-01586		10-682610-13R DU	07-01673	
10-349310-1R	10-349310-1R		10-349310-8DR	07-01587		10-682620-11R	07-01674	
10-51360-27	10-51360-27R		10-349310-8R	07-01588		10-682910-13R DU	07-01675	
10-163050-9R	07-02489		10-349320-4DR	07-01589		10-682910-18R DU	07-01676	
10-51365-47R	10-51365-47R		10-349320-4R	07-01590		10-79020-10R	10-79020-10	
10-163005-11R	07-01523		10-349350-6R	07-01593		10-79020-118R	07-01677	
10-163005-3R	07-01524		10-349350-7R	07-01594		10-79020-119R	07-01678	
10-163010-15R	07-01526		10-349365-6R	07-01598		10-79020-17R	07-01681	
10-163010-2R	07-01527		10-349365-10R	07-01595		10-79020-18R	07-01682	
10-163010-6R	07-01529		10-349370-2R	07-01603		10-79020-19R	07-01683	
10-163015-3R	07-01531		10-349370-5R	07-01606		10-163020-2R	08-15795	
10-163020-4R	07-01534		10-349370-6R	07-01607		10-163030-1R	08-15796	
10-163045-1R	07-01536		10-349460-1DR	07-01609		10-500514-2R	08-15799	
10-163045-3R	07-01538		10-349490-1DR	07-01610		10-500514-3R	08-15800	
10-163045-6R	07-01539		10-349490-1R	07-02520		10-500514-4R	08-15801	
10-163045-8R	07-02482		10-349490-3R	07-01612		10-500514-5R	08-15802	
10-163050-1R	07-01541		10-349500-1R	07-02524		10-500514-8R	08-15803	
10-163050-2R	07-01542		10-349510-1DR	07-01614		10-500514-201R	08-15804	
10-163050-6R	07-01543		10-349510-3R	07-01616		10-500516-2R	08-15805	
10-163050-7R	07-01544		10-349520-1DR	07-01617		10-500516-3R	08-15806	
10-163055-1R	07-01546		10-682555-11	07-02426		10-500516-5R	08-15807	
10-163060-2R	07-01548		10-382555-12R DU	07-25998		10-500516-6R	08-15808	
10-349220-4R	07-01549		10-382555-151R D	07-23930		10-500516-7R	08-15809	
			10-382555-15R DU	07-02430		10-500516-9R	08-15809	
10-349235-3R	07-01551		10-382550-11R DU	07-02429		10-500516-10R	08-15811	
10-349260-3R	07-01553		10-382560-11R DU	07-02432		10-500516-10H	08-15816	
10-349260-4R	07-01554		10-382603-13R DU	07-01672		10-500356-90TH	08-15818	
10-349260-6R 10-349260-7R	07-01556 07-01557		10-382910-13R DU	07-01675		10-52350-23R	08-15819	
10-349260-7R 10-349270-7R	07-01557		10-382910-1311 DU	07-01675		10-600604-1R	08-15819	
10-349270-711 10-349285-1R	07-01558		10-382920-11R DU	07-01070		10-600604-111 10-600606-3R	08-15821	
10-349285-111 10-349285-5R	07-01559		10-51360-41R	07-02443		10-600614-2R	08-15822	
	07-01560		10-51360-41R	07-01642		10-600614-3R	08-15823	
10-349285-7R			-	07-01642		10-600614-3R	08-15824	
10-349290-17R	07-01562		10-51360-46R					
10-349290-1DR	07-01563		10-51360-47R	07-01644		10-600616-5R	08-15825 08-15826	
10-349290-2DR	07-01565		10-51360-54R	07-01646		10-600616-6R		
10-349290-2R	07-01566		10-500556-203R	07-19311		10-600616-101R	08-15827	
10-349290-3DR	07-01567		10-51360-58R	07-01648		10-600644-3R	08-15829	
10-3492920-3R	07-01568		.10-51365-32R	07-01650		10-600644-4R	08-15830	
10-349290-4R	07-01569		10-51365-33R	07-01651		10-600644-5R	08-15831	
10-349290-9R	07-01570		10-51365-34R	07-01652		10-600644-202R	08-15832	
10-349300-4DR	07-01571		10-51365-35R	07-01653		10-600646-101R	08-15833	
10-349300-4R	07-01572		10-51365-40R	07-01654		10-600646-3R	08-15834	
10-349305-1DR	07-01573		10-51365-48R	07-01659		10-600646-4R	08-15835	
10-349305-2R	07-01575		10-51365-57R	07-01660		10-600654-1R	08-15836	
10-349305-3R	07-01576		10-51365-9R	07-01661		10-600656-3R	08-15837	
10-349305-4R	07-01577		10-52350-22R	07-01664		10-79020-16R	08-15838	
10-349310-10R	07-01578		10-600616-7R	07-02591				
10-349310-11R	07-02505		10-600644-201R	10-06225				
10-349310-14R	07-01580		10-682555-13R DU	07-01667				
10-349310-3R	07-01583		10-682555-141R DU	07-02601				

## **ENDIX MAGNETOS**



**OVERHAULED BENDIX MAGNETOS**A Bendix magneto is a specific type of aircraft magneto manufactured by Teledyne Continental Motors. There are multiple models of Bendix magnetos, and they can be infinitely overhauled. As a result, the Bendix magneto is more often overhauled than bought new, allowing for efficient, cost-effective use.

Core charges apply to all Overhauled Magnetos.

10-163010-10 O/H Bendix Mag 10-103022 10-163060-1R O/H Bendix Mag 10-349220-5 O/H Bendix Mag 10-349260-7 O/H Bendix Mag 10-349290-1 O/H Bendix Mag 10-349293-1 O/H Bendix Mag 10-349293-1 O/H Bendix Mag 10-349305-1 O/H Bendix Mag 10-349310-2 O/H Bendix Mag 10-349310-4R O/H Bendix Mag 10-349350-4 O/H Bendix Mag 10-349350-5 O/H Bendix Mag 10-349350-5 O/H Bendix Mag 10-349365-1 O/H Bendix Mag 10-349370-1 O/H Bendix Mag 10-349370-1 O/H Bendix Mag 10-349370-1 O/H Bendix Mag 10-349370-2 O/H Bendix Mag 10-349365-3 O/H Bendix Mag 10-349420-2 O/H Bendix Mag 10-349420-2 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349450-1 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349450-1 O/H Bendix Mag 10-349520-1 O/H Bendix Mag 10-349520-1 O/H Bendix Mag 10-500516-2 O/H Bendix Mag 10-500516-2 O/H Bendix Mag 10-500556-101 O/H Bendix Mag 10-500556-103 O/H Bendix Mag 10-500556-103 O/H Bendix Mag 10-500556-203 O/H Bendix Mag 10-500556-3 O/H Bendix Mag 10-500556-3 O/H Bendix Mag 10-500556-901R O/H Bendix Mag 10-502550	Description	Part No.	Price
10-163060-1R O/H Bendix Mag 07-02392 10-349220-5 O/H Bendix Mag 07-01935 10-349260-7 O/H Bendix Mag 07-01938 10-349290-1 O/H Bendix Mag 07-01933 10-349293-1 O/H Bendix Mag 07-01977 10-349305-1 O/H Bendix Mag 07-01941 10-349310-2 O/H Bendix Mag 07-01980 10-349310-4R O/H Bendix Mag 07-01980 10-349350-4 O/H Bendix Mag 07-01931 10-349350-5 O/H Bendix Mag 07-01930 10-349350-5 O/H Bendix Mag 07-01930 10-349365-1 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01961 10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01992 10-500516-2 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500516-2 O/H Bendix Mag 07-01974 10-500516-3R O/H Bendix Mag 07-01993 10-500556-101 O/H Bendix Mag 07-01927 10-500556-103 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01924 10-500556-201 O/H Bendix Mag 07-01924 10-500556-201 O/H Bendix Mag 07-01924 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02550	-		FIICE
10-349220-5 O/H Bendix Mag 10-349290-1 O/H Bendix Mag 10-349290-1 O/H Bendix Mag 10-349293-1 O/H Bendix Mag 10-349293-1 O/H Bendix Mag 10-349305-1 O/H Bendix Mag 10-349310-2 O/H Bendix Mag 10-349310-2 O/H Bendix Mag 10-349310-4 O/H Bendix Mag 10-349350-4 O/H Bendix Mag 10-349350-5 O/H Bendix Mag 10-349350-5 O/H Bendix Mag 10-349365-1 O/H Bendix Mag 10-349365-3 O/H Bendix Mag 10-349370-1 O/H Bendix Mag 10-349370-1 O/H Bendix Mag 10-349420-1 O/H Bendix Mag 10-349420-2 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349400-2 O/H Bendix Mag 10-34940-2 O/H Bendix Mag 10-34940-1 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349520-1 O/H Bendix Mag 10-500516-3 R O/H Bendix Mag 10-500556-101 O/H Bendix Mag 10-500556-103 O/H Bendix Mag 10-500556-103 O/H Bendix Mag 10-500556-203 O/H Bendix Mag 10-500556-203 O/H Bendix Mag 10-500556-203 O/H Bendix Mag 10-500556-3 O/H Bendix Mag 10-500556-901R O/H Bendix Mag 10-502550 10-51360-27R O/H Bendix Mag 10-502550 10-51360-28R O/H Bendix Mag 10-502550 10-50556-101 O/H Bendix Mag 10-505550-101 O/H Bendix Mag 10-505550-101 O/H Bendix Mag 10-505550-101 O/H Bendix Mag 10-505556-101 O/H Bendix Mag 10-505556-201 O/H Bendix Mag 10-505556-301 O/H Bendix Mag 10-505550-301 O/H Bendix Mag 10-505550-3	9		
10-349260-7 O/H Bendix Mag 07-01938 10-349290-1 O/H Bendix Mag 07-01933 10-349293-1 O/H Bendix Mag 07-01977 10-349305-1 O/H Bendix Mag 07-01980 10-349310-2 O/H Bendix Mag 07-01980 10-349310-2 O/H Bendix Mag 07-01980 10-349350-4 O/H Bendix Mag 07-01931 10-349350-5 O/H Bendix Mag 07-01930 10-349365-1 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01990 10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01961 10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01992 10-500516-2 O/H Bendix Mag 07-01973 10-500516-3R O/H Bendix Mag 07-01974 10-500556-103 O/H Bendix Mag 07-01992 10-500556-103 O/H Bendix Mag 07-01992 10-500556-103 O/H Bendix Mag 07-01927 10-500556-203 O/H Bendix Mag 07-01929 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-27R O/H Bendix Mag 07-02550			
10-349290-1 O/H Bendix Mag 07-01933 10-349293-1 O/H Bendix Mag 07-01977 10-349305-1 O/H Bendix Mag 07-01980 10-349310-2 O/H Bendix Mag 07-01980 10-349310-4R O/H Bendix Mag 07-02402 10-349350-4 O/H Bendix Mag 07-01931 10-349350-5 O/H Bendix Mag 07-01930 10-349365-1 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01990 10-349370-1 O/H Bendix Mag 07-01960 10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01962 10-349460-2 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01991 10-500516-2 O/H Bendix Mag 07-01973 10-500516-3R O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01993 10-500556-203 O/H Bendix Mag 07-01929 10-500556-3 O/H Bendix Mag 07-01929 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02549 10-51360-28R O/H Bendix Mag 07-02550			
10-349293-1 O/H Bendix Mag 07-01977 10-349305-1 O/H Bendix Mag 07-01980 10-349310-2 O/H Bendix Mag 07-02402 10-349350-4 O/H Bendix Mag 07-01931 10-349350-5 O/H Bendix Mag 07-01930 10-349365-1 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01961 10-349420-1 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01993 10-349490-2 O/H Bendix Mag 07-01991 10-349520-1 O/H Bendix Mag 07-01992 10-500516-2 O/H Bendix Mag 07-01973 10-500516-3R O/H Bendix Mag 07-01974 10-500556-103 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01993 10-500556-203 O/H Bendix Mag 07-01993 10-500556-203 O/H Bendix Mag 07-01983 10-500556-3 O/H Bendix Mag 07-01993 10-500556-3 O/H Bendix Mag 07-01983 10-500556-3 O/H Bendix Mag 07-01984 10-500556-3 O/H Bendix Mag 07-01924 10-500556-3 O/H Bendix Mag 07-01924 10-500556-3 O/H Bendix Mag 07-01924 10-500556-3 O/H Bendix Mag 07-02549 10-51360-28R O/H Bendix Mag 07-02550	<u> </u>		
10-349305-1 O/H Bendix Mag 07-01941 10-349310-2 O/H Bendix Mag 07-01980 10-349310-4R O/H Bendix Mag 07-02402 10-349350-4 O/H Bendix Mag 07-01931 10-349365-5 O/H Bendix Mag 07-01930 10-349365-3 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349420-2 O/H Bendix Mag 07-01963 10-349460-1 O/H Bendix Mag 07-01963 10-349490-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01991 10-349520-1 O/H Bendix Mag 07-01992 10-500516-1 O/H Bendix Mag 07-01973 10-500516-3R O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01927 10-500556-1 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01924 10-500556-30 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02549 10-51360-28R O/H Bendix Mag 07-02550			
10-349310-2 O/H Bendix Mag 10-349310-4R O/H Bendix Mag 10-349350-4 O/H Bendix Mag 10-349350-5 O/H Bendix Mag 10-349350-5 O/H Bendix Mag 10-349365-1 O/H Bendix Mag 10-349365-3 O/H Bendix Mag 10-349365-3 O/H Bendix Mag 10-349370-1 O/H Bendix Mag 10-349370-1 O/H Bendix Mag 10-349370-4 O/H Bendix Mag 10-349420-1 O/H Bendix Mag 10-349420-2 O/H Bendix Mag 10-349460-1 O/H Bendix Mag 10-349460-2 O/H Bendix Mag 10-349490-2 O/H Bendix Mag 10-349490-2 O/H Bendix Mag 10-349490-2 O/H Bendix Mag 10-3494520-1 O/H Bendix Mag 10-349520-1 O/H Bendix Mag 10-500516-1 O/H Bendix Mag 10-500516-2 O/H Bendix Mag 10-500516-3R O/H Bendix Mag 10-500556-103 O/H Bendix Mag 10-500556-103 O/H Bendix Mag 10-500556-203 O/H Bendix Mag 10-500556-3 O/H Bendix Mag 10-500556-901R O/H Bendix Mag 10-502550 10-51360-28R O/H Bendix Mag 10-50556-101 O/H Bendix Mag 10-50556-901R O/H Bendix Mag 10-50556-101 O/H Bendix Mag 10-500556-101 O/H Bendix Mag 10-500556-101 O/H Bendix Mag 10-500556-203 O/H Bendix Mag 10-500556-203 O/H Bendix Mag 10-500556-3 O/H Bendix Mag 10-500556-3 O/H Bendix Mag 10-500556-3 O/H Bendix Mag 10-500556-901R O/H Bendix Mag 10-500556-901R O/H Bendix Mag 10-500556-10-28R O/H Bendix Mag 10-50556-28R O/H Bendix Mag 10-50556-38R O/H Bendix Mag 10-50556-38R O/H Bendix Mag 10-50556-38R O/H Bendix Mag 10-50556-39R O/H Bendix Ma	10-349293-1 O/H Bendix Mag	07-01977	
10-349310-4R O/H Bendix Mag 107-02402 10-349350-4 O/H Bendix Mag 107-01931 10-349350-5 O/H Bendix Mag 107-01990 10-349365-3 O/H Bendix Mag 107-01990 10-349370-1 O/H Bendix Mag 107-01960 10-349370-4 O/H Bendix Mag 107-01960 10-349370-4 O/H Bendix Mag 107-01961 10-349420-1 O/H Bendix Mag 107-01962 10-349420-2 O/H Bendix Mag 107-01962 10-349460-1 O/H Bendix Mag 107-01963 10-349460-2 O/H Bendix Mag 107-01991 10-349490-2 O/H Bendix Mag 107-01991 10-349490-2 O/H Bendix Mag 107-01991 10-349450-1 O/H Bendix Mag 107-01992 10-500516-1 O/H Bendix Mag 107-01973 10-500516-2 O/H Bendix Mag 107-01974 10-500556-101 O/H Bendix Mag 107-01993 10-500556-103 O/H Bendix Mag 107-01927 10-500556-203 O/H Bendix Mag 107-01929 10-500556-203 O/H Bendix Mag 107-01924 10-500556-3 O/H Bendix Mag 107-01924 10-500556-901R O/H Bendix Mag 107-02550	10-349305-1 O/H Bendix Mag	07-01941	
10-349350-4 O/H Bendix Mag 07-01931 10-349350-5 O/H Bendix Mag 07-01990 10-349365-1 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01960 10-349370-1 O/H Bendix Mag 07-01961 10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01992 10-500514-1 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500516-3R O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01927 10-500556-103 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-27R O/H Bendix Mag 07-02549	10-349310-2 O/H Bendix Mag	07-01980	
10-349350-5 O/H Bendix Mag 07-01930 10-349365-1 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01934 10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01992 10-500514-1 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500516-3R O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01927 10-500556-203 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-27R O/H Bendix Mag 07-02549 10-51360-28R O/H Bendix Mag 07-02550	10-349310-4R O/H Bendix Mag	07-02402	
10-349365-1 O/H Bendix Mag 07-01990 10-349365-3 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01934 10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01991 10-349520-1 O/H Bendix Mag 07-01992 10-500514-1 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01927 10-500556-1 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01929 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-28R O/H Bendix Mag 07-02550	10-349350-4 O/H Bendix Mag	07-01931	
10-349365-3 O/H Bendix Mag 07-01942 10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01934 10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01994 10-349520-1 O/H Bendix Mag 07-01992 10-500514-1 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01927 10-500556-1 O/H Bendix Mag 07-01927 10-500556-203 O/H Bendix Mag 07-01929 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-28R O/H Bendix Mag 07-02550	10-349350-5 O/H Bendix Mag	07-01930	
10-349370-1 O/H Bendix Mag 07-01960 10-349370-4 O/H Bendix Mag 07-01934 10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01994 10-349520-1 O/H Bendix Mag 07-01992 10-500514-1 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01927 10-500556-1 O/H Bendix Mag 07-01927 10-500556-203 O/H Bendix Mag 07-01929 10-500556-3 O/H Bendix Mag 07-01924 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02550	10-349365-1 O/H Bendix Mag	07-01990	
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10-349420-1 O/H Bendix Mag 07-01961 10-349420-2 O/H Bendix Mag 07-01962 10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01964 10-349520-1 O/H Bendix Mag 07-01992 10-500514-1 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500556-101 O/H Bendix Mag 07-02418 10-500556-103 O/H Bendix Mag 07-01927 10-500556-1 O/H Bendix Mag 07-01927 10-500556-203 O/H Bendix Mag 07-01929 10-500556-3 O/H Bendix Mag 07-01924 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02550	10-349370-1 O/H Bendix Mag	07-01960	
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10-349460-1 O/H Bendix Mag 07-01963 10-349460-2 O/H Bendix Mag 07-01991 10-349490-2 O/H Bendix Mag 07-01964 10-349520-1 O/H Bendix Mag 07-01992 10-500514-1 O/H Bendix Mag 07-01973 10-500516-2 O/H Bendix Mag 07-01974 10-500516-3R O/H Bendix Mag 07-02418 10-500556-101 O/H Bendix Mag 07-01993 10-500556-103 O/H Bendix Mag 07-01927 10-500556-1 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01983 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-27R O/H Bendix Mag 07-02550	10-349420-1 O/H Bendix Mag	07-01961	
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10-500556-101 O/H Bendix Mag 07-01993  10-500556-103 O/H Bendix Mag 07-01927  10-500556-1 O/H Bendix Mag 07-01929  10-500556-203 O/H Bendix Mag 07-01983  10-500556-3 O/H Bendix Mag 07-01924  10-500556-901R O/H Bendix Mag 07-02424  10-51360-27R O/H Bendix Mag 07-02550	10-500516-2 O/H Bendix Mag	07-01974	
10-500556-103 O/H Bendix Mag 07-01927 10-500556-1 O/H Bendix Mag 07-01929 10-500556-203 O/H Bendix Mag 07-01983 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-27R O/H Bendix Mag 07-02549 10-51360-28R O/H Bendix Mag 07-02550	10-500516-3R O/H Bendix Mag	07-02418	
10-500556-1 O/H Bendix Mag 07-01929  10-500556-203 O/H Bendix Mag 07-01983  10-500556-3 O/H Bendix Mag 07-01924  10-500556-901R O/H Bendix Mag 07-02424  10-51360-27R O/H Bendix Mag 07-02549  10-51360-28R O/H Bendix Mag 07-02550	10-500556-101 O/H Bendix Mag	07-01993	
10-500556-203 O/H Bendix Mag 07-01983 10-500556-3 O/H Bendix Mag 07-01924 10-500556-901R O/H Bendix Mag 07-02424 10-51360-27R O/H Bendix Mag 07-02549 10-51360-28R O/H Bendix Mag 07-02550	10-500556-103 O/H Bendix Mag	07-01927	
10-500556-3 O/H Bendix Mag 07-01924  10-500556-901R O/H Bendix Mag 07-02424  10-51360-27R O/H Bendix Mag 07-02549  10-51360-28R O/H Bendix Mag 07-02550	10-500556-1 O/H Bendix Mag	07-01929	
10-500556-901R O/H Bendix Mag 07-02424  10-51360-27R O/H Bendix Mag 07-02549  10-51360-28R O/H Bendix Mag 07-02550	10-500556-203 O/H Bendix Mag	07-01983	
10-51360-27R O/H Bendix Mag 07-02549 10-51360-28R O/H Bendix Mag 07-02550	10-500556-3 O/H Bendix Mag	07-01924	
10-51360-28R O/H Bendix Mag 07-02550	10-500556-901R O/H Bendix Mag	07-02424	
-	10-51360-27R O/H Bendix Mag	07-02549	
-	10-51360-28R O/H Bendix Mag	07-02550	
10-51360-37	10-51360-37 O/H Bendix Mag	07-01943	
10-51360-55R O/H Bendix Mag 07-02562	10-51360-55R O/H Bendix Mag	07-02562	
10-51365-43 O/H Bendix Mag 07-01968			
10-51365-46 O/H Bendix Mag 07-01969			

Description	Part No.	Price
10-51365-47 O/H Bendix Mag	07-01944	
10-51365-39R O/H Bendix Mag	07-02569	
10-51365-44R O/H Bendix Mag	07-02573	
10-51365-45R O/H Bendix Mag	07-02574	
10-52350-20R O/H Bendix Mag	07-02583	
10-52350-23R O/H Bendix Mag	07-02586	
10-600606-1 O/H Bendix Mag	07-01971	
10-600614-1R O/H Bendix Mag	07-02425	
10-600616-3R O/H Bendix Mag	07-02589	
10-600646-1 O/H Bendix Mag	07-01985	
10-600646-201 O/H Bendix Mag	07-01925	
10-600646-2 O/H Bendix Mag	07-01972	
10-600656-1 O/H Bendix Mag	07-01945	
10-79020-16 O/H Bendix Mag	07-01986	
10-79020-6 O/H Bendix Mag	07-01987	

#### **OVERHAULED BENDIX DUAL MAGNETOS**

Description	Part No.	Price
10-682555-141 O/H Bendix Dual Mag	07-02601	
10-682555-15R O/H Bendix Dual Mag	07-02429	
0-682555-16 O/H 1 Bendix Dual Mag	07-02431	
10-682560-13 O/H Bendix Dual Mag	07-02433	
10-682555-11R O/H Bendix Dual Mag	07-02426	
10-682555-151R O/H Bendix Dual Mag	07-02430	
10-682555-16R O/H Bendix Dual Mag	07-02431	
10-682560-11R O/H Bendix Dual Mag	07-02432	
10-682560-13R O/H Bendix Dual Mag	07-02433	
10-682610-131R O/H Bendix Dual Mag	07-02438	
10-682920-11R 8 cyl O/H Bendix Dual Mag	07-02443	

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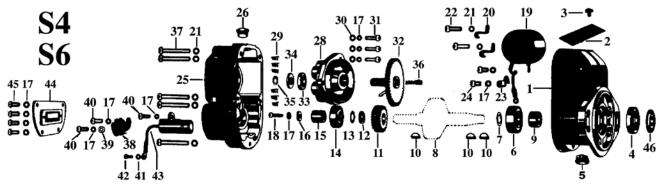
## **BENDIX MAGNETO ENGINE APPLICATIONS**

	Engine	Magneto	Magneta	Units per
Make			Magneto Replacement	Engine
	A-65-8, A-75-8,	S4RN-20	10-51360-27 (Rt. Side)	1
	C-75-8, C-85-8 with original crankcase	S4RN-21	10-51360-28 S(Lt. Side)	1
	A65-8, A-75-8, C-75-8, C-85-8 with current crankcase castings No. 6794 & No. 6795	S4RN-21	10-51360-28	2
	C-75-12F, C-85-8F, C-85-12F, C-90-12,	S4LN-21	10-51360-26	2
	C-115, C-125-2, C-145-2, C-145-4	S6LN-21	10-51365-39	2
Continental	E-165-2, E-185-2 (above S/N 10111) E-185-3, E-185-9 (above S/N 5937) (above S/N 20922), E-225-4, E-225-8 (all), O-470- (above S/N 5937)	S6LN-20	10-51365-43	2
	GO-300A, GO-300B	S6RN-21	10-51365-35	2
	O-470-2, -4, -13, -A, -B, -E, -G, -J, -K, -L, -M, BGSO-526-A	S6RN-25	10-79020-8	2
1	O-470-13A	S6LN-23	10-52350-20	2
1	PE-150-2, -6 Packette	S6LN-23	10-52350-20	1
	FSO-526-A	S6RN-26	10-85290-2	2
	6A4-150-B3, 6A4-165-B3	S6RN-21		2
Franklin	6V4-178-B3, -B33, O-335-2, -3	S6RN-21	10-51365-48	2

	Engine	Magneto	Magneto	Units per
Make	Model	Type	Replacement	Engine
Franklin	6V4-200-C32, -C33, O-335-2, -3, -5, -6	S6RN-23	10-52350-19	2
	6A4-200-C6	S6RN-23	10-52350-21	2
	††O-145-B2, -B3, -C2, -C3, ††O-235-C,	S4LN-20	10-51360-29	1
	O-235-C1, -C1A,	S4LN-21	10-51360-30	1
	O-320-A1A, -A2A, -B1A, -B2A, O-340-A, -A1A,	S4LN-21	10-51360-30 (25° Lag) or	2
	-A2A, -B1A, B2A, O-360-A, -A1A, -A1B , -B1A, -B2A	S4LN-21	10-51360-25 (35° Lag)	2
	O-290-G (single ignition)	S4LN-21	10-51360-25	1
	GO-435-C2, -C2A, -C2B, -C2B2, -C2C, -C2E, GO-480, -B, -B1A6, -B1C,	S6LN-20	10-51365-31	1
	-B1D, -C1A, -C1D6, -C2E6, -F1A6, -F2A6, -F3A6, -F4A6	S6LN-21	10-51360-32	1
Lycoming	O-435-19, -20, VO-435A, -A1A, -A1B, -A1C, -A1D, GO-480-C1B6, -D1A,	S6LN-20	10-51365-33	1
	-G1B6, GSO-480-A1A6, -A1C6, -B 1A6, -B1B6,-B1C6	S6LN-21	10-51365-34	1
	O-435-6, -6A, -23, -23A,	S6LN-22	10-52350-22	1
	-23B, -A1C (optional), O-480-1	S6LN-23	10-52350-23	1
	O-435-17, GO-435-C2, -C2A, -C2B, -C2D,	S6LN-20	10-51365-44	1
	GO-480-B1, -B1B, -C2C6, -F3B6, -F4B6	S6LN-21	10-51365-45	1
	O-540	S6LN-20	10-51365-46	1
	U-540	S6LN-21	10-51365-47	1

\*\*New P/N 10-357584. \*\*\*New P/N 10-357586.

#### PARTS COMMON TO S4N & S6N MAGNETOS



Ref. No.	Part No.	Description	Price Ea.
1	10-50727Y	Housing - Magneto	
2	10-400012	Plate - Mag Ident	
3	10-22067	Drive Screw - Ident Plate	-
4	10-357592	Oil Seal - Drive Shaft	
5	10-157134	Vent - Mag Housing	-
6	10-81806	Bearing - Mag, Drive End	
7	2-161-1	Shim Washer0025"	
	2-161-2	Shim Washer004"	
	2-161-3	Shim Washer005"	
	2-161-4	Shim Washer008"	
	2-161-5	Shim Washer010"	
	2-161-6	Shim Washer012"	
		(Drive End Bearing)	
8		Magnet - Rotating	
9	10-25788	Bushing - Drive Shaft	
10	10-90788-5	Key - Woodruff	
11	10-157123Y	Gear-Distrib., Small (S4)	
11A	10-157120Y	Gear-Distrib., Small (S6)	
12	10-3503	Spacer-Brkr End Bearing	
13	2-199-1	Shim Washer002"	
	2-199-2	Shim Washer004"	

Ref. No.	Part No.	Description	Price Ea.
13	2-199-3	Shim Washer005"	
	2-199-4	Shim Washer008"	
	2-199-5	Shim Washer010"	
	2-199-6	Shim Washer012"	
	-	(Breaker End Bearing)	
14	2-202	Bearing-Magnet, Brkr End	
15	10-88543-1	Cam - Breaker	
16	10-51354	Washer-Plain (Cam Screw)	
18	10-35936-10	Screw - Cam	
19	10-357164	Coil	
20	10-50765	Clamp - Coil Core	
21		Washer - Lock	
22	10-35937-8	Screw - Coil Core Clamp	
23	10-5752	Clip - Primary Lead	
24	10-16479	Screw	
25		Housing - Distributor	
26	10-157135	Plug - Distributor Housing	
27		Bushing - Ground Terminal	
28	10-52949	Block - Distributor (S4)	
28A	10-52958	Block - Distributor (S6)	
29	10-50737	Spring-H.T. Cable Contact	

Ref. No.	Part No.	Description	Price Ea.
30		Washer - Plain	
31		Screw - Distributor Block	
32	10-357584	Gear-Distributor, Large (S4)**	
32A	10-357586	Gear-Distributor, Large (S6)***	
33	10-50752	Washer - Felt	
35	10-92815-37	Ring-Retain. (Distributor,Gear)	
36	10-9595	Brush - Carbon	
37	10-157158	Screw	
38		Breaker Assembly*	
39	10-14268	Washer - Plain	
40	10-157161	Screw	
41		Washer - Lock	
42		Screw - Lead to Breaker	
43	10-51676	Condenser	
44		Cover - Breaker	
45	10-157161	Screw - Breaker Cover	
46	10-51678	Oil Slinger - Drive Shaft	

<sup>\*</sup>See Listing Below.

## NITION ACCESSO



#### **BENDIX BREAKER ASSEMBLIES**

Early S4, S6 Mags P/N 07-06305 (10-357173) with spring (current production) ...... **Ea.** P/N 07-06306 (10-357174) without spring (current production) ...... Ea.

All above breaker assemblies used on either Right or Left Magnetos. Late S4/S6 Mags, S200 Mags\*



#### **BENDIX MAGNETO GREASE**

#10-27165 - Factory recommended lubricant for bearings in Bendix magnetos.

#10-391200 - For use on distributor block bushing. Provides proper shaft lubrication.

8 oz. can ......P/N 10-391200 .....----

#### REPLACEMENT COILS FOR CONTINENTAL ENGINES PER SERVICE BULLETIN NO. 637

TCM Ignition Systems has issued Service Bulletin No. 637 to retire from service certain older coils and rotating magnets. The Bulletin applies to many S-20, S-200, S-600, and S-1200 series magnetos as identified in this chart. Compliance with this Bulletin is required at the next 100 inspection, annual inspection, or progressive maintenance inspection, whichever comes first. Order by new coil part number.

Magneto Series	Old Coil P/N	Color	New Coil P/N	Color	Our Price
S-20	10-163172				
S-200	10-163209	Opaque Amber to Dark Purple	10-357165-1	Bright Red to Dark Red	
5-200	10-160887				
S-1200	10-349271	Opaque Amber	10-391088-1	Blue to Olive Green to Black	



#### ALTERNATOR FILTER

Replacement part for existing alternator filters. Wire won't break at the case and its clamp is made from heavy gauge steel. Double the capacitance compared to OEM alternator filters. For stubborn alternator noise, this Alternator filter combined with the Eliminator (P/N 11-08055) can trap a wide frequency range of electronic noise. Both of these filters have been thoroughly tested under a DO 160D and are FAA/PMA approved.

P/N 11-08060...



### **MAGNETO FILTER** FAA APPROVED

Lone Star Aviation's Magneto filter (FEED THRU) (Fail Safe Design) attenuates both low and high frequencies of noise generated from bendix magneto

ignition systems. The firing of the aircraft spark plugs through the ignition systems harness can cause noise problems and interference to aircraft electronics such as audio panels, radio equipment, navigation equipment, instrumentation, and autopilot systems on board an aircraft. This filter has been used by avionics shops. OEM aircraft manufacturers. and FBO's, to attenuate and suppress pulsating noise generated by their aircraft's magneto systems. The magneto filter is FAA-PMA approved and is compatible with the bendix series S20, S21, S200, D3000, D4000 magneto.

Features: • 1000 VDC working voltage, 5000VDC break down voltage • Capacitance: .05 uf-self healing technology • Braided cable is shielded, silver plate over copper, supplied in 8 inch lengths • Heavy duty mounting clamp • Advanced feed through design • Temp. range: -35°C to +80°C • Max. current: 20 amps.......P/N 07-00713 ......

### **BOGERT AVIATION GROMMET** STRETCHER TOOL



Using the Grommet Stretcher is 2-3x's faster when stretching grommets over fittings and plugs. Improves safety because grommets are continuous. Operating Instructions: 4 Simple Steps Saves time and frustration. Insert grommet over end of Grommet Stretching Tool. Squeeze handle to spread the grommet. Insert cable through grommet and release the squeeze on tool handle. Remove the grommet from tool by sliding grommet off the ends..... P/N 11-06946 .....-----

#### **GROUND TERMINAL KITS**



For S-20 series mags. Kit No. 10-52306 (AN3105).....----

Reg. No.	Part No.	No. Req.	Description	
1	10-30299	1	NUT - Coupling (Ground Terminal)	
2	10-56507	1	CROMMET Assy.(Ground Terminal)	
3	10-3383	1	FERRULE - Inner (Ground Wire)	
4	10-25725	1	SLEEVE - Insulating (Ground Wire)	



For 20 series mags. Kit No ......P/N 10-52305 ......-----

Reg. No.	Part No.	No. Req.	Description	
1	10-37669	1	NUT - Coupling (Ground Terminal)	
2	10-7030	1	FERRULE - Outer (Ground Wire)	
3	10-7029	1	FERRULE - Inner (Ground Wire)	
4	10-37668	1	SLEEVE - Insulating (Ground Wire)	
5	2-155	1	WASHER - Ground Wire Contact	

## TCM/BENDIX IMPULSE COUPLINGS | CAM ASSEMBLIES

Part No.		Price
10-40307		<b></b> -
10-40309		<b></b>
10-40314		<b></b>
10-40315		<b></b>
	vo charge applica	

Core charge applies

## **TCM/BENDIX**

Part No. 10-40166-6 10-40167-4 10-40167-6	Price
10-40166-6	
10-40167-4	<b></b> -
10-40167-6	

Core charge applies

**SEE WEBSITE FOR MORE TCM PARTS!** 

## ERT AVIATION

#### **BOGERT AVIATION SLICK STYLE P-LEADS**



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because

most leads are shielded, mechanics do not have the materials, tooling or the experience to fabricate p-leads.

These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the p-lead is airworthy and matches the requirements of the aircraft.

Bogert P/N	Length	Description	Part No.	Price
21M-PL030-SS	30	P-lead 30" Slick Style	11-06869	
21M-PL036-SS	36	P-lead 36" Slick Style	11-06870	
21M-PL042-SS	42	P-lead 42" Slick Style	11-06871	
21M-PL048-SS	48	P-lead 48" Slick Style	11-06872	
21M-PL054-SS	54	P-lead 54" Slick Style	11-06873	
21M-PL060-SS	60	P-lead 60" Slick Style	11-06874	
21M-PL066-SS	66	P-lead 66" Slick Style	11-06875	
21M-PL072-SS	72	P-lead 72" Slick Style	11-06876	
21M-PL084-SS	84	P-lead 84" Slick Style	11-06877	
21M-PL096-SS	96	P-lead 96" Slick Style	11-06878	
21M-PL108-SS	108	P-lead 108" Slick Style	11-06879	
21M-PL120-SS	120	P-lead 120" Slick Style	11-06880	
21M-PL132-SS	132	P-lead 132" Slick Style	11-06881	
21M-PL144-SS	144	P-lead 144" Slick Style	11-06882	
21M-PL156-SS	156	P-lead 156" Slick Style	11-06883	
21M-PL168-SS	168	P-lead 168" Slick Style	11-06884	

#### **BOGERT AVIATION BENDIX ROUND NUT P-LEADS**



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because

most leads are shielded, mechanics do not have the materials, tooling or the experience to fabricate p-leads.

These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the p-lead is airworthy and matches the requirements of the aircraft

Bogert P/N	Length	Description	Part No.	Price
21M-PL030-BR	30	P-lead 30" Round Nut	11-06891	
21M-PL036-BR	36	P-lead 36" Round Nut	11-06892	
21M-PL042-BR	42	P-lead 42" Round Nut	11-06893	
21M-PL048-BR	48	P-lead 48" Round Nut	11-06894	
21M-PL054-BR	54	P-lead 54" Round Nut	11-06895	
21M-PL060-BR	60	P-lead 60" Round Nut	11-06896	
21M-PL066-BR	66	P-lead 66" Round Nut	11-06897	
21M-PL072-BR	72	P-lead 72" Round Nut	11-06898	
21M-PL084-BR	84	P-lead 84" Round Nut	11-06899	
21M-PL096-BR	96	P-lead 96" Round Nut	11-06901	
21M-PL108-BR	108	P-lead 108" Round Nut	11-06902	
21M-PL120-BR	120	P-lead 120" Round Nut	11-06903	
21M-PL132-BR	132	P-lead 132" Round Nut	11-06904	
21M-PL144-BR	144	P-lead 144" Round Nut	11-06905	
21M-PL156-BR	156	P-lead 156" Round Nut	11-06906	
21M-PL168-BR	168	P-lead 168" Round Nut	11-06907	

#### **BOGERT AVIATION BENDIX HEX NUT P-LEADS**



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because most leads are shielded, mechanics do not

have the materials, tooling or the experience to fabricate p-leads. These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the p-lead is airworthy and matches the requirements of the aircraft.

Bogert P/N	Length	Description	Part No.	Price
21M-PL030-BH	30	P-lead 30" Hex Nut	11-06914	
21M-PL036-BH	36	P-lead 36" Hex Nut	11-06915	
21M-PL042-BH	42	P-lead 42" Hex Nut	11-06916	
21M-PL048-BH	48	P-lead 48" Hex Nut	11-06917	
21M-PL054-BH	54	P-lead 54" Hex Nut	11-06918	
21M-PL060-BH	60	P-lead 60" Hex Nut	11-06919	
21M-PL066-BH	66	P-lead 66" Hex Nut	11-06920	
21M-PL072-BH	72	P-lead 72" Hex Nut	11-06921	
21M-PL084-BH	84	P-lead 84" Hex Nut	11-06922	
21M-PL096-BH	96	P-lead 96" Hex Nut	11-06923	
21M-PL108-BH	108	P-lead 108" Hex Nut	11-06924	
21M-PL120-BH	120	P-lead 120" Hex Nut	11-06925	
21M-PL132-BH	132	P-lead 132" Hex Nut	11-06926	
21M-PL144-BH	144	P-lead 144" Hex Nut	11-06927	
21M-PL156-BH	156	P-lead 156" Hex Nut	11-06928	
21M-PL168-BH	168	P-lead 168" Hex Nut	11-06929	

### **BOGERT AVIATION D2000 & D3000** P-LEADS BENDIX ROUND NUT



P-Leads are a critical part of the ignition system and their good condition is vital to safety and airworthiness. P-leads are often overlooked and seldom replaced because replacement p-leads are not available from the aircraft manufacturer and materials to fabricate new p-leads are not commonly available. Because most leads are shielded,

mechanics do not have the materials, tooling or the experience to fabricate p-leads.

These p-leads are fabricated using proper materials, genuine terminal kits and additional strain reliefs. Each lead is inspected and tested. It is the responsibility of the installing agency to certify that the is airworthy and matches the requirements of the aircraft.

Bogert P/N	Description	Part No.	Price
21M-PL030-DBR	30" Round Nut Short Style	11-13539	
21M-PL036-DBR	36" Round Nut Short Style	11-13540	
21M-PL042-DBR	42" Round Nut Short Style	11-13541	
21M-PL048-DBR	48" Round Nut Short Style	11-13542	
21M-PL054-DBR	54" Round Nut Short Style	11-13543	
21M-PL060-DBR	60" Round Nut Short Style	11-13544	
21M-PL66-DBR	66" Round Nut Short Style	11-13545	
21M-PL072-DBR	72" Round Nut Short Style	11-13546	
21M-PL084-DBR	84" Round Nut Short Style	11-13547	
21M-PL096-DBR	96" Round Nut Short Style	11-13548	
21M-PL108-DBR	108" Round Nut Short Style	11-13549	
21M-PL120-DBR	120" Round Nut Short Style	11-13550	
21M-PL132-DBR	132" Round Nut Short Style	11-13551	
21M-PL144-DBR	144" Round Nut Short Style	11-13552	
21M-PL156-DBR	156" Round Nut Short Style	11-13553	
21M-PL168-DBR	168" Round Nut Short Style	11-13554	
21M-PL180-DBR	180" Round Nut Short Style	11-13555	
21M-PL192-DBR	192" Round Nut Short Style	11-13556	
21M-PL204-DBR	204" Round Nut Short Style	11-13557	
21M-PL216-DBR	216" Round Nut Short Style	11-13558	
21M-PL228-DBR	228" Round Nut Short Style	11-13559	
21M-PL240-DBR	240" Round Nut Short Style	11-13560	

These magneto repair kits are designed to simplify the Bendix magneto overhaul process by providing all of the commonly needed overhaul parts in one convenient kit. The Repair Kits contain the parts needed for minor repair such as a 500 hour inspection, and the Deluxe Repair Kits contain the parts needed for major repair such as a magneto overhaul. These parts are highest quality direct replacement parts and are approved for installation and use on certificated aircraft. The Repair Kit and Deluxe Repair Kit for the Bendix -200, -201, and -202 series magnetos contain two sets of contact assembly kits. Some parts that may be need replacing during magneto overhaul are not included in these kits.

1 - Contact Assy. Kit (3) • 1 - Capacitor • 2 - Bearings • 1 - Oil Seal • 1 - Oil Slinger • 3 - Woodruff Keys • 1 - Cotter Pin • 1 - Cam Screw • 1 - Felt Washer • 1 - Felt Strip • 1 - Snap Ring • 1 - Carbon Brush

1 - Contact Assy. Kit (3) • 1 - Coil Kit • 1 - dist. Block Kit • 1 - Gear Kit • 1 - Capacitor • 2 - Bearings • 1 - Oil Seal • 1 - Oil Slinger • 3 - Woodruff Keys • 1 - Cotter Pin • 1 - Cam Screw

#### **BENDIX SERIES S-20 & S21**

Magneto Part No.	Magneto Type	Repair Kit P/N	Kit Price
10-51360-1			
10-51360-3			
10-51360-4	S4R(L)N -20,21	07-00855	
10-51360-6			
10-51360-8			
10-51360-10			
10-51360-11	0.40/1.)NL 00.04	07.00005	
10-51360-12	S4R(L)N -20,21	07-00825	
10-51360-25			
10-51360-26			
10-51360-27	S4R(L)N -20,21	07-00855	
10-51360-28			
10-51360-29	0.4D(L)NL 00.04	07.00005	
10-51360-30	S4R(L)N -20,21	07-00825	
10-51360-31	S4R(L)N -20,21	07-00855	
10-51360-33			
10-51360-37	0.40/1.)NL 00.04	07.00005	
10-51360-40	S4R(L)N -20,21	07-00825	
10-51360-41			
10-51360-45	S4RN-21	07-00860	
10-51360-46	S4R(L)N -20,21	07-00825	
10-51360-47	S4RN-21	07-00860	
10-51360-48	S4RN-21	07-00858	
10-51360-54	S4R(L)N -20,21	07-00825	
10-51360-55	C4D/L)N 20 04	07.00000	
10-51360-58	S4R(L)N-20, 21	07-00860	
10-51360-1 up to S.N.238468	S6R(L)N-20, -21	07-00862	
10-51365-1 up to S.N.238469	S6R(L)N	07-00864	
10-51365-2			
10-51365-5	S6R(L)N -20,21	07-00862	
10-51365-7			

Magneto Part No.	Magneto Type	Repair Kit P/N	Kit Price
10-51365-9	S6R(L)N -20,21	07-00864	
10-51365-13	S6R(L)N -20,21	07-00862	
10-51365-14			
10-51365-15			
10-51365-16			
10-51365-17			
10-51365-20			
10-51365-25			
10-51365-26			
10-51365-27			
10-51365-28	S6R(L)N -20,21	07-00864	
10-51365-29			
10-51365-30			
10-51365-31			
10-51365-32			
10-51365-33			
10-51365-34			
10-51365-35			
10-51365-39			
10-51365-40	CCD/L\NL 20 21	07.00960	
10-51365-41	S6R(L)N -20,21	07-00862	
10-51365-42			
10-51365-43			
10-51365-44	SCD(L)N_00.04	07.00004	
10-51365-45	S6R(L)N -20,21	07-00864	
10-51365-46			
10-51365-47			
10-51365-48	S6R(L)N -20,21	07-00862	
10-51365-53	SSD(L)NL 20 24	07.00904	
10-51365-54	S6R(L)N -20,21	07-00864	
10-51365-57	S6LN -20,21	07-00868	

#### **MAGNETO P-LEAD ADAPTER**



This unique design of the P-lead adapter ensures proper spring pressure against the internal contact. It provides secure and stable alignment, and includes a post that prevents the timer leads from falling off. This adapter allows you to connect to the timer leads of all Bendix magnetos with an immediate and positive connection. One pair per package. 1 lbs (0.5Kg) shipping weight.

d Adapter (Early S2, S4, S20)	P/N 12-03522	
d Adapter (S200, S600, later S2, S4, S	S20)P/N 12-03523	
	P/N 12-03524	
	P/N 12-03525	

## **POWERUP MAGNETO REPAIR KITS**

#### **BENDIX SERIES S-24 & S25**

Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price
10-79020-5			
10-79020-6	CCD/L\N 04.05	07-00864	
10-79020-8	S6R(L)N -24,25	07-00664	
10-79020-10			
10-79020-11	S6LN -25	07-00868	
10-79020-13			
10-79020-14	S6R(L)N -24, -25	07-00864	
10-79020-16			

Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price
10-79020-17			
10-79020-18	S6LN -25	07-00868	
10-79020-118			
10-79020-19	S6RN-25	07-00866	
10-79020-119	36HIV-25	07-00866	

### **BENDIX SERIES S-200**

			BENDIX S
Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price
10-163005-1			
10-163005-2			
10-163005-3			
10-163005-4	0.40/1.\N1.000*	07.00044	
10-163005-5	S4R(L)N-200*	07-00844	
10-163005-7			
10-163005-10			
10-163005-11			
10-163015-1			
10-163015-2	0.40/1.\\\.004*	07.00044	
10-163015-3	S4R(L)N-201*	07-00844	
10-163015-4			
10-163045-1	S4LN -204	07-00757	
10-163045-2	S4RN -204	07-00846	
10-163045-3	S4LN -204	07-00757	
10-163045-4	S4RN -204	07-00846	
10-163045-6	S4LN -204	07-00757	
10-163045-7	S4RN -204	07-00846	
10-163055-1	S4RN -205	07-00846	
10-163055-2	S4LN -205	07-00757	
10-163010-1			
10-163010-2			
10-163010-3	S6R(L)N -200*	07-00849	
10-163010-4			
10-163010-5			

ILS 5-200	·		
Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price
10-163010-6			
10-163010-7			
10-163010-8			
10-163010-9	S6R(L)N -200*	07-00849	
10-163010-10			
10-163010-11			
10-163010-15			
10-163010-17			
10-163020-2	S6R(L)N-201*	07-00849	
10-163020-3	30h(L)N-201	07-00649	
10-163020-4			
10-163030-1	CCD/L\N 004	07-00849	
10-163030-4	S6R(L)N-204	07-00649	
10-163050-1			
10-163050-2	S6LN-204	07-00853	
10-163050-3	30LIN-204	07-00653	
10-163050-5			
10-163050-6			
10-163050-7	S6RN -204	07-00851	
10-163050-8			
10-163050-9	S6LN -204	07-00853	
10-163060-1	S6RN -205	07-00851	
10-163060-2	S6RN -205	07-00853	
10-163070-1	S6RN -206	07-00853	
10-163070-3	301114 -206	07-00653	

<sup>\*</sup>The Repair Kit and Deluxe Repair Kit for the Bendix -200, -201, and -202 Series Magnetos contain two sets of Contact Assembly Kits.

## REPLACEMENT PARTS FOR BENDIX MAGNETOS FROM POWERUP

Part No.	Description	Price	Part No.	Description	Price	Part No.	Description	Price	Part No.	Description	Price
07-06301	Bearing		07-06326	Distributor Block		08-14664	ES10-382618 Nut		08-15862	ES10-382785 Connector Strip	
10-357078	Bushing		07-06327	Vent		08-14665	ES10-17050 Washer		08-15863	ES10-382787 Bearing Retainer Plate	
10-357164	Coil		10-50737	Spring		08-14666	ES10-35937 Screw				
10-357165-1	Coil		07-06329	Felt Washer		08-14667	KA10-682024 Screw		08-15864	ES10-382931 Coil Retention Spring	
10-35717-3	Breaker Points		07-06330	Plug		08-14668	ES10-400166-4		08-15907	ES10-4093 Washer	
10-35717-4	Breaker Points		10-51676	Capacitor		08-14669	ES10-400166-5		08-15910	ES10-682014 Gear Assy	
07-06308	Capacitor		07-01066	Washer		08-14670	ES10-400167-8		-	ES10-682016 Gear Assv	
10-52949	Distributor Block		07-06333	Washer		08-15840	AM-3015 Screw		08-15912	ES10-685548 Washer	
07-06311	Breaker Points		07-06334	Distributor Block		08-15841	AM-3020 Screw		08-15915	KA10-16092 Washer	
10-382584	Breaker Points		07-06335	Distributor Block		08-15842	AM-3183-1 Nut		08-15916	KA10-35937-12 Screw	
07-06313	Coil		07-06336	Bearing		08-15843	AM-3183-2 Washer		08-15917	KA10-361639 Bushing	
07-06314	Breaker Points		07-06325	Ring		08-15845	ES10-163048 Bushing		08-15918	KA10-382568 Strip	
07-06315	Breaker Points		07-06338	Ring		08-15846	ES10-349219 Wedge		08-15919	109-2 3/4 Nut	
07-06316	Capacitor		07-06339	Bearing		08-15847	ES10-349248 Slinger, Oil		08-15920	113-2 5/8 Nut	
07-06317	Washer		07-06341	Bushing		08-15848	ES10-349392-1 Flange		08-15921	148A Insulator	
07-02453	Washer for Slick Mag		10-160844	Brush		08-15849	ES10-349392-2 Flange		08-15922	148B Brass Retainer	
07-06318	Coil		07-06344	Bushing		08-15850	ES10-349392-3 Flange		00.15000	2391 Insulator & Retainer	
07-06319	Capacitor		07-06345	Felt Strip		08-15851	ES10-349392-4 Flange			Assembly	
07-06320	Gasket		07-06346	Packing		08-15852	ES10-349392-5 Flange		08-15924	2392 Insulator	
07-06321	Bushing		07-06347	Capacitor		08-15853	ES10-349392-6 Flange		08-15925	2446-2 3/4 Elbow Assembly	
10-391088-1	Coil		07-06348	Washer		08-15854	ES10-349970 Breaker Points		08-15926	2463-2 5/8 Elbow Assembly	
07-06323	Gasket		07-06350	Breaker Points		08-15855	ES10-349971 Breaker Points		08-15927	70043 Ferrule	
07-06324	Gasket		07-06351	Bearing		08-15856	ES10-35935-5 Screw		08-15928	70044 Ferrule	
07-06325	Distributor Block		08-12204	MF3A Ignition Filter Cap		08-15857	ES10-3793 Washer		08-15929	70046 Ferrule	

## ICK MAGNETOS



NEW 4300 AND 6300 SERIES SLICK MAGNETOS

These new lightweight aircraft magnetos are being used by many new equipment manufacturers. Weigh only 3-3/4 lbs. compared to 6-1/4 lbs. for typical old style magnetos. All units carry a One Year warranty after delivery to the user. These new model magnetos are completely rebuildable. The old 4000/4100 magnetos may not be returned as an exchange unit for a new magneto of the same model. Most other Magnetos may be returned for core credit. Drive gears are not included. \*When purchasing slick magnetos separately gaskets are not included.

#### **4300 SERIES**

Magneto	ROT.	LAG	Weight	Туре	Part No.	Price	Application
4309	LEFT	0	4	DD	08-01338		Cont. IO-240-B
4310	LEFT	30	4	RB	08-01339		Cont. IO-240-B
4333	RIGHT	25	4.8	IC	08-04333		Cont. A-65-1, A-65-3, A-65-6, A-65-6J, A-65-7 A-65-8, A-65-8F, A-65-8FJ A-75-3, A-75-6, A-75-6J, A-75-8, A-75-8F, A-75-8FJ, A-75-8J, C-75-8, C-75-8F, C-75-8FH C-75-8FHJ, C-75-8FJ, C-75-8J, C-85-8, C-85-8F C-85-8FHJ, C-85-8FJ, C-85-8J, C-90-8F, C-90-8FJ
4345	LEFT	15	4	RB	08-01345		Lyc. AEIO-360-A1A, AEIO-360-A1A, HIO-360-D1A, IO-360-A1A IO-360-A1C, IO-360-A2A, IO-360-A2C, IO-360-C1A IO-360-C1B, IO-360-D1A
4347	LEFT	25	4	RB	08-04347		Lyc. AEIO-360-A1A, AEIO-360-A1A, AEIO-360-B1B, HO-360-C1A IO-320-B1D, IO-360-B1B, IO-360-B1D, IO-360-E1A O-235-C1B, O-235-F1B, O-320-A2C, O-320-B2C O-320-B1A, O-320-B1B, O-320-B2C, O-320-B2D O-320-B3C, O-320-D2B, O-320-D2B, O-320-E2B O-360-A1D, O-360-A2D, O-360-C1C, O-360-C2C
4372	LEFT	15	4.8	IC	08-43720		Lyc. AEIO-360-A1B, AEIO-360-A1B6, AEIO-360-A1D, AEIO-360-A1D AEIO-360-A1E, AIO-360-A1A, AIO-360-A1B, AIO-360-B1B IO-360-A1B, IO-360-A1B6, IO-360-A1D, IO-360-A1D6 IO-360-A2B, IO-360-C1C, IO-360-C1C6, IO-360-C1D6 IO-360-C1E6, IO-360-C1F, IO-360-K2A, O-235-K2A, O-235-K2B, O-235-K2C, O-235-L2A, O-235-M1, O-235-M2C O-235-N2A, O-235-N2C, O-235-P1, O-235-P2A, O-290-D2

Abbreviations: DD (Direct Drive), IC (Impulse Coupled), RB (Retard Breaker), TD (Tachometer Drive), P (Pressurized) Weight does not include harness cap or magneto drive gear, and are provided for reference only.

#### **4300 SERIES**

Model No.	Part No.	Price	
4302	08-01337		
4309	08-01338		
4310	08-01339		
4316	08-04316		
4330	07-26967		
4333	08-04333		
4342	08-01343		
4344	08-01344		
4345	08-01345		
4347	08-04347		
4348	08-01346		
4353	08-01347		
4370	08-04370		
4371	07-26966		
4372	08-43720		
4373	07-26965		
4374	08-01349		
4381	08-14585		
4392	08-01350		

### **CONTINENTAL MAGNETO DRIVE GEARS**

Used on Continental Engines.

Engine Eligibility	Magneto Gear No.	Part No.	Price
O-200; C90-12, 14, 16; C85-12, 14, 15; C75-12, 15; IO-240-A, B	SA36066	07-18019	
C-125, C-145, O-300	530603	07-02003	
O/IO-470, 520 Sancast	641728	07-02005	
520-550 Permold	641742	07-02006	
GTSIO-520	632797	07-02007	
GTSIO-520	632799	07-02008	
TCM-Continental	AEL1665	07-27109	

#### **6300 SERIES**

Model No.	Part No.	Price
6309	6309	
6310	6310	
6313	6313	
6314	6314	
6320	6320	
6324	6324	
6350	6350	
6351	6351	
6355	6355	
6360	6360	
6361	6361	
6364	6364	
6367	6367	
6371	6371	
6377	6377	
6379	6379	
6380	6380	
6393	6393	
6399	6399	



#### LYCOMING MAGNETO **DRIVE GEARS**

Used on Lycoming Engines.

Engine Eligibility	Magneto Gear No.	Part No.	Price
O-235, 320, 360 Impulse Magneto	61665	07-02010	
O-235,320, 360 Impulse Magneto	SL61665	07-02010	
O-235,320, 360 Direct Drive Magneto	68C19622	07-02011	
320, 360, "76"Series	LW-15659	07-02012	
O/IO-360 Dual Magneto	LW-13643	07-02013	
O/IO/LTIO/TIO-540	LW-19096	07-02014	
O/IO/LTIO/TIO-540 Dual Magneto	LW-13899	07-02016	

## **SLICK MAGNETOS**

#### **NEW 6300 SERIES MAGNETOS**

Magneto	ROT.	LAG	Weight	Туре	Part No.	Price	Application
6310	RIGHT	30	4.9	IC	08-06310		Cont. IO-470-A, IO-470-C, IO-470-D, IO-470-E, IO-470-F, IO-470-G, IO-470-H, IO-470-J, IO-470-K, IO-470-L, IO-470-LO, IO-470-N, IO-470-N, IO-470-P, IO-470-P, IO-470-P, IO-470-P, IO-470-P, IO-470-P, IO-470-V, IO-470-V, IO-520-A, IO-520-B, IO-520-BA, IO-520-BB, IO-520-C, IO-520-C, IO-520-L IO-520-E, IO-520-F, IO-520-J, IO-520-N, IO-520-L IO-520-B, IO-550-B, IO-550-P, ISIO-520-B,
6320	RIGHT	30	4.9	ICP	08-01353		Cont. LTSIO-360-E, LTSIO-360-EB, LTSIO-360-KB, LTSIO-360-RB TSIO-520-A, TSIO-520-AE, TSIO-520-AF, TSIO-520-B, TSIO-520-BB TSIO-520-C, TSIO-520-CE, TSIO-520-D, TSIO-520-DB, TSIO-520-E, TSIO-520-EB, TSIO-520-G, TSIO-520-H, TSIO-520-J, TSIO-520-JB, TSIO-520-K, TSIO-520-KB, TSIO-520-LC, TSIO-520-LB, TSIO-520-M TSIO-520-N, TSIO-520-NB, TSIO-520-NB, TSIO-520-T, TSIO-520-U, TSIO-520-T, TSIO-520-U, TSIO-520-UB, TSIO-520-BE, TSIO-550-B, TSIO-550-C, TSIO-550-E, TSIO-520-BE,
6350	LEFT	0	4	DD	08-06350		Lyc. AEIO-540-D4A5, AEIO-540-D4B5, AEIO-540-L1B5, IO-540-A1A5, IO-540-B1A5, IO-540-B1C5, IO-540-C1B5, IO-540-C1C5, IO-540-C2C IO-540-C4B5, IO-540-C4C5, IO-540-D4A5, IO-540-D4C5, IO-540-E1A5 IO-540-E1B5, IO-540-G1A5, IO-540-G1B5, IO-540-G1C5, IO-540-G1E5 IO-540-J4A5IO-540-K1A5, IO-540-K1B5, IO-540-K1D5, IO-540-L1A5 IO-540-K1G5, IO-540-K1H5, IO-540-K1J5, IO-540-K1K5, IO-540-L1A5 IO-540-L1C5, IO-540-M1A5, IO-540-N1A5, IO-540-P1A5, IO-540-R1A5 IO-540-S1A5, O-540-A1A, O-540-A1B5, O-540-A1C5, O-540-A1D O-540-A1D5, O-540-A2B, O-540-A3D5, O-540-A4A5, O-540-A4B5 O-540-A4D5, O-540-B1A5, O-540-B2A5, O-540-D1A5, O-540-E4A5 O-540-E4B5, O-540-G1A5-wd, O-540-G2A5, O-540-G2A5-wd, O-540-J3A5, IO-540-AA1A5
6351	LEFT	35	4.8	IC	08-06351		Lyc. AEIO-540-D4B5, AEIO-540-L1B5, IO-540-AB1A5, IO-540-AC1A5 IO-540-G1C5, IO-540-G1D5, IO-540-G1F5, IO-540-K1A5, IO-540-K1B5 IO-540-K1C5, IO-540-K1E5, IO-540-K1G5, IO-540-K1H5, IO-540-K1K5 IO-540-L1A5, IO-540-L1C5, O-540-B2C5, O-540-E4C5, O-540-G1A5 O-540-G1A5-wd, O-540-G2A5, O-540-G2A5-wd, O-540-J3A5 IO-540-D4B5
6355	LEFT	45	4.8	IC	08-06355		Lyc. IO-540-C2C, O-540-A1A, O-540-A1A5, O-540-A1B5, O-540-A1C5 O-540-A1D5, O-540-A2B, O-540-A4A5, O-540-A4B5, O-540-B2B5 O-540-B2B5-wd, O-540-B2C5-wd, O-540-B4B5, O-540-B4B5-wd, O-540-E4B5-wd, O-540-H2A5, O-540-E4B5
6371	LEFT	0	4	TD	08-01358		Lyc. AEIO-540-D4B5, IO-540-G1D5, IO-540-G1E5, IO-540-K1B5 O-540-E4C5, IO-540-S1A5
6393	LEFT	37	4	RBP	08-06393		Lyc. AEIO-540-D4A5, AEIO-540-D4B5, AEIO-540-L1B5, IO-540-A1A5 IO-540-B1A5, IO-540-B1C5, IO-540-C1B5, IO-540-C1C5, IO-540-C4B5 iO-540-C4C5, IO-540-D4A5, IO-540-D4C5, IO-540-E1A5, IO-540-E1B5 IO-540-G1A5, IO-540-G1B5, IO-540-J4A5, IO-540-K1C5, IO-540-K1D5 IO-540-K1F5, IO-540-K1J5, IO-540-M1A5, IO-540-N1A5, IO-540-P1A5 IO-540-R1A5, IO-540-S1A5, O-540-A1B5, O-540-A1D, O-540-A1D5 O-540-A3D5, O-540-A4D5, O-540-B1A5, O-540-B2A5, O-540-D1A5 O-540-E4A5, O-540-E4C5, IO-540-AA1A5
6399	RIGHT	35	4.9	IC	08-01366		Franklin 6A-350-C1, 6A-350-C1A, 6A-350-C2, 6A-350-C2A, 6A-350-D1 6A-350-D1A, 6A-350-D1B, 6A4-150-B3, 6A4-150-B31, 6A4-150-B4 6A4-165-B3, 6A4-165-B4, 6A4-165-B6

Abbreviations: DD (Direct Drive), IC (Impulse Coupled), RB (Retard Breaker), TD (Tachometer Drive), P (Pressurized) Weight does not include harness cap or magneto drive gear, and are provided for reference only.

## ICK MAGNETOS



### **OVERHAULED SLICK MAGNETOS**

Note: Please remove drive gears before returning Magneto cores for "Core Credit."
These lightweight aircraft magnetos are being used

by many new equipment manufacturers. Weigh only 3-3/4 lbs. compared to 6-1/4 lbs. for typical old style magnetos.

In early 1988, Slick discontinued the sale of re-

All units carry a six-month warranty after delivery to the user. 4000/4100/6200 series magnetos may not be returned as exchange units for a new magneto of the same model. Only 4300 and 6300 series Slick Magnetos may be returned for core credit. Drive gears are not included.

4300 series is a direct replacement for previous 4200 series Magnetos.

#### **4300 SERIES**

Model No.	Part No.	Price
4301R	08-13699	
4302R	08-13700	
4309R	08-13701	
4310R	08-13702	
4316R	08-13703	
4330R	08-13704	
4333R	08-13705	
4342R	08-13706	
4344R	08-13707	
4345R	08-13708	
4347R	08-13709	
4348R	08-13710	
4353R	08-13711	
4354R	08-13712	
4370R	08-13713	
4371R	08-13714	
4372R	08-13715	
4373R	08-13716	
4374R	05-15839	
4381R	08-13718	
4392R	08-13719	

#### 6300 SERIES

Part No.	Price								
08-13720									
08-13721									
08-13722									
08-13724									
08-13725									
08-13726									
08-13727									
08-13728									
08-13729									
08-13730									
08-13731									
08-13732									
08-13733									
08-13734									
08-13735									
08-13736									
08-13737									
08-13739									
08-13743									
08-13744									
08-13745									
08-13746									
08-13747									
08-13748									
08-13749									
	08-13720 08-13721 08-13721 08-13722 08-13724 08-13725 08-13726 08-13727 08-13728 08-13729 08-13730 08-13731 08-13731 08-13732 08-13734 08-13735 08-13736 08-13737 08-13737 08-13739 08-13744 08-13745 08-13745 08-13745 08-13747								

#### **CHAMPION SLICK MAGNETO 500 HOUR** INSPECTION KITS

Model #	Mag Models Used	Part No.	Price
MK431	4301, 4302, 4303, 4309, 4316, 4330, 4331, 4333, 4370, 4371, 4372, 4373, 4374, 4381, 4392		
MK432	4310, 4345, 4347, 4348, 4353, 4354	08-15952	
	4342, 4344	08-15953	
MK631	6310, 6313, 6314, 6320, 6324, 6362, 6364, 6367, 6377, 6379, 6380, 6382, 6399	08-15954	
MK632	6309, 6363, 6365, 6371, 6391, 6393, 6394	08-15955	
MK633	6390	08-15956	



### **CHAMPION OVERHAULED SLICK MAGNETO**

Note 1: Magnetos are overhauled by Quality Aircraft Accessories. Quality Aircraft Accessories is the Champion Authorized Repair Station for Slick Magnetos.

Note 2: Please remove drive gears before returning Magneto cores for "Core Credit."

These lightweight aircraft magnetos are being used by many new equipment manufacturers. Weigh only 3-3/4

lbs. compared to 6-1/4 lbs. for typical old style magnetos. In early 1988, Slick discontinued the sale of re-manufactured magnetos to offer new units only.

All units carry a 12-month warranty after delivery to the user. These model magnetos are completely rebuild-able. The old 4000/4100 series magnetos and the 600 series magnetos may not be returned as an exchange unit for a new magneto of the same model. Most other Magnetos may be returned for core credit.

#### **4300 SERIES**

Description	Part No.	Price
4301R Champion OH Slick Mag Imp Coupled	08-13927	
4309R Champion OH Slick Mag Non/Imp	08-13930	
4310R Champion OH Slick Mag Non/Imp	08-13931	
4370R Champion OH Slick Mag Non Impulsed	08-13916	
4371R Champion OH Slick Mag Impulsed	08-13915	
4372R Champion OH Slick Mag Impulsed	08-13928	
4373R Champion OH Slick Mag Impulsed	08-13921	
4381R Champion OH Slick Mag Impulsed	08-13918	

#### **6300 SERIES**

Description	Part No.	Price
6310R Champion OH Slick Mag Impulsed	08-13917	
6351R Champion OH Slick Mag Impulsed	08-13919	
6320R Champion OH Slick Mag Impulsed	08-13920	
6324R Champion OH Slick Mag Impulsed	08-13922	
6361R Champion OH Slick Mag Impulsed	08-13925	
6350R Champion OH Slick Mag Non/imp	08-13923	
6393R Champion OH Slick Mag Non/imp	08-13926	
6360R Champion OH Slick Mag Non/imp	08-13929	



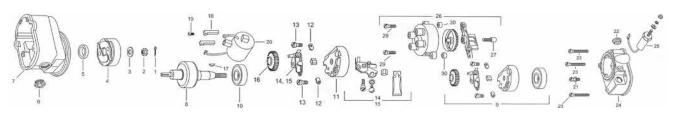
## CHAMPION SLICK MAGNETO

MAINTENANCE KITS
Inspection and maintenance are simpler and more convenient than ever before. Champion also incorporated mechanic-endorsed features to improve performance and service life. Lift-off housing -Internal timing is not disturbed during inspections. Simplified internal timing -Improved

internal markings and unique Slick T-150 E-gap tool make timing easier and more accurate. Fully sealed bearings -Keeps contaminants out and grease in for smoother operation and less maintenance. Lower EMI Levels -Housing improves sealing and results in less radio noise. OEM Approved -Models are available for more than 225,000 engines -all compatible with existing Slick Ignition Harnesses.

Kit No.	Where Kit Used	Mag Models Used	Part No.	Price
MK401	All IC or DD 4cyl. Magnetos	4301, 4302, 4303, 4309, 4316, 4330, 4331, 4333, 4370, 4371, 4372, 4373, 4374, 4381, 4392	08-14592	
MK402	All IC RB or TD 4cyl. Magnetos Excluding 4342 & 4344	4310, 4345, 4347, 4348, 4353, 4354	08-14593	
MK403	4342 & 4344 TD 4cyl. Magnetos	4342, 4344	08-14594	
MK601	All 6cyl. IC & DD Magnetos with small shaft	6310, 6313, 6314, 6320, 6324, 6362, 6364, 6367, 6377, 6379, 6380, 6382, 6399	08-14595	
MK602	All 6cyl. RB Magnetos with small shaft	6309	08-14596	
MK603	6390	6390	08-14597	
MK604	All 6cyl. IC & DD Mag- netos with large shaft	6331, 6340, 6350, 6351, 6355, 6360, 6361	08-14632	
MK605	All 6cyl. RB & TD Magnetos with large shaft except 6390	6363, 6365, 6371, 6391, 6393, 6394	08-14633	

## EP

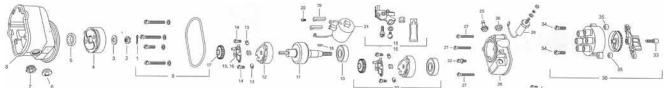


	4300 SERVICE PARTS LIST											
No.	Description	4301	4302	4303	4316	4330	4331	4342	4344	4345	Qty	Price/ea.
1	Cotter pin	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	1	
2	Nut	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	1	
3	Washer	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	1	
4	Impulse Coupling Assy.	M3007	-	-	M3076	M3068	-	-	-	-	1	
5	Oil Seal	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	1	
6	Air Vent	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	1	
7	Frame	M3859	M3900	M3859	M3888	M3888	M3900	M3900	M3900	M3900	1	
8	Rotor	M3073	M3518	M3338	M3047	M3065	M3065	M3548	M3513	M3548	1	
9	Bearing Kit	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	K3301	K3301	K3301	1	
10	Ball Bearing	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	1	
12	Bearing Cap Clamp	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	2	
13	Screw	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	2	
14	Contact Point Kit-Primary	M3081	M3081	M3081	M3081	M3081	M3081	M3637	M3637	M3637	1	
15	Contact Point Kit-Secondary	-	-	-	-	-	-	M3740	M3740	M3637	1	
16	Rotor Gear	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	1	
17	Woodruff Key	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	1	
18	Coil Wedge	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	2	
19	Screw	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	1	
20	Coil*(see below)	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	1	
21	Screw	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	1	
22	Air Vent w/Hood	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	1	
23	Screw	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	3	
24	Housing, Dist.	M3902	M3902	M3902	M3902	M3902	M3902	M3874	M3874	M3832	1	
25	Capacitor	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	1	
27	Carbon Brush	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	1	
	Washer	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	1	
29	Screw	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	2	
30	Spacer	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	2	

No.	Description	4347	4348	4353	4354	4370	4371	4372	4373	4374	4381	Qty	Price/ea.
1	Cotter pin	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	M2556	1	
2	Nut	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	M3019	1	
3	Washer	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	M3172	1	
4	Impulse Coupling Assy.	-	-	-	M3529	-	M3163	M3100	M3529	M3689	M3007	1	
5	Oil Seal	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	M3062	1	
6	Air Vent	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	M1077	1	
7	Frame	M3900	M3900	M3900	M3859	M3900	M3859	M3859	M3859	M3888	M3859	1	
8	Rotor	M3548	M3513	M3548	M3158	M3548	M3158	M3158	M3158	M3065	M3158	1	
9	Bearing Kit	K3301	K3301	K3301	K3301	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	K3318-4	1	
10	Ball Bearing	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	M3006	1	
12	Bearing Cap Clamp	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	M3018	2	
13	Screw	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	2	
14	Contact Point Kit-Primary	M3637	M3637	M3637	M3637	M3081	M3081	M3081	M3081	M3081	M3081	1	
15	Contact Point Kit-Secondary	M3637	M3637	M3637	M3637	-	-	-	-	-	-	1	
16	Rotor Gear	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	M3827	1	
17	Woodruff Key	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	M2536	1	
18	Coil Wedge	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	M3040	2	
19	Screw	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	M3020	1	
20	Coil*(see below)	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	K3975	1	
21	Screw	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	M2555	1	
22	Air Vent w/Hood	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	M3084	1	
23	Screw	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	M3015	3	
24	Housing, Dist.	M3832	M3832	M3832	M3832	M3902	M3902	M3902	M3902	M3902	M3902	1	
25	Capacitor	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	K3984	1	-
27	Carbon Brush	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	M3215	1	
	Washer	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	M2532	1	
29	Screw	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	M3021	2	-
30	Spacer	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	M3826	2	

\*Replaces M3525 Coil

Slick T153 Cam And Rotor Set ......P/N 12-01449 .....----Slick Gasket M3426 ......P/N 08-05247 .....-



No.   Description   6310   6314   6320   6324   6331   6340   6350   6351   6365   6360   Oty,   Price ea			9	14 13	12	11	10		(W)	T 1			30 -	
No.   Description	- 2	7 6			6200	CEDVICE	_	32		27 28	Of the .	5		
Colter pin   M2556	NI-	Decembration	6010	CO1.4					COEO	COE1	COFF	6060	04	Duine no
2														Price ea
3														
Impulse Coupling Ass.   M3905   M3906   M3906   M3906   M3906   M3906   M3313   M331									-		-			
5   Oil Seal	_			-		<del></del>							-	
Fig.   Pressure Vent Plug										<del>                                     </del>	<del>                                     </del>			
7. Al Vert MIGHT MIDT? M	_			<del>                                     </del>		-				<del>                                     </del>	<del>                                     </del>			
Parene	_				-	-						-		
Seaker Pressure Kit			_	-	M3837	M3847	M3888	M3900		-	-	M3900		
10   Ball Bearing				-		-			-		-			
11   Relor   Mod-17   Mog0a   Mog0a   Mog0a   Mog0a   Mog1a	_		M3006	M3006		-			M3006	M3006	M3006			
14   Screw										<del></del>	<del></del>			
15   Contact Pt. Kil-Primary   M3081   M3082   M33828   M3828   M382		Bearing Cap Clamp	M3018	M3018	M3018	M3018	-			M3018	M3018	M3018	2	
16   Contact Pt. Kit-Secondary   -     -     -     -     -     -     -       -	14	Screw	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	M3221	2	
17   Rotor Gear	15	Contact Pt. Kit-Primary	M3081	M3081	M3081	M3081	M3081	M3081	M3081	M3081	M3081	M3081	1	
18	16	Contact Pt. Kit-Secondary	-	-	-	-	-	-	-	-	-	-	1	
19   Coil   Wedge	17		M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	M3828	1	
20   Screw   M3020   M3250   M3256   M2555   M2555   M2555   M2555   M2552	_			-		-					-			
21   Coll   M3975		ŭ .				-								
22         Screw         M.2555         M.2555         J.         -         -         -         M.2555         M.2555         -         1         -           24         Screw         -         -         -         -         -         -         -         3         -           25         Pressure Tube Fitting         -         -         M.3084         M.3084         -         -         M.3018         M.3084         M.3084         -         M.108           27         Screw         M.3015         M.3016         M.3015         M.3015         M.3016         M.3015         M.3016         M.3015         M.3016         M.3016         M.3015         M.3016         M.3015         M.3016         M.3016         M.3015         M.3016											<del></del>			
24 Screw         Screw         . <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th></t<>										-				
25				t					i e	1	1			
66         in' Ventr with Hood         M3084         M3094         -         -         -         M3084         M3084         -         1         -										-			_	
27         Screw         M3015         M3015         -         -         -         M3015         M3015         -         3							-					M1280		
88         Housing, Distributor         M3902         M3904         K13984         K3984         K3984 <th></th> <th></th> <th></th> <th></th> <th>_</th> <th>-</th> <th></th> <th></th> <th></th> <th>-</th> <th>·</th> <th>-</th> <th></th> <th></th>					_	-				-	·	-		
29   Capacitor         K3984				-		-				-			_	
31         Washer         Mz532         Mz532         -         -         -         Mz532         Mz532         -         1         -           32         Bearing Kit         K3320         K3320         K3319         K3321         M3021         M30							-							
Bearing Kit	_				N3904	N3904	N3904				<del>                                     </del>	N3904		
33         Carbon Brush         M3215         M3216         M3021         M3031         M30321         M30321         M30321         M3021					K3330	K3330	K3310					K3310		
34         Screw         M3021         M3032         M3031         M3032         M3039         M3030         M3050         M3039         M3		ŭ												
No.   Description   G361   G362   G363   G364   G365   G367   G371   G380   G382   G390   Qty.   Price ea														
No.   Description   G361   G362   G363   G364   G365   G367   G371   G380   G392   G390   Oty.   Price ea											<del></del>			
1 Cotter pin         M2566 M2556 M2556 M2556 M2556 M2556 M2556 M2556 M2556 M2566 M	-	opuco.	1110020											
Nut, Impulse Coupling														
Washer			-	1		6364	6365	6367	6371	6380	6382	6390	Qty.	Price ea
4         Impulse Coupling Ass.         M3333         M3050         -         M3590         -         M3524         -         M3050         M3050         -         -           5         Oil Seal         M3331         M3062         M3311         M3062         M3331         M3062         M3311         M3062         M3311         M3062         M3311         M3062         M3311         M3062         M3311         M3062         M3081         M3018	1	Cotter pin	M2556	M2556	M2556	<b>6364</b> M2556	<b>6365</b> M2556	<b>6367</b> M2556	<b>6371</b> M2556	<b>6380</b> M2556	<b>6382</b> M2556	<b>6390</b> M2556	Qty.	
5 Oil Seal         M3331         M3062         M3331         M3062         M3331         M3062         M3331         M3062         M3331         1	1 2	Cotter pin Nut, Impulse Coupling	M2556 M3019	M2556 M3019	M2556 M3019	<b>6364</b> M2556	6365 M2556 M3019	<b>6367</b> M2556	<b>6371</b> M2556 M3019	6380 M2556 M3019	6382 M2556 M3019	<b>6390</b> M2556 M3019	<b>Qty</b> . 1	
6 Pressure Vent Plug         M3179         -         M3179         -         M3179         -         -         -         -         1         -           7 Air Vent         -         M1077         -         M1077         -         M1077         M1077         M1968         M1968         M1077         1            8 Frame         M3859         M3837         M3900         M3856         M3900         M3850         M3850         M3900         1            9 Gasket Pressure Kit         K3307         -         K3307         -         K3307         -         K3307         - <t< th=""><th>1 2 3</th><th>Cotter pin Nut, Impulse Coupling Washer</th><th>M2556 M3019</th><th>M2556 M3019 M3172</th><th>M2556 M3019</th><th>6364 M2556 M3492</th><th>6365 M2556 M3019</th><th>6367 M2556 M3492</th><th><b>6371</b> M2556 M3019</th><th>6380 M2556 M3019 M3172</th><th>6382 M2556 M3019 M3172</th><th><b>6390</b> M2556 M3019</th><th><b>Qty.</b> 1 1 1</th><th></th></t<>	1 2 3	Cotter pin Nut, Impulse Coupling Washer	M2556 M3019	M2556 M3019 M3172	M2556 M3019	6364 M2556 M3492	6365 M2556 M3019	6367 M2556 M3492	<b>6371</b> M2556 M3019	6380 M2556 M3019 M3172	6382 M2556 M3019 M3172	<b>6390</b> M2556 M3019	<b>Qty.</b> 1 1 1	
8         Frame         M3859         M3837         M3900         M3853         M3900         M3856         M3900         M3850         M3900         1            9         Gasket Pressure Kit         K3307         -         K3307         -         <	1 2 3 4	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass.	M2556 M3019 - M3333	M2556 M3019 M3172 M3050	M2556 M3019 - -	6364 M2556 M3492 - M3590	6365 M2556 M3019 -	6367 M2556 M3492 - M3524	6371 M2556 M3019 -	6380 M2556 M3019 M3172 M3050	6382 M2556 M3019 M3172 M3050	6390 M2556 M3019 -	Qty. 1 1 1 1	
9         Gasket Pressure Kit         K3307         -         K3307         -         -         -         -         -         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         -         -         -         -         -         1         -         -         1         -         -         1         -         -         1         -         -         -         -         1         -<	1 2 3 4 5	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal	M2556 M3019 - M3333 M3331	M2556 M3019 M3172 M3050 M3062	M2556 M3019 - - M3331	6364 M2556 M3492 - M3590 M3062	6365 M2556 M3019 - - M3331	6367 M2556 M3492 - M3524 M3062	6371 M2556 M3019 - - M3331	6380 M2556 M3019 M3172 M3050 M3062	6382 M2556 M3019 M3172 M3050 M3062	6390 M2556 M3019 - - M3331	Qty. 1 1 1 1 1	
10         Ball Bearing         M3006         M3007         M30117         M3499         M3117         M3047         M3017         1	1 2 3 4 5 6	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug	M2556 M3019 - M3333 M3331 M3179	M2556 M3019 M3172 M3050 M3062 - M1077	M2556 M3019 - - M3331 M3179	6364 M2556 M3492 - M3590 M3062 - M1077	6365 M2556 M3019 - - M3331 M3179	6367 M2556 M3492 - M3524 M3062 - M1077	6371 M2556 M3019 - - M3331	6380 M2556 M3019 M3172 M3050 M3062	6382 M2556 M3019 M3172 M3050 M3062	6390 M2556 M3019 - - M3331	Qty. 1 1 1 1 1 1 1	
11         Rotor         M3327         M3047         M3117         M3496         M3117         M3499         M3117         M3047         M3017         1	1 2 3 4 5 6 7	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame	M2556 M3019 - M3333 M3331 M3179 - M3859	M2556 M3019 M3172 M3050 M3062 - M1077 M3837	M2556 M3019 - - - M3331 M3179 - M3900	6364 M2556 M3492 - M3590 M3062 - M1077 M3853	6365 M2556 M3019 - - M3331 M3179 - M3900	6367 M2556 M3492 - M3524 M3062 - M1077 M3856	6371 M2556 M3019 - - M3331 - M1077	6380 M2556 M3019 M3172 M3050 M3062 - M1968	6382 M2556 M3019 M3172 M3050 M3062 - M1968	6390 M2556 M3019 - - M3331 - M1077	Qty. 1 1 1 1 1 1 1 1 1 1 1 1	
13         Bearing Cap Clamp         M3018         M3021         M3221	1 2 3 4 5 6 7 8	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307	M2556 M3019 M3172 M3050 M3062 - M1077 M3837	M2556 M3019  M3331 M3179  M3900 K3307	6364 M2556 M3492 - M3590 M3062 - M1077 M3853	6365 M2556 M3019 - - - M3331 M3179 - M3900 K3307	6367 M2556 M3492 - M3524 M3062 - M1077 M3856	6371 M2556 M3019 - - - M3331 - M1077 M3900	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850	6390 M2556 M3019 - - M3331 - M1077 M3900	Qty. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
14         Screw         M3221         M3215         M3221         M321         M321         M3215         M3215         M3215         M3215         M3215         M3215         M3221         M321         M321         M321         M3215         M3215         M3081         M3021         M3081         M3021         M3081         M3081 </th <th>1 2 3 4 5 6 7 8 9</th> <th>Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing</th> <th>M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006</th> <th>M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006</th> <th>M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006</th> <th>6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006</th> <th>6365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006</th> <th>6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006</th> <th>6371 M2556 M3019 - - - M3331 - M1077 M3900 - M3006</th> <th>6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006</th> <th>6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006</th> <th>6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006</th> <th>Qty. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</th> <th></th>	1 2 3 4 5 6 7 8 9	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006	6365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006	6371 M2556 M3019 - - - M3331 - M1077 M3900 - M3006	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006	Qty. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
15         Contact Pt. Kit-Primary         M3081         M3081         M3637         M3081         M3637         M3081         M3637         J	1 2 3 4 5 6 7 8 9 10	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327	M2556 M3019 M3172 M3050 M3062  M1077 M3837  M3006 M3047	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496	6365 M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499	6371 M2556 M3019 - - - M3331 - M1077 M3900 - M3006 M3117	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047	6390 M2556 M3019 - - - M3331 - M1077 M3900 - M3006 M3117	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
16         Contact Pt. Kit-Secondary         -         M3637         -         M3637         -         -         M3740         1	1 2 3 4 5 6 7 8 9 10 11	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327 M3018	M2556 M3019 M3172 M3050 M3062  M1077 M3837  M3006 M3047 M3018	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018	6365 M2556 M3019 	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018	6371 M2556 M3019 - - - M3331 - M1077 M3900 - M3006 M3117 M3018	6380 M2556 M3019 M3172 M3050 M3062  M1968 M3850  M3006 M3047 M3018	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 2	
17         Rotor Gear         M3828         M3840         M3040         M3075         M3075         M3075         <	1 2 3 4 5 6 7 8 9 10 11 13	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327 M3018 M3221	M2556 M3019 M3172 M3050 M3062  M1077 M3837  M3006 M3047 M3018 M3221	M2556 M3019 - - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3021	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221	6371 M2556 M3019 - - - M3331 - M1077 M3900 - M3006 M3117 M3018	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221	Oty.  1 1 1 1 1 1 1 1 1 1 1 2 2	
18         Woodruff Key         M2536         M2537         M2556	1 2 3 4 5 6 7 8 9 10 11 13 14 15	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327 M3018 M3221 M3081	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081	M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3021 M3081	6365 M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3018 M3018 M3221 M3637	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3017 M3018 M3221 M3637	Oty.  1 1 1 1 1 1 1 1 1 1 1 2 2	
20         Screw         M3020         M3021         M3075         M3	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary	M2556 M3019 - M3333 M3371 - M3859 K3307 M3006 M327 M3018 M3221 M3081	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3021 M3081	M2556 M3019 - - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3021 M3637	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3018 M3021 M3081	6365 M2556 M3019 - - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3018 M3018 M3018 M3018	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3096 M3499 M3018 M3018	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3021 M3637	6380 M2556 M3019 M3172 M3050 M3062  M1968 M3850  M3006 M3047 M3018 M3018	6382 M2556 M3019 M3079 M3050 M3062  M1968 M3850  M3006 M3047 M3018 M3021 M3081	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3018 M3018 M3221 M3637 M3740	Oty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
21         Coil         M3975         M3955         M2555         M2552         M2552         M3015         M3084         M30	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear	M2556 M3019 - M3333 M3331 M379 - M3859 K3307 M3006 M3327 M3018 M3221 M3081 - M3828	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536	M2556 M3019 - - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3018 M3021 M3081 - M3828	M3331 M3179 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3021 M3081 - M3081 -	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3021 M3637 M3637 M3628	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3021 M3081 - M3828	6382 M2556 M3019 M3072 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3021 M3081 - M3081 -	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3021 M3637 M3740 M3828	Qty.  1  1  1  1  1  1  1  1  2  1  1  1  1	
22         Screw         -         M2555         -         M2555         -         M2555	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge	M2556 M3019 - M3333 M33179 - M3859 K3307 M3006 M3327 M3018 M3221 M3081 - M3828 M2536 M3040	M2556 M3019 M3172 M3050 M3062 	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M3081 M3081 M3081 M3081 M3081 M3081 M3081 M3081 M3081 M3082 M3082 M3082 M3083 M3083 M3083 M3083 M3083 M3083 M3083 M3083 M3084 M3044 M3044 M3084 M304 M304 M304 M304 M304 M304 M304 M30	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M367 M36	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M3081 M3828 M3040	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3828 M3620	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3828 M3828	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M3828 M3940	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
24         Screw         -         M3125         -         -         -         -         -         -         M3125         -         3            25         Pressure Tube Fitting         M1280         -         M1280         -         -         -         -         -         1            26         Air Vent with Hood         -         M3084         -         M3084         M3085         M3015	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw	M2556 M3019 M3333 M3317 M3179 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020	M2556 M3019 M3172 M3050 M3062 	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3638 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3888 M32536 M3040 M3020	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3630 M3637 M367 M36	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3888 M32536 M3040 M3020	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M367 M367 M367 M367 M367 M367 M367 M367 M367 M367 M367 M3	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3536 M3040 M3040	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3536 M3040 M3040	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M3637 M3740 M3637	Qty. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
25         Pressure Tube Fitting         M1280         -         M1280         -         -         -         -         -         -         1            26         Air Vent with Hood         -         M3084         -         M3084         M3015         M3015 <t< th=""><th>1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21</th><th>Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil</th><th>M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975</th><th>M2556 M3019 M3172 M3050 M3062 M3075 M3087 M3096 M3047 M3018 M3221 M3081 M3086 M3040 M3040 M3020 M3975</th><th>M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M367 M36</th><th>G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3081 - M3081 - M3081 - M3081 - M3081 - M3081 - M3082 M302 M302 M302 M302 M302 M302 M302 M30</th><th>G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3636 M3040 M3020 M3975</th><th>G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M3040 M3040 M3020 M3975</th><th>6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3828 M2536 M3040 M3020 M3975</th><th>6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3081 - M3081 - M3081 - M3082 M3082 M3083 M3083 M3083 M3084 M3085</th><th>6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3530 M3040 M3040 M3040 M3020 M3975</th><th>6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M3636 M3040 M3020 M3975</th><th>Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</th><th></th></t<>	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975	M2556 M3019 M3172 M3050 M3062 M3075 M3087 M3096 M3047 M3018 M3221 M3081 M3086 M3040 M3040 M3020 M3975	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M367 M36	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3081 - M3081 - M3081 - M3081 - M3081 - M3081 - M3082 M302 M302 M302 M302 M302 M302 M302 M30	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3636 M3040 M3020 M3975	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M3040 M3040 M3020 M3975	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3828 M2536 M3040 M3020 M3975	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3080 M3081 - M3081 - M3081 - M3081 - M3082 M3082 M3083 M3083 M3083 M3084 M3085	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3530 M3040 M3040 M3040 M3020 M3975	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M3636 M3040 M3020 M3975	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
26         Air Vent with Hood         -         M3084         -         M3084         -         M3084         M3085         M3015         M3020         M3020         M3832         M3902         M3832         M3902         M3832         M3902         M3832         M3902         M3832         M3902         M3832         M3902         M3884         K3984         K	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3081 - M3081 - M3828 M2536 M3040 M3020 M3975 M3050	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3636 M3040 M3020 M3975	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3081 - M3081 - M3081 - M3081 - M3081 - M3081 - M3082 M302 M302 M302 M302 M302 M302 M302 M30	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3900 M3000 M30	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3638 M3637	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M3536 M3620 M3975 M3050	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M3636 M3040 M3020 M3975	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
27         Screw         -         M3015         -         M3015         -         M3015         M3021	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Screw Screw	M2556 M3019 - M3333 M3331 M3179 - M3859 K3307 M3006 M3327 M3018 M3021 M3081 - M3828 M2536 M3040 M3020 M3020	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3018 M3021 M3081 - M3081 - M3083 M3090 M300 M30	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637	6364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3975	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3018 M3018 M3021 M3637 M367 M36	6367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3975	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3628 M2536 M3040 M3975 M39555	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3975	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3975 M3955 M3125	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3975 M3975	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
28         Housing, Distributor         M3902         M3902         M3832         M3902         M3832         M3902         M3832         M3902         M3802         M3902         M3874         1            29         Capacitor         K3984	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Screw Pressure Tube Fitting	M2556 M3019 M3333 M3331 M3179 M3859 K3307 M3006 M3327 M3018 M3021 M3081 M3828 M2536 M3040 M3020 M3975 M1280	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3125 -	M2556 M3019 - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 -	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3018 M3018 M3021 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3090 M300 M30	G367 M2556 M3492 - M3524 M3062 - - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555	6371 M2556 M3019 - - M3331 - M3006 M3117 M3008 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3637	6380 M2556 M3019 M3172 M3050 M3062 - - M3066 M30850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M30975 M30975	M3556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M3025 M3025	M3331 - M3331 - M3900 - M306 M3117 M3900 - M306 M3117 M3918 M3221 M3637 M3740 M3828 M2536 M3040 M3975 M2555	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
29         Capacitor         K3984         K3984 <t< th=""><th>1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26</th><th>Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Screw Pressure Tube Fitting Air Vent with Hood</th><th>M2556 M3019 M3333 M3331 M3331 M3379 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M1280</th><th>M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M2555 M3125 - M3084</th><th>M2556 M3019 - - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3620 M3020 M3075 - -</th><th>M3590 M362 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3975 M3084</th><th>M3331 M3179 </th><th>M3524 M3062 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M2555 - M3084</th><th>6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3628 M2536 M3040 M3975 M2555 - M3084</th><th>M3050 M3062 - M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555  M3084</th><th>6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3125 - M3084</th><th>6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3975 M2555 - M3084</th><th>Qty.           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           3           1           1</th><th></th></t<>	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Screw Pressure Tube Fitting Air Vent with Hood	M2556 M3019 M3333 M3331 M3331 M3379 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M1280	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M2555 M3125 - M3084	M2556 M3019 - - - M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3620 M3020 M3075 - -	M3590 M362 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3975 M3084	M3331 M3179 	M3524 M3062 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M2555 - M3084	6371 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3628 M2536 M3040 M3975 M2555 - M3084	M3050 M3062 - M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3084	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3125 - M3084	6390 M2556 M3019 - - M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3975 M2555 - M3084	Qty.           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           3           1           1	
31     Washer     -     M2532     -     M2532     -     M2532     -     M2532	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26 27	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Pressure Tube Fitting Air Vent with Hood Screw	M2556 M3019 M3333 M3331 M3179 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M1280	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3125 - M3084 M3015	M2556 M3019 M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3628 M2536 M3040 M3020 M3975 M1280 -	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3055 - M3084 M3015	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3900 M3900 M3975 - - - - - - - - - - - - - - - - - - -	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M30555 - -	6371 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M30975 M3094 M3094 M3095	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M2555 M3125 - M3084 M3084	6390 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3020 M3975 M3040 M3020 M3975 M2555 - M3084 M3015	Oty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
32     Bearing Kit     K3319     K3320     K3302     K3320	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Pressure Tube Fitting Air Vent with Hood Screw Housing, Distributor	M2556 M3019 M3333 M3317 M3179 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M1280 M3902	M2556 M3019 M3172 M3050 M3062 M1077 M3837 M3006 M3047 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M2555 M3125 M3084 M3015 M3090	M2556 M3019 M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3628 M2536 M3040 M3020 M3975 M1280 M3832	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M3084 M3015 M3084 M3015	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3620 M3975 - - - - - - - - - - - - - - - - - - -	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3084 M3040 M3020 M3975 M3084 M3040 M3090	6371 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M3084 M3055 - M3084 M3084 M3084 M3084 M3084 M3084 M3084	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3080 M3975 M3975 M3080 M3090 M3090	6390 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3020 M3975 M3084 M3015 M3874	Qty.           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           3           1           3           1           3           1	
33         Carbon Brush         M3215	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Pressure Tube Fitting Air Vent with Hood Screw Housing, Distributor Capacitor	M2556 M3019 M3333 M3317 M3179 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M1280 M3902 K3984	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3081 M3021 M3081 M3221 M3081 - M3083 M3255 M3125 - M3084 M3092 K3984	M2556 M3019 M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3628 M2536 M3040 M3020 M3975 M1280 M3832 K3984	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3084 M2536 M3040 M3020 M3975 M3084 M3084 M3015 M3084 M3015 M3084 M3015	G365 M2556 M3019 - - - M3331 M3179 - - M3900 M3900 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 - - - - - - - - - - - - - - - - - - -	G367 M3524 M3062 - M3524 M3062 - M307 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3084 M3015 M3084 M3018	6371 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3620 M3975 M2555 M3084 M3015 M3882 K3984	6380 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3084 M3020 M3975 M2555 - M3084 M3015 M3084 M3015 M3902 K3984	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M3084 M3084 M3084 M3084 M3084 M3084 M3084	6390 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3020 M3975 M2555 M3084 M3018	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 31	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Pressure Tube Fitting Air Vent with Hood Screw Housing, Distributor Capacitor Washer	M2556 M3019 M3333 M3331 M3179 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M1280 M3902 K3984	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3021 M3081 M3020 M3975 M3020 M3975 M3084 M3015 M3084 M3015 M3084 M3015 M3084 M3015 M3084 M3015 M3084 M3015	M2556 M3019 M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3628 M2536 M3040 M3020 M3975 M1280 M3832 K3984 -	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 - - M3084 M3084 M3084 M3092 K3984 M3092 K3984 M2532	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3828 M2536 M3040 M3020 M3975 - - - - - - - - - - - - - - - - - - -	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3084 M3018 M3020 K3984 M2532	6371 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3627 M3637 M3628 M2536 M3040 M3020 M3975 M2555 M3084 M3018 M3084 M3018	6380 M3256 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 - M3084 M30902 K3984 M2532	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3255 M3040 M3975 M3084 M3084 M3094 M3095 M3084 M3095 M	6390 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3020 M3975 M3084 M3018	Qty.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
35   Spacer   M3826   2	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 31 32 33	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Pressure Tube Fitting Air Vent with Hood Screw Housing, Distributor Capacitor Washer Bearing Kit Carbon Brush	M2556 M3019 M3333 M3331 M3179 M3859 K3307 M3006 M3221 M3018 M3828 M2536 M3040 M3020 M3975 M1280 M3902 K3319 K3319 M3215	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M3921 M3084 M3015 M3922 K3984 M2535 K3984 M2535 K3984 M3532 K3920 M3215	M2556 M3019 M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3637 M3637 M3637 M3637 M3828 M2536 M3040 M3020 M3975 M1280 M3832 K3984 - K3302 M3215	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3084 M3015 M3092 K3984 M2532 K3320 M3215	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3637 M3637 M3621 M3620 M3975 - - - - - - - - - - - - - - - - - - -	M3524 M3062 - M3524 M3062 - M3075 M3066 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 - - - M3084 M3015 M3084 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M3020 M3015 M301	6371 M2556 M3019 M3331 M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3628 M2536 M3040 M3020 M3975 M2555 M3084 M3015 M3682 K3984 M3015 M3632 K3984 M3532 K3902 M3215	M3050 M3062 M3068 M3062 M3068 M3066 M3069 M3066 M3047 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M2555 M3084 M3015 M3084 M3015 M3092 K3984 M3532 K3320 M3215	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M3084 M3015 M3084 M3085 M3084 M3085 M3086 M	6390 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3975 M2555 M3084 M3015 M3874 K3984 M2532 K3302 M3215	Qty.           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           3           1	
	1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 33 33 34	Cotter pin Nut, Impulse Coupling Washer Impulse Coupling Ass. Oil Seal Pressure Vent Plug Air Vent Frame Gasket Pressure Kit Ball Bearing Rotor Bearing Cap Clamp Screw Contact Pt. Kit-Primary Contact Pt. Kit-Secondary Rotor Gear Woodruff Key Coil Wedge Screw Coil Screw Fressure Tube Fitting Air Vent with Hood Screw Housing, Distributor Capacitor Washer Bearing Kit Carbon Brush Screw Screw Carbon Brush Screw Bressure Tube Fitting Carbon Brush Screw Bearing Kit Carbon Brush	M2556 M3019 M3333 M3331 M3331 M3379 M3859 K3307 M3006 M3327 M3018 M3221 M3081 M3828 M2536 M3040 M3020 M3975 M1280 M3902 K3984 K3319 M3215 M3021	M2556 M3019 M3172 M3050 M3062 - M1077 M3837 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 M3125 - M3084 M3015 M3092 K3984 M3015 M3902 K3984 M2532 K3320 M3215 M3021	M2556 M3019 M3331 M3179 - M3900 K3307 M3006 M3117 M3018 M3221 M3637 M3637 M3637 M3620 M3975 M1280 M3832 K3984 - K3302 M3215 M3021	G364 M2556 M3492 - M3590 M3062 - M1077 M3853 - M3006 M3496 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M2555 - M3084 M3015 M3902 K3984 M2532 K3320 M3215 M3021	G365 M2556 M3019 - - - M3331 M3179 - - M3900 K3307 M3006 M3117 M3018 M3637 M3637 M3637 M3620 M3975 - - - - - - - - - - - - - - - - - - -	G367 M2556 M3492 - M3524 M3062 - M1077 M3856 - M3006 M3499 M3018 M3221 M3081 - M3828 M2536 M3040 M3020 M3975 M2555 - M3084 M3015 M3902 K3984 M2532 K3320 M3215 M3021	6371 M2556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3637 M3628 M2536 M3040 M3020 M3975 M2555 M3084 M3015 M3832 K3984 M2532 K3302 M3215 M3021	6380 M3256 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3084 M3050 M3975 M2555 - M3084 M3015 M3902 K3984 M2532 K3320 M3215 M3021	6382 M2556 M3019 M3172 M3050 M3062 - M1968 M3850 - M3006 M3047 M3018 M3221 M3081 - M3828 M2536 M3040 M3975 M2555 M2555 M3084 M3015 M3902 K3984 M2532 K3320 M3215 M3021	6390 M3556 M3019 M3331 - M1077 M3900 - M3006 M3117 M3018 M3221 M3637 M3740 M3828 M2536 M3040 M3020 M3975 M3084 M3015 M3874 K3984 M2532 K3302 M3215	Qty.           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           3           1           1           1           1           1           1           1           1           1           2	

## **SLICK IGNITION HARNESSES BY CHAMPION**

### **AIRCRAFT ENGINE APPLICATION CHART**

Engine	Engine Models	Magneto	5/8" x 24 Spark Plug Termination	3/4" x 20 Spark Plug Termination
	Textron Lycoming			
0-235	C	S4-1200	M2365	M2235
0-235	С	S4-20, S4-200	M2364	M2360
0-235	C1,C1B,C2A,C2C,E1,H2C,J2A,J2B,K2C,L2A,L2C,M1,N2A,N2C,P1,P2A	S4-1200	M2365	M2235
0-235	C1,C1B,C2A,C2C,E1,H2C,J2A,J2B,K2C,L2A,L2C,M1,N2A,N2C,P1,P2A	S4-20, S4-200	M2364	M2360
0-235	C1,C1B,C2A,J2A,L2A,M1,N2A,P1,P2A	4200.4300	M4004	M2508
0-235	C2C,E1 ,H2C,J28 ,K2C,L2C,N2C	4200,4300	M4001	M2508
0-290	D,D2	4200,4300	M4004	M2508
0-290	D,D2,D2A,D2C	S4-20, S4-200	M2364	M2360
AEI0-320	D1B.D2B	4200,4300	M4005	M2508
AEI0-320	D1B,D2B,E1A,E2B	S4-1200	M2365	M2235
AEI0-320	D1B,D2B,E1A,E2B	S4-20, S4-200	M2364	M2360
		4200.4300		
AEI0-320	E1A	,	M4004	M2508
AEI0-320	E2B	4200,4300	M4001	M2508
AI0-320	B1B	4200,4300	M4005	M2508
AI0-320	B1B	S4-1200	M2365	M2235
AI0-320	B1B	S4-20, S4-200	M2364	M2360
10-320	B1A,B1C,B1D,B2A,B2B,C1A,C1C,D1A,D1B,E1A,E2A,E2B,F1A	S4-1200	M2365	M2235
10-320	BIA,B1C,B1D,B2A,B2B,C1A,D1A,D1B,E1A,E2A,E2B,F1A	S4-20, S4-200	M2364	M2360
10-320	B1A,C1A,F1A	4200,4300	M4000	M2508
10-320	B1C,B2A,E1A,E2A	4200,4300	M4004	M2508
10-320	B1D	4200,4300	M4007	M2508
10-320	C1C	S4-20, S4-200	M2112	M2360
10-320	D1A,D18	4200,4300	M4005	M2508
10-320	E2B	4200,4300	M4001	M2508
LI0-320	B1A.C1A	4200,4300	M4000	M2508
LI0-320	B1A,C1A	S4-1200	M2365	M2235
LI0-320	B1A,C1A	S4-20, S4-200	M2112	M2360
0-320	A1A,A1B,A2A,A2C,A2D,A3A,A3B,B1A,B2A,B2B,B2D,83A,B3B,83C,C1A,C1B,C3A,C38,D1A,D1B,D1F,D2A,D2B,D2J,D3G,E1A,E1B,EIC,EIF,E2A,E2C,E2D,E2E,E2F,E2G,E2H,E3D,E3H	S4-1200	M2365	M2235
0-320	A1A,A1B,A2A,A2D,A3A,A3B,B1A,B1B,B2A,B2B,B3A,B38,C1A,C1B,C3A, C3B,D1A,D1B,D2A,D2B,D2J,D3G,E1A,E1B,EI C,EIF,E2A,E2C,E2D,E2E,E2F, E2G,E2H,E3D,E3H	S4-20, S4-200	M2364	M2360
0-320	A1A,A2D,C1A,C3A,D3G,E2D,E2E,E2G,E3D	4200,4300	M4001	M2508
0-320	A1B,A2A,A2B,A2C,A3A,A3B,B1A,B1B,B2A,B2B,B2C,B2D,B3A,B3B,B3C,C1B,C3B,D1A,D28,E1A,E2A,E2H	4200,4300	M4004	M2508
0-320	A2B,A2C,B2C,82D,83C	S4-20, S4-200	M2402	M2360
0-320	DIF	S4-20, S4-200	M2363	M2360
0-320	DIF,D2A,E1C,EIF,E2F,E3H	4200, 4300	M4005	M2508
0-320	D2J	4200, 4300	M4002	M2508
0-320	E2C	4200, 4300	M4007	M2508
0-320	H2AD	DUAL	1011007	M2917
0-340	A1A	S4-20, S4-200	M2364	M2360
AEI0-360	A1A,A1B,A1B6,A1D,B1F,B1G6,B2F,B2F6,B4A,H1A	S4-1200	M2365	M2235
AEI0-360		S4-20, S4-200		
	A IA,A1B,A1B6,A1D,B1F,B1G6,B2F,B2F6,B4A,H1A	4200, 4300	M2364	M2360
AEI0-360	A1A,A1D,B4A	,	M4004	M4029
AEI0-360	A1B,A1B6	4200, 4300	M4012	M4029
AEI0-360	B1F,B2F	4200, 4300	M4005	M2508
AEI0-360	B1G6,B2F6,H1A	4200, 4300	M4001	M2508
AI0-360	A1A,A1B	4200, 4300		M4029
AI0-360	A1A,A1B	S4-20, S4-200	M2364	M2360
AI0-360	A1A,A1B,B1B	S4-1200	M2365	M2235
AI0-360	AIB,B1B	4200,4300	M4001	M4029
AI0-360	B1B	S4-1200		M2492
HI0-360	A1A	S4-20, S4-200	M2817	M2859
HI0-360	B1A,C1A	S4-20, S4-200	M2795	M2856
HI0-360	D1A	4200,4300	M4007	1412000
HI0-360	D1A	S4-1200	M2655	
HI0-360	E1AD.E1BD.F1AD	DUAL	IVIZUUU	M2944
H0-360	A1A,B1A,81BB	S4-20, S4-200	M2364	M2360
10-360	A1A,B1A,B1BB A1A,A1B,A1B6,A1C,A1D6,A2A,A2B,B1A,B1B,B1D,BIE,81F,B1F6,B2End, 82Ewd,82F6,C1A,C1C6,C1D6,D1A,K2A	S4-20, S4-200 S4-20, S4-200	M2364 M2364	M2360 M2360
10-360	A1A,A1B,A1C,A2A,A2B,B1A,B1B,B1D,B1F,BIF6,B2End,B2Ewd,B2F6,			
	C1A,C1D6,K2A	S4-1200	M2365	M2235
10-360	A1A.A2A.B1B.B1D.C1A.K2A	4200,4300	M4004	M2508
10-360	A1B,A1B6,A1C,A1D6,C1B,C1D6	4200,4300	M4004 M4012	M2508
10-360	A1B6	S4-1200	M2420	M2641
10-300			IVIZ4ZU	
	A1B6D,J1A6D	DUAL	140.400	M2915
10-360	A4DC	S4-1200	M2420	M2235
I0-360 I0-360	A1D6	1000 1000		
10-360 10-360 10-360	A2B,B1E,B2End	4200,4300	M4006	M2508
10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D	DUAL		M2916
10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E	DUAL S4-1200	M2423	M2916 M2235
10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D	DUAL		M2916
10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E	DUAL S4-1200	M2423	M2916 M2235
10-360 10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6	DUAL S4-1200 4200,4300	M2423 M4005	M2916 M2235 M2508
10-360 10-360 10-360 10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6 B1F6 C1B,D1A	DUAL S4-1200 4200,4300 4200,4300 S4-1200	M2423 M4005 M4001 M2365	M2916 M2235 M2508 M2508 M2616
I0-360 I0-360 I0-360 I0-360 I0-360 I0-360 I0-360 I0-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6 B1F6 C1B,D1A C1C,C1C6,C1E6	DUAL S4-1200 4200,4300 4200,4300 S4-1200 4200,4300	M2423 M4005 M4001 M2365 M4027	M2916 M2235 M2508 M2508 M2616 M2508
10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6 B1F6 C1B,D1A C1C,C1C6,C1E6 C1C,C1E6,C1F	DUAL \$4-1200 4200,4300 4200,4300 \$4-1200 4200,4300 \$4-1200	M2423 M4005 M4001 M2365 M4027 M2423	M2916 M2235 M2508 M2508 M2508 M2616 M2508 M2616
10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6 B1F6 C1B,D1A C1C,C1C6,C1E6 C1C,C1E6,C1F C1C,C1E6,C1F	DUAL \$4-1200 4200,4300 4200,4300 \$4-1200 4200,4300 \$4-1200 \$4-1200 \$4-20,\$4-200	M2423 M4005 M4001 M2365 M4027 M2423 M2658	M2916 M2235 M2508 M2508 M2616 M2508
10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6 B1F6 C1B,D1A C1C,C1C6,C1E6 C1C,C1E6,C1F C1C,C1E6,C1F C1C,C1E6,C1F	DUAL S4-1200 4200,4300 4200,4300 S4-1200 4200,4300 S4-1200 S4-1200 S4-20, S4-200 S4-1200	M2423 M4005 M4001 M2365 M4027 M2423 M2658 M2423	M2916 M2235 M2508 M2508 M2616 M2508 M2616 M2661
10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6 B1F6 C1B,D1A C1C,C1C6,C1E6 C1C,C1E6,C1F C1C,C1E6,C1F C1C,C1E6,C1F C1C,C1E6,C1F C1C,C1E6 C1F,D1A	DUAL \$4-1200 4200,4300 4200,4300 \$4-1200 4200,4300 \$4-1200 \$4-1200 \$4-20, \$4-200 \$4-1200 4200,4300	M2423 M4005 M4001 M2365 M4027 M2423 M2658 M2423 M4007	M2916 M2235 M2508 M2508 M2616 M2508 M2616 M2661
10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360 10-360	A2B,B1E,B2End A3B6D B1E B1F,B2Ewd,B2F6 B1F6 C1B,D1A C1C,C1C6,C1E6 C1C,C1E6,C1F C1C,C1E6,C1F C1C,C1E6,C1F	DUAL S4-1200 4200,4300 4200,4300 S4-1200 4200,4300 S4-1200 S4-1200 S4-20, S4-200 S4-1200	M2423 M4005 M4001 M2365 M4027 M2423 M2658 M2423	M2916 M2235 M2508 M2508 M2616 M2508 M2616 M2661

FOR A COMPLETE APPLICATION GUIDE AND PART NUMBERS PLEASE VISIT WWW.AIRCRAFTSPRUCE.COM

#### SLICKSTART

Improve your engine starting hot or cold Slick Start™ unleashes a firestorm of ignition energy to get your engine started and get you off the ground. SlickSTART is so effective, even sub-optimal fuel mixtures and seriously fouled plugs won't stop the capacitive discharge output from providing the ignition boost your engine needs for reliable starts every time. SlickSTART's sure starting power...

Delivers up to 340% more spark energy to your plugs. Overcomes poor engine priming. Reduces costly electrical stress to your battery and starter. Requires no maintenance. Is approved for use with Slick magnetos. Plus, it's inexpensive and easy to install. Just add SlickSTART to your impulse coupled magnetos or replace your

antiquated starting. The FAA-PMA approved SlickSTART™ magneto booster system integrates solid state electronics with conventional ignition hardware to deliver optimum spark energy for improved engine starting under all operating conditions.



#### **SLICK MAGNETO** ASSEMBLY & TIMING KIT

T-100 Assembly and Timing Kit for fieldrepairable Slick 4300/6300 Series Magnetos. P/N 07-00788 .....-



### CHAMPION SLICK MAGNETO **ADAPTER M2638-74 (.810)**

P/N M2638-4 ..... ---

### T118 SLICK MAGNETO LOCKING PIN

Use this pin to lock the gears of Slick® magnetos and maintain the correct timing position prior

to removal or installation of the magneto.....P/N 12-01441 .....

### T-200 SLICK® IGNITION HARNESS TOOL KIT



The Slick® Assembly Tool Kit is required to install all Slick Ignition Harness Leads on all magneto harness caps and spark plug termination ends. The complete kit includes: Pressing Tool, #72 Drill Bit, Pin Vise, Stripping Tool, Spring Assembly Tool, and Shield Stripper. Complete instructions

for the use of this kit can be found in the Unison Industries L-1178 P/N 12-00720.. Service Manual.

### SLICK IMPULSE COUPLING INSPECTION GAUGE

T-155 Impulse Coupling Inspection Gauge for Slick. P/N 12-01450.....



#### CHAMPION MAGNETO OIL

Champion Magneto Oil R5008 - 32 Fluid Ounces. P/N 08-07199 .....

POWERUP REPLACEMENT PARTS FOR SLICK TYPE MAGNETOS

Magneto replacement parts manufactured by Aero Accessories Inc. are made to specifications dictated by Federal Aviation Administration parts manufacturing approvals. They are highest quality, direct replacement parts, approved for installation and use on certified aircraft. Note: Always refer to the parts and service manual of the original equipment manufacturer or to Aircraft Type Certificate Data Sheets or other FAAapproved data to determine eligibility of a part or component for use in any application.

\*Kit Includes: A13081, A13081-1, -2, & AM3611 \*\*Includes: AM3183, AM3182-1, & -2

Model No.	Description	Champion Part No.	Part No.	Price
A-13081-8	Contact Lube		07-01081	
AM-3183-1	Nut		07-02452	-
AM-3183-2	Washer		07-02453	
AM3611	Cam		07-02456	
ES3307	Pressure Gasket Kit	K3307	07-19939	
ES1077	Air Vent	M1077	07-19931	
AM-2536	Woodruff Key	M2536	07-02446	
AM-2540	Cotter Pin	M2540	07-02447	-
AM-3006	Ball Bearing	M3006	07-02448	
AM-3015	Screw	M3015	08-15840	-
ES3018	Bearing Cap Clamp	M3018	07-19932	
ES3019	Nut	M3019	07-19933	-
AM-3020	Screw	M3020	08-15841	
AM-3021	Screw	M3021	07-02449	
ES3040	Coil Wedge	M3040	07-19934	
AM-3062	Oil Seal	M3062	07-01089	
A-13081	Contact Assembly Kit*	M3081	07-02445	
ES3084	Air Vent w/ Hood	M3084	07-19935	

Model No.	Description	Champion Part No.	Part No.	Price
ES3172	Washer	M3172	07-19936	
ES3179	Vent Plug	M3179	07-19937	
ES3180	Tube Fitting	M3180	07-19938	
AM-3183	Capacitor Assembly**	M3183	07-02451	
AM-3215	Brush & Spring	M3215	07-02454	
ES3331	Oil Seal	M3331	07-19940	
AM-3485	Bearing & Cap Assembly	M3485	07-02455	
ES3637	Contact Point	M3637	07-19941	
ES3740	Contact Point	M3740	07-19942	
ES3826	Spacer	M3826	07-19943	
ES3827	Rotor Gear	M3827	07-19945	
ES3828	Rotor Gear	M3828	07-19946	
A-13009	Coil	M3975	07-02444	
ES917	Impulse Spring	M917	07-19944	
ES3822	Distributor Block Assembly 4 Cylinder	K3822	08-16227	
ES510406	Gear Assembly 4 Cylinder	K3008	08-16232	

#### POWERUP BENDIX SERIES MAGNETO REPAIR KITS

These magneto repair kits and deluxe repair kits are designed to simplify the Bendix magneto overhaul process by providing all of the commonly needed overhaul parts in one convenient kit. The Repair Kits contain the parts needed for minor repair such as a 500 hour inspection, and the Deluxé Repair Kits contain the parts needed for major repair such as a magneto overhaul. These parts are highest quality direct replacement parts and are approved for installation and use on certificated aircraft. AB-200445SC-D and AB-200445SC-R kits contain two sets of contact assembly kits. Some parts that may be need replacing during magneto overhaul are not included in these kits.

#### **4 CYLINDER KITS**

Repair Kit Type	Tempest Kit P/N	Part No.	Price
Minor	AB-484SC-R	10-04844	
Minor	AB-485SC-R	10-04845	
Minor	AB-200445SC-R	10-04849	
Deluxe	AB-484SC-D	10-04851	
Deluxe	AB-200445SC-D	10-04855	

#### **6 CYLINDER KITS**

Repair Kit Type	Tempest Kit P/N	Part No.	Price
Minor	AB-684SC-R	10-04847	
Minor	AB-685SC-R	10-04848	
Minor	AB-200645SC-R	10-04850	

SEE WWW.AIRCRAFTSPRUCE.COM FOR MAGNETO KIT ELIGIBILITY AND CONTENTS.

## **OWERUP NEW MAGNETOS**



#### **POWERUP MAGNETOS**

Utilizing over 35 years of manufacturing FAA/PMA replacement magneto parts, Powerup is proud to introduce an ALL NEW direct magneto replacement for general aviation. Performance improvements including coil, capacitor, breaker points and impulse coupling make the Powerup Mag the superior quality option for General Aviation.

Note: Core charge added to cart once magneto is added to cart. Please remove drive gears before returning Magneto cores for "Core Credit."

#### **POWERUP 4300 SERIES MAGNETOS**

POWERUP 4300 SERIES MAGNETOS							
Model Number	Part No.	Price					
Powerup Factory New ES4301 Magneto	07-25726						
Powerup Factory New ES4302 Magneto	07-25727						
Powerup Factory New ES4309 Magneto	07-25728						
Powerup Factory New ES4310 Magneto	07-25729						
Powerup Factory New ES4330 Magneto	07-25730						
Powerup Factory New ES4333 Magneto	07-25731						
Powerup Factory New ES4342 Magneto	07-25732						
Powerup Factory New ES4345 Magneto	07-25733						
Powerup Factory New ES4347 Magneto	07-25734						
Powerup Factory New ES4348 Magneto	07-25735						
Powerup Factory New ES4353 Magneto	07-25736						
Powerup Factory New ES4354 Magneto	07-25737						
Powerup Factory New ES4370 Magneto	07-25738						
Powerup Factory New ES4371 Magneto	07-25739						
Powerup Factory New ES4372 Magneto	07-25740						
Powerup Factory New ES4373 Magneto	07-25741						
Powerup Factory New ES4374 Magneto	07-25742						
Powerup Factory New ES4381 Magneto	07-25743						
Powerup Factory New ES4392 Magneto	07-25744						

#### **POWERUP 6300 SERIES MAGNETOS**

Model Number	Part No.	Price
Powerup Factory New ES6309 Magneto	07-25745	
Powerup Factory New ES6313 Magneto	07-25747	
Powerup Factory New ES6314 Magneto	07-25748	
Powerup Factory New ES6320 Magneto	07-25749	
Powerup Factory New ES6324 Magneto	07-25750	
Powerup Factory New ES6340 Magneto	07-25751	
Powerup Factory New ES6350 Magneto	07-25752	
Powerup Factory New ES6351 Magneto	07-25753	
Powerup Factory New ES6355 Magneto	07-25754	
Powerup Factory New ES6360 Magneto	07-25755	
Powerup Factory New ES6361 Magneto	07-25756	
Powerup Factory New ES6362 Magneto	07-25757	
Powerup Factory New ES6363 Magneto	07-25758	
Powerup Factory New ES6364 Magneto	07-25759	
Powerup Factory New ES6365 Magneto	07-25760	
Powerup Factory New ES6367 Magneto	07-25761	
Powerup Factory New ES6371 Magneto	07-25762	
Powerup Factory New ES6377 Magneto	07-25763	
Powerup Factory New ES6379 Magneto	07-25764	
Powerup Factory New ES6390 Magneto	07-25767	
Powerup Factory New ES6391 Magneto	07-25768	
Powerup Factory New ES6393 Magneto	07-25769	
Powerup Factory New ES6394 Magneto	07-25770	

#### **POWERUP SLICK MAGNETO 500 HOUR REPAIR KITS**

#### In The Box:

· Contact Point Kits · Carbon Brush · Capacitor Kit · Impulse Coupling Spring • Rotor Gear • Cotter Pin

Description	Mag Models Used	Part No.	Price
ES431	4301, 4302, 4303, 4309, 4316, 4330, 4331, 4333, 4370, 4371, 4372, 4373, 4374, 4381, 4392	07-26904	
ES432	4310, 4345, 4347, 4348, 4353, 4354	07-26905	
ES433	4342, 4344	07-26906	
ES631	6310, 6313, 6314, 6320, 6324, 6362, 6364, 6367, 6377, 6379, 6380, 6382, 6399	07-26907	
ES632	6309, 6363, 6365, 6371, 6391, 6393, 6394	07-26908	
ES633	6390	07-26909	

#### **POWERUP MASTER OVERHAUL KITS FOR SLICK MAGNETOS**

#### In The Box:

- Contact Point Kits Double Sealed Bearing Bearing Cap Assembly
   Condenser Rotor Gear Cotter Pin Coil Distributer Block and Gear
- · Woodruff Key · Oil Seal · Washer · Impulse Coupler

Description	Where Kit Used	Mag Models Used	Part No.	Price
ES401 Kit	All IC or DD 4 cylinders Magnetos	4301, 4302, 4303, 4309, 4316, 4330, 4331, 4333, 4370, 4371, 4372, 4373, 4374, 4381, 4392	07-26896	
ES402 Kit	All IC RB or TD 4 cylinders Magnetos Excluding 4342 & 4344	4310, 4345, 4347, 4348, 4353, 4354	07-26897	
ES403 Kit	4342 & 4344 TD 4 cylinders Magnetos	4342, 4344	07-26898	
ES601 Kit	All 6 cylinders IC & DD Magnetos with small shaft	6310, 6313, 6314, 6320, 6324, 6362, 6364, 6367, 6377, 6379, 6380, 6382, 6399	07-26899	
ES602 Kit	All 6 cylinders RB Magnetos with small shaft	6309	07-26900	
ES603 Kit	6390	6390	07-26901	
ES604 Kit	All 6 cylinders IC & DD Magnetos with large shaft	6331, 6340, 6350, 6351, 6355, 6360, 6361	07-26902	
ES605 Kit	All 6 cylinders RB & TD Magnetos with large shaft except 6390	6363, 6365, 6371, 6391, 6393, 6394	07-26903	



Powerup ignition harness incorporate a negative-pitch spring design (the tip of the coil spring extends inward) allowing the coil spring tip to lie flat against the spark plug electrode, providing 360 degreee contact. Powerup ignition harnesses are FAA/PMA approved for Lycoming, Continental and Franklin engines. Should your preferred Harness not be in stock, please see Powerup Blue Ignition Harnesses

NOTE: PART NUMBERING SYSTEM and CROSS REFERENCE: The part numbering system is "user Friendly" for quickly cross-referencing to both Champion and Unison Harnesses. The "KA1" prefix is equivalent to the Champion "CH1" or the Unison"M" with the balance of the part number remaining the same. Add the suffix "E"to the part number to designate the 90 degree steel elbow terminations whenever ordering an "Elbow" harness. (EXAMPLE: KA12121E).

ALL PART NUMBERS LISTED ARE FOR RED IGNITION HARNESSES. BLUE AND YELLOW ARE ALSO AVAILABLE. FOR A COMPLETE SELECTION, PLEASE VISIT WWW.AIRCRAFTSPRUCE.COM

	FOR A COMPLETE SELECTION,	PLEASE VISIT W			GE.GUIVI			
Engine	Continental Engine Model	Magneto	5/8" x 24 Spark Plug Term.	Spruce P/N	Price	3/4" x 20 Spark Plug Term.	Spruce P/N	Price
A-50		Slick 400 Series	KA17005	08-01206				
A-65		Slick 400 Series	KA17005	08-01206				
A-75		Slick 400 Series						
A-80		Slick 400 Series	KA17005	08-01206				
C-75	12, 15	Eisemann LA-4				KA17007	08-01210	
C-75		Slick 400 Series						
	8	Slick 400 Series		-				
	12, 15	S4-20, S4-200				1	08-01208	
C-75	12, 15	4200, 4300		08-01103			08-01214	
C-85	12, 12FJ, 14, 15	Eisemann LA-4				KA17007		
C-85	12, 12FJ, 14, 15		KA12007				08-01208	
C-85	12, 12FJ, 14, 15	4200, 4300		08-01103			08-01214	
C-90	12, 14, 16, 16F	Eisemann LA-4	KA17007				08-01212	
C-90	12, 14, 16, 16F		KA12007				08-01208	
C-90	12, 14, 16, 16F	4200, 4300		08-01103		KA17011	08-01214	
	2	S6-20, S6-200	KA12130					
	ALL	6200, 6300	KA12932	08-01147				
	2, 2H		KA12130					
	ALL	6200, 6300		08-01147				
	2. 3. 4		KA12176				08-01163	
E-185	1, 2, 3, 5, 8, 9, 10, 11	S6-20, S6-200	KA12176				08-01163	
O-200	A, B, C		KA17008			KA17007	08-01210	
O-200	A, B, C	S4-20, S4-200	KA12007	08-01113		KA17006	08-01208	
O-200	A, B, C	4200, 4300	KA11780	08-01103		KA17011	08-01214	
E-225	2, 4, 8, 9	S6-20, S6-200	KA12176	08-01131		KA12339	08-01163	
	A, B, C, D, E	Slick 600 Series	KA11884			KA12318	08-01161	
O-300	A, B, C, D, E	S6-20, S6-200		08-01125				
	A, B, C, D, E	6200, 6300	KA12932	08-01147				
	A, C, CB, D, DB, G, GB, H, HB, J, JB, K, KB	S6-20, S6-200				KA12015	08-01115	
	C, D, G	6200. 6300					08-01146	
LTSIO-360		S6-20, S6-200					08-01115	
	A, AB, B, C, CB, D, DB, E, EB, F, FB, GB, H, HB, JB, KB, LB, MB	S6-20, S6-200					08-01115	
TSIO-360		6200, 6300				KA12778	08-01146	
	A	S6-20, S6-200	KA11978	08-01111			08-01098	
IO-470	A, C, D, E, F, G, H, J, K, L, LO,	Slick 600 Series	KA11878			KA11480	08-01095	
10-470	M, N, P, R, S, T, U, V, VO							
	C, D, E, F, G, H, L, M, N, P, R, S, U, V	S6-20, S6-200		08-01111			08-01098	
	F, J, K, N, S	S6-1200					08-01133	
	F, J, K, N, S	S6-1200					08-01101	
0.470	A, C, D, E, F, H, J, K, L, LO, M, N, P, R, S, T, U, V, VO A, B, BC1, E, G, GC1, H, J, K, KC1,	6200, 6300		08-01185		KA12381		
0 470	L, LĆ1, M, MĆ1, N, P, R, S, Ú A, B, BC1, E, G, GC1, H, J, K, KC1,	Slick 600 Series	KA11878			KA11480		
0-470	L, LC1, M, MC1, N, P, R, S, U	6200, 6300		08-01185		KA12381	08-01142	
	A, B, E, M, P, R R, S, U	S6-20, S6-200		08-01111			08-01098 08-01101	
		S6-1200						
	R, S, U	S6-1200	 VA11070			•	08-01133	
TSIO-470	, -,	S6-20, S6-200		08-01111			08-01098	
	C, D, F, H, K, L, M, N	S6-1200				+	08-01109	
	A, B, BA, BB, C, CB, D, E, J, K, L, M, MB, N, NB		KA11878				08-01095	
	B,BB, E	S6-20, S6-200		08-01111			08-01098	
	A, BA, BB, C, CB, D, F, J, K, L,	S6-1200					08-01133	
	A, B, BA, BB, C, CB, D, F, J, K, L,	S6-1200					08-01101	
	A, B, BA, BB, C, CB, D, E, J, K, L, M, MB, N, NB	6200, 6300		08-01185			08-01142	
LTSIO-520		S6-1200					08-01101	
LTSIO-520 TSIO-520	AE, AF, C, D, DB, G, H, J, JB, K, KB,	S6-1200 S6-1200					08-01133	
TSIO-520	L, LB, M, N, NB, P, R, T, UB, WB AE, AF, C, DB, G, H, J, JB, K, KB,	S6-1200					08-01101	
TSIO 520	L, ĹB, M, Ń, NB, P, Ŕ, Ť, ÚB, ŴB A, B, BB, BE, C, CE, D, DB, E, EB, G, H, J, JB,							
	K, KB, L, LB, M, N, NB, P, R, T, U, UB, VB, WB A, B, BB, C, CE, D, DB, E, EB, G, H, J, JB, K,	Slick 600 Series		08-01105		KA11480		
TSIO-520	KB, L, LB, M, N, NB, P, R, T, U, UB, VB, WB	6200, 6300	KA12828	08-01185		KA12381	08-01142	

## **POWERUP IGNITION HARNESSES**

	I OWEITOI IGHT	_						
Engine	Lycoming Engine Model	Magneto	5/8" x 24 Spark Plug Term.	Spruce Part No.	Price	3/4" x 20 Spark Plug Term.	Spruce Part No.	Price
O-235	C1, C1A, C1B, C1C, C2A, C2C, E1, E1B, E2A, F1, F1B, F2A, G1, G1B, G2A, H2C, J2A, K2A, K2C, L2A, L2C, M1, M2C, M3C, N2A, N2C, P1, P2A, P2C, P3C	S4-20, S4-200				KA12360	08-01136	
O-235	C2B, E2B, F2B, G2B, J2B, K2B	S4-1200	KA12365	08-01082		KA12235	08-01134	
O-235	C2B, E2B, F2B, G2B, J2B, K2B	4200, 4300		08-01148			08-01145	
O-290	D, D2, D2A, D2B, D2C	S4-20, S4-200	KA12364				08-01136	
O-290	D2, D2B	4200, 4300		08-01148		KA12508	08-01145	
O-290	D, D2, D2B, D2C	4200, 4300		08-01152				
	E1A, E1B, E2A, E2B		KA12364	08-01138			08-01136	
	E1A, E1B, E2A, E2B	4200, 4300					08-01145	
AIO-320	A1A, A1B, A2A, A2B, B1B, C1B	S4-1200		08-01082		KA12235		
AIO-320	A1A, A1B, A2A, A2B, B1B, C1B	4200, 4300	KA14001	08-01148		KA12508	08-01145	
IO-320	A1A, A2A, B1A, B1B, B1C, B2A, C1A, C1B, E1A, E1B, E2A, E2B, F1A	S4-20, S4-200					08-01136	
IO-320	B1A, B2A, C1A	S4-20, S4-200					08-01136	
-	B1D, B1E, D1A, D1B, D1C	S4-1200		08-01082			08-01134	
-	B1D, B1E, D1A, D1B, D1C	4200, 4300		08-01148		-	08-01145	
	E2A	4200, 4300		08-01152			08-01145	
	B1A, C1A	S4-20, S4-200 S4-1200	KA12364	08-01138			08-01136 08-01134	
	B1A, C1A  A1A, A1B, A2A, A2B, A2C, A2D, A3A, A3B, A3C, B1A, B1B, B2A, B2B, B2C, B3A, B3B, B3C, C1A, C1B, C2A, C2B, C2C, C3A, C3B, C3C, D1A, D1B, D1D, D2A, D2B, D2G, D2H, D2J, D3G, E1A, E1B, E2A, E2B, E2D, E2G, E2H, E3H	S4-20, S4-200					08-01134	
O-320	B1A, B1B, B2B, B3A, B3B	S4-20, S4-200	KA12112	08-01119		KA12360	08-01136	
O-320	D1C, D1F, D2C, D2F, E1C, E1F, E1J, E2C, E2F	S4-1200	KA12365	08-01082		KA12235	08-01134	
O-320	A2A, A2B, A2C, A3A, A3B, A3C, B3C, D1A, D2A, D2B, E2B	4200, 4300		08-01152				
	D1C, D1F, D2C, D2F, E1C, E1F, E1J, E2C, E2F	4200, 4300		08-01148			08-01145	
	A1A, A2A, B1A		KA12364			KA12360	08-01136	
O-340	A1A, A2A	4200, 4300		08-01152		KA10000	00.01100	
	A1A, A1D, A1E, A2A, B1B, B4A, H1A A1B, A1B6, A2B, B1F, B1F6, B1G6, B2F	S4-20, S4-200 S4-1200	KA12364	08-01138			08-01136 08-01134	
	A1B, A1B6, A2B, B1F, B1F6, B1G6, B2F	4200, 4300		08-01082			08-01134	
	A1A, A1B, A2A, A2B, B1B	S4-1200	KA12365			KA12235		
	A1A, A1B, A2A, A2B, B1B	4200, 4300	KA14001				08-01145	
HIO-360	A1A, B1A, B1B, C1A	S4-20, S4-200	KA12364	08-01138			08-01136	
	C1B, D1A	S4-1200		08-01082			08-01134	
<u> </u>	C1B, D1A	4200, 4300	KA14001			KA12508	08-01145	
<u> </u>	B1A	4200, 4300	KA14004					
	A1A, B1A, B1B	,				KA12360	08-01136	
	A1A A1D A2A B1A B1B B1C B1D B4A C1A K1A	4200, 4300	KA14004			K 4 1 2 2 C O	08-01136	
IO-360	A1A, A1D, A2A, B1A, B1B, B1C, B1D, B4A, C1A, K1A A1B, A1B6, A1C, A1D6, A2B, A2C, B1E, B1F, B2E, B2F, B2F6, C1B, C1C, C1C6, D1A, E1A, F1A	S4-20, S4-200 S4-1200		08-01138			08-01136	
IO-360	C1E6	S4-1200	KA12423	08-01144		KA12616	08-01170	
10.260	A1B, A1B6, A1C, A1D6, A2B, A2C, B1E, B1F, B2E, B1F, B2E, B2F, B2F6, C1B, C1C, C1C6, E1A, F1A	4200, 4300		08-01148			08-01145	
IO-360	A1C, A2B, A2C, B2E, C1B, C1C, D1A	4200, 4300	KA14002	08-01150		KA12508	08-01145	
IO-360	B1A, B1B, B1D,	4200, 4300	KA14004	08-01152				
IVO-360	A1A	S4-20, S4-200	KA12364	08-01138		KA14033	08-01198	
IVO-360	A1A	S4-20, S4-200	KA12364	08-01138		KA12360	08-01136	
LIO-360	C1E6	S4-1200	KA12365	08-01082		KA12235	08-01134	
LIO-360	C1E6	S4-1200	KA12423	08-01144			08-01170	
O-360	C1E6  A1A, A1C, A1D, A1H, A2A, A2D, A2E, A2H, A3A, A3D, A4A, A4D, A4J, A4K, A4M, A4N, B1A, B1B, B2A, B2B, C1A, C1C, C2E, D1A, D2A, D2B, F1A6, G1A6,	4200, 4300 S4-20, S4-200		08-01148 08-01138			08-01145 08-01136	
O-360	A1F, A1F6, A1G, A1G6, A2F, A2G, A4G, C1F	S4-1200	KA12365	08-01082		KA12235	08-01134	
O-360	A1F, A1F6, A2G, A1G6, A2F, A2G, A4G, C1F	4200, 4300		08-01148			08-01145	
O-360	A1A, A1D, A2A, A2D, D2A, D2B	4200, 4300		08-01152				
VO-360	A1A, A1B, B1A	S4-20, S4-200	KA12364			KA12360	08-01136	
VO-360	A1A, A1B, B1A	S4-20, S4-200					08-01198	
GO-435	C2A2, C2B2, C2B2-6	S6-20, S6-200	KA12474	08-01167		1.000	2 2 1 1 3 3	
-	F1A	· ·				KA12865	08-01192	
-	A1A, B1A, D1B, G1B	S6-1200		08-01174			08-01165	
	A1D, A1E, A1F	S6-20, S6-200					08-01165	
	···-, ···-, ····	100 20, 00 200	1.0112700	100 01174		1.0112777	20 01100	

## POWERUP IGNITION HARNESSES

Engine	Lycoming Engine Model Cont'd	Magneto	5/8" X 24 Spark Plug Term.	Spruce Part No.	Price	3/4" X 20 Spark Plug Term.	Spruce Part No.	Price
VO-435	B1A	S6-20, S6-200	KA12712	08-01176		KA12865	08-01192	
GO-480	G1J6	S6-1200	KA12742	08-01178				
GSO-480	B1J6	S6-1200	KA12745	08-01180				
GSO-480	B1A6, B1B6, B1C6, B1E6, B1F6, B1G6, B2C6, B2D6, B2G6, B2H6	S6-20, S6-200	KA12854	08-01190				
IGSO-480	A1D6, A1E6	S6-1200	KA12854	08-01190				
IGSO-480	A1A6	S6-20, S6-200	KA12244	08-01155		KA12247	08-01157	
AEIO-540	D4A5	S6-1200	KA12154	08-01127		KA12157	08-01129	
AEIO-540	D4A5	S6-20, S6-200	KA12121	08-01123		KA12120	08-01121	
IGSO-540	A1D, A1E, A1F, B1C	S6-1200	KA12259	08-01159				
IO-540	A1A5, B1A5, B1B5, B1C5, C1B5, C1C5, C2C, C4B5, D4A5, E1A5, G1A5, K1C5, K1D5, N1A5, P1A5, R1A5, S1A5	S6-20, S6-200	KA12121	08-01123		KA12120	08-01121	
IO-540	A1A5, B1A5, B1B5, B1C5, C1B5, C1C5, C2C, C4B5, D4A5, E1A5, G1A5, K1C5, K1D5, N1A5, P1A5, R1A5, S1A5	S6-1200	KA12154	08-01127		KA12157	08-01129	
O-540	A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B2A5, B2B5, B4A5, B4B5, D1A5, E4A5, E4B5, F1A5, F1B5, H1A5, H2A5	S6-20, S6-200	KA12121	08-01123	-	KA12120	08-01121	
O-540	A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B2A5, B2B5, B4A5, B4B5, D1A5, E4A5, E4B5, F1A5, F1B5, H1A5, H2A5	S6-1200	KA12154	08-01127		KA12157	08-01129	
TIO-540	A1A, A1B, A2A, A2B	S6-1200				KA12037	08-01117	
TIO-540	C1A	S6-1200	KA12790	08-01183		KA12851	08-01188	
TIO-540	C1A	S6-1200	KA12154	08-01127		KA12157	08-01129	
TIO-540	C1A	S6-20, S6-200	KA12121	08-01123		KA12120	08-01121	
TIVO-540	A2A	S6-1200	KA12709	08-01174		KA12447	08-01165	
VO-540	A1A, B1A, B1B, B1D, B2D, C1C3	S6-1200	KA12709	08-01174		KA12447	08-01165	
TIGO-541	E1A	S6-1200				KA12890	08-01194	
TIO-541	E1A4, E1B4, E1C4, E1D4, E1E4	S6-1200				KA12628	08-01172	

#### FOR A COMPLETE APPLICATION CHART PLEASE VISIT WWW.AIRCRAFTSPRUCE.COM



### POWERUP INDIVIDUAL HARNESS LEADS

The leads are made with our industry leading Powerup red ignition harness wire cut 72 inches in length with available 5/8 or 3/4 spark plug termination. Also shipping with the leads is an attachment kit with magneto attachment hardware for both Slick and Bendix/CMI magnetos. Trim to fit.

 Assy W/ Elbow P/N 08-13222	Powerup E100-72 Trim To Fit Lead 72" 3/4 Lead Assy W/ Elbow
 W/ Elbow P/N 08-13223	Powerup E200-72 Trim To Fit 72" 5/8 Lead Assy W/ Elbow
 P/N 08-13224	Powerup S100-72 72" 3/4 Lead Assy Straight
 P/N 08-13225	Powerup S200-72 72" 5/8 Lead Assy Straight



#### **POWERUP DUAL IGNITION HARNESSES - OVERHAULED**

Dual Ignition Harness - If you demand quality and a quick turn-around, then Powerup overhauled Bendix/TCM Magnetos and FAA/PMA approved replacement parts are your answer. From the in-house manufacturing of FAA/PMA replacement parts, to the final assembly and testing of the magneto, the the job is done right. The claims of superior service and reliability are backed by a six month warranty.

Model No.	Description	Part No.	Price
10-821615-4R	Dual Ignition Harness	08-15939	
10-821635-4R	Dual Ignition Harness	08-15944	
10-821625-2YR	Yellow Dual Ignition Harness	08-17042	

#### **POWERUP DUAL IGNITION HARNESSES - NEW**

Powerup ignition harness incorporate a negative-pitch spring design (the tip of the coil spring extends inward) allowing the coil spring tip to lie flat against the spark plug electrode, providing 360 degreee contact. Powerup ignition harnesses are FAA/PMA approved for Lycoming, Continental and Franklin engines.

Model No.	Description	Part No.	Price
KA12915	Dual Ignition Harness	08-17697	
KA12916	Dual Ignition Harness	08-17698	
KA12917	Dual Ignition Harness	08-17699	
KA12918	Dual Ignition Harness	08-17700	
KA12919	Dual Ignition Harness	08-17701	
KA12942	Dual Ignition Harness	08-17702	
KA12944	Dual Ignition Harness	08-17703	
KA12949	Dual Ignition Harness	08-17704	

Model No.	Description	Part No.	Price
KA12995	Dual Ignition Harness	08-17705	
KA12997	Dual Ignition Harness	08-17706	
KA1415-12	Dual Ignition Harness	08-17707	
KA1444-6	Dual Ignition Harness	08-17708	
KA1614-36	Dual Ignition Harness	08-17709	
KA1624-6	Dual Ignition Harness	08-17710	
KA1825-2	Dual Ignition Harness	08-17711	

### LIGHTWEIGHT HIGH TEMPERATURE SHIELDED IGNITION HARNESSES MFG. BY ACS PRODUCTS CO.



New production ignition harnesses for Experimental Aircraft at remarkably low prices. Late type 5MM wire constructed of 16 strands of tightly braided copper wire impregnated with scuff resistant white silicone. All strands must fracture before a complete open circuit type failure occurs thus extending lead life. Lead flexibility is retained from -65° to 400° F. Moisture and cleaning solvent penetration is eliminated by the impregnated silicone coating. This

extremely flexible wire lends itself to sharp bends thereby eliminating the need for old style harness elbows. No soldered joints in the grounding circuit. Custom made for most 4 cylinder and 6 cylinder engines using Bendix or Eisemann magnetos and 4 cylinder engines using Slick magnetos. Cable outlet plates are not furnished for Bendix and Eisemann mags as these are already installed on the magnetos in service. They must be purchased separately for new magneto installations. Harnesses for Slick magnetos are furnished with the backplates installed. Standard harnesses for the Bendix S4/S6 mags are fitted with a male nut which screws into the threaded outlet plate on the back of the mag.

#### HARNESSES FOR BENDIX AND EISEMANN MAGNETOS

All 4-Cylinder Harnesses (8 wires)	
All 6-Cylinder Harnesses (12 wires)	
(Not Available for Bendix \$1200 Magnetos)	
Replacement Leads to 48" (Specify Length)	
(Bendix & Eisemann only)	

#### HARNESSES FOR SLICK MAGNETOS

For 4000, 4200 & 4300 Series Mags (4 Cyl.) Only.......Call For Quote All Harnesses Furnished with Cable Ties and Clamps For plugs with 5/8-24 barrel size only.

For plugs with 5/6		
BENDIX MAGNETOS		
Engine/Magneto	Part No.	
Cont. A-65/S4	12301-02	
C-85/S4	12301-05	
C-90/S4	12301-06	
0-200/S4	12301-05	
LYC. 0-100/S4	12301-21	
0-235/S4	12301-21	
0-290/S4	12301-21	
0-320/S4	12301-22	
0-360/S4	12301-22	
Cont. A-65/SF4	12302-02	
A-75/SF4	12302-03	
Lyc. 0-100/SF4	12302-20	
0-235/SF4	12302-20	
0-290/SF4	12302-20	
Cont. E-185/S6	12305-10	
E-225/S6	12305-11	
O-470/S6	12305-13	
C-145/S6	12305-09	
O-300/S6	12305-09	
Lyc. 0-540/S6	12305-22	
IO-540/S6	12305-22	
Franklin165/S6	12305-41	
Cont.C-125-SF6	12307-08	
Lyc.0-435/SF6	12307-23	

SLICK MAGNETOS			
Engine/Magneto	Part No.		
VW (M2266) *	12304-32		
Lyc 0-235 (M2363)	12304-33		
0-290 (M2363)	12304-33		
0-320,0-360 (M2363)	12304-33		
Cont. 0-200 (1780)	12304-31		
C-75 (1780)	12304-31		
C-85 (1780)	12304-31		
C-90 (1780)	12304-31		
Lyc 0-540	12304-34		
EIGEMANN MACNETOS			

EISEMANN MAGNETUS			
Engine/Magneto	Part No.		
Cont A65/LA-4	12303-04		
A75/LA-4	12303-04		
C-85/LA-4	12303-07		
E-185/LA-6	12306-12		
Franklin 150/LA-6	12306-40		
Continental C90/LA4	12303-08		
Continental E-185/LA6	12306-12		
Franklin 150/LA6	12306-40		

\*This harness only comes with 4-leads.

# **ENGINE BAFFLE IGNITION WIRE SEALS**









P/N M2755

Seal Type	Part No.	Each
5mm Wire Seal Slick 3-Wire	07-26962	
5mm Wire Seal Slick 2-Wire	M2375	
5mm Wire clamp Slick 2-Wire	M2755	

# **HIGH TENSION CABLE**

Unshielded 7MM ignition cable consists of tinned conductor, rubber insulation, reinforced glass braid and Hypalon jacket that resists sun, weather, heat, chemicals and oxidation by ozone. Temperature range -65° to 250°F

P/N 07-03700..

## **CHAMPION IGNITERS**

The research and development team at Champion Aerospace has pioneered the use of exotic materials to extend the life and enhance performance of turbine Igniters. The patented Champion Series

21™ Igniter and lead incorporate numerous design benefits that improve performance, installation, and maintenance. Variable immersion depth allows it to be used in multiple engine platforms. The self-centering conical contact virtually eliminates flashover and arcing.

Description	Part No.	Price
CH31547C Champion Igniter	07-03236	
CH31621A Champion Igniter	07-03237	
CH31815-2 Champion Igniter	07-03239	
CH34055 Champion Igniter	07-03241	
CH34269 Champion Igniter	07-03243	
CH34419 Champion Igniter	07-19263	
CH34659-3 Champion Igniter	07-03244	
CH34682 Champion Igniter	07-03245	
CH34745 Champion Igniter	07-03246	
CH34804-3 Champion Igniter	07-03247	
CH34817 Champion Igniter	07-19370	
FHE146-7A Champion Igniter	07-03287	
FHE164E Champion Igniter	07-03288	
FHE246-4 Champion Igniter	07-03289	
CH31487A Champion Igniter	07-03492	
Y183-5 Champion Igniter	07-03548	
CH53399-06 Turbine Ignition Lead	07-03250	
CH3442-3 Turbine Ignition Lead	07-18032	
CH34758-3 Champion Igniter	08-17134	

#### **CHAMPION EXCITERS**

Champion Aerospace manufactures a broad range of high performance ignition exciters. From pioneering designs in solid-state technology, to the new, patented PPT exciter, the first true hightension solid-state exciter, Champion combines the reliability and performance critical to aviation applications.

The Champion solid state ignition exciters are significantly lighter and more compact than any existing product on the market. PPT combines the technologies of both solid-state and spark-gap technology, but suffers none of the drawbacks.

Part No.	Description	Price
08-13063	CH92106-5 Champion Exchange Exciter Box	
07-03549	Champion 305012-2 Exciter Box Exchange	

#### CHAMPION IGNITION LEADS

Champion Aerospace designs and manufactures a full range of aerospace ignition leads for turbine engine applications. New ignition leads from Champion Aerospace are available for a wide

range of turbine engines, from small turbine APU applications to the large GE and PW turbofan engines, including the new Rolls Royce Trent 900 engines for A380 aircraft.

53067-21 Ignition Lead JT15D	P/N 07-03542	
53067-38.5 Ignition Lead JT15D	P/N 07-03543	
53399-09 Ignition Lead	P/N 07-03546	
53399-06 Ignition Lead		
53442-3 Ignition Lead		
53247 Ignition Lead		
CH53399-02 Ignition Lead		
CH53490 Lead Ignition Cable		



# L2E LIGHT SPEED TO EFIS ADAPTER

The L2e allows you to display the parameters of your Light Speed ignition module directly on your EFIS during flight. Your EFIS can record these parameters for download and diagnosis .. P/N 10-06222 .....



# WIRE TERMINAL CLIP

For 7 MM unshielded harnesses. P/N 07-03500 .....-

### **CT-496 IGNITER LEAD CONNECTOR WEAR GAUGE**

Igniter lead connector wear gauge for ARP670 type 2M fittings common to PT6 leads and others. Features a calibrated pin to measure connector wear. Opposite end sized to measure neoprene grommet expansion.

Note: Many leads incorporate type 2M and 3M connectors at oppo-

.....P/N 12-04959 ......

# NITION SYST

#### SUREFLY ELECTRICAL IGNITION

SureFly is an FAA certified electronic (solid state) magneto replacement. The SureFly Ignition Module replaces one magneto - generally the left or impulse-coupled/starting magneto on most aircraft. 4 and 6-Cylinder models are available for Lycoming and Continental engines.

Replacing just one magneto eliminates magneto maintenance and cuts associated costs in half! Zero maintenance. Zero rebuilds. Zero overhauls. Cessna 172s, 470-powered Bonanzas and AA5 Grumman owners can utilize the advanced timing feature for improved efficiency. Other single-engine fixed-wing aircraft will be able to enable the timing advance feature as the FAA extends the Airframe STC AML.

Reliability - For SureFly customers, 500 hours simply isn't good enough. When their airplanes stop flying to service low time parts, they stop making money. SureFly Electronic Ignition Modules provide customers with a service life of up to 2,400 hours. Simply install a new SIM at every engine overhaul.

Safety - The magneto itself isn't inherently unsafe. What makes an externally powered electronic ignition more safe than a mag is a fact that it is simply never opened-up, inspected and potentially rebuilt/overhauled like a magneto is every 500 hours. No mechanical parts to wear = Zero maintenance = a 0% chance of introducing a maintenance-related ignition failure.

Performance - Longer spark dwell and RPM/manifold pressuremoderated timing advance, up to engine manufacturers' prescribed maximum, provide SureFly customers real fuel savings. Low power consumption and lightweight (up to 2 lbs. lighter than a Bendix magneto) make SureFly Ignition Modules light on fuel and light on the wallet too.

Better Starts - SureFly perfectly controls timing at TDC below 400 rpm which combined with longer spark dwell and the option to use wider gapped spark plugs, makes starting a breeze, greatly minimizing wear and tear on high-performance starters and electrical systems.

Trusted - SureFly Ignition Modules are hand built in Granbury. Texas almost entirely from components manufactured in Texas and Michigan. Designed, engineered, created and supported by the same team that brought you Sky-Tec starters and Plane-Power alternators, our approach to SureFly shares the same commitment, experience and passion for creating and bringing sensible, affordable solutions to the piston engine aviation market.

FAA approves SureFlydual electronic ignitions.



#### SIM4P 4 CYLINDER IMPULSE COUPLED **MAGNETO REPLACEMENT**

The vast majority of 4-Cylinder applications will replace the impulse coupled magneto. 4.4 lbs. Now approved for the replacement of both mechanical magnetos on most certified four- and six-cylinder Lycoming and

Continental powered aircraft with dual SureFly Electonic Ignitions. Please review the Engine and Airframe STC's and installation instructions for further application information.... P/N 08-17074

#### SIM4N 4 CYLINDER NON-IMPULSE **MAGNETO REPLACEMENT**

Replaces 4-cylinder non-impulse coupled magnetos on Lycoming & Continental engines. 4.0 lbs.

P/N 08-17075.....





### SIM6L 6 CYLINDER LYCOMING **MAGNETO REPLACEMENT**

Replaces 6-cylinder magnetos on Lycoming engines. 5.2 lbs.....P/N 08-17076....

#### SIM6C 6 CYLINDER CONTINENTAL MAGNETO REPLACEMENT

Replaces 6-cylinder magnetos on Continental engines. 5.0 lbs......P/N 08-17077......



# **SUREFLY TACH2 TACHOMETER** SIGNAL CONVERTER



The Tach Signal Converter (Tach2) converts SIM P-Lead signals to negative –going signals compatible with the Horizon P-1000 digital tachometer input and to a positive-going 0-5V square wave signal compatible with electronic tachometers that rely on a signal from a magnetic

pickup inserted into a magneto. Tach 2 can accept one or two SIM P-Leads as input, converts and conditions the signals and outputs them to corresponding output terminals. The Tach2 must be installed in the aircraft cabin and secured to the airframe with screws and nuts. The Tach2 power input from the aircraft bus may range from 8.5VDC to + 30VDC without damage. The Tach2 consumes less than 0.25A of power. 0.2 lbs......P/N 08-17284 .....

#### E-MAG ELECTRONIC IGNITION

Note: New installation requires a harness, and possibly a gear, depending on the application (See Accessories). Verify



requirements before ordering.

Of all the E-MAG innovations, the self-powering capability of the "P" Model is the most significant. It solves the largest single issue faced by all electronic ignitions - their need for an uninterruptible power supply. Power back-up strategies that a) compromise ignition effectiveness, b) solve only half the problem, or c) require additional maintenance are less than ideal. Next-Generation ignitions need a better solution. So what does a next-generation electrical back-up need to do? Above all, it has to be reliable. When it's needed, it has to work - period. It should operate for as long as needed. Whether it's the last 10 minutes of

a Sunday pleasure flight, or you're crossing the Atlantic. It should be maintenance-free. Benign neglect should not prevent it from working. On the rare occasion it's needed, it should automatically engage without operator intervention. A simple and convenient pre-flight check should confirm it's working properly. This P model ignition has an internal three phase brushless alternator that produce enough power to sustain the ignition when the engine is turning 800 rpm, or more. If the aircraft buss voltage goes off-line, the ignition has an internal alternator. With this arrangement, dual electronic ignitions can be run "clean". No back-up batteries and no back-up magnetos.

The P Model Built-In Alternator adds no (zero) mechanical contact/ wear parts to the system. Adds only a few ounces of weight. Requires no additional hardware to install. Will operate as long as the engine is turning.

Description	Part No.	Price
"P" Model (P-MAG) Ignition - Lycoming (and like) engines.	07-01292	
E-Mag P Model Ignition with Alternator 4C Continental - Ignition compatible with 4 cylinder Continental O-200 Engines.	07-01311	
E-Mag Gear Adapter Kit C 200	07-01805	
E-Mag Spark Plug Adapters w/o Gaskets (4 pk) Short Reach	08-06753	
E-Mag Spark Plug Adapters w/ Gaskets (4 pk) Short Reach	08-06753-1	
E-Mag Spark Plug Adapters w/ Gaskets (4 pk) Long Reach	08-07608	
E-Mag Spark Plug Adapters w/o Gaskets (4 pk) Long Reach	08-07608-1	

## E-MAG 200 SERIES IGNITION FOR 6 CYL EXPERIMENTAL AIRCRAFT



E-Mag is a next-generation electronic ignition, designed to serve as an upgrade or replacement for traditional aircraft engine magnetos.

Built-in back-up operating power - The importance of power supply for any electronic ignition cannot be overstated. E-MAG's internal alternator (redundant back-up power) provides automatic switching between aircraft (14v to 28v) and internal operating power.

High energy spark - A standard feature for any modern electronic ignition. But to avoid too much of a good thing E-MAGs uses a closed-loop energy management system (not too much - not too little) to reduce operating stresses.

Variable spark firing - Another standard feature for electronic ignitions. Tuning the advance range is key. Series 200 has simple built-in tools for adjusting the variable boundaries. Note: An optional cockpit switch lets the pilot choose fixed or variable mode firing [required for boosted engines].

Simplified mechanical section - All moving mechanical elements are housed in the nose (engine oil/wet) section with a solid barrier separating

the electronics/dry section - i.e. no oil seal to wear out. Multi-strike firing and boosted energy at start-up. Starts more like a car.

Lycoming. .....P/N 07-26839 .....-----Continental (TCM) ......P/N 07-26840 .....-----



#### **IGNITION KITS**

Auto style custom fit kits. Include low-resistance spiral wound lead wire, end fittings, and tool. Auto style harness with terminals and boots installed on both ends. Same wire used in their custom trim-to-fit kit.

Description	Part No.	Price
Auto Harness - 4 Lead Kit without adapter	07-02716	
Spark plug adapters - 4 pack	08-06753	



IGNITION DRIVE GEARS		
Description	Part No.	Price
Lycoming 68C19622	07-02011	
Superior SL68C19622	08-11837	

# WWW.AIRCRAFTSPRUCE.COM Prices Subject to Change without Notice - Valid as of June 1, 2025.

# CTROAIR – IGNI

# ECTROAIR 4 CYLINDER **ELECTRONIC IGNITION KITS**



The EIS-41000 Series Electronic Ignition Kit is a fully STC'd kit for most Lycoming 4cyl engines. Replacing one magneto with the EIS-41000 will typically improve fuel economy on average by 10-15% (many operators have reported consistent fuel savings of 1gph or greater). Additionally,

there will be an improvement in horsepower, smoother engine operation, and improved high altitude performance. Used on either 12V or 24V systems. Kit includes: all the required parts to replace the direct drive magneto (typically, the right hand mag), or the Impulse Coupled Magneto (typically left handed) in most 4cyl Lycoming engines. (Please refer to the FAA approved model list to verify the system can be installed on your engine - Note: engines are being added regularly).

Description	Part No.	Price
EIS-41000 Direct Drive (non-impulse coupled)	08-07272	
EIS-41000IC Impulse Coupled	08-07505	
EIS-41000T Twin Engine Aircraft; Lycoming 4cyl Engines. Standard Rotation, Direct Drive (non-impulse coupled) Magneto Replacement	08-07667	
EIS-41000TIC Twin Engine Aircraft; Lycoming 4cyl Engines. Standard Rotation Impulse Coupled Magneto Replacement	08-07668	
EIS-41000TLH Twin Engine Aircraft; Lycoming 4cyl Engines. Counter-Rotating, Direct Drive (non-impulse coupled) Magneto Replacement	08-07669	
EIS-41000TLHIC Twin Engine Aircraft; Lycoming 4cyl Engines. Counter Rotating, Impulse Coupled Magneto Replacement	08-07670	
EIS-61000-T5M 6 Cylinder EIS Lycoming Normal ASP MAG Timing Housing	08-16206	
The EIS-42000D Electronic Ignition Kit is a fully STC'd kit to replace the Bendix single drive, dual magneto with a complete, Dual Electronic ignition.	08-17417	

PLEASE VISIT WWW.AIRCRAFTSPRUCE.COM FOR ADDITIONAL IGNITION KITS.

## **ELECTROAIR SPARK PLUGS**



Electroair partnered with Tempest to produce its new HE spark plug line. The HE plugs are STC'd and PMA'd for use with the Electroair electronic ignition systems. The plugs are approved for all aircraft, and installations approved for use with the Electroair electronic ignition systems. Electroair's "HE" plug line include a massive electrode with extended reach outer electrodes has a gap of 0.032. This optimal gap accommodates the high energy output of 70,000 volts delivered by the Electroair system.

EAREM37HE	P/N 08-07714
EAREM38HE	P/N 08-07715
FARHB32F	P/N 08-16212

## **ELECTROAIR SPARK PLUG WIRE ASSEMBLY**

Electroair Spark Plug Wire Assy. 8	FtP/N 08-17585
Electroair Spark Plug Wire Assy. 10	FtP/N 08-17586
Electroair Spark Plug Wire Assy. 12	P. Ft. for 6 Cylinder Twin
	D/N 08-17587



# **ELECTROAIR CERTIFIED SPARK** PLUG WIRE ASSEMBLY KIT

EA-4000 Spark Plug Wire Assembly Kit

The EA-4000 spark plug wire kit comes complete with enough wire and spark plug hardware to replace any lead in the system. This easy to assemble spark plug lead allows the maintainer to quickly and neatly install a spark plug lead. Routing leads individually allows for a cleaner and easier installation.....P/N 08-07678.....-



# ECTRONIC IGNITION KITS

The EIS-61000 Electronic Ignition Kit is a fully STC'd kit for Continental 470 & 520, non-turbo'd, series engines, installed on

single engine aircraft. Replacing one magneto with the EIS-61000 will typically improve fuel economy. This kit can be used on either 12V or 24V systems. Kit includes: all the required parts to replace one magneto.

Description	Part No.	Price
EIS 61000-1C Electroair Cont. 6 Cyl.	08-12237	
EIS 6100-T1C Electroair Cont. 6 Cyl.	08-13155	
EIS-61000-1M for Continental 360, 470, 520, &550 non turbo series engines on single engine aircraft.	08-13696	
EIS-61000-T1M for Continental 360, 470, 520, &550 non turbo series engines on twin engine aircraft.	08-13759	
EIS-61000-5C for Lycoming 540 non turbo series engines on single engine aircraft.	08-13760	
EIS-61000-T5C for Lycoming 540 non turbo series engines on twin engine aircraft.	08-13761	

Note: The following are replacement units for the EIS systems.			
EA-6000/EA-6000TP the brains of the Electroair Electronic Ignition System. This replacement unit if for 6cyl engines. This unit can be used in either a 12V or 24V application.	08-13157		
EA-11000 Crank Shaft Trigger Wheel kit mounts on the bare spot of the crank shaft just behind the propeller flange.  NOTE: Minimum clearance of 0.650" between the front of the engine case and propeller studs is REQUIRED. Please check this dimension before starting installation ordering the kit.	08-13158		
EA-8000 is the 6cyl Coil Pack used in the EIS-61000 Electronic Ignition System. This unit can be used in either a 12V or 24V application.	08-13159		
The EA-3000 replaces the direct drive magneto found on most 4cyl Lycoming engines. This unit provides the EA-1000 Controller with the engine position and RPM information needed to drive the electronic ignition system.	08-07671		



# **ELECTROAIR IGNITION SWITCH PANELS**

The EA-13000 is approved ignition switch panel with STC to control both the Electroair electronic ignition system (EIS) and the magneto.

Horizontal	P/N 08-14693
Vertical	P/N 08-14694



# **EA-15000 IGNITION SWITCH PANELS**

The EA-15000 is an approved ignition switch panel to control two magnetos and a starter in a conventional ignition configuration (magneto to magneto). The panel comes in

two versions, a horizontal one and a vertical one. This set of ignition switches is approved to replace the outdated and venerable rotary keyswitch.

Horizontal	P/N 08-17141
Vertical	P/N 08-17142

# **SMOOTH POWER BACKUP BATTERY** SYSTEM CONTROL PANEL

Smooth Power Backup Battery System Control Panel.

12V Backup Battery System Control Panel ...P/N 08-17592 .....----24V Backup Battery System Control Panel ...P/N 08-17593 .....---

# HT SPEED IGNIT

### **PLASMA II PLUS CDI**



The Plasma II is Light Speed Engineering's basic electronic ignition system for aircraft. It is a lightweight, high-energy capacitor discharge system containing all of the essential Plasma CDI features. Its smaller size and lighter weight sets it apart from any other ignition source.

#### PLASMA III CDI

The Plasma III Capacitor Discharge System is high performance ignition for all 4-cyl and 6-cyl aircraft engines. Its long duration spark and optimized timing curve makes more horsepower and improves fuel efficiency- at all altitudes. Other benefits include quick starts, reduced mainclericy- at all attitudes. Other benefits include quick starts, reduced maintenance, light weight, lower EGT's and up to 20% more range. As with all LSE ignitions, RPM and manifold pressure inputs are used for our proprietary timing curves. The Plasma III is also capable of displaying the current timing advance, manifold pressure and rpm on an optional lightweight LCD display. The Plasma III can easily replace one or both magnetos, making your engine run better under all conditions.

# PLASMA CAPACITIVE DISCHARGE **IGNITION SYSTEMS**

All Plasma CDI systems include: high tension leads, harness, spark plugs, spark plug adapters, ignition coils with mounting bracket, and Hall Effect Sensor module OR Direct Crank Sensor assembly

Hall Effect Sensor module OR Direct Crank Sensor assembly.		
Description	Part No.	Price
Plasma II Plus: 4 Cylinder Hall Effect Module	08-06295	
Plasma III: 4 Cylinder Hall Effect Module	08-00676	
Plasma III: 6 Cylinder Direct Crank Sensor	08-00677	
Plasma III: 4 Cylinder with Mini DC Sensor	08-12136	
Plasma III: 6 Cylinder with Mini DC Sensor	08-12137	
Dual Plasma CDI Systems		
Dual Plasma II Plus: 4 Cylinder Direct Crank Sensor	08-06296	
Dual Plasma III: 4 Cylinder Direct Crank Sensor	08-06298	
Dual Plasma III: 4 Cylinder Hall Effect Module	08-06299	
Dual Plasma III: 6 Cylinder Direct Crank Sensor	08-06300	
Dual Plasma III: 4 Cylinder with Mini DC Sensor	08-12139	
Dual Plasma III: 6 Cylinder with Mini DC Sensor	08-12140	
Options		
LSE Plasma Super-C Turbo	08-06301	
LSE Franklin and Continental engine ignition systems	08-06302	

# **LSE ALUMINUM BRONZE** REACH SPARK PLUG ADAPTERS



Light Speed Engineering's standard issue spark plugs are pictured to the left. Single ground electrode with a short body make these a durable option for most applications. W27EMR-C: Used on standard and high compression engines. The standard reach (1/2") spark plug adaptor is also pictured here (08-14009). This adaptor is used when converting aircraft engines using 1/2" reach aircraft spark plugs to 14mm plugs. Light Speed Engineering's spark plug adaptors are made of high strength aluminum bronze. \*These plugs and adaptors are included with ignition kit purchase for those with 1/2" reach.

1/2"	Reach	Spark	Plug Adapt	er	P/N	08-14009	 
3/4"	Reach	Spark	Plug Adapt	er	P/N	08-14010	 
HHF	l ona l	Reach	Spark Plug	Adapter	P/N	08-14011	 

#### NGK SPARK PLUGS



- 98% pure copper core increases heat dissipation for more reliable starts and prevents spark plug from overheating
- High-grade alumina silicate ceramic insulator for superior strength and heat transfer
- Cold-rolled threads to prevent cross-threading and damage to cylinder heads
- Trivalent plating eliminates need for anti-seize and corrugated ribs prevent flashover

Note: The spark plugs listed are not for aircraft application

Size	Description	Part No.	Price
10mm	CR5HSB	08-06263	
12 mm	DCPR7E	08-00504	
12 mm	DCPR8E (Removable Terminal Nut)	08-01228	
12 mm	DCPR8E (Solid Terminal Nut)	08-07044	
12 mm	DR8EA	08-00693	
14 mm	BR8EIX	08-00650	
14 mm	BR8ES 08-00736		
14 mm	BR8ES (Removable Terminal Nut)	08-00736-1	
14 mm	BR7ES	08-07041	
14 mm	BR9ES	08-07042	
14 mm	BR7EIX	08-07045	
14 mm	BR9EIX	08-07046	
12mm	DP9EA-9	15-05219	
14mm	IK24	15-05204	

### SPARK PLUG HOLE PROTECTIVE CAPS



#9721 Spark Plug Hole Caps. Seal your Spark plug hole openings with these inexpensive tapered fit plastic caps. Prevent debris from accidentally entering ports and creating damage or mischief. Ideal for sealing for winter storage, preventing moisture from corroding internal engine parts. Also can be used to seal ports for

leak testing, an important procedure that locates potential air leaks before they cause costly engine damage. Tapered fit provides positive seal for either vacuum or pressure testing, Tapers from 0.482" to 0.526"......P/N 15-06003......



### **LSE BLACK TWIN TOWER IGNITION COIL**

Ignition coils are typically mounted on the top center of the engine. They can also be mounted on the motor mount tubes using Adel clamps or on the firewall to a piece of angle aluminum. Ignition coils should be mounted so

that spark plug lead length will be kept to a minimum for maximum spark energy and minimum noise. It is important that each coil connects to opposing cylinders, i.e. one coil fires cylinders 1 and 2 and the other coil fires 3 and 4......P/N 08-17193 .....---



# AN4062-1 DEHYDRATOR **PLUGS 18MM**

These plugs are used to prevent rust and corrosion in engines while in storage. Contain silica gel which turns from blue to pink when moisture is absorbed. Reusable & refillable. The pink silica gel may be reactivated (after removing from reservoir) by heating for 16 hours at 250°F.

18MM ......P/N AN4062-1 .....--- ea CILICA GEL Indicating tv

SILICA GEL. Indicating	type, for refilling plugs.	
1/4 Lb. Bag	P/N 07-00731	
1 Lb. Can	P/N 07-03400	

# **DEHYDRATOR PLUG 18MM MS2721501 NON-REFILLABLE**

Dehydrator Plug 18mm MS2721501	Non-Refillable - Single Unit.
Single Unit	P/N 08-17377-1
Can of 20	P/N 08-17377

# RK PLUG PA



#### TEMPEST AVIATION SPARK PLUGS

Made in USA. Copper, co-extruded inside a nickel alloy sleeve made in USA. Copper, co-extruded inside a flickel alloy sleeve ensures outstanding heat and electrical conductivity while the nickel sleeve offers high resistance to corrosive combustion gases. High Alumina Ceramic Insulator. "V" tip focuses heat to reduce fouling and enhance heat range control. Proprietary Glass Center Seal, and resistor design, eliminating resistor degradation causing mistire. Environmentally preferable electrolytic nickel provides substituted durable finite guarage correction and outstanding durable finish, superior corrosion protection, and

extreme wear resistance. Aviation grade nickel electrode design focuses on minimizing sparking voltage requirements. Harness Wire Contact is a smooth, uninterrupted, oxide treated spring contact surface.

#### **MASSIVE ELECTRODE**

Model	Part No.	Price
UREM38E	08-00046	
URHM38E	08-00047	
UREM40E	08-00048	
URHM40E	08-00049	
URHB32E	08-00245	
UREB37E	08-00246	
URHB37E	08-00247	
UREM37BY	08-00248	

#### **FINE WIRE**

Model	Part No.	Price
URHB32S	08-07213	
URHB36S	08-01230	
URHM38S	08-01232	
UREB36S	07-26932	
UREM38S	08-01234	

BOXES OF 12 SPARK PLUGS ARE AVAILABLE FOR EACH MODEL. CALL OR VISIT OUR WEBSITE FOR PRICING.



#### CHAMPION SPARK PLUG ANTI-SEIZE

Apply sparingly to second and third threads. Do not contact electrodes as it could short out the plug. Do not apply to shielding barrel threads. Unbreakable 4oz. bottle with applicator brush top......P/N 2612....

# **TEMPEST SPARK PLUG** THREAD LUBRICANT & ANTI-SEIZE COMPOUND

Comes packaged with a brush that applies the lubricant to the threads with a smooth even flow, doesn't drip, and more importantly, won't inadvertently run down on the firing end of the spark plug potentially causing an environment conducive to fouling or even pre-ignition. It stays where you put it and covers

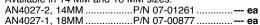


# TEMPEST COPPER

SPARK PLUG GASKET
AN4027-1, 18MM P/N M673. These are the AN4027-1 18mm copper spark plug gaskets. Model U674. Made of solid copper to current aircraft standards. Box of 100......P/N 07-01798.....----



Made of solid copper to current aircraft standards. Available in 14 MM and 18 MM sizes.





## **CHAMPION M674** SPARK PLUG GASKET

# SURPLUS SPARK PLUG BARGAINS



Please view our website for current prices

New surplus 18MM longreach, shielded, 3/4-20 barrel. FAA approved for Continental IO-470, GIO-470, TSIO-470, IO-520 & GTSIO-520. Not for 0-470, which uses short reach plugs.

P/N 08-03699 ......

SEE TOOL SECTION FOR FULL LINE OF CHAMPION SPARK PLUG TOOLS

## SPARK PLUG TYPE DESIGNATION SYSTEM



In the early 1900s, small planes flew with single ignition systems not the early 1900s, smail pianes new with single ignition systems powered by adapted automobile engines using Champion-brand automotive spark plugs. By the 1920s, the company had devel ped innovative spark plugs designed specifically for the aviation industry. Champion Aerospace designs and manufactures Champion-brand piston-engine ignition components for both OEM and aftermarket for general aviation aircraft applications. Every spark plug manufactured that the design advertees that course leaves the applications. has built-in design advantages that assure longer life and greater reliability. A typical spark plug number with symbol explanation.

#### A TYPICAL SPARK PLUG NUMBER WITH SYMBOL EXPLANATION

R - Push-wire-90° to Center R H B 37 E

1. Resistor	NoneNo Resistor	RMil-Spec. Resistor-Erosion protection
2. Barrel Style	None Unshielded	E Shielded 5/8"-24 Thread
2. Barrel Style	H Shielded 3/4"-20 TI	hread (All Weather Plug)
3. Mounting Thread	Reach	Hex Size
B - 18 mm	13/16" (2.06 cm)	7/8" (2.22 cm)
M- 18 mm	1/2" (1.27 cm)	7/8" (2.22 cm)
J - 14 mm	3/8" (.095 cm)	13/16" (2.06 cm)
L - 14 mm	1/2" (1.27 cm)	13/16" (2.06 cm)
U - 18 mm	1-1/8" (2.85 cm)	7/8" (2.22 cm)
N - 14 mm	3/4" (1.90 cm)	13/16" (2.06 cm)
4. Heat Rating Position	High numberHot (50)	Low numbercold (26)
5. Electrode Design None - Conventional Single	E - Two Electrode Massive S - Single Electrode (Iridium) R - Push-wire - 90° to Center P - Two Electrode (Platinum)	

#### CHAMPION SPARK PLUGS

SHIELDED – MASSIVE ELECTRODES									
5/8-24*	Price	3/4-20*	Price						
REJ38 (14MM)		RHM38E							
REL37B (14MM)		RHM40E							
REB37E		RHU27E							
REM37BY		RHB32E							
REM38E									
REM40E									
REB32E									
SHIELI	LECTRODES**								
5/8-24*	Price	3/4-20*	Price						
REM38S		RHB32S							
REB-36S		RHB36S							
		RHM38S							
	UNSHIELD	ED	-						
5/8-24*	Price	3/4-20*	Price						
M41E (18MM)									

<sup>\*</sup> Shielded barrel thread size. Check barrel size - 5/8x24 or 3/4x20 threads before ordering and select proper plug number.

#### SEE PAGE ON THE RIGHT FOR SPARKPLUG APPLICATION TABLE.

\*The "Iridium S" sparkplugs replace the Platinum and "W" Iridium types. Increased bore diameter improves scavenging action. Greater clearance volume can accept more combustion deposits. Single Iridium electrode offers greater resistance to lead attack. Easy to clean Easy to gap



# **CHAMPION RVL38S SPARK PLUGS**

Used on M14 YAK.P/N 08-06280 .....

NOTE: Spark plugs are shipped in factory sealed plastic cases. Opened spark plug cases make the spark plugs non-returnable. Please do not open any spark plug until you are sure you have received the correct spark plugs for your application.



#### **HELI-COIL INSERTS**

18mm long Heli-Coil aviation grade spark plug inserts. 

#### SILICONE HEAT TRANSFER COMPOUND



A thermally conductive grease based on zinc oxide and silicone oil that provides good thermal conductivity across a wide operating temperature range. Non-conductive, non-capacitive, and non-

corrosive, it is used to improve the thermal conductivity between irregular metal surfaces. It is widely used to improve heat flow between heat sinks and heat generating electronic components such as CPU's, GPU's, and power components. Silicone thermal greases are preferred in high operating temperature applications where silicone migration is not a concern.

4 Gram / 1.7 mL Pouch......P/N 09-05316....

# TEMPEST AVIATION SPARK PLUG APPLICATION CHART

	AVIA		V	<u> </u>	Ц		7	Ш	1
				Mas	sive			ne-W	
		Thread	5			3/4"-20	5/8"-2	3/4"	'-20
			M37HE	7B∀ 8E		187	SSS	S S	URHM38S
FAA-PMA Approve			REM EB3	REM37BY	HB3	URHM38E URHM38E	UREB36S	URHB32S URHB36S	НMЗ
Engines Application	ons		EA	55	55	555		55	5
Continental Motors A-65, A-75, C-75, C-85, C-9 C-145 Series	0, C115, C-125 Series			: .	•				•
E165, E-185, E225 Series O-200-A, B, C, D				•					÷
IO-240-A, B O-300-A, B, C, D, E			-	. :		÷	•		÷
GO-300-A, B, C, D, E, F IO-346-A, B				• •		::			÷
<u>IO-360-A, AB, C, CB, D, DB</u> IO-360-B						•			÷
TSIO-360-A, AB, B, BB, C, ( H, HB, JB, K, KB, LB, MB, N	CB, D, DB, E, EB, F, FE NB, PB, RB, SB	3, G, GB,		•		•			•
<u>LTSIO-360-E, EB, K, KB, RI</u> O-470-2	В			÷		÷	:		·
O-470-4, 11, 11B, 11B-C1, O-470-B, G, H, M, N, P, R,	<u>11-C1, 13, 13A, 15</u> S			•	•	. :			÷
O-470-B-C1, G-C1, K-C1, L O-470-A, E, J, K, L,	-C1, M-C1				•				·
O-470-T, U IO-470-A, C, G, P, R, T IO-470-D, E, F, H, L, LO, M.	N. O. H. W. WO			·	·				·
IO-470-J, K	, N, S, U, V, VO				•				·
L/IQ-470-A TSIO-470-B, C, D IO-520 Series				Ė		Ü		٠.	Ė
10-520 Series 10-520-A, B, BA, BB, C, CB LIO-520 Series	, D, E, F, J, K, L, M, MB	3, N, NB	ŧ		Ė	Ħ	Ħ		
TSIO-520-A, AE, AF, B, BB, H. J. JB, K. KB, L. LB, M. N.	. NB. P. R. T. U. UB. V.	VB. WB	T	П	ŀ	П	П		Т
LTSIO-520-A, AE, B, BE, C, JB, K, KB, L, LB, M, N, NB,	, CE, D, DB, E, EB, G, F P. R. T. U. UB. VB. WB	H, J,	T	П	ŀ	П	П		П
GTSIO-520-C, D, E, F, G, H IO-550-A, B, C, D, E, F, G, I IOF-550-B, C, D, E, F, L, N,	I, K, L, M, N				·				Ξ
IOF-550-B, C, D, E, F, L, N, TSIO-550-A, B, C, E	P, R						Н		Ξ
R9-A R-670			÷			•	·	•	Ξ
R-670-3, -4, -8, -11, -11A W-670									٠
ECI (Engine components I OX-320 series	nt'l) TITAN® Engines								•
IOX-320 series OX-340 series				•	•	::			÷
IOX-340 series OX-360 series				÷	•				÷
IOX-360 series OX-370 series					•				_
IOX-370 series O-340 series (ASTM certifie	d)			÷	•		•		<u>:</u>
IO-340 series (ASTM certific Electroair (Electronic Ignit ES41000, ES41000IC, ES4	tion)			Ė	_				÷
Franklin/PZI/WSK 2A-120-A, B, C, D	10001			_	<u> </u>	-			_
4A-235-B, B1, B2, B3, B4, E 6AS-335-A, B	36			Н	÷		÷	•	Ξ
6V-335-A1A, A1B 6VS-335-A. B. A1. B1					÷	•	ŀ	•	
<u>6A-350-C1, C1A, C2, C2A, </u> 6AS-350-A. A1		D1B			•		÷	• •	
6V-350-A, B PZL-3S, 3S 2nd Series, 3SF	3				·		÷	•	
ASZ-62IH-16, M18 Jacobs			·			•	٠		_
L-4, L-5, L-6 Series 4M, 4MA, 4MA7, 4MB, 5M,					•	ď			÷
R-755-A1, A2, A2M, A2M1, R-755S, SM R-755-9	D1, D2, D2W, E								Ξ
R-915-3, 5, 7 Ken Royce									٠
Ken Royce 7F, 7G Ken Royce 90 5G					•				
Kinner B-5, B-54, C-5, K-5						Η.			_
Kinner R-5, R-5 Series 2, R- lambert	-55, R-56		F		•			Ħ	Ε
B-5, B-54, C-5, K-5 leBlond					•				Ξ
LeBlond 70 5DE, 5E LeBlond 85 5F, 5DF				_	•				
LeBlond 90 5F LeBlond 110 7DF					•				
Menasco Buccaneer A-6, B-6, B6S					•				
Super Buccaneer C6S-4 Pirate A-4, B-4, C4, D4, M-5	50				•				
Super Pirate D-4-87 P. Ponk O-470-50 Super Eagle			Ŧ		1.	ď			_
Pratt & Whitney R-985 Wasp Jr. Series			Ŧ			Η.		H	-
R-1340 Wasp Series (Short R-1340 Wasp Series (Long	Reach)		٠.	•				H	÷
SR-1340-E R-1800 Twin Wasp F1			٠.				Н		H
R-1830 Twin Wasp Series R-2000 Twin Wasp Series			:	H	÷		÷	• •	F
Twin Wasp Series SC-G, SC R-2800 Double Wasp A, B,	3-G, S1C-G, S1C3-G, Series	S3C4-G, S4C4-G		Н	•		÷	• •	F
Double Wasp Series CA3, C CA19, R2800-97, CB3, CB4	CA5, CA15, CA17, CA18	8,	ŀ	П	•		ŀ		
R-4630 Wasp Major Series Ranger			•		٠	•	٠	•	
Ranger 6-390, 6-410, 6-440 Superior Air Parts					•				٠
O-360-A1A1, A1A2, A2A1, A5A2, A6A1, A6A2, B1A1, B4A2, B5A1, B5A2, B6A1, C3A2, C4A1, C4A2, C5A1, D2A2, D3A1, D3A2, D4A1, E1A2, E2A1, E2A2, E3A1,	A2A2, A3A1, A3A2, A4 B1A2, B2A1, B2A2, B3 B6A2, C1A1, C1A2, C2 C5A2, C6A1, C6A2, D1 D4A2, D5A1, D5A2, D6	A1, A4A2, A5A1, A1, B3A2, B4A1, A1, C2A2, C3A1, A1, D1A2, D2A1, A1, D6A2, E1A1,			•				

Not a complete list.	To find the right Tempest Aviation Spark Plugs for your engine, see our complete applica-
	tion quide & engine chose reference at http://tempestalus.com

		Ele		od			El	ne-V ectr	Vir od
Thread	ш		۱		4"-2	Т	5/8"-24	3.	4"-20
Engines	EARE! UREB	REM	REM	HHB:		RH	REB	BHB	ΣÌ
D-360-A1A1, A1A2, A2A1, A2A2, A3A1, A3A2, A4A1, A4A2, A5A1,		⊃ :	•	) 	) <u>=</u>	$\supset$	> =	) = 	0 0
A5A2, A6A1, A6A2, B1A1, B1A2, B2A1, B2A2, B3A1, B3A2, B4A1, B4A2, B5A1, B5A2, B6A1, B6A2, C1A1, C1A2, C2A1, C2A2, C3A1,									
84A2, B5A1, B5A2, B6A1, B6A2, C1A1, C1A2, C2A1, C2A2, C3A1, C3A2, C4A1, C4A2, C5A1, C5A2, C6A1, C6A2, D1A1, D1A2, D2A1, D2A2, D3A1, D3A2, D4A1, D4A2, D5A1, D5A2, D6A1, D6A2, E1A1									
E1A2, E2A1, E2A2, E3A1, E3A2, E4A1, E4A2, E5A1, E5A2, E6A1, E6A2 Textron Lvcomina	!		-	Ш	-	+			۰
O-235-C, E, H, K, L, M, N, P Series		•	٠	Н	÷	•	•	Н	•
O-290 Series O-320-A, B, C, D, E, H Series	Н	: :		F		•	•	Н	•
O-320 A, B, C, D, E, Series		. :	•	H		•			
O-320-F Series O-320-C1A, F1A (Long Reach)			٠	Н		•			٠
O-320-C1B (Long Reach) AIO-320-A, B, C series	·			Н					Ţ.
LIO-320-B Series (Short Reach) LIO-320-C1A (Long Reach)			٠	Н		•		Η,	·
AEIO-320 A, B, C, D, E Series D-340-A, B Series	=	•		П	÷				÷
0-360-A, B, C, D, F, J Series 0-360-E Series	-			П		:	·		÷
O-360-A, B, C Series O-360-A, B, C, D, E, F, J, K, L, M Series				Н					÷
LO-360-A, B, C, TF, F1A Series (Long Reach) LO-360-A, C, E Series	·			П	•				Ė
TO-360-A. C. E. F Series	·	Ì	Ť	·	•	Ť	•		
TO-360-C1A6D, E1A6D, F1A6D Series (Long Reach) /O-360-A, B Series				Ė	•		•		٠
AIO-360-A, B Series HIO-360-A, B, G Series		: :	٠	H		•	•		÷
HIO-360 -C, D Series HIO-360-E1AD, E1BD, F1AD Series (Long Reach)		Ė		·			٠		
VO-360-A Series LIO-360-C, M Series	·			Ė			•		٠
LTO-360-A1A6D, E1A6D TIO-360-A, C Series	÷			•	•		•	•	
AEIO-360-A, B, C, H Series AEIO-360-A Series (Long Reach)		•	Ē	E		•			Ė
LHIO-360-C Series LHIO-360-F1AD	-		F			-	•		F
O-435-A, C, K Series O-435-B Series	-	-	٠	H	ŀ	•		Η.	·
O-435-A1A (Long Reach) O-435-6, 6A	-		Ŧ	٠	•	Ŧ			F
O-435-23, 23A, 23B, 23C, 25, 25A GO-435-A Series	·	Ξ.	Ŧ	Ŀ			٠.	•	Ę
GO-435-C, D, Series GO-435-K Series	-		•	F	Ė	:	•	П	Ŀ
VO-435-A Series	Ξ.	·	٠	L	·	Ì			·
VO-435-A, B Series (Long Reach) TVO-435-A Series (Short Reach)	Ė	·			ŀ		ŀ		Ŀ
TVO-435-A, B, C, D, E, F, G Series (Long Reach)  -480-1, 3	Ė			÷		İ	٠	Ė	
GO-480-B, D, F Series GO-480-C, G Series			•		٠	•			Ė
GO-480-G1, G2 Series (Long Reach) GO-480-E1A6	Ė			Ė			٠	Ė	٠
GSO-480-A, B, D, F Series (Short Reach) GSO-480-A, B Series (Long Reach)	•	ď	•			•			Ė
IGO-480-A Series (Long Reach) IGSO-480-A Series (Short Reach)	·			Ė	•		·		·
GSO-480-A Series (Long Reach) O-540-A, B, D, E, F, G, H, J Series	Ė			·	•		•		Ŀ
O-540-L3C5D, M1B5D Series (Long Reach) IO-540-A, AB, AE, B, C, D, E, G, J, K, L, M, N, P,	÷	-		Н	•		•	H	•
O-540-A, AB, AE, B, C, D, E, G, J, K, L, M, N, P, R, S, T, U, V, W, (Short Reach) O-540-AF (Short Reach)	-	-		Н				Н	H
O-540-AA, AC, AE, E, G, J, K, M, N, P, R, S, U (Long Reach) O-540-E1A5, E1B5, E1C5 (Long Reach)	-	-	Ŧ	F			H		:
O-540-E1A5, E1B5, E1C5, J4A5, K1A5, K1A5D, K1B5, K1B5D, K1C5, K1D5, K1E5, K1E5D, K1F5, K1F5D, K1G5, KIG5D, K1H5,			Ī	•	•		•		Т
K1J5, K1J5D, K1K5, K1K5D, K2A5, P1A5, R1A5 (Long Reach)				L			L.		
VO-540-A, B, C Series (Short Reach) VO-540-A, B, C Series (Long Reach)	·				·		·		
TIO-540-A, AA, AB, AE, AF, AG, AH, AJ, AK, C, E, F, G, H, J, K, N, R, S, T, U, V, W Series									
LTIO-540-F, J, N, R Series LTIO-540-U, V Series				•	•	Í	٠		
AEIO-540-D, L Series (Short Reach) AEIO-540-L Series (Long Reach)			•		•	•	•		
IGO-540-A, B, Series IVO-540-A Series	÷	f			•	f		•	
TIVO-540-A Series IGSO-540-A, B Series	F	Ŧ		•			٠	: :	
TIO-541-A, E Series TIGO-541-A, E Series	÷		ĺ	•	•	Ī			
O-580 Series (Short Reach) O-580 Series (Long Reach)	₩.	•	ĺ			f	H	Η.	
AEIO-580 Series (Short Reach) AEIO-580 Series (Long Reach)	Ė	-	ĺ			f	Ħ	Η.	
N-200-A, B, C, D Series (Short Reach)	É		٠	F		٠	ŀ	Ħ	:
O-720-A, B, C, D Series (Long Reach)	·			٠		Í		•	
Warner Scarab Series 28, 29, 30, 40, 50			٠	П		•			•
Scarab Jr. Series 40, 50 Super Scarab Series 40, 50, 50A		İ	•	Ħ	Ė	•	•		:
Super Scarab 165, A, B, D, 185, 185J, 185K Wright/ curtis Wright			•	Н		•	٠		÷
Cyclone Double Row Series Cyclone R-1300 Series	÷	Ė			•	f			
Cyclone R-1820 Series (Except F & HE) Cyclone R-1820-84 (C9HE) Series	•	f	ſ	٠	٠	f	٠		
Cyclone R-2600 Series Cyclone R-3350-C18BA, C18BD	÷	F	Ī			ı	÷		
GR-975 Series (Short Reach)	F		·	H	F	:	H	П	F
R-975 Series (Snort Heach) R-540 Series	·	F		F	•	i	H	H	F
R-975 Series (Short Reach) R-975 Series (Long Reach)	-		Ė	F		Ė	H	Ħ	Ė
Whirlwind J-5 (Short Reach)	Ė		٠			٠			Ė
Whirlwind J-5 (Long Reach) Whirlwind R-760 Series (Long Reach)	÷	۰	Ť		:	Ŧ		Н	-

# **ARK PLUG TOOLS**

#### AVIATION SPARK PLUG SERVICE UNIT



For Cleaning: Two flexible rubber adapters handle 14 and 18mm plug types. For Testing: Steel adapters of 14 and 18 mm are standard equipment and conveniently stored on the top of the cleaner for ready availability. Molded of rugged A.B.S. plastic which is durable, oil resistant and easy to clean. An aluminum-base frame is included, which permits easy mounting to a work base had exist a work base had been seen to be seen to be a control of the contr ing to a work bench and quick removal. The solid state ignition system pro-duces a stable

ignition test voltage providing greater accuracy and reliability. Its lack of moving parts eliminates the major cause of tester failures. Cleaning is by a dry-abrasive air blast, which quickly and effectively removes conductive deposits. All compressed air for both cleaning and testing passes

	r trap to stop harmful air line moisture.
110V	P/N 12-00794
220V	P/N 12-00902
110V Replacement Coil	P/N 12-03773

#### **MODEL 2600A VIBRATOR/CLEANER**



Champion now makes it easier than ever to clean heavily lead-fouled spark plugs with this new, improved Vibrator/Cleaner. Each unit is shipped with all accessories required for cleaning fine-wire and 2-prong massive electrode aviation spark plugs. This unit features quick-change cleaning head assemblies, easy and inexpensive replacement of single cutter blades, improved heavy duty top-mounted switch and improved vibrator

motor for faster cleaning and maximum durability.	
Model 2600AP/N	12-15600
Full Cutter Single Blade (CT-435F)P/N	12-01147
Damper For Vibrator CleanerP/N	12-04953

# CT-415AV GAP SETTING TOOL



A low-cost efficient gap setting tool for closing gaps on massive electrode type aviation spark plugs. May be used as a hand tool, mounted on a bench or held in a vise. Furnished with one adapter for 18mm spark

### CT-450 RETRACTABLE GAP GAUGE

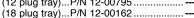


High-impact red plastic case contains four sets of accurate, retractable "go" and "no go" wire gauges: 2 sets .015-.019 (.016 Nom.) 2 sets .018-.022 (.019 Nom.) Length: 3-1/2". Wt. 1-1/4 oz ..... P/N 12-00797 ......



### CT-446 SPARK PLUG TRAY

Steel tray holds up to 12 plugs. Speeds handling of used or new plugs. Holes numbered to correspond with engine cylinders. Protects against shielding barrel contamination. Dims: 5"H x 8"L x 3.5"W. Wt. 1 lb. (12 plug tray)...P/N 12-00795.....----





# NO. 91893 ABRASIVE COMPOUND

For use in CT-475AV Dry Abrasive Cleaner/Tester. Contains 1 full charge (15oz.). Note: This main item no longer ships with a tip unless it is ordered separately. P/N 91893. ....

#### **622 CHAMPION RUBBER TIP**

P/N 12-94023.....----



# **LEAD-MASTER** WRENCH SETS

Reduce time to remove and install sparkplug ignition leads. Permit shortarc turning due to 12-point grip head.

)799 <b></b>	12-00799	P/N	Wrench	landle Box	/4" "T" ł	CT911 3	
0801	12-00801	P/N	<b>Wrench</b>	landle Box	/8" "T" I	CT912 7	
0802	12-00802	P/N	<b>Κ</b>	n End Box	7/8" Ope	3/4" &	

# CT906 CHAMPION PLU

MASTER RATCHET WRENCH
CT-906 Plug Master Ratchet Wrench.
Designed especially to make spark plug removal and installation easier and faster. Flex-handle allows 30-degree angle travel in either direction. Extra fine reversible ratchet action

requires only 6-degree travel for next bit. Popular 3/8 in./0.95cm square 

#### CT492 CHAMPION IGNITER EROSION GAUGE



A special tool designed specifically to measure the erosion-wear of Champion AA series igniters. Calibrated in colored scale segments to determine the extent of erosion of the undercut area of the steel shell, not easily visible to the eye. Measuring tips shaped to reach into the undercut, true-wear area. Instructions for use 

### CT-494 CHAMPION **EROSION GAUGE**

CT-494 Igniter Erosion Gauge. The CT-494 accurately determines wear on 10 different Champion surface gap igniters, insuring maximum igniter life without exceeding safe wear limitations.

P/N 12-04929 .....-----



# **CHAMPION CT-482 SPARK**

PLUG EROSION GAUGE Champion CT-482 spark plug erosion gauge provides an easy, accurate method of determining whether your plugs have reached their maximum wear limit. Calibrated to reject plugs after their electrodes have eroded to at least one-half their original thickness.....P/N 12-00791.....

# CT449 CHAMPION THREAD **CLEAN OUT TOOL**



CT-449 Thread Clean-Out Tool. For cleaning aircraft engine spark plug 18mm bushings to assure correct installation of new or overhauled spark

plugs. Regular 7/8"/2.22cm hex fits spark plug sockets. Precision ground 

### **52243 CHAMPION CRIMP TOOL**

A special tool used to crimp turbine ignition lead contacts to the unshielded center wire......P/N 12-04951 .....



# **MODEL 2500A GAP SETTING TOOL**

A precision gap-setting tool for all massiveelectrode Champion spark plugs. Permits simultaneous adjustment of two opposite prongs without removing the spacing gauge.

Designed for permanent installation on bench or heavy wooden board.

P/N 12-15500 ......



# **CT-457 FINE WIRE GAP** SETTING TOOL

Designed exclusively for adjusting fine wire electrode spark plug gaps. Slot fits iridium ground electrodes for quick, safe adjustment. Size: 2-1/4" x 2" x 1/4" 

#### **CHAMPION 52241 HOOK**

Champion 52241 Hook......P/N 12-04925 .....

#### **CHAMPION CT466 GAUGE**

Champion CT466 Gage. ......P/N 12-04924 ......-----

**SEE OUR WEBSITE FOR REPLACEMENT PARTS.** 

# **RK PLUG TOOL**



# **TEMPEST AA446 SPARK PLUG TRAY**

Constructed of high quality metal protecting the spark plugs from damage. Tray design is sturdy and balanced. Rubber feet on the bottom of the tray help keep the tray in place. Numbered spark plug slots.

P/N 07-02510 .....----



# **TEMPEST SPARK PLUG RESISTANCE TESTER**

Tempest has developed an easy-to-use tester that makes it very efficient for IA/AP's to test the resistance in all aviation spark plugs. The IA/AP simply places the spark plug, barrel side down over the contact post and touches the other lead end to the firing end of the center electrode. If the light is green, the spark plug resistance is below 4kÙ (thousand ohms). If both the green and red lights are on, then the plug is between

4 - 5kÙ. This is acceptable for serviceable plugs. If the red light is on alone, this indicates a resistance value in excess of 5kÙ and the plug must be discarded and replaced ......P/N 08-07462 .....



# **ATS DELUXE SPARK**

PLUG KIT

Kit Includes: • SPCT100A Spark Plug
Cleaner Tester Unit (120V/240V) • ATS415 Bench Gapping Tool with Gap Gauge • #12 Spark Plug Cleaner • PA01 Spark Plug Vibrator Cleaner to remove lead deposits Spark Plug Tray • 10X Inspection Magnifier · A 4oz Bottle of ATS Anti-Seize Lubricant

100ea Copper Gaskets • Spark Plug Thread Chaser • ATS950 Magnetic Spark Plug Socket.......P/N 12-02410 .....-----------

> ATS VIBRATOR CLEANER PA01 It will clean heavy deposits in and around the electrodes with absolutely no risk of damage to the plug. 1 lbs (0.5Kg) shipping weight.

P/N 12-00714 .....-----



SPARK PLUG EROSION GAUGE Makes it easy to determine if you plugs have reached the end of their useful life. Simply gap your plug per manufacturer's recommentation and then check to see if the electrodes fit through the hole of the gauge. If they enter the hole, then your plug is too worn and must be replaced.

P/N 12-03392 .....----



# **ATS SPARK** PLUG GAPPER

Sure-Gap is designed for use on all massive electrode aircraft spark plugs. Saves time and money, eliminates guessing of plug gap, prolongs plug life and ensures peak performance. 18mm. 1lbs shipping weight.

P/N 12-01682 .....

### ATS SPARK PLUG GAP GAUGE



Convenient Gap Gauge for all Champion and Tempest massive electrode spark plugs. Slider design keep gauge wires stowed away when not in use.

- Retractable slider design
- Includes wires for .015", .019", .018", and .022"
   Works with all Champion and Tempest Massive Electrode Spark Plugs
- Replacement Wire Gauges are available.

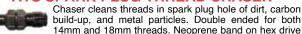
#### ATS SPARK PLUG GAPPER & GAUGE 415K



A low-cost efficent gap setting tool for closing gaps on massive-electrode Aviation Spark Plugs. Great design allows it to clamp on to your workbench for easy gapping.

Features: • Manufacturued from 4160 Tool Grade Steel CNC Machined surfaces for exact alignment • Includes 

# ATS SPARK PLUG THREAD CHASER



#### ATS MAGNETIC SPARK PLUG SOCKET



The new Spark Plug Socket features a thin-walled design to get into to the tightest confines. Magnetic interior guarantees that you won't accidentally drop the plug during installation or removal. Works with all Champion and Tempest Aviation Spark Plugs. Works

with all Champion and Tempest Aviation massive electrode Spark Plugs. Thin-Walled design to get to the tightly spaced plugs. Magnetic interior holds spark plugs and keeps them from falling out. 7/8" Socket. 3/8" Drive. 3-1/2" Overall Length. Made of Chrome Vanadium Steel. 1lbs shipping weight......P/N 12-01693 ......

#### AVIATION SPARK PLUG SOCKET



Aviation spark plugs have special needs; using a nonstandard 7/8" hex, and exhaust manifolds can get in the way of wrench access. A thin-wall socket is necessary for many applications. To ensure compatibility with all makes of plugs including Champion and Tempest, a deep well is called for. Developed specifically for general aviation

aircraft. Compatible with Tempest and Champion Spark Plugs. Thin wall for fit into narrow cavities. Combined built-in 1" hex and 3/8" drive permits added flexibility in manifold access. Lifetime guaranteed and professional .....P/N 12-03771 ....

### ATS SPARK PLUG CLEANER



Cleans any size plug without changing grommet. Has 2-way valve (blast or air) and comes complete with abrasive powder. Ready to use.

P/N 12-01684 .....----Replacement Abrasive X-Fine 600 Grit P/N 12-04897 .....----

#### **AUTOLITE SPARK PLUG TOOLS**



#### **SPARK PLUG DEEP SOCKETS**

T-558 1/2" drive w/o magnet

P/N 12-00712 .....----

# **HEAVY DUTY SPARK PLUG GAPPER KIT**



A complete spark plug gapping solution for field or bench use includes the Heavy Duty Spark Plug Gapping Tool to accurately set your spark plug gaps to within 0.001". You also get a set of wire feeler gauges to verify gap size. If you should happen to accidentally over-gap the plug, then the included Gap Expansion Tool will get you back on track. And finally, included in

the Kit is an Electrode Erosion Gauge to make sure that your gapped plugs are still in serviceable condition......P/N 12-03359 ......----

# HEAVY DUTY SPARK PLUG GAPPER



This professional heavy-duty spark plug gap setting tool is completely portable for field use, yet precise enough to set gaps to within 0.001". The precision screw drive with its comfortable knurled knob gaps any

screw unive with its confinerable knuried knob gaps any type of Massive Electrode Aviation Spark Plug reliably and without any danger of damaging the spark plug. Simply screw the spark plug into the base of the tool and turn the knob to the required gap width. Very easy to use. Sets gaps to whithin 0.001". Precision CNC Machined from 4160 Tool Grade Steel. Attractive Nickel-Cadmium finish resists rusting. Knurled palm grip keep the tool from slipping in hands. Compatible with all Champion, and AutoLite Massive Electrode Spark Plugs

Gapper	P/N 12-03389	-
Gapper with Gauge	P/N 12-03390	_

# SPARK PLUG TOOLS

# **SPARK PLUG GAP EXPANSION TOOL**

Expands the spark gap of any massive electrode aviation plug safely and efficently.





# **UNIVERSAL SPARK PLUG GAP GAUGE**

This gap gauge provides easy accurate spark plug adjustment. Features flanged edge for electrode bending and beveled round hole for opening gap. 1-1/2" diameter. Wt.: 0.8 oz. Scaled from .020" to .100". Pewter plating makes the inches more legible for user to read. Also available in metric scale (0.5 mm to 2.4 mm). Gap gauge (inches)......P/N 12-21375....

# **SPARK PLUG VIBRATOR CLEANER**



Anyone that cleans a lot of spark plugs knows that a spark plug vibrator cleaner is the only way to go to break up and clean out stubborn lead deposits. A spark plug abrasive cleaner is great for the finish cleaning, but it just won't take care of the lead deposits found down around the plug porcelain. Aircraft Spruce now

offers an inexpensive way to professionally clean spark plugs. This 115V vibrator cleaner is small, light weight, easy to use. It is great for the pilot or mechanic that wants to carry one along - just in case. 90 day guarantee.

Cleaner	P/N 1	12-21355	/ea.
Extra Cutter Blades	P/N 1	12-01147	/ea.



# **SPARK PLUG CLEANER** TESTER DUAL VOLTAGE

Works with both 120V and 220V sources, and has advanced circuitry to prevent thermal overload during heavy use. Uses a powerful blast of air and abrasive to thoroughly remove carbon deposits from plugs. Manufactured to the rigorous ISO 9002 standard and carries a full one-year warranty. Specifications: · Operating voltage: 115V or 220V AC Single-phase

50/60Hz • Dimensions: 19.3" (49cm) x 11" (28cm) x 10.4" (26cm) Weight: 22.5 lbs (10.2kg) · Accessories included: 12mm, 14mm and 18mm spark plug adapters (2pcs each); 12mm, 14mm and 18mm cleaner gaskets (1 each); Adapter case (1pcs); Aviation Massive Electrode adapter plug (1pcs), Abrasive 1 lbs (900g).P/N 12-03184 ......

# **SCREEN CLEAN SPARK PLUG CLEANER**



The Screen Clean tool works great for field cleaning of spark plugs. It is non-abrasive and can be used for several cleanings. Simple to use-just work the bi-fold edge through

the gap with several strokes before setting the gap. Actually removes deposits blasting cannot reach......P/N 12-15610.....



#### **SPARK PLUG CADDY**

Handy case holds (2) 14mm spark plugs. Small enough to fit into your pocket. P/N 13-03869 .....



#### SPARK PLUG WRENCH

Loosen or tighten your spark plugs with this handy tool......P/N 13-03921 .....--



#### THREAD CLEANOUT TOOL

In servicing spark plugs, a common problem is carbon accumulation in the jug threads. Cleaning these threads regularly can save big money by preventing thread damage and the need to pull the jug and install thread inserts. This specially designed tool works very well to limit this problem. It provides maximum depth penetration and its unique spring action assures that there will be no enlargement of the existing thread pitch diameter.....P/N 12-17200 .....



# AIRCRAFT SPRUCE PLUG MAINTENANCE KIT

The Aircraft Spark Plug Maintenance Kit includes an aircraft spark plug tray, air-powered spark plug cleaner, feeler gauge, spark plug gap setting tool, aircraft spark plug socket, a set of 8 spark plug gaskets and a bottle of spark plug thread lubricant and anti-seize compound.

P/N 12-02250 .....



## PRECISE-GAP SPARK PLUG GAPPING TOOL

Precise Gap is a simple tool to gap twothree- or four electrode 18 mm sparkplugs. Only 2" overall - comfortably handheld. Precision made of stainless steel. 'T" handle adjusters move the ground electrodes closer to the center electrode until wire feeler identifies proper gap. Adjusters have fine thread with ball tips for precise movement. Don't buy an inferior imitation at a higher price!

P/N 12-11600 ......



#### SPARK PLUG TRAY

This unique spark plug tray is quality made of PVC plastic. Each holding position has 18 mm thread so that plugs screw in for positive holding. This tray permits simultaneous inspection of either the electrode or barrel end of plugs, protects plugs from damage, and can be stored in any position. Optional carrying strap attaches to ends.

P/N 12-30185 .....-



### **PLUG-A-LONG SPARK PLUG TRAY**

Holds 12 spark plugs each hole stamped with cylinder number also marked top and bottom so each plug can be identified easily, no mix-ups. Plugs can be serviced and returned back to where they were removed. a must for aircraft mechanics. Made from 18 gauge steel. Blue powder coat finish. Dimensions: W=4.0", L=8.0", H=2.6. P/N 12-00974.....-----



# **RADIAL ENGINE SPARK** PLUG HOLDER

18 plug holder is made out of steel. Powder coated federal yellow.

P/N 13-11617 ..... ---



### **FAP 18 HOLE SPARK PLUG TRAY**

FAP-18 Aircraft Spark Plug Tray holds 18 plugs. Made from 18 gauge steel. P/N 12-03809 .....----



## **SPARK PLUG WIRE**

High-quality multi-strand copper core unshielded wire. 7mm diameter. For all Rotax® and most other engines. Replaces Rotax® Part No. 965-.....P/N 11-04105..... --- per ft.

# **ECTRONIC IGNITION SYSTEMS**

# **FLYEFII DUAL SYSTEM32 ENGINE MANAGEMENT SYSTEM**



FlyEFii System32 The Engine Management System Hardware is the first electronic engine management system ever designed specifically for the needs of experimental aviation. System32 is a state of the art, high speed, fully redundant system that represents the fulfillment of a ten year wish list of functionality. Dual 32 bit high speed ECUs and a sunlight readable graphical LCD Cockpit Controller combine for seamless power and efficiency

in managing your engine's electronic fuel injection and electronic ignition functions. System32 will be offered in ignition only and full ignition + injection versions.

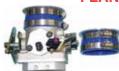
#### Specifications:

Engine Computer: • Advanced 32-bit microprocessor • EMI Filtering on all inputs · Operates down to 3.5 volts · Live Telemetry Interface • Integrated ADI Control • Up to 12 individually trimmable injector outputs · Onboard SD Card enables easy field updates, loading and saving map files, and data logging · Supports up to three O2 sensors · Integrated Boost Control • Lightning strike protection • Full 3D mapping of your ignition timing and fuel delivery • Compatible with standard left-right-both ignition switch.

Cockpit Controller: · Color LCD 1000-NIT sunlight readable display · Integral rolling tape Air Fuel Ratio display · Convenient full size SD card enables easy field updates, loading and saving map files, and data logging • Seamlessly interfaces with two ECUs • Effortless tuning enter your engine size and compression ratio to instantly set fuel and ignition base maps • Fits in standard 3-1/8" aircraft instrument hole · Annunciator display for ECU power, fuel pump power, and two battery voltages · Multi-function knob and buttons provide intuitive access to functions.

Description	Part No.	Price
4 Cylinder Ignition Only	07-19978	
4 Cylinder Ignition & Injection	07-19980	
6 Cylinder Ignition Only	07-19979	
6 Cylinder Ignition & Injection	07-19981	

# **EFII THROTTLE BODY** FLANGE ADAPTER KIT



The EFII Throttle Body Flange Adapter kit provides a convenient method to join a Van's Filtered Air Box or other flat surface interface to the EFII throttle body which is included in all EFII electronic fuel injection kits.

The EFII throttle body has a 3 1/4" rounded snout at its inlet. the TBFA kit includes a high quality silicone hose coupler which fits onto the EFII throttle body snout. The other end of the silicone coupler has a 3" ID which fits the included 3" aluminum flange adapter. Stainless steel hose clamps are included to complete the assembly of the TBFA.

The aluminum flange adapter can be riveted, bolted, welded or bonded to your air filter box or air inlet ......P/N 07-19987 .....-

# **EFII FUEL FLOW INTERFACE**



Required when Dynon or Garmin engine monitors are used with the EFII electronic fuel injection system. The EFII electronic fuel injection system does not require a mechanical fuel flow sensor to display fuel flow on your engine monitor. However, you will need our Fuel Flow Interface to translate the EFII Fuel Flow signal to the FloScan type signal required by Dynon and Garmin engine monitors. Grand Rapids and MGL engine monitors do not require this interface. The Fuel Flow Interface enclosure measures approx. 2" x 1.37" x 0.75".

P/N 07-19988 .....----

### **EFII GROUND BUS**



The EFII Ground Bus, part number GB-1, Is a great addition to a well designed wiring is a great addition to a well designed wiring system. The GB-1 is a nicely designed "forest of tabs" type grounding junction that can clean up and organize all your avionics and system ground wires. Many people use two of these devices to lay out their grounding scheme. One for avionics or small signal grounds, and one for higher current grounds, such as lighting, strobes, pitot heat, etc. .P/N 07-19993 .....

# **EFIS SPARK PLUG ADAPTERS**



If you are going to run an electronic ignition on your aircraft engine, you will need a set of these to adapt the 18mm spark plug threads in your aircraft cylinder head to 14mm threads for use of automotive spark spark

# E-MAG SPARK PLUG ADAPTER FOR 14MM SPARK PLUGS





08-07608

Auto plug adapters allow for an easy conversion of 18mm (standard engine plug thread) to 14mm (common auto plug thread). Both short reach and long reach adapters are available. The Spark Plug Adapter allows you to use: High performance 14mm automotive plugs, that offer an almost unlimited variety of heat ranges, & electrode styles, designed specifically to take advantage of electronic ignitions - see ignition manufacturer documentation for recommendations (note: not all plugs are equally suited). Shorter plugs with 90° silicon boots provides greater clearance for sleeker cowls and less drag. Some kits include 4 adapter gaskets.

Set of 4 without gaskets - Short ReachP/N 08-06753	
Set of 4 with gaskets - Short ReachP/N 08-06753-1	
Set of 4 without gaskets - Long ReachP/N 08-07608	
Set of 4 with gaskets - Long ReachP/N 08-07608-1	



# **BUS MANAGER**This Bus Manager is an

important safety device for aircraft that have critical electronics that require a protected essential bus. This would include air-

craft that are running electronic fuel injection, electronic ignition, electric fuel pumps, or critical instrumentation. Provides a triple redundant essential bus for all critical electronic equipment. This redundancy is crucial for engines that rely on uninterrupted +12V power to critical items. The end user no longer has to attempt to come up with a home brew bus system for their plane. The Bus Manager has been professionally designed and over-built to faithfully provide extreme reliability..... P/N 07-01852.....-----

# **BUS MANAGER** ACCESSORY KIT



The Accessory Kit for the Bus Manager consists of all the parts necessary to setup a Bus Manager based electrical distribution system for experimental aircraft.

P/N 07-01853.....---

# **ELECTRIC BOOST** PUMP MODULE



The EFII Boost Pump Module (BPM) brings a new level of installation simplicity and functionality to the fuel system of your aircraft equipped with Bendix, AFP or Precision

Airmotive type mechanical fuel injection. The BPM reduces a time consuming and frustrating plumbing job to a simple and clean, easy to set up installation. It is used to supply a steady source of 30PSI fuel to your engine during take-off, landing, priming, or emergency situations. The BPM has integral back flow prevention and pressure regulation valving.

Standard......P/N 07-01854.....---w/ 90° fitting......P/N 07-02461.....----

# EGULATORS - ALTERNATORS

# LAMAR (ELECTRODELTA) VOLTAGE REGULATORS

Mfg Part No.	Description	Replacement for	Part No.	Price
VR500-0101	27.7V Voltage Regulator	Cessna C611004-0101	07-00912	
VR500-0102	28.8V Voltage Regulator	Cessna C611004-0102	07-00913	
VR515F-5	28V Voltage Regulator	Cessna C611005-0102	07-27175	
VR580	28V Voltage Regulator	Cessna C611008-0101	07-00916	
VR801	28V Alternator Control	Cessna C611008-0101	07-00919	
VR415F	14V Voltage Regulator	Zeftronic R15300	07-00910	
VSF7203A	12V Voltage Regulator	Cessna, Pitts, Bellanca, Aeronca, Zeftronic R1510N	07-00921	
VR2000-14-2	14V Voltage Regulator		07-24344	
VR2000-28-2	28V Voltage Regulator	Diamond	07-00895	
VSF7403A	24V Voltage Regulator	Cessna, Beechcraft, Aero Commander, TCM	07-00922	
B-00371-1	14V Alternator Control	Piper Aircraft, Inc. (PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-201T, PA-28-235, PA-28-236, PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T, PA-28S-160, PA-28S-180, PA-32-260, PA-32-300, PA-32-301, PA-32-301FT, PA-32-301T, PA-32-301XTC, PA-32R-300, PA-32R-301(HP), PA-32R-301(SP), PA-32R-301T, PA-32RT-300, PA-32RT-300T, PA-32S-300, PA-38-112)	07-01167	
VR300-28-40	28V Voltage Regulator	Delco-Remy 1119237,1119656	07-00906	
		tzell (Electrodelta) Voltage Regulators (Factory Overhauled)		
Mfg. P/N	Description	Replacement for	Part No.	Price
VR515G-2	28V Voltage Regulator	Cessna	07-01108	
		zell (Electrodelta) Voltage Sensors & Monitors (Factory New)		
Mfg Part No.	Description	Replacement for	Part No.	Price
GPM-001	28V Ground Power Motor	Cessna C593005-0101	07-01275	
OS60	14V Overvoltage Sensor	Cessna C5930001-0101	07-00890	
OS100-0101	28V Overvoltage Sensor	Cessna C593003-0101	07-00887	
OS75-14	14V Overvoltage Sensor	Zeftronic V1510A	07-00891	
OS75-28	28V Overvoltage Sensor	Zeftronic V2510A	07-00892	

<sup>\*</sup> For complete application chart please visit our website at www.aircraftspruce.com

### **OVERHAULED COMPONENTS**

Alternators, generators, and starters which are remanufactured for installation in general aviation aircraft. Fully FAA approved.

<b>EXPERIMENTAL ALTERNATORS</b>					
Part No.	Volt/Amp	Price			
ES-6012	14V60A	CALL			
ES-6024	28V60A	CALL			
ES-6212	13.8V60A	CALL			
ES-6224	28V60A	CALL			
ES-7024	28V70A	CALL			
ES-10024	28V100A	CALL			
1100715R	12V70A	CALL			
1100716R	12V52A	CALL			
1100717R	12V70A	CALL			
1100718R	24V50A	CALL			
1100723R	24V50A	CALL			
1100747R	24V50A	CALL			
1100753R	24V65A	CALL			
1100792R	24V65A	CALL			

<b>DELCO- GENERATORS</b>						
Part No. Volt/Amp Price						
DEL1101898	12V35A	CALL				
DEL1101908	12V50A	CALL				
DEL1101914	12V35A	CALL				
DEL1105052	24V40A	CALL				
DEL1105053	24V40A	CALL				
DEL1105052	24V/50A	CALL				
DEL1105056	24V40A	CALL				
D	<b>ELCO STARTER</b>	S				
DEL1108234	24V					
1108249R	12V	CALL				
1109511R	12V	CALL				
1109517R	24V	CALL				
1109511R	12V	CALL				
1109518R	24V	CALL				
1109511R	12V	CALL				

Part No.	Volt/Amp	Price				
1109511R	12V	CALL				
1109514R	12V	CALL				
1109651R	12V	CALL				
1109656R	12V	CALL				
1109657R	12V	CALL				
1109660R	12V	CALL				
1109662R	24V	CALL				
1109678R	12V	CALL				
1109689R	12V	CALL				
1109687R	24V	CALL				
1109677R	12V	CALL				
1109678R	12V	CALL				
1109519R	12V	CALL				
1109518R	24V	CALL				
1109678R	12V	CALL				
1109681	12V	CALL				
*1	*Data a seat to alread					

\*Drive not included (DEL 1971890). For price see listing for drives. \*\*Drive not included (DEL 1940969).

For price see listing for drives.



# **LAMAR 14V VOLTAGE REGULATOR**

Lamar Voltage Regulator DGR6-1 fits Cessna 150 thru Cessna 210 series aircraft. DGR6-1 is the PMA replacement for DGR6, C611001-0101, C611001-0102, C611001-0201, and VR600.

Manufactured in the USA. P/N 07-01897 .....----



#### AMAR 28V ALTERNATOR CONTROL Lamar Alternator Control DGR3-1

fits Cessna 150 thru Cessna 210 series aircraft. DGR3-1 is the PMA replacement for DGR3, C611005-0103, C611501-0102, and VR15F. Manufactured in the USA. P/N 07-01896 .....----

# HARTZELL ENGINE **TECHNOLOGIES ALTERNATORS**



The most popular alternators in use on Cessna and Beech aircraft are of Ford manufacture. Chrysler alternators are usually found on Piper aircraft. These units are manufactured to aircraft specifications and are not available through automotive parts stores. Note: Core charge is billed on all exchange units & credited upon receipt of acceptable core.

#### ALTERNATOR PRODUCT INFORMATION

ALTERNATOR TROBUST IN STIMATION								
CHRYSLER ALTERNATORS - FACTORY OVERHAULED								
Model No. Description Part No. Price								
4111810R	12V/60A BD	07-06402						
FORD	ALTERNATORS -	FACTORY OVERH	AULED					
Model No.	Model No. Description Part No. Price							
DOFF10300BR	28V/60A BD	07-06413						
DOFF10300DR	28V/60A GD	07-06418						
DOFF10300ER	28V/38A GD	07-06414						
DOFF10300FR	15V/60A GD	07-06415						
DOFF10300JR	15V/60A BD	07-06416						
E3FF10300AAR	28V/95A BD	07-06417						
ES4019RS	28V/130A BD	08-07118						
EOFF10300BAR	28V/60A BD	07-06419						

# HARTZELL ENGINE TECHNOLOGIES **OVERHAULED AL SERIES ALTERNATORS**



Aircraft Spruce carries the full line of alternators, and starters which are remanufactured by Hartzell for installation in general aviation aircraft. Fully FAA approved. All prices shown are exchange prices. Core charges are billed when unit is shipped. Core credit is issued upon return of acceptable like model

core to Aircraft Spruce West in Corona, CA. Note: If core is not in stock at factory, customer must send core to Aircraft Spruce at time of order to have the core overhauled.

Hartzell Part No.	Volt/ Amp	Drive	Replaces	Part No.	Price
ALE-6520R	12V/40A	Belt	ALE-6420, Lyc LW-14302	08-07005	
ALE-8520R	12V/40A	Belt	ALE-8420, Lyc LW-14300	08-07006	
ALT-8520R	24V/50A	Belt	ALT-8420, CMI 652486	07-06404	
ALT-8521R	24V/50A	Belt	ALT-8421	08-07008	
ALT-9522R	24V/50A	Direct	ALT-9422, CMI 641668	07-06405	
ALU-6521RS	24V/70A	No Pully/ Belt	ALU-6421LS, Lyc LW-14329	08-07009	
ALU-8521R	24V/70A	Belt	ALU-8421	07-06406	
ALU-8521RS	24V/70A	No Pully/ Belt	ALU-8421LS, Lyc LW-14326	07-06407	
ALU- 8532RLS	8V/75A			08-15661	
ALU-9522R	24V/70A	Direct		08-07010	
ALX-8521R	12V/70A	Belt		07-06421	
ALX-8521RS	12V/70A	No Pully/ Belt		08-07014	
ALX-9524R	12V/70A	Direct	CMI 641670	08-07016	
ALX-9525BR	12V/70A	Direct	CMI 643008	07-06410	
ALY-6520R	12V/60A	Belt	Lyc LW-14333	08-07017	
ALY- 6520RLS	12V/60A			08-15662	
ALY-6521R	12V/60A	Belt		07-06411	
ALY-6522R	12V/60A	Belt		08-07018	
ALY-6527R	12V/60A	Belt	Lyc LW-14315	08-07019	
ALY-8520R	12V/60A	Belt		07-06412	
ALY-8520RS	12V/60A	No Pully/ Belt	Lyc LW-14313	08-07020	
ALY-8524R	12V/60A	Belt		08-07021	

# HARTZELL ENGINE TECHNOLOGIES **NEW ALTERNATORS**







**AL Series** 

**ES4000 Series** 

As the OEM, Hartzell offers factory new alternators engineered specifically to meet the challenges and increased demands of today's aircraft electrical systems. Each unit is aviation designed & developed, no automotive parts used. For decades our alternators have been powering Lycoming/Continental engines with unmatched performance and reliability.

#### AL SERIES ALTERNATOR - Prestolite Style - FAA/PMA Approved.

		· · · · · · · · · · · · · · · · · · ·		• •
Model No.	Volts/Amps	Description	Part No.	Price
ALT8520	24V/50A	Belt Driven	08-07122	
ALT8521	24V/50A	Belt Driven	08-07123	
ALT8521LS	24V/50A	No Pully/Belt	08-07124	
ALT9522	24V/50A	Gear Driven	08-07125	
ALU-6526	24V/60A	Belt Driven	07-19276	
ALX-6526	12V/70A	Belt Driven	07-19277	
ALU6521 LS	24V/70A	Belt Driven	08-07126	
ALU8521	24V/70A	Belt Driven	08-07127	
ALU8521 LS	24V/70A	No Pully/Belt	08-07128	
ALU8532 LS	24V/70A	No Pully/Belt	08-07129	
ALX8521	12V/70A	Belt Driven	08-07130	
ALX8521LS	12V/70A	No Pully/Belt	08-07131	
ALX8523	12V/70A	Belt Driven	08-07132	
ALU-6539-4	25V/175A		08-15650	
ALX9524	12V/70A	Gear Driven	08-07133	
ALX9525B	12V/70A	Gear Driven	08-07134	
ALY9524	12V/60A	Belt Driven	08-07135	
ALY6527	12V/60A	Belt Driven	08-07136	
ALU-6526	24V/60A	Belt Driven	07-19276	
ALX-6526	12V/70A	Belt Driven	07-19277	
ALY8520	12V/60A	Belt Driven	08-07137	
ALY8520LS	12V/60A	Belt Driven	08-07138	

# ES4000 SERIES ALTERNATOR - Ford Style - FAA/PMA Approved

Model No.	Volts/Amps	Description	Part No.	Price
ES4000	15V/60A	Belt Driven	08-07139	
ES4001	15V/60A	Gear Driven	08-07141	
ES4002	15V/80A	Gear Driven	08-07142	
ES4003	15V/95A	Belt Driven	08-07143	
ES4004	28V/38A	Gear Driven	08-07144	
ES4006	28V/60A	Gear Driven	08-07145	
ES4008	28V/70A	Gear Driven	08-07146	
ES4009	28V/70A	Belt Driven	08-07147	
ES4011	28V/95A	Belt Driven	08-07148	
ES4019LS	28V/130A	Belt Driven	08-07149	
ES4017	28V/90A	Belt Driven	08-15654	
ES4011LS	15V/80A	Belt Driven	08-15653	
ES40193LS	28V/130A	Belt Driven	08-15655	

#### ES4020 SERIES ALTERNATOR - Chrysler Style - FAA/PMA Approved

Model No.	Volts/Amps	Description	Part No.	Price
ES4020	14V/90A	Belt Driven	08-07150	
ES4029	28V/70A	Gear Driven	08-07151	

## HARTZELL ENGINE TECHNOLOGIES ES4020 **SERIES ALTERNATORS - FACTORY NEW**



Chrysler Style - FAA/PMA Approved Proven, Tested, & Trusted. As the OEM, Hartzell Engine Technologies offers factory new alternators engineered specifically to meet the challenges and increased demands of today's aircraft electrical systems. Each unit is aviation designed & developed, no automotive parts used. For decades these alternators have been powering Lycoming/ Continental engines with unmatched performance and reliability.

Volts/Amps	Description	Model No.	Part No.	Price
24V/85A	Belt Driven	ES-4024LP	08-15656	
24V/85A	Belt Driven	ES-4024LP-2	08-15657	
24V/85A	Belt Driven	ES-4024LP-3	08-15658	

# HARTZELL ENGINE TECHNOLOGIES ES-10024 **AIRCRAFT ALTERNATOR - FACTORY NEW**



Introducing the brand new ES-10024 28volt / 100amp aircraft alternator. The ES-10024 alternator is a direct replacement for TCM part number 656802. The ES-10024 is a field proven design that has been in use for over 5 years with thousands of alternators operating on the world's top selling aircraft. Prestolite Style - FAA/PMA Approved. Lightweight, cost effective, 2 yr. warranty.

Model No.	Volt/Amp	Drive	Replaces	Part No.	Price
ES-10024V-2	24V/100A			08-15651	
ES-10024B-6	24V/100A	Belt	Piper 651-756	08-15652	



# HARTZELL ES7024-14 **ALTERNATOR**

Hartzell Lightweight Alternator ES7024-14. 28 Volt, 70 Amps. Weight: 7 lbs.

Replaces TCM part number 657199.

Features: • All aircraft quality parts, no automotive parts • High altitude brushes • High speed

bearings • High temperature varnish on rotor and stator • No modifications necessary for Retro-fit into any existing Ford style applications • Two year warranty .......P/N 08-07444 .....

#### HARTZELL ES10024 ALTERNATOR



Introducing the brand new ES-10024 28 volt / 100amp aircraft alternator. The ES-10024 alternator is a direct replacement for TCM part number 656802. The ES-10024 is a field proven design that has been in use for over 5 years with thousands of alternators operating on the world's top selling aircraft. Prestolite Style - FAA/PMA Approved.

Lightweight, cost effective, 2 yr. warranty.

Features: • Up to 9.6 lbs. weight savings (per engine) • OEM Direct Replacement • More power at engine cruise • Built in noise cancellation
• Rugged design for extreme conditions • More economical than overhauled units • Two year warranty. Specifications: • 28 Volt / 100 Amp Prestolite Style • Replaces TCM part number 656802

P/N 08-07443 .....



# **HARTZELLENGINETECHNOLOGIES ES-6024D ALTERNATOR**

This unit is based on the highly reliable, field proven 100A ES-10024 and extensive certification testing has demonstrated a marked increase in efficiency and performance compared to the legacy

Continental Crittenden unit it replaces. Aside from the improvement in reliability, two additional advantages offered by this alternator is that owner/pilots will really appreciate are improvements both in cut-in and idle speed performance — with over double the power output at idle! Benefits of the new HET ES-6024D alternator include:

· Dramatically increased reliability and estimated MTBF compared to legacy Crittenden alternators • Overall efficiency increased by six to 10% over the entire operating range, resulting in lower operating temperatures

Output at engine idle speed more than doubled to ~23A.

The ES-6024D alternator has been FAA PMA certified as a direct replacement for the 60A Continental Crittenden alternator on Continental -520 and -550 series engines. It replaces Continental alternator models 646843, 646490 and 642055 found on various twin Cessnas, Beechcraft Bonanzas and Barons, early pre-glass panel Cirrus SR-22s, and the Cessna TTx-series aircraft including early Corvalis and Columbia ......P/N 07-18097 ..... models.....

#### HARTZELL ALV-9610 ALTERNATOR



Lighter, Tougher, and Proven! Introducing the brand new ALV-9610. The ALV-9610 alternator is a direct replacement for gear driven heavyweight alternators on the Continental 520 & 550 engines. Weighing under 13 lbs., the ALV-9610 is up to 9 lbs. lighter than current heavyweight options. The ALV-9610 is up to 9 lbs. lighter than current heavyweight options. The ALV-9610 is up to 9 lbs. a field proven design that has been in use for over 5 years with thousands of alternators operating on the world's top selling aircraft. FAA/PMA Approved.

See Service Bulletin Document on our website regarding coupling SB11-3 Features: • Up to 9.6 lbs. weight savings (per engine) • OEM Direct Replacement • More power at engine cruise • Built in noise cancellation • Rugged design for extreme conditions • More economical than overhauled units • Two year warranty. Specifications: • 28 Volt / 100 Amp Prestolite Style • Max Continuous Oper. Speed: 10000 rpm • Type Drive: Gear • Min. Speed for Regulation: 2400 rpm • Max. Operating Altitude: 35000 rpm • Weight: 12 lbs • Rotation: Bi-Directional • Replaces 

# HARTZELL ENGINE TECHNOLOGIES ES-6012-6 ALTERNATOR - FACTORY NEW ES-6012-6 - 12V/60A Belt Driven alternator created



for six-cylinder Continental engines. This unit is based on the highly reliable, field proven 100A ES-10024 and extensive certification testing has demonstrated a marked increase in efficiency and performance compared to the legacy Continental Crittenden unit it replaces. Aside from the improvement in reliability,

two additional advantages offered by this alternator is that owner/pilots will really appreciate are improvements both in cut-in and idle speed performance – with over double the power output at idle!

Benefits of the new HET ES-6012-6 alternator include:

Dramatically increased reliability and estimated MTBF compared to legacy Crittenden alternators • Overall efficiency increased by six to 10% over the entire operating range, resulting in lower operating 



# HARTZELL ENGINE TECH **ALY-6521 ALTERNATOR**

Hartzell/Prestolite Alternator. 12 Volt, 60 Amp. Overhauled by Aerotech of Louisville. Belt drive, pulley not included. Exchange Sale and Core Return Required.......P/N 07-27106.....



## ALTERNATOR DRIVE COUPLINGS

Overhauled alternator drive couplings for the gear driven TCM alternators. Additional core charge added to purchase at time of checkout  $\bf Part\ No.\ 646655R$ 

Applicable to engine models: IO-520, TS10-520, 

Part No. 635796R

Applicable to engine models:

75, C-85, C-90, C-115, C-125, C-145, E-165, E-185, E-225, O-200, O-300, GO-300, GIO-300, IO-240, IO-360, TS10-360, & LTS10-360 P/N 07-00642 ..... ----

#### HARTZELL FAA/PMA BRUSH SETS

Mfr. Part No.	Description	Part No.	Price
ALE-1013AS	Hartzell Brush Set	07-00963	
10-1020	Hartzell Carbon Brush Set	07-02713	
ALV-1012S	Brush Set Package	07-03225	
ALE-2013AS	Carbon Brush Set	07-18138	
90-2526	Hartzell Brush Set	07-18766	
AMA-19S	Prestolite Brush Set	07-20460	
ALV-1015S	Hartzell Brush Holder	07-24501	
10-9000S	Hartzell Brushes	07-19977	
15-5005S	Hartzell Brush Holder Assy	07-19976	
11-1013S	Hartzell Brush Holder, 14v	07-24519	
ES646348	Hartzell Brush, Str Positive	07-24694	
40D1542S	Hartzell Brush	07-24725	
90E53-1S	Hartzell Brush	07-24808	
7025480001S	Hartzell Brush Assembly	07-24812	
7024512001S	Hartzell Brush Piece Pt Pkg	07-24830	
ALU-3045BS	Hartzell Brush Assembly	08-13833	

# **ENGINE TECH. ASG ALTERNATORS**



### **NEW HARTZELL ASG SERIES ALTERNATOR**

ASG Series alternators were originally developed by Aero Electric and are OEM on several Cessna applications and PMA replacements for out-of-production 24V Ford alternators. The ASG aircraft alternator designs incorporated several improvements over the Ford alternators they replaced.

Model Number	Product & Application Information	Part Number	Price
ASG10001-13-PMA	60A/28V, Small Frame Ford mount eligible to replace Cessna/Ford alternators used on several legacy 28V single engine Cessnas, including 152, 172, 177, 180, 128, 206 and 207. Replaces Ford DOFF10300B (Cessna P/N C611503-0101 and -0102).	07-18003	
ASG10001-17-PMA	60A/28V, Small Frame Ford mount used on Cessna 172R, 172S, 182S and 182T, as well as being eligible to replace Cessna/Ford alternators on legacy 28V, 188 and 207 model Cessnas. Replaces Ford DOFF10300B (Cessna P/N 1570213-7) and Cessna P/N 9910591-5 and -11	07-18004	
ASG10001-18-PMA	60A/28V, Small Frame Ford mount used on Cessna 206H, T206H. Replaces Cessna P/N 9910591-6 and -12	07-18005	
ASG12000-1-PMA	95A/28V, Large Frame Ford mount is eligible on many 28V legacy piston engine Cessnas, including: 182, R182, T182, TR182, A188, T188, U206, TU206, 207, T207, 210, T210, P210, and T303. Replaces Ford E3FF10300AA (Cessna P/N C611505-0102) and Cessna P/N 9910592-1.	07-18006	
ASG12000-2-PMA	95A/28V, Large Frame Ford mount used on all Cessna 208s. Replaces Cessna P/N C611505-0201 and 9910592-2.	07-18007	
ASG12000-3-PMA	95A/28V, Large Frame Ford mount used on Cessna 182S, 182T, T182T, 206H, T206H with 95A option. Replaces Cessna P/N 9910592-3.	07-18008	



**OVERHAULED HARTZELL ASG SERIES ALTERNATOR**ASG Series alternators were originally developed by Aero Electric and are OEM on several Cessna applications and PMA replacements for out-of-production 24V Ford alternators. The ASG aircraft alternator designs incorporated several improvements over the Ford alternators they replaced.

Additional core charge added to purchase at time of purchase.

Model Number	Product & Application Information	Acceptable Cores	Part Number	Price
ASG10001-13R	60A/28V, Small Frame Ford mount eligible to replace Cessna/Ford alternators used on several legacy 28V single engine Cessnas, including 152, 172, 177, 180, 128, 206 and 207. Replaces Ford DOFF10300B (Cessna P/N C611503-0101 and -0102).	C611503-0101 & -0102	07-18003-1	
ASG10001-17R	60A/28V, Small Frame Ford mount used on Cessna 172R, 172S, 182S and 182T, as well as being eligible to replace Cessna/Ford alternators on legacy 28V, 188 and 207 model Cessnas. Replaces Ford DOFF10300B (Cessna P/N 1570213-7) and Cessna P/N 9910591-5 and -11	9910591-5 & -11	07-18004-1	
ASG10001-18R	60A/28V, Small Frame Ford mount used on Cessna 206H, T206H. Replaces Cessna P/N 9910591-6 and -12	99105916 & -12	07-18005-1	
ASG12000-1R-PMA	95A/28V, Large Frame Ford mount is eligible on many 28V legacy piston engine Cessnas, including: 182, R182, T182, TR182, A188, T188, U206, TU206, 207, T207, 210, T210, P210, and T303. Replaces Ford E3FF10300AA (Cessna P/N C611505-0102) and Cessna P/N 9910592-1.		07-18006-1	
ASG12000-2R-PMA	95A/28V, Large Frame Ford mount used on all Cessna 208s. Replaces Cessna P/N C611505-0201 and 9910592-2.	C611505-0201 & 9910592-2	07-18007-1	
ASG12000-3R-PMA	95A/28V, Large Frame Ford mount used on Cessna 182S, 182T, T182T, 206H, T206H with 95A option. Replaces Cessna P/N 9910592-3.	9910592-3	07-18008-1	

# HARTZELL REPLACEMENT PARTS

For a complete listing of Hartzell Starters, Alternators, Turbochargers, Brush Sets, Bolts, Rotors, O-Rings, Bearings, Housings, Screws, Washers, Nuts, Seals, and other replacement parts, please see our website at

WWW.AIRCRAFTSPRUCE.COM

# SKY-TEC STARTER ADAPTERS FOR CONTINENTALS



### SKY-TEC STARTER ADAPTERS FOR CONTINENTAL ENGINES

Sky-Tec factory new starter adapters for Continental engines. The starter motor bolts to the adapter and connects to an input shaft. This shaft has a worm gear attached that turns a larger brass gear. The brass gear has a large spring attached that compresses on the aircraft starter drive shaft turning it to start the aircraft engine.

When the engine starts, the starter is released and the spring opens allowing the shaft to turn freely within the spring.

Hartzell Part No.	CMI OEM	Part Number	Price
55260	654223	07-25410	
55261	655034	07-25418	
55262	655035	07-25419	
55263	642083-1A2	07-25382	
55264	642083A12	07-25380	
55267	642087A68	07-25407	
55268	642087A69	07-25405	
55269	642087A70	07-25402	
55270	642087A72	07-25397	
55271	643259A18	07-25383	
55272	643259A39	07-25404	
55273	643259A43	07-25408	
55274	646220-1A1	07-25409	
55275	646220-1A3	07-25411	
55276	646220A37	07-25379	
55277	646220A43	07-25393	
55278	646220A45	07-25394	
55279	646220A50	07-25395	
55280	646220A51	07-25403	
55281	646220A53	07-25378	
55282	646220A54	07-25400	
55283	646220A56	07-25401	
55284	646757A15	07-25406	
55285	646757A16	07-25391	
55287	653074A39	07-25412	
55288	653074A45	07-25413	
55289	653074A47	07-25398	
55290	653074A51	07-25399	
55291	653074A52	07-25414	
55292	653074A53	07-25421	
55293	653074A55	07-25415	
55294	653074A56	07-25416	
55297	658440A1	07-25387	
55298	658440A2	07-25384	
55299	658440A3	07-25388	
55300	658440A4	07-25396	
55301	658440A5	07-25392	
55302	658440A7	07-25389	
55303	658440A8	07-25390	
55304	653074A40	07-25417	
55305	653074A54	07-25420	



#### **TURBOCHARGERS**

All Turbo-system components (turbocharger, wastegate, controller, and pressure relief valves) overhauled by Quality Aircraft Accessories (QAA) are overhauled in accordance with Hartzell Engine Technologies Recommended Service Facility (RSF) requirements.

Specifically, these RSF requirements are:

- All turbo-system components are overhauled in accordance with the most recent component maintenance manual revision
- Only original Hartzell Engine Technology manufactured components are utilized during the overhaul process
- Product liability insurance applies to all turbo-system components overhauled
- Overhauled turbochargers include the 100% replacement of the turbine wheel and center housing.

Note: Core Charges vary and apply to all Turbochargers.

OEM Part No.	Replaces	Description	Part Number	Price
406610-9019	CMI 632729-10	406610-9019 Quality OH Hartzell Turbocharger	07-24350	
406610-9025	CMI 632729-11	406610-9025 Quality OH Hartzell Turbocharger	07-24353	
406610-9026	Lycoming LW-15749	406610-9026 Quality OH Hartzell Turbocharger	07-24354	
406610-9028	CMI 632729-12	406610-9028 Quality OH Hartzell Turbocharger	07-24355	
406610-9029	CMI 632729-13	406610-9029 Quality OH Hartzell Turbocharger	07-24356	
406610-9030	Cessna C295001-0501	406610-9030 Quality OH Hartzell Turbocharger	07-24357	
406610-9031	Lycoming LW-19330	406610-9031 Quality OH Hartzell Turbocharger	07-24358	
407540-9003	Lycoming LW-13310	407540-9003 Quality OH Hartzell Turbocharger	07-24360	
407810-9001	CMI 635630	407810-9001 Quality OH Hartzell Turbocharger	07-24361	
408610-9001	CMI 637374-1	408610-9001 Quality OH Hartzell Turbocharger	07-24362	
409170-9001	Lycoming LW-12463	409170-9001 Quality OH Hartzell Turbocharger	07-24363	
409680-9011	CMI 640327-11	409680-9011 Quality OH Hartzell Turbocharger	07-24364	
465292-9002	CMI 642518-4	465292-9002 Quality OH Hartzell Turbocharger	07-24365	
465292-9004	CMI 642518-4	465292-9004 Quality OH Hartzell Turbocharger	07-24366	
465680-9004	Cessna C295001-0202	465680-9004 Quality OH Hartzell Turbocharger	07-24368	
465930-9002	CMI 641672-2	465930-9002 Quality OH Hartzell Turbocharger	07-24370	
465930-9003	CMI 641672-3	465930-9003 Quality OH Hartzell Turbocharger	07-24371	
466011-9002	Lycoming 46C19836	466011-9002 Quality OH Hartzell Turbocharger	07-24372	
466304-9003	CMI 646677	466304-9003 Quality OH Hartzell Turbocharger	07-24373	
466642-9001	CMI 649151-1	466642-9001 Quality OH Hartzell Turbocharger	07-24374	
466642-9002	CMI 649151-2	466642-9002 Quality OH Hartzell Turbocharger	07-24375	
466642-9005	Lycoming 46C19839	466642-9005 Quality OH Hartzell Turbocharger	07-24376	
466642-9006	Lycoming 46C22924	466642-9006 Quality OH Hartzell Turbocharger	07-24377	
466881-9001	Lycoming 46P22250	466881-9001 Quality OH Hartzell Turbocharger	07-24378	



#### **CONTROLLERS**

All Turbo-system components (turbocharger, wastegate, controller, and pressure relief valves) overhauled by Quality Aircraft Accessories (QAA) are overhauled in accordance with Hartzell Engine Technologies Recommended Service Facility (RSF) requirements.

Specifically, these RSF requirements are:

- All turbo-system components are overhauled in accordance with the most recent component maintenance manual revision
- Only original Hartzell Engine Technology manufactured components are utilized during the overhaul process
- Product liability insurance applies to all turbo-system components overhauled
- Overhauled turbochargers include the 100% replacement of the turbine wheel and center housing.

Note: Core Charges vary and apply to all Turbochargers Components.

OEM Part No.	Replaces	Description	Part Number	Price
470688-9005	Cessna C165004-0501(R)	470688-9005 Quality OH Hartzell Controller	07-24404	
470688-9007	Cessna C165004-0502(R)	470688-9007 Quality Factory Rebuilt Controller	07-24405	
470836-9003	CMI 633388-9, 641434-2	470836-9003 Quality OH Hartzell Variable Absolute Pressure Controller	07-24407	
470836-9019	CMI 633388-11, 641434-6	470836-9019 Quality OH Hartzell Variable Absolute Pressure Controller	07-24409	
470836-9020	CMI 642247, 642271	470836-9020 Quality OH Hartzell Variable Absolute Pressure Controller	07-24410	

# HARTZELL QUALITY OVERHAULED CONTROLLERS/WASTEGATES

### **CONTROLLERS CONT'D**

OEM Part No.	Replaces	Description	Part No.	Price
470836-9021	CMI 633388-9, 641434-2	470836-9021 Quality OH Hartzell Variable Absolute Pressure Controller	07-24411	
470884-9004	Lycoming LW-10682	470884-9004 Quality OH Hartzell Density Controller	07-24412	
470884-9010	Lycoming LW-16840	470884-9010 Quality OH Hartzell Density Controller	07-24413	
470886-9002	Lycoming LW-10098	470886-9002 Quality OH Hartzell Differential Controller	07-24414	
470948-0001	Cessna C165004-0102	470948-9001 Quality OH Hartzell Differential Dual Absolute Pressure Ratio Controller	07-27216	
481008-9008	Lycoming LW-14297	481008-9008 Quality OH Hartzell Variable Absolute Pressure Controller	07-24418	
481008-9022	CMI 640655-22, 643138-1	481008-9022 Quality OH Hartzell Variable Absolute Pressure Controller	07-24419	
481008-9025	Lycoming LW-18518	481008-9025 Quality OH Hartzell Variable Absolute Pressure Controller	07-24420	
481008-9028	CMI 640655-28, 649362-1	481008-9028 Quality OH Hartzell Variable Absolute Pressure Controller	07-24421	
481058-9001	Cessna C165004-0701	481058-9001 Quality OH Hartzell Sloped Controller	07-24423	
481058-9007	Lycoming 48B22488	481058-9007 Quality OH Hartzell Sloped Controller	07-24425	
481058-9013	CMI 646318-13	481058-9013 Quality OH Hartzell Sloped Controller	07-24428	



### **WASTEGATES**

All Turbo-system components (turbocharger, wastegate, controller, and pressure relief valves) overhauled by Quality Aircraft Accessories (QAA) are overhauled in accordance with Hartzell Engine Technologies Recommended Service Facility (RSF) requirements.

Specifically, these RSF requirements are:

- · All turbo-system components are overhauled in accordance with the most recent component maintenance manual revision
- Only original Hartzell Engine Technology manufactured components are utilized during the overhaul process
- Product liability insurance applies to all turbo-system components overhauled

All overhauled turbo-system components have a two-year, 1000-hour warranty against material and workmanship defects."

OEM P/N	Replaces	Description	Part Number	Price
470780-9015	Cessna 5050154-15	470780-9015 Quality Oh Hartzell Wastegate	07-24381	
470818-0003OE	Lyc LW-12778	470818-9003 Quality Oh Hartzell Wastegate	07-27215	
470842-9003	Cessna C165006-0303	470842-9003 Quality Oh Hartzell Wastegate	07-24386	
470842-9004	Cessna C165006-0304	470842-9004 Quality Oh Hartzell Wastegate	07-24387	
470842-9009	CMI 649006-9	470842-9009 Quality Oh Hartzell Wastegate	07-24389	
470892-9002	CMI 635381-2	470892-9002 Quality Oh Hartzell Wastegate	07-24390	
470908-9012	Cessna C165006-0106	470908-9012 Quality Oh Hartzell Wastegate	07-24392	
470908-9013	Cessna C165006-0107	470908-9013 Quality Oh Hartzell Wastegate	07-27211	
470908-9015	Cessna C165006-0109	470908-9015 Quality Oh Hartzell Wastegate	07-24394	
470908-9017	CMI 636188-17	470908-9017 Quality Oh Hartzell Wastegate	07-24395	
470908-9020	Cessna C165006-0114	470908-9020 Quality Oh Hartzell Wastegate	07-24396	
470954-9001	Lyc LW-12960	470954-9001 Quality Oh Hartzell Wastegate	07-24397	
470954-9003	Cessna C165006-0601	470954-9003 Quality Oh Hartzell Wastegate	07-24398	
481064-9001	Cessna C165006-00113	481064-9001 Quality Oh Hartzell Wastegate	07-24402	
481064-9002	CMI 646317	481064-9002 Quality Oh Hartzell Wastegate	07-24403	



All Turbo-system components (turbocharger, wastegate, controller, and pressure relief valves) overhauled by Quality Aircraft Accessories (QAA) are overhauled in accordance with Hartzell Engine Technologies Recommended Service Facility (RSF) requirements.

- Specifically, these RSF requirements are:

   All turbo-system components are overhauled in accordance with the most recent component maintenance manual revision

   Only original Hartzell Engine Technology manufactured components are utilized during the overhaul process

   Product liability insurance applies to all turbo-system components overhauled

  All overhauled turbo-system components have a two-year, 100-hour warranty against material and workmanship defects."

Note: Core Charges vary and apply to all Turbochargers Components.

### PRESSURE RELIEF VALVES

OEM P/N	Replaces	Description	Part Number	Price
470930-9001	C482002-0101	470930-9001 Quality OH Hartzell Pressure Relief Valve	07-24429	
470930-9002	C482002-0102	470930-9002 Quality OH Hartzell Pressure Relief Valve	07-24430	
470930-9004	C482002-0103	470930-9004 Quality OH Hartzell Pressure Relief Valve	07-24431	
470930-9005	C482002-0104	470930-9005 Quality OH Hartzell Pressure Relief Valve	07-24432	
470930-9006	C482002-0105	470930-9006 Quality OH Hartzell Pressure Relief Valve	07-24433	
470930-90016	7110067	470930-90016 Quality OH Hartzell Pressure Relief Valve	07-24434	
470930-9017	637583-17	470930-9017 Quality OH Hartzell Pressure Relief Valve	07-24435	
470930-9018	637583-18	470930-9018 Quality OH Hartzell Pressure Relief Valve	07-24436	
470930-9019	637583-19	470930-9019 Quality OH Hartzell Pressure Relief Valve	07-24437	
470944-9007	Lyc LW-14445-2	470944-9007 Quality OH Hartzell Pressure Relief Valve	07-24438	
470944-9009	CMI 63319-9	470944-9009 Quality OH Hartzell Pressure Relief Valve	07-24439	
470944-9010	Lyc LW-14445-4	470944-9010 Quality OH Hartzell Pressure Relief Valve	07-24440	
470944-9011	Lyc LW-14445-3	470944-9011 Quality OH Hartzell Pressure Relief Valve	07-24441	
470944-9015	Cessna C402002-0110	470944-9015 Quality OH Hartzell Pressure Relief Valve	07-24442	
470944-9012	Cessna C482002-0108	470944-9012 Quality OH Hartzell Pressure Relief Valve	07-24443	
470944-9020	Cessna C482002-0113	470944-9020 Quality OH Hartzell Pressure Relief Valve	07-24444	
470944-9022	Lyc LW-14445-6	470944-9022 Quality OH Hartzell Pressure Relief Valve	07-24445	
470944-9024	Lyc CMI 63931-24	470944-9024 Quality OH Hartzell Pressure Relief Valve	07-24446	
470944-9026	CMI 636319-26	470944-9026 Quality OH Hartzell Pressure Relief Valve	07-24447	
470944-9029	Lyc LW-14445-10	470944-9029 Quality OH Hartzell Pressure Relief Valve	07-24448	
470944-9030	Lyc LW-14445-11	470944-9030 Quality OH Hartzell Pressure Relief Valve	07-24449	
470944-9034	CMI 636319-34	470944-9034 Quality OH Hartzell Pressure Relief Valve	07-24450	
481028-9001	CMI 641404-1	481028-9001 Quality OH Hartzell Pressure Relief Valve	07-24451	
481066-9001	CMI 643511-1	481066-9001 Quality OH Hartzell Pressure Relief Valve	07-24452	
481066-9003	CMI 643511-3	481066-9003 Quality OH Hartzell Pressure Relief Valve	07-24453	

# HARTZELL OVERHAULED ALTERNATOR KITS

Model No.	Description	Part No.	Price
90-3032	For ALE-6406,G; ALE-6420,G; ALE-6520; ALE-8105A; ALE-8406,G; ALE-8408; ALE-8420,G; ALE-8421; ALE-8520; ALE-8521	07-01684	
90-3035	For ALT-8403; ALT-8404; ALT-8404LS; ALT-8407; ALT-8420; ALT-8421; ALT-8421LS; ALT-8520; ALT-8521; ALT-8521LS	07-01687	
90-3036	For ALT-9405; ALT-9422; ALT-9522	07-01688	
90-3037	For ALU-6421LS; ALU-6521LS; ALU-8403; ALU-8403LS; ALU-8421LS; ALU-8521; ALU-8521LS	07-01689	
90-3040	For ALV-9401; ALV-9401L; ALV-9405L; ALV-9407, S	07-01692	
90-3042	For ALV-9510	07-01694	
90-3044	For ALX-8403,G,R,RG; ALX-8403LS,RS,LSG,RSG; ALX-8421,G,R,RG; ALX-8421LS,RS,LSG,RSG; ALX-8521; ALX-8521LS	07-01696	
90-3045	For ALX-9402	07-01697	
90-3046	For ALX-9404L,LG,R,RG; ALX-9422L,LG,R,RG; ALX-9424; ALX-9522; ALX-9524	07-01493	
90-3048	For ALY-6403,G; ALY-6406,G; ALY-6420,G; ALY-6427,G; ALY-6520,G; ALY-6520LS; ALY-6527,G; ALY-8403,G; ALY-8403LS,G; ALY-8410; ALY-8420,G; ALY-8420LS, G; ALY-8423; ALY-8520; ALY-8520LS	07-01495	
90-3052	For ES4020	07-01498	
90-3053	For ES4000; ES4000LS; ES4005; ES4005-2; ES4007; ES4009; ES4009LS; ES4013; ES4013LS; ES4017; ES4018; ES4018LS; ES4023; ES4024; ES4030; ES4031; ES4040	07-01499	
90-3054	For ES4021; ES4024L; ES4024LP	07-01501	
90-3055	ES4003; ES4003LS; ES4011; ES4011LS; ES4011-1; ES4011-1LS; ES4014; ES4016; ES4019; ES4019LS; ES4019-2LS; ES4022	07-01502	
90-3056	For ES4001; ES4002; ES4004; ES4006; ES4008; ES4028; ES4029	07-01503	
90-3057	For 4111810R	07-01504	
90-3058	For DOFF10300B; DOFF10300J; EOFF10300BA; E3FF10300BA	07-01505	
90-3059	For DOFF1030D; DOFF10300E; DOFF10300F	07-01506	

# **TER OVERHAUL KITS**

### HARTZELL STARTER OVERHAUL KITS



Major overhaul kits for its line of lightweight Lycoming and Continental starters.

After consulting with industry operators, owners and flight schools, it was recognized that downtime is critical in this economy and there is a need to

The overhaul kits include all parts necessary for a normal major overhaul, as well as any special tools, lubricants, and thread compounds.

The overhaul kits include all parts necessary for a normal major overhaul, as well as any special tools, lubricants, and thread compounds.

The overhaul manual has been rewritten to highlight tear down and assembly with detailed drawings and instructions. The manual covers all aspects of the rebuild in easily understood steps with tech support just a call or email away. (See Documents Tab)

Average time to do a complete overhaul can be accomplished in less than an hour reducing downtime and increase revenue, as well as maintain the

Average time to do a complete overhaul can be acc quality standards of the maintenace organization.

• PM1201-OHK - Fits all PM1201/1202 starters

• PM1203-OHK - Fits all PM1203 starters

• PM1204-OHK - Fits all PM2401/2402 starters

• PM2401-OHK - Fits all PM2403 starters

• PM2403-OHK - Fits all PM2403 starters

- PM2404-OHK Fits all PM2404 starters

Description	Part No.	Price
PM1204-OHK - Fits all PM1204 starters	08-06007-1	
PM2403-OHK - Fits all PM2403 starters	07-01273-1	
LT-EBB-142A Starter Drive Kit, Lycoming 149T, left hand Rotation fits all 04 starters	07-01899	
OHK-0001 Kit , Tools, OHK, Lycoming fits all OH kits	07-01901	
OHK-0002 Kit, Planetary Gears, 3 ea. Fits all Lycoming starters	07-01902	
OHK-003 Kit, Thru Bolt and Anchor Ring #10 fits all Lycoming starters	07-01903	
OHK-0004 Kit, Brush Assembly, 12V pos. fits all 12 volt starters	07-01904	
OHK-0005 Kit, Brush Assembly, 12V neg fits all 12 volt starters	07-01905	
OHK-0006 Kit, Brush Assembly, 24V pos. fits all 24 volt starters	07-01906	
OHK-0007 Kit, Brush Assembly, 24V neg fits all 24 volt starters	07-01907	
OHK-0008 Kit, Brush Bracket & Spring fits all starters	07-01908	
OHK-0009 Kit, Hardware, Starter, Lycoming	07-01909	
ACCESSORIES		•
Description	Part No.	Price
2305002 Armature, 12V, Lycoming	07-01911	
9301004-F 12/24V Starter Bearing OH Kit	07-01183	
5301001 End Bell	07-01917	
5401001 Shield Grease	07-01918	
7801008 Washer, Wave	07-01920	
9005001 Assembly, Flux Ring, Lycoming, Complete	07-01921	

#### PMA APPROVED ALTERNATOR REPLACEMENTS

Plane-Power Certified Alternators are PMA certified to replace any existing alternator in the aircraft and engine applications listed below. No STC paperwork required. All Plane-Power PMA alternators produce up to 70 amps. Your airframe/application may use only a portion of the available output as limited by the aircraft electrical system components and design. Every Plane-Power alternator is tested to exceed all quality and performance specifications. Plane-Power PowerFlex Voltage Regulators are also available separately.



Volts/Amps	Model	Brackets included	Part No.	Price
12/60	AL12-C60	Yes	07-00997	
24/70	AL24-F60	No	07-00999	
12/70	AL12-F60	No	07-00998	
12/70	AL12-P70	No	07-01001	
24/70	AL24-P70	No	07-01002	
12/70	AL12-F60C	No	07-01256	
24/70	AL24-F60C	No	07-01257	
12/70	AL12-70	Yes	07-01258	
24/28Volt, 70 Amp	AL24-FS60	No	07-01491	
24/70	AL24-70	Yes	07-01259	
28V/150A	C28-150	N/A	07-01838	

American Champion	OEM P/N	Model #
7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	ALY-8420	AL12-P70
Beechcraft	OEM Part #	Model #
19A, B19, M19A, 23, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R	33-380009-1	AL12-F60
19A, B19, M19A, 23, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R	ALE-8105A / ALE-8406	AL12-P70
76 Duchess, 77 Skipper	ALY-8420	AL12-P70
76 Duchess	ALU-8421	AL24-P70
B19, C19, C24R	ALU-8421R	AL24-P70
Cessna	OEM P/N	Model #
177, 177A, 177B	C611501-0101	AL12-F60
172I, K, L, M, N, P, 177, 177A, 177B, 177RG	C611501-0102	AL12-F60
P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, TP206A, TP206B, TP206C, TP206B, TP206E, TU206E, 207, T207, 210B, 210C, 210D, 210E, 210F, T210F, T210G, T210H, T210J	C611501-0101	AL12- F60C
180H, 180J, 180K, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 185E, A185E, A185F, 188, P206C, U206C, U206D, U206E, U206F, U206G, TP206C, TU206B, TU206C, TU206E, TU206F, TU206G, 207, T207	C611501-0102	AL12- F60C
180H, 182G, 182H, 185D, 210E	0750217-1	AL12- F60C
188, A188, A188A, A188B, 210K, T210K, 210G, 210H	1570213-6	AL12- F60C
152, A152, 172M, 172N, 172P, 172Q, 172RG, 177B, 177RG, R182, TR182	C611503-0102	AL24-F60
180J, 180K, 182P, 182Q, 182R, T182, U206E, U206F, U206G, TU206E, TU206F, TU206G, 207, T207, 210K, 210L, 210M, 210N, 210R, P210N, P210R, T210K, T210L, T210M, T210N, T210R, A185F, 207A, T207A	C611503-0102	AL24- F60C
188, 188A, 188B, A188, A188A, A188B, T188C, 207, T207	1570213-7	AL24- F60C
172R, 172S, 182S*, 182T*, T182T*	9910591-5	AL24-FS60
*S/N182001(1997) through 18281197(2004)	9910591-11	

Commander	OEM P/N	Model #
112, 112B, 112TC, 112TCA, 114, 114A, 114B, 114TC	LW14316	AL12-P70
Twin Commander Aircraft Corporation	OEM P/N	Model #
500-S	78314	AL24-P70
Diamond Aircraft Industries GmbH	OEM P/N	Model #
DA-40	ALU-8421LS	AL24-70*
Grumman (Gulfstream, Tiger)	OEM P/N	Model #
AA-1, AA-1A, AA-1B, AA-1C	ALE-6420 / ALY-6420 LW-14310	AL12-P70
AA-5, AA-5A, AA-5B, AG-5B, GA-7	DOFF- 10300J	AL12-F60
AG-5B	ALU8421LS	AL24-P70
Mooney	OEM P/N	Model #
M20C, M20E, M20F, M20G, M20J	ALY-8420 / ALX-8403	AL12-P70
M20J	ALU6421LS	AL24-P70
M20M (Single alternator installations only)	ES-4009LS	AL24-P70
Piper (Without Airconditioning)	OEM P/N	Model #
PA-44-180, PA-44-180T	751 346	AL12-P70
PA-28-151, PA-32R-301 (SP), PA-32-301T, PA-32R, 301(HP), PA-32R-301T (SP), PA- 32-301, PA-34-200, PA-38-112	551-984	AL12-P70
PA-24-260	ALX8403	AL12-70
PA-23-235, PA-23-250	ALX8403	AL12-P70
PA-23-235, PA-23-250	ALU-8403	AL24-P70
PA-44-180, PA-44-180T	ALX8421LS	AL12-P70
PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-180, PA-28-235, PA-28R-180, PA-28R-200, PA-32-260, PA-32-300, PA-32R-300	69670-00	
(60 amp)	AL12-C60	
PA-28-140, PA-28-151, PA-28-161, PA-28-180, PA-28-235, PA-28R-200, PA-32-300, PA-32R-300	69670-03	
(60 amp)	AL12-C60	
PA-28-151, PA-28-161, PA-28-181, PA-28-236, PA-28R-201, PA-28RT-201, PA-32-300, PA-32R-300, PA-32RT-300, PA-32RT-300T	69670-04	
(60 amp)	AL12-C60	
Vulcanair, S.P.A	OEM P/N	Model #
P68, P68B, P68C, P68C-TC, P68 "Observer", P68TC "Observer", P68 "Observer 2"	ALU-8421LS	AL24-P70

For Lycoming engines 235, 320, 360, 540, 720 and Superior engines O-360, IO-360, Plane-Power alternators AL12-P70, AL12-70\*, and AL24-70\* replace Lycoming and Superior certified 70amp alternators: LW14300, LW14302, LW14308, LW14310, LW14319, LW14319, LW14322, LW14322. \*Comes with all new Plane-Power mounting brackets and hardware.



## PLANE POWER LIGHTWEIGHT C14-100 ALTERNATOR

The Plane Power alternator can produce all 100 amps if proper size wiring, ammeter and circuit breaker are installed and approved. PMA replacement, requires only a log book entry.

Aircraft electrical system will be limited by existing wiring and output circuit breaker.

Warranty: 2-Year Limited

Specifications: • 14 volt, 100 amp alternator. Replaces Hartzell/Powerup, Crittenden, TCM 50 - 100amp alternators on TCM 520 and 550 Series engines. • Weight: 13 Pounds .......P/N 07-01948 .....



### PMA CONTINENTAL ALTERNATOR REPLACEMENT

These alternator kits are FAA PMA Certified to replace the vast majority of popular general aviation alternators. They include everything you need to replace your current alternator using the existing belt and brackets. Where required, the kit will also include brackets, spacers and hardware.

An alternative to high-priced, marginally-performing, rebuilt used replacement aircraft alternators. These Plane-Power alternators are the product of years of research, development and intensive testing. Each component has been engineered, developed, tested and re-tested exclusively for use in general aviation aircraft ......P/N 07-01838 .....----------

# PLANE POWER LIGHTWEIGHT ALTERNATOR KITS FOR EXPERIMENTAL AIRCRAFT



#### Note: Core charge now applies on Plane Power Alternator kits

The AL12-El60 kit comes with an ultra compact lightweight AIRCRAFT alternator with an exclusive internal crowbar overvoltage protection circuit. The alternator is fully pilot controllable through unique internal wiring. The dual internal fans are designed for aircraft engine rotation for maximum cooling. The AL12-El60 kit includes the tension arm, mounting brackets, and all required AN hardware.

Also available 70 amp version only 2 additional pounds.

**Boss Mount** 

Attaches to a bracket mounted to the side of the engine

Case Mount

Mounts to 3 bolts that hold case halves together.

Description	Part No.	Price
AL12-EI60/B (Boss Mount)	07-01313	
AL12-El60/C (Case Mount)	07-01313-1	

# **AL12-EI70/B HARTZELL** PLANE POWER ALTERNATOR



The AL12-EI70 kit includes a high output AIRCRAFT alternator with an exclusive internal crowbar over-voltage protection circuit. The alternator is fully pilot controllable through unique internal wring. The dual internal fans are designed for aircraft engine rotation for maximum cooling. The AL12-El70 kit includes the tension arm, mounting brackets, all required AN hardware, and V-Belt for Superior and most Lycoming engines with a 9-3/4 engine pulley.

Description	Part No.	Price
AL12-EI70/B (Boss Mount)	07-01414	
AL12-EI70/C (Case Mount)	07-01414-1	

# AL12-EE70/B HARTZELL **PLANE POWER ALTERNATOR**



AL12-EE70/B Hartezell Plane Power Alternator.

Note: Regulators are not included with the alternators. They must be purchased separately. Please see the "Accessories" tab for the associated regulators.

These are complete kits which include everything you need to add an alternator to your experimental aircraft engine including not only the alternator, but also all new brackets, spacers, mounting hardware and belt.

Volts/ Amps	Model	Replaces	Part No.	Price
12/14 volt 70 amp	AL12- EE70/b	(BOSS MOUNT) exter- nally regulated alternator. Kit includes pulley, brackets, mounting hardware & belt	07-01005	
12/28 volt 70 amp	AL24- EE70/b	for EXPERIMENTAL aircraft applications (Regulator not Included)	07-01006	
12/14 volt 70 amp	AL12- EE70/c	(CASE MOUNT) externally regulated alt aernator Kit includes pulley, brackets, mounting hardware & belt	07-01005-1	
24/28 volt 70 amp	AL24- EE70/c	for EXPERIMENTAL aircraft applications (Regulator not Included)	07-01006-1	
14.2 volt 30 amp	FS1- 14B	Primary alternator for aircraft not requiring more than 30 amps at cruise RPM and little or no output below ap- prox. 1200 RPM. It mounts on an unused AND 20000 pad (vacuum pad) on both Lycoming and Continental engines (Internal Regulator)	07-01883	

# PLANE POWER EXPERIMENTAL 50 AMP (12/14V) GEAR DRIVEN ALTERNATOR EX14-50



12/14 volt, 50 amp, internally regulated alternator with built-in Over-Voltage protection for use in EXPERIMENTAL Aircraft with small block Continental Engines. Includes Pre-Wired Enable Plug and Gaskets.

Features: • For small block Continental engines • Internal voltage regualtor • Exclusive built-In crowbar over-voltage protection • Fully pilot controllable through internal wiring • Dual internal fans designed for aircraft engine rotation for maximum cooling • Fits\*\* C75, C85, C90, C125, C145, E165, E185, E225, IO-240, O-200, and O-300 applications (\*\*with accessory case drive gear) • Pre-wired enable/field plug included. Note: • Overall Diameter: 4.4" • Overall Length: 6"......P/N 07-01268 .....

# **PLANE POWER CONVERSION KITS**

# **BELT DRIVEN GENERATOR CONVERSIONS**

BELT DRIVEN GENERATOR CONVER	
Aircraft Parts & Development	Plane- Power
Intermountain (Callair) A, A-2, A-4, A-5, A-5T, A-9, A-9B	SAL12-70
Alexandria Aircraft, L.L.C.	
Bellanca 14-19-2, 14-19-3, 14-19-3A	SAL12-70C
Cessna Aircraft Co.	
180, 180A, 180B, 180C, 180D, 180E, 180F, 180G,	SAL12-70C
182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H,	SAL12-70C
185, 185A, 185B, 185C, 185D	SAL12-70C
210, 210A, 210-5 (205), 210-5A (205A)	SAL12-70C
206, P206	SAL12-70C
Cessna 310, 310A, 310B, 310C*, 310D*, 310E*, 310F*, 310G, 310H, 310I, 310J, 310K *10-9006 kit may be required for installation. View installation instructions online for further information	TAL24-70C
Fred Garcia	TAL 04 700
Camair 480	TAL24-70C
FS 2003 Corporation (Piper)	
Piper PA-12, PA-12S	SAL12-70
Hawker Beechcraft Co.  Beech H35, J35, K35, M35, N35, P35, 35-33, 35-A33, 35-B33, 35-C33	SAL12-70C
23	SAL12-70
Beech Baron 95-55, 95-A55, 95-B55, 95-B55A	TAL24-70C
Beech Travelair 95, B95, B95A, D95A, E95	TAL24-70
Helio Aircraft, LLC	
Helio H-250	SAL12-70
Helio 500	TAL12-70
KWAD Co.	
Super-V	TAL12-70
Latinoamerican De Aviacion	
Piper PA-25, PA-25-235, PA-35-260	SAL12-70
Lockheed Aircraft Corp.	
402-2	SAL12-70C
Mooney Airplane Company	
M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G	SAL12-70
Piper Aircraft, Inc.	
Piper PA-16, PA-16S	SAL12-70
Piper PA-18, PA-18S, PA-18 "105" (SPECIAL), PA-19S	SAL12-70
Piper PA-18A, PA-18 "125" (Army L-21A), PA18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA18A "135", PA-18AS "135", PA-18AS "135", PA-18 "150", PA-18AS "150", PA-18AS "150", PA-19 (Army L-18C), PA-20, PA-20S, PA-20-"135", PA-22, PA-22-135, PA-22S-150, PA-22S-150, PA-22-160, PA-22S-160 (When modified with FAA Approved rear mounted oil cooler)	SAL12-70
Piper PA-20-"115", PA-205-"115"	SAL12-70
Piper PA-22-108	SAL12-70
Piper PA-24, PA-24-250, PA-24-260, PA-24-400	SAL12-70
Piper PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-28S-160, PA-28S-180	SAL12-70
Piper PA-23, PA-23-160, PA-23-235, PA-23-250, PA-E23-250	TAL12-70
Piper PA -30	TAL12-70
Prop-Jets Inc.	
Meyers 200, 200A, 200B, 200C, 200D	SAL12-70C
Raytheon Aircraft Co.	
35, A35, B35, C35, D35, E35, F35, G35, 35R, modified by STC conversion to O-470 or IO-470 engine.	SAL12-70C
Revo, Inc.	CAL 10 70
Colonial C1, Colonial C2, Lake LA-4, LA-4A, LA-4P	SAL12-70
Sierra Hotel Aero, Inc.  Navion D, E, F,G, H, and Navion (L-17A), Navion A (L-17-B & L-17C), B modified by STC conversion to O-470 or IO-470	SAL12-70C
Twin Commander Aircraft Corporation	
500A	TAL24-70C
500, 500-B, 500-U	TAL24-70
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# **GEAR DRIVEN GENERATOR CONVERSIONS**

Ad Aerospace	Plane-
•	Power
T-211	ER14-50
Aerodifusion	ED44.50
D-1190S	ER14-50
Aeromca (Burl A. Rogers)	ED44.50
15AC, S15AC	ER14-50
Aircraft Parts & Development	ED44.50
A-3 All American	ER14-50
10A	ER14-50
American Champion	EN14-30
402, 7EC, 7ECA, 7FC, 7JC, S7EC	ER14-50
Hawker Beechcraft	L1114-30
35, 35R, 45 (YT-34), A35, B35, C35*, D35*, E35*,F35*,	
G35*, (*When equipped with E225-8 Engine)	ER14-50
Cessna	
120, 140, 140A, 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150M, 170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H	ER14-50
Commonwealth Aircraft	
185	ER14-50
Edward Scott Kerns	
Trojan A-2	ER14-50
FA 2001	
J5A (Army L-4F) (when equipped with C75-12 Engine)	ER14-50
Swift Museum Foundation	
GC-1A, GC-1B	ER14-50
Goodyear	ED4: -:
GA-22A	ER14-50
Helio Aircraft	ED44.50
15A (when equipped with C145-2 Engine)	ER14-50
<b>Avion Jodel</b> 150, D-1190, DR-1050 ER14-50	ER14-50
The Don Luscombe Aviation History Foundation	EN14-30
8E, 8F, T-8F	ER14-50
Maule Aircraft Company	EN14-30
BEE DEE M-4, M-4, M-4C, M-14S, M4T, M-4-210, C, S, T, M-5-210C	ER14-50
Thomas H. McClish	
B85C	ER14-50
Micco Aircraft Company	
MAC-125C. MC-145	ER14-50
S.O.C.A.T.A	
(Ralley) Series 100S, Rallye Series MS 880B, Rallye Series	ER14-50
Navion	
(Army L-4),(Army L-17B and L-17C)	ER14-50
Piper  J3C-35* (Army L-4), L-4A*, L-4B ( Navy NE-1*), L-4H*, L-4J*( Navy NE-2*)), J3C-65S*, -4A**, J4E* (Army L-4E), PA-18, PA-19, PA-18S***, PA-19S*** (When equipped with (*C75-12) (**C85-12) (***C90-12F) Engine) PA-28-201T, PA-28R-201T, PA-28RT-201T, PA-34-200T, PA-34-220T	ER14-50
Quartz Mountain Aerospace	
11A	ER14-50
Superior	
(Culver) V, (Culver) V-2	ER14-50
Taylorcraft Aviation	
BC-12D-4-85, BCS12D-4-85	ER14-50
Univair Aircraft	
(Alon) A-2, (Alon) A-2A, (Forney) F-1, (Forney) F-1A, (Mooney) M10, ERCO 415-C*, ERCO 415-CD*, ERCO 415-D, ERCO E, ERCO G, (*When equipped with C75-12,	ER14-50
C75-12F, C85-12 or C85-12F Engine)	

# ANE-POWER LIGHTWEIGHT STC GENERATOR TO ALTERNATOR CONVERSIONS



BELT DRIVEN - Include hardware and brackets to replace your existing generator and regulator. Plane-Power STC Belt Driven Generator Conversions allow for increasing the size of the output wire and circuit breaker to allow for a maximum of 70 amps All Plane-Power alternators feature dual internal fans specially designed for aircraft engine rotation to maximize cooling. Models available for both 12 and 24 volt as well as for both Lycoming and Continental installations.

Model	Output	Voltage	Part No.	Price	Ι
SAL12-70	70 (max)	12	07-01301		
SAL12-70C	70 (max)	12	07-01299		П
TAL12-70	70 (max)	12	07-01302		П

Model	Output	Voltage	Part No.	Price
TAL24-70	70 (max)	24	07-01304	
TAL24-70C	70 (max)	24	07-01303	

GEAR DRIVEN - Plane-Power Gear Driven Generator to Alternator Conversion Kits replace your existing generator with an alternator which will provide higher output at lower rpm and allow for increasing the size of the output wire and circuit breaker to allow for a maximum of 50 amps of output. The ER14-50 uses your existing gear assembly. The entire gear assembly (ER14-GR) may be purchased separately. Some older generators have larger diameter (5/8") shafts and require the gear support kit (G-Pack). Please call for details. The ER14-50 weighs 6.9 lbs and comes with a pre-





### PLANE-POWER ALTERNATOR VOLTAGE REGULATORS

Plane-Power Power-Flex Voltage Regulators are FAA-PMA Approved. Available for most certified aircraft. Solid-state voltage regulators with over-voltage protection, field short (over current) protection, and reverse battery protection. Plane-Power Power-Flex voltage regulators also support precision load sharing for twin applications and an alternator inoperative lamp. Power-Flex voltage regulators are designed to be setup in the field for 14 or 24 volt operation by a simple placement of the two internal jumpers. For smaller mounting placement on the R1224, installation aid 12-1021 may be used.



Model	Description	Voltage	Part No.	Price
R1224	Replaces many Ford, Electrodelta, Prestolite, Interav, Wico, and FVR voltage regulators.	14V	07-01305	
R1224S-28	Replaces many Ford, Electrodelta, Prestolite, Interav, Wico, and FVR voltage regulators.	28V	07-20521	
R1224B	Replaces voltage regulators on twin Cessnas, Beechcraft, and Vulcanair.	14V	07-01306	
12-1021	Adapter Plate - Visit our website for a list of common aircraft in need of this adapter.		07-03532	



#### AMBER LIGHT INDICATORS FOR THE HARTZELL ER14-50

28V .......P/N 08-14617 .....---



#### **GEAR ADAPTER KIT G-PACK**

Required for use with the existing drive gear when the generator shaft is over 0.5" in diameter. Uses existing gear from replaced generator......P/N 07-01348......

# PLANE POWER ALTERNATORS ONLY -WITHOUT MOUNTING KIT



Plane-Power alternators are FAA PMA certified to replace the vast majority of popular general aviation alternators. Plane-Power also manufactures an alternator kit for experimental aircraft applications that comes complete with required brackets, spacers, internal cooling, voltage regulation (choice of internal or external), and over-voltage protection. Plane-Power alternators are warrantied for 2-years against component failures.

Volts/ Amps	Model	Part No.	Price
12/70	AL12-C60, SAL12-70, TAL12-70	07-17756	
12/70	AL12-F60	07-17757	
12/70	AL12-F60C, SAL12-70C	07-17758	
12/70	AL12-EI60-L, AL12-EI60/B, AL12-EI60/C	07-18016	
24/70	AL24-F60	07-17760	
24/70	AL24-FS60	07-17761	
24/70	AL24-F60C, TAL24-70C	07-17762	
24/70	AL12-70, AL12-P70	07-18054	
12/50	ER14-50	07-19404	

#### PLANE POWER REBUILT FLX ALTERNATOR



Description	Part Number	
ALT-FLX-1	07-21649	
ALT-FLX-2	07-19188	
ALT-FLX-3	07-19189	
ALT-FLX-4	07-19190	
ALT-FLX-5	07-19191	
ALT-FLX-6	07-21650	
ALT-FLX-7	07-19193	
ALT-FLX-8	07-19194	
ALT-FLX-9	07-19195	

# PLANE POWER C28-150 ALTERNATORS



- Dual cooling fans ensure effective cooling and unmatched durability even in low engine RPM/high output installations.
- Compact size simplifies installation and ongoing inspections.
- FAA-PMA approved, no STC required for installation.

Plane-Power C28-150 line of FAA-PMA certified, 28V/150 Amp high output, geardriven alternators.

These factory-rebuilt units will carry the

same two-year warranty offered on every new Plane-Power alternator. The Plane-Power C28-150 gear-driven alternators deliver more continuous power at lower engine RPMs than any other aircraft alternator. Aircraft owners with high electrical demand during ground operations; such as those with sophisticated avionics suites or electrically-driven air conditioning systems, will appreciate the abundant electrical power they will get at idle with these Plane-Power alternators. C28-150S-FR without Debris Shield......P/N 07-18128 .....---

#### ANE POWER C14-100 ALTERNATORS



- Dual cooling fans ensure effective cooling and unmatched durability even in low engine RPM/high output installations.
- Compact size simplifies installation and ongoing inspections.
  FAA-PMA approved, no STC required for
- installation.

Plane-Power C14-100 line of FAA-PMA certified, 24V/150 Amp high output, geardriven alternators. These factory-rebuilt units will carry the same two-year warranty offered

on every new Plane-Power alternator. The Plane-Power C14-100 geardriven alternators deliver more continuous power at lower engine RPMs than any other aircraft alternator. Aircraft owners with high electrical demand during ground operations; such as those with sophisticated avionics suites or electrically-driven air conditioning systems, will appreciate the abundant electrical power they will get at idle with these Plane-Power alternators. C14-100S-FR without Debris Shield......P/N 07-18126 .....

# ROTECH OVERHAULED ALTERNATORS



Aerotech of Louisville specializes in the overhaul, repair and distribution of general, corporate and military aviation charging and starting system accessories.

# **AEROTECH CESSNA OVERHAULED ALTERNATORS**

Mfr. P/N	Volts	Amps	Drive	Part No.	Price
9910591-1	28V	60A	Belt	08-14718	
9910591-7	28V	60A	Belt	08-14719	
9910591-11	28V	60A	Belt	08-14720	
9910591-12	28V	60A	Belt	08-14721	
9910592-1	28V	95A	Belt	08-14723	
9910592-2	28V	95A	Belt	08-14725	

# **AEROTECH TCM OVERHAULED ALTERNATORS**

Mfr. P/N	Volts	Amps	Drive	Part No.	Price
642055	24V	60A	Gear	08-14726	
646491	24V	100A	Gear	08-14729	
646842	24V	100A	Gear	08-14730	
649283	24V	70A	Belt	08-14731	
649304	24V	100A	Gear	08-14732	
653344	24V	70A	Gear	08-14733	

## **AEROTECH CHRYSLER OVERHAULED ALTERNATORS**

OVERHAGEED AETERMATORIO						
Mfr. P/N	Volts	Amps	Drive	Part No.	Price	
2098615	12V	37A	Belt	08-14734		
2098640	12V	37A	Belt	08-14735		
2642197	12V	60A	Belt	08-14738		
2642210	12V	60A	Belt	08-14739		
2642995	12V	37A	Belt	08-14740		
2642996	12V	37A	Belt	08-14741		
3656623	12V	40A	Belt	08-14742		
2642997	12V	60A	Belt	08-07034		

# **AEROTECH DELCO REMY OVERHAULED ALTERNATORS**

Mfr. P/N	Volts	Amps	Drive	Part No.	Price
1100652	12V	52A	Gear	08-14743	
1100660	12V	70A	Belt	08-14744	
1100667	12V	70A	Gear	08-14745	
1100715	12V	70A	Gear	08-14746	
1100716	12V	52A	Gear	08-14747	
1100717	12V	70A	Belt	08-14748	
1100718	24V	50A	Belt	08-14749	
1100723	24V	50A	Gear	08-14751	
1100747	24V	50A	Belt	08-14752	
1100753	24V	65A	Gear	08-14753	
1100792	24V	65A	Belt	08-14754	

# **AEROTECH ELECTROSYSTEMS OVERHAULED ALTERNATORS**

Mfr. P/N	Volts	Amps	Drive	Part No.	Price
ALU-8539LS	28V	75A	Belt	08-14756	
ALY-8523R	12V	60A	Belt	08-14757	
ALZ-8523R	12V	50A	Belt	08-14761	

# **AEROTECH FORD OVERHAULED ALTERNATORS**

Mfr. P/N	Volts	Amps	Drive	Part No.	Price	
C6115030103	28V	60A	Belt	08-14763		
D7FF10300AA	28V	95A	Belt	08-14764		
DOFF10300A	28V	60A	Belt	08-14765		
DOFF10300C	28V	60A	Gear	07-19036		
DOFF10300F	14V	60A	Gear	08-14768		
DOFF10300B	28V	60A	Belt	08-16402		
DOFF10300J	14V	60A	Belt	08-14769		

# **AEROTECH PRESTOLITE OVERHAULED ALTERNATORS**

Mfr. P/N	Volts	Amps	Drive	Part No.	Price
ALV-6403	24V	100A	Belt	08-14770	
ALV-8402	24V	100A	Belt	08-14771	
ALV-9401	24V	100A	Gear	08-14773	
ALV-9405	24V	100A	Gear	08-14775	
ALV-9406	24V	100A	Gear	08-14776	
ALV-9510	24V	100A	Gear	08-14779	

#### **NOTE:**

Exchange prices are shown. Core charges apply to all units.



The Tempest PowerFlite series of aviation engine starters represents a new state-of-the-art energy efficient design providing reduced current draw and long life. The PowerFlite starter mounts directly to existing TCM engines and is available in both 12 and 24 volt configurations. Tempest starter part numbers PL13459 (12v) and PL13484 (24v) are eligible on TCM engine models O-300-D, GO-300-D, IO-346, IO-360, L/TSIO-360, O-470, IO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520, IO-550, TSIO-550 and TSIOL-550.

Powerflite Starter 12V New .......P/N 08-07284 .....----



Delco Generators are overhauled using only FAA approved components. In stock or have the capability to overhaul almost every 12 or 24 volt Declo-Remy Aircraft Generator. Each unit is tested to manufacturer's original operating specs before it leaves our facility.

Shipments will include domestic 8130 form.

Attention: Should a core unit not be available in stock with factory; at time of order customer must ship in core to be overhauled. Ship to: 225 Airport Circle, Corona Ca. 92880

### **AEROTECH DELCO OVERHAULED** CENEDATORS

Model No.	Volts	Amps	Drive	Part No.	Price
1101881	12V	13A	Gear	08-14780	
1101884	24V	15A	Belt	08-14781	
1101885	12V	36A	Gear	08-14782	
1101886	12V	26A	Gear	08-14783	
1101887	12V	35A	Gear	08-14784	
1101889	24V	15A	Belt	08-14785	
1101890	12V	20A	Gear	08-14786	
1101893	24V	15A	Belt	08-14787	
1101895	12V	50A	Belt	08-14788	
1101896	12V	20A	Belt	08-14789	
1101903	24V	15A	Belt	08-14790	
1101907	24V	25A	Belt	08-14791	
1101908	12V	50A	Gear	08-14792	
1101909	12V	50A	Belt	08-14793	
1101916	24V	15A	Belt	08-14794	
1101919	12V	20A	Gear	08-14795	
1101920	24V	25A	Belt	08-14796	
1101921	24V	15A	Belt	08-14797	
1101923	15V	50A	Belt	08-14798	
1105052	24V	40A	Belt	08-14799	

# **AEROTECH PRESTOLITE OVERHAULED STARTERS**

	VEITIMOLL	DOTAITE	
Model No.	Voltage	Part No.	Price
MCL-6502	12	08-14838	
MCL-6503	12	08-14839	
MHB-4001	24	08-14841	
MHB-4002	24	08-14842	
MHB-4003	24	08-14843	
MHB-4015	24	08-14844	
MHB-4016	24	08-16404	
MHB-4019A	24	08-14845	
MHB-4019R	24	08-14846	
MHJ-4002	24	08-14848	
MZ-4203	12	08-14849	
MZ-4205	12	08-14851	
MZ-4206/4222	12	08-14852	
MZ-4207	12	08-14853	
MZ-4214	12	08-16431	
MZ-4216	12	08-14854	
MZ-4217	12	08-14855	
MZ-4218	12	08-14856	
MZ-4223	12	08-14858	

## **DELCO OVERHAULED STARTERS**

DELC	O OVERHA	ULED STAF	RIERS
Delco ID	Voltage	Part No.	Price
1108234	24	07-00131	
1108249	12	07-00132	
1109514	12	07-00142	
1109519	12	07-00145	
1108234	24	08-14802	
1109504	12	08-14803	
1109505	24	08-14804	
1109506	12	08-14805	
1109509	24	08-14806	
1109511	12	08-14807	
1109512	12	08-14808	
1109517	24	08-14809	
1109518	24	08-14810	
1109651	12	08-14811	
1109657	12	08-14812	
1109658	12	08-14813	
1109660	12	08-14814	
1109665	24	08-14816	
1109668	12	08-14817	
1109669	24	08-14818	
1109673	12	08-14819	
1109675	24	08-14820	
1109677	12	08-14821	
1109678	12	08-14822	
1109679	12	08-14823	
1109680	24	08-14824	
1109684	12	08-14826	
1109687	24	08-14827	
1109688	12	08-14828	
1109689	12	08-14829	
1109690	24	08-14830	
1109694	12	08-14831	
1109694	12	07-24481	
1109695	12	08-14832	
1109696	24	08-14833	
1109768	12	08-14834	
1109909	24	08-14835	
1109926	12	08-14836	
1113471	12	08-14837	

#### NOTE:

Exchange prices are shown. Core charges apply to all units.

# **FALCON ES4000 SERIES OVERHAULED ALTERNATORS**



Factory Overhauled ES4000 Series Alternators.

Model Number	Volts/Amps	Description	Part No.	Price
ES4000	15V/60A	Belt Driven	07-19049	
ES4000LS	15V/60A	Belt Driven	07-19050	
ES4005	28V/60A	Belt Driven	07-19051	
ES4005-2	28V/60A	Belt Driven	07-19052	
ES4007	28V/60A	Belt Driven	07-19053	
ES4009	28V/70A	Belt Driven	07-19054	
ES4009LS	28V/70A	Belt Driven	07-19055	
ES4013	28V/80A	Belt Driven	07-19056	
ES4013LS	28V/80A	Belt Driven	07-19057	
ES4017	15V/80A	Belt Driven	07-19058	
ES4018	28V/70A	Belt Driven	07-19059	
ES4018LS	28V/70A	Belt Driven	07-19060	
ES4021	28V/70A	Belt Driven	07-19061	
ES4023	28V/80A	Belt Driven	07-19062	
ES4024L	28V/85A	Belt Driven	07-19064	
ES4024LP	28V/85A	Belt Driven	07-19065	
ES4030	28V/70A	Belt Driven	07-19066	
ES4031	28V/85A	Belt Driven	07-19067	
ES4040	15V/85A	Belt Driven	07-19068	
ES4003	15V/95A	Belt Driven	07-19069	
ES4003LS	15V/95A	Belt Driven	07-19070	
ES4011	28V/95A	Belt Driven	07-19071	
ES4011LS	28V/95A	Belt Driven	07-19072	
ES4011-1	28V/95A	Belt Driven	07-19073	
ES4011-1LS	28V/95A	Belt Driven	07-19074	
ES4014	28V/90A	Belt Driven	07-19075	
ES4016	12V/90A	Belt Driven	07-19076	
ES4019	28V/130A	Belt Driven	07-19077	
ES4019LS	28V/130A	Belt Driven	07-19078	
ES4019-2LS	28V/130A	Belt Driven	07-19079	
ES4022	12V/130A	Belt Driven	07-19080	
ES4001	15V/60A	Gear Driven	07-19081	
ES4002	15V/80A	Gear Driven	07-19082	
ES4004	28V/38A	Gear Driven	07-19083	
ES4006	28V/60A	Gear Driven	07-19084	
ES4008	28V/70A	Gear Driven	07-19085	
ES4028	15V/85A	Gear Driven	07-19086	
ES4029	28V/70A	Gear Driven	07-19087	

# **FALCON OVERHAULED STARTERS**



Model Number	Description	Part No.	Price
ES646238-1	12V	07-19095	
ES646238-3	12V	07-19097	
MCL-6502	12V	07-19101	
MCL-6503	12V	07-19102	
MZ-4203	12V	07-19127	
MZ-4204	12V	07-19128	
MZ-4205	12V	07-19129	
MZ-4206	12V	07-19130	
MZ-4207	12V	07-19131	
MZ-4208	12V	07-19132	
MZ-4214	12V	07-19133	
MZ-4216	12V	07-19134	
MZ-4217	12V	07-19135	
MZ-4217	12V	07-19136	
MZ-4219	12V	07-19137	
MZ-4220	12V	07-19138	
MZ-4221	12V	07-19139	
MZ-4221	12V		
MZ-4223	<del>                                     </del>	07-19140	
	12V	07-19141	
MZ-4224	12V	07-19142 07-19143	
MZ-4225 MZ-4226	12V 12V		
	+	07-19144	
ES646275	24V	07-19098	
MHB-4001	24V	07-19103	
MHB-4002	24V	07-19104	
MHB-4003	24V	07-19105	
MHB-4006	24V	07-19108	
MHB-4008	24V	07-19109	
MHB-4009	24V	07-19110	
MHB-4010	24V	07-19111	
MHB-4011	24V	07-19112	
MHB-4012	24V	07-19113	
MHB-4013	24V	07-19114	
MHB-4014	24V	07-19115	
MHB-4016	24V	07-19116	
MHB-4018	24V	07-19118	
MHB-4019	24V	07-19119	
MHB-4019A	24V	07-19120	
MHJ-4002	24V	07-19122	
MHJ-4005	24V	07-19125	
MMU-4001	24V	07-19126	

### **NOTE:**

Core charges apply to all overhauled units.

#### FORD OVERHAULED ALTERNATORS



Factory Overhauled Ford Alternators.

Model Number	Description	Part No.	Price
DOFF10300M	15V/60A	07-19042	
DOFF10300G	28V/38A	07-19039	
C6115050102	28V/95A	07-19028	
D7FF10300AA	28V/95A	07-19029	
DOFF10300A	28V/95A	07-19033	
DOFF10300C	28V/95A	07-19035	
DOFF10300D	28V/95A	07-19036	

#### **FALCON OVERHAULED ALTERNATORS**



Falcon Overhauled Alternators.

Model Number	Volts/Amps	Description	Part No.	Price
ALY-6520	12V/60A		07-19171	
ALY-8523	12V/60A		07-19177	
ALX-6523	12V/70A		07-19165	
ALX-8523	12V/70A		07-19167	
ALU-9522	24V/70A		07-19153	-

### **FALCON TCM OVERHAULED ALTERNATORS**



Factory Overhauled TCM Alternators.

Model Number	Description	Part No.	Price
642055	24V/60A	07-19043	
646843	24V/60A	07-19047	
646491	24V/100A	07-19046	

# **FALCON OVERHAUL CHRYSLER ALTERNATORS**



Overhaul Chrysler alternator Pulley Driven.

Model Number	Description	Part No.	Price
3656624R	12V/60A	07-06401	
3656623R	12V/41A BD	08-07035	

#### **FALCON TCM OVERHAULED GENERATORS**



Falcon TCM Overhauled Starters.

Model Number	Description	scription Part No.	
646238	12V	07-19088	

# NOTE:

Core charges apply to all overhauled units.



#### **FALCON CHRYSLER ALTERNATORS**

Chrysler series 12 volt alternators are available in 37, 40 and 60 amp versions. Common part numbers are 2642996, 2642997, 3656623, 3656624, and 4111810.

Model No.	Description	Part Number	Price
4111810	12V/60A B	08-10689	



#### FREEDOM AVIATION STANDBY ALTERNATOR

- Freedom Aviation's standby alternator system is for Cessna 182T/T182T/206H/T206H aircraft. More specifically, the system is for Cessna 182 and 206 aircraft equipped with the Garmin 1000 (NAV III) avionics package. The standby alternator system consists of four major components:

  1. Standby Alternator: A BC425-1 alternator from B&C Specialty Products is mounted to the accessory drive pad on the Cessna. This pad was formerly intended for a second vacuum pump. This alternator provides a continuous source of power up to 20 amps without loading the engine anymore than a vacuum pump.
- 2. Alternator Controller: The BC203-2D alternator controller from B&C Specialty Products performs the automatic switch over function of the system and serves as the system's voltage regulator. The controller also is where the Standby Alternator Master switch is connected to the "STBY ALT ON" annunciator.
- 3. Standby Alternator Master Switch: The STBY ALT master switch is added to the pilot's checklist and should be turned on when the aircraft is started.
- 4. Standby Alternator Light Indicator ("STBY ALT ON"): A STBY ALT ON light turns on when the primary alternator fails, indicating the standby alternator is carrying the electrical load.

The standby alternator system activates automatically. When the alternator controller senses the primary aircraft alternator has failed, the load is shifted automatically to the standby alternator. The STBY ALT ON light turns on and indicates the standby alternator system has been activated. In the event the load on the aircraft electrical system exceeds

the capabilities of the standby alternator, the "STBY ALT ON" light flashes, warning the pilot to shed electrical load.

P/N 07-27256 ......

# & C ALTERNATORS

#### **B & C LIGHTWEIGHT ALTERNATORS**

#### L-40 ALTERNATOR

The L-40 is a high-performance belt-driven 40 amp alternator for Lycoming engines. Designed to meet the rigorous demands of weight-sensitive homebuilt designs, without sacrificing reliability, the L-40 alternator features a precision-balanced rotor, sealed heavy-duty ball-bearings and 2 internal cooling fans. Weighs 6.1 lbs. and measures 3.9" (diameter) x 5.6" (length). Also

includes mounting hardware, belt tension arm, and belt. Applicable to Lycoming O-235 through IO-720 engines.

L-40 Case Mount (Narrow Deck engine), w/ B&C Starter P/N 07-06810..

L-40 requires an external voltage regulator - see BELOW

L-40 alternators require external regulators – use: P/N 07-06742 (LR3C) for 14V, P/N 07-06786 (LS1A) for 28V



### **B & C BC462-H ALTERNATOR**

The high-performance spline-driven alternator from the company that pioneered the spline-driven alternator over 20 years ago! The BC462-H mounts on a standard AND20000-spec accessory pad, and offers robust performance with a rated output of 35 to 45 amps @ cruise RPM. Every BC462-H features

a CNC machined billet aluminum mounting flange for superior durability, heavy-duty sealed ball bearings, two internal cooling fans, a precision dynamically-balanced rotor (a B&C quality essential), and a special "shear section" drive coupling. Suitable for 14 volt or 28 volt applications, the BC462-H is designed for aircraft-style external control, and may be used as either a Primary or a Standby Alternator, depending on the electrical system configuration (see note below). Includes mounting gasket and pre-wired field connector assembly. Weight: 6.75 lbs.

P/N 07-17985 .....-

Note: L-40, BC460-H, BC410-H, and BC462-H alternators require external regulators use: P/N 07-06742 (LR3C) for 14V Primary, P/N 07-06786 (LS-1A) for 28V Primary, P/N 07-03461 (SB1B-14) for 14V Standby, and P/N 07-03462 (SB1B-28) for 28V Standby.



BC410-H ALTERNATOR
The BC410-H is the original high-performance spline-driven alternator that mounts on a standard vacuum pump accessory pad. It may be used either as a primary or a stand-by alternator for a nominal output of 20 to 30 amps, depending on engine RPM. Designed for many hours durable service, the BC410-H features a dynamically balanced rotor,

heavy-duty sealed ball-bearings, 2 internal cooling fans, and a special "shear section" designed into the drive coupling. The BC410-H is externally-regulated, and may be used in either 14 and 28 volt homebuilt aircraft using our LR3C-14 (14V), LS-1A (28V), or SB1B (14V or 28V) Controllers. Measures 4.6" (diameter) and 6.0" (length), and weighs 5.75lbs. The BC410-H will clear a stock tachometer cable on Lycoming engines, as well as B&C Oil Filter Adapters ... P/N 07-06771 ......

# LR3C AND LS-1A LINEAR CONTROLLERS (REGULATORS)



P/N 07-06742

The LR3C and LS-1A are more than your typical regulators; more accurately, they are alternator controllers. Each device combines a essential functions in one physical container—linear ("quiet") regulation, solid-state over-voltage protection, and low-voltage monitoring and warning. This makes possible sobilities the property of the provided protection. sible sophisticated, space-saving, and cost-

effective alternator control for homebuilt aircraft, while also improving safety of flight. The LR3C-14 may be used with 14 volt externally regulated alternators, while the LR3C-28 may be used with OEM-type, 28 volt externally regulated alternators. The LS-1A permits the use of B&C alternators in a 28 volt electrical system. The LR3C and the LS-1A weigh approximately 9 ounces each, and are intended for circuit type "B" (one field lead grounded directly) alternator systems.

P/N 07-06786 .....-------

# **BC460-H ALTERNATORS**



Introducing the "Next Generation" 60 amp Alternator that saves both weight AND money – without sac-rificing performance or reliability. The BC460-H fea-tures heavy-duty sealed ball bearings, two internal cooling fans, and a precision dynamically-balanced rotor (rare in the industry, but standard on every

B&C!). Additionally, it has three attachment points for stable mounting, and we uniquely modify the BC460-H for use with a more sophisticated, aircraft style, external voltage regulator with over-voltage protection. The BC460-H may be used in either a 14 volt or 28 volt electrical system, and includes your choice of Boss (Wide Deck) or Case (Narrow Deck) mounting brackets, attachment hardware, belt tension arm, high-performance belt, and pre-wired field connector assembly. Weight: 7.1 lbs.



# **BC433-H GEAR DRIVEN** ALTERNATOR WITH PMR3A

The BC433-H is a 30 amp 14V gear-drive alternator for Continental engines (C-75 through O-300). Featuring a unique brushless design, with a billet aluminum mounting flange and heavy-duty ball

aluminum mounting flange and heavy-duty ball bearings, the BC433-H is an ideal choice for a variety of homebuilt designs. Weighs 4.4 lbs. and measures 4.1" (diameter) x 3.75" (length). Also includes a matching PMR3A Regulator and 505-1 Over-Voltage Protection kit. Sold without the Continental drive gear assembly (customer supplied), and requires the latest revision of the Hub (P/N 07-01327) and Retainer (P/N 07-01328). B&C has a limited supply of used drive gear assemblies, available at additional cost supply of used drive gear assemblies, available at additional cost.

Generator Coupling (Cont. P/N: 653983)....P/N 07-01327.....----Generator Retainer (Cont. P/N: 653982) ...P/N 07-01328 .....----



#### **SD-8 ALTERNATOR & REGULATOR**

The SD-8 is a lightweight, spline-driven 14V alternator system for aircraft with an available vacuum pump drive pad. Features an ultra-reliable, brushless design, with a billet aluminum mounting flange and sealed heavy-duty ball bearings. With

a nominal output of 8 amps, the SD-8 alternator is adequate for many day-VFR applications, and may be used as a backup power source on a variety of homebuilt aircraft. The SD-8 is a long-time favorite of top aerobatic pilots around the world. Weighs 2.9 lbs. and measures 3.5' (diameter) x 4.6" (length)......P/N 07-06770 ......----

### 200G ALTERNATOR & REGULATOR



The 200G is a 12 amp 14V gear-drive alternator for Continental engines (C-75 through O-300). Features a ultra-reliable, brushless design, with a billet aluminum mounting flange and heavy-duty ball-bearings. Used in the prototype Vari-Eze, as well as many Cassuts, Q-200s, and other home-built aircraft, the 200G has been in production

for over 30 years, with many systems still in service. With a nominal output of 12 amps, the 200G will support a modest night-VFR-night system. Measures 4.4" (diameter) and 3.8" (length), and weighs 3.4 lbs. Also includes a matching PMR1C Regulator and 504-1 Over-Voltage Protection kit Sold without the Continental drive services and the continental drive services and the continental drive services. Protection kit. Sold without the Continental drive gear assembly (customer supplied; or purchased at additional cost). Gear assembly must be installed by B&C - send to Aircraft Spruce for installation.

New Drive Gear......P/N 07-06500 ......----

# **B&C PERMANENT MAGNET ALTERNATOR** OVER-VOLTAGE (PM/OV) KITS The PM/OV Kit is designed to provide over-voltage



protection to homebuilt aircraft electrical systems using a permanent magnet alternator. Features a solid-state "crowbar" over-voltage protection module, relay, filter capacitor, panel-mount warning

lamp, and wire terminals. Included with all new B&C Permanent Magnet Alternator systems.

504-1 20A PM/OV Kit (14 Volt)......P/N 08-00658 ......----

#### RTERS - AL ERNATORS



# **B & C LIGHTWEIGHT** STARTERS FOR LYCOMINGS

The original lightweight Starter for Lycoming engines. Weighing only 10.2 lbs., the B&C Starter was designed to meet rigorous demands of weight sensitive aircraft designs, without sacrificing reliability or performance. Introduced over

25 years ago, this same design has provided dependable service for thousands of satisfied customers. Every B&C Starter features heavyduty sealed ball-bearings, all metal gears, electro-mechanical pinion engagement (no Bendix drive), and an efficient series-wound motor. Cantilevered pinion gear mounting requires no forward shaft support. bearing, thus eliminating cowl interference or on-going maintenance. If battery failure precedes engine starting, a positive spring retraction system insures pinion gear disengagement. Both STC/ PMA and Homebuilt versions are available in 14 volt and 28 volt configurations.

FAA-approved for any of the following series of Lycoming engines:

- O-235 O-290-D O-320 IO-320 AIO-320 AEIO-320 LIO-320 O-360 HO-360 LO-360 IO-360 HIO-360 AIO-360 AEIO-360
- TIO-360 LTIO-360 O-540 IO-540 HIO-540 AEIO-540 TIO-540 • LTIO-540 • IO-720

FOR CERTIFICATED AIRCRAFT APPLICATIONS					
Part No.	Model No.	Pinion Gear Pitch	Teeth on Ring Gear		Price
07-06700	BC315-100-1	10/12	122	12	
07-06705	BC315-100-2	12/14	149	12	
07-06710	BC315-100-3	10/12	122	24	
07-06715	BC315-100-4	12/14	149	24	

FOR EXPERIMENTAL AIRCRAFT APPLICATIONS					
Part No.	Model No.	Pinion Gear Pitch	Teeth on Ring Gear	Battery Voltage	Price
07-06720	BCS206-122-12	10/12	122	12	
07-06725	BCS206-149-12	12/14	149	12	
07-06730	BCS206-122-24	10/12	122	24	
07-06735	BCS206-149-24	12/14	149	24	

# **B & C LIGHTWEIGHT STARTERS** FOR CONTINENTALS



With an innovative, patented design, the BC320 Starter for Continental engines solves all the problems that other starter designs have hadfrom worn-out clutches and broken pinions, to nagging oil leaks and catastrophic failure modes. Weighing only 10.3 lbs., it is also 4.3 to 5.2 lbs. lighter depending on your current starter configuration. Built for reliable service, the BC320 features a billet aluminum end bell, heavy-duty

sealed ball-bearings, all metal gears, electro-mechanical pinion engagement, and an efficient series-wound motor. Cantilevered pinion gear mounting requires no forward shaft support bearing. The BC320 is a complete starter, ready to install, and includes an installation kit to convert from an existing pull-type starter, or an existing key-type starter. Both STC/ PMA and Homebuilt versions are available. FAA-approved for the following Continental engines: • C-75 • C-85 • C-90 • O-200 • C145-2 • IO-240 • O-300 • GO-300-A/B/C

FOR CERTIFICATED AIRCRAFT APPLICATIONS				
Part No.	Model No.	Installation Kit	Battery Voltage	Price
07-06716-1	BC320-1	Existing Key-Type (501-1)	12	
07-06716-3	BC320-1	Existing Pull-Type (501-3)	12	

#### **ACCESSORIES**

ing will need to be removed from your engine before installing the BC320. A special tool kit is available to aid in removing this needle bearing. If you do not care to keep this kit, you may return it and be refunded \$80.00



# JASCO GEAR DRIVEN ALTERNATOR KITS

The Jasco alternator is STC'd for many aircraft including the early Cessna 150, 172, and 175 series as well as Beech Model 35's with early E series Continental engines. Applicable to Continental C-90, 0-200 and

0-300 engines. Well-proven over many years of use in a variety of aircraft. Kit variants include alternator, voltage regulator, and over-voltage control.

Volts	Amps	Drive	Alt. P/N	Kit P/N	Price
		New Alternators	Only		
24	50	4 Stud, 6 Spline, Square Pad	7555T	07-00735	
24	70	4 Stud, 6 Spline, Square Pad	7655T	07-00703	
	Alternator Kits				
12	50	4 Stud, 6 Spline, Square Pad	6555-1	6555-1	
12	50	Round Pad, Like Delco	6560-1	07-06900	
12	50	6 Stud, 16 Spline, Round Pad	6565-1	6565-1	
24	50	4 Stud, 6 Spline, Square Pad	7555-1	7555-1	
24	50	6 Stud, 16 Spline, Round Pad	7565-1	07-75651	
24	70	4 Stud, 6 Spline, Square Pad	7655-1	07-20060	
		Accessories	S		
24		150 Ohm Resistor	17-10	07-01710	

# PLANE POWER POWERFLEX VOLTAGE REGULATORS



#### **REGULATOR - R1224**

14V / 28V, replaces Ford, Electrodelta, Prestolite, Interav, Wico, FVR, and more voltage regulators. (Refer to Model Eligibility for your more information and additional models). The Plane Power R1224 Voltage Regulator is a solid-state voltage regulator

with over-voltage protection, field short (over current) protection, and reverse battery protection. The Plane Power R1224 Voltage Regulator also supports precision load sharing for twin applications, and an alternator inoperative lamp

applications, and an alternator in	operative famp.
14V	P/N 07-01305
28V	P/N 07-20521

#### **REGULATOR - R1224J**

Plane-Power recently earned a PMA for its R1224J voltage regulator for use in Jasco alternator conversion kits. "There are thousands of Jasco alternators currently in the field on all types of engines from legacy radials to newergeneration Continental and Lycoming engines," said Keith Bagley, president of Hartzell Engine Technologies. "Unfortunately, as those original components age, their reliability goes down and cost as those original components age, their heliability goes down into cost of ownership goes up. By offering a voltage regulator with improved technologies, we are providing Jasco STC holders with a cost-effective path to upgrade to a solid-state voltage regulator that features integrated

.....P/N 07-26835 ...... 28V



# POWERUP AERO ALTERNATOR **KIT FOR CESSNA 206**

Powerup B/U Alternator Kit for Cessna 206. MFR Model# KATS-15-002 .. P/N 07-25508 ..... ---



# **POWERUP AEROSPACE DUAL ALTERNATOR KIT**

The kit includes a duplicate 95 amp alternator to the original equipment, along with all the pulleys, belts,

brackets and hardware for installation on the Lycoming IO-540 series engines. All system controls are panel mounted and the backup system is activated with a flip of a switch. STC Approved for Cessna 182, 182T, 182S. Alternator Kit Cessna 182/182T ......P/N 07-01490 .....-----Dual Alternator Kit Cessna 182S......P/N 07-01804 .....----



# LS-1A VOLTAGE REGULATOR

The LS-1A Controller offers linear voltage regulation, integral over-voltage protection, and low-voltage monitoring and warning. It has been specially designed, however, to permit the use L-40 & L-60 alternators in a

28v electrical system. The LS-1A weighs approximately 9 ounces, may be mounted on the cockpit side of the firewall, and is available with an optional battery temperature sensor for colder climates. Select a location for mounting that will protect unit from heat, vibration, and water. The pilot side of the firewall, or inside the cabin near the instrument panel, is recommended. For Experimental Aircraft ONLY ......P/N 07-06786 .....-----

**ALTERNATOR & GENERATOR BELTS** 

CONTINENTAL......539547-31.19.....-

# LENGINE TECHNOLOGIES S

# HARTZELL ENGINE TECHNOLOGIES **E-DRIVE STARTERS**



· Lightweight neodymium permanent magnet motor • In line design • Self-resetting torque limiter for kickback protection

· Internal solenoid engagement · Drive pinion supported by bearings on both ends E-Drive aircraft starters offer industry-leading, robust, high duty

cycle starters in a lightweight package. By utilizing a powerful neo-dymium permanent motor driven though a self-resetting negative torquesensing device, the E-Drives provides unparalleled kickback protection, preventing hours of down time and replacement costs. The E-Drive aircraft starter is solenoid engaged, eliminating the need for a Bendix drive. Its low current draw helps maintain good battery life.



High Performance Armature • Robust spring design · Increased commutator bar length · High performance field housing • Thin laminations • Rare earth neodymium magnets • High qual-

ity magnetic alloy • Small package • 12 & 24 volt winding configuration • Stronger flux field • Redesigned Brush Holder · Improved temperature stability · Metal construction for heat sinking 9.5 lbs. • Offset brush position for increased brush contact area

#### APPLICATION CHART E-Drive Number - Approved Alternative for the following: ERB-8011 ERB-8012 ERZ-8011 ERZ-8012 MHB-4015 MZ-4205 MZ-4204 MHB-4001 MHB-4002 MHB-4002 MZ-4206 MZ-6204 MZ-4207 MHB-6001 MHB-4003 MHB-4005 MZ-4217 MHB-4007 M7-4218 MHB-4010 MZ-4219 MHB-4012 M7-4221 MHB-4013 MZ-4224 MHB-4014 MZ-4222 MHB-4016 MZ-4223 MHB-4017 MZ-4225 MZ-6222 MHB-4019 MHB-4020 MZ-6224



· Starter system designed for maximum performance · Drive assembly integrates proprietary pinion gear, clutch, torque limiter, and actuator in one complete module · Available for coarse and fine pitch ring gears, clockwise and counterclock wise rotation . No periodic service or recurring maintenance required • 9.5 lbs.

Model	Description	Lycoming Engine	Replaces	Part No.	Price
ERZ- 8011	Clockwise rotation, 12 Volt, 149 tooth - 12/14 Pitch Gear	235, 290, 320, 340, 360, 540	31A21198, Sky-Tec 149-NL,149-12PM, LS, Lamar PM1201, PM1204, MZ-4205 thru -4207,-4217 thru -4219,-4221 thru -4219,-6222,-6224	07-01102	
ERZ- 8012	Clockwise rotation, 12 Volt, 122 tooth - 12/12 Pitch Gear	235, 290, 320, 360, 540	31A21210, Sky-Tec 122-NL,122-12PM, LS, Lamar PM1203, MZ-4204,-6204	07-01103	-
ERB- 8011	Clockwise rotation, 24 Volt, 149 tooth - 12/14 Pitch Gear	235, 320, 340, 360, 540	31B21064, Sky-Tec 149-NL, 149-NL/ ec, 149-24, Lamar PM2401, MHB- 4010,-4016 thru -4020,-6014,-6016,- 6018	07-01099	-
ERB- 8012	Clockwise rotation, 24 Volt, 122 tooth - 10/12 Pitch Gear	235, 290, 320, 340, 360, 540	31B21211, Sky-Tec 122-NL/ec,122- 24PM, LS, Lamar PM2403, MHB- 4015,-6001, MMU- 4001,-6001, Delco 1109669	07-01101	
ELB- 8011*	Reverse/ Counter rotation, 24 Volt, 12/14 Pitch Gear	LTIO-540, LTIGO-540	14214, Sky-Tec 149- NLR/ec*, Lamar PM2404, MHB-4014, MHB- 6014	07-02665	
ELZ- 8021*	Reverse/ Counter rotation, 12 Volt, 12/14 Pitch Gear	LIO-320, LO-360, LTO-360, LIO-360	14215, Sky-Tec 149-NLR, Lamar PM1204, MZ-4220, MZ-6220	07-02666	

## HARTZELL ENGINE TECHNOLOGIES **FACTORY OVERHAULED STARTERS**

If No Cores are Available at factory, we will require your core for overhaul.



Mfg. Ref.	Part Number	Price
MC-6501	07-06503	
MHB-4020R	CALL	CALL
MZ-4204R	CALL	CALL
MZ-4219R	CALL	CALL
MZ-4224R	CALL	CALL
646238-2R	07-02650	

#### HARTZELL STARTER OVERHAUL KITS



Lamar Technologies overhaul kits include all parts necessary for a normal major overhaul, as well as any special tools, lubricants, and thread compounds. The model specific kits cover all starters manufactured by Lamar Technologies in eight different kits. The overhaul manual has been rewritten to highlight tear down and assembly with

detailed drawings and instructions. The manual covers all aspects of the rebuild in easily understood steps with tech support just a call or email away. (See Documents Tab). Average time to do a complete overhaul can be accomplished in less than an hour reducing downtime and increase revenue, as well as maintain the quality standards of the maintenance organization.

Description	Part No.	Price
PM1204-OHK - Fits all PM1204 starters	08-06007-1	
PM2403-OHK - Fits all PM2403 starters	07-01273-1	



# QUALITY AIRCRAFT OVERHAULED STARTER ADAPTERS



07-19962

Description Part No. Price 642083A12 07-19956 642087A68 07-19960 642087A69 07-19962 07-19963 642087A70 643259A18 07-19968 643259A39 07-19969 658440A1 07-19970

#### STARTERS FOR CONTINENTAL HARTZELL



Hartzell Permanent Magnet Starters represent the next generation in starter technology, setting new standards in performance and reliability. These lightweight starters deliver exceptional torque to start virtually any general aviation piston engine in nearly any environment, yet

weigh about 40% less than conventional starters. The key is patented permanent magnet motor design. It replaces the bulky windings of a conventional starter motor with lightweight permanent magnets. These TBO starters are built to go the distance between engine overhauls. Conventional starters generally don't last, they usually have to be pulled 

#### CONVERSION CHART

The Magnaflite lightweight starter listed in the table below will be superseded by the E-Drive and/or X-Drive starter listed therein. All Magnaflite P/N's listed below that are currently installed, being installed or in inventory are in no way affected. Standard Limited Warranty, is in effect and returns for reason of supersedure will not be accepted.

KAPS Part Number	X-Drive Left Hand Solenoid	X-Drive Right Hand Solenoid	E-Drive
MHB-6016	SRB-9021	SRB-9031	ERB-8011
MHB-6018	SRB-9021	SRB-9031	ERB-8011
MMU-6001	SRB-9022	SRB-9032	ERB-8012
MZ-6204	SRZ-9022	SRZ-9032	ERZ-8012
MZ-6222	SRZ-9021	SRZ-9031	ERZ-8011
MZ-6224	SRZ-9021	SRZ-9031	ERZ-8011
MZ-6226	SRZ-9021	N/A	ERZ-8011

# TCM ENERGIZER STARTERS

FACTORY NEW						
Model Volt/Amp Part No. Price						
ES646238-2	12V	07-01333				
ES646275-1	24V	07-02652				

FACTORY OVERHAULED						
Model Volt/Amp Part No. Price						
646238-2R	12V	07-02650				
646275-1R	24V	07-06502				

# **KY-TEC STARTERS**

# SKY-TEC ST2 & KCST2 MODEL STARTERS FOR SMALL CONTINENTAL ENGINES

**SKY-TEC PULL START CONVERSION C12ST2** - FOR FACTORY KEYSTART STARTER FOR A65-12 THROUGH O-300C ENGINES

9.2 lbs., Bolt-off / Bolt-on, High Torque, Low-Current, Gasket Included, Replaces TCM starter & continuous running sprag clutch in TCM factory keystart engines. Now featuring internal, self-resetting Kickback Protection System - zero maintenance - no pin to shear.

#### SKY-TEC KCST2 - STC-CERTIFIED CONVERSION KIT FOR FACTORY PULL-START ENGINES

STC Modification of Engine Required (removal of OEM starter pinion shaft in rear of engine). STC Modification of Airframe Required (replacement of pull-start T-handle with Sky-Tec-supplied push button & wiring) High Torque, Low-Current, 9.2 lbs. Now featuring internal, self-resetting Kickback Protection System - zero maintenance - no pin to shear. Complete Conversion Kit includes: C12ST2/S Starter, Push Button Switch, Wiring Harness, Gasket, Instructions, STC for Airframe Modification, STC for Engine Modification

#### SKY-TEC KEY-START C12ST2/SR

REVERSE TURNING for Continental GO-300 Engines ONLY - Internal. self-resetting Kickback Protection System - zero maintenance - no pin to shear. 6-8 lbs. lighter and significantly more reliable than the original, heavyweight factory starter. Also sold in a Kit (KCST2/SR)STC Certified conversion kit includes C12ST2/SR REVERSE TURNING starter for GO-300 engines (only), push-button switch, push-to-start placard, wiring harness, two STC's (one for airframe modification, one for engine modification) and instructions. 2-year factory warranty.

Model C12ST2 (Starter only)	P/N 07-00614
Model C12ST2/S (Starter only)	P/N 07-00719
Model KCST2 conversion kit	P/N 07-00721
KCSW Switch and harness only.	P/N 07-00722

# **SKY-TEC ST5 SERIES STARTERS**

The ST5 starter couples a high power 2.2 kW motor with an innovative solenoid-engaged (and disengaged) drive system completely disengages the powerful permanent magnet motor while the starter is unpowered eliminating possible TCM starter adapter wear while providing authoritative, high-torque starting. Positive solenoid enabled engagement and disengagement allows the

TCM starter adapter to fully unwrap under all normal operating conditions thus greatly prolonging starter adapter life. Weight: 9.1 lbs. .....P/N 07-01341 ...

### C24ST5 ......P/N 07-01342 .....-**SKY-TEC BCE-6 EXTENSION CABLE KIT**



6" Battery Cable Extension kit aids the installation of starters in aircraft that have limited slack available in the aircraft's starter power cable. Generally not required for TCM starter installations. May be needed in some PM, and NL model Lycoming installations.

P/N 07-00923.....



SKY-TEC XLT STARTERS
The world's lightest starter ever certified for Lycoming engines. Only 6.5lbs! Only 8 inches total length and 3.5 inches tall! Leftside mounted solenoid. High torque and fast spin. FAA PMA certified for most Lycoming 4-cylinder engines from O-235 to IO-390. Low current draw. Highly durable, fortified aluminum mount/housing. No Bendix to lubricate. Nothing to maintain.

2-Year factory warranty.

Volts	Model	Recommended for	Part No.	Price
12V	122- 12XLT	Engine Powered Aircraft with 10/12 pitch, 122-tooth ring gears	07-02419	
12V	149- 12XLT	engine powered aircraft with 12/14 pitch, 149-tooth ring gears	07-02420	
24V		engine powered aircraft with 10/12 pitch, 122-tooth ring gears	07-02421	
24V	149- 24XLT	engine powered aircraft with 12/14 pitch, 149-tooth ring gears	07-02422	

# SKY-TEC STARTERS HIGH-TORQUE INLINE STARTERS FOR LYCOMING ENGINES



Featuring Sky-Tec's Exclusive KPS® Kickback Protection System, Sky-Tec's NL-series of starters fit all Lycoming powered aircraft. All NL-series starters are FAA-PMA certified as replacement parts for all non-geared, flat Lycoming engines. Sky-Tec NL-series starters fit without modification or 337 paperwork. At only 9.3 lbs., the NL-series is the lightest Bendix-free inline available. Two-year warranty.

Model No.	Voltage/ Description	Pitch	FAA-PMA Eligible	Part No.	Price
122-NL	12 Volt	10/12 (for 122-Tooth Ring Gears)	Lyc 235, 290, 320, 360, 540 & 720	07-00761	
149-NL	12 Volt	12/14 (for 149-Tooth Ring Gears)	Lyc. 235, 290, 320, 340, 360, 540	07-00762	
149-NLR	12 Volt	12/14 (for 149-Tooth Ring Gears)	Lyc. LIO-320, LO-360, LTO-360, LIO-360, LHIO- 360, & LTIO-540	07-00763	
122-NL/ ec	24 Volt Super Duty	10/12 (for 122-Tooth Ring Gears)	Lyc. 235, 290, 320, 360, 540 & 720	08-07061	
149-NL/ ec	24 Volt Super Duty	12/14 (for 149- Tooth Ring Gears)	Lyc. 235, 290, 320, 340, 360, 540	08-07059	
149-NLR/ ec	24 Volt Super Duty	12/14 (for 149-Tooth Ring Gears)	Lyc. LTIO-540	08-07060	

# SKY-TEC HIGH-TORQUE STARTER



One of the lightest Lycoming starters available at only 8.9 lbs. Spins twice as fast as most heavyweight OEM starters. Zero maintenance - no pins to replace in the event of a kickback. FAA-PMA approved for most Lycoming engines. Some airframe applications may require minor modification for best fit. Confirm aircraft fit, ring gear tooth

count and voltage before ordering. 2-Year factory warranty.

Model	Voltage	Description	Part No.	Price
122-12HT	12V	10/12 Pitch (122 Tooth)	07-06250	
122-24HT	24V	10/12 Pitch (122 Tooth)	07-06251	
149-12HT	12V	12/14 Pitch (149 Tooth)	07-01840	
149-24HT	24V	12/14 Pitch (149 Tooth)	07-01841	
149-24HT/ EC	24V	Sky-Tec Starter (149 Tooth)- SuperDuty/EC	07-06255	

# SKY-TEC FLYWEIGHT™ STARTERS FOR LYCOMING ENGINES



FAA-PMA approved for most Lycoming engines. Some airframe applications may require modification for best fit. LS model has the solenoid offset to the left side and PM model is offset to the right. Confirm aircraft fit, ring gear tooth count and voltage before ordering. Generous 2-Year factory warranty. **Note**: The LS Solenoid is at the 2:30 position and the PM Solenoid is at the 7:30 position when viewed from the front. 8.1 lbs.

Model	Part No.	Price	Model	Part No.	Price
122-12LS	07-06245		149-12PM	07-06253	-
149-12LS	07-06246		122-24PM	07-06249	
122-12PM	07-06252		149-24PM	07-06257	

# RECOMMENDED STARTER BY AIRCRAFT

For complete listing of recommended Sky-Tec™ Starters by Aircraft make & model, please see the Aircraft Spruce website for a link to the Sky-Tec™ website at www.aircraftspruce.com

#### LAMAR STARTER SOLENOIDS

Silver contacts provide 300A in-rush capability. Much higher than the original units. Strong spring and high-current coil for quick contact opening - minimizing arcing. Single coil terminal (other end connected to case). FAA-PMA APPROVED for Certified Aircraft



Model No.	Volts	Description	Part Number	Price
STS-12S	12	Starter Solenoid	07-03562	
STS-24S	24	Starter Solenoid	07-03563	
STS-12M	12	Battery/Master Solenoid	07-03564	
STS-24M	24	Battery/Master Solenoid	07-03565	
STS-12A	12	Continuous Duty (Aux) Solenoid	07-03566	
STS-24A	24	Continuous Duty (Aux) Solenoid	07-03567	

#### GPL ELECTRIC STARTERS

GPL Electric offers an electric starter kit for several rotax engines. This unique system not only allows you to retain pull start, but also allows you to keep oil injection (if present) otherwise, a cover plate can be used (if space constrained). This system safely engages the ring gear at a 90 degree angle, then fully disengages from the crankshaft. The GPL Electric starter kit will not disable the engine due to malfunction, so it is the safest designed after market starter kit available for rotax engines and is made in the U.S.. GPL Electric also provides excellent warranty, comprehensive technical support and maintains a full replacement of parts inventory.

# **GPL STARTER KITS FOR ROTAX ENGINES**

GPL Electric Starter Kit Includes:
(M8) Hi Collar Split Washer, (M6 X 90) Socket Head Cap Screw, (M6) Hi Collar Split Lock Washer, (M6 X 18)
Socket Head Cap Screw, (M6) Split Lock Washer, (M8 X 25) Socket Head Cap Screw, (M8 X 22) Low Profile
Socket Head Cap Screw, Main Casting (D3) Sits In The 10:00 Pos or Main Casting (D4) Sits In The 11:00 Pos, Ring Gear, Inner Spacer, Starter Motor (Heavy Duty), Loctite 242 Threadlocker, Instaliations Instructions, and Coverplate (If Not Retaining Pull Start)
If Retaining Pull Start The Following Is Also Required

Outer Spacer (1), (M8 X 12) Hex Head Cap Screw (3), (M8) Split Lock Washer (3), and (M6 X 22) Socket Head Cap Screw (4)

Application	Model Number	Part Number	Price
Rotax Engines (377,447,503)	03-001	15-06473	
Rotax Engines (462,582,618,670)	03-004	15-06472	
Rotax Engines (532 CDI)	03-005	15-08364	
Rotax Engines (532 POINT)	03-006	15-08365	

#### **GPL RETAIN PULL START KITS**



Retain Pull Start Kit: Engine Specific Outer Spacer And Required Hardware (nuts/bolts). Model No. 02-29 RO Rotax Engines (462,582,618,670)......P/N 15-05373......----

# **GPL ELECTRIC REPLACEMENT** STARTER MOTORS



This motor fits all GPL Starter Kits and the Hirth F23 Engine as well. Heavy Duty Starter Motor Model 02-70HD..P/N 15-05371 .....

#### **GPL DELUXE STARTER KITS**



The Deluxe Starter Kit Includes: Rubber Insulating Boots, Push Button Switch, Solenoid, Regulator/rectifier, 20 Amps Fuse / Fuse Holder, Cables & Wiring (aircraft Specific), Hardware (nuts/bolts). Deluxe Add On Kits. Weighs 3 Lb

Application	Model No.	Part Number	Price
Challenger Air Crafts (11 ft Cable)	03-009-11	15-08341	
Other Air Crafts (5 ft Cable)	03-009-05	15-08340	

# **GPL PULL START RETENTION KIT**



GPL pull start retention kit for Rotax 462, 582, 618, 670. P/N 15-07970 .....----

SEE WWW.AIRCRAFTSPRUCE.COM FOR A COMPLETE LIST OF REPLACEMENT PARTS.

# **ZEFTRONICS VOLTAGE REGULATORS**

• G • Tr • Ur Pr R1ts Sar Pro	Description  15100 Rev A VR:14.2V. Ground-Fault-Protection (GFP) Frouble-Shooting Light (TSL) Jse R15V00 Rev A for built-in OV Protection.  15V00 Rev A VR:14.2V; OV 16V ame as R15100 Rev A plus OV otection  1510N Voltage Regulation: 14.2V Jse R15V0N for built-in OV otection  Gingle or Dual Alternator Application Externally Adjustable	07-00622 07-00628	FAA-STC	\$309.00 \$466.00	Replacement For  Cessna: C611001-0101, -0102, -0201.  Beech: 33-380010 Electrodelta: VR600  Lamar: DGR6 FORD: D4FF-10316-BA, D4FF-10316-CA  Zeftronics: R15100 Rev A (ACU), Plus V11100
R1s Sar Pro R1s • U:	15V00 Rev A VR:14.2V; OV 16V ame as R15100 Rev A plus OV rotection 1510N Voltage Regulation: 14.2V Jse R15V0N for built-in OV rotection Single or Dual Alternator Application Externally Adjustable			\$466.00	Zeftronics: R15100 Rev A (ACU), Plus V11100
• Us	Jse R15V0N for built-in OV otection Single or Dual Alternator Application Externally Adjustable	07-00624			(OVS)
• Ex	15V0N VR: 14.2V ; OV 16.0V		FAA-STC FAA-PMA	\$415.00	Prestolite: VSF7201, 2, 2S, 3, 3A, 3S, 4 Electrodelta: VSF7203A TCM: 649684-1 Piper: 550-383
	_ow/OV Light, OV Protection	07-00630	FAA-STC FAA-PMA		Zeftronics: R1510N (ACU), Plus V1510A (OVR)
· G · Tr · Ro	1510L Voltage Regulation: 14.2V. Ground-Fault-Protection (GFP) Frouble-Shooting Light Reduced panel lights fli Use R15V0L for built-in OV Protection	07-00623	FAA-PMA		Piper: 450-392, 484-121, 66804-03, 756-055, 484-088 Beech: 169-380063 Wico: X16300B, X17990. Lamar: B00267-1, 2, B00331-1, 2. Delco Remy: 9000590, 1116393, 1116398 Electrodelta: VR200, A Commander: 1816110 Prestolite: FVR4004, 4224, 4011 RBM: 87-87102-21 Lycoming: LA-11357, 12747
· G	15V0L VR: 14.2V ; OV: 16V Ground-Fault-Protection (GFP) Frouble-Shooting Light (TSL) DV Protection built-in	07-00629	FAA-PMA	\$447.00	Piper: 557-337 Lamar: B00371-1,-8,-14 Electrodelta: VR371 Zeftronics: R1510L (ACU), Plus V1510A (OVR)
• G	15300 VR: 14.2V. OV: 16V Ground-Fault-Protection (GFP) OV Protection built-in, T/s Light	07-00625	FAA-PMA	\$527.00	Mooney: 800270-505, 880016-503 Electrodelta: VR415F Lamar: DGR1-1
• G	1530B VR: 14.2V. OV: 16V Ground-Fault-Protection (GFP) DV Protection built-in Frouble-Shooting Light	07-00626	FAA-РМА	\$559.00	Mooney: 880016-501 Beech: 35-380093-1,2,3 Electrodelta: VR414, B00403-1; EM2073-1, 2 Oeco: 20053, 20065, 20137, 20437, 20082
• G • U wiri	25101 Rev A VR: 27.7 GFP & Trouble-Shooting Light Jse R25400 (require mod to ALT ring & connector) for built-in OV rotection.	07-00631	FAA-PMA		Cessna: C611004-0101, C611002-0102, -0105 Ford: C8FF/ C6FF-10316-A TCM: 636147 Electrodelta: VR500-0101
28.	25102 Rev A Voltage Regulation: 3.7V ame features as R25101 Rev A	07-00632	FAA-PMA		Cessna: C611004-0102 Electrodelta: VR500-0102
•Tro	251DR VR: 27.7V ••BEST VALUE•• rouble-Shooting Light & GFP externally Adjustable	07-00634	FAA-PMA	\$458.95	Delco Remy: 9000591 Lycoming: 74292 TMC: 631656
•0\	25400 VR: 28.7V DV Protection built-in & GFP rouble-Shooting Light	07-00635	FAA-STC		Cessna: C611005-0103, -0101, -0102 Electrodelta: VR515F, G, GA Lamar: DGR3

FOR A COMPLETE LISTING OF ALL PRODUCTS AND AIRCRAFT ELIGIBILITY LIST, VISIT WWW.AIRCRAFTSPRUCE.COM.

# ZEFTRONICS VOLTAGE REGULATORS – CONTROLLERS

Photo	Description	Part No.	Approval	Price	Replacement For
- Vandaria	R2510N VR: 28.4V  • Use R25V0N for built-in OV Protection.  • Single or Dual Alternator Application  • Externally Adjustable	07-00633	FAA-STC		Prestolite: VSF7403A, 3S, 4Piper: 550-381 Lycoming: LW10179, 77347
8/16	R25V0N VR: 28.4V ; OV 32V R2510N plus OV Relay, Low/Over-Voltage Indicator	07-00636	FAA-STC	\$567.00	Prestolite: VSF7403A,3S,4. Piper: 550-381. Lyc: LW10179, 77347 Zeftronics: R2510N + V2510A
	V11100 Over-Voltage Trip: 16.0V • Use w/ R15100 Rev A, VR600 or DGR6 • More Precise OV Protection	07-00637	FAA-STC		Cessna: C593001-0101 Lamar: DG01 Electrodelta: OS60. Electromech: EM235
9	V1510A Over-Voltage Trip: 16.0V  • Use with R1510N or VSF72XX Series for OV Protection.  • Use with R1510L for OV Protection  • More Precise OV Protection	07-00638	FAA-STC FAA-PMA		Piper: 450-397, 484-183, 550-380, 450-393 Beech: 138-1 Wico: X-17621 Lamar: B00289-2, B00339-1 Electrodelta: OS75-14 Delco-Remy: 1115831 Prestolite: FOC-4002B
	V25101 Over-Voltage Trip: 32V  • Use with R25101(2) Rev A or VR500-0101,0102 for OV Protection	07-00639	FAA-STC FAA-PMA		Cessna: C593003-0101, -0102 Electrodelta: OS100-0101 Electromech: EM233 Lamar: DG02-28 Other P/n: 138-3
	V2510A Over-Voltage Trip: 32.0V • More Precise OV Protection • Use with R2510N or VSF74XX	07-00640	FAA-STC		Piper: 484-182, 550-382, 584-043 Prestolite: FOC4003A, B. Lycoming: 74804, 78060 Wico: X17634, X17620 Delco Remy: 1115832
	G1200N VR:14.2V. Current Limit (CL): 20A Trouble-shooting Lights, Electronic GCU	07-00617	FAA-PMA	\$399.00	Delco: 1118736, 1118904, 1119226. VR300-14- 20. Cessna: 0413025-4, 5, 12
	G1350N • VR 14.2V: Current Limit (CL): 35A trouble shooting Lights, Electronic GCU	07-00618	FAA-PMA	\$415.00	Delco: 1118704, 1119220, 1118-704, 1118892. VR300-14-35, 450-390. Cessna: 0413025-6, 8, 10
All.	G1500N VR:14.2V: Current Limit (CL): 50A Trouble-shooting Lights, Electronic GCU	07-00619	FAA-PMA	\$415.00	Delco: 1118884, 1118713, 1119224, Electrodelta: VR300-14-50. Cessna: 0413025-7, 9, 11
	G250KN VR: 28.4V.CL: 50A, EQR Built-in	07-01367	FAA-STC		1119656 ,VR300-28-50. Cessna: 0850460-9

#### FOR EXPERIMENTAL AIRCRAFT

# ZEFTRONICS B SINGLE ENGINE GENERATOR CONTROLLERS GCU



14V or 28V Type B Single Engine Generator Controller (GCU) available for 10 - 50A with built-in Reverse Current Protection, Field Ground Fault Protection (GFP), and Troubleshooting Lights. Replaces carbon pile Voltage Regulators.

14V B Single ...... P/N 07-17986.....---28V B Single ...... P/N 07-17987.....----

# **ZEFTRONICS ALTERNATOR** CONTROLLERS WITH OV PROTECTION



14V or 28V Alternator Controller Unit (ACU) with built-in OV Protection (OVP), Field-to-Ground Short Protection (GFP), and Troubleshooting Lights that separately indicate OVP. GFP. and Power-On.

14V ......P/N 07-17991 .....----28V ......P/N 07-17992 .....-----

# **ZEFTRONICS 28V A SINGLE ENGINE GENERATOR CONTROLLER GCU**



28V Type A Single Engine (SE) Generator Controller Unit (GCU) available for 10- 50A with built-in Reverse Current Protection, and Color-Coded Diagnostic Troubleshooting Liahts.

Used on Ground Power Units. 14V A Single .....P/N 07-17990 .....------

# **ZEFTRONICS 28V ALTERNATOR** CONTROLLER WITH LOW AND OV INDICATION



28V Alternator Controller (ACU) with built-in Low and OV Indication, OV Protection, Field-to-Ground Short Protection, and Color-Coded Diagnostic Lights.

28V ......P/N 07-17993 .....----

# **WAPSI AERO REGULATOR / RECTIFIER**

Designed as a direct drop-in replacement for Key West regulators ......P/N 05-27536 .....

# **ZEFTRONICS 28V B ALTERNATOR** CONTROLLER WITH LOW AND OV PROTECTION



28V Type B Alternator Controller Unit (ACU) with built-in OV Protection, OV Indication pin. Field-to-Ground Short Protection and Color-Coded Diagnostic Lights.

28V......P/N 07-17994.....---

# AMAR ELECTRICAL COMPONENTS

### LAMAR ELECTRICAL COMPONENTS

Lamar	Description	Applications	Our	Price
Number	·		Number	
A-00258-1	Switch, Alternator INOP	Piper, Hawker Beechcraft, Maule	07-01146	
A-00258-2	Switch, Alternator INOP	Piper, Hawker Beechcraft, Maule, Twin Commander	07-01147	
B-00266-2	Overvoltage Relay, 28V, Piper	Piper, Twin Commander, Agusta-Bell	07-01148	
B-00286-1	Regulator, 28V, Parallel OP (twin)	Cessna & Piper	07-01449	
B-00288-1	Regulator, 14V, Parallel OP (twin)	Piper, Hawker Beechcraft, True Flight Holdings	07-01150	
B-00289-2	Overvoltage Relay, 14V	Piper, Hawker Beechcraft, Cessna, Maule, American Champion, True Flight Holdings, Varga, General Avia	07-01151	
B-00306-3	Regulator, 28V, Parallel OP (twin)	Hawker Beechcraft	07-01153	
B-00325-1	Timer, Pneumatic, 28V	Piper	07-01455	
B-00331-2	Voltage Regulator, Type 1, 14V	Piper, Hawker Beechcraft, Enstrom, American Champion, True Flight Holdings, CPAC	11-04130	
B-00341-1	Time Delay Switch	Piper	07-01158	
B-00368-2	Alternator Control, 28V Load		07-01803	
B-00371-1	Alternator Control, 14V	Piper, Maule, Robinson, Zenair, American Champion, Taylorcraft 2000, Enstrom, Brantly, Vulcanair, Socata	07-01167	
B-00372-1	Alternator Control, Load Balancing	Hawker Beechcraft	07-01168	
B-00375-2	Monitor Low Voltage	Piper	07-01170	
B-00380-2	Sensor-Alt Out, 28V Pulsed	Hawker Beechcraft	07-01171	
B-00382-1	Alternator Control, 28V Load	Piper	07-01172	
B-00387-1	Voltage Regulator with Overvoltage Protection, 28V	Hawker Beechcraft	07-01173	
B-00392-1	Alternator Control, 14V, Piper	Piper	07-01174	
B-00403-1	Voltage Regulator with Overvoltage Protection, 14V	Hawker Beechcraft, Mooney	07-01176	

#### LAMAR SOLENOIDS



Aviation grade, non FAA-PMA approved, solenoid for continuous duty 12 volt applications. Fits current GA production aircraft as well as legacy aircraft. Replaces both single terminal switched units, as well as the current double terminal switched units in production today. All units have multiple quality and functional tests prior to certification

and delivery.

Features: • Replaces most contactors in general aviation • 12 Volt
Unit or 24 Volt Unit • Continuous Duty or Intermittent • All units inspected and tested to performance standards

Description	Part Number	Price
X61-0028 12V Continuous	07-01875	
X61-0029 24V Continuous	07-01876	
X61-0030 12V Intermittent	07-01877	
X61-0031 24V Intermittent	07-01878	

# RPX TECHNOLOGIES DRYBOT AUTOMATED **ENGINE DEHYDRATOR KITS**



Cheaper than an overhaul! The DryBot engine dehydrator is totally automated and can be left unattended. It's designed to maintain internal engine humidity below the critical relative humidity at which corrosion occurs on steel surfaces such as cams and lifters. Armed with 12 sensors, the DryBot continually monitors for system and setup faults to ensure system performance. "Green light, you're good!"

### **KITS AND ADAPTERS**

Description	Part No.	Price
Kit with adapter A/ USA Plug	08-19100	
Kit with adapter B/ USA Plug	08-19101	
Kit with adapter C/ USA Plug	08-19102	

ADAPTERS ONLY

Description	Part No.	Price
Adaptor A	08-19049	
Adaptor B	08-19050	
Adaptor C	08-19060	
Adaptor D Confg 205	08-19105	
Adaptor D Confg 208	08-19106	
Adaptor D Confg 210	08-19107	
Adaptor M14	08-19108	

**SEE OUR WEBSITE FOR ADAPTOR DETAILS** 

# **SUPERIOR LYCOMING ENGINES - MAJOR** OVERHAUL GASKET SETS



SUPERIOR Lycoming engines are built with the best components in the industry. The only parts we paint are the steel

barrels to resist corrosion. All aluminum parts; crankcase, assembly case, sump cylinder heads and assy drives are alodined only for corrosion protection. This leaves an engine that is easy to inspect, provides better cooling, and is lighter weight. FAA-PMA Approved

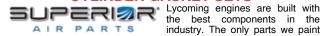
Note: Intake hoses and oil drain-back hoses must be ordered separately.

Contains Exhaust Gaskets

\*\* Contains Spiratallic "NO BLO" Exhaust Gaskets
\*\*\* Exhaust Gaskets, Not Included

	askets, Not Included			
Superior Part No.	Engine Model	Cylinder Head Type		Price
SL61499-1**	O-235 Series	Parallel	08-11792	
SL69371-1**	O-290 Series	Parallel	08-11840	
SL12636*	AIO, AEIO-320 Wide Deck	Parallel	08-11572	
SL14815*	O-320-H Series ('76' Series)	Parallel	08-11627	
SL75439-1**	IO, HIO-360 Conventional IO- 360-A, C, D, K; HIO-360-A, C; LIO, LHIO-C Wide Deck	Parallel	08-11966	
SL75441-1**	IO, HIO-360 Conventional IO- 360-A, C, D, K; HIO-360-A, C; LIO, LHIO-C Wide Deck	Angle	08-11967	
SL12937***	HIO-360-D1A, D1AD Wide Deck	Angle	08-11580	
SL12945*	O, LO-360 Wide Deck (Dual Magneto)	Parallel	08-11582	
SL12944**	IO-360 Wide Deck (Dual Magneto)	Angle	08-11581	
SL14845***	HIO-360-E, F, Wide Deck (Dual Magneto) LHIO-360-F Wide Deck (Dual Magneto)	Angle	08-11628	
SL71900-1***	VO-435-A Series	Angle	08-11869	
SL71181-1***	GSO, IGSO-480 Series	Angle	08-11857	
SL71569-1***	O-540-A, B, E, F, G, H; IO- 540-C, D, J, N, R Conventional and Wide Deck (Parallel Valve Head)	Parallel	08-11861	
SL73185-1***	IO-540-A, B, E, G, H, K, L, M, P, S Conventional and Wide Deck (Angle Valve Head)	Angle	08-11908	
SL13378*	O-540, B, E, G,H, Wide Deck (Dual Magneto)	Parallel	08-11594	
SL13367*	IO-540-K, L, M, U Wide Deck (Dual Magneto) AEIO-540- L1B5D Wide Deck (Dual Magneto)	Angle	08-11592	
SL13377*	IO-540-C, N, T, V, W; O-540-J, L Wide Deck (Dual Magneto)	Parallel	08-11593	
SL77175-1*	TIO-540-A Series Conventional; TIO-540-A2C Wide Deck	Angle	08-11995	
SL15903*	TIO-540-S1AD Wide Deck	Angle	08-11642	
SL12956*	TIO, LTIO-540-F, J, N, R (Dual Magneto)	Angle	08-11583	
SL75181-1*	IO-720-A, B, C, D Series Conventional	Angle	08-11959	
SL15423*	IO-720-A1B, B1B, B1BD, D1B, D1C, D1CD Wide Deck	Angle	08-11638	

# SUPERIOR LYCOMING ENGINES - SINGLE **CYLINDER GASKET SETS**



are the steel barrels to resist corrosion. All aluminum parts; crankcase, assembly case, sump cylinder heads and assy drives are alodined only for corrosion protection. This leaves an engine that is easy to inspect, provides better cooling, and is lighter weight. FAA-PMA Approved Note: Exhaust Gaskets Must be Purchased Separately

Superior	Engine Model	Set No.	Part No.	Price
Part No.	Lingine model	Set No.	Fait NO.	FIICE
SL12040- SC	O-235 SERIES	SL12040- SC Parallel Valve Head	08-11559	
SL12032- SC	O-290; O, IO, LIO-320; AIO, AEIO-320; O-340; O-360-A, B, C, D, F; IO-360-B, E, F; AEIO-360-B, H; HO-360-A, B; HIO-360-B; VO, IVO-360 O-540-A, B, E, F, G, H, J, L; IO-540-C, D, J, N, R, T, V, W; TIO-540-C, E, G, H, K; LTIO-540-K; AEIO-540-D	SL12032- SC Parallel Valve Head	08-11545	
SL12039- SC	IO-360-A, C, D, J; AIO-360-A, B; AEIO-360-A; HIO-360-A, C, D, E, F; LIO-360-C; LHIO- 360-C, F; TO-LTO-360-A; TIO-360-A	SL12039- SC Parallel Valve Head	08-11557	
SL16916- SC	O-320-H; O, LO, TO, LTO- 360-E "76" SERIES	SL16916- SC Parallel Valve Head	08-11679	
SL12036- SC	O-435-A	SL12036- SC Parallel Valve Head	08-11552	
SL12034- SC	GO, VO, TVO-435; GO, GSO, IGSO-480; IO-540-A, G, K, L, P, S, AA; AEIO- 540-L; TIO, LTIO-540-U; VO, TVO, TIVO-540; IGO, IGSO-540-A	SL12034- SC Angle Valve Head	08-11549	
SL12033- SC	IO-540-B, E, M, U; TIO- 540-A, S, T; TIO-LTIO-540-F, J, N, R; TIO-541-A; IGO- IGSO-540-B	SL12033- SC Angle Valve Head	08-11547	
SL12037- SC	IO-720-A, D	SL12037- SC Angle Valve Head	08-11554	



SUPERIOR MILLENNIUM CYLINDERS

Uniform hardness all the way through the steel barrel walls which allows the barrel to provide even wear while withstanding extreme cylinder temperatures and pressures. Exhaust and intake ports are volumetrically matched to maximum output and performance. Increased port wall thickness - eliminates problems with warping and cracking. Computer-generated head fin configuration - deliver more uniform heat transfer and fewer "hot" spots. Manufactured from the most advanced alloys available - exceed industry standard for strength and porosity.

420	from the most advan	ceu alloys	avallable
Mille	ennium Cylinders For Continental I	Engines	
Model No.	Application	Part No.	Price
SA65000S0	A-65 (Sold in Kit of 4 - STC)	08-11477	
SA10200-A20P	O-200-A, B; C-125-2, C-145-2, -2H; O-300A, B, C, D	08-10908	
SA10200-A21P	C-75, 85	08-10909	
SA10200-A22P	C-90	08-10910	
SA47006L-A20P	O-470-U; IO-470-D, E, F, H, L, M, N, S, U, V	08-11060	
SA47006S-A20P	O-470-G, M, P; IO-470-C, G, P, R	08-11061	
SA47006S-A21P	O-470-K, L, R, S	08-11062	
SA52006-A20P	IO-520-A, B, BA, BB, C, CB, D, E, F, J, K, L, M, MB	08-11098	
SA52006-A22P	TSIO-520-AF, B, BB, C, CE, D, DB, E, EB, G, H, J, JB, K, KB, L, LB, M, N, NB, P, R, T, UB, VB, WB	08-11099	
SA52006-A23P	IO-550-A, B, C	08-11100	
SA55006-A20P	IO-550-D, E, F, L (Taper Finned Barrel)	08-11208	

# **SUPERIOR SL75089A PISTON**

Superior SL75089A Piston. ......P/N 08-17025 ..... ---

See website for Engine Applications.

Mill	Millennium Cylinders For Lycoming Engines				
Model No.	Application	Part No.	Price		
SL 10302-A20P	O-235-F, J (High Compression)	08-11510			
SL 10302-A21P	O-235-K, L, M (Medium Compression)	08-11511			
SL 32006N-A20P	O-320-B, D, IO-320-B (Narrow Deck)	08-11732			
SL 32006W-A20P	O320-B, D; IO-320-B, D; AIO-320-B, C; AEIO-320-D; LIO-320-B (Wide Deck)	08-16434			
SL 32006W-A21P	O-320-A, C, E; IO-320-A, E; AEIO- 320-E; (Wide Deck)	08-16432			
SL32006N-A21P	O-320: -A1A, -A1B, -A2C, -A2D, -A3A, -E1A, -E1B, -E1C, -E1F, -E1J, -E2A, -E2B, -E2C, -E2D, -E2F, -E2G, -E2H, -E3D, -E3H (Narrow Deck)	08-16433			
SL 36006N-A20P	O-360-A, C; IO-360-B; HO-360-B; HIO- 360-B; O-540-A, D, E, G; IO-540-C, D, N; TIO-540-G (Narrow Deck)	08-11745			
SL 36006N-A21P	O-360-B, D; O-540-B (Narrow Deck)	08-11746			
SL 36006W-A20P	O-360-A, C, F, G; IO-360-B, E, M; HO- 360-C; HIO-360-B; LO-360-A; AEIO- 360-B, H; O-540-A, E, G, H; IO-540-C, D, N, T; AEIO-540-D (Wide Deck)	08-11749			
SL 36006W-A21P	O-360-B, D; O-540-B	08-11750			

**CALL OF EMAIL FOR QUOTE ON SUPERIOR XP & VANTAGE ENGINES** 

# **SUPERIOR AIR PARTS**

Superior PNM         Description         Part No.         Price           STD-1945         Exhaust Nut         08-03639            STD-1925         Rocker Box Cover Screw         08-03639            SA22022         Continental Brass Exhaust Nut         07-03554            SA22387         Engine Mount         22387            SA630979-9         O-Ring         08-11295            SA531001         Cylinder Hold Down Nut         08-11148            SA640612         Washer         08-11389            SA540610         Push Rud         07-03570            SA2147         Exhaust Nut         07-03570            SA2185         Continental Inner Intake Hose         07-03477            SA534610         Push Rod Packing         08-03679            SL212881         Gasket         08-11573            SL-STD-2180         Hose         08-03011            SL-STD-1821         Hose         08-03011            SL-STD-2180         Hose         08-12021            SL-S336413         Intake Gasket				
STD-1410         Exhaust Nut         08-03639            STD-1925         Rocker Box Cover Screw         08-03697            SA22022         Continental Brass Exhaust Nut         07-03554            SA22387         Engine Mount         22387            SA630979-9         O-Ring         08-11295            SA531001         Cylinder Hold Down Nut         08-11399            SA531001         Cylinder Hold Down Nut         08-11399            SLSTD-1411         Nut         08-11399            SL-STD-1411         Nut         08-11872            SA21247         Exhaust Nut         07-03570            SA21185         Continental Inrae Hose         08-03679            SL-STD-1816         Hose         08-03679            SL-STD-1821         Hose         08-03679            SL-STD-1821         Hose         08-03679            SL-STD-1821         Hose         08-03679            SL-STD-1821         Hose         08-03617            SL-STD-1825         Continental Intake Gasket	Superior P/N#	Description	Part No.	Price
SA22022         Continental Brass Exhaust Nut         07-03554	1 -	-	08-03639	
SA22387         Engine Mount         22387         —           SA630979-9         O-Ring         08-11295         —           SA531001         Cylinder Hold Down Nut         08-11148         —           SA531001         Cylinder Hold Down Nut         08-11189         —           SL-TD-1411         Nut         08-11872         —           SL-TD-1417         Aux         08-11872         —           SA21247         Exhaust Nut         07-03570         —           SA21185         Continental Inner Intake Hose         07-03477         —           SA53610         Push Rod Packing         08-03679         —           SL-TD-180         Hose         08-003011         —           SL-TD-1821         Hose         08-003051         —           SL-TD-1821         Hose         08-00305         —           SA22250         Continental Intake Gasket         08-00305         —           SA536413         Intake Gasket         08-03684         —           SA539401         Continental Connector Push Rod         07-03556         —           SA531003         Nut         Mu         08-11449         —           SLP75906         Gasket         08-11414	STD-1925	Rocker Box Cover Screw	08-03697	
SA630979-9	SA22022	Continental Brass Exhaust Nut	07-03554	
SA630979-9   O-Ring	SA22387	Engine Mount		
SA531001   Cylinder Hold Down Nut   08-11148		<u> </u>		
SA-STD-1411         Nut         08-12024				
SL-STD-1411		,		
SA21247		*** *		
SA21247         Exhaust Nut         07-03570            SA21185         Continental Inner Intake Hose         07-03477            SAS34610         Push Rod Packing         08-03679            SL312681         Gasket         08-11573            SL-STD-2180         Hose         08-00301            SL72059         Lycoming Oil Dipstick Gasket         08-00305            SL72059         Lycoming Oil Dipstick Gasket         07-03559            SA539413         Intake Gasket         07-03559            SA539840         Continental Connector Push Rod         07-03556            SA539840         Continental Connector Push Rod         07-03556            SA539840         Continental Gonnector Push Rod         07-03556            SA539840         Continental Gonnector Push Rod         07-03556            SA539840         Continental Gonnector Push Rod         07-03556            SA539840         Continental Rod         07-03556            SA539841         Oblish          08-11849            SL2028         That         -				
SA21185         Continental Inner Intake Hose         07-03477	-			
SA534610		***************************************		
SL12681   Gasket   O8-11573				
SL-STD-1821         Hose         08-00311            SL-STD-1821         Hose         08-12031            SL72059         Lycoming Oil Dipstick Gasket         08-0305            SA22250         Continental Intake Gasket         07-03559            SA536413         Intake Gasket         08-03684            SA539840         Continental Connector Push Rod         07-03556            SA531003         Nut         08-11149            SA531003         Nut         08-11349            SA531003         Nut         08-11349            SA633958-3         Seal         08-11349            SLP75906         Gasket         08-11567            SA21323         Carb Gasket - Bottom         21323            SL212186         Nut-Hex         08-11567            SA632837         Continental Stainless Steel Gasket         08-11813            SL66224         Gasket         08-11848            SL70310         O-Ring         08-11848            SL7231         Induction Air Hose         08-1184<		•		
SL-STD-1821				
SL72059				
SA22250         Continental Intake Gasket         07-03559				
SA536413         Intake Gasket         08-03684            SA629925         Intake Gasket         08-11260            SA539840         Continental Connector Push Rod         07-03556            SA531003         Nut         08-11149            SA53958-3         Seal         08-110891            SA633958-3         Seal         08-11021            SA21323         Carb Gasket         08-12021            SA21323         Carb Gasket - Bottom         21323            SL12186         Nut-Hex         08-11567            SA632837         Continental Stainless Steel Gasket         08-13232            SL66224         Gasket         08-10885            SL70310         O-Ring         08-11848            SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11444            SL69603         Hose         08-11444            SL69603         Hose         08-11444            SL75906         Gasket         08-11983				
SA629925         Intake Gasket         08-11260				
SA539840         Continental Connector Push Rod         07-03556				
SA531003				
M83248/1-00         O-Ring         08-10891            SA633958-3         Seal         08-11349            SLR75906         Gasket         08-12021            SA21323         Carb Gasket - Bottom         21323            SL21186         Nut-Hex         08-11567            SA632837         Continental Stainless Steel Gasket         08-13232            SL66224         Gasket         08-11813            MS9134-01         Gasket         08-11888            SL70310         O-Ring         08-11808            SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11808            SL69603         Hose         08-11808            SL69603         Hose         08-11844            SL69603         Hose         08-11444            SL75906         Gasket         08-11184            SL66732         Gasket         08-11183            SL-6TD-1215         Bolt         07-00001            SL60430				
SA633958-3         Seal         08-11349            SL175906         Gasket         08-12021            SA21323         Carb Gasket - Bottom         21323            SL12186         Nut-Hex         08-11567            SA632837         Continental Stainless Steel Gasket         08-1183232            SL66224         Gasket         08-11813            MS9134-01         Gasket         08-11848            SL70310         O-Ring         08-11848            SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11579            SL69603         Hose         08-11844            SL69603         Hose         08-11844            SL5313         Gasket         08-11983            SL5906         Gasket         08-11983            SL66732         Gasket         08-11983            SL66732         Gasket         08-11773            SL60430         Cover         08-111778            SL60430				
SLR75906         Gasket         08-12021            SA21323         Carb Gasket - Bottom         21323            SL12186         Nut-Hex         08-11567            SA632837         Continental Stainless Steel Gasket         08-13232            SL66224         Gasket         08-11813            MS9134-01         Gasket         08-11848            SL70310         O-Ring         08-11848            SL70310         O-Ring         08-11848            SL70310         O-Ring         08-11848            SL6224         Gasket         08-11808            SL62224         Gasket         08-11808            SL66222         Thrust Button         08-11569            SL6903         Hose         08-11808            SA642917-1         Induction Air Hose         08-11414            SL69603         Hose         08-11844            SL69603         Hose         08-11444            SL5313         Gasket         08-11941            SL6933				
SA21323         Carb Gasket - Bottom         21323            SL12186         Nut-Hex         08-11567            SA632837         Continental Stainless Steel Gasket         08-13232            SL66224         Gasket         08-11813            MS9134-01         Gasket         08-11848            SL70310         O-Ring         08-11848            SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11579            SA642917-1         Induction Air Hose         08-11414            SL69603         Hose         08-11444            SL69603         Hose         08-11444            SL5313         Gasket         08-11983            SL75906         Gasket         08-11983            SL75906         Gasket         08-11983            SL66732         Gasket         08-11773            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA40215				
SL12186         Nut-Hex         08-11567            SA632837         Continental Stainless Steel Gasket         08-13232            SL66224         Gasket         08-11813            MS9134-01         Gasket         08-10885            SL70310         O-Ring         08-11848            SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11579            SA642917-1         Induction Air Hose         08-11414            SL69603         Hose         08-11844            SL69603         Hose         08-11844            SL5313         Gasket         08-11944            SL534750         Gasket         08-11983            SL66732         Gasket         08-11983            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11778            SL6030         Cover         08-11778            SL61173         Gasket         08-11785            AN500-416-1				
SA632837         Continental Stainless Steel Gasket         08-13232            SL66224         Gasket         08-10885            MS9134-01         Gasket         08-10885            SL70310         O-Ring         08-11848            SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11579            SL62224         Gasket         08-11414            SL69603         Hose         08-11414            SL69603         Hose         08-11844            SL69603         Hose         08-11844            SL8313         Gasket         08-11983            SL75906         Gasket         08-11983            SL66732         Gasket         08-11983            SL66732         Gasket         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SL60430         Cover         08-11778            SL60431         Screw				
SL66224         Gasket         08-11813            MS9134-01         Gasket         08-10885            SL70310         O-Ring         08-11848            SL2824         Gasket         08-11808            SL12892         Thrust Button         08-11579            SA642917-1         Induction Air Hose         08-11444            SL69603         Hose         08-11844            SL69603         Hose         08-11844            SL69603         Hose         08-11844            SL69603         Gasket         08-12019            SL69603         Gasket         08-11983            SL69603         Gasket         08-11983            SL69603         Gasket         08-11983            SL69603         Gasket         08-11983            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11773            SL60430         Cover         08-11778            SL60430         Cover         0				
MS9134-01   Gasket   O8-10885   SL70310   O-Ring   O8-11848   SL62224   Gasket   O8-11808   SL62224   Gasket   O8-11808   SL12892   Thrust Button   O8-11579   SA642917-1   Induction Air Hose   O8-11414   SL69603   Hose   O8-11844   SL8313   Gasket   O8-12019   SA534750   Gasket   O8-11164   SL75906   Gasket   O8-11164   SL75906   Gasket   O8-11821   SL66732   Gasket   O8-11821   SL66732   Gasket   O8-11821   SL-STD-1215   Bolt   O7-00001   SL60430   Cover   O8-11778   SL-STD-1215   Bolt   O7-00001   SL60430   Cover   O8-11778   SL12272   Lock Plate   O8-11568   SL61173   Gasket   O8-11172   SL61173   Gasket   O8-11785   SA630286   Packing   O8-11275   SA630286   Packing   O8-11275   SA634857   Gasket   O8-11165   SA62856   Washer   O8-11320   SA632248   Seal   O8-11322   SA534857-\$   Gasket   O8-111823   SA632310   Gasket Rocker Cover   O8-11322   SA634857-\$   Gasket   O8-11320   SA632248   Seal   O8-11320   SA632248   Seal   O8-11320   SA632248   Seal   O8-11320   SA632310   Gasket Rocker Cover   O8-11322   SA1100-A20   Millennium Cylinder   O8-10908   SL12032-SC   Gasket Set   O8-1166   SL67193-S   Gasket Set   O8-1166   SL67193-S   O-Ring   O8-10908   SA638172   Continental Bushing   O8-00321   SA638172   Continental Bushing   O8-00321   SA638172   Continental Bushing   O8-00321   SA638172   Continental Bushing   O8-00321   SA628488   Hydraulic Valve Lifter   O8-11257   SA634856   Gasket Alternator Crankoase   O8-10857   SL3601-SC   Ring Set Single Cylinder   O8-11751   SA641250   Crankshaft Seal   O8-03675   S				
SL70310         O-Ring         08-11848            SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11579            SA642917-1         Induction Air Hose         08-11414            SL69603         Hose         08-11844            SL69603         Hose         08-11844            SL8313         Gasket         08-11983            SA534750         Gasket         08-11164            SL75906         Gasket         08-111983            SL66732         Gasket         08-111821            AN500-416-1         Screw         08-11173            SL-60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11778            SA630286         Packing         08-11172            SA630286         Packing         08-11275            SA634857         Gasket         08-11244            SA634856				
SL62224         Gasket         08-11808            SL12892         Thrust Button         08-11579            SA642917-1         Induction Air Hose         08-11414            SL69603         Hose         08-11844            SL8313         Gasket         08-11164            SA534750         Gasket         08-11183            SL75906         Gasket         08-11821            SL66732         Gasket         08-11821            SL66732         Gasket         08-11173            SL60430         Cover         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11768            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11175            SA630286         Packing         08-11275            SA6284857 </td <td></td> <td></td> <td></td> <td></td>				
SL12892         Thrust Button         08-11579            SA642917-1         Induction Air Hose         08-11414            SL69603         Hose         08-11844            SL8313         Gasket         08-12019            SA534750         Gasket         08-11983            SL75906         Gasket         08-11821            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA634857         Gasket         08-11165            SA62856         Washer         08-11244            SA6284	-	•		
SA642917-1         Induction Air Hose         08-11414            SL69603         Hose         08-11844            SL8313         Gasket         08-12019            SA534750         Gasket         08-11164            SL75906         Gasket         08-11983            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-111785            SA630286         Packing         08-11275            SA634857         Gasket         08-11185            SA62856         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA6322				
SL69603         Hose         08-11844            SL8313         Gasket         08-12019            SA534750         Gasket         08-11164            SL75906         Gasket         08-11983            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL2272         Lock Plate         08-11568            AN500-416-1         Screw         08-11725            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA634857         Gasket         08-11244            SA62856         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA634857-S         Gasket         08-11320            SA632248				
SL8313         Gasket         08-12019            SA534750         Gasket         08-11164            SL75906         Gasket         08-11983            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SA63286         Packing         08-11165            SA634857         Gasket         08-11244				
SA534750         Gasket         08-11164            SL75906         Gasket         08-11983            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11725            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA534857         Gasket         08-11125            SA628556         Washer         08-11244            SA628556         Washer         08-11353            SA628556         Washer         08-11353            SA628450         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248 <td></td> <td></td> <td></td> <td></td>				
SL75906         Gasket         08-11983            SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA534857         Gasket         08-11165            SA628556         Washer         08-11244            SA628505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA534857-S         Gasket         08-11320            SA632248         Seal         08-11120            SA632310         Gasket Rocker Cover         08-11322 <t< td=""><td></td><td></td><td></td><td></td></t<>				
SL66732         Gasket         08-11821            AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA630286         Packing         08-11275            SA634857         Gasket         08-11165            SA628566         Washer         08-11244            SA628505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA632248         Seal         08-111823            SA632310         Gasket Rocker Cover         08-11322 <td< td=""><td></td><td></td><td></td><td></td></td<>				
AN500-416-1         Screw         08-11173            SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA534857         Gasket         08-11275            SA62856         Washer         08-11244            SA628556         Washer         08-11244            SA628556         Washer         08-11244            SA628450         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA534857-S         Gasket         08-11320            SA534857-S         Gasket         08-11126            SA632310         Gasket Rocker Cover         08-11322				
SL-STD-1215         Bolt         07-00001            SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA630286         Packing         08-11275            SA534857         Gasket         08-11165            SA62856         Washer         08-11244            SA628556         Washer         08-11244            SA6284505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SA632310         Gasket Rocker Cover         08-11823            SA10200-A20         Millennium Cylinder         08-10968				
SL60430         Cover         08-11778            SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA632857         Gasket         08-11244            SA628556         Washer         08-11244            SA628556         Washer         08-11244            SA632800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA632248         Seal         08-11166            SA632310         Gasket Rocker Cover         08-11322            SA1				
SA402151         Continental Exhaust Manifold Stud         05-03634            SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA534857         Gasket         08-11165            SA628556         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA534857-S         Gasket         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket Rocker Cover         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring				
SL12272         Lock Plate         08-11568            AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA534857         Gasket         08-11165            SA628556         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SA632310         Gasket Rocker Cover         08-11823            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321         <				
AN500-416-1         Screw         08-11172            SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA534857         Gasket         08-11165            SA628556         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA532248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-111823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321 <t< td=""><td></td><td></td><td></td><td></td></t<>				
SL61173         Gasket         08-11785            SA630286         Packing         08-11275            SA534857         Gasket         08-11165            SA628556         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-111823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835 <td< td=""><td></td><td>Lock Plate</td><td></td><td></td></td<>		Lock Plate		
SA630286         Packing         08-11275            SA534857         Gasket         08-11165            SA628556         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241<	AN500-416-1	Screw	08-11172	
SA534857         Gasket         08-11165            SA628556         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SA629436         Gasket Alternator Crankcase	SL61173	Gasket	08-11785	
SA628556         Washer         08-11244            SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alterna		Ţ.		
SA634505         Nut 6 Point         08-11353            SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC				
SA22800         Intake Hose         08-10953            SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641				
SA632248         Seal         08-11320            SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675				
SA534857-S         Gasket         08-11166            SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675				
SL67193-S         Gasket         08-11823            SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675				
SA632310         Gasket Rocker Cover         08-11322            SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	SA534857-S		08-11166	
SA10200-A20         Millennium Cylinder         08-10908            SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	SL67193-S	Gasket	08-11823	
SL12032-SC         Gasket Set         08-11545            STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	SA632310			
STD-1196         Lycoming 1-1/2 Inch Intake Hose         08-00580            AS3578-038         O-Ring         08-10767            SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675		Millennium Cylinder	08-10908	
AS3578-038 O-Ring 08-10767 SL-STD-2090 Nut, Hex 08-12034 SA638172 Continental Bushing 08-00321 MS29512-8 O-Ring 08-10835 SA628488 Hydraulic Valve Lifter 08-11241 SL71481 Lycoming Cylinder Base Seal 08-03637 SA629436 Gasket Alternator Crankcase 08-11257 SL3601-SC Ring Set Single Cylinder 08-11751 SA641250 Crankshaft Seal 08-03675	SL12032-SC	Gasket Set	08-11545	
SL-STD-2090         Nut, Hex         08-12034            SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	STD-1196	Lycoming 1-1/2 Inch Intake Hose	08-00580	
SA638172         Continental Bushing         08-00321            MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	AS3578-038	O-Ring	08-10767	
MS29512-8         O-Ring         08-10835            SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	SL-STD-2090	Nut, Hex	08-12034	
SA628488         Hydraulic Valve Lifter         08-11241            SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	SA638172	Continental Bushing	08-00321	
SL71481         Lycoming Cylinder Base Seal         08-03637            SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	MS29512-8	O-Ring	08-10835	
SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	SA628488	Hydraulic Valve Lifter	08-11241	
SA629436         Gasket Alternator Crankcase         08-11257            SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675	SL71481	Lycoming Cylinder Base Seal	08-03637	
SL3601-SC         Ring Set Single Cylinder         08-11751            SA641250         Crankshaft Seal         08-03675				
SA641250 Crankshaft Seal 08-03675				

Superior P/N#	Description	Part No.	Price
MS13997-3	Key	08-10802	
SA200-T1	Gasket Set	08-10931	
SA24804	Nut	08-10972	
SA646277	Hydraulic Valve Lifter Exhaust	08-11432	
SA401893	Continental Exhaust Stud	08-03682	
SL383-B	Hexagon Nut	08-11768	
SL72075	Seal, Ring, O	08-11877	
MS21333-75	Clamp	08-10823	
SA530019	Continental Crank Oil Seal	07-12765	
SL31C-12	Lycoming Exhaust Stud	08-03636	
SA628109	Connecting Rod Nuts	08-11239	
SA630046	Piston Pins	08-11261	
SA520-T1	Gasket Set	08-11117	
SL13792	Lycoming Crankshaft Seal	08-00292	
SA633958-5	Seal	08-11350	
SA536379	Screw	08-11182	
SL3601-SC P	Ring Set Single Cylinder	08-11752	
SA652541	Nut 12 Point	08-11486	
SA530928	Continental Push Rod Gasket	08-00317	
SA641607	Seal, Push Rod Housing	08-11392	
SL68972	Gasket	08-11835	
SL13444-1	Piston Pin	08-11595	
SA536740	Seal, Intake	08-11184	
SA2437	Nut	08-10966	
SL-STD-208	Seal, Oil	08-12033	
SA470-T2	Gasket Set	08-11083	
SA24759	Gasket	08-10968	
MS29512-10	O-Ring	08-10832	
SA630365	Gasket	08-11277	
SL60592	Gasket	08-11779	
SA652947	Washer	08-11487	
SA629104	Counterweight Snap Ring	08-11249	
SA2000-SC	Continental Single Cylinder Ring Set		
AN737TW74	Clamp	08-10760	
SA643629	Plate, Crank	08-11424	
SA626140	Nut	08-11220	
SA530162	Gasket	08-11130	
MS21333-65	Clamp	08-10822	
SA626983	Gasket	08-11223	
MS90725-12	Bolt	08-10874	
SA646234	Gasket	08-11429	
SL15619	Gasket	08-11639	
SA630892	Gasket Neck	08-11292	
SL72711	O-Ring	08-11292	
SL14995	Spring	08-11629	
SL72091	Packing Resistant Oil Seal Ring	08-11880	
MS49005-6Z	Pipe Plug	08-11000	
SA530830	Piston Pin	08-12047	
SL13790A	Shaft, Rocker	08-11143	
SL-STD-425	Washer #10	08-11003	
SA626342	Gasket, Oil Cooler-To-Plate	08-11222	
SA22350	Gasket	08-11222	
SL13641	Magneto Drive Cushions	08-10944	
SA501867	Rocker Shaft Retaining Bolt Washer	08-11002	
SA22532	Crankshaft Bolts	08-11090	
SL71032	Bushing, Engine Support	08-10949	
SA646985	Seal	08-11654	
SA638125	Exhaust Stud - Rosan	08-03688	
SA636125 SA625303	Gasket	08-03686	
	Shaft, Rocker		
SA652984	·	08-11488	
SL12795	Gasket Millangium Cylinder	08-11578	
SL36006W-A2	Millennium Cylinder	08-11749	
SA642917-2	Intake Hose	08-11415	
SA5000-SC5	Piston Rings (For Steel Barrel)	08-11084	
SA535057	Gasket	08-11171	

**SEE OUR WEBSITE FOR COMPLETE SELECTION OF SUPERIOR PARTS** 

# **SUPERIOR AIR PARTS**

Superior P/N#	Description	Part No.	Price
	•		FIICE
SA52006-A22	Millennium Cylinder	08-11099	
SL-STD-2213	Crew	08-12039	
SA21361	Lock	08-10940	
SA539467	Piston Pin	08-11203	
SA537019	Screw	08-11186	
MS35756-8	Key	08-10859	
SA52006-A20	Millennium Cylinder	08-11098	
SA24122	Bushing	08-10964	
MS27769-01	Plug	08-10827	
SA3577	Gasket	08-10999	
SL12136	Bushing, Rubber	08-11566	
SL53E19600	Valve, Oil	08-11771	
SL68763A	Bearing, Crankshaft	08-11831	
SL11997	Lycoming Crankshaft Seal	08-03671	
SA626341	Gasket	08-11221	
SL11020			
-	Bearing	08-11521	
SA1000-SC	Single Cylinder Ring Set	653394	
SL11485	Shroud, Push	08-11525	
SA22344	Gasket	08-10943	
MS20823-6D	Elbow	08-10813	
SL61183	Gasket	08-11787	
MS29513-018	O-Ring	08-10836	
SL78290	Plunger Assembly	08-12007	
SL73857A	Lycoming Ring Oil	08-03694	
SL18101	Hose	08-11682	
MS9549-17	Washer	05-11791	
SA534743	Gasket	08-11163	
SA532200	Continental Cylinder Base Seal	08-03683	
SA537745	Gasket	08-11195	
SL68761	Tube Assembly	08-11830	
SA632372	Gasket, Cooler To Plate	08-11324	
SL74389	Bushing, Valve Rocker	08-11942	
MS29561-010	O-Ring	08-10842	
SA520129	Rocker Arm Bushing	08-11102	
SL68315	Gasket	08-11824	
-			
MS29561-012	O-Ring	08-10843	
SL14260	Oil Seal	08-11625	
MS29561-237	O-Ring	08-10851	
MS90725-14	Bolt	08-10876	
SA25135	Gasket	08-10980	
SA530162-S	Gasket, Rocker Cover	08-11131	
SL11625	Piston Pin Plugs	08-11530	
SA10200-A21	Millennium Cylinder	08-10909	
SA646605	Nut	08-11470	
SA5484	Gasket	08-11207	
SA40762	Cover, Valve	08-11056	
SA352058	Gasket	08-10988	
MS16625-208	Retaining Rings Camshaft	08-10806	
SA21477	Packing, Cylinder Base	08-10941	
SA641066	Continental Cylinder Base Seal	08-03689	
	-	<del> </del>	
SA5000-SC5	P10 Ring Set Single Cylinder	08-11086	
SA530658	Bushing	08-11142	
SA636465	Gasket	08-11359	
SL72566	Gear,Starter	08-11894	
SL31H-0.88	Bolt	08-11731	
SA539058	Washer	08-11202	
SA25102	Seal	08-10977	
SA530642	Gasket	08-11141	
SL77569	O-Ring	08-11996	
SA47006L-A2	Millennium Cylinder	08-11060	
		1	
SA530340	Gasket	08-11134	
AN932-2	Plug	08-10762	
SL-STD-1623	Helicoil	08-12027	
SA646846	Plunger Unit	08-11473	
	Body, Hydraulic	•	
SL72877		08-11902	
SA3610-SC	Piston Rings (For Steel Barrel)	08-11013	
SA530917	Crankcase Nose Seal	08-11146	
SA533355	Gasket	08-11159	
SL16711A	Crankshaft Bearing	08-11673	
	i -		
SA643873	Exhaust Valve	08-03680	
SA21007	Screw	08-10934	
SA530386	Bearing	08-17196	
_			

Superior P/N#	Description	Part No.	Price
SA36170-A1	Continental Bearing	08-17194	
SA352066	Gasket	08-10994	
SA550-T1	Gasket Set	08-11209	
SA5201-SC2	Ring Set	08-11103	
SL15F19957- H28SS	Push Rod Assembly Clamp	08-11651 08-10777	
MS9135-01	Gasket	08-10777	
MS9136-01	Gasket	08-10887	
SA360-T1	Gasket Set	08-11011	
SL12040-SC	Gasket Set	08-11559	
SL1691-C	Gasket	08-11680	
SL62869	Lycoming Cylinder Base Seal	08-03687	
SA35019	Gasket	08-10985	
SL5401-SC	Ring Set Single Cylinder	08-11772	
SL72312	Packing	08-11890	
MS90725-13	Bolt	08-10875	
SA24802	Key, Valve Spring Outer Retainer	08-10971	
SA537282 SL2351-SC	Gasket Ring Set-Si	08-11187 08-11705	
AS3578-011	O-Ring	08-11703	
SA24890-A5	Gasket Set	08-10974	
SL32006W-A2	Millennium Cylinder	08-16434	
SA352179	Gasket, Star	08-10998	
MM5SS	Drain Back Clam	08-10797	
SA5000-SC5	Ring S	08-11085	
SA641931-10	Thrubolt	08-11398	
SL32006W-A21P	Millennium Cylinder	08-16432	
SL18109A-S	Impeller Kit	08-11683	
SL74241A	Ring, Piston	08-11934	
SL31C-12 P0	Stud	08-11722	
SA35985	Gasket	08-11006	
SA47006S-A2	Millennium Cylinder	08-11062	
SA625958	Spring	08-11216	
SL1028-B	Ball	08-11509	
SL12034-SC SL12039-SC	Gasket Set Gasket Set	08-11549 08-11557	
SL18639	Lockplate	08-11684	
SL75439-1	Gasket Set	08-11966	
SA536410	Seal	08-11183	
SL19001A	Valve, Exhaust	08-11697	
SA537749	Gasket	08-11196	
SL73998A	Piston Ring	08-11923	
AS3578-210	O-Ring	08-10769	
SL74673A	Ring	08-11946	
SA10200-A22	Millennium Cylinder	08-10910	
SL61084	Spring	08-11783	
SL69371-1	Gasket Set	08-11840	
SA21284	Housing, Push Rod	08-10938	
SA530192	Bushing	08-11132	
SA629117-1	Rotocoil	08-11251	
SA6310884	Bolt	08-11299	
SA637837	Spring	08-11363	
SA649205 SL14815	Screw Gasket Set	08-11475 08-11627	
SL61499-1	Gasket Set		
MS29512-12	O-Ring	08-11792 08-10833	
MS29561-111	O-Ring	08-10845	
SA24764	Screw, Drive	08-10969	
SA52006-A23	Millennium Cylinder	08-11100	
SL73032	Gasket	08-11905	
SL74065	Packing Resis	08-11926	
M83248/1-14	O - Ring	08-10789	
SA4000-SC2	Ring Set	08-11018	
SL60096	Gasket	08-11774	
MS13998-3	Сар	08-10803	
MS21318-14	Drive Scre	08-10819	
SA642238	Gasket - Fuel Pump Adapter	08-11400	
SL-STD-1211	Expansion	08-12023	
M83248/1-12	O-Ring	08-10787	
SA535666	Screw	08-11175	
SA538185	Gasket	08-11198	
SA538304 P3	Push Rod	08-11199	

# GINE PARTS

	Ξ
INTAKE HOSES Lycoming 1-3/4" Intake Hose P/N 69603 Cont. #22800 Outer & Cont. #21185 Inner Hose (8 sets required for A-65 thru 0-300)P/N 08-03700 Cont. #22800 Outer Intake Hose P/N 22800 Cont. #21185 Inner Intake Hose P/N 07-03477	not use IO-
INTAKE GASKETS	65
Cont. #21327 (4) for A-65 only Ea. Cont. #22250 (4) for C-85 — 0-300 Ea.	Q
EXHAUST GASKETS Cont #21493 (08-05237) for A-65 thru 0-300 SS Ea. Cont. #632837 SS Ea. #77611 for 0-320 - not for H series SS Ea.	(
EXHAUST NUTS  Cont. #22022 (5/16-24) for A-65 thru 0-300 (8) Ea.  Cont. #MS20500-428 (1/4-28) for 0-470 (12) Ea.  Lyc. #STD1410 (5/16-18) Ea.	-
ROCKER BOX GASKETS Cont. #530162 for A-65 thru 0-300 (4 required)	Paris Paris
ROCKER BOX COVER SCREWS  Cont. #535091 (24) Ea.  Lyc. #STD1925 (24) Ea.	(
CYLINDER BASE SEALS Cont. #21477 for A-65 thru 0-200 (4) Ea.	Tap Lyc
MAGNETO FLANGE GASKET Cont. #535324 Ea. Lycoming #62224 Ea.	Cor eac -10
TACH OIL SEAL  Cont. #642714 (was #640087) for A-65 thru 0-300	scr -14 -22 -28

Lvc. #LW14260 for 0-235, 0-290 ..... ---



# CARBURETOR GASKETS

For A-65 thru 0-200 Cont. #21051 (Top) ..... Ea. Cont. #21323 (Bottom) ...... Ea.



For Lycoming 0-235, 0-290. P/N 60886.....-



Replace the original cork gaskets which come standard on Lycoming 0-235, 0-320 and 0-360 engines. NOT FAA approved. For experimental aircraft only...... P/N 08-01187 .....



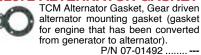
#### TCM GASKET

TCM Gasket for Magneto & Access Drive...... P/N 08-07531 ...... ---

## ANGLED VALVE "IO" SERIES LYCOMING VALVE COVER GASKETS

These gaskets are for the fuel injected "IO" series, sometimes referred to as the Angle Valve cylinder Lycoming They are not FAA approved and are not manufactured under a PMA. These are sed on Angled valve Lycoming engines IO-360, -540, IO-720 ......P/N 08-05882 .

#### 52072 ALTERNATOR GASKET



## 649984 ALTERNATOR **GASKET**

TCM Alternator Gasket replaces Continental Motors: 352066, 632560...... P/N 07-00768.....



#### **PUSH ROD SEALS**

Continental #539840 for A-65 thru 0-200 (8) ..... **--- Ea.** 



#### TCM OIL SUMP PLUG 532432

Cont. #532432 Oil Sump Plug......

## **CRANKSHAFT OIL SEALS**

Cont. #530019 for A-65 thru 0-200, Flanged Shaft ..... Cont. #24321 for A-65 and C-85,

per Shaft..... 



#### AN900 COPPER **GASKETS**

ont. Engine Applications, A-65 thru 0-200 (1) ach:

oil
a.
a.
a.
a.

#### AERO-SEAL HOSE CLAMPS

Aero-Seal Clamps for Cont. Intake Hoses. P/N QS100-M32W ..... **--- Ea.** 



#### PROP GOVERNOR **GASKET**

P/N 07-00878 ..... ---



#### RING HOSE CLAMPS Cont. #536388 (16) Required --- Ea.



Cont. #22387 for A-65, C-85, C-90 except C-90-14F (8) Reg'd......--- Ea. Lyc. #60883 for 0-235 and 0-290, 7/8" hole (8) Reg'd .......P/N 60883 .......-- Ea. Lyc. #71032 for 0-320 with 1" hole (8) Req'd ......P/N 71032 ......--- Ea. Lycoming, FAA Approved. Replaces #71032. Set of 8......P/N 71032.....

#### **ENGINE MOUNT WASHERS**

Cont. #21530 for A-65, C-85, C-90 except C-90-14F (8) Req'd ...... --- Ea. Lyc #STD619 for 0-235 thru 0-320 (8) Req'd.....-Ea.

## **CRANKSHAFT SEAL** LW11997

LW11997 Crankshaft Seal. Spring is impregnated in the gasket 4-04. P/N 08-11997 .....------

## LYCOMING PARTS TO CONVERT 0-235 WITH SPIN ON **OIL FILTER TO OIL SCREEN**

Oil Pressure Screen Housing P/N 68974 Oil Screen......P/N 62817 .....----Oil Screen Housing Gasket P/N 61173... FOR OIL COOLER INSTALLATION ADD: Spring ......P/N 69436 .....-Plunger ......P/N 62415 ..... ---Gasket ......P/N AN900-10 ..... Cont. Oil Screen ... P/N 08-01544 .....

OIL COOLER PARTS SHOWN ABOVE NOT **USED WITH THERMAL VALVE ASSY.** 

## GENERATOR ATTACHING PARTS FOR CONT. C85, C90 & 0-200



Item	Fact
Oil Seal	<b></b> -
Attaching 653982 Retainer	<b></b> -
Sleeve	<b></b> -
Gear	<b></b> -
Slotted Nut	
Generator Gasket	
s sold as a pair. If only one	
ed, order P/N 08-06218	<del></del> -
	Sleeve

#### **ENGINE MOUNTING PARTS FOR** CONT. C-90-14F & O-200 ONLY



				Price
Ref.	P/N	Item	Qty.	Each
#16	328555-16	6Hose	(4)	<b></b>
#2	530627 .	Spacer	(4)	
#3	530626 .	Seat	(8)	<b></b>
#4	530740 .	Bushing	(8)	
		Washer		
		Bolt		
	AN310-6	Nut	(4)	
M:		83Pin		



Lycoming37A19773-376 (Alt.)	
Lycoming37B19774-374 (Gen.)	
Continental539547-31.19	
Piper PA28/PA32	
P/N 05-06877	



## 24031 VALVE **SPRING**

Continental Inner Valve Spring Used on C90 & O-200 Engines P/N 07-24031..... ---

# **ENGINE PARTS**

#### **CONTINENTAL ENGINE PARTS**

CONTINENTAL C-85 Price Each	
<u>C-85</u> <u>Price Each</u> 639640 Bearing set, rod (2 req.)	Price Each 539467 Piston pin
21477 Cyl base seal	·
530917 Crankshaft seal taper	SA534610 Push rod packing
SA402151 Ex. stud	649226 Ring set, steel barrel
22022 Ex. nut	649226CP Ring set, chrm barrel
646612 Exhaust Valve	SSR539740 Rocker shaft
653728 Gasket, rocker	637837 Spring, valve, outer
632837 Gasket, no-blow	631521 Springs, valve, inner
22250 Gasket, intake	SA539740 Rocker Shaft
646539-A1 Gasket set, moh	IO-470 ANGLE HEAD
641792 Intake Valve (30 degree)	SSR532200 Cyl base seal
530019 Nose seal, flange sft	•
530830 Piston pin	PA641250 Crankshaft seal
539840 Push rod packing	SA402151 Ex. stud
649632-A1 Single Cylinder Ring Set	Ex. nut MS20500-428
<u>O-200</u>	643967 Ex. nut
627246-A1 Bearing set, main	SA643873 Exhaust Valve
639640 Bearing set, rod (2 req.)	653191 Gasket, rocker, angle head
21477 Cyl base seal	628260 Gasket, no-blow
SA402151 Ex. stud	SSR536413 Gasket, intake
22022 Ex. nut	642917-1 Intake hose
646612 Exhaust Valve	
530162 Gasket, rocker	646283 Intake Valve
627429 Gasket, no-blow	539467 Piston pin
22250 Gasket, intake	SA534610 Push rod packing
646539-A1 Gasket set, moh	SSR539740 Rocker shaft
22800 Intake hose	SA539740 Rocker Shaft
641792 Intake Valve (30°)	IO-520 TSIO-520
530830 Piston pin	630826 Bearing set, rod
539840 Push rod packing	653888 Camshaft follower tappet
649632-A1 Single Cylinder Ring Set	SSR641066 Cyl base seal
653394 Single Cylinder ring set	PA641250 Crankshaft seal
<u>O-300</u>	SSR401893 Ex. stud
639640 Bearing set, rod (2 req.)	
21477 Cyl base seal530917 Crankshaft seal	SSR638125 Ex. stud, rosan
SA402151 Ex. stud	Ex. nut MS20500-428
22022 Ex. nut	643967 Ex. nut
646612 Exhaust Valve	SA643873 Exhaust Valve
530162 Gasket, rocker	653191 Gasket, rocker
627429 Gasket, no-blow	SSR536413 Gasket, intake
22250 Gasket, intake	642917-1 Intake hose
6465417-A1 Gasket set, moh	646283 Intake Valve
21185 Intake hose	654850 Piston IO-520
646255 Piston	630046 Piston pin
530830 Piston pin	SA534610 Push rod packing
539840 Push rod packing	
649632-A1 Single Cylinder Ring Set	652148 Ring set, steel cyl IO-520
625958 Springs outer	SA539740 Rocker Shaft
O-470 ANGLE HEAD	CONTINENTAL ENGINE BELTS
653888 Camshaft follower tappet	539547-30.00
SSR532200 Cyl base sealPA641250 Crankshaft seal	539547-31.19
SSR401893 Ex. stud	539547-32.00
Ex. nut MS20500-428	539547-35.00
643967 Ex. nut	642759
SA643873 Exhaust Valve	37A19773-376 (76026)
653191 Gasket, rocker, angle	
SSR536413 Gasket, intake	37A19773-382 (74519)
642917-1 Intake hose	37B19774-325 (60886)
646263 Piston	37B19774-341 (71579)

**AIRCRAFT SPRUCE CARRIES THE COMPLETE CONTINENTAL MOTORS** PRODUCT LINE. SEE OUR WEBSITE FOR PART NUMBERS AND PRICING.

#### LYCOMING ENGINE PARTS

O-235 L.N SERIES         Price Each         Price Each           98737 Bearing, rod, 8 req.         69603 Intake hose 1-3/4         —           71105 Camshaft follower tappet.         75089         —           SSR62869 Cyl base seal         75089         —           STD-2180 Cyl drain hose         Piston, high compression         —           LW-11997 Crankshaft seal         75413         —           SSR10-12 Ex. stud         —         Piston, low compression         —           STD-1410 Ex. nut.         —         SSRLW-13464 Piston pin         —           41271         SSRLW-1346661         —         Push rod packing         —           77611 Gasket, no-blow         —         74241 Ring, compression         —           1973 Gasket, finake         —         seel cylinder         —           SSR1049-1         SSR73857         —         SSR1049-1         —           Gasket set, moh         —         Ring, oil cit steel cylinder         —         SSR714819           SSR1049-1         SSR75857         —         SSR1049-1         —         SSR75857           Gasket set, moh         —         Ring, oil cit steel cylinder         —         SSR73857           SSR1049-1         SSR75857         —	LYCOMING EN	
73938 Intake Valve	O-235 L,N SERIES Price Each	Price Each
STD-2180 Cyl drain hose		
STD-2180 Cyl drain hose         — Piston, high compression           LW-11997 Crankshaft seal         — 75413           SSR31C-12 Ex. stud         — Piston, low compression           STD-1410 Ex. nut         — SSRLW-13444 Piston pin           41271         SSRLW-18661           Fuel pump, mechanical         — Push rod packing           77611 Gasket, no-blow         — 74241 Ring, compression           71973 Gasket, intake         — steel cylinder           SSR1W-1946         — SSR373857           Gasket set, moh         — Ring, oil cdl steel cylinder           SSR5TD-1196         SL111997 Crankshaft Seal           Intake hose 1-1/2"         — SL66224 Lyc. Carb. Gasket           SSR1W-13445 Piston pin         — 66224 Lyc. Carb. Gasket           68028 Piston pin plug         — 66224 Lyc. Carb. Gasket           SSRLW-18661         —           Push rod packing         — Q.10-360           SL60592 Carb. Gaslet         — SSA72877 Camshaft follower           Q-290         — SSR71481 Cyl base seal           SSR71481 Cyl base seal         — SSR71481 Cyl base seal           SSR31C-12 Ex. stud         — STD-1410 Ex. nut           41271         — Extra Stud         — STD-1410 Ex. nut           41271         — Extra Stud         — T1410 Ex. nut     <	71105 Camshaft follower tappet	
LW-11997 Crankshaft seal	SSR62869 Cyl base seal	75089
SR31C-12 Ex. stud	STD-2180 Cyl drain hose	Piston, high compression
STD-1410 Ex. nut.         —         SSRLW-13444 Piston pin.         —         41271         SSRLW-13661         —         Push rod packing.         —         77611 Gasket, no-blow.         —         74241 Ring, compression         —         77241 Ring, compression         —         77241 Ring, compression         —         578149-1         —         SSR73857         —         SSR5TW-1396         —         SL11997 Crankshaft Seal         —         —         —         —         SSR5TW-13445 Piston pin.         —         66224 Lyc. Carb. Gasket         —         —         —         SSRLW-13445 Piston pin.         —         66224 Lyc. Carb. Gasket         —         —         SSRLW-1345 Piston pin piug.         —         66224 Lyc. Carb. Gasket         —         —         SSRLW-13465 Piston pin piug.         —         66224 Lyc. Carb. Gasket         —         SSRLW-13661         —         —         —         9         —         9         2.059 Dipstick Tube Base Gasket         —         SSRLW-136661         —         —         9         9         —         9         2.0692 Piston pin piug.         —         0         2.099         —         SSR71481 Cyl base seal.         —         9         9         SSR71481 Cyl base seal.         —         9         9         SSR71481 Cyl base seal.         —		75413
SSRLW-18661   Fuel pump, mechanical   Push rod packing   Push rod pa	SSR31C-12 Ex. stud	· ·
Push rod packing	STD-1410 Ex. nut	SSRLW-13444 Piston pin
77611 Gasket, no-blow         74241 Ring, compression           71973 Gasket, intake         steel cylinder           SSR61499-1         SSR73857           Gasket set, moh         Ring, oil ctl steel cylinder           SSRSTD-1196         SL11997 Crankshaft Seal           Intake hose 1-1/2"         SL66824 Carb. Gasket           SSRLW-13445 Piston pin         66224 Lyc. Carb. Gasket           SSRLW-18661         RG-72059 Dipstick Tube Base Gasket           Push rod packing         SR71481 Cyl base seal           SL60592 Carb. Gaslet         SSR71481 Cyl base seal           69373 Bearing, Rod         LW-11997 Crankshaft seal           69373 Bearing, Rod         LW-11997 Crankshaft seal           SSR71481 Cyl base seal         SSR71481 Cyl base seal           SSR71481 Cyl base seal         SSR71481 Evl base seal           SSR71481 Cyl base seal         SSR31C-12 Ex. stud           SSR71481 Cyl base seal         SSR71481 Evl pump, mech           SSR71481 Cyl base seal         SSR71481 Evl pump, mech           SSR71481 Cyl base seal         SSR71481 Evl pump, mech           Fuel pump, mechanical         77611 Gasket, no-blow           77971 Gasket, intake         SSR75439-1           SSR83031-1         Gasket set, moh           Gasket set, moh         G9603 Intak	41271	
T1973 Gasket, intake	Fuel pump, mechanical	Push rod packing
SSR1499-1   SSR73857   Gasket set, moh	77611 Gasket, no-blow	74241 Ring, compression
Gasket set, moh	71973 Gasket, intake	steel cylinder
SSRSTD-1196   SL11997 Crankshaft Seal		
Intake hose 1-1/2"	Gasket set, moh	Ring, oil ctl steel cylinder
SSRLW-13445 Piston pin         — 66224 Lyc. Carb. Gasket         — 68028 Piston pin plug         — RG-72059 Dipstick Tube Base Gasket           SSRLW-18661         — O.IO-360         — SSA72877 Camshaft follower         — O.290         — SSA72877 Camshaft follower         — O.290         — SSR71481 Cyl base seal         — SSR71481 Cyl base seal         — O.290         — SSR31C-12 Ex. stud         — SSR31C-12 Ex. stud         — SSR31C-12 Ex. stud         — STD-1410 Ex. nut         — STD-1410 Ex. nut         — STD-1410 Ex. nut         — STD-1410 Ex. nut         — W-19001 Exhaust Valve         — O.290	SSRSTD-1196	
68028 Piston pin plug.         RG-72059 Dipstick Tube Base Gasket           SSRLW-18661         —           Push rod packing.         —           Q-290         SSA72877 Carnshaft follower           SSR71481 Cyl base seal.         —           SSR71481 Cyl base seal.         —           SSR71481 Cyl base seal.         —           SSR31C-12 Ex. stud.         —           SSR31C-12 Ex. stud.         —           STD-1410 Ex. nut.         —           41271         62B26931 Fuel pump, mech.           Fuel pump, mechanical.         —           77611 Gasket, no-blow.         —           71973 Gasket, intake.         —           71973 Gasket, intake.         —           71973 Gasket, intake.         —           SSRSTD-1196         75089           Intake hose 1-1/2"         —           —         Piston, high compression.           —         —           118661         Push rod packing.           —         —           11862         —           118661         Push rod packing.           11862         —           11963         —           11864         Push rod packing.           <	Intake hose 1-1/2"	
SSRLW-18661	SSRLW-13445 Piston pin	66224 Lyc. Carb. Gasket
Push rod packing	68028 Piston pin plug	RG-72059 Dipstick Tube Base Gasket
SSA72877 Camshaft follower   SSA72807 Camshaft follower   SSR71481 Cyl base seal   SSR71481 Cyl base seal   SSR71481 Cyl base seal   SSR31C-12 Ex. stud	SSRLW-18661	
0-290         SSR71481 Cyl base seal         —           69373 Bearing, Rod         —         LW-11997 Crankshaft seal         —           SSR31C-12 Ex. stud         —         SSR31C-12 Ex. stud         —           SSR31C-12 Ex. stud         —         STD-1410 Ex. nut         —           41271         62B26931 Fuel pump, mech         —           Fuel pump, mechanical         —         77611 Gasket, no-blow         —           77611 Gasket, no-blow         —         71973 Gasket, intake         —           71973 Gasket, intake         —         SSR75439-1         —           SSR69371-1         Gasket set, moh         —           Gasket set, moh         —         —         9603 Intake hose 1-3/4"         —           SSRSTD-1196         75089         —         Nather hose 1-3/4"         —           SSRSTD-1196         75089         —         Piston, high compression         —           Intake Valve 73938.         —         SSRLW-18661         —         —           Push rod packing.         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —	Push rod packing	
SSR71481 Cyl base seal	SL60592 Carb. Gaslet	SSA72877 Camshaft follower
SSR71481 Cyl base seal         —         SSR31C-12 Ex. stud         —           SSR31C-12 Ex. stud         —         STD-1410 Ex. nut         —           STD-1410 Ex. nut         —         LW-19001 Exhaust Valve         —           41271         62B26931 Fuel pump, mech.         —           77611 Gasket, no-blow         —         77611 Gasket, no-blow         —           77973 Gasket, intake         —         71973 Gasket, intake         —           71973 Gasket, intake         —         SSR75439-1         —           Gasket set, moh         —         69603 Intake hose 1-3/4"         —           SSRSTD-1196         75089         —           Intake hose 1-1/2"         —         Piston, high compression         —           Intake Valve 73938         —         SSRLW-18661         —           Push rod packing         —         Piston, high compression         —           62916 Ring,         —         Piston, bigh compression         —           62916 Ring,         —         SSR73857         —           69401 Ring,         —         SL66224 Carb. Gasket         —           69401 Ring,         —         SL66224 Carb. Gasket         —           98771481 Cyl base seal         <	<u>O-290</u>	SSR71481 Cyl base seal
SSR31C-12 Ex. stud         STD-1410 Ex. nut         —           STD-1410 Ex. nut         —         LW-19001 Exhaust Valve         —           41271         62B26931 Fuel pump, mech         —           Fuel pump, mechanical         —         77611 Gasket, no-blow         —           77611 Gasket, no-blow         —         77973 Gasket, intake         —           71973 Gasket, intake         —         SSR75439-1         —           SSR69371-1         Gasket set, moh         —         —           SSRSTD-1196         75089         —         —           Intake hose 1-1/2"         —         Piston, high compression         —           Intake Valve 73938         —         SSRLW-18661         —         —           Push rod packing         —         —         —         —           SSRLW-18661         Push rod packing         —         —         —           Push rod packing         —	69373 Bearing, Rod	LW-11997 Crankshaft seal
STD-1410 Ex. nut.         LW-19001 Exhaust Valve           41271         62B26931 Fuel pump, mech.           Fuel pump, mechanical	SSR71481 Cyl base seal	SSR31C-12 Ex. stud
41271       62B26931 Fuel pump, mech.       —         Fuel pump, mechanical       —       77611 Gasket, no-blow       —         77611 Gasket, no-blow       —       71973 Gasket, intake       —         71973 Gasket, intake       —       SSR75439-1       —         SSR69371-1       Gasket set, moh       —       —         Gasket set, moh       —       —       —         SSRTD-1196       75089       —       —         Intake hose 1-1/2"       —       Piston, high compression       —         Intake Valve 73938       —       SSRLW-18661       —       —         SSRLW-18661       Push rod packing       —       —       —         Push rod packing       —       —       —       —       —         62916 Ring       SSR73857       —<	SSR31C-12 Ex. stud	STD-1410 Ex. nut
Fuel pump, mechanical         77611 Gasket, no-blow            77611 Gasket, no-blow         71973 Gasket, intake            71973 Gasket, intake          71973 Gasket, intake            SSR69371-1         Gasket set, moh            Gasket set, moh          69603 Intake hose 1-3/4"            SSRSTD-1196         75089            Intake hose 1-1/2"          Piston, high compression            Intake Valve 73938          SSRLW-18661          Push rod packing            SSRLW-18661         Push rod packing	STD-1410 Ex. nut	LW-19001 Exhaust Valve
77611 Gasket, no-blow         71973 Gasket, intake	41271	62B26931 Fuel pump, mech
71973 Gasket, intake         —         SSR75439-1           SSR69371-1         Gasket set, moh         —           Gasket set, moh         —         69603 Intake hose 1-3/4"         —           SSRSTD-1196         75089         —           Intake hose 1-1/2"         —         Piston, high compression         —           Intake Valve 73938         —         SSRLW-18661         —           Push rod packing         —         74241 Ring, comp steel cyl         —           62916 Ring,         SSR73857         —           compression steel cylinder         —         Ring, oil ctk steel cyl         —           69401 Ring,         SL66224 Carb. Gasket         —           69373 Bearing, rod         —         SSR71481 Cyl base seal         —           SSR71481 Cyl base seal         —         3792 Crankshaft seal         —           SSR31C-12 Ex. stud         —         SSR31C-12 Ex. stud         —           SSR31C-12 Ex. stud         —         STD-1410 Ex. nut         —           LW-19901 Exhaust Valve         —         77611 Gasket, no-blow         —           SSR71569-1 Gasket set, moh         —         SSR71569-1 Gasket set, moh         —           LYCOMING CYLINDERS         69603 Intake hose 1-3/4"<	Fuel pump, mechanical	77611 Gasket, no-blow
SSR69371-1         Gasket set, moh            Gasket set, moh          69603 Intake hose 1-3/4"            SSRSTD-1196         75089            Intake hose 1-1/2"          Piston, high compression            Intake Valve 73938          SSRLW-18661 <td< td=""><td>77611 Gasket, no-blow</td><td>71973 Gasket, intake</td></td<>	77611 Gasket, no-blow	71973 Gasket, intake
Gasket set, moh         —         69603 Intake hose 1-3/4"         —           SSRSTD-1196         75089         —           Intake hose 1-1/2"         —         Piston, high compression         —           Intake Valve 73938         —         SSRLW-18661         —           SSRLW-18661         Push rod packing         —           Push rod packing         —         74241 Ring, comp steel cyl         —           62916 Ring,         SSR73857         —           compression steel cylinder         —         Ring, oil ctk steel cyl         —           69401 Ring,         SL66224 Carb. Gasket         —           69373 Bearing, rod         —         SSR71481 Cyl base seal         —           SSR71481 Cyl base seal         —         13792 Crankshaft seal         —           SSR31C-12 Ex. stud         —         SSR31C-12 Ex. stud         —           SSR31C-12 Ex. stud         —         STD-1410 Ex. nut         —           LW-19901 Exhaust Valve         —         77611 Gasket, no-blow         —           SL60592 Carb. Gasket         —         71973 Gasket, intake         —           LYCOMING CYLINDERS         69603 Intake hose 1-3/4"         —           LW12988 O540/HIO360         75089 Piston	71973 Gasket, intake	SSR75439-1
SSRSTD-1196         75089           Intake hose 1-1/2"         — Piston, high compression           Intake Valve 73938.         — SSRLW-18661           SSRLW-18661         Push rod packing           Push rod packing         — 74241 Ring, comp steel cyl           62916 Ring,         SSR73857           compression steel cylinder         — Ring, oil ctk steel cyl           69401 Ring,         SL66224 Carb. Gasket           0il control steel cyl         — Q.IO-540           69373 Bearing, rod         — SSR71481 Cyl base seal           SSR71481 Cyl base seal         — 13792 Crankshaft seal           LW-11997 Crankshaft seal         — SSR31C-12 Ex. stud           SSR31C-12 Ex. stud         — STD-1410 Ex. nut           STD-1410 Ex. nut         L W15473 Fuel pump, mech           LW-19001 Exhaust Valve         — 77611 Gasket, no-blow           SL60592 Carb. Gasket         — 71973 Gasket, intake           SSR71569-1 Gasket set, moh         —           LYCOMING CYLINDERS         69603 Intake hose 1-3/4"           LW12988 O540/HIO360         75089 Piston           new ass'y         — 60828 Piston pin plugs           — 74241 Ring, comp steel cyl         — 74241 Ring, comp steel cyl           — 7320         SSR73857           71973 Gasket, intake<	SSR69371-1	Gasket set, moh
Intake hose 1-1/2"	Gasket set, moh	69603 Intake hose 1-3/4"
SSRLW-18661	SSRSTD-1196	75089
SSRLW-18661         Push rod packing	Intake hose 1-1/2"	Piston, high compression
Push rod packing.	Intake Valve 73938	SSRLW-18661
62916 Ring,       SSR73857         compression steel cylinder       Ring, oil ctk steel cyl.         69401 Ring,       SL66224 Carb. Gasket         oil control steel cyl.          69373 Bearing, rod.       SSR71481 Cyl base seal         SSR71481 Cyl base seal          LW-11997 Crankshaft seal       SSR31C-12 Ex. stud         SSR31C-12 Ex. stud          STD-1410 Ex. nut       LW15473 Fuel pump, mech.         LW-19001 Exhaust Valve          SL60592 Carb. Gasket          SR71569-1 Gasket set, moh          SSR71569-1 Gasket set, moh          LW15318 O320H new ass'y          LW12988 O540/HIO360       75089 Piston         new ass'y          60828 Piston pin plugs          74241 Ring, comp steel cyl.          9-320       SSR73857         71973 Gasket, intake          SSRSTD-1196       SL66224 Carb. Gasket	SSRLW-18661	Push rod packing
compression steel cylinder         — Ring, oil ctk steel cyl.         — SL66224 Carb. Gasket.         — G9401 Ring, oil control steel cyl.         — O,I0-540           69373 Bearing, rod.         — SSR71481 Cyl base seal.         — SSR71481 Cyl base seal.         — SSR71481 Cyl base seal.         — LW-11997 Crankshaft seal.         — SSR31C-12 Ex. stud.         — SSR31C-12 Ex. stud.         — STD-1410 Ex. nut.         — STD-1410 Ex. nut.         — LW15473 Fuel pump, mech.         — STD-1410 Ex. nut.         — CW15473 Fuel pump, mech.         — T7611 Gasket, no-blow.         — T7973 Gasket, intake.         — T973 Gasket, intake.         — T973 Gasket, intake.         — T973 Gasket set, moh.	Push rod packing	74241 Ring, comp steel cyl
69401 Ring, oil control steel cyl	62916 Ring,	SSR73857
oil control steel cyl.         — O,IO-540           69373 Bearing, rod.         — SSR71481 Cyl base seal.         — SSR71481 Cyl base seal.           LW-11997 Crankshaft seal.         — SSR31C-12 Ex. stud.         — SSR31C-12 Ex. stud.           SSR31C-12 Ex. stud.         — STD-1410 Ex. nut.         — CTP-1410 Ex. nut.           LW-19001 Exhaust Valve.         — 77611 Gasket, no-blow.         — T1973 Gasket, intake.           SSR71569-1 Gasket set, moh.         — SSR71569-1 Gasket set, moh.         — T3938 Intake hose 1-3/4".           LW15318 O320H new ass'y.         — 73938 Intake Valve.         — T4241 Ring, comp steel cyl.           New ass'y.         — 60828 Piston pin plugs.         — 74241 Ring, comp steel cyl.           O-320         SSR73857           71973 Gasket.         — Ring, oil ctl, steel cyl.         — SSRSTD-1196	compression steel cylinder	Ring, oil ctk steel cyl
69373 Bearing, rod.       —       SSR71481 Cyl base seal.       —         SSR71481 Cyl base seal.       —       13792 Crankshaft seal.       —         LW-11997 Crankshaft seal.       —       SSR31C-12 Ex. stud.       —         SSR31C-12 Ex. stud.       —       STD-1410 Ex. nut.       —         STD-1410 Ex. nut.       —       LW15473 Fuel pump, mech.       —         LW-19001 Exhaust Valve.       —       77611 Gasket, no-blow.       —         SL60592 Carb. Gasket.       —       71973 Gasket, intake.       —         SSR71569-1 Gasket set, moh.       —       —         LYCOMING CYLINDERS       69603 Intake hose 1-3/4".       —         LW15318 O320H new ass'y.       —       73938 Intake Valve.       —         LW12988 O540/HIO360       75089 Piston.       —         new ass'y.       —       60828 Piston pin plugs.       —         74241 Ring, comp steel cyl.       —         O-320       SSR73857         71973 Gasket, intake.       —       Ring, oil ctl, steel cyl.       —         SSRSTD-1196       SL66224 Carb. Gasket.       —	69401 Ring,	SL66224 Carb. Gasket
SSR71481 Cyl base seal	oil control steel cyl	<u>O,IO-540</u>
LW-11997 Crankshaft seal	69373 Bearing, rod	SSR71481 Cyl base seal
SSR31C-12 Ex. stud	SSR71481 Cyl base seal	13792 Crankshaft seal
STD-1410 Ex. nut       —       LW15473 Fuel pump, mech.       —         LW-19001 Exhaust Valve       —       77611 Gasket, no-blow       —         SL60592 Carb. Gasket       —       71973 Gasket, intake       —         SSR71569-1 Gasket set, moh       —       —         LW15318 O320H new ass'y       —       73938 Intake Valve       —         LW12988 O540/HIO360       75089 Piston       —         new ass'y       —       60828 Piston pin plugs       —         74241 Ring, comp steel cyl       —         O-320       SSR73857         71973 Gasket, intake       —       Ring, oil ctl, steel cyl       —         SSRSTD-1196       SL66224 Carb. Gasket       —	LW-11997 Crankshaft seal	SSR31C-12 Ex. stud
LW-19001 Exhaust Valve	SSR31C-12 Ex. stud	STD-1410 Ex. nut
SL60592 Carb. Gasket	STD-1410 Ex. nut	LW15473 Fuel pump, mech
SSR71569-1 Gasket set, moh	LW-19001 Exhaust Valve	77611 Gasket, no-blow
LYCOMING CYLINDERS       69603 Intake hose 1-3/4"	SL60592 Carb. Gasket	71973 Gasket, intake
LW15318 O320H new ass'y 73938 Intake Valve LW12988 O540/HIO360 75089 Piston 60828 Piston pin plugs 74241 Ring, comp steel cyl 74241 Ring, comp steel cyl SSRSTD-1196 SL66224 Carb. Gasket		
LW12988 O540/HIO360 75089 Piston  new ass'y	LYCOMING CYLINDERS	
new ass'y	LW15318 O320H new ass'y	73938 Intake Valve
74241 Ring, comp steel cyl	LW12988 O540/HIO360	75089 Piston
O-320       SSR73857         71973 Gasket, intake       —         SSRSTD-1196       SL66224 Carb. Gasket	new ass'y	
71973 Gasket, intake Ring, oil ctl, steel cyl SSRSTD-1196 SL66224 Carb. Gasket		74241 Ring, comp steel cyl
SSRSTD-1196 SL66224 Carb. Gasket	<u>O-320</u>	SSR73857
	71973 Gasket, intake	Ring, oil ctl, steel cyl
Intake hose 1-1/2	SSRSTD-1196	SL66224 Carb. Gasket
	Intake hose 1-1/2	

**AIRCRAFT SPRUCE CARRIES THE COMPLETE LYCOMING** PRODUCT LINE. SEE OUR WEBSITE FOR PART NUMBERS AND PRICING.

# NGER AIR FIL



#### **CHALLENGER AVIATION HIGH-FLOW AIR** FILTER W/ K&N FILTER MEDIA

Features & Benefits of Prime air filters: • 40% - 50% better airflow • Can be washed and serviced up to 25 times • Increase horse power 2%-4% • Save money and improve engine efficiency • FAA-PMA approved • Properly serviced, can be used to TBO of an engine • Ecologically sound · Better takeoff and climb-out performance · Fire retardant · Faster airspeed and/or better fuel consumption · Have been used on high performance vehicles for 40yrs • Accordion fold design provides up to 5 times the filtering surface of non-pleated designs. PART NUMBERS WITH A -1 INCLUDE GREASE.

Model	Application	Installation	Part No.	Price
	Aero Commander - A-9, A9A, A9B	Brackett BA-104 Fram CA-161PL	08-00721-1	
CP-1150	Aeronca - S65, S65CA, 7AC, 7ACA, 7 BCM(L-16A) ARMY, 7CCM(6-16B) ARMY, 7DC, 7EC, 7FC, 7JC, 7ECA, 7GCAA, 7GCBC, 7KC, 7KCAB, S7AC, S7CCM, S7DC, S7EC P/N CP-3274 is the installation kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	
CPE-1957	Aeronca - 7GC, 7GCA, 7HC, 7GCB, 7GCBA, 7KC	Donaldson P10-4145, Fram CA-161-PL, Air Maze 13203	08-00721-1	
CP-2004	Beech Baron - 95-C55 S/N TE-1 thru TE-451 except TE-50, 95-C55A S/N TE-1 Thru TE-451 Except TE-50, D55 S/N TE-452 Thru TE-492, D55A S/N TE-452 Thru TE-492, E55 S/N TE-768 Thru TE-1079, E55A S/N TE-768 Thru TE-1079, 58 S/N TH1-TH740 No sealing grease or gasket required for this application.	Donaldson P12-7996, Air Maze 121128-2, Brackett BA-6210-1	08-01024	
CPE-1957	Beech Musketeer - A23A, A23, A23-24, B23, 23	Brackett BA-104, Beech 169-3	08-07101	
CP-1182	Bellanca - 14-19-3-A, 17-30 P/N CP-3276 Is the install kit. Use P/N CP-2602 To replace gasket at annual.	Brackett BA-8110	08-00870	
CPE-1957	Bellanca - 17-30A	Brackett BA-104	08-00721-1	
	Brantly B2B		08-00721-1	
CP-1150	Cessna - 120, 140, 150, 150A-M, A150K, A150L, A150M, 152, A152 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Donaldson P10-7150, Cessna C294510- 0201	08-00843	
CP-1172	Cessna - 170, 170A, 170B, 172, 172A-G, H, I, K, L, M, N, P, Q P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Cessna C294510- 0301, Donaldson P10-7172, Brackett BA-5110	08-00902	
CPE-1173	Cessna - 172R, S	Donaldson P198281, Fram 3559	08-00894-1	
CP-1182	Cessna - 180, (exception 1953-1955 models), 180A-H, 180J-K, 182, 182A-H, 182J-R, T182T S/N T18208001 AND ON, 182T S/N 18280945 AND ON, 185, 185A-E, A185E, A185F P/N CP-3276 Is the install kit. Use P/N CP-2602 To replace gasket at annual.	Cessna 0750038-1-4, Donaldson P10-6150, Brackett BA-8110	08-00870	
CPE-1202	Cessna - 182S, S/N >s 18280001 thru 18280944	Donaldson P19-8290, Fram CA3717	08-00903-1	
CPE-1178	Cirrus - SR-20, SR-22 No sealing grease required for this application.	Brackett BA-111	08-01221	
CPE-2175	Cirrus - SR-22 with STC SA10925SC	BA-111	08-07404	
CP-2175	Great Lakes - 2T1A-1, 2T1A-2	12009, P57A, AC- 6486197 BA-101	08-06282	
CP-4423	Enstrom Helicopter - F-28A	CA151PL, A86A, AFP5	08-07388-1	
CPE-1040	Grumman - AG CAT G164B	Brackett BA-105	08-00717-1	
CPE-1957	Lavia S.A PA25, PA25-235, PA25-260(PRIOR TO S/N 1477)	Fram CA-161PL, Brackett BA-104	08-00721-1	
CP-1150	Luscombe - 8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	
CP-1172	Maule - M-4, M-4T, M-4C, M-4S, M-4-180C, M-4-180S, M-180T, M-4-220, M-4-220C,M-4-220S, M-4-220T, M-5-180C, MX-7-160, MX-7-180,M-5-210C, M-5-235C, M-5-210TC, M-5-220C, M-6-180, M-6-235, M-7-235 P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Brackett BA-6110, Donaldson P12-6491	08-00902	
CPE-1178	Maule - M-4-210, M-4-210C, M-4-210S, M-4-210T, M-5-210C No sealing grease required for this application.	Brackett BA-111	08-01221	
CP-1150	Mooney - M10 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Donaldson P12-0494	08-00843	
CP-1172	Mooney - M20, M20A, M20B, M20C, M20D, M20G P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Fram 13219, Brackett BA-6110, Donaldson P12-6491	08-00902	
	Mooney - M20 E, F Replacement Gasket P/N-CP-2802	Donaldson P10-4065 Brackett BA-6310	08-01031	
	Mooney - M20J (201)	Brackett BA-6210	08-00896	
CP-1175	Mooney - M20K S/N 25-1000 & UP		08-01020-1	
CPE-1179	Mooney - M20M, M20R, M20S	Mooney 600417-503, AM EDD4028, Donaldson P524257	08-01263-1	
	Piper - PA-18 S/N 18-6964 and up O-320	Piper 454-118, Fram CA-122PL, Brackett BA-112	08-01032-1	
CPE-1040	Piper - PA28R-180, PA28R-200, PA28R-200T, PA28R-201, PA28RT-201, PA28R-201T, PA30, PA-34-200, PA39, PA44-180, PA44-180T	Piper 460-630 Brackett BA-105	08-00717-1	
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#### CHALLENGER AVIATION HIGH-FLOW AIR FILTER W/ K&N FILTER MEDIA (CONTINUED FROM PREVIOUS PAGE)

Model	Application	Installation	Part No.	Price
CPE-1957	Piper - PA23-235A, PA23-235B, PA23-250B, PA-24 S/N 1479 and up, PA24-180 S/N 1477 and up, PA24-250 S/N 1477 and up, PA24-260, PA25-150, PA25-235, PA25-260 PRIOR TO S/N1477, PA28-140, PA28-150, PA28-160, PA28-180, PA28-181,PA28RT-201T, PA28-235, *PA32-260, *PA32-300 S/N 32-7640001 & Up, *PA32R-300, *PA32RT-300, *PA32RT-300T, *PA32RT-300T, *PA34-220T, *P	Fram CA-161PL, Piper 460-632, Brackett BA- 104, PURO AFP-2, AC-6485710	08-00721-1	
CP-1150	Piper - J3, J3C-65, J3C-65S, J5A, J5A-80, PA-11, PA-11S, PA-12, PA-12S, PA-16, PA-17, PA-18, PA-18A, PA-18S, PA-18-105, PA-20-115 PA-20-135, PA-22-108, PA-22-135, PA-22-150, PA-22-160, PA-38-112 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Piper 460-638	08-00843	
CPE-1956	Piper - PA28-151, 161 REPLACEMENT GASKET P/N CP-2604.	Brackett BA-16, Piper 560-679	08-01033	
CP-3202	Piper - PA-31-300, PA31-310, PA-31-325, PA-31-350, PA-32RT-300T	460-817 560-747 P10-6590	08-07405	
CP-1150	Reims/(Cessna) F150G, F150H, F150J, F150K, F150L, F150M, FA150K, FA150L, F152, FA152 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Cessna C294510-0201 Brackett BA-4106 Donaldson P10-7150	08-00843	
CP-1172	Reims/(Cessna) - F172D, F172E,F172G, F172H, F172K, F172L, F172M P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Cessna C294510-0301 Brackett BA-5110 Donaldson P10-7172	08-00902	
CPE-1220	Robinson - R-44	Robinson C771-1	08-00720-1	
CP-4422	Robinson - R44 II	C-771-2	08-07380-1	
CPE-1104	Robinson - R-22	Robinson A771-1 Brackett BA-110	08-01021-1	
Cp-2100	Rockwell Commander - 100-180, 112, 112b	124748-019 Brackett BA-3910	08-05915	
CP-1172	Socata - TB9, TB10 P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Brackett BA-5110	08-00902	
CP-1150	Taylorcraft - BF65, BF12-65, BFS65 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	
CP-1150	Tiger Aircraft/Llc/Gulfstream American - AA-1, AA-1B, AA-1B, AA-1C, AA-5 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4210 AMS13202	08-00843	
CP-1960	Tiger Aircraft / Gulfstream American - AA5A	Brackett BA-19	08-07307	
CP-1958	Tiger Aircraft/Gulfstream American - Tiger Aa-5b	Brackett BA-4106	08-01022-1	
CP-1150	Univair - A-2, A2A (FORNEY) F-1, F-1A - P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	
CP-1150	Globe/Swift - Swift GC-1A, GC-1B P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	
CP-2010	Waco Aircraft - UPF-7	22756-B	08-07389-1	

#### **CHALLENGER AIR FILTER ACCESSORIES**

Aircraft	Туре	Challenger Part No.	Part No.	Price
CP-2003 Beech Bonanza	Gasket	CP-2502	08-01041	
CP-2055 Beech Baron 55, A55, B55	Gasket	CP-1505	08-07357	
CP-2175 Cessna 175, 175A-C	Gasket	CP-2775	08-07358	
CP-2182 Cessna R182, TR182, T182	Gasket	CP-2782	08-07360	
CP-1150 Cessna 140, 150, 152	Gasket	CP-2402	08-01043	
CP-1172 Cessna 170, 172	Gasket	CP-2302	08-01044	
CP-1182 Cessna 180, 182, 185	Gasket	CP-2602	08-01045	
CP-1177 Cessna Cardinal 177	Gasket	CP-1504	08-01264	
CP-1178 Cirrus SR-20, SR22	Gasket	CP-2902	08-07364	
CP-1176 Mooney 20E, F	Gasket	CP-2802	08-01047	
CP-1174 Mooney M20J	Gasket	CP-2202	08-01048	
CP-5502A Air Tractor AT-502A / AT-602	Gasket	CP-2705	08-07361	
CP-5502 Air Tractor AT-402/502/502B/503A	Gasket	CP-2704	08-07359	
CPE-1956 Piper PA-28-151, 161	Gasket	CP-2604	08-01046	
CPE-1957 Piper Oval Cover	Gasket	CP-2102	08-01049	
CPE-1040 Piper Round	Gasket	CP-2702	08-01050	
All Models	Re-Charger Kit	CP-99-5050	08-05884	
* Various Models	Sealing Grease	CP-99-0704	08-04954	



# CHALLENGER RE-CHARGING KIT Challenger's recharger kit includes non-aerosol bottles

of air filter cleaner and air filter oil for recharging air filters. Restores airflow efficiency.

P/N 08-05884 .....-



#### **CHALLENGER SEALING GREASE**

K&N Sealing Grease provides an airtight fit around sealing surfaces on all types of air filter elements. It resists heat and will not melt or run off. K&N sealing grease is 

If you do not see your application here, or for more CHALLENGER AIR FILTER ACCESSORIES, please call or VISIT OUR WEBSITE AT WWW.AIRCRAFTSPRUCE.COM



The specially treated polyurethane element in the Brackett filter assures near total protection from any foreign material entering the system. Repels water, fire retardant and has good air flow for proper fuel/air ratio. Has no pleats to collect dirt. Low-cost maintenance with increased engine life. FAA approved. Replace original air filter unit with a Brackett assembly. Thereafter, throw away element and replace with new one at minimal cost.

Aircraft Model Assembly	Air Filter P/N	Assy Price	Element P/N	Element Price
Aero Commander: A9, A9A, A9B	BA104		BA3	
100-100A	BA8910		BA8905	
100-180,112,112A,112B	BA3910		BA3905	
112TC,112TC-A,114,114A	BA4010		BA4005	
500A-B,560F,680F,FL,FLP,500U	BA151	-	BA151E	
560, 560A, 560E, 680 - L	BA2610L		BA2605L	
560, 560A, 560E, 680 - R <b>Aircoupe:</b> 415C, CD, D, E, G	BA2610R BA8810		BA2605R BA8805	
F-1, A-1, A2-2	BA4106		BA4108	
Beech: 23, A23, A23A, A23-19	BA104		BA3	
A23-19A, A-23-24, B23	BA104		BA3	
C-23, C24R, A24R, B24R, B19	BA7510		BA7305	
33, A33, B33, C33, E33, F33	BA7110		BA7112	
C33A,E33A,E33,F33A,F33C,G33	BA7210	-	BA7112	
35, A35, B35 thru S/N2605	BA7310		BA7305	
B35,C35,D35,E35,F35,G35,H35,J35	BA7110	-	BA7112	
K35, M35, N35, P35, 35R	BA7110		BA7112	
S35 thru S/N D7671	BA7410	-	BA7112	
\$35, V35, V35A, V35B,36,A36	BA7210	-	BA7112	
A36TC, B36TC, A45(T-34) B45((T-34A), D45(T-34B)	BA7210 BA7210		BA7112 BA7112	
W/STC SA1450 SW Cont.IO-520	BA7210		BA7112	
E50 (L-23D, RL-23D),F50	BA100		BA7	
55, A55, B55	BA7610		BA7605	
G50, H50, J50	BA100		BA7	
C55, D55, E55, 355	BA6210-1		BA6205	
S/N TE768-1078 58 thru S/N TH 740	BA6210-1	-	BA6205	
E55, 355A, SN TE-1079 & up	BA7710		BA7705	
58, 58A, SN TH741 & up	BA7710		BA7705	
A65, 70, 65-B80, B88	BA100		BA7	
76	BA7010	-	BA7005	
77	BA2010		BA6108	
95, B95, B95A, D95A Bell:	BA7810		BA7805	
47G-2, 47G2A, 47G2A-1, 47G-3, 47G-3B	BA102		BA2	
47G-3B-1, 47G-3B-2, 47G-3B 2A, 47J, 47J-2	BA102		BA2	
47J-2A,47G-3B,47G-3B,47G-3B-1	BA102		BA2	
47G-3B-2,47G-4,47G-4A,47G-5,47J-2,47J-2A	BA103		BA9	
Bellanca: 14-19-3A, 17-30	BA8110		BA8103-1	
17-30A	BA104		BA3	
Brantly: B-2, B-2B	BA104		BA3	
Cessna: 340,340A,402C,414,414A	BA109		BA22	
402B,SN0801 & after,421,T310R	BA108		BA13	
421A, 421B, 421C, T310R	BA108		BA13	
337, 337A-H, R172K, F337E-,336,T41B-D P337, T337 Rear Engine,172RG	BA111 BA5810		BA24 BA5805	
R182, TR182, T-182, FR182	BA2510		BA2505	
190, 195, 195A, 195B	BA8410		BA8405	
120,140,140A,150,150A-M,152,152A	BA4106		BA4108	
170, 170A-M,172, 172A-M	BA5110		BA6108	
172N, 172P, F172N, F172P	BA5110A		BA6108	
175, 175A-C, L-19	BA101		BA8	
177, 177A, B, RG, F177RG	BA5710		BA5705	
180 ('53-'55)	BA8010		BA8005	
180A-K, 182, 182A-R, F182P, F182Q	BA8110		BA8103-1	
185,185A-E,A185E,A185F	BA8110		BA8103-1	
188, 188A	N/A		BA14	
205,205A,210,210A,B,C,310A,B,C,D	BA2110 BA2210L		BA2305 BA2205-L	
P206A-E, U206A-G, 207, 207A 210D-N (to SN 64535 w/o air)	BA2210L BA2210L		BA2205-L	
210D-N (to SN 64535 w/o air)	BA2210R		BA2205-R	
210N (SN645436 & up w/air), 210R, T210F–N	BA2410		BA2405	
P210 All	BA8710		BA8705	
310F thru L	BA2310		BA2305	
310N-Q, T310P, T310Q, 401 S/N 145-401B S/N 221, 402 S/N 145-402B S/N 800	BA107		BA12	
310R		-	BA117	
F150GthruM,FA150K-L,F152,FA152	BA4106		BA4108	
R172K, FR172E-K	BA111		BA24	
TP206,TP206A-E,TU206A-G, T207, T207A	BA2410		BA2405	
411, 411A	BA-3810		BA3805	
Bobcat T-50, AT-17, UC-78, JRC-1	N/A		BA2705	

# **BRACKETT AIR FILTERS**

			,	
Aircraft Model Assembly	Air Filter P/N	Assembly Price	Element P/N	Element Price
Champion: 7GC,7GCA,7GCBC,7HC	BA104		BA3	
8KCAB, 8GCBC, 7KCAB, 7GCBC, 7GCAA	BA8110		BA8103-1	
7GCAA, 7GCBC, 7KCAB, 8KCAB, 7ECA 7ECAw/Cont.0-200-, 7ACA, 7ECA, 7FC, 65CA	BA106 BA4106		BA11 BA4108	
Cirrus: SR20 & SR22 Non-Turbo	BA111		BA24	
DeHavilland: DHC-2 (L-20)	BA8210-1		BA8205	
Great Lakes: 2TIA-2	BA101		BA8	
Helio: H295	N/A		BA21	
Hiller: UH-12, UH-12-E	BA102		BA2	
Grumman American				
AA-1,AA-1A,AA-1B,AA-5,AA- 1C,AA-5	BA4210		BA4108	
AA-5B-Tiger, GA-7, G164B	N/A		BA20	
AgCat, G164, G164A	BA8210		BA8205	
AA5A	N/A		BA19	
Hughes: 269A,269A-1,269B-C	BA102		BA2	
Lake: LA4, LA4-200	BA3110		BA7305	
Luscombe: 8, 8A thru 8F, T8F	BA4106		BA4108	
Maule: M-4-210T, M-5-210C	BA111		BA24	
M-4-210,M-4-210C,M-4-210-S	BA111		BA24	
MA-4, M-4C, M-4S, M-4T	BA6110 BA6110		BA6108 BA6108	
M-4-220, M-4-220C, M-4-220S				
M-4-220T, M-4-180C, M-4-180S M-4-180T, M-5-220C, M-5-235C	BA6110 BA6110		BA6108 BA6108	
M-5-180C, M-5-210C, M-6-180	BA6110		BA6108	
M-6-235, MX7-180, M-7-235	BA6110		BA6108	
Mooney: M-10	BA4106		BA4108	
M-18C	BA5110		BA4108	
M20, M20A, B, C, D, G	BA6110		BA6108	
M20E, F	BA6310		BA6305	
M20J	BA6210		BA6205	
Navion: A with (E) Series Engines	BA113		BA25	
B: G, H, or with 10-470	BA4310		BA4305	
North American: AT6 (SNJ)	N/A		BA8305	
Partenavia: P68, P68B, P68C	N/A		BA162E	
Piper: 600, 601	N/A		BA4	
J-3,J-4,J5,PA-11,11S,12,12S,16,17	BA4106		BA4108	
PA-18,19,20,115,135,PA-22-ALL	BA4106		BA4108	
PA-18-"150",18A-"150",18S - "150",18S-"150"	BA112		BA13	
SN18-6964 & up w/TCDS Item 110 Installed	BA112		BA13	
PA-23,160,24-180 up to SN1476	BA3110A		BA7305	
PA-24-250 up to SN 1476	BA3210		BA3205	
PA-23-235, 250, PA-25-235, 260	BA104		BA3	
PA-28-140, 150, 160, 180, 235	BA104		BA3	
PA-28-181, 201T, PA-28R-201T	BA104 BA104		BA3	
PA-28RT-201T, PA-32-260, PA-23-250,E23-250,SN27 2505 & up	BA104 BA115		BA3 BA15	
PA-23-250, E23-250, W/Turbo Lyc.	N/A		BA3505	
PA-23-250, E23-250, W/Tubb Lyc. PA-23-250 w/Air Research Turbo	N/A		BA8605	
PA-24-180 & PA-24-250 SN1477 & up	BA104		BA3	
PA-24-25 SN103-1476 w/Piper Kit 754-285 Install	BA104		BA3	
PA-24-260 SN4000-4802 except 24-4783	BA104		BA3	
PA-32-300 SN76-40001&up	BA104		BA3	
PA-32R-300,PA-32RT-300,PA-32R-301	BA104		BA3	
PA-34-200T, 220T	BA104		BA3	
PA-28R-201,PA-28RT-201,PA-28R-180, PA-28R-200	BA105		BA10	
PA-28-236 S/N 28-7911283 & Up	BA2910		BA2905	
PA-30-160	BA105		BA10	
PA-31P, 31P-350	N/A	N/A	BA3305	
PA-38	BA4106		BA4108	
PA-28-151,161	N/A	N/A	BA16	
PA-28-236 SN 28-7911283 & up	BA2910		BA2905	
PA30, with Ray Jay Turbo	BA121		BA27	
PA31, PA-31-300, -310, -325,-350	BA100		BA7	
PA-31P, 31P-350	N/A	N/A	BA3305	
PA-32-300 w/l0-540-K1A5	BA115		BA15	
PA-32RT-300T	BA100		BA7	
PA-32-301T, 32R-301T	BA100		BA7	
PA-34-200w/LYCl0360C01ES or LI0-360-C1E6	BA105	 N/A	BA10	
PA-44-180T Robinson: R22	N/A BA110	N/A 	BA3505 BA23	
Stearman: All Series 75	BA110		BA23 BA18	
Stinson: 108, 108-1, -2,-3	BA118 BA9110		BA18 BA9105	
Swift: GC-1A, GC-1B	BA4106		BA4108	
Taylorcraft	BA4106		BA4108	
Varga: 2150A	BA4106		BA4108	
Vultee: BT-13	RA2810		BA2805	
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SEE WWW.AIRCRAFTSPRUCE.COM FOR REPLACEMENT BRACKETT AIRFILTER GRILLS & GASKETS



Donaldson has been the OEM source for Cessna, Piper, Beechcraft, and Maule & Mooney since the 1960's. They currently supply Cessna all of their SE Piston aircraft filters, Beech Bonanza & Baron filters, Mooney & Maul with their filters. For Piper they currently supply all of their Turbo charge aircraft with filters. Aircraft Spruce is a factory authorized distributor for Donaldson filters.

Features: • High Performance Engine Intake Filters • Synthetic media: offers improved air flow and better dust capturing efficiency • Engineered to last 500 Flight Hours • Washable filter element, use compressed air/warm soapy water • Clean installation: dry media, no sticky/messy oil to trap dirt • OEM choice for GA aircraft for over 30 years • Meets All Flammability requirements per FAR 23.853 • Solid Construction with no removable parts-no loose screens, elements or screws • Exceptional wet weather performance, no oil to wash away in wet weather • Moisture passes thru the filter, doesn't build up an oiled surfaces (no oil present) • All filters starting with "P" feature our Premium Synthetic filter media • No Airworthiness Directives against Synthetic media filters • Cost efficient over the life of the filter, 3 years, 500 FH 5 cleanings
Only filters with \* after part number have cellulous media

Donaldson	OEM	Description 5 to 1 to 1 to 1 to 1 to 1 to 1 to 1 to	Part No.	Price
P107150	C-294510-0201, 13203	C-150/152 & Various others Engine Intake air filter	08-06027	
P107172	C-294510-0301, 13219	C-170/172 Engine Intake air filter	08-06024	
P15-1936	PS600073 / 561-020	Piper PA-32R *(Engine Intake air filter)	08-06029	
P107336	C-294510-0401	C-172XP/ 337 Engine Intake air filter	08-06038	
AM102035FP	C-294510-0501	Engine Intake air filter	08-06052	
P106150	0750038-4	C-180/182/185 Engine Intake air filter	08-06023	
P131367	C-294510-0901	TR182/182R Engine Intake air filter	08-06042	
AM102135FP	1250704-3	C-206/207/210 Engine Intake air filter	08-06033	
AM102235FP	1250704-4	C-210 Engine Intake air filter	08-06046	
P107210	1250846-1	T206/T207/T210 Engine Intake air filter	08-06047	
P131364	C-294510-0801	T210N/P Engine Intake air filter	08-06049	
P108421	99100181	T310/320/335/401/402/421 Engine Intake air filter	08-06056	
P109337	C-294510-0701	337/T337 Engine Intake air filter	08-06051	
AM102035FP	C-294510-0501	Engine Intake air filter	08-06052	
AM102735EA	9910018-2	310/401/402 Engine Intake air filter	08-06054	
AM102935EA	9910200-1	310R Engine Intake air filter	08-06055	
P128156	9913001-1	340/414 Engine Intake air filter	08-06028	
P128157	9910141-1	404 Engine Intake air filter	08-06057	
EBG03-0001	C-294501-0101	Instrument Air Filter Assembly, Cover & Filter element	08-06059	
P105290	C-294501-0203	Replaceable instrument Instrument air filter only, part of EBG03-0002 assy	08-06060	
AM103435IA	C-294501-0301	Instrument Air Filter	08-06035	
AM103535IA	C-294501-0302	Instrument Air Filter	08-06036	
P130374	45-91210, 13917	Debonair & Early Bonanza Engine Intake air filter	08-06062	
P105304	35-380035-5, -1	Bonanza Engine Intake air filter	08-06032	
P137627	35-380035-7	Bonanza Engine Intake air filter	08-06026	
P136680	105-389000-3	B76 Engine Intake air filter	08-06063	
P133881	P13-3881	B77 Engine Intake air filter	08-06064	
P128219	P12-8219, 122601, AM101020FP	95-55, A55, B55 Baron Engine Intake air filter	08-06065	
P127996	P12-7996, 121128-2, AM101120FP	C55, D55, E55 & 58 Baron Engine Intake air filter	08-06066	
		•		
P12-8167	96-389005-1	E55 & 58 Baron Engine Intake air filter	08-06025	
P108700	50-389070-15	Duke Engine Intake air filter	08-06067	
P124439	50-389070-23	58P Baron Engine Intake air filter	08-06069	
P105798	50-389070-11	A65, 70, B80 Engine Intake air filter	08-06070	
EBG03-0003	205538-089	Instrument air filter	08-06072	
EBG03-0018	101-380039-1	King Air Instrument air filter	08-06034	
P136602	560-584	PA-28-236 Engine Intake air filter	08-06074	
P138683	560-904	PA-28-236 Engine Intake air filter	08-06075	
P106590	560-747	PA-31 Engine Intake air filter	08-06076	
	460-609	PA-31P Engine Intake air filter	08-06077	
P136739	560-947	PA-32 Engine Intake air filter	08-06078	
P138580	86881-2, 560-953	PA-44T Engine Intake air filter	08-06080	
AM108365FP	P13-6287	M20K Engine Intake air filter	08-06081	
204418-156	77852	Lycoming Engine Spin on oil Filter adapter	08-06037	
P11-0172	C-294510-0601	Engine Intake air filter	08-06228	
P198281	P198281, CA3559	172R & 172S Engine Intake Filter	08-07051	
P198290	P198290, CA3717	182S Engine Intake Filter	08-07052	
P197268	P197268	T206H Engine Intake Filter	08-07053	
P13-0234	125997-010, BA6210	M20J Engine Intake Filter	08-07054	
ED04011	600417-501	M20K (s/n 25-1000 and up) engine intake Filter	08-07055	
ED04028	600417-503	M20M/R/S Engine Intake Filter	08-07056	
P10-5225	C-294501-0103	Various Instrument Air Filter	08-07057	
P617058	460-632	Oval Piper Filter PA28/PA34	08-07276	
P617053	460-630	Round Piper Filter PA28/PA44	08-07277	
P617774	460-629	Round Piper Filter PA23/32	08-07278	
	9546982 HBC, 6260A77 M0	Mooney M20J & M20K Air Filter Assembly Cover & Filter	08-15994	
3034292WFC	3034292, 3034293, Alternate P-1010	Pratt & Whitney (Various Aircraft)	08-15978	
WF334552	3029268 Alternate 3028856, 3029267 P-1018	Pratt & Whitney Canada (Various Aircraft)	08-15979	
	·	3038142 P-1139	08-15979	
WF336238	3038142 P-1139			

VISIT OUR WEBSITE FOR COMPLETE AIRCRAFT APPLICATION INFORMATION.



TEMPEST AEROGUARD™ INDUCTION AIR FILTERS FAA-PMA
Tempest AeroGuard™ induction air filters are approved on a variety of Cessna, Piper, Beechcraft and Mooney Tempest AeroGuard™ induction air filters are approved on a variety of Cessna, Piper, Beechcraft and Mooney aircraft. They are manufactured using a black anodized aluminum housing and screen to prevent corrosion and fragmented media from being ingested. Designed to keep your induction system clean in the dirtiest environments, the synthetic media offers maximum airflow while still filtering out 99% of contaminants larger than 5 microns. These induction air filters will provide you with the high quality and durability you've come to expect with Tempest products.

Features: • No minimum purchase order • Black Anodized Aluminum Housing • Greater media surface area provides maximum airflow for longer service intervals. • Greater than 99% of contaminants larger than 5 microns are filtered out. • Reusable and washable synthetic media maximizes airflow and filters contaminants more effectively. • Screen design prevents fragmented media from being ingested, improving safety, complying with FAR23.1107 (b).

Description	Donaldson	Brackett	Application	Part No.	Price
•			Alexandria Aircraft Bellanca:		
			14-19-3A, 17-30 American Champion:		
AA10-6150	P10-6150	BA-8110	7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC	08-17231	
			Textron Aviation (Cessna): 180A/B/C/D/E/F/G/H/J/K/L/M /N/P/Q/R/S/T, T182T, 185, 185A/B/C/D/E/F/G/H/J/K/L/M /N/P/Q/R/S/T, T182T, 185A/B/C/D/E/T, T182T, T182		
			D/E, A185E, A185F, F182P/Q		
			Alexandria Aircraft Bellanca:		
			17-30A Beechcraft:		
			19A, 23, A23, A23A, A23-19/24, B23		
AA617058	P617058		B-N Group:  BN-2, BN-2A, BN-2A-2/3/6/8/9/20/21/27, BN-2B-20/21/26/27	08-17232	
			Piper Aircraft:		
			PÁ-23-235/250, PA-24, PA-24-250/260, PA-28-140/150/160/180/181/ 201T/235, PA-28R-201T, PA-28RT-201T, PA-32-260/300/301/ 301FT, PA-32R-300, PA-32RT-300, PA-32R301 (SP), PA-		
			32R-301 (HP), PA-34-2007/220T, PA-36-285/300/375		
			Textron Aviation (Cessna):		
			170, 170A/B, 172, 172A/B/C/D/E/G/I/K/L/M/N/P /Q,		
			172F (USAF T-41A),		
			172H (USAF-T41A), F172D/E/F/G/H/K/L/M/N/P   <b>Diamond:</b>		
AA10-7172	P10-7172	BA-5110	DA 40 F	08-17233	
			Maule: M-4, M-4C/S/T, M-4-180C/S/T, M-4-220, M-4-220C/S/T, M-5-180C, M-5-210C/TC, M-5-220C, M-		
			W-4, W-4C/5/1, W-4-180C/5/1, W-4-220, W-4-220C/5/1, W-5-180C, W-5-210C/1C, W-5-220C, W-  5-253C, M-6-180, M-6-235, M-7-235, MX-7-180, MX-7-160		
			Mooney:		
AA1034351A			M-18C, M20, M20A/B/C/D/G	08-17234	
AA12-8167	P12-8167		Textron Aviation Beech: E55, E55A, 58	08-17235	
A1035351A				08-17236	
			<b>Aeronca:</b> (Army L-3F) 65-CA, S-65-CA		
			American Champion:		
			7AC, 7ACA, S7AC, (Army L-16A) 7BCM, (Army L-16B) 7CCM, S7CCM, 7DC, S7DC, 7EC, S7EC, 7ECA, 7FC, 7GCAA, 7GCBC, 7JC, 7KC, 7KCAB		
			American General:		
			AA-1, AA-1A/B/C, AA-5		
			Augustair: 2150A		
			Aviat Aircraft:		
			A-1 Textron Aviation (Cessna):		
			120, 140, 140A, 150, 150A/B/C/D/E/F/G/H/J/K/L/M, A150K/L/M, 152, A152, F150G/H/J/K/L/M, F152,		
			FA150K/L, FA152 Swift:		
			GC-1A/B		
AA10-7150	P10-7150	BA-4106	Luscombe:	08-17237	
			8, 8A/B/C/D/E/F, T-8F Mooney:		
			M10 °		
			Piper Aircraft:  1-3 13C-65 13C-655 14Δ 14Δ-5 14Ε (Δrmy 1-4Ε) 15Δ (Δrmy 1-4Ε) 15Δ-80 PΔ-11 PΔ-115		
			J-3, J3C-65, J3C-65S, J4A, J4A-S, J4E (Army L-4E), J5A (Army L-4F), J5A-80, PA-11, PA-11S, PA-12, PA-12S, PA-16, PA-17, PA-18, PA-18A/S, PA-18 "125" (Army L-21A), PA-18S "125", PA-		
			18AS "125", PA-18 "135" (Army L-21B), PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18A "150", PA-18A "150", PA-18A (Restricted), PA-18A "135" (Restricted), PA-18A "150"		
			(Restricted), PA-20, PA-20 "115", PA-20 "135", PA-22, PA-38-112		
			Taylorcraft:		
			BC-65, BCS-65, BC12-65 (Army L-2H), BCS12-65, BC12-D1, BCS12-D1, BC12D-85, BCS12D-85, BC12D-4-85, BC-		
			S12D-4-85, BF-65, BFS-65, (Army L-2K) BF12-65, 19, F19, F21, F22, F22A/B/C, (Army L-2, L-2C)		
			DC-65, (Army L-2A, -2B, -2M) DCO-65   <b>Univair</b> :		
			F-1, F-1A, A-2, A2-A		
AA198290			Cessna Aircraft: 182S Cirrus Aircraft: SR20	08-17390	
AA12-4439	P12-4439		Textron Aviation (Beech): 58P/TC	08-17238	
AA617053	P617053		Piper Aircraft: PA-28R-180/200/201, PA-28RT-201/201T, PA-30, PA-34-200, PA-39, PA-44-180	08-17239	
AA10-5304	P10-5304		Textron Aviation (Beech):	08-17240	
		BA-	35-C33A, E33A, F33A, F33C, G33, S35, V35, V35A, V35B, 36, A36, V35TC  Textron Aviation (Beech):		
AA12-7996	P12-7996		95-C55, 95-C55A, D55, D55A, E55, E55A, 58	08-17241	
AA617774	P617774	DA 0540	Piper Aircraft: PA-23-250, PA-E23-250, PA-32-300	08-17242	
AA13-1367	P13-1367		Textron Aviation (Cessna): R/T/TR182 Textron Aviation (Beech):	08-17243	
AA13-0374	P13-0374	BA-7110	35-33, 35-B33, 35-C33, E/F33, B/C/D/E/F/G/H/J/K/M/N/P35	08-17244	
AA11-0172	P11-0172	BA-5710	Textron Aviation (Cessna): 177, 177A/B/RG	08-17245	
AA8994656			American Champion / Grumman: AA-5B and GA-7	08-17578	
AA10-3260			Van's Airbox: FAB-320-1 and FAB-360/540	08-17579	
AA10-3450			Van's Airbox: FAB-320-1 and FAB-360/540	08-17580	



#### PLEATED PAPER AIR FILTERS

These pleated paper aircraft induction air filters are manufactured in South Africa and are fully approved by the South African Dept. of Transport, Division of Civil Aviation. Strict quality control standards are enforced at all stages of manufacture. The filters feature aluminum frames and cured EA131 pleated elements with 96% micron rating. Rubber gaskets are waterproof, oil solvent, and chemical resistant. Mesh overlays are of stainless steel for enhanced strength, durability, and appearance. Not FAA approved at this time.

		0 7 77 11	
Part No.	AC Equivalent P/N	Aircraft Type	Price
08-14639	124748-019 (No Gasket)	Aero Commander 100-180, 112, 112A, 112B	
08-14638	124748-019 (121262-7)	Aero Commander 100, 100A	
08-14640	124748-036 (615045-1)	Aero Commander 112TC, 112TCA, 114, 114A	
08-14641	361-200 (126053-002)	Aero Commander 500	
08-00018	P10-5304	Beech 36	
08-00020	P12-8219 (122601)	Beech 55	
08-00019	P12-7996 (121128-2) TE946 thru TE1078 TH1 thru TH740	Beech 58	
08-14646	P13-6680 (105-389000-3)	Beech 76	
08-14647	P13-3881	Beech 77	
08-00023	P12-8167 (96-389005-1) TE1079 & after TE741 & after	Beech E55 & 58 Late Model	
08-14644	P10-2646 (35-0035-3) Maze 122943-1	Beech S35	
08-00000	C294510-0201	Cessna 150	
08-00001	C294510-0301	Cessna 172	
08-00002	C294510-0401	Cessna 172	
08-00003	C294510-0501	Cessna 172 RG Cutlass	
08-14649	P57A (AC- 6486197) Maze 12009	Cessna 175, 175 A, B, C	
08-00004	C294510-0601	Cessna 177	
08-00007	0750038-4	Cessna 182	
08-00006	C294510-0901	Cessna 182RG	
08-00008	1250704-3 (Port)	Cessna 206	
08-00009	1250704-4 (Stb)	Cessna 207	



#### AIR-MAZE AIR FILTERS

Filter for Continental for A-65 thru C-125\*. P/N A40599.....

Filter for Lycoming O-235, O-290, some O-320 (advise aircraft application)......P/N A40599..... Aeronca 7AC, 11AC......P/N 2-849...

FOR NEW INSTALLATION - P/N 24306 & P/N 24308 ARE REQUIRED



#### VARI-EZE / LONG **EZ AIR INTAKE FILTER**

NAPA #2904 air intake filter (equivalent to Purolator #AFP-177 & AC #44-8C) .P/N 2904 .....



#### OVAL AIR FILTER FOR DUAL **BING 54 CARBURETOR**

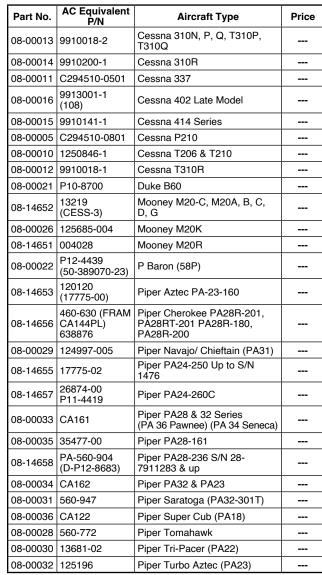
Oil impregnated, pleated, washable, polyester air filter. Can be washed and re-oiled for years. Traps dirt and other foreign particles to keep

Filter for Rotax 532 582 and 618 ......P/N 15-08370 ...... ---Filter for Rotax 503......P/N 15-08343.....----



#### NAPA AIR FILTER

Air Filter for 7GCA, 7GCB, 7GC, 7HC Models. Experimental Only. Direct replacement of FRAM made by NAPA......P/N 05-06388.....





#### **NAPA 6153 GOLD AIR FILTER**

These Filters Contain 30% More Media Than OES Filters And Use A Phenolic Resin Treated Enhanced Cellulose Media Which Provides Excellent Durability

Against Moisture Ingestion. When Applicable, The High-Tear Strength Polyurethane Seal Survives Extreme Hot And Cold Temperature Conditions. Air Filter Laboratory Tests Per ISO 5011 At Least 99.5% Efficiency (Based On NAPA # 2389) NAPA Gold Filters Are Recommended For OEM Air Filter Change Intervals.

Specifications: • Height (Inches): 1.62 in • Length: 10.68 in • Width: 7.95 in P/N 08-17162 .....--



#### **NAPA 7243 OIL FILTER**

HD Oil Filters Feature a Cellulose/Poly Media w/ Contaminant Holding Capacity

Specifications: • Filter O.D. (Inches): 3.778 in. • Flow Rate: 28 To 30 gpm • Height (Inches): 5.962 in. • Micron Rating: 21 • Style: Spin-On Oil Filter • Thread Size: 1-1/2 in-16.

P/N 08-17161 ..... ---



## GPL WASHABLE RE-USEABLE **AIR FILTER FOR BING 54**

Oil Impregnated, Pleated, Washable, Polyester Air Filter. Can be washed and re-oiled for years. Fits Bing 54 Carburetor. GPL Part # 3920 For Bing 54. 3.5" D x 4" L x 2 .....P/N 08-07665 .....

# **BRICANTS - GASKETS - DEGREASERS**



# MCFARLANE AIR FILTER

SHROUD ASSEMBLIES
McFarlane now has FAA-PMA approval on their improved Cessna Airbox Shroud/Seal Assemblies for various 150, 152 and 172 aircraft! McFarlane Airbox Seal Assemblies for select Cessna aircraft have drastically

improved the life of their part using aluminum instead of plastic. McFarlane patented Cowl Saver Material with Bi-Flex is used with the new shroud to prevent cowl damage.

Description	Part Number	Price
MC0450066-5 Air Filter Shroud Assembly	05-27124	
MC0452017-15 Air Filter Shroud Assembly	05-27125	
MC0552130-11 Air Filter Shroud Assembly	05-27126	



#### ANDYS SUPER OIL LUBRICANT

Powerful Lubrication - A 21st Century Formula. Andy's Super Oil takes advantage of the latest advances in tribology (the science of lubrication) by combining a high-quality petroleum base with the finest additives, including PTFE (commonly known by the trademarked-name Teflon). PTFE is one of the most lubricious materials known and is a key element in making Andy's Super Oil the finest spray lubricant available today. 11 oz ......P/N 09-04441 .....

#### **MOLYKOTE 33 BEARING GREASE**

Dow Corning 33 Extreme Low Temperature Bearing Grease is a thickened silicone oil; resistant to oxidation, moisture and corrosive atmospheres, inert, good shear stability and wide service temperature range.

#### Specifications:

- 5.3oz (150g) Tube
- · Base Chemistry: Silicone
- Flash Point: >101.1°C
- · Service Temperature: -73 to 204°C
- Specific Gravity: 1.1 @ 25°C
- Viscosity Cp: 100 @ 25 °C

P/N 06-02342 .....



## **LOCTITE® HIGH TEMPERATURE GASKET SEALANT**

LOCTITE® High Temperature Gasket Sealant is a slow drying viscous paste. It remains pliable and flexible and is designed to seal flanges, threaded connections and fasteners at temperatures from -45° C to +315 °C. It can be effectively applied to cork, paper, plastic and metal surfaces. Typical applications include sealing gaskets, flanges and threaded connections, aircraft heating systems, manifolds, pipe fittings, steam lines, gear boxes and cover plates.

P/N 09-28425 .....----



#### **PERMATEX FORM-A-GASKET NO. 1**

Seals and repairs a wide range of gaskets. Fills in uneven flanges surfaces. Seals pipe fittings, air ducts, boilers, plumbing connections and threaded assemblies. Dries fast, sets hard for sealing permanent or rigid assemblies. Easy to apply. Improves gasket sealing power, adds reliability to rigid or permanent assemblies. Eliminates delays. 3 oz., Tube, #1B......P/N 09-28415.....---

11 oz, Tube, #1C ......P/N 09-28430 .....-----



#### PERMATEX FORM-A-GASKET NO. 2

A non-hardening, heavy-bodied, pliable sealant for semi-permanent assemblies. Use on threaded assemblies, over plates and hose connections, metal-to-metal applications. Temperature range -65° to 400° F., pressures up to 5000 PSI. Apply with putty knife or stiff bristle brush. Conforms to MIL-S-45180B Type II. 3 Oz. Tube #2B......P/N 09-28420 ..... 11Oz. Tube #2C.....P/N 09-28400 .....---



ANDEROL ROYCO 782 HYDRAULIC FLUID

Synthetic fire resistant "Super Clean" hydraulic fluid ROYCO 782 is a red - colored synthetic hydraulic fluid developed to meet the severe duty demands of today's military and industrial equipment. Modern additive technology is employed for oxidative stability, corrosion inhibition, and anti-wear protection. ROYCO 782 is compatible with petroleum based fluids and all components used in mineral oil type hydraulic systems. Mil-Spec: MIL-PRF-83282.

.....P/N 08-07539-1.....-----Case (24 Quarts) ......P/N 08-07539 ..... ---

## **AVIATION FORM-A-GASKET NO. 3** Slow-drying, non-hardening brush-top sealant approved

for use in aviation as well as automotive applications. Temperature range -65°F to 400°F (-54°C to 204°C); resists gasoline, oil and grease.

Application: Close-fitting machined surfaces, sealing

hoses, solid gaskets.



#### MARVEL MYSTERY OIL

Standard for break-in on new or overhauled engines and for carbon removal from cylinder heads, piston rings, valves, etc. Mix with regular oil for perfect engine operation to -20°F. Lubricates tight nuts, control hinges and landing gear. Dust repellent.

landing goal. Back top	Onorit.
Quart	P/N 09-27500
Pint	P/N 09-27505
Gallon	P/N 09-27600



## **MOUSE MILK OIL**

For speedy help in removal of rusted or frozen studs, nut and bolts; frees up cables, slides and linkage; unequalled wherever a lubricant and penetrant are required. Lasting lubricating qualities.

Attention: Volatile Organic Compounds (VOCs) Government Regu-lations. Product cannot be purchased, sold, or used in California.

8 Oz ......P/N 09-39608 .....----32 Oz ......P/N 09-39632 .....----



## **MOUSE MILK OIL PURPLE** VOC COMPLIANT

Mouse Milk Purple is a vegetable oil based VOC-compliant alternative to the traditional Mouse Milk. The Greener Alternative. For speedy help in removal of rusted or frozen studs, nut and bolts; frees up cables, slides and linkage; unequalled wherever a lubricant and penetrant are required. Lasting lubricating qualities.

.....P/N 09-05784 .....------



#### **BENDIX MAGNETO GREASE**

#10-27165 - Factory recommended lubricant for bearings in Bendix magnetos.

Provides proper shaft lubrication.

P/N 10-86527 .....------------------



#### **AIM-A-SQUIRT**

Aim-A-Squirt was developed out of the need to apply lubricants, corrosion inhibitors and solvents in those hard to reach areas with out getting the products all over everything. Aim-A-Squirt has been tested with hundreds of different products which have had no affect

on the special plastics the straw is made of. The straw is flexible enough that it will not kink when it is twisted in a small circle.

Features: • Reach difficult areas with ease • Allows can to remain upright Two sizes to fit most cans • 32" length .....P/N 09-02325 .....

## NTINENTAL CYLINDER KITS



CMI Through Hardened Steel Barrel Cylinder Kits.

The genuine, through-hardened steel barrel cylinders offer you peace-ofmind with OEM quality and product support at an aftermarket price. Most kits do not include piston pins, rocker arms, valve covers, and attaching hardware.

Model No.	Engines	Part No.	Price
658552A2	TSIO520	07-20388	
658552A3	IO550 A, B, C	07-20389	
658552A4	1O520 - all	07-20390	
658603A4	TSIO550 A, B, C, E	07-20399	
658603A8	TSIO520BE	07-20402	



## **COMBUSTION TECH PISTONS** FOR LYCOMING

All pistons manufactured by Combustion Technologies are made in the USA from high quality aluminum forgings. Their pistons are not made from castings and are designed to utilize Lycoming ring sets and piston pins so you do not need any special rings or pins.

Model Number	Description	Part No.	Price
ASC15357-P10	Combustion Technology Piston (Not FAA-Approved)	07-21498	
ASC1021- FL-P10	Combustion Technology Piston (Not FAA-Approved)	07-21500	
ASC653009 P15	Combustion Technology Piston (Not FAA-Approved)	07-24490	

#### REIFF HOTSTRIP OIL SUMP HEATERS



HotStrip is thin and lightweight like a silicone pad, but made of aluminum for maximum durability. Works either as a stand-alone sump heater or integrated with the Hot Band Cylinder Heating Systems in the Standard, Turbo, and Turbo XP Systems. Bonds to the bottom or side of oil sump and electrically heats the oil. Features dual heating elements

for redundancy. System includes two 100W elements thermostat, and power cord.

FAA Approved for:

Lycoming 0-235; All 290, 320, 360 series; All 435, 480, 540, 541 series; Continental IO-346; All 300, 600 series; E-165, E-185, E-225, All 470, 520, 550 series.

HotStrip Oil Sump Heater System: All engines above (Except Continental A-65, A-75, A-80, C-85, C-90, O-200, IO-240. These engines with oval oil sump use HotPad flexible silicone heating elements) Franklin 165, 220 ......P/N 08-00688 .....

#### F PREHEATER FOR ROTAX 912/914



The Reiff preheat system for Rotax 912 and Rotax 914 aircraft engines is an engine-mounted electric preheat system designed for easier cold-weather starts. The preheat system consists of a 100-watt metal "hot strip" element, which is epoxied to the bottom of the crankcase, and a 50-watt band heater that is clamped to the oil tank.

The Reiff is FAA approved, and includes a thermostat to keep the oil from exceeding 150° F.

-		
Description	Part No.	Price
150 Watts 110V	08-06219	
250 Watts 110V	08-07620	
250 Watts 220V	08-07620-1	
350 Watts 110V	08-07621	

#### E-Z HEAT AIRCRAFT ENGINE PREHEATERS

Preheating engines for winter operations is at best a miserable chore and at worst can be a disaster for the plane, the pilot & flight operations - until the development of the E-Z Heat Aircraft Engine Heater. The E-Z Heat was designed to provide very efficient engine heating for virtually all propeller driven aircraft. The heaters consist of a flexible synthetic pad that easily conforms to the contours of the oil pan. This pad will heat 12 gts of oil from -40° to +60°F in an hour while using approximately 300 watts of electricity. The heater is 1/32" thick. which enables the immediate heat transfer from heater to engine.

The heaters are thermostatically controlled, so leaving them plugged in overnight means the plane will be ready to go in the morning. Normally, complete pre-heating takes only 3-5 hours for the entire engine to be nice and warm. With this new lighted plug, the owner simply needs to look out the window or peek in the hangar to see if they remembered to plug in their E-Z Heat engine pre-heater. Molded into the male plug end is a newly designed light emitting diode (LED). This LED allows the operator to visually recognize if there is electrical power to the preheat system even from a distance. FAA approved for certificated aircraft.

End your cold weather starting problems and reduce premature engine wear with the installation of our proven

#### Specifications:

Power Consumption: 300 watts or less / Thermostatically Controlled Power Requirement: 110/120 volts (models 441 and 540 are available in 220 volts).

Installation: The adhesive is already on the pad. All you need to do is peel and stick it on! (excluding model 470)

Preheat Time: 3 to 5 hours on cold soaked engine, although, since unit is thermostatically controlled, it may be left on overnight, or all the time. Cowl covers and prop covers are recommended for extreme cold weather, they also reduce preheat time.

Lite Brite Plug: With this new lighted plug, the owner simply has to look out the window or peek in the hangar to see if they remembered to plug in their E-Z Heat engine pre-heater! (excluding model 470)

Weight: Only 9 ounces!

Heat Transfer: Convection/conduction, the safest way of heat transfer available. No flames or glowing elements are potential fire hazards.









07-00756 07-05315 07-05345 07-05210

Application	Heater #	Part No.	Price
Continental A-65 to O-200 (round). Use on round kidney shaped oil sumps	360	07-00756	
Continental A-65 to O-200 (rectangle) Use on flat oil sump surface	270	07-05315	
Continental C-125 to O-300, E-165 to E-225, IO-360 to TIO-360 Lycoming O-235, O-290, O-320*	440	07-05100	
Continental 0-470, IO-470, O-520, IO-520 Lycoming O-320*, O-360, IO-360, O-540, IO-540C, D, TIO-540C	441	07-05200	
Continental O-470, IO-470, O-520, IO-520	470	07-01320	
Lycoming IO-360A & C Series	442	07-05210	
Continental O-470, IO-470, O-520, IO-520, IO-550 Lycoming O-540,	411, 440 or 540	07-05345	
TIO-540 (except C), IO-720	220V	07-05345-2	
Model 441 - 220 Volt	441-2	07-05200-2	

\* Except H and Rear Carbs

#### E-Z HEAT 912 ENGINE PREHEATER



The E-Z Heat Engine Preheater system fits the Rotax motors and many other light sport aircraft on the market today. The system consists of two heater pads connected with a common "Light Bright" power cord. Installation is easy by peeling and sticking a pad on both the sump and on the oil tank to assure the engine gets the proper amount of heat.

P/N 07-01860 .....-

# IS PREHEAT SYST

## TANIS CONTINENTAL / LYCOMING PREHEAT KITS

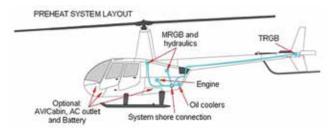


Engine Preheat Kit for 4 / 6 / 8 Cylinder Continental and Lycoming engines. This preheat kit contains threaded heat elements located in each cylinder assembly and one pad heat element on the engine crankcase/oil sump/tank. This multi-point configuration fully preheats the

engine and attached accessories. Power is routed to the elements through a dedicated wiring assembly with LED system power indication and circuit overload protection standard. The system is self-regulating through design. Heated components reach an average state of thermal equilibrium in approximately six hours. This preheat kit is compatible with all engine monitor systems as the threaded heat elements can replace either a rocker cover screw or intake bolt fasteners. Not eligible for rotorwing aircraft (helicopters)

STC / PMA	Description	Part No.	Price
FAA-STC: # SE03232CH TCCA acceptance of FAA- STC on file. EASA- STC: # 10054417	Tanis STC Engine Preheat Kit - 4 Cylinder Continental And Lycoming - 115 Volt #SE03232CHalso TCCA & Easa Approved TSP- 4CYL-2925-115	05-14825-1	
FAA-STC: # SE03232CH TCCA acceptance of FAA- STC on file. EASA- STC: # 10054417	Tanis STC Engine Preheat Kit - 4 Cylinder Continental and Lycoming - 230 Volt #SE03232CHalso TCCA & Easa Approved TSP- 4CYL-2925-230	05-14826-1	!
FAA-STC: # SE03309CH TCCA acceptance of FAA- STC on file EASA- STC: # 10054433	and Franklin - 115 Volt	05-14829-1	
PMA ONLY	Tanis Engine Preheat Kit - 8 Cylinder Io-720 - 115 Volt TSP8CYL-1045-115	05-14833	
PMA ONLY	Tanis Engine Preheat Kit - 8 Cylinder lo-720 - 230 Volt TSP8CYL-1045-230	05-14834	

#### TANIS ROBINSON HELI-PREHEATER KITS



Preheating is accomplished using electrical resistance heat in the form of thin pads sized and shaped to fit various parts. The pads are surface mounted with a bonding adhesive. This includes engine, accessory and propeller reduction gearboxes, attached accessories, and engine oil tank. Power is routed to the heating elements through a dedicated shore power plug, circuit protection, and wiring assembly. System is self-regulating, heated components reach an average state of thermal equilibrium in approximately six hours.

Description	Description Part No.	
Tanis Heli-preheat Kit - Robinson R44 - 115 Volt Tshr44-2778-115	05-14813-1	
Tanis Heli-preheat Kit - Robinson R44 - 230 Volt Tshr44-2778-230	05-14814-1	
Tanis Heli-preheat Kit - Robinson R66 - Rr250-c300/a1 - 115 Volt Tshr66-3078-115	05-14815	
Tanis Heli-preheat Kit - Robinson R66 - Rr250-c300/a1 - 230 Volt Tshr66-3078-230	05-14816	

#### TANIS PREHEAT SYSTEM FOR ROTAX 912/914 SERIES ENGINES



Engine Preheat Kit for 4 cylinder Rotax 912/914 (all models).

This preheat kit contains electrical elements located in each cylinder assembly, one threaded heat element on the engine crankcase (oil pump) and a pad heat element bonded on the oil tank. This multipoint configuration fully preheats the engine and attached accessories. Power is routed to the elements through a dedicated wiring assembly with system power indication and

circuit overload protection. System is self-regulating through design. Heated components reach an average state of thermal equilibrium in approximately six hours.

This preheat kit when installed will supply 230 watts with a 2.0 amp draw at 115/230 volts.

Standard	P/N 08-07395-1
Europe	P/N 08-07395-230-1

#### TANIS JABIRU PREHEAT KITS





Preheating is accomplished using electrical resistance heat in the form of thin pads sized and shaped to fit various parts. The pads are surface mounted with a bonding adhesive. This includes engine, accessory and propeller reduction gearboxes, attached accessories, and engine oil tank. Power is routed to the heating elements through a dedicated shore power plug, circuit protection, and wiring assembly. System is self-regulating, heated components reach an average state of thermal equilibrium in approximately six hours.

Description	Part No.	Price
Tanis Engine Preheat Kit -Jabiru 2200 - 115 Volt TSP4CYL-2513-115	05-14821	
Tanis Engine Preheat Kit -Jabiru 2200 - 230 Volt TSP4CYL-2513-230	05-14822	

#### TANIS AVIONICS / CABIN HEATER



Includes 6 foot long cable for easy use on floor of aircraft. Note: Extension cord to get to your aircraft or inlet/outlets not included. Output: 500 watts ± 10%. Required power: AC 100-240 Volt - 50/60 Hz. Dimensions: 6 x 5.75 x 2 inches (150 x 145 x 45 mm) Approximate. Heater Lead length: 6 inches (150 mm) Approximate.

P/N 05-14755 .....----



#### **TANIS 4 / 6 CYLINDER ENGINE** PRESERVATION KIT

Engine Preservation Kit: recommended by engine manufacturers for storage of an engine longer than 90 days. Everything you need for long-term protection of your Lycoming & Continental engine.

4 Cylinder......P/N 08-07085 ..... 6 Cylinder.....P/N 08-07086 .....---------

#### TANIS BONDING SEALANT



Conforms to MIL-A-46106. Clear must be used as the coloring dies and other added materials reduce the materials thermal transfer rates. Bonding sealant - 1 ounce tube.

P/N 08-13884 .....----

Engine preheating is accomplished through electrical resistance heat in the form of thin pads sized and shaped to fit various parts. The pads are surface mounted with a bonding sealant/adhesive. Heated items include, engine accessory/reduction gearboxes, fluids, batteries and attached accessories. Power is routed to the heat elements through a dedicated wiring assembly with power indication and circuit overload protection. System is self-regulating through design. Heated components reach an average state of thermal equilibrium in approximately six hours.

Description	Part No.	Price
Cessna 208B - PT6A-140A - 115 Volt - When installed will supply 555 watts with a	05-14769-1	
4.8 amp draw at 115 volts.		
Cessna 208B - PT6A-140A - 230 Volt - When installed will supply 555 watts with a 2.4 amp draw at 230 volts.	05-14770-1	
Twin Otter DHC-6 400 PT6A-34 - 115 Volt	05-14771	
Twin Otter DHC-6 400 PT6A-34 - 230 Volt	05-14772	
Gippsaero Airvan GA8 Series - W/battery & Avionics/cabin Heat - 115 Volt TSF- GA8-3120-115	05-14773	
Gippsaero Airvan GA8 Series -W/battery & Avionics/cabin Heat - 230 Volt TSF- GA8-3120-230	05-14774	
Quest Kodiak 100 - W/battery & Avionics/ cabin Heat - 115 Volt TSFKODIAK-3123-115	05-14775-1	
Quest Kodiak 100 - W/battery & Avionics/ cabin Heat -230 Volt TSFKODIAK-3123-230	05-14776-1	
Pilatus PC-12, PC-12/45, PC-12/47, Serial number (S/N): 101 thru 999 Engine: PT6A-67B. When installed will supply 703 watts with a 6.1 amp draw at 115 volts	05-14777	
Pilatus PC-12, PC-12/45, PC-12/47, Serial number (S/N): 101 thru 999 Engine: PT6A-67B. When installed will supply 703 watts with a 3.1 amp draw at 230 volts	05-14778	
Pilatus PC-12/47E, Serial number (S/N): 1001 - UP Engine: PT6A-67P. When installed will supply 703 watts with a 6.1 amp draw at 115 volts	05-14779	
Pilatus PC-12/47E, Serial number (S/N): 1001 - UP Engine: PT6A-67P. When installed will supply 703 watts with a 3.1 amp draw at 230 volts	05-14780	
P&W - R1340 - 115 Volt TSP9CYL-2904-115	05-14835	
P&W - R1340 - 230 Volt TSP9CYL-2904-230	05-14836	
Pratt & Whitney DHC-8 (Q400). Supplies 2838 watts with a 24.6 amp draw at 115 volts. Each engine is supplied with 1315 watts with a 11.4 amp draw at 115 volts. The 3 batteries are supplied with 208 watts with a 1.8 amp draw at 115 volts.	05-14781	
Pratt & Whitney DHC-8 (Q400). Supplies 2838 watts with a 12.3 amp draw at 230 volts. Each engine is supplied with 1315 watts with a 5.7 amp draw at 230 volts. The 3 batteries are supplied with 208 watts with a 0.9 amp draw at 230 volts.	05-14782	
Pratt & Whitney PT6A Small And Medium Engines (Short PRGB) - 115 Volt	05-14841	
Pratt & Whitney PT6A Small And Medium Engines (Short PRGB) - 230 Volt	05-14842	
Pratt & Whitney PT6A Large Engines (Long PRGB) - 115 Volt	05-14843-1	
Pratt & Whitney PT6A Large Engines (Long PRGB) - 230 Volt	05-14844	
Pratt & Whitney 118, 120, 121, 123 - 115 Volt	05-14845	
Pratt & Whitney 118, 120, 121, 123 - 230 Volt	05-14846	
Pratt & Whitney 124, 125, 126, 127 - 115 Volt	05-14847	
Pratt & Whitney 124, 125, 126, 127 - 230 Volt Pratt And Whitney PW545A	05-14848 05-14849	
(Cessna Citation Excel) - 115 Volt Pratt And Whitney PW545A	05-14850	
(Cessna Citation Excel) - 230 Volt Pratt & Whitney PWJT15D Series Turbofan	05-14851	
Engines - 115 Volt Pratt & Whitney PWJT15D Series Turbofan		
Engines - 230 Volt	05-14852	
Garrett TPE 331u & TPE 331 Series - 115 Volt	05-14839-1	
Garrett TPE 331 Series - 230 Volt  AgustaWestland A109C, A109E, A109S, AW109SP WITH PW206C/PW207C - 115 VOLT TSHAW109-2219-115	05-14840-1 05-14787	
AgustaWestland A109C, A109E, A109S, AW109SP WITH PW206C/PW207C - 230 VOLT TSHAW109-2219-230	05-14788	
Rolls Royce RR250 Series Turboprop - 115 Volt	05-14853	
Rolls Royce RR250 Series Turboprop - 230 Volt	05-14854	

rmal equilibrium in approximately six hours.	tootion. Cyc	
Description	Part No.	Price
Airbus TSHAS350-318 - RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14783	
Airbus TSHAS350-3184-230 - RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14784	
Airbus TSHAS350-3185-115	05-14785	
Airbus TSHAS350-3185-230	05-14786	
Airbus TSHEC130-3186-115 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14803	
Airbus TSHEC130-3186-230 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14804	
Airbus (Eurocopter) Ec 135 P1 & P2 With PW206B - 115 Volt TSHEC135-2230-115 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14805	
Airbus (Eurocopter) Ec 135 P1 & P2 With PW206B - 230 Volt TSHEC135-2230-230 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14806	
Airbus (Eurocopter) EC135T1/T2 With Arrius 2b/2b1/2b2 - 115 Volt TSHEC135-2765-115 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14807	
Airbus (Eurocopter) EC135T1/T2 With Arrius 2B/2B1/2B2 - 230 Volt TSHEC135-2765-230 RTB0001 Required. This Kit Is Not Eligible For An 8130-3	05-14808	
Austro AE300 - 115 Volt #SE03232CHALSO TCCA & EASA Approved TSP4CYL-3001-115	05-14827	
Austro AE300 - 230 Volt #SE03232CHALSO TCCA & EASA Approved TSP4CYL-3001-230	05-14828	
Jacobs (L-4) R-755 - 115 Volt TSP- 7CYL-3002-115	05-14831	
Jacobs (L-4) R-755 - 230 Volt TSP- 7CYL-3002-230	05-14832	
Bell 407 With RR250-C47B - 115 Volt #SR03474CH TSHB407-3083-115	05-14795	
Bell 407 With RR250-C47B - 230 Volt #SR03474CH TSHB407-3083-230	05-14796	
Bell 212, 412, 412cf, 412EP - 115 Volt #SR04132CH TSHB412-3132-115	05-14799	
Bell 212, 412, 412CF, 412EP - 230 Volt #SR04132CH TSHB412-3132-230	05-14800	
AgustaWestland AW119 (Koala) with PT6B-37A. 802 watts with a 7.0 amp draw at 115 volts	05-14789	
AgustaWestland AW119 (Koala) with PT6B-37A. 802 watts with a 3.5 amp draw at 230 volts	05-14790	
Enstrom Helicopter F-28/280 W/ Hio-360 - Standard (CHT Not Wells Required) - 115 Volt TSHEN280-2780-115	05-14809	
Enstrom Helicopter F-28/280 W/ Hio-360 - Standard (CHT Not Wells Required) - 230 Volt TSHEN280-2780-230	05-14810	
Enstrom 480 - 115 Volt TSHEN480-2504-115	05-14811	
Enstrom 480 - 230 Volt TSHEN480-2504-230	05-14812	
Schweizer/Sikorsky 269/300 - Standard (CHT Wells Not Required) - 115 Volt TSHS269- 2508-771-dt-115	05-14817	
Schweizer/Sikorsky 269/300 - Standard (CHT Wells Not Required) - 230 Volt TSHS269- 2508-771-dt-230	05-14818	
Airbus (Eurocopter) AS350D with Lycoming LTS101 - When installed will supply 587 watts with a 5.1 amp draw at 115 volts.	05-14729	
Airbus (Eurocopter) AS350D with Lycoming LTS101 - When installed will supply 587 watts with a 2.6 amp draw at 230 volts.	05-14730	
Oil Tank Heater Kit - 115 Volt TSP1051-115	05-14819-1	
Oil Tank Heater Kit - 230 Volt TSP1051-230	05-14820-1	

# TANIS PREHEAT ACCESSORIES

TANIS PAD HEAT ELEMENTS				
Dims	Volt/Watts	Description	Part No.	Price
1.75"x7"	115/120	Shape: Rectangular Connector: Pin	05-14748	
1.75"x7"	230/120	Shape: Rectangular Connector: Pin	05-14749	
2"x3"	115/40	Shape: Rectangular Connector: Pin	05-14750	
2"x3"	230/40	Shape: Rectangular Connector: Pin	05-14751	
2"x4.5"	115/80	Shape: Rectangular Connector: Pin Usage: 6 cylinder piston engine sump and case	05-14752	
2"x4.5"	230/80	Shape: Rectangular Connector: Pin Usage: 6 cylinder piston engine sump and case	05-14753	
1.75"x7"	115/120	Shape: Rectangular Connector: Pin Usage: 6 cylinder piston engine sump and case	05-21977	
3"x3"	115/70	Shape: Square Connector: Socket Usage: 6 cylinder piston engine sump and case	05-21978	
4"x3.1"	115/70	Shape: Irregular Connector: Socket Usage: 6 cylinder piston engine sump and case	05-21980	
3"x3.5"	115/80	Shape: Rectangular Connector: Pin Usage: 6 cylinder piston engine sump and case	05-21981	
Shape Varies	115/240	Shape: Irregular Connector: Pin Usage: 6 cylinder piston engine sump and case	05-21982	
0.9"x1.5"	115/13	Shape: Rectangular Connector: Socket Usage: 6 cylinder piston engine sump and case	05-21984	
		Cable Assembly Kit, Thermostat – 1 lead. For single battery systems.	05-21985	
		Threaded Heat Element 1-20 Socket Only 50 Watt - 115 Volt	05-22003	
1.5" X 2"	115/28	Shape: Rectangular Connector: Pin	05-22391	
3" X 7"	115/200	Shape: Rectangular Connector: Pin	05-22392	

#### **TANIS BATTERY HEAT ELEMENTS**

Dims	Volt/ Watts	Connector	Part No.	Price
31.5"x4"	115/60	with socket connector	05-14731	
31.5"x4"	230/60	with socket connector	05-14732	
31.5"x3.5"	115/60	with socket connector	05-14733	
31.5"x3.5"	230/60	with socket connector	05-14734	
38.5"x4"	115/74	with socket connector	05-14735	
38.5"x4"	230/74	with socket connector	05-14736	
31.5"x4"	115/60	with pin connector	05-14737	
31.5"x4"	230/60	with pin connector	05-14738	
31.5"x3.5"	115/60	with pin connector	05-14739	
31.5"x3.5"	230/60	with pin connector	05-14740	
38.5"x4"	115/74	with pin connector	05-14741	
18"x2.37"	115/20	with pin connector	05-14742	

#### TANIS THREADED HEAT ELEMENTS

TAMO TITILADED HEAT ELEMENTO			
Description	Part No.	Price	
3/8-24 CHT Dual Probe - J Type Grounded - Red/ White or Black/Yellow (TAS100T-J) with Pin Connector	05-14861	-	
Threaded Heat Element Socket Plug Connector 1/4-20X1.00 50 WATT - 115 VOLT	05-14857	-	
Threaded Heat Element 1/4-20 W/PIN CONNECTOR 50 WATT - 115 VOLT	05-14858		
1/4-20 with Pin Connector 50 Watt - 115 Volt	05-14868		
1/4-20 with Pin Connector 50 Watt - 230 Volt	05-14870		

## TANIS LED INDICATOR LIGHTS

Description	Part No.	Price
6 inch lead, Pin connector - 115V	05-14756	
6 inch lead, Pin connector - 230V	05-14757	
6 inch lead, socket connector - 115V	05-14758	
6 inch lead, socket connector - 230V	05-14759	
6 inch lead, no connector - 115V	05-22393	

#### **TANIS PREHEAT PARTS**

TANIS PREHEAT PARTS	5	
Description	Part No.	Price
Connector kit comes with all the items necessary to install one 2 contact socket connector.	05-14745	
Connector kit comes with all the items necessary to install one 3 contact socket connector.	05-14746	
Solid Pin Contact - For single 18 or 20 gauge wire connection 0460-202-16141	05-14701	
Solid Pin Contact-Nickel w/green stripe - For single 18 gauge wire connection or two 20 gauge wires 0460-215-16141	05-14702	
Solid Socket Contact - For single 18 or 20 gauge wire connection 0462-201-16141	05-14703	
Solid Socket Contact - Nickel w/ green stripe. For single 18 gauge wire connection or two 20 gauge wires 0462-209-16141	05-14704	
Solvent Wipe CB911	05-14711	
4 Way Indent Crimp Tool for 16-22 AWG Wire TU02793	05-14876	
Aluminum Spacer - 1/4" I.D. TU02846	05-14877	
Aluminum Spacer - 5/16" I.D. TU02846-5	05-14878	
Anti-Seize 2 Gram Pillow Pack	05-14881	
Flush Mount Plug - Metal - 115V	05-14760	
Flush Mount Plug - Tethered Cap	05-14762	
Fuse, 12AMP TU02848	05-14880	
Harness Connector (Blade Contact) CNA	05-14713	
Battery Heat Installation Kit Battery Heat Element Sold Separately TSB2800	05-14766	
Bonding Sealant 1oz. AC-1230	08-13884	
Slotted Socket - 11mm Deep 6 Sided 1/4 Drive TU03032	05-14884	
Bracket, Shore Plug (Continental Sandcast, AE300) TU03016	05-14883	
Cable Tie - 8" Long, 40 lb, Black, Heat Stabilized	05-14879	
Low Profile Cable Mount, Click Bond adhesive.	05-14874	
18 gauge, 2 conductor - Black/Grey (BLK) and White (WHT) paired nickel coated copper wires with Red jacket.	05-14706	
Circular Plug Bracket (Lycoming)	05-14871	
Click Bond Installation Kit	05-14712	
Contact Removal Tool	05-14715	
Element Connector "Spade style" (receptacle contact)	05-14714	
Washer Kit for LED Light TU03065	05-14885	
Washer Thermocouple, K Type Grounded Kit	05-14725	
Panel Mount Fuse Holder for 1/4" x 1 1/4" Fuses.	05-14723	
Install one 2 contact pin connector.	05-14743	
Install one 3 contact pin connector.	05-14744	
Placard for Tanis 115 Volt Systems	05-14872	
Placard for Tanis 230 Volt Systems	05-14873	
Power Door Kit (2.4) TD02840	05-14747	
Power Plug, Free Hanging 115V TP02770-115	05-14747	
Sealing Cap for 2 Pin Connector DT06-2S-C017	05-14703	
Sleeving - 0.249"/0.229", Non-Fray HO #3 Red - /FT 3120003-Red	05-14710	
Sleeving - 0.198"/0.182", Non-Fray HO #5 Red - /FT 3120005-Red	05-14708	
Sleeving - 0.178"/0.162", Non-Fray HO #6 Red - /FT 3120006-Red	05-14709	
Slotted Socket - 1/2" Deep 6 Sided 1/4 Drive TU02905-05	05-14882	
Sealing Plug For 2 Pin Connector DT06-2S-C017	05-14719	
Triangular Sealing Plug For 3 Pin Connector DT06-3S-C017	05-14721	
6 Contact Plug Wedge	05-22396	
Fireproof Grommet TG01056	05-14754	
-		
Fuse - 5 AMP	05-22395	
Tethered Cap with Snap Ring	05-22394	
Junction 6 Lead Kit	05-22390	

#### **C & D AIRCRAFT HEATERS**



Designed for upgrading obsolete aircraft heating systems or first time installation in your aircraft, C&D Installation kits include a complete group of materials necessary to replace the obsolete system or to install for the first time. Commonly used C&D heater components are shown below. For replacement heaters, request a quote by phone or email and provide aircraft make, model, and serial number.

#### **HEATER COMPONENTS**

C & D Part No.	Description	Part No.	Price		
CD12065-1	Cabin Heater	05-12002			
CD12064-1	Cabin Heater	05-12003			
CD14072-1	Cabin Heater	05-12004			
CD14073-1	Cabin Heater	05-12005			
CD14075-1	Cabin Heater	05-12006			
CD14077-1	Cabin Heater	05-12007			
CD14078-1	Cabin Heater	05-12010			
CD21253	Electronic Thermostat	08-14605			
CD21255	Rotary Thermostat	08-14606			
CD21402	24V Motor	08-14607	*		
CD21401	12V Motor	08-14608	*		
CD22050	Spark Plug	08-14609			
CD21381	24V Ignition Unit	08-14610	*		
CD20800	12VDC Fuel Regulator	08-04612	*		

<sup>\*</sup>Additional Core charge

#### SAFE-HEET ENGINE HEATERS



SAFE-HEET is a thin flexible pad that is bonded to the engine oil sump. The kit is complete with materials and step-by-step instructions. A log book entry is all that is required for permanent installation; No S.T.C. or 337 form required. There are no airframe modifications required. SAFE-HEET can be used with a timer or the 707 temperature controller, and uses

standard 110 A.C. voltage. We recommend using the SAFE-HEET 707 Temperature Controller to cure the adhesive for faster installation.

#### **ECONOMICAL AND EFFICIENT**

SAFE-HEET puts the heat where it is needed with very little loss to the surrounding atmosphere. The air inside the engine is heated by the warm oil sump. The warm air goes up and the cold air goes down, your engine is heated from the inside out. It uses about 300 Watts which costs about 3 cents per hour to operate. Less than 1 hour will generally warm the engine oil from subzero to safe easy starting temperature. The entire engine will be warm in 2 to 3 hours. The adhesive is thermo-conductive, and the metal foil heatsink is vulcanized to the pad for even heat transfer. SAFE-HEET reduces costly starter and engine abuse during cold weather starts.

Model 720 Dimension: 4" x 7"......P/N 05-04421 ......



#### ANTI SPLAT AERO NO HASSLE **ENGINE PRE-HEATER**

"No Hassle Engine Pre-Heater" is Anti Splat Aero LLC's newest specialty accessory, developed specifically for use in most Lycoming equipped aircraft. The product is constructed of 6061-T-6 aluminum, machined and assembled to give years

of trouble-free service. Warms internal engine components for quick starts in cold weather and reduces engine wear by improving the oil flow. No glue, stickers, Band-Aids, no fans, no hoses, no box heaters, no ductwork, requires no thermostat or timers, no fuss or mess, just plug it in and you are ready to go. P/N 07-26883 .....-

#### VARIABLE TEMPERATURE CONTROLLER



The SAFE-HEET Variable Temperature Controller can be used with any 700 Series SAFE-HEET Engine Pre-heater as an installation aid, or for providing temperature control for continuous preheat without promoting internal engine corrosion

P/N 05-04423 ... FOR APPLICATION INFORMATION PLEASE CALL

OR VISIT OUR WEBSITE AT WWW.AIRCRAFTSPRUCE.COM

#### THE SWITCHBOX REMOTE CONTROL APP



The easiest, cheapest and safest way to remote control any electrical device.

For Pilots: No more driving to the airport hours before a flight. Turn on your Engine Heater from your cellphone, and simplify your cold flying routine! TIP: Activate a 2nd device like a Cabin Heater for your sensitive avionics, or a Coffee Maker before you arrive!

For General Use: Your new 'Smart Home' with the easy automation from SwitchBox. Remote control your heating, lighting and air conditioning, from anywhere in the world. TIP: Turn On the A/C before you get home, or check to see if you left the lights On and turn them Off. Save Money! SwitchBox App for iPhone/iPad/Android - Free. Visit our website

to download your copy.		
The Switchbox 4G Full System	P/N 08-17037	<b></b>
Cell Service Sim Card		
Wired Antenna	P/N 08-13551	
Backup Battery	P/N 08-17035	<b></b>



## **SWITCHEON 15 AMP BASE** REMOTE POWER SWITCH

SwitcheOn Remote Power Control is the ultimate remote power switching device. It is easy to use and can be controlled by a smart phone enabled app for easy switching on and off. There is no wifi, hotspot or additional SIM/ service required and comes available in 2 or

4 channels. This device is perfect for remotely turning on engine block heaters in aircraft. Features: • LTE-M Remote power switching • Switch 2 Channels (Outlets) • Up to 15 amps (1800 watts) • Automatic recovery after power failure • Monitoring • Ambient temperature sensor • Available additional analog/sensor inputs • Bright OLED display • Local and ZULU time • Cellular Signal status • Power/port status • Ambient Temperature • Automations for each channel • On at Ambient temperature • Off at Ambient temperature • On at time • Off at time • Verizon cell tower based service • Uses LTE-M and NB-IoT bands deployed as part of 5G rollouts Newest band type will have long term availability for future • Operates much further from cellular towers than normal 3G or 4G

SwitchOn 2 Channel USA	P/N 05-27121
SwitchOn 4 Channel USA	P/N 05-28987
SwitchOn 2 Channel Canada	P/N 05-29015
SwitchOn 4 Channel Canada	P/N 05-29016

## **BRUSHLESS CABIN HEATERS**



These heaters are available from 12-48 volts, and different wattages as well. The Stealth heater is simple to install and can be operational in minutes. Measuring only 6" long and 5" tall, our Stealth heater will fit in virtually any small space. RuCar elements allow the heaters to be mounted vertically

OR horizontally which allows even a tighter mounting space. The Stealth heaters feature RuCar elements which have been tested to have a life expectancy of 10,000 hours, are vacuum sealed, and are exclusive to DC Thermal. RuCar elements operate at temperatures in excess of 650 degrees, are up to 300% more efficient than standard alloy heater elements.

Specifications: Heater Dimensions: 6"x 5" X 4". Brushless 50,000 Hour Ball Bearing Fan. 10,000 Hour DC Thermal ©RuCar Vacuum Sealed Elements. Case Construction: Riveted T5052 Aircraft Aluminum. Wired Entirely with GXL Wire. Thermally Protected. HIGH and LOW HEAT Settings. Comes complete with mounting hardware, mounting bracket, fuse, fuse holder, electrical connector ends, and detailed instruction. TWO YEAR Parts AND Labor Warranty.

Price	Part No.	BTUS	Volts/Watts	Model
	05-02121	6012	12V / 360W	SA12-3000
	05-01966	8016	12V / 480W	SA12-4000
	05-03869	10,020	12V / 600W	SA12-5000
	05-04855	10,020	24V / 600W	SA24-2500
	05-03870	14,028	24V / 840W	SA24-3500
	05-02123	18 036	24V / 1080W	SA24-4500

## RANS AIRCRAFT CABIN HEATER



The RANS aircraft heater is the answer to the winter flying "chills". It is very lightweight, inexpensive and installs easily in just two hours. This heater utilizes ram air and the heat off the engine muffler.Operation is simple. Slipstream air is forced through the heater inlet, passing over the muf-

fler, picking up the heat and delivering it to the cabin or pod via an Aeroduct hose. Contains no moving parts. Fits Rotax mufflers and adaptable to other engines. Only fits Rotax 503 and 582. Will not fit 618......P/N 05-17400.....---





#### CHAMPION SPIN-ON OIL **FILTERS**

Spin-On Oil Filter CH48109-1 by Champion. Replaces oil filter element. Easy to install. Saves time and clean-up. FAA Approved. Features: • Replacement elements service engine-mounted or line-installed filter systems

CH48110-1 incorporating a permanent housing assembly. All sizes of replacement elements are packed 12 per case of a single

- part number in heavy, re-shippable corrugated-board cartons
   Modern spin-on oil filters contain the element, incorporating the antidrain back valve mechanism (and internal bypass valve 48108-1/48109-1), and are sealed in a disposable housing.
- All sizes of spin-on filters are packed 12 per case of a single part number in heavy, re-shippable corrugated-board cartons.
- Silicone impregnated filter gasket aids in future removal.
  Shorter stud length on CH 48110-1 for tight clearance applications.
- · Heavy, corrugated steel center tube supports each convoluted pleat of the filter element and produces a substantially higher collapse-pressure rating, twice that of other similar filters.
- · Maximum full-flow design, without interference from center-bolt oil filter assemblies, provides increased oil filtration each engine-operating hour.

Aircraft	Aircraft Model	Filter Part No.
Beech	E33, F33, A35 thru S35	CH48109-1
Cessna	120, 140, 170, 172, 180, 182, 185, 205, 210, 310 C thru Q, 310R	CH48110-1
Mooney	M20, M22	CH48110-1
Piper	PA-18, PA-22, PA-23, PA-24, PA-25, PA-28, PA-30, PA-31, PA-34, PA-60	CH48110-1
LSA	Lycoming 233	CH48114-1

Filter Part No.	Price	12 Pack	Price
CH48103-1		08-00905-12	
CH48104-1		08-00906-12	
CH48108-1		08-00907-12	
CH48109-1		08-00908-12	
CH48110-1		08-00909-12	
CH48111-1		08-00910-12	



#### AIRWOLF REMOTE MOUNTED OIL FILTER KITS

The remote mount oil filter kit by Airwolf Filter Corp. replaces the Lycoming oil screen and housing allowing every aircraft to have an oil filter and to locate it on the firewall where it's easy to get to. The adapter takes up no more space on the engine than the original part, so even the tightest installations can benefit

from it. Your Vernatherm and oil temp bulb are reused and transferred directly to our adapter, everything else is included. Universal STC'd kit fits any Lycoming powered Single/Multi engine airplane less than 450hp. All other STC'd for specific aircraft. Hoses not included unless where indicated. Perfect for Tight Installations in: \* Avion \* Aeronca \* Bellanca \*Beech \*Cessna \*Cozy MK-IV \* Glasair \* Grumman \* Lancair \*Long EZ \*Maule \*Mooney \* Piper \* Pitts \* RV \*Skybolt \*T-18 \*Vari-EZ \* Velocity Fits Lycoming Series Engines: 0-235, 290, 320, 340, 360, & 540

CONTINENTAL				
Description	Part No.	Price		
Universal Continental kit. Fits: A50/65/75/80, C75/C85/C90 C125, O200, & IO240 Engines	08-05675			
Universal Continental Kit. Fits: C145, O300, GO300, & IO360	08-05680			
Universal Continental kit. Fits: O470, IO470, IO520, TSIO520, GTSIO520, & IO550 Engines (Except Below) This kit screws into the existing oil pump and replaces the original oil screen.	08-05685			
Universal Continental Kit. Fits: O470 Military Engines used on T34 Mentor & L-19 Birddogs.	08-05690			
Continental Filter Relocation Kit. Fits: IO520BA, C, M, TSIO520 B,D,E,J,K,L,N,U,BE,VB,WB & IO550B & C engines and all engines with new style TCM Oil Pumps w/ integral oil filter mounting pad that is part of the oil pump.	08-05800			
Stearman Kit, [Continental W670 Radial with 1" Lines]	08-05805			
Waco Kit, [Continental W670 Radial with 3/4" Lines]	08-05810			



#### TEMPEST SPIN-EZ OIL FILTERS

Tempest Oil Filters feature a MAGNETIC secondary filtration system that attracts steel particles too small to be caught in the filter media. • Base Plate Thickness: .187" • Burst Pressure: 700 PSI • Media Size: 311 sq. in. • AA48108 & AA48109: • Bypass Relief Valve TCM specs: 12-14 psi · Patented PC Housing.

Filter No.	Our Part No.	Price	Filter No.	Our Part No.	Price
AA48103-2	08-01266		AA48108-2	08-01268	
AA48104	08-01267		AA48109	08-01269	
AA48162	00 40400		AA48110-2	08-01270	
Cessna 162 LSA	08-48162		AA48111	08-01271	

#### SPIN-ON OIL FILTER - SIX PACK

Part No.	Tempest	Price	Part No.	Tempest	Price
08-04969	AA48103-2-6PK		08-04972	AA48109-6PK	
08-04970	AA48104-6PK		08-04973	AA48110-2-6PK	
08-04971	AA4810826PK		08-04974	AA48111-6PK	



#### TEMPEST ROTAX OIL FILTERS

The new filter has all the features which have made the Tempest oil filter so popular, including the magnetic secondary filtration system, and higher burst pressure. Full Can Thickness:.019". Base Plate Thickness: 100" Burst Pressure: 275-325. Media Size: 118 sq. in ......P/N 08-07226 .....-

## FOR TEMPEST OIL FILTER TOOLS SEE PAGE 800.



**AEROMAG** Note: Sold as a single unit, however to gain maximum results purchase as a set of two (one on each side).

Within the tight clearances of today's aircraft engines, normal wear generates tiny steel particles that are carried away in your oil. These particles are so small they will pass right through an normal oil filter. When the oil circulates back into the engine, these same particles are

carried into every lubricated space where they can cause three body abrasive wear. AeroMag® extracts normal, wear-causing steel particles from your oil with its powerful, focused, magnetic field technology. These particles are permanently trapped on the inside wall of the filter and are thrown away when the filter is changed. Slide the AeroMag® off the old filter, snap it onto a new one and it goes right back to work protecting your engine. AM360 3.6" (Lyc & Cont with at least a 3.625 in. diameter oil filter)

	P/N 08-01088
AM300 2.9" (Tall Rotax)	P/N 08-01235
AM150 2.5" (Short Rotal	c)P/N 08-07058

LYCOMING				
Description	Part No.	Price		
Lycoming Homebuilt Kit	08-05605			
STCD Husky Kit AFC-K005 Includes Hoses & Clamps	08-05635			
STCD Super Cub Kit AFC-K006 Includes Hoses & Clamps	08-05630			
STCD Universal Lycoming Kit	08-05660			
All American Champion Aircraft with Lycoming engine. Includes Lifetime Teflon Firesleeved Hoses	08-15995			
STCD Lycoming Kit-Fits all with Single Drive, Dual Magneto Engines.	08-05665			
Lycoming Filter Relocation Kit - Requires existing Lycoming 77852 Spin-on adapter. Application does not include helicopters.	08-00038			
K007-G Stearman Kit [Lycoming R680 Radial] Includes Hoses	08-13248			
STCD Franklin Oil Filter Kit Includes Hoses & Clamps	08-05815			

RADIAL					
Description	Part No.	Price			
P&W R985 Kit, Stearman	08-00995				
AFC-K015-D P&W R1830 Kit, DC-3/C-47	08-00997				
AFC-K015-E R985 Kit, Beach-18, Staggerwing, DGA-15	08-00998				
P&W R1340 Kit, Otter	08-00999				
AFC-K015-G P&W R985/1340 Kit, AG-Cat	08-01001				
AFC-K015-H P&W R1340 Kit, AT301/401/501	08-01002				
R1340 Kit, Thrush/S2D (Snow)	08-01003				
AFC-K015-L P&W R985 Kit,	08-01004				
FC-K015-K P&W R985 Kit, Weatherly; Gorilla Pump for radial engines.	08-07297				

# TER TOOLS - OIL CAN CUTTERS



#### TEMPEST AA472 OIL FILTER TORQUE WRENCH

The Tempest AA472 oil filter torque wrench is a great addition to any toolbox. Its 1" hex allows easy installation of all oil filters. The torque wrench also comes preset to 17 foot pounds and is easily recalibrated.

P/N 08-07023 .....----

#### TEMPEST AA473 OIL DRAIN TOOL



Tired of messy oil filter changes? Tempest oil drain tool with a twist of the knob drills a hole in the filter and allows the oil to drain out of the filter into your container. No mess, easy to do and inexpensive. Tempest improved the popular AA473 Oil Filter Drain Tool by redesigning the swivel fitting to a smaller, more compact design. The new fitting also allows for easier use of the tool because of its "true" swivel characteristics. If you want to upgrade your previously purchased AA473 Oil Filter

Drain Tool you can purchase the fitting individually.

Can only be used on Tempest Oil Filters.

Oil Drain Tool ......P/N 12-02248 .....----

#### TEMPEST AA473 OIL DRAIN TOOL



The Strain-O-Matic was created to take the hassle and mess out of draining oil filters, while simultaneously straining the engine oil for contaminants. The device hangs over the edge of a 5-gallon bucket. An included, Premium Silicone Tube connects to the engine oil drain valve. A removable 2" stainless-steel strainer is in the base of

the unit. When an engine is making metal, it is a little-known fact that the oil filter will only contain a small fraction of this metal. Most of the metal fragments lie dormant at the bottom of the oil pan. As oil is drained from the engine, any metal fragments are washed out as the oil is drained. This metal is removed by the strainer. Once the oil has finished draining from both the filter and the engine, the strainer is removed and .....P/N 08-19277 .

## TEMPEST AA474 OIL FILTER WRENCH EXTENSION



Some aircraft applications create an environment that does not allow adequate clearance to get a torque wrench or even an open-end wrench around the install nut on oil filters. Even though Tempest has recently introduced the Dash II filter, which is the shortest oil filter on the market, the clearance is still not enough on some

applications, such as Beech Barons and Bonanzas. To eliminate this problem Tempest producs the AA474 oil filter wrench extension. Features: Chrome-plated steel provides a high quality tool. Easy to use torque conversation label on back of tool.

P/N 10-03929 .....----

#### **SLICK T150 GAP GAUGE**



Tool Gauge Gap. Will work on Lycoming and Continental engines. P/N 12-00302 ....

#### CHALLENGER OIL FILTER TORQUE WRENCH



Challenger CP102 Oil Filter Wrench Torque Wrench Adapter 1" L P/N 12-01674 ....

Challenger CP103 Oil Filter Wrench Torque Wrench Adapter 30 MMS P/N 12-01675 ......

Challenger CP102 Oil Filter Wrench Torque Wrench Adapter 1" ST P/N 12-01676 .....



#### ACS OIL CAN CUTTER

This unit has the capacity of both P/N AFC-470 & 12-21395. It also uses the same replacement blade as the 12-21395. Anodized "Red" for corrosion resistance. Base can be clamped in a bench vise if desired. Made in USA

P/N 12-01048 .....-----

#### CT-709 OIL FILTER ADAPTER WRENCH

The CT- 709 tool, designed by a professional aircraft mechanic makes the job easier. Manufactured from tool quality steel, the wrench features both 3/8" and 1/2" drives, as well as "flip over" reversibility. For Cessna adapter for 150 Series through 300 Series Aircraft.

P/N 12-00792 .....

#### TEMPEST OIL FILTER CAN CUTTER



This universal cutter from Tempest is easy to use and is a great addition to any toolbox. It's made from high quality aircraft aluminum, making it lightweight and very durable. Works on all aircraft spin-on oil filters. Adapter pin easily removed for 'male' filters.

P/N 12-01392..... Tempest Oil Can Cutter Blades. P/N 12-01393 .....-----

#### **AIRWOLF AFC-470 OIL CAN CUTTER**



Every A&P knows the importance of cutting every single oil filter open after an oil change. The problem up to now was oil filters were difficult to open and the tools to open them were expensive. This is no longer the case with the Airwolf AFC-470 oil filter cutter. The AFC-470 is the easiest and quickest way to determine

the current health of your engine. The Airwolf AFC-470 oil filter cutter is constructed out of a solid 6" billet of super strong 6061-T6 aluminum, hard anodized to resist scratches and wear. Stainless steel rollers allow the oil filter to spin effortlessly during cutting. And finally, our specially designed razor sharp cutter wheel hardened to 60 Rockwell, will make quick work of opening any oil filter. This filter is designed to last a lifetime. Fits new style oil filters. Champion/Tempest/Kelly Filters from 3.75" - 3.00" Dia

Opens oil filters from 3.75" - 3.00" Dia......P/N 12-00789-1.....----Rotax Filters From 3.25" - 2.375" Dia .......P/N 12-02295 ......----Replacement Cutting Wheel......P/N 08-13957.....----

#### AND CRANK OIL FILTER CUTTING TOOL



This tool was designed to eliminate much of the mess that occurs with small handheld oil filter cutting tools. Very simple to operate, it is excellent for individual aircraft owners as well as FBO's and maintenance shops where a lot of filters need to be cut. Simply clamp in a vise, screw on the filter, turn the cutter into the filter and hand crank to open the filter. The rugged construction enables this tool to operate trouble free for years.

P/N 12-00122.....---

Replacement Cutting Wheel......P/N 12-01685 .....----



## **HV-FLEX OIL FILTER FLUID EXTRACTOR TOOLS**

Accomplish oil filter extraction task without the mess with quality, US-patented HV-FLEX TOOLS. Our products are guaranteed to help speed up the process. Based in Gilford, New Hampshire, our company offers our products

nationwide and beyond. Tidy. Efficient. Eco-Friendly. Oily and messy situations are common when replacing spin-off filters. Luckily, the HV-FLEX TOOLS were created to solve this problem, helping save time and cost from clean-ups. Our products extract the oil accumulated within spin-off oil filters during routine replacement. They are used on oil, diesel fuel, and hydraulic fluid filters found in automotive, marine, aviation industries, and etc. The HV-FLEX TOOLS offer a quick and clean oil filter extraction process. In addition to all of this, the oil fluids collected from the vacuum pump reservoirs can be recycled, reducing oil waste and negative environmental impacts.

2.5 inch diameter	P/N	12-06428	
3 inch diameter	P/N	12-06429	
3.5 inch diameter	P/N	12-06430	
4.5 inch diameter	P/N	12-06431	

# GARDSERT REPAIR KITS

#### **AVIATION OIL FILTER CUTTER**



This aviation oil filter cutter will open any size oil filter canisters for your inspection. To use the tool, place the filter in a vice, attach the tool to the

top of the filter, and rotate 4 to 6 turns to open the canister. The cutting wheel will stay sharp for about 50 uses, and is easily replaced when dull. The tool is made from 6061 aluminum with a purple anodized finish. The tool is ready to use on any oil filter with a male or female thread.

Oil filter cutter ......P/N 12-21395 ..... Replacement cutting wheel ......P/N 12-21396 .....

#### TEMPEST AA471 OIL FILTER MEDIA CUTTER



Tempest's new AA471 provides a low cost, efficient and safe tool that every mechanic will want to put in their tool box. Strong guard and non-retractable blade to secure the media and ensure an accurate cut.

P/N 12-01854 .....

# FC-2000 OIL FILTER

CAN CUTTER
Features: • Cuts all Champion,
Hartzell, and Tempest 3.7" Dia. oil filters Rugged 6061-T6 aluminum construction

Roller bearings provide smooth rolling action

 Hardened hardware throughout
 No parts to change
 Can cut in either direction • Made in USA Lifetime Warranty. P/N 12-00923-1.....

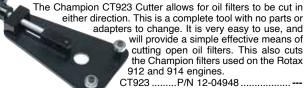
Replacement Cutter Wheel ......P/N 12-01689 .....-

#### FC-3000 OIL FILTER **CAN CUTTER**

This an cutter incorporates a longer plate that allows cutting filters from 3.7 to 4.7 inches in diameter. Roller bearings provide smooth cutting action. Ideal for cutting racing filters too! Black anodized finish.

P/N 12-02628 ....

#### CHAMPION OIL CAN CUTTER





#### OIL FILTER WRENCH

This very versatile, revolutionary oil filter wrench is for the aviation community and aircraft enthusiasts. This wrench was created specifically for you and your airplane. This tool is small, lightweight and easy to use making your

filter servicing and installations fast and easy. With very little effort your oil filter can be removed or run in and torqued. This super wrench is constructed with materials that are very strong, (4130 heat treated steel) then electroplated to meet our standards and will provide you with years of service......P/N 05-12376......----

#### FMC-2000 OIL FILTER MEDIA CUTTER



This patented tool is designed to hold Champion Aerospace brand Aviation oil filter spools, and to allow cutting the paper filter media at each end of the spool without holding the filter spool by hand. Using this tool reduces the risk of cutting one's hands while cutting the filter media as well as reducing the time necessary to accomplish this task. The filter media is rotated in a special holder that is supported by roller bearings. A knife, with a retractable safety cover is brought into position to make a clean cut of the filter media at each end. The filter media can then be removed for inspection.Patented.

FMC-2000BL Media Cutter Blades (3 pack) ...P/N 12-01688 .....-----FMC-2000K Kelly Filter Cutter Adapter ...... P/N 12-01686 ...... ---FMC-2000T Tempest Filter Cutter Adapter....P/N 12-01687 ................---Replacement Cutting Wheels ......P/N 12-00183 .....----

#### TOMS OIL FILTER CUTTING TOOL

Tom's oil filter cutting tool will allow you to inspect your aircraft's oil filtering material for trapped debris in a quick and easy manner. Oil filter inspection is a critical measure of your engine's health and should always be a part of your aircraft's regular maintenance program. Most filter cutters work like a pipe or tubing cutter in that you have to go around and around the filter, adjusting cutter depth with each pass.

Although you could do that with this tool, the real beauty of this new product is that the cut can be easily made in one

pass. The tool is designed primarily for Lycoming oil filters that have a threaded insert protruding from the end of the filter. A few Lycoming oil filters and most Continental oil filters do not have this insert. For these filters, an adapter insert is supplied with the tool. Tom's oil filter cutter may also be used on smaller filters such as found on Rotax or automotive engines. Simply remove the cutter handle and reposition the pivot bolt to the inner hold on the base handle. The adapter insert may be needed on these filters as well. Made in USA.

P/N 12-01697 .....----

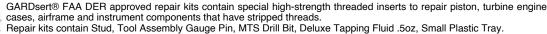
#### TALON OIL FILTER REMOVAL TOOL

The Talon Oil Filter Tool was created to remove stubbornly stuck oil filters. It is 50% stronger than the standard 10M-OFT type. The tool is safe in tight quarters and unable to slip, attempting to minimize damage to nearby components. This is still a messy process but this tool is your best chance of removing stuck filters out damaging anything else.

with- out damaging anything eise.

Features: • Three pin (TALON) engagement in oil filter plate for stability and strength • Good for up to 1500 in. lbs. of torque • Works in tight spaces! • Works on Aircraft, Automotive, Marine, and Recreational Vehicle applications • Made in the USA P/N 11-11556......

#### **GARDSERT STUD REPAIR KITS**





Description	Part No.	Price
1/2-13 Gardsert Stud Repair Kit	08-17552	
1/4-20 Gardsert Repair Kit	08-17536	
1/4-20 Gardsert Stud Repair Kit	08-17546	
1/4-20 Thinwall Gardsert Repair Kit	08-17538	
1/4-28 Gardsert Repair Kit	08-17537	
3/8-16 Gardsert Repair Kit	08-17547	

Description	Part No.	Price
3/8-16 Thinwall Gardsert Repair Kit	08-17545	
3/8-24 Gardsert Repair Kit	08-17548	
5/16-18 Gardsert Repair Kit	08-17540	
5/16-18 Thinwall Gardsert Repair Kit	08-17542	
5/16-24 Gardsert Repair Kit	08-17541	
7/16-14 Gardsert Stud Repair Kit	08-17551	

#### OIL FUEL FLOW RESTRICTOR FITTING



An oil/fuel flow restrictor fitting designed to fit the Lycoming engine oil pressure port as well as the fuel pressure port on the KB-090-T. This fitting is a modified AN823-4 and the restriction is a .040" hole. Threaded end is 1/8" NPT......P/N 05-11908.....

#### CONTINENTAL REMOTE OIL FILTER ADAPTER



Replaces the oil screen and will fit C65 thru O-200 engines. 3 ports In and out. Note: This Continental Remote Oil Filter Adaptor will go nicely with the Remote Oil Filter Bracket 08-01057. For Experimental use only Does not include fittings or copper gasket as shown in image. IN & OUT pipe threads in the continental oil filter adapter are: 3/8-18 npt (female). The third hole is a 5/8-18 straight thread with a 45 degree chamfer at the bottom of the thread for a temperature probe to seat against. P/N 08-13154 .....

Note: The Oil Temp Probe Delete Plug is an Optional plug for a builder that doesn't need to use an oil temperature gauge and chooses to plug the 5/8-18 port on the Continental remote oil filter adapter. No Crush gasket needed as the sealing surface (or seat) is the 45-degree chamfer at the bottom of the thread in the temp probe port. Remember to be sure these chamfers are clean and scratch free when installing. There are

#### safety wire holes provided......P/N 08-17065.....-**B&C BC700 LYCOMING OIL FILTER ADAPTER**



The original 90-degree oil filter adapter for Lycoming engines, precision CNC machined from billet aluminum. Designed to provide a high-quality replacement for the stock Lycoming oil screen or horizontal spin-on filter adapter, the BC700 mounts directly on the engine accessory case without interference with the magne-

tos, vacuum pump, or standard mechanical tach drive. STC/PMA on Lycoming 0-235; O, IO, LIO, AIO, AEIO-320; O, IO, LIO, HO, HIO, TIO, AEIO-360; O, IO, HIO, TIO, LTI, AEIO-540 & IO-720 series engines. Adapter kit also includes a new gasket, crush washers, mounting bolts, and CH48108-1 filter. Weight: 1 lbs. (with filter: 2.30 lbs).

BC700-1 Oil Filter Adapter, STC/PMA......P/N 08-00195.....---

BC700-H Oil Filter Adapter, Homebuilt ......P/N 08-00196 ..... **ACCESSORIES:** 

B&C Oil Temperature Probe Adapter......P/N 08-07092 .....

#### **CESSNA / CONTINENTAL OIL** FILTER ADAPTER KITS

Part No.	Aircraft Application	Price
0450404-3	C150, A150, F150, FA150, FRA150	
0556010-200	C172, F172	
1250922-201	C180, C185, C188, T188	
1250922-200	C205, C206, U206, P206, 207, 210	

All the Continental spin on adapter kits above require the following items in addition to the adapter: Oil Filter......P/N CH48110 .....---.....P/N 1250405-1 .....---

## LYCOMING SPIN-ON FILTER ADAPTER KITS

Part No.	Aircraft Application	Price
LW-13743	All Applicable Engines Except Models Shown In Table Below	
	0-235 Series	
LW-13745	IO-720 with 1200 Series Series Magnetos	
08-00513	0-320-H (LW-14969)	
LW-13904	All Engines with Dual Magnetos. Includes Converter Plate Assembly and Does Not Include Filter	

All Lycoming spin on oil filter adapter kits above include adapter, oil filter assembly, adapter plate, gaskets, & attaching hardware. LW-14969 kit also contains oil cooler bypass valve assembly, 2 elbows, & 2 oil seals for oil cooler installations.

#### CASPER LABS NO SPILL OIL FILTER HOUSING



The Casper Labs "full flow" vertical oil filter kit is designed to provide Lycoming Engine owners several improvements over the standard Lycoming oil screen or filter hardware. This device locates the filter in the vertical plane.

The unit has no moving parts and requires no maintenance. Standard aviation filters are compatible. Temperature probe hardware transfers directly from the present screen housing or OEM filter adapter. Note: Verify the adapter and filter fit in

the engine compartment before bolting the unit on to the case. Kits Include: Filter (some kits do NOT include a filter: see descriptions for details) Housing • O-Ring and Washers, seal rings, gasket & installation manual

Description	Part No.	Price
CL1000A-STC Kit with CH48109-1 Filter	08-01237	
CL1000A-STC Kit with CH48108-1 Filter	08-01236	
CL1000A-STC Adapter ONLY for Retrofit Lycoming Engine (see web for models)with 2/MAG & 2 Drive ONLY	08-01094	
CL1000A-EXP (EXPERIMENTAL) Kit with CH48109-1 Filter	08-00977	
CL1000A-EXP (EXPERIMENTAL) Kit with CH48108-1 Filter	08-00976	
CL1000A-EXP (EXPERIMENTAL) Adapter ONLY (no filter)	08-00975	



#### AEROQUIP E-Z OIL DRAIN SUMP VALVES

Makes aircraft oil changes easy. The hand actuated valve when attached to the oil drain port permits engine oil changes from the ground without removing the engine cowling. The spring loaded E-Z Drain valve cannot be accidentally opened. Actuation of the valve requires a combination push/twist motion. It also contains a dual seal arrangement which combines both an O-ring & metal-to-metal seal to prevent acci-dental leakage of oil through the valve. FAA Approved for use on the engines listed. Incorporates fine Aeroquip quality hose. Installation eligibility listing furnished with each unit.

Part No.	Engine Application	Thread	Price
AE99950G	Cont. C-90, O-200, GO-300, IO-360 TSIO-360, O-470, IO-470 TSIO-470, IO-520, TSIO-520, GTSIO-520	5/8-18	
AE80666H	Cont. O-300, late C-145	1-18	

Valve O-Ring, All Models	. MS28775-0	)11	- Ea.
Interface O-Ring	. AE99950G	MS28775-113	- Ea.
· ·	AF8055551	MS28775-118	- Fa

Not to be used on Piper Models PA-28R-200, PA-28R-201, PA-28RT-200.



SAF-AIR OIL DRAIN SUMP VALVES
Changing hot engine oil has never been easier! With the SAF-AIR oil drain valve, no wrench is needed to remove the drain plug. A simple push and turn of the SAF-AIR valve locks it in the open position. The valve is made completely from anodized aluminum and stainless steel components. These materials are used throughout the aircraft industry due to their strength and durability. FAA & PMA APPROVED.

Part No.	Engine Application	Thread	Price
S6250	Cont. (same as Aeroquip AE99950G)	5/8-18	
S1000	Cont. (same as Aeroquip AE80666H)	1-18	
P5000	LYC (same as Aeroquip AE80664H)	1/2NPT	
M12175	ROTAX 912, 914	12mm x 1.75	
S7516	Cont IO-520-E	3/4"-16	
P7500	Franklin Engines	3/4" NPT	
S5020J	Jabiru 2200 / 3300	1/2"-20	
M20150	Subaru 2.2L / 2.5L	20-1.50mm	
F62	Continental	5/8-18	



## SAF-AIR LOW PROFILE 2-PIECE OIL DRAIN SUMP VALVES

Perfect for a close clearance engine oil drain application such as on the Piper Arrow. These low profile oil drain valves are designed to clear retractable landing gears & other restrictions. The valve is very affordable and can be rebuilt. It is a

simple procedure to sample or drain hot oil. The valve is made from 360 brass & 302 stainless steel. FAA & PMA APPROVED. All valves come with a F50-180 opener.

Mfg. No.	Engine Application	Thread	Part No.	Price
F62	Continental	5/8-18	05-00981	
F10	Pratt & Whitney	1-18	05-00982	
F50	Lycoming	1/2-18 NPT	05-00983	
F50-90 - Bent	Lycoming, Continental, Pratt & Whitney, Franklin		05-06924	
F50-180 - Straight	Lycoming, Continental, Pratt & Whitney, Franklin		05-15064	



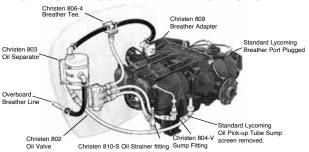
#### **CURTIS OIL DRAIN VALVES**

Quick opening drain valves for aircraft oil or fuel systems. A slight twist opens valve. No safety wire needed in closed position. Designed for installation in a standard NPT port for NPT threaded valves or an AND-10050 style port for UNF threaded valves. Use a sealant on NPT threaded valves or a fuel resistant o-ring of the proper size for UNF threaded valves.

Mfg. No.	Application	Thread	Part No.	Price
CCB-5000	Lycoming	1/2 NPT	05-22973	
CCB-38000* (Low Profile)	Lycoming	1/2 NPT	05-15400	
CCA-1400	Lycoming	1/2" NPT	05-03060	
CCA-1700	Lycoming	1/2" NPT	05-01872	
CCB-37000*	Lycoming	1/2" NPT	05-03061	
CCB-36000H*	Lycoming	1/2" NPT	05-15399	
CCB-6250	Continental	5/8-18 UNF	05-22974	
CCB-33000*	Continental	5/8-18 UNF	05-15398	
CCA-39560	Continental	5/8-18 UNF	05-03656	
CCA-39550	Continental	5/8-18 UNF	05-01873	

# SYSTEMS

#### **CHRISTEN 801 INVERTED OIL SYSTEM**



This accessory kit for Lycoming engines provides normal engine lubrication with minimal oil loss during aerobatic flight. It functions as a selfcontained extension of the normal engine oil and breather systems. Can be installed in a few hours without engine disassembly.

Part No.	Description	Price
801-4	For four-cylinder engines. Includes 802 Oil Valve (with plug wrench and plugs for unused ports), 803 Oil Separator, 806-4 Breather Tee, and product manual which provides detailed instructions for application. Weight: 4.75 lb. installed.	
801-6	For six-cylinder engines. Same as 801-4 Kit, but is supplied with 806-6 Breather Tee. Weight: 4.75 lb. installed.	
811-V	For vertical-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 804-V Sump Fitting (vertical type) with crush gasket and MS20822-10D elbow. Weight: 0.50 lb. installed.	
811-A	For horizontal-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 805 Sump Plug with insertion tool, 804-A Sump Fitting (angular 360° swivel-type) with crush gasket and wrench for swivel clamping screw. Weight: 0.36 lb. installed.	
811-S	For horizontal-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 805 Sump Plug with insertion tool, 804-S Sump Fitting (straight-type) with crush gasket. Weight: 0.33 lb. installed.	
809-K	For engines with forward breather ports such as the O-235 and O-290 models. Includes 809 Breather Adapter with gas-ket. AN842-12D hose elbow, and MS20913-6D plug for forward breather port. Weight: 0.53 lb. installed.	-
812-2	For addition of oil ports to engine sumps. Includes two 812 Weld Bosses and quantity of 5% silicon-aluminum welding rod (type 4043) Weight: 0.12 lb. installed.	
812-1	Same as 812-2 Kit, except with only one 812 Weld Boss for addition of single sump port. Weight: 0.06 lb. installed.	
813-4	Stainless steel spring wire. Installed inside breather hose to permit relatively sharp bends without collapsing or kinking. 10 x $47/64$ ". Weight: 0.12 lb. installed.	
813-6	Stainless steel spring wire. Installed inside breather hose to permit relatively sharp bends without collapsing or kinking. 10 $\times$ 63/64". Weight: 0.12 lb. installed.	
807-4	All hoses and fittings required for deluxe show-plane quality installation on four-cylinder engines. Includes Aeroquip braided stainless steel hose for oil lines, MIL-H-6000 rubberfabric hose for breather lines, thin abrasive cut-off wheel for professional-quality hose cuts, AN and MS fittings (blue anodized), Aeroquip hose end fittings (blue and red anodized), and miniature stainless steel hose clamps. All materials are factory new; no surplus. Weight Excluding Hose: 1.53 lb. installed.	
807-4 Economy Hose & Fitting Kit	These kits include same items as Aviat Factory Kits but are	
807-6 Economy Hose & Fitting Kit	packaged by Aircraft Spruce.	

10-page detailed manual - describes system operation & procedure for selecting proper components for each engine model.

P/N 05-20600 ..... --- ea.

#### CHRISTEN OIL VALVE



Multiple port gravity operated ball valve. It is cast aluminum with textured white epoxy enamel finish and all internal steel parts are cadmium plated. Normally installed

on firewall or on engine mount. Designed for fittings to be installed either at side or front or both. Requires 3 AN816-10D nipples for hose connection. Wt. 1.75 lbs. installed......P/N 08-06745.....

#### CHRISTEN OIL SEPARATOR



Features welded aluminum construction with a textured white epoxy enamel finish. All internal parts are cadmium plated, and unit includes stainless steel positioning clamps. Normally installed on fire wall or on engine mount. Requires 2 AN842-12D or -16D hose elbows and one

AN823-10D hose fitting. Wt. 2.8 lbs. installed. Applicable to all Lycoming engine applications. Used to replace a worn out or broken oil separator on Christen 801-4 systems only ......P/N 08-06740 ......



#### **BOGERT AVIATION 180 DEGREE** OIL QUICK DRAIN PROBE

Drain probe not only gives you an alternative to the high priced AVI probe but it includes some major improvements. Probe is leak proof! The AVI design could leak where it mates to the valve plunger making a mess. This design incorporates an O-ring seal around the valve body preventing leaks. The O-ring also locks the probe to the valve body. Also note the larger drain tube to speed up 

#### **BOGERT AVIATION 90 DEGREE OIL QUICK** DRAIN PROBEOIL QUICK DRAIN PROBE



This drain probe not only gives you an alternative to the high priced AVI probe but it includes some major improvements. The first big improvement is that the probe is leak proof. The AVI design could leak where it

mates to the valve plunger making a mess. Incorporates an O-ring seal around the valve body preventing leaks. The O-ring also locks the probe to the valve body. The compactness of the probe, is actually shorter than the BJ 107B making it easier to install. 09M-PRB90 



#### BOGERT AVIATION ENGINE CESSNA OIL QUICK DRAIN STC

Drain oil in wind or shop with little clean up. Saves money on clean up, solvent, labor and parts. Oil goes into bucket without splashing or spilling. Made in the USA. Approved for: Cessna 210J through 210 R, T210J through T210R, P210H through P210R, 337 through 337H, T337B through T337H, and P337H, 310 through 310R, T310P through T310R, 320 through 320F, 340, and 340A, 101 through 101R, 402 through 402 through 403 through 404 through 404 through 405 and 404 through 405 and 401 through 401B, 402 through 402C, 404, 411, 411A, 414, 414A, and 421 through 421Cnd 421 through 421C

Description	Part No.	Price
Single Engine Kit Includes: 1 ea. 09-OQD STC Paper work 1 ea. 09-Probe 1 ea. 09-BJ107 Valve w/o-ring 1 ea. 09-AN900-10 Gasket	12-02101	
Twin Engine Kit Includes: 1 ea. 09-OQD STC Paper work 1 ea. 09-Probe 2 ea. 09-BJ107 Valve w/o-ring 2 ea. 09-AN900-10 Gasket	12-02102	



#### RAVEN INVERTED OIL SYSTEMS

The Raven Full Oil System includes a CNC machined adjustable valve. There are no extra holes to plug, you simply rotate it to where you want it. The system includes the valve, mount and clamps, as well as the air/oil separator, mount and clamps. Both the valve and separator use stainless steel internal parts and are

powder coated for durability. The weight of all components is 4 ½ lbs. The Raven Half System is the breather portion of the full inverted system, it is used to perform basic positive G aerobatics where a full inverted system is not required, it will catch and return approx 95% of the oil that would normally end up overboard when performing basic maneuvers.

Description	Kit Contents	Color	Part No.	Price
Half Inverted Oil System 4"	Air/Oil Separator & Mount with Clamps &	Black	08-15637	
Half Inverted Oil System 4"	Sump Return Fitting	White	08-15638	
Full Inverted Oil System 5"		Black	08-00796	
Full Inverted Oil System 5"	Valve & Mount with Clamps, Air/Oil	White	08-00800	
Full Inverted Oil System 4"	Separator & Mount with Clamps	Black	08-00797	
Full Inverted Oil System 4"		White	08-00801	



#### **RAVEN INVERTED** SYSTEM VAC ADAPTERS

These vac adapters are machined from solid aluminum with anodized finish. Furnished with a seal installed, and complete with AN fitting and gaskets. Non-Acc'y

Vac Pad Oil P/U ..



#### **RAVEN SUMP FITTING KITS**

These sump fitting kits come with specialized fittings, washers, O rings needed to install the kit. Sump kit for Horizontal screen 4 or 6 cyl. Lyc.With Straight Fitting ...... P/N 08-00787.....-With 45° Swivel ......P/N 08-15780 .....-----



The Airwolf Air/Oil Separator will improve the efficiency of your aircraft dramatically whether it is a single engine fun craft of a twin powered corporate plane. Designed to separate air and oil in the crankcase breather & wet vacuum pump systems on conventional aircraft engines, Airwolf recovers oil from the crankcase, thus eliminating the oily overboard discharge and the ever present "oily belly" syndrome. Oil loss is greatly reduced - tests have indicated a recovery of up to 80% of crankcase oil previously wasted, depending on the type and condition of the engine.

The Airwolf oil recovery system is only slightly larger than an oil filter cartridge (4" dia. x 7.5") and it is available for all conventional engines regardless of displacement. It can be easily removed and disassembled for inspection and cleaning. With no moving parts, the Airwolf is designed to last the life of your engine. Available for planes with either wet or dry vacuum pump. Now STC'd for most aircraft. Available in black epoxy finish only. Specify aircraft model no., serial no., and engine model.

Airwolf Part No.	Part No.	Price
AFC-302-A	08-03806	
AFC-314-B	08-13288	
AFC-315-B	08-13292	
AFC-5006	08-05630	
AFC-700	08-07390	
AFC-K001	08-05605	
AFC-K005	08-05635	
AFC-K007-A	08-05660	
AFC-K007-B	08-05665	
AFC-K007-F	08-00038	
AFC-K007-G	08-13248	
AFC-K008-A	08-05675	
AFC-K008-B	08-05680	
AFC-K008-C	08-05685	
AFC-K008-D	08-05690	
AFC-K008-F	08-05800	
AFC-K008-G	08-05805	
AFC-K006-G AFC-K008-H	08-05810	
AFC-K009	08-05815	
AFC-K009 AFC-K015-A	08-00995	
AFC-K015-A		<del></del>
	08-00039	
AFC-K015-CA	08-00996	<b></b>
AFC-K015-D	08-00997	<b></b>
AFC-K015-E	08-00998	<del></del>
AFC-K015-F	08-00999	<b></b>
AFC-K015-G	08-01001	
AFC-K015-H	08-01002	
AFC-K015-J	08-01003	
AFC-K015-K	08-07297	
AFC-K015-L	08-01004	
AFC-K017-B	08-13612	
AFC-W300-A	08-00645	
AFC-W302-B	08-13260	
AFC-W303-A	08-13261	
AFC-W306-A	08-07398	
AFC-W306-B	08-13271	
AFC-W311-A	08-01303	
AFC-W311-B	08-13282	
AFC-W314-A	08-03834	
AFC-W315-A	08-13291	
AFC-W316-A	08-00652	
AFC-W318-A	08-01297	
AFC-W321-A	08-00655	
AFC-W321-C	08-13576	
AFC-W321-D	08-13577	
AFC-W323-A	08-01306	
AFC-W323-B	08-13578	
AFC-W328	08-13249	
AFC-W333-B	08-13600	
AFC-W347-A	08-13643	
AFC-W400	08-07189	
AFC-W410	08-05887	

**VERIFY AIRCRAFT APPLICATION BEFORE ORDERING.** VISIT WWW.AIRCRAFTSPRUCE.COM FOR AIRCRAFT APPLICATION CHART.

Airwolf W-2300 Air/Oil Separator gasket......P/N 08-13956......................



#### TEMPEST ENGINE MOUNTED OIL FILTER ADAPTER

Tempest engine mounted oil filter adapters eliminate the need for oil screens and provide increased filtering capabilities for longer engine life. Being engine mounted with no external lines, they reduce mess during oil changes and increase the time between oil changes. STC APPROVED. Note: Tempest filters are included with adaptors. Price listed is for one adapter each.

08-00631

FM Model	Aircraft Application	Engine Application	Part No.	Price
T.A.FL	Cont. C-75-12 C-85-12 O-200 O-200A	Cessna 120, Cessna 140, Cessna 150, Luscombes, Taylorcrafts, Cubs Note: Will only for Cubs with pressure cowls (totally encloses the engine). Will not work on Cubs that cylinders stick out through the cowling.	08-00631	
CO-300	Cont. C-125, C-145, CO-300	Cessna 170, 172, Globe Swift, Maule	08-00632	
C6LC-S	Cont. O-470,	Bellanca Viking, Cessna 182, 55 series Beech Baron	08-00633*	
C6LC-L	Cont. O-470 IO-470, IO-520	Cessna 205, 206, 207, 210, 310, Beech Bonanza & Debonair, Navion, Meyers, Twin Commander, Widgeon	08-00634	
C6LC- 11/15	Cessna L-19 "Bird Dog"	Continental Motors 0-470-11 and 0-470-15	08-01037	
C6SC	Cessna 175, Cessna 172 Hawk XP, Maules, Cessna 337, Cessna 036, Cessna 0-2, Mooney M20-K, Piper Turbo Arrow III & IV, Piper Seneca II PA-34-200T	Continental GO-300 Series & IO-360 Series	08-01038	

**WILL NOT FIT AIRCRAFT WITH FLOATS** 

## TEMPEST OIL FILTER ADAPTER GASKETS

These Gaskets work with the Tempest Oil Filter Adapters, see your manual to ensure proper selection. Tempest Gasket FM-02......P/N 08-13896 .....-----

#### **TEMPEST GASKET KIT ST07**



Stratus Tool Technologies ST07 is a multi-layer gasket designed to combine the enhanced anti-leak characteristics of the FM07 fiber gasket with the resiliency and resistance to sudden rupture of the AN900-28 copper crush washer. The outer facings of this new gasket are comprised of an expanded PTFE matrix that provides better

conformance to sealing surface imperfections. The perforated stainless steel core is embedded within the ePTFE to enhance stability and increase blowout resistance ......P/N 08-17584



#### AIRWOLFMINI AIR/OIL SEPARATOR

Reduce oil consumption and remove harmful water vapor with Airwolf's Walker Air/Oil Separator. The AirSep distills and recirculates crankcase oil vapor generated by normal operation, extending engine life. The Airwolf Walker AirSeps uses a tiny amount of vacuum pump discharge air, to help condense the oil inside the AirSep, and to overcome crankcase pressure to return collected oil to the engine while the engine is running. The competitive systems are only gravity flow

so no oil returns into the engine until the engine is completely shut off. Thus, one system is large enough to clean both the engine breather oil and wet vacuum pumps discharge. It comes with a lifetime warranty on workmanship and material of all new AirSeps produced. STC'd

MiniSep,	3/4"	Inlet	P/N 08-05887	
MiniSep,	5/8"	Inlet	P/N 08-07189	



#### CHALLENGER FAA/PMA LIFETIME OIL FILTER SYSTEM

The filter element is made from medical grade, type 304 stainless steel micronic filter cloth providing unmatched protection against oil contamination and resultant engine damage. A rare earth magnet is installed in the top of the element for magnetic pre-filtering of the oil. The unique twist lock design allows for easy disassembly, inspection and cleaning. The quad-ring gasket doubles the seal between the filter and the engine. The

filter housing is carved out of a solid piece of 6061 T6 billet aluminum with cooling fins, which not only looks good but aids in dissipating heat.

Features: • Cleanable and Reusable • High Flow Rate • Unique Twist Lock Design • Exteriors Fins • Unaffected by Water, Heat, or Pressure • Safety Wire Attachments 360 degrees • Environmentally Friendly.

Challenger	Replaces	Our P/N	Engine Model	Price
CP-48103C 13/16-16 Thread w/o Relief Valve	CH48103-1	08-06017	Lycoming O-320, IO320, O360, IO-360, LO-360, TO-360, HIO-360, LTO-360, LHI0-360 SERIES	
CP-48108C 3/4-16 Thread w/o Relief Valve	CH48108-1	08-06019	TSIO-360, O-470, IO-	
CP-48109C 3/4-16 Thread w/ relief valve	CH48109-1	08-06020	470, LIO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520, LTSIO-520, IO-550 SERIES	
CP-48110C 3/4-16 Thread w/ Nipple w/o Relief Valve	CP48110-1	08-06021	Lycoming O-235, IO-320 SERIES LIO-320, AIO-3230, AEIO-320, O360,IO360, AIO-360, HIO-	
CP-48111C 3/4-16 Thread w/ Nipple w/o Relief Valve	CH48111-1	08-06022	360,LIO-360, TIO-360, LHIO-360, AEIO-360, O-540, IO-540, HIO-540, TIO-540, AEIO-540, LTIO-540, TIO-541, IO-580, IO-720 SERIES	
CP-9124C w/ Relief Valve	8245-706	08-07174	Bombardier-Rotax 912 F2, 912 F3, 912 F4, 912 S2, 912 S3, 912 S4, 914 F2, 914 F3, 914 F4	



## **CHALLENGER OIL FILTER** ELEMENT REPLACEMENTS

The filter element is made from medical grade, type 304 stainless steel micronic filter cloth providing unmatched protection against oil contamination and resultant engine damage. A rare earth magnet is installed in the top of the element for magnetic pre-filtering of the oil. The unique twist lock design allows for easy disassembly, inspection and cleaning. The quad-ring gasket doubles the seal between the filter and the engine. The filter housing is carved out of a solid piece of 6061 T6 billet aluminum with cooling fins, which not only looks good but aids in dissipating heat.

Challenger	Application	Part No.	Price
CP-621	Challenger 48103, 48104	08-07370	
CP-620	Challenger 48108, 48109	08-07369	
CP-619	Challenger 48110, 48111	08-07366	
CP-720	Challenger 9124C	08-07371	

#### CHALLENGER ACCESSORIES

Description	Part No.	Price
CP-621 48103, 48104 Element	08-07370	
CP-620 48108, 48109 Element	08-07369	
CP-619 48110, 48111 Element	08-07366	
CP-720 9124C Element	08-07371	
CP-623 Oil Filter Quad Seal Gasket	08-07186	

## CHALLENGER STAINLESS STEEL MICRONIC OIL FILTER FOR ROTAX 912/914 ENGINES



The filter element is made from medical grade, type 304 stainless steel micronic filter cloth providing unmatched protection against oil contamination and resultant engine damage. A rare earth magnet is installed in the top of the element for magnetic pre-filtering of the oil. The unique twist lock design allows for easy disassembly, inspection and cleaning. The quad-ring gasket doubles the seal between the filter and the engine. The filter housing is carved out of a solid piece of 6061 T6 billet aluminum with cooling fins,

which not only looks good but aids in dissipating heat. Features: • Cleanable and Reusable • High Flow Rate • Unique Twist Lock Design • Exteriors Fins
• Unaffected by Water, Heat, or Pressure • Safety Wire Attachments 360 degrees • Environmentally Friendly......P/N 08-07174...

# R/OIL SEPARATORS – OIL ANALY



#### **OIL FILTER BIB**

For horizontal or angle-mounted filters. No more messy oil changes! Catches the Oil & the Filter. No Dripping. No Spillage. No Messy Clean-Ups. Easy To Use. Slide Bib Around the Oil Filter, pull up on Tabs and Tilt to Form a Seal, and unscrew the Oil Filter. Withstands High Temperature. Will not melt, weaken or leak from Hot Engine Oil and

Filter. Great for filters in tight places.	Fits any sized filter. Disposable	
3 pack	P/N 12-04883	
10 pack	P/N 12-04884	



#### SUPER SLIME FIGHTER®

Following in the success of the Slime Fighter® series of air separators, Aircraft Spruce now offers the Super Slime Fighter with the same ease of installation for large Lycoming engines

found in aircraft such as the RV-10, Glassair III and the F1 Rocket. Installs in 20 minutes with no additional drain line required. Includes instructions. Clamps and hoses are only included in the RV-10 kit. RV-10 kit includes custom hose shape. Not FAA approved.

Standard (80HP-160HP)	P/N 08-13971
Mid-Size (160HP-220HP)	P/N 08-13972
Large (220HP-320HP)	P/N 08-13973
RV10 Experimental	P/N 08-06152

#### HOMEBUILDER'S OIL BREATHER/SEPARATOR



These 4 inch diameter reservoirs have beaded outlets for 5/8" I.D. hoses and a mounting flange for easy firewall attachment. These units are of a new, improved design and the reservoir body is now a spun aluminum bowl for optimum performance. The oil separators minimize oil

loss and allow free breathing of the engine. They are recommended for experimental aircraft use only and are not STC'd for any certificated aircraft. Size: 4"dia.x 3-3/8"h......P/N 10570 .....



#### RMJ-AERO OIL SEPARATOR

Designed to remove oil from the engine crankcase breather line providing the builder with a cleaner plane, less oil consumption, and prolonged engine life from maximum cooking, cleaning, & lubrication. Fashioned after Tony Bingelis' proven design, these separators incorporate several enhancements, including O-ring seals for the lid. Fabricated from aircraft quality materials, TIG welded, and allodyned for corrosion control. They can be firewall or cooling baffle mounted with the cushion clamp provided. The design

allows for easy installation in the breather line by the use of hose clamps. Oil from the separator is returned thru tubing to a port in your engine's housing. Should your engine not have an available oil return port, RMJ-Aero can provide a Self Sealing Clamp-On Adapter utilizing your engine's oil filler neck. Installation of this adapter is easy for both flying and aircraft under construction. When clamped in place around the filler neck, the adapter provides a return port for separated oil and an integral seal, which prevents leakage. Installation & maintenance guidelines are included.

Description	Part No.	Price
Oil Separator for Lycoming (3/4" inlet/outlet)	08-00571	
Oil Separator for Cont. (5/8" inlet/outlet)	08-00572	
Adapter for Lycomings	08-00577	
Adapter for Continentals	08-00578	



#### ANDAIR OIL/AIR SEPARATOR

The OS8850 has been designed to remove the oil from the crankcase breather on Lycoming and Continental Engines. This gives reduced oil consumption, cleaner aircraft, and environment. • Upper outlet can rotate through 360° allowing easy installation. · The unit can be dismantled for inspection/cleaning. · Vortex swirl separation. O-Ring seals · Light weight: 6.4 oz. • 4 off 10-32 mounting lugs on the base of the separator for easy fire wall mounting.



#### P/N 08-01034 ..... ANDAIR CONDENSATION TRAP

This new device is a small and very light weight con-densation trap. It is used to extract the water from the oil when used in conjunction with the Andair Oil / Air Separator. Water can build up in the engine due to water in the air condensing during a cold night. Overnight this water sinks to the bottom of the sump settling at the lowest point. This is generally where

the oil pump pick up is. Therefore there is a real potential that if one of these devices is not used water can build up in the engine. Flight test have shown that the worst possible condition for water in the oil is on humid days, cold nights and where short flights are undertaken.

P/N 08-01035 .....

#### METAL CHECK ENGINE OIL ANALYSIS KIT



Metal Check / This oil analysis kit is used for determination of the condition of oil wetted engine parts, even on the first sample. This laboratory analysis consists of ICP (Inductively Coupled Plasma Spectroscopy) quantitation of 12 wear metal elements for piston and tur-bine engines. The analysis is completed in 24 hours - abnormal results are communicated immediately. Available in two ver-

sions: with return postage included and without return postage included to fit your needs! AV Lab is recommended or authorized by most engine manufacturers. The kit is excellent for pre-purchase inspection.

Not applicable for hydraulic fluid.

OIL ANALYSIS RESULTS - INCLUDING INTERPRETATION AND STATISTICAL ANAL-YSIS, ARE AVAILABLE ONLINE.

Return Postage Included	P/N 08-00931	
Return Postage Not Included	P/N 08-10691	

#### **METAL CHECK AIRCRAFT ENGINE OIL FILTER ANALYSIS KIT**



Includes oil and oil filter analysis. Oil filter debris analysis should be part of all preventative maintenance programs. Filter analysis is critical for turbine engines because they generate predominately larger wear particles that are trapped by small micron filtration. The oil filter is rinsed and the exact alloys presents in the debris are determined

by SEM/EDXRF. The AMS number, amount, type, form, and condition of the particles are reported. Features . Largest Oil Analysis Results Database • The Most Accurate Interpretive Results Guidelines • The Most Experienced staff. • Recommended, Approved, or Authorized by Engine Manufacturers. • 24 Hour a Day Service Available 7 Days a Week. Large P/N 08-06270 ..... Oil Analysis Kit.

#### CHAMPION OIL FILTER ANALYSIS KIT



Champion Oil Filter Analysis Kit can help you detect abnormal engine wear and even predict impending engine wear and even predict impending engine trouble, because it provides a comprehensive analysis of both the larger wear particles in the oil filter and the finer wear particles in the engines oil. P/N 08-01051 .....----

# OIL DIPSTICKS



New manufacture oil tank dipsticks stamped with proper calibration markings. Dipstick Short Neck 9-1/2" P/N 08-04612.....----

## THIXO # 2 AVIATION GREASE - 425 GRAM TUBE



ThixO #2 Aviation Grease: A high performance water resistant grease using advanced thickening agents and superior lubricant chemistry. ThixO #2

Aviation Grease is a specialty lubricant designed for specific aviation applications primarily to prevent rust, corrosion, and seizing of critical components in drives, hub sets and splines. ThixO#2 Aviation Grease demonstrates outstanding sheer stability and exhibits a broad temperature range (-35C to >250C) dependent on application requirements.

P/N 08-13829 .....

## **DOW CORNING 55 MOLYKOTE O-RING GREASE**



Molykote 55 is a strong, siliconebased substance that will swell natural rubber and other materials to make a more powerful seal.

Typical Use: Used for dynamic lubri-

cation and sealing between rubber and metal parts in pneumatic valves. Typical applications are found within the aircraft, automotive and other industries. 5.3 oz. Tube ......P/N 08-13684 .....----

# . COOLERS

#### OIL COOLER APPLICATION CHART

Aircraft Model	Aero Classic Part No.	Positech Part No.	Stewart Warner Part No.
Beech 10, C23, A24R, C24R	8000075	4211	8406R
Cessna 150,152, A152, 170, 170, 172, 175, 177	8000075	4211	8406R
Experimental	8000081	4215	10599
Piper PA23-150, PA28-140, PA23-160 (SN 23-163 up), PA28-150, -151, PA28-160, -161, PA28-180, -181	8000075	4211	8406R
PA18, PA18A, PA22-135, -150, -160	8000328		
Pitts S2B	8000215	4219	10611
Stinson 108, 108-1, -2, -3	8000075	4211	8406R
Taylorcraft F22B, F22C, F22R	8000075	4211	8406R

#### MEGGITT TROY OIL COOLERS **MEGGITT TROY 8406R**



MEGGITT TROY South Wind 8406R (formerly Harrison P/N 8526250). Applicable to all Lycoming installations from 4-cylinder 0-235 through 6-cylinder IO-540 engines. Inlet & outlet ports accept 3/8" pipe fittings. Fits Beech B-19 Sport (0-320-E2C), C-23 Sundowner (0-360-A4G), Muskateer (0-360-A2G), Cessna 172 Skyhawk (0-320-E2D), 177 Cardinal (10-360-AF6D), 177 Cardinal (0-0-360-A1FG), 177 Cardinal RG (0-360-AFGD), Mooney Ranger (0-360-A2D). Size: 7.75"l x 3.5"d x 4.75"h. Wt.: 4 lbs.

Model 8432R--Fits BeechA24R Sierra (IO-360-A2B), Mooney Chaparral

(IO-360-A1A), Mooney Mark 22 (TIO-541-A1A). Weight 4 lbs.

SIZE: 5-3/4 FIX8	VVX3-5/8 L	. P/IN	8432H
Model 10611R	- Fits Piper Single Engines	P/N	10611R
Model 10599R	- Fits Cessna and Stoddard	P/N	10599R
Model 10578R	- Fits Gulfstream AA-1	P/N	10578R
Model 10610R	- Fits Cessnas	P/N	10610R
Model 10568R	- Fits Gulfstream AA5B, GA-7	P/N	10568R

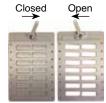
Note: The oil coolers manufactured by MEGGITT TROY formerly Stewart Warner will fit the aircraft listed but in most cases are not furnished with the FAA/PMA certification for those aircraft. The exceptions are P/N 8406R and P/N 8432R are furnished with FAA/PMA approval for certain Mooney aircraft. For all other applications, Form 337 field approvals are required for installation on certificated aircraft. Call for further information.



## HOMEBUILDER'S ENGINE CRANK CASE OIL BREATHER This is a 3-1/4" dia. can reservoir with a 3/4"

or 5/8" od hose barb outlet, 1/8npt curtis drain valve on bottom of can, and a fire wall mounting bracket. Item also available with a 5/8 od hose barb outlet, please call or email for price & availability. It keeps oil in can and off belly of airplane then can be drained later with petcock. Helps to keep crank case condensation to a minimum. Recommended for experimental aircraft use only not STC'd for certified aircraft.

3/4" od hose barb outlet	P/N 08-00765	
5/8" od hose barb outlet	P/N 08-07219	



#### **OIL COOLER AIR SHUTTER**

This product will add full control of air entering the oil cooler, thus giving the pilot some degree of control over the oil temperature. This basic product was offered for several years by another manufacturer, who ceased production. At this point we tooled up, made a few improvements to the rigidity, air flow, materials, and ease of operation. No restriction, when fully open these

will flow 35% more air than the oil cooler will pass. The weight is only 5.5 oz. (a small price to pay for full control). The dimensions are 3.5" X 5.5" (against cooler opening), 4.5" X 6.5" (mounting flange), 7.75" to top of control arm. The thickness is .187". This can put to rest, fears of flying with your oil temperatures too low for efficient engine operation in cold climates, and greatly cut warm-up time for take-offs in any climate. P/N 05-21817

#### AERO CLASSICS REMOTE MOUNT OIL COOLERS



8000357 Bar & Plate

Classics offers the General Aero Aviation community the largest number of FAA-PMA. (Federal Aviation Administration - Parts Manufacturing Authority) approved oil coolers in the world. Remote-mount oil coolers mount to the airframe or engine baffle instead of directly to the engine. Hoses are used to connect the oil cooler to the engine. This type of oil cooler is used

with most non-Continental engines including all Lycoming engines. All FAA-PMA approved with supporting FAA 8130-3 documentation unless otherwise noted. All models have 3/8 NPT inlets and outlets. All Aero-Classic coolers come with a full two year warranty. Note: Models 8000081, 8000706 & 8000942 are for experimental aircraft only. Not FAA-PMA Approved. \*\*\*May not work with all applications\*\*\*

Model No.	Description	FAA/PMA Approved	Part No.	Price
8000075	7 Row Drawn Cup	YES	08-00640	
8000074	9 Row Drawn Cup	YES	08-00641	
8000081*	10 Row Drawn Cup	NO	08-00642	
8000215	13 Row Drawn Cup	YES	08-00643	
8000216	17 Row Drawn Cup	YES	08-00644	
8000353	18 Row Drawn Cup	YES	08-00808	
8000328	Bar & Plate	YES	08-00809	
8000343	9 Row 2 Pass Drawn Cup	YES	08-00810	
8000356	Bar & Plate	YES	08-00811	
8000357	Bar & Plate	YES	08-00812	
8000590	Bar & Plate with Valve	YES	08-07408	
8000661	13 Row Drawn Cup	YES	08-07409	
8000618	Bar & Plate with Valve	YES	08-07410	
8000706	Bar & Plate	NO	08-07411	
8000942	Bar & Plate	NO	08-07412	
8000950	Bar & Plate with Valve	YES	08-07413	
8000997	Bar & Plate with Valve	YES	08-07414	
8001201	7 Row Bar & Plate	YES	08-07415	
8001241	3 Hole 7" Oil Cooler	Yes	08-16189	
8001467	Bar & Plate With Valve	Yes	08-16190	
8001628	3 Hole 7" Oil Cooler	Yes	08-16191	
8001819	2 Hole 8" Oil Cooler	Yes	08-16192	
8002015	Remote Mount Oil Cooler	Yes	08-16193	
8002038	Remote Mount Oil Cooler	Yes	08-16194	
8002319	Remote Mount Oil Cooler	Yes	08-16195	
8002320	Remote Mount Oil Cooler	Yes	08-16196	
8002437	Remote Mount Oil Cooler	Yes	08-16197	

## **AERO CLASSICS "HE SERIES"** AVIATION OIL COOLERS



Aero's HE Series (High Efficiency) FAA-PMA oil coolers are designed to be direct replacements Stewart Warner (today known as Meggitt) oil coolers - most of which do not have FAA-PMA. Aero-Classics HE

Series oil coolers are intended to be a competitively priced option for those whose aircraft came with a Stewart Warner oil cooler. The HE Series come with full FAA-PMA documentation, an industry leading 2YR/2,000HR warranty, and heat rejection capabilities that match or exceed the competition.

Aero's HE Series oil coolers are approved for use on many Beech, Cessna, Grumman, Mooney, Robinson Helicopter, and other popular aircraft makes. Listed below is the SW part number and the corresponding Aero-Classics HE Series replacement part number.

SW Part No.	Aero Part No.	Description	Part No.	Price
10578R	8001535	4 Row 6" Long Core	08-07425	
10877A	8001588	6 Row 7" Long Core	08-07426	
10599R	8001599	8 Row 6" Long Core	08-07427	
8406R	8001602	6 Row 6" Long Core	08-07428	
10568R	8001640	5 Row 6" Long Core	08-07429	
10614R	8001643	14 Row 6" Long Core	08-07430	
10610R	8001646	10 Row 6" Long Core	08-07431	
10611R	8001649	11 Row 6" Long Core	08-07432	
10634R	8001652	12 Row 6" Long Core	08-07433	
8432R	8001689	8 Row Dual Pass 6" Long Core	08-07434	
8432S	8001694	8 Dual Pass 6" Long Core	08-07435	
10865B	8001701	16 Row 7" Long Core	08-07436	
10880A	8001713	16 Row Dual Pass 7" Long Core	08-07437	
10891A	8001718	14 Row Dual Pass 6" Long Core	08-07438	
10886A	8001723	16 Row 7" Long Core	08-07439	
8406R	8001733	6 Row Bar & Plate 8" Long Core	08-07440	

## . COOLERS

#### **AERO CLASSIC CONTINENTAL OIL COOLERS**



Universal 7th Stud

Aero-Classic's engine mounted oil coolers for Continental powered aircraft offer high quality features such as a CNC machined base for reliable, leak-proof mounting. Aero's line of Continental front mounted oil coolers feature a hassle free design that accommodates both 7th stud and non-7th stud engine cases - eliminating the chance 8000545 10" Non-Congealing of getting the "wrong" oil cooler. The oil coolers on Continental engines often

Universal 7th Stud
mount directly to the engine and do not require hoses. All FAA-PMA approved with supporting FAA 8130-3 documentation, and full two year warranty.

Model No.	TCM Part No.	Description	Spruce Part No.	Price
8000545	639171	10" Non-congealing Universal 7th Stud Front Mount	08-04961	
8000319	639151	11" Non-congealing Universal 7th Stud Front Mount	08-04963	
8000531	639152	11.5" Non-congealing Universal 7th Stud Front Mount	08-04965	
8000683	626189	12 Bolt Congealing Non 7th Stud Front Mount	08-04967	
8000687	652671	12 Bolt Congealing 7th Stud Front Mount	08-04968	
8000925	627392	8 Bolt Front Mount	08-07418	
8000440	654580	Rear Mount	08-07419	
8000464	646685	Rear Mount	08-07420	
8000934	646880	8 Bolt Rear Mount	08-07421	
8000953	654585	Rear Mount	08-07422	
8000960	654572	Rear Mount	08-07423	
8001213	655090	Rear Mount	08-07424	

Note: Some part numbers have been superseded

8000677 (our part # 08-04962) superseded by 8000545 (our part # 08-04961) 8000307 (our part # 08-04964) superseded by 8000319 (our part # 08-04963) 8000127 (our part # 08-04966) superseded by 8000531 (our part # 08-04965)

#### NDM OIL COOLERS



NDM is one of the world's largest volume manufacturers of FAA approved oil coolers. An approved supplier to both Lycoming and Continental, as well as many airframe manufactur-ers, NDM holds FAA/PMA's for most of these oil coolers. NDM oil coolers are manufactured utilizing the vacuum oven brazing process rather than the less costly Controlled Atmosphere

Brazing (CAB) method used by others to save costs. Utilizing the vacuum oven process guarantees a high quality product and lower warranty returns. If you are not sure which NDM oil cooler is FAA Approved for your aircraft, please provide the aircraft model & serial number and we will determine the correct oil cooler for your application.

Part No.	NDM Part No.	Stewart Warner Part No.	Price
08-00740	20002A	8406R	
08-00741	20003A	N/A	
08-00742	20004A	10599R	
08-00743	20005A	N/A	
08-00744	20006A	10611R	
08-00746	20008A	10614R	

#### OIL THERMOSTAT SYSTEM



Designed to regulate the oil temperature on engines like the Rotax and Jabiru. on engines like the notax and dabitu. If you are flying time and time again and the engine temperature is only getting to say 85°C the water will remain in your oil as a contaminant and can go on to destroy your engine with corrosion problems. Additionally, warmup is achieved very quickly on even the coldest of days because the thermostat diverts the oil flow from the oil cooler. Made in the USA these special oil thermostat units are designed to quickly allow your engine to reach and maintain its optimum operating temperature even on the coldest of days. CNC machined from 6061-T6 the unit is

anodised with the type 2 surface finish to protect the thermostat longterm against corrosion. There are a number of benefits in using an oil thermostat in your aircraft which include fuel savings resulting from quick warmup times and engine operation at optimum oil temperature which also increases engine life because the engine is being operated at the correct oil temperature. Does not include Hardware.

P/N 08-07212 .....



#### **ROTAX 912 12.5MM** OIL COOLER HOSE

912 Oil Cooler Hose 12.5mm high heat hose for 912-914 oil coolers. Sold by the foot ...........P/N 15-06907 ......-----

#### **OIL COOLER DUCT SYSTEM**



This economical duct system provides the aircraft builder with a simple way to route cooling air to Stewart Warner style oil coolers. Manufactured from .040 aluminum, this kit was designed for use on RV series aircraft but is ideal for virtually any homebuilt using a firewall mounted oil 

#### **ALUMINUM COOLING LOUVERS**



These aluminum cooling louvers are custom made and designed to improve the cooling of your engine compartment on your experimental aircraft. They are simple to install, and will dramatically lower your CHT temps, as well as your oil

temperature.

The standard size of the aluminum plate is 12" long and 5" wide, and the outside flange can be trimmed to fit your application. There are a total of 9 louver slots which aid in cooling......P/N 08-07625 .....

#### **OIL DOOR HINGE**



The hidden hinge has a uniquely shaped arm that allows the hinge to be mounted completely out of view to the underside of the cowling. The center hinge eye is removed for the custom made spring that loads the hinge to be full open when unlatched. If your oil door unlatched it will be full open, eliminating accidentally taking off with the oil door unlatched. The hinge is aircraft quality extruded MS20001-4 hinge with a 3/32" steel hinge pin. One end of the hinge pin is flattened. When installed and closed the hinge pin is gripped tightly by the force of the spring. Oil Door Hinge ......P/N 12-04708 .....-------------------------Replacement Spring ....P/N 12-04709 ..... ---



#### X-SERIES OIL COOLERS BY AIRFLOW SYSTEM

The first aircraft oil cooler design in 50 years. Computer modeling and flight testing have been used to develop coolers that deliver significantly lower oil temps with no increase in oil cooler size or oil pressure drop. Designed as a direct replacement for popular oil coolers used

in experimental aircraft, the X- SERIES oil coolers are built to Airflow Systems specifications and certified aircraft oil cooler standards. Flight testing on the popular RV series of aircraft has shown oil temperature drops of 10 -15 degrees F for coolers of the same size in the same location. Not FAA approved.

Model	Size	Engine Application	Notes	Part No.	Price
2002X	7 Rows	Continental O-200, Lycoming O-235, Lycoming O-320,	Max 180 HP. No piston	08-06153	
2004X	10 Rows	Lycoming O-360, Lycoming IO-360, Corvair, Subaru, VW	squirters or cold air induction	08-13963	
2006X	13 Rows		Go up one size for piston	08-06154	
2007X	15 Rows	Lycoming O-360K, Lycoming IO-360, Lycoming IO-540	squirters, cold air induction, aerobatic and/	08-13964	
2008X	17 Rows		or float plane applications	08-06155	

## AIRFLOW SYSTEMS ASOCD-45-13BV OIL COOLER DUCT BUTTERFLY VALVE



Airflow System 4 inch butterfly valve for modulating airflow to oil coolers installed on 45 degree duct. It's Welded in metal shaft bushings, not plastic The CNC machined lever arm with pinch bolt allows for various positions on shaft. Has proper swiveling cable attachment with set screw. May be mounted in multiple orientations. It is anodized

for corrosion resistance and appearance .....P/N 08-17116 ...



## AIRFLOW SYSTEMS ASOCD-45-13 OIL COOLER DUCT

Airflow System 45 degree metal duct for 13 row oil coolers. Has a 4" diameter hose connector. May be mounted in multiple orientations. Is also anodized for corrosion resistance and appearance.

P/N 08-17115 .....----



## **AIRFLOW SYSTEMS ASOCD-4-**BV BUTTERFLY VALVE

Airflow System 4 inch butterfly valve for modulating airflow to oil coolers. Welded in metal shaft bushings, not plastic. CNC machined lever arm with pinch bolt allows for various arm positions on shaft. Proper swiveling cable attachment with set screw. Mounting ears allow easy attachment to

rear baffles or air box (holes on 4.95 diameter centers). Anodized for corrosion resistance and appearance ......P/N 08-17117 .....

## AIRFLOW SYSTEMS OIL COOLER **INSTALLATION KITS**



Airflow Systems oil cooler brackets and mounting hardware kits offer the homebuilder a quick and easy solution for firewall mounted oil cooler installations. A variety of mounting angles cover most applications at a cost that is often little more than the cost of material for a builder made bracket. The generous radiuses resist cracking. Delivered without holes but including an oil cooler mounting hole template the brackets may be tailored to individual installations.

Description	Part No	Price
Asik-01 Oil Cooler Installation Kit Bolts & Spacers	08-13968	-
Asik-02 Oil Cooler Install Kit 45* Bracket	08-13969	
Asik-03 Oil Cooler Install Kit 90* Bracket	08-13970	

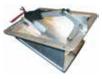


#### OIL SEPARATOR INSTALL KITS

Included are three feet of high quality silicone hose, four quality hose clamps, one steel braid -4 AN Teflon oil return hose, one -4 AN X 1/8" NPT 90 Deg. Fitting and one 1/8" X 3/8" NPT reducer bushing that fits the oil return in the accessory case on most Lycoming engines. Also included is a new accessory case

breather fitting that is more IO-540 friendly when installing on the six cyl engines. Full installation and maintenance instructions will be included as well.

Description	Part No	Price
4 Cylinder Install Kit	05-12370	
6 Cylinder Install Kit	05-12482	



#### E-Z COOL FLAP

This revolutionary product, the "EZ Cool Flap" is a long awaited solution to this sometimes challenging task of climbing out without high CHTs. This revolutionary, retrofit electric cowl flap product will definitely help calm the fears of many RV owners and builders of these great

aircraft. Our effort turned out to be far greater in monetary and time investment than we initially planned but, all good things take time. After a considerable investment in design, engineering and testing many different configurations, learning and improving along the way. We now offer our product as the most logical, simple and easily installed device to address these temperature concerns. This product is constructed of the finest aircraft alloys and workmanship available and is far superior to any and all other solutions available at any price. This product only weighs a few ounces, is extremely easy to use, and offers unparalleled protection for your aircraft engine... .....P/N 05-12374 ....



#### CRANKCASE VACUUM KIT

Included are the 321 stainless steel saddle mount fitting, mounting clamps, vacuum valve assembly and a complete safety by-pass with a .25 psi internal pop-off valve. This will put the finishing touch on your oil separator installation or breather system. Your engine will virtually stop all leaks and

seeping when in service, due to the vacuum inside. This system stops any possibility of freezing up the breather tube in cold climates, as no moisture laden air is present in the engine and none can be inhaled through the overboard draft tube. The rarefied air and low pressure in the crankcase has a very dramatic effect on windage and oil in suspension, thus freeing up a little power and adding some efficiency. This will also greatly lower the boiling point of any moisture that finds its way into the engine. Any oil temperature over 160 degrees will get rid of all the moisture in turn the acids. Any lowering of pressure on the underside of the pistons is exactly the same as adding cylinder pressure on top. This results in a very noticeable power increase (on the average 180 HP engine, 3 to 5 HP). We hear this over and over with reports of higher static RPM, better climb and acceleration, lower fuel burn etc. The belly of your airplane will stay immaculately clean as anything that exits the separator or breather line will be consumed in the exhaust stream.....P/N 05-12429 .....



#### MAGNETIC SUPER PLUG

This is the most powerful plug available and was designed specifically for GA aircraft use. This is about the least expensive thing you can add to your aircraft that will extend engine life and prevent damage to your engine. The plug end is very high quality with a special rolled thread to prevent leaks, is cad plated to prevent corrosion and drilled for safety wire. The rolled thread size is 1/2" npt and this fits all Lycoming, Continental, Franklin and many other aircraft engines. The extremely powerful high temperature, Alnico magnet is pressed and locked into the plug permanently and

will outlast your engine. This powerful device extends into the oil and removes all ferrous material that is suspended in and circulating with .....P/N 05-12373 ..... your oil causing wear..



#### THE A.S.A. OIL SEPARATORS

"THE ASA OIL SEPARATOR" Is a solution to the oil consumption and collection of oil on the belly of your aircraft. The breathers kick out oil mist that collects on the belly that in turn grabs all the dust and dirt. For years we have been making this type of product used in automotive racing engines so the leap to a light weight aircraft unit was a small one. After many hours on the dynamometer

many changes and hours of flight testing the effort was well worth it. "ASA Oil Separator" that in our tests out performs most of the competition at a fraction of the price.

Description	Part No	Price
4 Cylinder Polished Mirror	05-12369	
4 Cylinder White Powder	05-12472	
6 Cylinder Polished Mirror	05-12473	
6 Cylinder White Powder	05-12474	

#### **AVIATION OIL ANALYSIS (AOA) KIT**

#### P/N 08-16223



A cost-effective service to enhance your aviation maintenance practices and provide confidence in the health of your engine. Aviation Oil Analysis (AOA) by ALS Tribology Division brings you a state-of-the-art oil analysis program designed specifically for aircraft owners. Oil analysis is an early warning system that reduces downtime, lowers maintenance costs, and helps you spot troubling issues before they become serious problems. AOA 'basic' kits can be

ordered with or without return postage and include standard elemental analysis to detect evidence of engine component wear. A small vial, mailing bag, and information form are furnished with the order. Upon receipt at the laboratory in Phoenix, AZ, the oil sample is analyzed and a full report, including statistical analysis and interpretation, is forwarded within 24 hours and posted for viewing online. Note: insufficient postage will cause a delay in receipt of your sample, please consult your local post office or contact the laboratory (1-800-445-7930) regarding current postage rates.

Description	Part No.	Price
Basic Kit for Piston Engines (with return postage)	08-16223	
Advanced Kit for all Engines (with return postage)	08-16225	
Comprehensive Kit for all Engines (with return postage)	08-16226	

## LAB ONE AVIATION LOA-101 OIL **ANALYSIS KIT WITH PREPAID POSTAGE**



This kit includes a sample bottle, shipping container and the paperwork. Upon receipt, your sample will be processed within 24 hours with the results emailed or mailed from Lab One in Phoenix, AZ.

Can be used on any reciprocating or turbine engine and helicopter transmissions and tail P/N 08-17164 .....

#### AVIATION LABS OIL FILTER ANALYSIS



Analysis of the oil filter only. The oil filter is rinsed and the debris removed is analyzed. The exact alloys present are determined by Scanning Electron Microscopy and EDXRF.
The alloys are reported by AMS number.
Amount, type, form and condition of particles are reported. Alloy spectra and metal maps for most aircraft engines. Filter analysis is a

critical part of all preventative maintenance programs. Aviation Laboratories has been a leader in the development of filter analysis programs for aircraft engines since 1985. Analysis completed in 24 hours. pre-purchase inspection......P/N 08-10692 .....-------------------

#### OTHER OIL ANALYSIS KITS

Description	Part No.	Price
Aviation Labs APU Oil Analysis	08-10693	
Aviation Labs CF34 Oil Filter Analysis	08-10694	
PW-MOP-NO PW100 Oil Filter Analysis	08-10695	
Aviation Labs FJ44-33 Oil Filter Analysis	08-10698	
Aviation Labs Chip Flakes Analysis	08-10699	
Aviation Labs AE3007 Oil Filter Analysis	08-10700	
Aviation Labs GA001-OF-PTG Oil Filter Analysis	08-13834	



#### **AVLABS 100** HOUR INSPECTION KIT

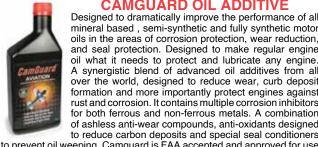
AvLabs 100hr Inspection Kit for JT15D engine. P/N 08-17183 .....-------------------------



LYCOMING OIL ADDITIVE
Approved oil additive LW-16702 that contains an anti-scuffing agent and can dramatically reduce engine wear. Applicable to all Avco Lycoming piston aircraft engines, and factory recommends use at every oil change or every 50 hours, whichever occurs first. For 6-8 qt. sump, use one 6 oz. can, for 12-15 qt. sump, use (2) 6 oz. cans, for 17-19 qt. sump, use (3) 6 oz. cans, for 23 qt. sump, use (4) 6 oz. cans.

P/N 08-05600.....

#### CAMGUARD OIL ADDITIVE



Designed to dramatically improve the performance of all mineral based, semi-synthetic and fully synthetic motor oils in the areas of corrosion protection, wear reduction, and seal protection. Designed to make regular engine oil what it needs to protect and lubricate any engine. A synergistic blend of advanced oil additives from all over the world, designed to reduce wear, curb deposit formation and more importantly protect engines against rust and corrosion. It contains multiple corrosion inhibitors for both ferrous and non-ferrous metals. A combination of ashless anti-wear compounds, anti-oxidants designed to reduce carbon deposits and special seal conditioners

to prevent on weeping. Camguard is	s i AA accepted and approved for use
in piston engine aircraft oils meeting	g SAE-1899 standards.
1 pint	P/N 08-07096
4 pints	P/N 08-07097
	P/N 08-07097-1
	P/N 08-14636
	P/N 08-12126
Auto oil additive Case of 4	P/N 08-12126-1
Combo Pkg 4 Bottles Aviation &	1 Bottle Auto
<b>G</b>	P/N 08-07096-C
Marine oil additive 8 oz	P/N 08-01217-1
	P/N 08-12127
	(pint)P/N 08-07402

# BI FN

#### AVBLEND

An oil supplement for all piston engine-powered aircraft owners and operators worldwide. Providing critical lubrication at start-up, AvBlend helps prevent accumulation of combustion chamber areas. Wear is reduced, engines stay cleaner and combustion chambers stay properly sealed. FAA approved. 4-cylinder engines require 1 can at each oil change, and 6 cylinder engines require 2 cans. 12oz. can ......P/N 08-05470 ..... 1Case (24 cans) ......P/N 08-05470-1 .....

#### MOBIL AGL SYNTHETIC AVIATION GEAR LUBRICANT



MOBIL AGL

Mobil AGL Synthetic Aviation Gear Lubricant offers measurably better wear protection for transmissions operating at high temperatures than Type I (MIL-L-7808) and Type II (MIL-L-23699) turbine oils, as well as wear resistance that is especially beneficial to military and other helicopters operating under unusual stresses.

AGL is formulated with synthesized hydrocarbon-based fluids. The combination of a naturally high viscosity index and a unique proprietary additive system help enable the gear lubricant to provide outstanding performance in extreme service applications at high temperatures, well beyond the capabilities of mineral oils. Note: ExxonMobil recommends Mobil AGL for use in helicopter transmissions only. Before using Mobil 



# **MICROLON AIRCRAFT**

ENGINE TREATMENT
One-time metal treatment that virtually eliminates friction in all internal combustion engines which improves performance (horsepower), reduces wear, and extends engine life. Also decreases fuel consumption, reduces oil consumption, and lowers operating temperatures. Impregnates the engines bearing

surfaces, forming a dry film lubricant that lasts no matter how many times the oil is changed. Continental A-65, C-85, and C-90 engines take the Half Kit. Most Lycoming and Continental engines used in light aircraft take the Single Kit. Turbocharged and Radial engines take from 2 to 6 Single Kits. Call for details if you have any questions on the quantity of Microlon needed for your application.

Microlon CL-100 Aircraft Kit (Single)......P/N 09-35805..... Microlon CL-100 Aircraft Kit (Half) ......P/N 09-35810 .....---

#### SHELL WATER DETECTOR

Water can occur in jet fuel in three forms, dissolved (chemically in solution in the jet fuel), settled (as in free water at the bottom of the tank), or as finely dispersed undissolved water held in suspension. The Shell Water Detector

is designed to detect undissolved water; it has been proven reliably for 30 years. This is water that a filter separator can remove, and is usually invisible to the eye in quantities below 40-60 ppm.

Box of 80 Kits..... .....P/N 08-13897 ......

# ROSHELL AVIATION OIL



#### AEROSHELL AVIATION OIL 15W-50 MULTIGRADE

Aeroshell Oil W 15 W 50 is a premium semi-synthetic multigrade ashless dispersant oil specifically developed for aviation piston engines. AeroShell Oil W 15 W 50 is a special blend of a high quality mineral oil and synthetic hydrocarbons with an advanced additive package...

Single Quart	P/N 08-05450
Case of 6	P/N 08-05451-6
55 Gallon Drum	P/N 08-15636

#### **AEROSHELL AVIATION OIL W100 SAE50**



Aeroshell W100 is an ashless, SAE 50 dispersant oil that provides excellent service in all four cycle aircraft piston engines. AeroShell Oils W80, W100 and W120 are produced to meet fully the SAE specification J-1899 (Grades SAE 30, 40, 50 and 60 respectively). Furthermore, they all have military qualification approval and are listed on the Qualified Products List (QPL) issued by the US Navy. Single Quart......P/N 08-05400 ..... Case of 6 ......P/N 08-05401-6 .....----

55 Gallon Drum......P/N 08-15645 ......----

#### **AEROSHELL AVIATION OIL W100 PLUS**



Single Grade Ashless Dispersant Engine Oils: .AeroShell Oil W100 Plus and W 80 Plus are new single grade oils that combine proven AeroShell ashless dispersant technology with advanced antiwear additives. They are the oils for pilots who want a single grade that delivers extra protection and performance. AeroShell Oil W 100 Plus and W 80 Plus brings together the best qualities of two of the world's bestselling four cycle aviation oils.

Single Quart	P/N 08-05485
Case of 6	P/N 08-05486-6
55 Gallon Drum	P/N 08-15647

#### **AEROSHELL AVIATION OIL** 100 SAE 50 MINERAL OIL



AeroShell Oil 100 is a straight mineral oil blended from selected high viscosity index base oil. This oil does not contain any additives except for very small amounts of pour point depressant (which aids to improve fluidity at very low temperatures) and an anti-oxidant. AeroShell Oil 100 is approved for all aviation piston engines of civil aircraft when the use of an oil not containing a dispersant additive is required; however, it should also be used during the break-in of a new aviation piston engine or those recently overhauled.

Single Quart	P/N 08-05410
Case of 6	P/N 08-05411-6
55 Gallon Drum	D/N 08-15642

## AEROSHELL AVIATION OIL W80 PLUS



Shell Oil W80 Plus introduces the anti-wear and anticorrosion additives of AeroShell W100 Plus engine oil into a lighter, single-grade oil for use in colder climates. The anti-wear additive reduces wear on start-up by forming a microscopic layer on the engine's moving parts to prevent metal-to-metal contract when there is little oil present. Combined with a corrosion inhibitor, it is designed for pilots who fly either in cooler weather or less frequently.

Sirigle Quart	F/N 00-03920	-
Case of 6	P/N 08-05919-6	-
55 Gallon Drum	P/N 08-15646	-



#### **AEROSHELL AVIATION OIL 80 SAE 40 MINERAL OIL**

AeroShell Oil 80 straight mineral oils blended from selected high viscosity index base oils. These oils do not contain any additives except for very small amounts of pour point depressant (which aids to improve fluidity at very low temperatures) and an anti-oxidant. AeroShell Oil 80 approved for all aviation piston engines of civil aircraft when the use of an oil not containing a dispersant additive is required; should also be used during the break-in of a new aviation piston engine.

Single Quart	P/N 08-0/50/-1
Case of 6	P/N 08-07507-6
	P/N 08-15641



AEROSHELL AVIATION OIL W80
An ashless dispersant oil specifically developed for aviation piston engines. No general rule exists for every engine type when choosing the correct grade of oil; however, based on the average ambient outside temperature at engine start-up the most common grades are SAE 40, SAE 50 and SAE 60, which equates to AeroShell Oil W80, W100 and W120 respectively.

Single Quart	P/N 08-00884	
Case of 6	P/N 08-01223-6	
55 Gallon Drum	P/N 08-15644	

## AEROSHELL AVIATION **OIL W120 SAE 60**



AeroShell Oil W120 is an ashless dispersant oil specifically developed for aviation piston engines. It combines nonmetallic additives with selected high viscosity index base oils to give exceptional stability, dispersancy and anti-foaming performance. No general rule exists for every engine type when choosing the correct grade of oil; however, based on the average ambient outside temperature at engine start-up the most common grades are SAE 40, SAE 50 and SAE 60, which equates to AeroShell Oil W80, W100 and W120 respectively.

Single Quart	P/N 08-19069
Case of 6 Quarts	
5 Litre Container(1.32 gallons)	P/N 08-00344-1
Case of 3	P/N 08-00344
55 Gallon Drum	P/N 08-00344-55

#### **AEROSHELL TURBINE 500**



A 5 centistoke synthetic hindered ester oil incorporating additives to improve thermal and oxidational stability and also metal passivation. AeroShell Turbine Oil 500 was developed essentially to meet the requirements of Pratt & Whitney 521 B Type II and MIL -L-23699 specifications and is entirely suitable for all civil and military engines requiring this class of lubricant. The outstanding high temperature and oxidation stability of AeroShell Turbine Oil 500 is due

to the natural properties of the synthetic hindered ester base fluids used. These fluids are clean running in that they tend to dissolve varnish and sludge rather than leave deposits on working surfaces. Research and Development has enabled the most suitable selection of additive to be used in order to provide the excellent oxidation stability, superior load carrying and exceptional protection against high temperature corrosion of metals. AeroShell Turbine Oil 500 is also approved for use in the industrial and marine versions of certain aero-engines listed.

Single Quart	P/N 08-00581	
Case of 24	P/N 08-00582	

AEROSHELL TURBINE OIL 555
An advanced 5 mm2/s synthetic hindered ester oil incorporating a finely balanced blend of additives to improve thermal and oxidation stability. Specifically developed to meet the high temperatures and load carrying requirements of SST engines and the DEF STAN 91-100 (formerly DERD 2497) and XAS-2354 specifications. AeroShell Turbine Oil 555 was also designed to give enhanced performance in current engines. More recently

with the need to transmit more power and higher loads through helicopter transmission and gearbox systems (many helicopters use a synthetic turbine engine oil in the transmission/gearbox system) it has become apparent that the use of a very good load carrying oil, such as AeroShell Turbine Oil 555is necessary.

Single Quart	P/N 08-00757	
Case of 24	P/N 08-00758	



AEROSHELL TURBINE OIL 560

A third generation 'low coking' 5 centistoke synthetic hindered ester lubricating oil. It incorporates advanced additive technology and a fine balance of additives to resist the high temperatures generated by turbine engines. Also improves the thermal and oxidational stability. The outstanding high temperature and oxidation stability of AeroShell Turbine Oil 560 is due to the natural properties of the synthetic hindered ester base fluid used. These fluids are clean running in that they tend to dissolve

varnish and sludge rather than leave deposits on working surfaces. AeroShell Turbine Oil 560 was developed essentially to meet the high temperature requirements of both modern engines and future models. 

Case of 24	P/N 08-00760	
55 Gallon Drum	P/N 08-15791	



AEROSHELL TURBINE OIL 308
AeroShell Turbine Oil 308 is a 3 mm2 /s synthetic ester oil incorporating additives to improve resistance to oxidation and corrosion and to minimize wear. AeroShell Turbine Oil 308 was developed specifically for use in particular models of aircraft turbo-prop and turbo-jet engines for which a MIL-PRF-7808 (formerly MIL-L-7808) oil is required. AeroShell Turbine Oil 308 contains a synthetic ester oil and should not be used in contact with incompatible seal

materiais and it also affects some p	aints and plastics.
Quart	P/N 08-14702
Case of 24	P/N 08-14702-1

## TON OIL



#### **AEROSHELL TURBINE OIL 390**

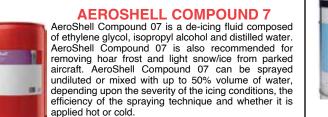
Helps to improve auxiliary power unit (APU) starting reliability, particularly coldsoak starting. Products such as ASTO 390 are commonly used in the APUs of four-engine intercontinental aircraft, but are now being



#### **AEROSHELL TURBINE OIL 750**

AeroShell Turbine Oil 750 is a 71/2 mm2/s synthetic mixed ester oil containing a thickener and additives which provide excellent load carrying, thermal and oxidation stability.

Quart	.P/N 08-15765	
Case of 24	.P/N 08-15765-1	



5 Gallon......P/N 08-14712.....----



MOBIL JET OIL II (AVIATION)
Mobil Jet Oil II helps keep oil systems clean. That
can mean less maintenance more flying and greater
revenue. Mobil Jet Oil II has a history of helping to keep aircraft where they belong - in the air generating revenue. Today, about 160 major airline use Mobil Jet Oil II in more than 11,000 gas turbine engines.

Quart	P/N 08-00763	
Mobil Jet II Case	P/N 08-00764	
55 Gallon Drum	P/N 08-15960 -	



#### **AEROSHELL 2XN** PRESERVATIVE FLUID

AeroShell Fluid 2XN is a corrosion preservative concentrate for protecting infrequently used engines. It uses an ashless anti-corrosion additive package and highly refined mineral base oils to protect internal engine surfaces from the Effects of humidity. It is also designed to neutralize the acidic by-products of oil oxidation and combustion. AeroShell Fluid 2XN can be used neat to long-term storage, but it is typically mixed with one part AeroShell Fluid 2XN to three parts fresh AeroShell Oil 100 to create an inhibited oil. It can also be sprayed undiluted on piston-engine exhaust ports, Rocker arms and accessories to provide additional protection.

5 Gallon......P/N 08-14701 .....----



EX(ON

HyJet IV-A"

#### **MOBIL JET OIL 254**

Mobil Jet Oil 254 is a third-generation synthetic lubricant made from a specially prepared hindered-ester base stock fortified with a special chemical additive package. The result is a product having superior thermal and oxidation stability that resists deterioration and deposit formation, while maintaining the physical characteristics required by builder and military specifications.

QT. ......P/N 08-07374-1 .....----

Case.....P/N 08-07374.....---



#### **EXXON MOBIL HYJET IV-A PLUS**

Exxon HyJet IV-A plus is a fire-resistant phosphate ester hydraulic fluid designed for use in commercial aircraft. It is the best-performing Type IV fluid and approaches to a great extent many of the performance capabilities of Type V fluids, including high temperature stability, long fluid life, low density, and rust protection. It is superior to all other Type IV fluids in these respects. Exxon HyJet IV-A plus meets the specifications of all major aircraft manufacturers and SAE AS1241.

	1 Quart	P/N 08-15974-1	
	Case of 24 Quarts	P/N 08-15974	
1 Gallon		P/N 08-15957-1	
Case of 6 Gallons	S	P/N 08-15957	
55 Gallon Drum.	-	P/N 08-15974-55	



#### AEROSHELL DIESEL ULTRA

AeroShell Oil Diesel Ultra is a fully synthetic, multigrade engine oil designed for use in the new generation of compression ignition (Diesel) Aviation Piston Engines. The formulation has been selected to be suitable in piston engines fueled by Jet A or Jet A-1 and is designed for use in the latest highly rated turbocharged diesel engines under all operation conditions. AeroShell Oil Diesel Ultra MUST NOT be used in spark ignition, or Avgas powered aircraft engines.

5W-30 Liter......P/N 08-10754 .....-----5W-30 Case of 12 ......P/N 08-10754-1 ..... ---



#### **EXXON MOBIL HYJET V**

Mobil HyJet V is a Type V fire-resistant phosphate ester hydraulic fluid, which is superior in thermal and hydrolytic stability to commercially available Type IV hydraulic fluids. Better stability means the extent of fluid degradation in aircraft systems will be less than Type IV fluids, in-service fluid life will be longer, and 

Case of 24 Quarts ......P/N 08-19053-1 .....---



#### **AEROSHELL OIL SPORT PLUS 4**

AeroShell Oil Sport Plus 4 is ideal; as it is extremely resistant to the immense sheer forces that occur in areas of high-pressure contact such as high-speed gearboxes, valve trains, bearings, pistons and liners. This is where the blend of base oil and additives is most crucial. AeroShell Oil Sport Plus 4 is made up of a blend incorporating synthetic technology and high performance additives to provide long lasting protection. So when you change your oil to new AeroShell Oil Sport Plus 4, you are not only removing dirt from your engine, you are also replenishing the additives used to protect your prograd during narmal properties.

protect your engine during normal operation.

DO NOT use AeroShell Oil Sport Plus 4 in engines that are designed to use Ashless Dispersant aviation piston engine oils such as AeroShell W Oils. This includes air cooled Teledyne Continental

Motors, Textron Lycoming and Jabiru engines. 4 Cycle Sport Plus 4 Oil (Case of 12)......P/N 08-07047 .....----

# Mobil Jet Mobil Jet Oil 387

an array of engine models and components

#### **MOBIL JET OIL 387**

Proactively developed to respond to the evolving needs of customers and the industry, Mobil Jet Oil 387 is the most advanced Mobil turbine oil ever developed. Specifically formulated to deliver unsurpassed engine performance, it strikes the perfect balance, providing optimal engine performance and advanced protection for engines and components. It will meet the performance requirements of both current and future, advanced gas turbine engines used in commercial and military service. Mobil Jet Oil 387 is approved for use in

an array of engine models and components.		
Quart	P/N 08-16230-1	
Case of 24 Qt.		
55 Gal. Drum		

#### TURBO OIL 2380



Turbo Oil 2380 is recommended for the lubrication of most aircraft gas turbines and accessories. It is also recommended for the lubrication of aero-derived gas turbines in industrial power generation, offshore and marine applications.

Single Quart	P/N 08-00761	<b></b>
Case of 24	P/N 08-00762	
5 Gallons	P/N 08-13061	
55 Gallon Drum	P/N 08-13753	



EASTMAN TURBINE OIL 2389
Turbo Oil 2389 is a 3 cSt synthetic lubricant. Turbo Oil 2389 is approved against US military specification MIL-PRF-7808L grade 3 and incorporates a level of technology from Type II (5 cSt) commercial turbine lubricants.

	Single Quart
	Case of 12
	55 Gallon Drum P/N 08-13757-55
ı	<b>EASTMAN TURBINE OIL 25</b>

Turbo Oil 25 is a 5 cSt high load carrying synthetic lubricant which was developed to meet the requirements of supersonic aircraft engines. Approved against US military specification DOD-L-85734(AS), and UK military specification DEF STAN 91-100/1 (DERD 2497). Designed to meet the severe requirements of helicopters. Single Quart ...... P/N 08-13758-1.....

Case of 12...... P/N 08-13758.....---55 Gallon Drum.. P/N 08-13758-55.....-----

#### **EASTMAN TURBINE OIL 2197**



Eastman Turbo Oil 2197 is a latest generation 5 cSt High Thermal Stability (HTS) synthetic lubricant that is approved against US military specification MIL-PRF-23699 HTS. It is formulated to provide exceptional high temperature cleanliness in vapor mist and liquid film areas, as well as outstanding oxidative, thermal and hydrolytic stability. It

provides exceptional performance in the most demanding existing turbines as well as new generation turbines just entering service.

Single Quart	P/N 08-12341
Case of 12	P/N 08-12341-1
5 Gallon Pail	P/N 08-13959

## EASTMAN TURBINE OIL 157 55 GALLON DRUM

Eastman™ HALO 157 is a clear amber colored fluid with a faintly aromatic odor reminiscent of turbine engine oils. It is based on selected polyol esters, the inherent characteristics of which are enhanced by additives, also fully compatible and miscible with other oils approved to specifications, MIL-PRF-23699 and MIL-PRF-7808. Multiple testing has been completed in bearing and gearbox rigs and flight evaluations culminating in the NATO standard (AIR STANDARD ACS 4035) for a 9 cSt advanced Helicopter . P/N 08-13960 .... Gear Box Lubricant.

#### **ROYCO 363 LUBRICANT OIL**

A general-purpose lubricant for instrument and wide range of airframe components for both military and civilian aircraft. It is suitable for use over a wide temperature range. • Specification: MIL - PRF - 7870 • NATO Specification: O-142 • Joint Service Designation: OM-12 • MIL-SPEC Scope: This specification covers one grade of general purpose, low temperature lubricating oil.

1 Gallon	P/N 08-16236-1
5 Gallon Pail	P/N 08-16234
55 Gallon Drum	P/N 08-16235
Gallon Case	P/N 08-16236

#### **ROYCO 560 TURBINE OIL**

A synthetic ester-based, broad application, 5 cSt turbine engine oil that is blended with corrosion inhibition in mind and for strong oxidative and thermal stability performance. These ester lubricants include hydraulic and aviation fluids, preservatives, turbine oils, drivetrain oils, performance greases and specialty products. They are engineered to meet

or exceed the most rigorous application requirements including military specifications, Boeing approvals, and public transportation constraints. Quart.....P/N 08-13989-1....----

Case of 24 Quarts. ......P/N 08-13989 ..... ---

## **ROYCO 586M LUBRICANT OIL**

A blend of highly refined mineral oils and additives that achieve excellent load carrying capacity and corrosion/oxidation inhibition. A higher load carrying capacity than Royco® 586L Lubricating Oil. Designed for application in gear boxes and specified helicopter transmissions. High temperature load carrying lube which meets MIL-PRF - 6086 specifications. 5 Gallon..........P/N 08-16222......



#### ROYCO 555 TURBINE ENGINE OIL

Royco 555 is an advanced 5 centistoke synthetic lubricating oil for gas turbine engines and helicopter transmissions. The product is a blend of "hindered" polyol esters and a finely balanced modern technology additive package.

Quart	P/N 08-1764	1	<b></b> -	-
Case (24 Quarts)	P/N 08-1764	1-24		-
5 Gallon Pail	P/N 08-1764	.2		

#### SKYDROL LD-4 HYDRAULIC FLUID

Skydrol LD-4 was also introduced in 1978, and is today the largest selling aviation phosphate ester fluid in the world. At the time of its introduction it was a breakthrough product,

solving problems of valve erosion and thermal stability common in earlier fluids. Its excellent thermal stability under real world conditions has given it a reputation as the gold standard among Type IV fluids. In recent years it has received an additional qualification of 5000 psi approval under Boeing BMS 3-11 (Type V, Grade B and Grade C). Skydrol LD-4 features low density, excellent thermal stability, valve erosion prevention, and deposit control.

Single Quart	P/N 08-12239
Case of 24 Quarts	
Gallon	
Case of 6 Gallons	P/N 08-12241-1
5 Gallons	
55 Gallons	P/N 08-13994



#### SKYDROL 500-B4 HYDRAULIC FLUID

The Skydrol 500 series of fluids has the longest service history among phosphate ester products. The first version, Skydrol 500, was introduced in 1952. Steady improvements to the formulation led in 1978 to the current version, Skydrol 500B-4 which contains the same breakthrough anti erosion additive and acid scavenger found in Skydrol LD-4. Skydrol 500B-4 is the most worker friendly of the aviation phosphate

esters; it is least irritating to skin and less prone to form mists which can be irritating to the respiratory tract. This has given the product enormous opularity for use in workshops and indoor test stands

popularity for account from one per arra	mace: teet etanae.
Single Quart	P/N 08-12463
Case of 24 Quarts	P/N 08-12463-1
	P/N 08-12462
Case of 6 Gallons	P/N 08-12462-1
55 Gallons	P/N 08-13995



## SKYDROL HYDRAULIC FLUID SKY-5

Introduced in 1996, Skydrol 5 was the first Type V fluid qualified under the Boeing BMS 3-11 specification. Skydrol 5 offers higher temperature capability than Type IV fluids, the lowest density, and better paint compatibility. Skydrol 5 does not have universal air frame manufacturer approval, so please consult Solutia's Skydrol Technical Service (800-260-4150) for specific approval and application information.

Single Quart	P/N 08-12242
Case of 24 Quarts	P/N 08-12242-1
	P/N 08-13996
Case of 6 Gallons	P/N 08-13996-1
5 Gallons	P/N 08-13997



#### SKYDROL PE-5 HYDRAULIC FLUID

Skydrol PE-5 was developed to meet and exceed the more demanding Type V fluid requirements. It features the longest fluid life of any commercially available fluid, low density and low viscosity at low temperature; an unbeatable combination of the best features for optimum fluid performance. Thermal Stability according to Airbus test method, Fluid life test with 0.5% moisture level.

Single Quart	P/N 08-14001
Case of 24 Quarts	P/N 08-14001-1
	P/N 08-14003
Case of 6 Gallons	P/N 08-14003-1
5 Gallons	P/N 08-14005
55 Gallons	P/N 08-14006



## **SKYKLEEN® 1000 AVIATION SOLVENT**

A generation aviation solvent that combines excellent cleaning A generation aviation solvent that combines excellent cleaning performance with environmentally friendly characteristics. Cleaning Applications: Skydrol® removal Polysulfide sealant removal (cured/uncured) • RTV removal Degreasing • Carbon removal (brake and piston housings) • Engine cleaning • Carbon cleaning prior to painting and bonding • General surface cleaning • Carbon epoxy composite surface cleaning • Fiberglass resin removal • Adhesive/epoxy removal.

16 oz	P/N 08-13911
Case of 16 oz	P/N 08-13911-1
5 Gallons	P/N 08-13909
54 Gallons	P/N 08-13910



# SKYKLEEN® 2000 AVIATION SOLVENT Combines excellent cleaning performance with environmentally

friendly characteristics.

friendly characteristics.

Cleaning Applications: • Adhesive/Epoxy Removal • Carbon Epoxy Composite Surface Cleaning • Carbon Removal (Brake and Piston Housings) • Degreasing • Engine Cleaning • Fiberglass Resin Removal • Final Cleaning prior to Painting and Bonding • General Surface Cleaning • Polysulfide Sealant Removal (Cured/Uncured) • RTV Removal • Skydrol Removal Single Quart ......P/N 08-13912 .....----Case of 8 Quarts ......P/N 08-13912-1 .....

# TION OILS & GREA

#### PHILLIPS OIL

#### **PHILLIPS 66 X/C AVIATION OIL 20W50**

X/C oils provide easy starting and quick lubrication under low temperature conditions. Provides film strength and low wear under high temperature conditions. Provides excellent protection against engine deposits, ring groove carbon, piston lacquer, crankcase sludge and oil oxidation. Contains ashless dispersant which keeps engine clean.

With more than 10 years	s of outstanding field performance, X/C oil
meets Avco-Lycoming &	Teledyne Continental engine specifications.
Single Quart	P/N 08-05300
Case of 12 Quarts	P/N 08-05301
Gallon	P/N 08-13854-1
Case of 4 Gallons	P/N 08-13854
55 Gal. Drum	P/N 08-07506

#### **PHILLIPS 25W-60 ENGINE OIL**

X/C 25W-60 is the first and only multiviscosity aviation oil designed and approved for radial engines originally designed to run on 120 grade. Pilots and mechanics will notice immediate benefits with X/C 25W-60 over single grade oils. Benefits such as improved oil flow at startup, quicker warm-up time, cooler operating temperatures and a cleaner operating engine.

X/C 25W-60 also has proven corrosion protection in extreme conditions. X/C 25W-60 can be used year-round, during break-in and on to TBO.

Quart	P/N 08-13856-1
Case of 12 Quarts	P/N 08-13856
Gallon	P/N 08-00885
Case of 4 Gallons	P/N 08-00886
2.5 Gallon	P/N 08-13023
2.5 Gallon Container (Case of 2)	P/N 08-13857
	P/N 08-13855

# VICTORY

#### **PHILLIPS 66 VICTORY AVIATION OIL 20W-50**

Phillips 66® Victory AW 20W-50 Oil is an ashless dispersant, multi-grade engine oil specially formulated for year-round use in aircraft piston engines. Victory AW 20W-50 Aviation Oil is recommended for use in opposed piston engines. It can replace Commercial Grade 65, 80 or 100 single-grade engine oils with no sacrifice in performance.

Quart		P/N 08-17114-1	
Case of	12 Quarts	P/N 08-17114	-
55 Gallo	on Drum	P/N 08-17114-55	_

#### PHILLIPS 66® AVIATION OIL VICTORY 100AW

Phillips 66® Victory Aviation Oil 100AW is an ashless dispersant, single-grade engine oil pre-blended with the proper concentration of antiscuff/antiwear additive (LW-16702) as mandated by Lycoming Service Bulletins 446E and 471B and Service Instruction 1409C. It is recommended for use in opposed piston and radial piston aircraft engines where cam lifter wear is a concern.

Quart	P/N 08-13850-1
Case of 12 Quarts	P/N 08-13850
55 Gallon Drum	P/N 08-14860

## **PHILLIPS 20W-50 MINERAL OIL**

Type M is generally recommended and used as a break-in oil for newly overhauled aircraft engines. Type M is generally used by engine overhaul and repair shops for the initial run-in of aircraft piston engines. Type M 20W-50 is designed for owners and pilots who want the performance of a multi-viscosity, mineral based piston engine aviation oil without dispersant additives. Single Quart......P/N 08-07197 ..... Case of 12 ......P/N 08-07198 .....----

55 Gallon Drum......P/N 08-13846 .....----

## **PHILLIPS 66 TYPE A 100AD OIL** Phillips 66 Type A 100AD is a premium, single grade oil

designed for opposed piston aircraft engines that call for SAE 50 or Commercial Grade 100 oils. Single Quart......P/N 08-00882 .....-Case of 12 ......P/N 08-05321 .....----55 Gallon Drum......P/N 08-13847 .....----

#### PHILLIPS 66® AVIATION ANTI-RUST OIL

Helps preserve aircraft piston engines during periods of inactivity. For planes that are infrequently flown, we recommend replacing up to 10% of the crankcase volume with 



#### **PHILLIPS 66 XC AERO OIL SAE**

X/C Aviation Oil was the first FAA-approved mineral oilbased, ashless dispersant, multiviscosity aviation engine oil. Recommended for use in radial piston engines and in other aviation piston engines originally designed to run on heavier-grade oils, such as Commercial Grade 120. P/N 08-13023 .....



#### AEROSHELL GREASES

Shell Aviation offers a range of aviation greases designed to fill almost every lubrication need of the aviation community.

Aeroshell greases are now slightly darker in color than before due to new factory formulation.

Description	14 oz Tube Part No.	Price 14 oz Tube	6.6 lb Can Part No.	Price 6.6 lb Can
Aeroshell Grease # 5	08-05455			
Aeroshell Grease # 6	08-05460		08-13568	
Aeroshell Grease # 7	08-05475		08-12238	
Aeroshell Grease # 14	08-05480		08-13151	
Aeroshell Grease # 22	08-05490		08-12236	
Aeroshell Grease # 33	08-00825		08-13462	
Aeroshell Grease # 58	08-17410			
Aeroshell Grease # 64	08-00824		08-13962	

Description	Size	Part No.	Price
Aeroshell Grease # 22	5 Gallon	08-15792	
Aeroshell Grease # 14	5 Gallon	08-15766	
Aeroshell Grease # 33	5 Gallon	08-15769	
Aeroshell Grease # 64	5 Gallon	08-15771	
Aeroshell Grease # 5	5 Gallon	08-15772	
Aeroshell Grease # 6	5 Gallon	08-15773	
Aeroshell Grease # 7	5 Gallon	08-14586	



## **QUAKER STATE 2 CYCLE** AIR COOLED OIL

Two-cycle oil for air-cooled engines. Recommended by engine manufacturers for air- and water-cooled engines. 8 oz. Single Bottle......P/N 08-06261 ..... Case of 8 oz. Bottles ......P/N 08-06260 .....-----

#### **MOBIL GREASE 28**

Mobilgrease 28 meets the quality level of U.S. Military under Specification MIL-PRF-81322, General-Purpose, Aircraft, and Specification DOD-G-24508A (Navy) for shipboard auxiliary machinery. It is a U.S. Military Symbol WTR and NATO Code Number G-395 grages. It maches the quality level of DOD Code Number G-395 grease. It meets the quality level of DOD-G-

24508A, Amendment 4.		
Grease 28 (13.4oz Tube)	. P/N 08-06157	
Case of 4 - 4.4 lb Cans	. P/N 08-12407-4	
Case of 40 Tubes	. P/N 08-07400	
5 Gallon	P/N 08-14587	



#### **EXXON MOBIL GREASE 33**

Mobligrease33 is a true multipurpose aviation grease intended for use in highly loaded anti-friction bearings, gears, and actuators as well as instruments, high speed bearings (though not recommended for wheel bearings), and general airframe lubrication, over operating temperatures from 100° F to 250° F. Cartridge ......P/N 08-07407-1 ..... Case......P/N 08-07407 ......----



#### **GREASE SHC-100**

Mobilith SHC™ Series greases are superior performance products designed for a wide variety of applications at extremes of temperature. They combine the unique features of synthetic base fluids with those of a high-

quality lithium complex thickener. The wax-free nature of synthetic fluids and the low coefficient of traction (compared with mineral oils), provide excellent low-temperature pumpability and very low starting and running torque.

4.4 lb. CanP/N	l 08-13740	
Case of 4 CansP/N	l 08-13742	
35 lb. PailP/N	l 08-17064	



**LEVER ACTION GREASE GUN**Multipurpose grease gun. Uses 14 ounce cartridges, bulk loaded, or loaded through a dispenser. Comes with 6" nozzle and 9" flex hose

P/N 08-07180 .....----



## **VALVOLINE VV825 HIGH** PERFORMANCE GEAR OIL

Valvoline® High Performance Gear Oil is a thermally stable, extreme-pressure gear lubricant that withstands severe temperatures and shock loading while providing excellent anti-wear, anti-scuffing, rust and corrosion protection. Reduced chattering in limited-slip differentials. Gear teeth wear protection from pitting and scouring. All hypoid differentials (conventional and limited slip) and manual transmissions in passenger cars, light trucks, sport utility vehicles, vans and heavy-duty trucks where an API-GL5 or MT-1 fluid is specified......P/N 15-05963.....

# IATION OILS—OIL DRAIN SYST



#### NYCO TURBONYCOIL 600 TURBINE OIL

TURBONYCOIL 600 is a standard lubricating oil with a viscosity of 5 cSt at 100°C based on high thermal stable polyol esters, and fortified with carefully selected anti-oxidant, antiwear and anti-corrosion additives.

Applications: • Turbine oil for military and civil aircraft and helicopters • Accessories (APUs, starters, IDGs, THS, propellers) • Stationary industrial applications (aero-derivative gas turbines)

Quart......P/N 08-17328.....---

#### NYCO GN 22

NYCO GREASE GN 22 is a NLGI 2, clay-thickened grease, based on a synthetic hydrocarbon oil with a viscosity of 7 cSt at 100°C. It is resistant to corrosion, oxidation and contains anti wear/extreme pressure

#### **NYCO GREASE GN 148**

NYCO GREASE GN 148 is a NLGI 2 Grade, multipurpose aircraft grease, based on a blend of synthetic diester oils and synthetic hydrocarbon base stock and thickened with a complex lithium soap. It is fortified with anticorrosion, antioxidant and strong extreme pressure and anti-wear additives.

Applications: • Multipurpose airframes (doors, flaps, slats, THS, bearings, etc.) • Landing gears • Wheels.

P/N 08-17293.....----



#### **NYCO GREASE GN06**

Applications: · Low speed and sliding motion parts · Airframe multipurpose

grease (doors, slaps, flaps, landing gear, etc. 400G Cartridge .......P/N 08-17625 .....----

#### **NYCO GREASE GN 25013**

NYCO GREASE GN 25013 is compatible with most elastomers commonly used, including EPDM. Its very low torque makes NYCO GREASE GN 25013 the best choice for parts actuated by low-power motors.

1 Kg Can......P/N 08-17644 ...... Case Of 6 1 Kg Cans......P/N 08-17643 .....----

#### **NYCO GREASE GN 15**

Applications: • Airframe multipurpose grease (doors, flaps, slaps, landing gear, etc.) • Anti-friction bearings, plain bearings & gearboxes • Can be technically replaced by the synthetic grease Nyco Grease GN 148. 400G Cartridge .... P/N 08-17588 ..........



#### **NYCO LUBE 3525**

Mineral lubricating oil for helicopter gear and transmission boxes - Extreme Pressure Quart......P/N 08-17623 .....----

20L Pail......P/N 08-17626 .....----Case of 24 Quarts......P/N 08-17622 .....---



NYCO GN 3058 GREASE
NYCO GREASE GN 3058 The high-temperature range grease for longer wheel bearing life, is a white lithium complex thickened synthetic grease designed to operate in salty and humid environment in a very wide temperature range going from -54°C to +175°C. **Applications:** • Wheels • Landing gears • Heavy

loaded systems

400G Cartridge	P/N 08-17290
	P/N 08-17289
35lb Pail	P/N 08-17291



#### **DISPOSABLE FOLDING OIL FUNNELS**

These disposable funnels are very popular among aircraft owners and pilots for adding engine oil. They store flat, clean and dry in a reclosable bag, and eliminate the messy cleaning when using a regular funnel. Also ideal for brake fluid, resins, and paints. Furnished in pack of 10 funnels.

Pack of 10 ......P/N 08-00040 .....----



DRIP TRAP - OIL ABSORBENT
Drip Trap is a mat made of corn stalks which captures oil, coolant, and other aviation fluids that can drip from the aircraft. Drip Trap measures 20" x 20" and can absorb up to 6 quarts of oil. It won't blow away, can be driven on, won't tip over like a drip pan, and can be walked on without tracking

the fluids on the hangar floor. Excellent for use with aircraft, cars, SUV's, trucks, motorcycles and in shops. When Drip Trap is fully saturated just dispose of it and replace. Drip Trap is the environmentally friendly and economical way to capture and contain drips and spills. P/N 13-04950 .....-



#### SUPER FLEXI-SPOUT

Works great for hard to reach areas. Dual threading fits most sized containers. Perfect for adding motor oil, anti-freeze, transmission and windshield washer fluid ......P/N 14-00707 .....-



#### OIL SAVER FUNNEL

The OIL-SAVER is simple in appearance, but a great deal of research has gone into its design. It consists of a basic rectangular funnel that's molded to hold six inverted oil bottles, the contents of which gradually

drain out and into the depository of choice -- usually another oil bottle, leaving the plastic bottles clean enough for recycling. And with thousands of funnels already in use, they have proven to be versatile, practical tools that allow you to save money and recycle.

Color	Part No.	Price	Color	Part No.	Price
Red	08-07391		Green	08-07535	
Orange	08-07533		Blue	08-07536	
Yellow	08-07534		White	08-07537	

#### **NYCO 65 VASELINE**

NYCO 65 Vaseline is a stiff, rather tacky petrolatum (heavy mineral paraffin wax), with a melting point in the range 45 to 60°C. It is not aggressive to any metal or alloy.

1 Kg Can Single	P/N 08-17661
	P/N 08-17660
100g Tube Single	P/N 08-17663
100g Tube Case of 12	P/N 08-17662

#### **NYCO 83483 FLUID**

NYCO 83483 is an homogenous mixture of pure petrolatum Vaseline and 50% of fine molybdenum disulphide powder. Molybdeum disulfide is a solid lubricant especially suitable for use at high temperature (up to 430°C) or under high load

) or anaci mgm load.	
Can Single	P/N 08-17667
Case of 24	P/N 08-17666

#### **NYCO GREASE GN GA 47**

NYCO Grease GN GA 47 is a ho	omogenous mixture of pure petrolatum
and 50 % of micronized graphite.	It is a fairly good electrical conductor.
1 Kg Can Single	P/N 08-17665
1 Kg Case of 24	P/N 08-17664

#### **HYDRAUNYCOIL 42**

Hydraunycoil FH 42 is a synthetic hydraulic fluid based on PAO and esters with a viscosity of 7 cSt at 40°C. It is designed to operate in the temperature range -54°C to +200°C without air intake for a long period of time without significant evaporation or change in viscosity.

unio minout digimount ovaporation of one	ango in viceceity.
1 Qt Can Single	P/N 08-17677
1 Qt Case of 24	P/N 08-17676

NYCO HYDRAUNYCOIL FH 51

NYCO Hydraunycoil FH 51 Petroleum Hydraulic Fluid is a petroleumbased hydraulic fluid with a viscosity of 14 cSt at 40°C. It contains antioxidant, anti-corrosion and anti-wear additives. Hydraunycoil FH 51 has an extremely wide operating temperature range (from -54°C to +135°C in air-tight circuits and -54°C to 90°C in open circuits) with a viscosity index exceeding 300. It is micro-filtered and is supplied with a controlled level of contaminant.

1 Qt Can Single	P/N 08-17679
1 Qt Case of 24	P/N 08-17678
	/==/

#### **NYCO HYDRAUNYCOIL FH 2**

NYCO Hydraunycoil FH 2 is a synthetic hydraulic fluid based on a blend of PAO and diesters, with a viscosity of 15 cSt at 40°C and a viscosity

1 Qt Can Single	P/N 08-17675			
	P/N 08-17674			
10/00				

NYCO 7870 is a mineral lubricating oil with a viscosity of 10 cSt at 40°C. It is inhibited against oxidation and corrosion.

#### 20L Pail......P/N 08-17668 ......----TURBONYCOIL 3516

NYCO Turbonycoil 3516 is a mineral turbine oil blended from mineral naphthenic base stocks and anti-oxidant additives, with a viscosity of 3 cSt at 100°C. It retains a low viscosity at very low temperature, down to -60°C. 1 Qt Can Single ......P/N 08-17673 .....-----------1 Qt Case of 24 ......P/N 08-17672 .....-----

#### NYCO 11B SYNTHETIC LUBRICATING OIL

Nycolube 11B is a synthetic lubricating oil with a viscosity of 13 cSt at 40°C, based on neopolyolesters. It is inhibited against oxidation and corrosion. 1L Can Single......P/N 08-17670.....----1L Case of 24 ......P/N 08-17669 .....----



## TURBINE OIL / HYDRAULIC FLUID **CAN DUST CAP**

Turbine oil / hydraulic fluid can dust cap.

P/N 08-13837 ..... NO SPILL OIL SPOUT™



Patented On/Off valve. Adjustable flow. No-mess... No-spill. Rev. B 3-1.....P/N 14-00024.....----



#### OIL DRIP PAN

The drip pan is 54-1/2" x 32-1/2" x 2" and is manufactured out of an extremely durable and chemical resistant plastic (high density polyethylene). White in color, our drip pan is neat and clean in appear-

ance and allows for easy visual inspection and monitoring of any engine leaks. The size and design of the drip pan will collect virtually any leaking fluids and eliminate the need for five quart pails and other messy collection containers. It is also a convenient place to pour fuel samples. Specifically designed for general aviation...P/N 08-06700 ......-----



#### **OIL DRIP PANS**

These developed oil Drip Pans are designed to protect floors from those irritating drips of oil, fuel and hydraulic fluid. They are overlapping to prevent drips from getting between the pans. Their interlocking

feature allows various pan sizes to be joined, protecting floors from all shapes and sizes of aircraft. Their lightweight and durable plastic design makes for easy set-up and clean-up. The interlocking feature allows various pan sizes to be joined, protecting floors from all shapes and sizes of aircraft, cars, buses, trucks and more! Includes: (1) DripPansUSA Oil Absorbent Pad, made of a minimum of 40% recycled polypropylene.

18" X 48" Interlocking ......P/N 08-07508 ..... 24" X 30" Interlocking ......P/N 08-07378 ......----

# DRIP PAN OIL ABSORBANT PADS DripPansUSA Oil Absorbent Pads Absorb: oil,



coolants, transmission fluids, other hydroid fluids, and water. Can also be used under and around machinery, as shelf liners, and for other clean-up applications. Made of durable blown polypropylene

and have many other uses around the home and shop. DripPansUSA Oil Absorbent Pads are made of a minimum of 40% recycled polypropylene. Made in the USA.

6 Pack	P/N 08-07510
12 Pack	P/N 08-07512

#### SPOUT DUST COVERS

Spout Covers for OPW 295 Series. D Spout Cover/Dust Cover.



Round			
Size	Color	Part No.	Price
1"	Red	08-13555	
1"	Black	08-13556	
1"	Blue	08-13557	
1.5"	Red	08-13558	
1.5"	Black	08-13559	
1.5"	Blue	08-13560	
Rectangular			
Size	Color	Part No.	Price
1 5"	Blook	00 12552	

#### CANKEY TURBINE OIL CAN OPENER

The CanKey turbine oil can opener is a simple and inexpensive tool that will open turbine oil cans without the risk of debris entering the can. Using other tools to open the oil cans can lead to metal shavings and other FOD being left in the can which can lead to damage to engine parts. Eliminate this issue by using the CanKey......P/N 08-13836.....-

#### FUNNELCAP OIL / FLUID DISPENSING CAPS

The FunnelCap makes it safe and easy to service aircraft oil and hydraulic systems without spilling of oil and without getting FOD in the oil, oil can or bottle.

Open half-used oil bottles and cans can be stored in the storage room or aircraft without risk of oil leaking out. The flex hose clip ensures a tight seal of the flex hose to the cap stud, and also secures the flex hose to the bottle or can to

minimize storage space when not in use. The red cap seals the flex hose and ensures a tight seal of the flex hose end

increase the reach.
P/N 08-17713
P/N 08-17714
P/N 08-17715

#### **FORM-A-FUNNEL®**

Aviation Funnel, go with the flow. When you need to get into a tight, hard to reach place or require extra length, the Aviation model (29" x 5") is the tool for the job. Thick, pliable nitrile rubber coating completely encases a thin, bendable layer of aluminum alloy that resists wear. Reshape and reuse it over and over. Edges can be molded around filters or drains to create a leak-proof seal. Keeps oil off of engines, frames and surrounding parts. Highly compatible with common automotive fluids. Works in temper-General Purpose Funnel (14.5" x 6.5") ...... P/N 12-03147 ..... ---General Purpose Kit (14.5" x 6.5" & 9" x 4.75"). P/N 12-04819 ..... ---



#### **OIL INJECTION / WATER** OVERFLOW RESERVOIRS

Constructed of high density polyethylene, these blow molded multi-purpose tanks offer excellent durability and resistance to most chemical and

fluids. Express service tanks come with a cap and straight fittings. All tanks come with a 2-1/4" buttress thread cap and a straight fitting which fits a 1/4" hose. All sizes nominal. Height includes neck & fittings. Width includes mounting tabs. Max working temperature is 180-deg F and max 

#### Accessories

Reservoir Tank Cap with Seal - 2-1/4"......P/N 15-05092..... Nylon Vented Cap - 2-1/4" ......P/N 15-06936-1 ......----Oil Water Reservoir Only ......P/N 15-06936-2.....----

## SHELL DEXCOOL® ANTIFREEZE / COOLANT



Single-phase, ethylene glycol based, extended life, universal automotive engine coolant. Suitable for a five year or 150,000 mile service life in automotive applications. It meets GM6277M-General Motor's Extended Life Coolant specification and will provide effective, long term corrosion protection for critical engine metals.......P/N 15-05767......



ROTELLA OIL 15W-40
Shell ROTELLA® T SAE 15W-40 is a leader in meeting leading OEM specifications, as well as the enhanced oil performance requirements for API CI - 4 PLUS, Caterpillar ECF-1, Mercedes-Benz 228.3, Cummins CES 20078, Detroit Diesel 93K214, Mack EO-N Premium Plus 03, Mercedes-Benz 228.3, and Volvo VDS-3, and meets the warranty requirement of all major diesel engine manufacturers......P/N 08-07038......

## MOBIL 1 RACING 4T FULL SYNTHETIC MOTOR OIL



Mobil 1 Racing 4T oil meets all the requirements for Rotax 4 stroke aircraft engines. This is a full synthetic oil designed for motorcycles, however is an excellent choice for Rotax 4 stroke aircraft engines because of the gearbox and close internal tolerances. Mobil 1 Racing 4T has been fully tested, both on laboratory dynamometers and in the field, to help provide optimum horsepower and acceleration.

P/N 08-13892.

## SEAFOAM MOTOR TREATMENT SF-16

Sea Foam 16 oz. motor treatment for gas and diesel engines For use in gas, ethanol, diesel or biodiesel engines. Internal engine use only. Can be used in 2-cycle and 4-cycle engines. •100% pure petroleum product. Works instantly to clean deposits from internal engine parts and remove moisture from 

# NEXT AIRCRAFT SERVICE DUE - STICKERS Service reminder decal "NEXT AIRCRAFT SERVICE DUE"



decal is black text on white semigloss background with "FILL IN" blanks. Removable decal is designed to adhere to any surface and not leave residue behind, perfect for aircraft rentals, owners, CFI's, trainers, service/repair stations, POH, log books, instrument panels, windows. Decal measures 3" x 3".....P/N 09-02137 .....



#### EVANS HIGH PERFORMANCE **WATERLESS COOLANT - GALLON**

Evans High Performance (HP) Waterless Coolant is a revolutionary coolant providing dramatic improvements in heat transfer without requiring changes to cooling system components. Conversion to Evans HP waterless coolant from the use

of conventional antifreeze is simple to accomplish, and offers performance advantages over water-based coolants. Evans HP Waterless Coolant is a long life coolant and is recommended for street use and racing where ethylene glycol use is permitted. 300 or more HP recommend use: aluminum radiator and 7 psi cap. Specified coolant for Rotax Aircraft Engines, Type 912 and 914 (series)......P/N 08-04535.....



#### EVANS PREP FLUID

Evans Prep Fluid is a waterless cooling system flush engineered specifically to purge the cooling system of waterbased antifreeze after draining and before installing new waterless coolant. Prep Fluid should be used when block drains are unavailable or cannot be removed. It is not a substitute for thoroughly draining the cooling system and related

components. Prep Fluid is NOT intended to be a stand-alone operating coolant, but as a flush only. ......P/N 08-04534 .....

# REWALL SH

#### PIG® LIGHT WEIGHT OIL ONLY ABSORBENTS



Hangs anywhere, goes anywhere! Grab one Pad or the whole tablet to clean up an oil-based spill or splatter in any corner of the shop. Durable PIG® Oil-Only Mat quickly soaks up gas and oil but won't waste absorbency on water like rags or floor sweep! Self-extinguishing material helps eliminate fire hazards;

melts instead of burning if contacted by direct flame.

100 each 15"x20" Pads ......P/N 08-07317 .....----



#### PIG® MEDIUM WEIGHT **OIL ONLY ABSORBENTS**

Clean up oil-based spills without wasting absorbency on water. Unlike rags or floor sweep, PIG® Water-Repellent Oil-Absorbent Mat quickly soaks up gas and oil but repels water from rain, slush, washdowns, ponds and sumps and more!.

100 each 15"x20" Pads ....P/N 08-07318 .....----30"x150 ft. Roll ......P/N 08-07321 .....----



## PIG® UNIVERSAL LIGHTWEIGHT ABSORBENTS

This Tablet goes anywhere to clean up drips, spills or splatters throughout the shop. Easier to use than floor sweep, so it reduces cleanup time. And with no damaging dust and grit to track around, the shop stays cleaner! Convenient pop-up tabs let you hang the Tablet anywhere you need it.

15 each 14"x14.25" Pads	P/N 08-07314
100 each 15"x20" Pads	P/N 08-07312
15"x50 ft. Roll	P/N 08-07315



#### PIG® MEDIUM WEIGHT UNIVERSAL ABSORBENTS

Genuine PIG® Mat is the better way to soak up drips, spills and splatters, and spend more time repairing vehicles. Easier to use than floor sweep so it reduces cleanup time. And with no damaging dust and grit to track around, the shop stays cleaner! • Safely absorbs and retains oil, coolants,

water, grease, gasoline, solvents, auto fluids, paint overspray, battery acid and most other liquids

*3 each 15"x20"Pads	P/N 08-07353	
100 each 15"x20" Pads	P/N 08-07313	
30"x150 ft. Roll	P/N 08-07316	



#### PIG® UNIVERSAL ABSORBENT SOCKS

Wrap flexible, self-contained PIG® Socks around tanks, drum areas and puddles to halt the spread of liquid while the Socks' thirsty absorbent filler absorbs it. Easier to use and clean up than messy floor sweep! . Moldable Socks surround equipment, drums or tanks and contain spills to keep them from spreading into walkways; also great for catching liquid that seeps under overhead doors Safely absorbs and retains oil, coolants, water,

grease, gasoline, solvents, auto fluids, paint overspray, battery acid and

lost other liquids.		
2 Universal Socks	P/N 08-07324	
2 Universal Socks	P/N 08-07327	
2 Water Repelling Socks (oil only).		

\* Designates item pictured.



## PIG® UNIVERSAL SPILL KIT

Respond to spills fast so you can get back to work. Our hi-viz Kit has the supplies you need for quick cleanups, and it's so affordable you can stock every spill-prone spot in your shop or stash one in each fleet vehicle for better liability protection! • Moldable Socks • Mat Pads • Bright nylon Bag stands out, so you can find it when you

need it. Universal Spill Kit. Specifications: • Includes: 2 PIG® Universal Socks • 20 PIG® Universal Med. Weight Absorbent Mat Pads • 2 Disposal Bags & Ties. P/N 08-07326 .....-------



#### PIG® TRAFFIC MAT® RUG

Help keep extreme-traffic walkways dry and safe with this highly durable, absorbent Rug. Heat-fused TRAFFIC MAT® Rug won't rip or fray, even under wheeled traffic, so it's perfect for ensuring heavy-use, splash-prone areas stay clean and injury free. · Incredible durability; won't ball or fray, even under wheeled traffic . Roll out to add traction and absorbency near parts washers, paint areas,

work benches, doorways, service bays and other high-wear areas Self-extinguishing material helps eliminate fire hazards; melts instead of burning if contacted by direct flame. Specifications: • Color: Black Style: Heavy-Duty

36"x100 Ft. Polybacked Mat......P/N 08-07323 ......



#### SKY COWBOY LIQUID **CONTAINMENT BAG**

This ultra-durable liquid containment bag is the perfect accessory for your backcountry adventure. 5.2 Gallons Capacity. Lays flat when empty. Stowable spout P/N 11-20281 .....---included!!

STAINLESS STEEL FIREWALL SHIELDS

Two piece shields for use over cables or wires with large end-fittings or existing installations. Single piece for use where the cable or wire may pass through the hole. Flat shields designed for use on wooden or composite firewalls using a fire resistant sealant to prevent leaks. Both types of shield available in flat or with dimple to accommodate rubber grommets up to outside diameter.

Actual hole size in 2 piece shields is slightly larger than indicated to prevent chafing cable. Ream pilot hole in single piece shields oversize for the size grommet used. Use grommets that fit tightly around the cable or wire to insure a good seal.

Shields may be installed with screws, bolts and plate nuts or rivnuts. Install cable and grommet in firewall. Locate the shield to insure that it is centered on the cable - then drill attach holes in firewall. Shields predrilled with 5/32" mounting holes. If more than one cable passes through grommet fire resistant sealant must be applied to grommet.

Caution: Any holes drilled in the firewall are potential source of carbon monoxide in the cockpit. Extreme caution must be exercised when installing firewall shields in your aircraft. They do not provide the necessary seal around cables or wires to prevent carbon monoxide, smoke or fire from entering the cockpit. The shields are designed only to protect the sealing material (grommets/gaskets) from excessive heat.



Two piece firewall shield, 5/32-Inch hole with 3/4-Inch dimple for grommet ..... P/N 08-13832 .....-



Two Piece 3/8" Hole 1" Dimple For Grommet. P/N 61-375 .....----



Two Piece 3/8" Hole 1-1/4" Dimple For Grommet. P/N 61-475 .....



Two Piece 1/2" Hole 3/4" Dimple For Grommet. P/N 61-300 .....----



Two Piece 1/4" Hole 3/4" Dimple For Grommet. P/N 61-250 .....-



Two Piece 3/8" Hole 3/4" Dimple For Grommet. P/N 61-275 .....-

#### LORD ELASTOMERIC ENGINE MOUNTS



Warranty: All Parker Lord general aviation engine mounts come with a 5-year limited warranty, which is retroactive. Included in the prorated warranty are engine mounts for Cessna, Cirrus, Mooney, Piper and all other general aviation models serviced through official Parker Lord distributors. Experimental or acrobatic aircraft are not covered under this warranty. Normal wear and tear expected to occur with regular use and maintenance is also excluded. All warranty claims are pending evaluation by Parker Lord. Please contact customer service for assistance with any warranty claim.

Life of the Part since Purchased:	0-36 Months	37-42 Months	43-48 Months	49 - 54 Months	55 - 60 Months	61 Months and more
Amount Reimbursed:	100%	50%	40%	25%	10%	0%

PROMPT SHIPPING GUARANTEED! IF YOU REQUIRE UNLISTED LORD MOUNTS, PLEASE CALL US FOR YOUR BEST PRICE.
WE BEAT ALL COMPETITOR'S PRICES! LET US KNOW OF ANY LOWER PRICE AND WE WILL BEAT IT!

WE BEAT ALL COMPETITOR'S PRICES! LET US						
Aircraft Model	Application/ Engine	No. per A/C	Part No.	Price Each		
AVIAT	T					
A-1	Lyc. O-360-C1G/A1P	8	J-1552			
S-1	Lyc. O-320	8	J-7401-2			
S-1S, -2A	Lyc. O-360-B4A, A1P	8	J-7401-2			
BEECHCRAFT	L 0.000 F00		17400 40			
19	Lyc. O-320-E2C	4	J-7402-16			
B19, M19A	Lyc. O-320-E2D	4	J-7402-16			
23	Lyc. O-360-A4G	4	J-7402-16			
23	Cont. IO-346-A	4	J-10778-4			
A23-24	Lyc. IO-360-A2B	4	J-10778-4			
C-23	Lyc. O-360-A4K	4	J-7402-16			
24,A24,A24R,B24R	Lyc. IO-360-A2B	2 ea*	J-10778-14			
C-24R	Lyc IO-360-A1B6	2 ea*	J-10778-16			
B33, C33	Cont. IO-470-K	4	J-7518-2			
C33A	Cont. IO-520-B	4	J-10520-1			
E33, F33	Cont. IO-470-K	4	J-7518-2			
E33A/C, F33A/C	Cont. IO-520-BB	4	J-10520-1			
G33	Cont. IO-470-N	4	J-10520-1			
35, A35, B35	Cont. E185-8	8	J-2245-1			
C35, D35, E35, F35	Cont. E185-11	4	J-3804-26			
E35, F35, G35	Cont. E225-8	4	J-3804-26			
H35	Cont. O-470-G	4	J-7518-2			
J35, K35, M35	Cont. IO470-C	4	J-7518-2			
N35, P35	Cont. IO-470-N or-C	4	J-7518-2			
S35,T35,V35,V35A,B	Cont. IO-520-BB	4	J-10520-1			
36, A-36	Cont. IO-520-BB	4	J-10520-1			
A36TC	Cont. TSIO-520-UB	4	J-10520-1			
V35A-TC	Cont. TSIO-520-D	4	J-10520-1			
B50	Lyc. GO-435-C2/C2E	8	J-3804-10			
C50	Lyc. GO-480-F1A6	8	J-3804-10			
D50, D50B/C/E	Lyc. GO-480-G2F6	4	J-3804-10			
E50, F50, G50, H50, G50, G50, J50	Lyc. GSO-480-B1B6 Lyc. IGSO-480-A1B6	4 4	J-6545-1			
55, A55, B55	Cont. IO-470-L	8	J-7518-2			
55, A55, B55, B55A	Cont. IO-470-L	8	J-9613-5			
C55(1967), D55, D55A,E55,E55A	Cont. IO-520-CB	8	J-10778-16			
56TC, A56TC	Lyc. TIO-541-EIB4	8	J-9613-9			
58	Cont. IO-520-CB	8	J-10778-16			
58 (1984-on)	Cont. IO-550-C	8	J-10778-16			
58P	Cont. TSIO-520-L/-LB	8	J-12453-12			
58P	Cont. TSIO-520-WB	8	J-12453-12			
58TC	Cont. TSIO-520-L/-LB	8	J-12453-12			
58TC	Cont. TSIO-520-WB	8	J-12453-12			
60, B60	Lyc. TIO-541-EIC4	8	J-9613-9			
65, A65, 70	Lyc. IGSO-480-AIE6	4	J-6545-1			
76TC	Lyc. TO-360-CIA6D	2 ea*	J-9613-49			
76	Lyc. O-360-AIG6D	2 ea*	J-9613-50			
77	Lyc. O-235-L2C	4	J-7402-1			
80, A80, B80, 88	Lyc. IGSO-540-AID	4	J-6545-1			
C90, C90A	PWC PT6A-21	6	LM427SA7			
E90, F90	PWC PT6A-28,- 135,-135A	6	LM427SA7			
H90	PWC PT6A-34B	6	LM427SA7			
95, 95A, 95B	Lyc. IO-360-B1B	8	J-7402-1			
D95A, E95	Lyc. IO-360-B1B	8	J-7402-1			
A100	PWC PT6A-28	6	LM427SA7			
200, 200C, 200CT	PWC PT6A-41	8	LM427SA7			
A200/C/CT	PWC PT6A-41	8	LM427SA7			
B200	PWC PT6A-42	8	LM427SA7			
C90, E90, C99, 200/C /CT, A200/C/	Overhaul kit for Barry Controls	8	LM427SA12			
CT, B200/C/CT/T	P/N 5906-2SA5					

Aircraft Model	Application/ Engine	No. per A/C	Part No.	Price Each
BELLANCA	-	-		
17-31, 17-31A	Lyc. IO-540-K	4	J-9868-5	
17-31A	Lyc. IO-540-KIE5	4	J-9868-5	
17-31TC,17-31ATC	Lvc. IO540-G. K	4	J-9868-5	
7ACA	Franklin 2A-120A, B	8	J-3608-1	
7ECA	Cont. O-200-A	8	J-3608-1	
7ECA		4		
	Lyc. O-235-C1	_	J-6230-1	
7GCAA, 7GCBC	Lyc. O-320-A2B	4	J-6230-1	
7GCAA, 7GCBC	Lyc. O-320-A2D	4	J-6230-1	
7KCAB	Lyc. O-320-E2A	4	J-6230-1	
7KCA	Franklin 2A-120A, B	8	J-3608-1	
8GCBC-CS	Lyc. O-360-C1E	4	J-6230-1	
8GCBC-FP	Lyc. O-360-C2E	4	J-6230-1	
8GCBC	Lyc. O-360-C2E	4	J-6230-1	
8KCAB	Lyc.IO-320-E1A	4	J-6230-1	
8KCAB-CS	Lyc. AEIO-320-E1B	4	J-6230-1	
8KCAB-FP	Lyc. AEIO-320-E2B	4	J-6230-1	
		-		
8KCAB-180	Lyc. AEIO-360-H1A	4	J-6230-1	
CESSNA	Ta			
120-140	Cont. C-85	8	J-3608-1	
140A	Cont. C-90	8	J-3608-1	
150, 150A-L	Cont. O-200-A	8	J-3608-1	
152, 152 Aerobat	Lyc. O-235-L2C	4	J-7402-1	
172 I-P	Lyc. O-320-E2D	4	J-9613-49	
172P	Cowl Mount		J-7444-14	
F172P	Cowl Mount		J-7444-14	
F172P	Cowl Mount		J-7444-24	
F172	Cowl Mount		J-7444-36	
172	Lyc. O-320-D2J	4	J-9613-49	
172N	Lyc. O-320-H2AD	4	J-9613-49	
172	Cont. IO-360-K	4	J-9613-42	
			J-9613-49	
172RG	Lyc. O-360-A1F6	2 ea*	J-9613-72	
172Q	Lyc. O-360-AL/N	2 ea*	J-9613-49	
1720	Lyo. O ooo niin	2 00	J-9613-72	
172P,Q	Cowl Mount		J-7444-24	
172	Cowl Mount		J-7444-36	
P172	Cont. GO-300-E	4	J-6545-1	
R172E,K	Cont. IO-360-D	4	J-9613-42	
175	Cont. GO-300-A	4	J-6545-1	
175A, B	Cont. GO-300-C, D	4	J-6545-1	
175C	Cont. GO-300-E	4	J-6545-1	
177	Lyc. O-320-E2D	4	J-9613-49	
177A	Lyc. O-360-A2F	4	J-9613-49	
177B	Lvc. O-360-A1F6D	4	J-9613-49	
177RG	Lyc. IO-360-A1B6	4	J-9613-59	
	,		J-3804-14	
180	Cont. O-470-A, J	2 ea*		
			J-3804-15	
180	Cont. O-470-K	4	J-6545-1	
	Cont. 0-470-K, R	4		
180A-H	<del>                                     </del>		J-6545-1	
180H, J	Cont. O-470-R, U	4	J-6545-1	
182, 182A-R	Cont. O-470-R, U	4	J-6545-1	
182, 182A-N	Accessory Mount		J-14290-4	
182H-N	Panel Mount		J-6984-64	
T182	Lyc. O-540-L3C5D	4	J-9613-12	
TR182	Lyc. O-540-L3C5D	4	J-9613-12	
185, 185A-E	Cont. IO-470-F	4	J-6545-1	
185	Cont. IO-520-D	4	J-6545-1	
A185F	Cont. IO-520-D	4	J-6545-1	
	Cont. O-470-R	4	2 00 10 1	

NOTE: \* indicates more than one Lord Part No. needed

# **LORD ENGINE MOUNTS**

Aircraft Model	Application / Engine	No. per A/C	Part No.	Price Ea.
CESSNA cont.		, ,,,,		
88	Cont. IO-520-D	4	J-6545-1	
188	Cont. IO-520-D	2 ea*	J15198-1	
188A, 188B	Cont. IO-520-D	2 ea*	J15198-2	
Γ188	TSIO-520T		J-6545-6	
205, 205A	Cont. O-360-B4A	4	J-6545-1	
206, 206A	Cont. IO-520A	2 ea*		
206B	Cont. IO-520F	2 ea*	J12453-1	
J206T	Cont. TSIO-520C	2 ea*	J12453-2	
J206	Cont. IO-520F	2 ea*		
J206,A,E	Panel Mount		J-6984-64	
J206G	Cont. IO-520-F	2 ea*		
ГU206A-F	Cont. TSIO-520-C	2 ea*		
	Cont. TSIO-520-M	2 ea*		
P206, P206A-E	Cont. IO-520-A	2 ea*	J12453-1	
P206T, P206T A-E	Cont. TSIO-520-C	2 ea*	J12453-1	
207, 207A	Cont. IO-520-F	2 ea*	0121002	
207A II	Cont. IO-520-F	2 ea*		
207T	Cont. TSIO-520-G	2 ea*		
Γ207A, T20A II	Cont. TSIO-520-M	2 ea*		
210, 210A-C	Cont. IO-470-E, S	4	J-6545-1	
210 D-J	Cont. IO-520-A, J	2 ea.*	J-12453-1	
210 K-R	Cont. IO-520-L	2 ea*	J-12453-2	
210 K, L	Panel Mount		J-6984-64	
Γ210M, N	Cont. TSIO-520-R	2/1/1*		
Γ210 F-L	Cont. TSIO-520-C, H	2 ea.*	146:55	
P210M, N	Cont. TSIO-520-AF, P	2/1/1*	J-12453-1	
P210N, R	/ -	4/2	J-12453-2	
210R (1985-86)	Cont. TSIO-520-CE	4/2*	J-12453-6	
P210 R (1985-86)	Cont. TSIO-520-CE	4/2*		
310B	Cont. O-470-M	8	J-6545-1	
310C-H	Cont. IO-470-D	8	J-12390-1	
310JQ	Cont. IO-470-U, V, VO	8	J-12390-1	
310R	Cont. IO-520-M, MB	8	J-9613-58	
Г310 P, Q, R	Cont. TSIO-520-B, BB	8	J-9613-58	
320 D-F	Cont. TSIO-520-B, BB	8	J-9613-58	
37, 337A-H	Cont. IO-360-C, D, G	8	J-9613-31	
337B-G	Cont. TSIO-360-A, H	8	J-9613-31	
P337H	Cont. TSIO-360-C, CB	8	J-9613-31	
340	Cont. TSIO-520-K, KB	8	J-9613-58	
	Cont. TSIO-520-NB	8	J-9613-58	
101, 401A,B	Cont. TSIO-520-E, EB	8	J-9613-58	
102, 402A,B	Cont. TSIO-520-E, EB	8	J-9613-58	
102C	Cont. TSIO-520-VB	8	J-9613-58	
104	Cont. GTSIO-520-M	8	J-9613-54	
111, 411A	Cont. GTSIO-520-W	8	J-9613-54	
114, 414A	Cont. TSIO-520-J, NB	8	J-9613-58	
21, A, B	Cont. GTSIO-520-0, NB	8	J-9613-54	
121, A, B	Cont. GTSIO-520-L, N	8	J-9613-54	
COMMANDER AIRCRA		0	J-9613-54	
	Lyc. O-360-C1D6	2 ea.*	J-9613-40	1
		2 ea.		
	Lyc. IO-360-C1A6D	∠ ea. 4	J-9613-53	
14 GRUMMAN AMERICAN	Lyc. IO-540-T4A5D	4	J-3804-28	
	Lvc. O-235-C2C	0	J-6113-5	
		8		
AA-1A, B	Lyc. O-235-C2C	8	J-6113-5	
AA-1C (Tomcat)	Lyc. O-235-L2C Lyc. O-235-L2C	4	J-7402-24	
A-1C (Lynx)			J-7402-24	
AA-5	Lyc. O-320-32G	4	J-7402-24	
A-5A	Lyc. O-320-32G	4	J-7402-24	
	Lyc. O-360-A4K	4	J-9613-49	
	Lyc. O-360-A4K	4	J-9613-59	
MOONEY AIRCRAFT	Luc 0.000		1,0000 1	
	Lyc. O-320	4	J-6230-1	
	Lyc. O-360	4	J-7402-16	
	Lyc. O-360-A1D	4	J-7402-1	
120C(S/N1940-20-1258)		4	J-7402-1	
	Lyc. O-360-A2D	4	J-7402-1	
	Lyc. O-360-A1A	4	J-7402-16	
120E (1969-75)	Lyc. O-360-A1A	4	J-9613-12	
	Lyc. O-360-A1A	4	J-9613-12	
M20G (1968-70)	Lyc. O-360-A1D	4	J-7402-1	
	Lyc. TIO-541-A1A	4	J-10520-1	
M22 (1966-70)	Lyc. IO-360-A3B6D	4	J-9613-40	
		4	J-9613-58	
M20J (1976-up)	Cont. TSIO-360-GB1	4		t
M20J (1976-up) M20K (1979-85)	Cont. TSIO-360-GB1	1/3*	J-9613-75	
M20J (1976-up) M20K (1979-85) M20K (1979-85)	Cont. TSIO-360-GB1 Cont. TSIO-360-GB3	1/3*	J-9613-75 and	
M20J (1976-up) M20K (1979-85) M20K (1979-85) M20K (1979-85)	Cont. TSIO-360-GB1 Cont. TSIO-360-GB3 Cont. TSIO-360-GB4	1/3* 1/3*	and	
M20J (1976-up) M20K (1979-85) M20K (1979-85) M20K (1979-85) M20K (1979-85)	Cont. TSIO-360-GB1 Cont. TSIO-360-GB3 Cont. TSIO-360-GB4 Cont. TSIO-360-LB1B	1/3* 1/3* 1/3*		
M20J (1976-up) M20K (1979-85) M20K (1979-85)	Cont. TSIO-360-GB1 Cont. TSIO-360-GB3 Cont. TSIO-360-GB4	1/3* 1/3*	and	

NOTF:	*	indicates	more	than	one	Lord	Part	Nο	needed

Aircraft Model	Application / Engine	No. per	Part No.	Price Ea.
	Application / Engine	A/C	· uit ito.	<u></u>
PIPER	L O 000 D0	_	1,0000.4	
PA-23	Lyc. O-320-D2	8	J-6230-1	
PA-23-160 PA-23-235	Lyc. 0-320-B	8	J-6230-1 J-3804-20	
	Lyc. OI-540-B1A5 Lyc. O-540-A1B5, A1D5	8		
PA-23-250 PA-23-250 (6)	Lyc. IO-540-C1B5, A1D5	8	J-3804-20 J-3804-20	
PA-23-250 (6)	Lyc. IO-540-C1B5, A1D5	8	J-9613-12	
PA-23-250 (6)	Lyc. IO-540-J4A5	8	J-9613-12	
PA-23-250 (6)	Lyc. IO-540-C4B5	8	J-9613-12	
PA-23-250T	Lyc. TIO-540-C1A	8	J-9613-12	
PA-24-250	Lyc. O-540-C1B5, A1A	4	J-3804-20	
PA-24-260	Lyc. IO-540-E4A5, D4A5	4	J-3804-20	
PA-24-400	Lyc. IO-720-A1A, A1B	2 ea.	J-9613-9	
PA-25-235	Lyc. O-540-B2C5,B2B5	4	J-3804-20	
PA-25-260	Lyc. O-540-E4	4	J-3804-20	
PA-28-140	Lyc. O-320-E2A	4	J-7402-16	
PA-28-140	Lyc. O-320-E2A	2	J-9613-40	
			J-9613-40	
PA-28-140	Lyc. O-320-E3D	2 ea.*	J-9613-53	
PA-28-150	Lyc. O-320-A2B	4	J-7402-16	
PA-28-150	Lyc. O-320-A2B*	4	J-7402-24	
PA-28-150	Lyc. O-320-E2A	4	J-7402-16	
			J-9613-40	
PA-28-151	Lyc. O-320-E3D	2 ea.*	J-9613-53	
PA-28-160	Lyc. O-320-B2B	4	J-7402-16	
PA-28-160	Lyc. O-320-D2A**	4	J-7402-16	
PA-28-160	Lyc. O-320-D2A	4	J-7402-24	
			J-9613-40	
PA-28-161	Lyc. O-320-D3G	2 ea.*	J-9613-53	
PA-28-180	Lyc. O-360-A3A	4	J-7402-24	
PA-28-180	Lyc. O-360-A4A	4	J-7402-24	
PA-28-180	Lyc. O-360-A4A, M***	4	J-9613-40	
PA-28R-180	Lyc. O-360-B1E	4	J-9613-40	
PA-28-181	Lyc. O-360-A4M	4	J-9613-40	
PA-28R-200	Lyc. IO-360-C1C	4	J-9613-40	
PA-28R-201	Lyc. IO-360-C1C, C1C6	4	J-9613-40	
PA-28R-201T	Cont. TSIO-360-F, FB	4	J-9613-58	
PA-28-235	Lyc. O-540-B2B5	4	J-3804-20	
PA-28-235	Lyc. O-540-B1B5	4	J-7402-20	
PA-28-235	Lyc. O-540-B4B5	4	J-7402-20	
PA-28-235	Lyc. O-540-B4B5****	4	J-3804-27	
PA-28-236	Lyc. O-540-J3A5D	4	J-9613-12	
PA-30	Lyc. IO-320-B1A1C1A	8	J-9613-19	
PA-31	Lyc. TIO-540-A1A, or	8	J-9613-12	
	A1B, A2C, A2B			
PA-31-310	Lyc. TIO-540-A2C	8	J-9613-12	
PA-31-325	Lyc. L/TIO-540-F2BD	8	J-9613-12	
PA-31-350	Lyc. L/ TIO-540-J2BD	8	J-9613-29	
PA-31P-350	Lyc. TIO-540-V2AD		J-9613-53	
PA-32-260	Lyc. O-540-E4B5	4	J-7402-20	
PA-32-260 (s/n 570-up)	Lyc. O-540-E4B5	4	J-3804-27	
PA-32-300	Lyc. IO-540-K1A5	4	J-3804-27	
PA-32-300	Lyc. IO-540-K1G5, K1A5	4	J-3804-40	
PA-32R-300	Lyc. IO-540-K1G5D	4	J-3804-31	
PA-32R-300 (s/n 141-up)	Lyc. IO-540-K1G5D	4	J-3804-40	
PA-32RT-300	Lyc. IO-540-K1G5	2 ea.	J-3804-40	
PA-32RT-300T	Lyc. TIO-540-51AD	2 ea.	J-3804-37&	
PA-32-301	Luc IO E40 K1GED	2.00	J-3804-39	
PA-32R-301	Lyc. IO-540-K1G5D	2 ea.	J-9613-19 &	
PA-32-301T	Lyc. IO-540-K1G5D Lyc. TIO-540-S1AD	2 ea.	J-9613-12	
PA-32R-301T	Lyc. TIO-540-S1AD	2 ea. 2 ea.	J-9613-19 & J-9613-55	
PA-34-200	Lyc. L/ IO-360-C1E6	8 8	J-9613-40	
PA-34-200, 200T	Cont. TSIO-360-E, EB	8	J-9613-58	
PA-34-200, 2001	Cont. L/ TSIO-360-KB	4	J-9613-58	
PA-36-300	Lyc. IO-540-K1G5	4	J-3804-31	
PA-38-112	Lyc. O-235L2C	4	J-7402-16	
PA-38-112 PA39	Lyc. IO-320-B1AC1A	8	J-7402-16 J-9613-19	
PA-44-180	Lyc. 0-360-E1A6D	8	J-9613-19 J-9613-40	
PA-44-180T	Lyc. T0-360-E1A6D	8	J-9613-40	
PA-46-310P	Cont. TSIO-520-BE	4	J-9613-40	
PA-46-350P	Lyc. TIO-540-AE2A	8		
		8	J-9613-55 J-9613-12	
PA-60-360 PA-60-600A	Lyc. IO-360-E1A Lyc. IO-540-K1F5			
PA-60-600B	Lyc. IO-540S1A5	8	J-9613-9 J-9613-9	
PA-60-600B PA-60-601P	Lyc. IO-540S1A5	8	J-9613-9 J-9613-9	
. 7. 00 00 11	12,0.10 0-00170		0 0010-9	

KING TAB WASHER - Used to lock mounting bolts to Lord Mounts.

Continental P/N 501867 is similar to Cessna P/N 08-51559-1.

P/N 08-50186-7.............-- ea.

COWL MOUNTS

Ina 172P and F172P Per supp 86 & 13.3...P/N J-7444-14....---
Ina 172P, F172P, and 172Q Per supp 86 & 13.3

P/N J-7444-24...---
P/N I-7444-36....---

# **RRY ENGINE MOUNTS**





Barry Controls has actively supported the general aviation market since 1981 and holds PMA approvals on a wide range of engine mounts. Barry mounts are warranted for 500 hours or 12 months and feature outstanding quality & value. Call for unlisted part numbers.

#### **BEECHCRAFT**

	DEEGIIGITAI I						
Common Name	Aircraft Model	Part No.	En- gine	Price			
Skipper	77	94150-40	All				
Sport	B19, M19A	94150-01	All				
Sundowner	C23	94150-01	All				
Bonanza	S-35-V35, A, B, C33A, E33A, C, F33A, C, 36	7351231-3	All				
Bonanza	A36	7351231-3	All				
Sport (Musketeer)	19A	94150-01	All	-			
Twin Bonanza	E50, G50, H50, F50, J50	94110-40	All				
Turbo Baron	56TC, A56TC	94011-04	All				
Baron	58P	94031-03	All				
Baron	58TC	94031-03	All				
Baron	A24, A24R, B24R, C24R, D55, D55A, E55, E55A, 58, 95-C55, 95-C55A	96068-01	All	-			
Baron	99-55, 95-A55, 95-B55,95-B55A	96071-01	All				
Bonanza	C35-G35	96115-01	All				
Duke	60, A60, B60	94011-04	All				
Queen Air	65, A65, 65/80, 65/88, 65-A80, 65-B80, 70	94110-40	All				
Duchess	76	94011-02(2)	All				
Duchess	70	94011-20(2)	All				
Travel Air	95, B95, A, D95A, E95	94150-40	All				
Note:	(1) Denotes 1ea. per engine. (2) D	enotes 2 ea.	per en	gine.			

All others require 4 engine

#### **GULFSTREAM**

Air	craft	Doub No.	F	Duin
Common Name	Model	Part No.	Engine	Price
	111	94011-02 (02)	All	
	'''	94011-20 (02)	All	-
	110 D T TO TO	94011-02 (02)	All	
	112, B, T, TC, TCA	94011-20 (02)	All	
Twin Commanders	500	94110-01	All	
	500A	94110-40	All	
	560A, E, F	94110-40	All	
	680, E, F, FL, FLP	94110-40	All	
	685	94001-01	All	
	720	94110-40	All	
Cougar	GA-7	94011-20	All	
Tiger	AA5B	94011-20	All	

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine \* AIRCRAFT SERIAL NUMBERS

#### **VANS**

Aiı	craft	Bort No.	Fueina	Price
Common Name	Model	Part No.	Engine	Price
Vans	RV-3	94011-20	All	
	RV-4	94011-20	All	
	RV-6	94011-20	All	

#### **CIRRUS DESIGN**

Aircraft		P/N	Familia	Price
Common Name	Model	P/N	Engine	Price
Cirrus	SR20 - PMA Approved	96355-01	All	
Cirrus	SR22- PMA Approved	96301-01	All	

#### **CESSNA**

	Aircraft	Part No.	Engine	Price
Common Name	Model	Part No.	Engine	Price
	152, 152A	94150-40	All	
Skyhawk	172I, J, K, L, M, N, P	94011-20	All	
Skyhawk / Cutlass	172RG, Q, R, S	J-9613-72HA	All	-
	P172D	94110-40	All	
	R172E	94017-01	All	-
Skylark	175, A, B, C	94110-40	All	1
Cardinal	177, A, B	94011-20	All	
	180, A thru H	94110-40	All	
Skylane	182, A thru R	94110-40	All	
	R182, TR182, T182	94011-02	All	
Skylane	182S, T	J-9613-82HA	All	
Skywagon	185, A thru F, A185F	94110-40	All	
	188	94110-40	All	
04-411	206, U206, A thru G,	94030-01	All	
Stationair	P206,A thru E	94031-01	All	
Stationair	206H, T206H	J-15195-4HA	All	
	TP206, A thru E, TU206,	94030-01	All	
	A thru G	94031-01	All	
	007 A T007 T007A	94030-01	All	
	207, A, T207, T207A	94031-01	All	
Yates Aircraft Conversion	A188B	94007-01	All	
Centurion	210, A thru C 210, D	94110-40	All	
Centunon	thru H, J	94030-01 (2)	All	
		94031-01 (2)	All	
		94030-01 (2)	All	
Centurion	210K thru N	94031-01 (1)	All	
		94031-02 (1)	All	
		94030-01 (2)	All	
Turbo Centurion	T210F thru H	94031-01 (1)	All	
		94031-02 (1)	All	
		94030-01 (2)	All	
Turbo Centurion	T210J thru N	94031-01 (1)	All	
		94031-02 (1)	All	
Dunnania I		94030-01 (2)	All	
Pressurized Centurion	P210N, R	94021-01 (1)	All	
Jonanon		94021-02 (1)	All	

#### **CESSNA TWIN ENGINE**

OLOGNA I WIN LINGING						
	Aircraft		Engine	Price		
Common Name	Model					
	310B, C	94110-40	All			
Skynight	320, A thru C	94016-03	All			
	320D, E, F	94006-01	All			
	ALT.	94017-01	All			
Skymaster	336	94016-01	All			
	337, A thru F	94017-01	All			
	P337H	94017-01	All			
	T337, B thru F	94017-01	All			
	340, A	94006-01	All	-		
	401, A, B	94006-01	All			
Business Liner	402, A thru C	94006-01	All			
Titan	404	94001-01	All			
	411, A	94001-01	All			
Chancellor	414, A	94006-01	All			
Golden Eagle	421, A thru, C	94001-01	All			
Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine						

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#### DIDED

		PIPER			
Aircr	aft	Part No.	Fraire	Price	
<b>Common Name</b>	Model	Part No.	Engine	FIICE	
Cherokee 140	PA28-140	94150-01	*20002-24999		
	DA00 440	94011-02 (2)	*25000-7125641		
	PA28-140	94011-20 (2)	*25000-7125641		
	DA00 140	94011-02 (2)	*7225001 & UP		
	PA28-140	94011-20 (2)	*7225001 & UP		
Cherokee 150	PA28-150	94150-01	All		
Cherokee 160	PA28-160	94150-01	All		
Warrior	PA28-151	94011-02 (2)	0-320-E3-D		
wamoi	FA20-151	94011-20 (2)	All		
Warrior	PA28-161	94011-02 (2)	All		
wanioi	FA20-101	94011-20 (2)	All		
Cherokee180	PA28-180	94150-01	*1761-4377		
	PA28-180	94150-01	*4378-5149		
Cherokee Six	PA32-300	94110-02	*32-7240056 & UP		
Archer	PA28-180	94011-20	*5151 & UP		
Archer II	PA28-181	94011-20	All		
Arrow	PA28R-180	94011-20	*3000 & UP		
	PA28R-200	94011-20	*35001-7135329 IO-360-C1C		
Arrow II	PA28R-200	94011-20	*7235001 & UP		
Turbo Arrow II	PA28R-201T	94006-01	TSIO-360-F, FB		
Arrow III	PA28R-201	94011-20	*7737002 & UP		
Turbo Arrow III	PA28R-201T	94006-01	All		
Dakota	PA28-236	94011-02	*0-540-J3A5D		
Comanche 250	PA25-250	94110-01	0-540-A1A		
Comanche 260	PA24-260	94110-01	IO-540-E or D4A5		
Comanche 400	PA24-400	94011-04	IO-720		
Cherokee Lance	PA32R-300	94110-02	IO-540-K1G5D		
Lance II	PA32RT-300	94110-02	IO-540-K1G5		
Saratoga	PA32-301	94011-02 (2)	All		
		94011-03 (2)	All		
Saratoga S.P	PA32R-301	94011-02 (2)	All		
		94011-03 (2)	All		
Tomahawk	PA38-112	94150-01	0-235		
Brave	PA36-300	94110-02	All		
Pawnee 235	PA25-235	94110-01	All		
Pawnee 260	PA25-260	94110-01	All		

#### **PIPER TWIN ENGINE**

Airc	raft	Part No.	Engino	Price
Common Name	Model	Part No.	Engine	Filce
Apache 235	PA23-235	94110-01	0-540-B1A5	
Aztec	PA23-250	94110-01	0-540, IO-540	
Aztec C, F	PA23-250	94011-02	IO-540-C4B5, CIB5	
Twin Comanche	PA30	94011-03	All	
	PA39	94011-03	All	
Turbo Navajo	PA31	94011-02	All	
Navajo C/R	PA31-325	94011-02	TIO-540-F2BD(L)	
Navajo Chieftain	PA31-350	94011-02	TIO-540-J2BD(L)	
Seneca	PA34-200	94011-20	All	
Seneca II	PA34-200T	94006-01	All	
Seneca III	PA34-220T	94006-01	All	
Seminole	PA44-180	94011-20	All	
Turbo Seminole	PA44-180T	94011-20	All	
Aerostar	PA60-700P	94011-40	All	
	PA60-600, 601	94011-01	All	
	PA60- 601P,602P	94011-01	All	
Note: (1) De	notes 1ea, per er	naine. (2) D	enotes 2 ea. per engi	ine.

All others require 4 engine \* AIRCRAFT SERIAL NUMBERS

#### **PILATUS PC-12**

Compatible Aircraft: PC-12. PC-12/45. PC-12/47. PC-12/47E

Description	Model	Part No.	Price
New	93880-23	08-15950	
Rebuilt	93880-23R	08-15950-1	

#### **MAULE**

Aircraft		P/N	Engine	Price
Common Name	Model	P/N	Engine	Price
Rocket	M-4-210, C, S, T	94016-01	All	
	M-5-210C	94016-01	All	
	M-5-235, C	94016-02	O-540-J/ IO-540-J	
	M-6-235	94016-02	O-540-J/ IO-540-J	
Orion/Super Rocket	M-7-235/260, M-8-235	94016-02	O-540-J/ IO-540-J	

#### **MOONEY**

Aire	craft	Part No.	Fraire	Price
Common Name	Model	Part No.	Engine	Price
Chaparral	M20E 1964 Only	94150-01	0-360-A1A	
Chaparral (Super 21)	M20E 1965 & Newer	94011-02	IO-360-A1A	
Executive	M20F	94011-02	IO-360-A1A	
201	M20J	94011-20		
231	M20K	94006-01	TSIO-360	
	CAP231	94016-44	ALL	
	M20A	94150-40	0-360-A1A, D	
	M20A	94150-01	0-360-A1A	
Master	M20D	94150-40	0-360-A1D, A2D	
Ranger	M20B	94150-40	0-360-A1A, D	
Ranger Mark 21	M20C	94150-40	0-360-A1A,D	
Statesmen	M20G	94150-40	IO-360-A1D	

#### **LANCAIR**

Aircraft		Engino	Price
Model	Part No.	Engine	Filce
235	94150-41	0-235	I
320	94150-41	0-320	
360	94150-41	0-320, 0-360	
Lancair 4		TIO-550, TIO-520	
4	94011-20, (2)	TIO-550, TIO-520	
ES	94017-01	All	
300	94001-01	IO-550	
	235 320 360 4 ES	235 94150-41 320 94150-41 360 94150-41 4 94001-01, (2) 94011-20, (2) ES 94017-01	Model         94150-41         0-235           320         94150-41         0-320           360         94150-41         0-320, 0-360           94001-01, (2)         TIO-550, TIO-520           94011-20, (2)         TIO-550, TIO-520           ES         94017-01         All

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine

#### **SIAI MARCHETTI**

Aircraft Model	Part No.	Engine	Price
F260	94110-01	All	
S208	94110-01	All	

#### **SOCATA**

Aircraft		Part No.	Fusina	Price
Common Name	Model	Part No.	Engine	File
Rallye	235C, E	94011-20	0-540-B4B5	

#### **PRATT & WHITNEY TURBO PROPS**

Aircraft		Part No.	Engine	Price
Common Name	Model	Part No.	Engine	FIICE
P&W Turbo Prop	5906-25A5	08-10679	PT-6	

#### **REBUILT ENGINE MOUNT FOR PT-6**

This engine vibration isolator assembly(engine mount) is for a variety of PT6 turbo-prop powered aircraft. Rebuilt....P/N 08-10679 ...............---

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## **NGINE MOUNTS**

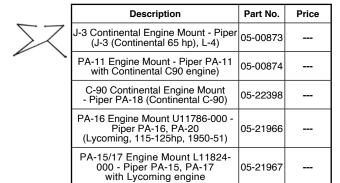


#### DYNAFOCAL ENGINE **MOUNT RINGS & KITS**

Standard rings furnished with 2-3/4" I.D. retainers, completely welded, ready for mount assembly. The Dynafocal ring kits contain all tubing cut and bent, with 2-3/4" I.D. retainers, ready to weld.

Dynafocal Ring for Lyc. 0-235 to I0-360 (200 HI	P)P/N 33521
Dynafocal Ring for Lycoming 0-320B	P/N 33521-B
Dynafocal Ring Kit for Lyc. 0-235 to 10-360 (200 HF	P)
(Pre-Welded)	P/N 33522
Retainer Cups & Rings Kit	P/N 33253
(includes 8 cups & 4 rings - everything in #33522 kit	above except the tubing)

#### **ENGINE MOUNTS FOR PIPERS**



#### LORD RUBBER ENGINE MOUNT

PA-18 Lycoming Eng Mount 125hp -Piper PA-18 125hp Lycoming engine



LORD Flex-Bolt™ Sandwich Mounts are designed to protect equipment and machinery against damaging vibration. These mounts provide high load-carrying capacity and assure long life. Provide lowcost mounting systems which are compact, lightweight, easy to install and maintenance-free.

05-22399

Model	Α	С	D	Thread	Part No.	Price
J-4624-45	1.00	.75	.75	5/16-18	10-01557	
J-4624-57	1.00	.75	.62	5/16-18	08-07196	

#### **URETHANE CONE STYLE** ENGINE MOUNT BUSHINGS







These engine mount bushings are made of a special urethane formula which outlasts most other mounts. They have been in use on smaller 4 cylinder Lycoming engines from the 0-235 series to the GO-480 series for years, and are now available to the experimental aircraft market. Specifications: These cone type mounts are applicable to the following  BARRY MOUNT FOR VANS **AEROBATIC AIRCRAFT** 



Barry Controls is a manufacturer of many aircraft engine mounts of both experimental and certified types. They also manufacture engine mounts for experimental and kit airplanes of various makes and models. Please call or visit our website for application information. P/N 94016-08 ..... ----

#### HOMEBUILDERS CONICAL LYCOMING **ENGINE MOUNT BUSHINGS**



These new bushings offer superior damping qualities and do not harden over time as original mounts can do. They are molded from hi-tech silicone rubber which offering a much lower compression set which reduces engine sagging over time. Silicone also withstands a very wide temperature range and

is compatible with grease and oil. These mounts are not PMA'd or FAA approved and are for use on experimental aircraft only. Not an approved replacement for Lycoming 71032 bushings. Sold in set of 8 bushings.

P/N 08-00662 ..... --- /Set



#### LORD ENGINE MOUNTS FOR ULTRALIGHTS

All altitude mounts for vibration isolation and shock prevention in all directions. Available in soft, medium, or hard rubber.

SoftP/N	08-07049	
MediumP/N	08-01013	
HardP/N	08-07050	
Snubbing Washer P/N	9810145-01804	



#### LORD MOUNTS FOR **COZY ENGINE MOUNT**

These Lord J-7402-24 mounts fit the engine mount for Lyc. 0-360 manufactured by CG Parts.

P/N 07-01115 ..... ----

## SKYBOLT PLATEMOUNTS



The SK2003A Series Mounts were specifically designed around the latest generation Cessna/Lord J7444-42 Series Mount. The SK2003-14A, -24A, and -42A all have the same flex feature as the J7444-42. They look and install exactly the same as the Cessna/Lord part it replaces using the same fastener length. The SK2003-14A, -24A, and -42A are fixed depth, Non-Adjustable Platemounts. The 50ADJ is adjustable and can be adjusted without removing the cowling for an exact fit.

Model	Application	Part No.	Price
SK2003-14A	Cessna P/N J7444-14. Used On - 67-On C150 (10ea), 67-86 C172 (11ea), C172XP (13ea) 68-78 C177 (14ea)	08-07222	
SK2003-24A	Cessna P/N J7444-24. Used On - 73-86 C182 (14ea)	08-07223	
SK2003-42A	Cessna P/N J7444-36 and -42. Used on -97, C172 R & S (14ea)	08-07208	

# **EXHAUST COMPONENTS**

#### STAINLESS STEEL FIREWALL **PENETRATION KIT 3/4**



The kit comes complete with stainless steel fabricated fitting, fire sleeve tubing, two ALL stainless steel hose clamps and a tube of fire block sealant to seal the ends from moisture and gasses. Includes installation instructions.

- · Fireproof seal of the firewall for penetration of wires and cables.
- · Seals out moisture and gasses.
- · Easy replacement of wires and cables if necessary.
- · Very clean looking installation.
- · Available in three sizes.

There are so effective that they received an STC under Advisory Circular AC 20-135 Power plant Installation and Propulsion Systems Component Fire Protection Test Methods, Standards and Criteria.

Firewall Penetration Kit 3/4"	P/N 09-00978
Firewall Penetration Kit 1/2"	P/N 09-02601
Firewall Penetration Kit 1"	P/N 09-00979

#### **AEROTAR PRIMER LINE ASSEMBLIES**



Model No.	Aircraft	Description	Part No.	Price
0400106-83	Cessna 152	Primer Firewall to Strainer	05-21778	
0400343-18	Cessna 152	Primer Firewall to Tee	05-21779	
0400343-20	Cessna 152	Primer RH - Tee to #1 Cylinder	05-21780	
0400343-24	Cessna 152	Primer RH - Tee to #1 Cylinder	05-21781	
0400343-25	Cessna 152	Primer RH - Tee to #3 Cylinder	05-21782	-
0400343-23	Cessna 152	Primer RH - Tee to Tee	05-21783	-
0400343-19	Cessna 152	Primer LH - Tee to Tee	05-21784	
0400343-21	Cessna 152	Primer LH - Tee to #4 Cylinder	05-21785	-
0400343-22	Cessna 152	Primer LH - Tee to #2 Cylinder	05-21786	
1700121-112	Cessna 172	Cylinder #2 to Tee	05-21787	
1700121-111	Cessna 172	Cylinder #4 to Tee	05-21788	
2400010-31	Cessna 172	Tee to Tee	05-21789	
2400010-11	Cessna 172	Cylinder #3 to Tee	05-21790	
2400010-10	Cessna 172	Tee to Firewall	05-21791	



#### **EXHAUST SHIELDS**

Over the years we have seen failure of the rivets that hold the exhaust heat shield to the mounting bracket. The solution was to spot weld the stainless steel mounting bracket to the stainless steel heat shield thus eliminating the possibility of rivet failure. Adding additional spot welds insures reliability. They are offered in two sizes, 2

inch and 4 inch to cover most a	applications.
Exhaust Shield 2"	P/N 08-07351
Exhaust Shield 4"	P/N 08-07352



#### T TUBE CONNECTOR

Expanded on short leg to slip over a 2" O.D. tube to divert air in two directions. Especially handy for close to the firewall applications. Weight is 1.7 ounces.

P/Ň 08-07304 .....-----



#### **2-1/2 INCH Y TUBE** CONNECTOR

With 2" offshoot. If you are running 2.5" tubing in one area and 2" to another, this is your part. Weight is 1.8 ounces.

P/N 08-07303 ..... ---



## **2 INCH DIAMETER Y TUBE**

WITH SHUT-OFF VALVE
This is a DL-010 "Y" Tube, modified with a shut-off valve in the straight run tube. The shut-off valve enables the builder to divert the flow of air from the straight tube and direct all or part of the air flow to the angled tube. Furnished with one stainless steel hose clamp. Weight is 2.9 ounces.

P/N 08-07296 .....-



#### **MODIFIED VA175 TUBE CONNECTOR**

This is a direct replacement for the VA175 (Van's part number). The VA175 directs warm air in the RV-10 tunnel to both sides equally.

With the Modified VA175, air can be directed all to one side, partially to one side, or both sides, through the controllable (cable actuated) flapper on the inside of the unit.

P/N 08-07306 .....



#### SHUT OFF VALVE TUBE CONNECTOR

Expanded on one end to 2" I.D. to slip over a 2" O.D. tube to regulate or shut off air. Also available non-expanded for in-line applications. Weight is 2 ounces

P/N 08-07305 .....---



#### **GPL STAINLESS STEEL EXHAUST SPRING**

Winding Length: 26mm · Overall Length: 60mm · Hook Distance: 66mm(2.60") · Wire Diameter: 2mm • O.D.: 13mm • Material: 304SS may be slightly magnetic . Number of Rolls: 12.5 • GPL Part Number: EXH-2S Replaces Rotax Part Number 938-795 P/N 08-07632 ..... ----

# HAUST COMPONENTS

#### **HEATER BYPASS VALVES**

Three models of the all stainless steel heater bypass boxes are offered. The engine side control lever comes with a backing plate that attaches to the cabin side of the firewall and has a 2 inch scat tube outlet so a tube can be attached in the cabin that directs air where wanted.

All stainless steel construction offers a fireproof closure in case of an engine fire.

New flapper design offers better seal to keep out hot air when closed.



#### **HEATER BYPASS VALVE FOR RV-10**

P/N 08-06230 ..... ----



HEATER BYPASS VALVE WITH CABIN SIDE CONTROL LEVER FOR RV-7, RV-8 AND RV-9 ......P/N 08-01311 .....----



#### **HEATER BYPASS VALVE WITH ENGINE** SIDE CONTROL LEVER

P/N 08-01311-1.....

#### **ALL STAINLESS STEEL TRI-BOX**



These boxes were developed for builders who want a simple, light, all stainless box that will fit in tight places, as it does not extend forward of the firewall as far as a standard box. Shown in the photo is a left unit. The box is available in both left and right units. The hole spacing is correct for the pre-punched holes in the RV-10 firewall, but they can be mounted on any firewall. For

ease in cable routing, the arm on the box is adjustable using the provided lock nuts. Everything in the unit is stainless steel, including bushings and rivets. It is furnished with a closed-cell silicone gasket. Weight is 9.8 ounces and has a 2" inlet/outlet port. Please note that these boxes are a direct replacement for the aluminum box available from Vans. The RV-10 uses both a left and a right unit, and they also can be ordered separately. If you 

Left unit is a special order part. Please contact us to order.



## 2 102" INLET & 2" OUTLET HOME-

## **BUILDERS CABIN HEAT BOX**

This box is identical to the deluxe stainless steel cabin heat box, except that the inlet is 2 ½" OD so that it can be used on larger heat muff applications where the builder is using 2 1/2" scat tubing. This box is currently being used on the MICCO certified aircraft. Weight is 7.2 ounces. P/N 08-04013.....

### SIDE INTAKE HOMEBUILDERS **CABIN HEAT BOX**



P/N DL-015 - This box is identical to the standard cabin heat box, P/N DL-001, except that the air intake is parallel to the firewall rather than coming straight in from the heat muff. This gives the builder the option of running scat tube parallel to the firewall. Total weight is 5.2 ounces and has a 2" inlet/outlet port. Furnished with a flange gasket and four mounting rivets. Can also be bolted to firewall.

P/N 08-04957 ..... ---

#### GPL STAINLESS STEEL EXHAUST **SPRING FOR 2 STROKES**

Winding Length: 32mm • Overall Length: 64mm • Hook Distance: 75mm (2.95") • Wire Diameter: 2mm • O.D.: 16mm • Material: 304SS may be slightly magnetic • Number of Rolls: 9.5 • GPL Part Number: EXH-4S

• Replaces Rotax Part Number 938-790 P/N 08-12235 .....----



#### **CESSNA RISER** HALF CLAMP 0750161-25



#### **AERONCA HEAT MUFF**

Aluminum muffs for models 7AC and 11AC exhaust stacks. Fit either left or right side.

P/N 05-08715 .....----



#### 2" DIAMETER 90° TUBE

This unit is designed to slide over the end of the 2" O.D. tube protruding from a cabin heat box that extends through the firewall. The short end of this unit is expanded to 2" I.D. Two stainless steel clamps are furnished with the unit. If you use scat tube, the 90° angle allows you to run the scat tube parallel to the fire-

wall and away from undesirable areas (brake pedals, etc.) Constructed of seamless 6061T4 .028 wall tube.



#### 2" DIAMETER "Y" TUBE

"Y" tube is designed to be used with the Homebuilders cabin heat box to make warm air available to 2 or more locations in the aircraft. Constructed of seamless 2024T6 tube, it weighs only 2 oz. These tubes are expanded to 2" I.D. on the inlet end to slip over and clamp to the 2" O.D. tube of the cabin heat box. Due

to the very light weight, "Y" tubes can be installed in scat tubing as well as attaching directly to cabin heat boxes. One stainless steel clamp is included with "Y" tube. Due to the light weight of only 1.7 oz., the nonexpanded Y-tube can be placed anywhere in a run of tubing to give more options for heating additional areas of the aircraft. Furnished w/2 stainless steel hose clamps.



#### IN-LINE HEATER/ **DEFROSTER VALVE**

This in-line valve connects to 2" SCAT ducting. It comes complete with cable end and can be hooked up in any combination to direct air to either heater out-



### **CESSNA TYPE HEAT MUFF**

Heli-arc welded aluminum muff with rustproof stainless steel fins for clamping to stack. Similar in design to the new Cessna type. Furnished with attaching clamps. w/2" Outlet ..... P/N 08-02400 ...... ----w/2.5" Outlet .... P/N 08-02500 ..... ---

#### THERMO-TEC STAINLESS STEEL **CLAMP-ON HEAT SHIELDS**



Stainless Steel Clamp-On Heat Shield incorporates Thermo-Tec proprietary coating technology. The new and improved flexible Stainless Steel Clamp-On Heat Shield blocks over 95% of the damaging radiant heat of the exhaust. The Stainless Steel construction of this heat shield provides the ultimate in protection.

Comes complete with all clamps and new stainless stand offs. Easily installs in minutes.

## **BOXES – EXHAUST COMPONEN**



#### **DELUXE HOMEBUILDER'S** CABIN HEAT BOX

P/N DL-002 - This cabin box is our first modification to our standard heat box. The only difference between this and the standard is that the deluxe cabin heat box has one inlet and two outlets; the second outlet must be used to dump and route, via 2" scat tube, the warm air away from the low plenum area when heat is not being used in the

cabin. (It is very important not to run the dump tube to another box on the other side of the firewall, because a constant flow of air is necessary to ensure that the heat muff does not overheat.) The weight on this unit .....P/N 08-04005 ...

## 2-1/2" OD INLET AND 2-1/2" OD OUTLET HOMEBUILDERS CABIN HEAT BOX P/N DL-005 - This box is identical to the deluxe



stainless steel cabin heat box, except that the inlet and outlet are 2 1/2" OD so that this box can be used when the builder wants to use 2 1/2" scat tubing throughout the project. (This box was used on the Cirrus SR20 certified aircraft. The SR20 now uses the DL-008 box listed below.) Weight is 6.3 ounces ......P/N 08-04015 .....

### **DELUXE HOMEBUILDERS CABIN HEAT BOX, ALL STAINLESS STEEL**



P/N DL-006 - This box was recently developed in response to customer requests. With the exception of brass shaft bushings, this box is constructed entirely of stainless steel, including all SS blind rivets. Like the deluxe boxes, this unit has a 2" inlet and 2" outlets. For the added durability of all stainless steel, the box still only weighs 10 ounces.

P/N 08-04025 ........---- ea.

#### ENGINE SAVER



Every aircraft owner knows that his engine is subject to moisture build up and internal rust formation when not flown regularly. Oil companies spend millions developing special additives to minimize rust. Now there is a better way to fight this rust! The Engine saver produces a continuous supply of very low humidity air that is introduced into the engine through the breather. Low humidity air pre-

vents water formation in the engine. The slight pressure built up keeps the moist outside air from entering, allowing the dry air to flow past the piston rings into the upper cylinder area protecting it as well. The Engine Saver is 110vac powered, requires no installation or FAA approval, and works with all piston engines......P/N 08-00724.....



#### OPCAP ENGINE PROTECTOR

Install TopCap in place of a removed cylinder to protect the engine from dirt, debris, and stray parts. Made from fuel and solvent resistant polymer, TopCap allows for full crankshaft rotation. One size fits Lycoming wide deck 320, 360, 540, 720 and Continental 470, 520, and 550......P/N 08-00373......--/pr.

#### MCFARLANE D A M EXHAUST L



Note: Do not use an anti-seize that contains graphite on your exhaust systems. Graphite corrodes and destroys the grain structure of stainless steel. D A M™ Exhaust Lube does not contain graphite. D A M Exhaust Lube is designed specifically for aircraft exhaust ball joints, clamps, slip joints, and hardware. A low viscosity liquid is blended with molybdenum-disulfide and other special micro-lubricants to

produce a protective dry lubricant film. This film embeds into the stainless produce a protective dry numeration......steel and keeps your joints lubricated for years!

Single (4 02)		
Case of 12	P/N 05-27307	



#### 2" ALUMINUM FLANGE

Accepts 2" scat tube. Flange allows riveting to firewall, baffles, etc. Wt: 0.2 oz.

P/N 08-04135 ..... ----



#### CARB HEAT CONNECTOR

Mounts on FAB airbox or similar airbox. Flange accepts 2" scat tube from muff. Standoff design allows hot air to escape when carb heat is not selected. Weight: 0.9 oz.

P/N 08-04145.....----



#### **FLANGED DUCT**

Accepts 2" ducting on both ends. Helps route ducting through bulkheads, firewalls, etc. Especially useful for getting heat to the back seat of the aircraft. 3" square plate with 2" tubing projecting 1' from each side. Wt:0.7 oz.



#### CABIN HEAT BOX

Custom built aluminum box mounts to firewall. Lever on butterfly may be attached to push-pull control for close adjustment of cabin air flow. Two 2" intake ports, one 2" outlet. Wt. 1 lb. 7-1/2" long. Fine quality construction.

P/N 08-01500 .....----

#### HOMEBUILDERS CABIN HEAT SHUTTLE KIT



Easily assembled and designed so that it can be modified for custom applications. Kit includes construction plans and directions along with installation hints for the popular Vans RV series of homebuilt aircraft. Controlled by ratchet type control cable such as ACS model A740 (P/N 05-12500). Order control cable separately......P/N 08-04460...

#### TURBO HEAT CABIN HEAT MUFF



The Turbo Heat is an improved version of the standard Experimental Cabin Heat Muff. Each canister is made from industrial grade .063 aluminum tubes with .125 6061T-6 aluminum end caps laser cut, welded and then machined to exact tolerance for ease of installation and a vibration free fit. Internally, each canister is fitted with 10 aluminum rods surrounded by copper

windings for superior heat transfer. **Dimensions**: The standard model is 8 in. in length with 2 in. intake and exhaust tubes. The end caps are machined specifically for the diameter of your engine's exhaust manifold. Please select your Custom Configuration......P/N 05-27123 .....



### STANDARD HOMEBUILDERS CABIN HEAT BOX

P/N DL-001 - This cabin heat box has been engineered to be the smoothest, most efficient and lightest heat box built. Fabricated from aircraft-grade aluminum with stainless steel shaft, arm and flapper. Originally designed for use on the popular RV-4 homebuilt, but is applicable to most other designs.

Total weight is only 5.2 ounces. Furnished with a gasket flange for the forward side of the firewall for leak-free ducting of warm air to anywhere the builder wants it. Inlet and outlet are 2 inch OD 6061-T4 seamless alum. The body of the box is constructed of 5052-032 alum. The outlet tube extends through the firewall so that scat tubing can be attached to route the warm air. Superior craftsmanship and quality. Over 4,000 sold 

#### **EXHAUST HEAT SHIELD SYSTEMS**



Heat Shield system is very easy to install and can be tailored to your specific needs and application, to control reflected heat in your engine compartment. These block, and control unwanted radiated heat from hot exhaust tubing, thus protecting your cowl and engine accessories from destructive high temperatures. They are held fast in place, approximately 1/4" off the hot surfaces with hose clamps around the pipes, or to the specific accessories, hose, line, tubes or item you wish to protect. Unlike most products in this category, they will not shake off or crack in a few hours. The attach brackets are made from .062" 14 ga. 301 stainless steel and will outlast your aircraft. The aluminum heat shields are 6061-T6 .032" pre-punched with properly spaced mounting and ventilation holes every one inch. This makes custom trimming and fitting to your needs very simple. The attach brackets can be fitted to the shields with .125" squeeze rivets, or you can use .125" stainless pop rivets with steel pull pins via the pre-punched holes. These heat shields are available in 4"/6"/12" lengths, and you can specify the tubing size you are going to mount to for proper clamp sizing.

Length	Diameter	Part No.	Price
4"	.5 - 1.25"	05-21805	
4"	1.5 - 2"	05-21806	
4"	2.25 - 2.5"	05-21807	

Length	Diameter	Part No.	Price
6"	.5 - 1.25"	05-21808	
6"	1.5 - 2"	05-21809	
6"	2.25 - 2.5"	05-21811	

Length	Diameter	Part No.	Price
12"	.5 - 1.25"	05-21812	
12"	1.5 - 2"	05-21813	
12"	2.25 - 2.5"	05-21814	

#### EXHAUST SYSTEMS BY AEROSPACE WELDING MINNEAPOLIS, INC.



Aerospace Welding, Inc. has earned a reputation for its uncompromising commitment to quality exhaust systems and components. Aircraft Spruce is an authorized distributor of AWI products, and as such can assure our customers of minimal down time and fast shipment through the Priority Service Proram at AWI. All exhaust systems are built in fixtures for precise fit and are FAA approved for the listed aircraft. Available in factory new (N) and overhauled (OH) condition as noted.

\* NOTE: \* 0550157-7 has been consolidated under PMA part number A0450338-14

Aerospace Welding Minneapolis, Inc.

Aircraft	OEM Part No.	Description	Part No.	Price
C-150	0450400-3	LH Muffler (N)	08-00061	
	0450400-26	RH Muffler (N)	08-00062	
	0450338-70	RH Riser (N)	08-00063	
	0450338-69	LH Riser (N)	08-00064	
	0450338-66	RH Tailpipe (N)	08-00065	
	0450338-67	LH Tailpipe (N)	08-00066	
	0450400-201	Shroud	08-14679	
	0450400-6	Shroud	08-14680	
	A0450338-10	Tailpipe Clamp without Pin	08-16025	
	A0450338-9	Tailpipe Clamp with Pin	08-16028	
	A0450400-200	LH Shroud	08-15997	
C-152	0454009-5	Muffler (OH)	08-00067	
	0454009-6	Muffler (OH)	08-00068	
	A0454002-10	LR Riser	08-15998	
	A0454002-2	RR Riser	08-16001	
	A0454002-4	RF Riser	08-16002	
	A0454023-1	LR Riser	08-16003	
	A0454023-2	LF Riser	08-16004	
	A0454023-3	RR Riser	08-16005	
	A0454023-3 A0454023-4	RF Riser	08-16006	
	A0454025-4 A0454009-5	Muffler Assembly	08-18950	
C-170B/ 172	0550157-9	LH Muffler (OH)	08-00070	
J-1100/112	A0450338-14*	RH Muffler (OH)	08-00070	
	0550157-7	Riser (N)	08-00071	
	0550157-7	Curved Riser(OH)	08-00072	
	A9954100-9	Muffler (N)	08-07517	
	A99541005 A99541005	Riser (N) LR	08-07520	
		Riser (N) LF	08-07521	
	A0550176-54	Tailpipe	08-14681	
	A0550176-57	4.5" Curved Riser	08-16010	
	A10172-013-2	Extended Tailpipe	08-16047	
	A1455009-3	Muffler Assembly	08-16054	
	A1455009-3FP	Float Plane Muffler Assembly	08-16055	
	A1754001-23	Muffler	08-16058	
	A9954100-3	Shroud	08-16087	
C-172	0550176-59	Muffler (N)	08-00074	
	1754001-25	Muffler (N)	08-00077	
	1754007-1	Riser (OH) RR	08-00079	
	1754008-1	Riser (OH) LR	08-00080	
	1754009-1	Riser (OH) LF	08-00081	
	1754010-1	Riser (OH) RF	08-00082	
C172R / 172S	A9954100-9	Muffler (N)	08-07517	
-	1754001-9	Muffler with flame tubes	08-00084	
	0550176-54	Tailpipe	08-14681	
	2454000-15	Tailpipe	08-14682	
C-177RG	2054000-42	LH Muffler (OH)	08-00085	
	2054000-40	LH Muffler (OH)	08-00086	
	2054000-31	LH Muffler (OH)	08-00087	
C-180	0750290-3	Muffler OH Dual Exchange	08-00089	
7 100	0750130-6	Stack Assembly	08-14683	
C-180/182	0750130-9	Muffler (OH)	08-00090	
7 100/102	0750130-9	Muffler (OH)	08-00091	
C-182S	A0750130-44	EXHAUST SYSTEMS	08-18955	
J-1023	9954200-11	Tailpipe	08-14684	
2.400 / 400 / 405	9954200-12	Tailpipe	08-14685	
C-180 / 182 / 185	A0750161-28	Muffler (N)	08-07514	
	A0750238-47	Exhaust Stack	08-16046	
	A0750161-87	Shroud	08-16247	
	A1254017-19	Muffler Assembly	08-16053	
C-180G / 182G	A0750161-40	Shroud	08-16008	
	A0750161-87	Cessna Shroud	08-16247	
C-206 / 207 / 210	A1250860-122-1M	Standard Turbo Inlet	08-17062	
	A1250860-122	Standard Turbo Inlet	08-17063	
	0750161-89	Muffler (N)	08-00094	

#### SEE WEBSITE FOR AIRCRAFT MODEL ELGIBILITY

Note: (N) or (OH) after description indicates New (N) or Overhauled (OH) condition. All overhauled parts carry a core charge. Please Order according to "Our PartNo."



#### **AWI ANTI-SEIZE COMPOUND 7550**

AWI Exhaust Lube is designed specifically for aircraft exhaust ball joints, clamps, slip joints and hardware. A low viscosity liquid is blended with molybdenum-disulfide and other micro-lubricants to produce a protective dry lubricant film. This film imbeds into the stainless steel and keeps your joints lubricated for years.

Features: • Protects up to 2400° F • No Stainless Corroding Graphite • Prevents Heat Corrosion and Joint Lockup • Joints stay free to move with thermal expansion • No greasy powdered metal paste that locks up • Low Viscosity- A little goes a long way 

# **AWI EXHAUST SYSTEMS**

Aircraft (cont'd)	OEM Part No.	Description	Part No.	Price
C-182R	0750238-20 2254003-17	15 inch Stack (N) Tailpipe	08-00095 08-14686	
0-102h	2254003-17	Tailpipe	08-14687	
C-182RG	1250251-12	Muffler (OH) w/ ring	08-00107	
C-206/210	1250263-2A	LH Collector	08-00107	
0 200/210	1250264-2A	RH Collector	08-00104	
	650-43	LH Muffler (OH)	08-00106	
	1250251-13	RH Muffler (OH) w/ rings	08-00107	
	1250251-16	RH Muffler (OH)	08-00108	
	1250256-7	LH Tailpipe (N)	08-00109	
	12502646-6	RH Tailpipe (N)	08-00111	
	1250860-203	Heat Exchanger (OH)	08-00115	
	1250860-90	Crossover (OH)	08-00116	
	12502860-164	New Tailpipe	08-15666	
	12520860-168	Tailpipe Adapter	08-15667	
C-206/210	12520860-1057M	LH Exhaust Modified	08-15669	
	12520860-100	Riser	08-15670	
	12520860M-122	Turbo Inlet Assembly Modified	08-15671	
	1250263-2	LH Stack Assembly	08-16048	
	1250264-2	RH Stack Assembly	08-16049	
	1250860-117	Riser	08-16051	
	120860-29	Clamp	08-16052	
	1555001-1	Muffler (OH)	08-00121	
	9910296-7	Slip Joint SS	08-16069	
	9910299-15	LH Elbow Sealess	08-16071	
	9910299-16	RH Elbow Sealess	08-16074	
	9910299-15L	LH Inconel Elbow Sealess	08-16072	
	9910299-16L	RH Inconel Elbow Sealess	08-16075	
	9910299-3 9910299-4	LH Elbow Seal RH Elbow Seal	08-16076 08-16078	
		LH Inconel Elbow Sealess		
	9910299-3L 9910299-4L	RH Inconel Elbow Sealess	08-16077 08-16079	
	9910299-4L	Left Westgate Overboard	08-16079	
	9910299-14	Right Westgate Overboard	08-16015	
	9910299-14	Elbow	08-16080	
	9910299-6	Westgate Overboard	08-16081	
	9910299-10	Bypass Elbow	08-16014	
	A075161-22	Clamp	08-16044	
	A0750161-24	Clamp	08-16044	
C-340 /340A/ 414/414A	A9910299-1	TailPipe Assembly Non-extended LH	08-18733	
C-340 /340A/ 414/414A	A9910299-1	TailPipe Assembly Non-extended RH	08-18737	
	A9910299-1X	TailPipe Assembly Extended LH	08-18736	
	A9910299-2X	TailPipe Assembly Extended RH	08-18738	
C-300/400	A9910295-13I	Stack Assembly- C-300/400 Inconel LH	08-18727	
C-300/400	A9910295-14I	Stack Assembly- C-300/400 Inconel RH	08-18728	
0 000/100	A9910300-16	TailPipe Assembly RH	08-18744	
C-421, 421A, 421B	A5155156-47	TailPipe LH	08-18716	
0 421, 4217, 4218	A5155156-48	TailPipe RH	08-18717	
Piper	A63243-002	1.75" Exhaust Pln Clamp	08-16275	
Piper J-3	71053-02	Muffler (OH)	08-00122	
1.150.00	A14235-00	2" Clamp with Pin	08-16245	
PA12/14/ 16/20/22	A11417-004	TailPipe	08-16274	
PA18	12433-014	Muffler (OH)	08-00123	
PA24-180/250	A26385-00	Muffler Assembly	08-18714	
PA28-140	A66704-02	Shroud	08-16251	
PA28-140/ 150/160/180	A99044-03	Left Rear Exhaust Stack	08-16252	
	A63726-04	Right Front Exhaust Stack	08-16250	
PA-28-150/ 160/180/ 151/161/181	A62230-00	Right Front Exhaust Stack	08-16260	
PA28-151 / 161/181	A35300-00	Left Front Exhaust Stack	08-16261	
PA28-150/PA28-160/PA28-180	A35655-02	Carb Heat Clamp	08-17040	
PA28-140/160/180	A62208-02	Shroud	08-16248	
PA28-140/180	99482-00	Muffler (OH)	08-00129	
	A99482-02	Muffler (N)	08-13105	
	99044-02	Stack (OH)	08-00131	
	99044-04	Stack (OH)	08-00132	
	99044-05	Stack (OH)	08-00133	
PA28-10/180/ 151/494/191	AWI 63666-002	Tailpipe (N)	08-07515	
	AWI 63723-001	Carb. Heat Shroud	08-14861	
PA-28-40/160	A63723-002	Shroud Bottom	08-14862	
[	A63726-02	Left Front Stack 8" Drop	08-15764	
PA-28-150/160/180	A62981-006	Carb Heat Shroud LH	08-17690	
	A62981-007	Carb Heat Shroud RH	08-17689	
	A35656-02	Carb Heat Link	08-16255	
PA28-151/161		Left Rear Exhaust Stack	08-16256	
PA28-151/161	A35301-01			
	A62232-004	Right Rear Exhaust Stack	08-17039	
PA28-151/ 161/180/191	A62232-004 66894-03	Right Rear Exhaust Stack Muffler (N)	08-17039 08-00135	
PA28-151/ 161/180/191 PA28-180	A62232-004 66894-03 A62231-00	Right Rear Exhaust Stack Muffler (N) Left Rear Exhaust Stack w/Tab	08-17039 08-00135 08-16253	
PA28-151/ 161/180/191	A62232-004 66894-03	Right Rear Exhaust Stack Muffler (N)	08-17039 08-00135	

SEE WEBSITE FOR AIRCRAFT MODEL ELGIBILITY

Note: (N) or (OH) after description indicates New (N) or Overhauled (OH) condition. All overhauled parts carry a core charge. Please Order according to "Our PartNo."

# **AWI EXHAUST SYSTEMS**

PA-28-181	A85477-02	Front Muffler	08-16258	
17720 101	A85477-05	Rear Muffler	08-16259	
	A690-091	Bolt Flange	08-17692	
PA28-200/201	A67809-00	Right Front Exhaust Stack	08-16263	
	A67810-00	Left Front Exhaust Stack	08-17763	
PA28-200/201	A67811-00 A67812-00	Left Rear Exhaust Stack Right Rear Exhaust Stack	08-17056 08-16264	
PA28-235	65012-00	Muffler (OH)	08-00137	
1 A20-203	65813-00	Muffler (OH)	08-00137	
	68718-03	Muffler (OH)	08-00139	
	65038-00	LH Stack (OH)	08-00140	
	65039-00	RH Stack (OH)	08-00141	
PA28-236	67517-00	Muffler (N)	08-00136	
PA31	A16696 A16697	LH Center Tube LH Aft Elbow	08-14621 08-14622	
	A16826	LH Manifold Assembly	08-14623	
	A16621	RH Center Tube	08-14624	
	A16620	RH AFT Tube	08-14625	
	A16825	RH Manifold Assembly	08-14626	
D. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	A15849	Short Fwd Tube	08-14629	
PA31-350	A40310-10	Upper Tailpipe Assembly	08-14627	
PA31-310/ 325/350 PA32-260	A40310-9 68718-00	Lower Tailpipe Assembly  Muffler (OH)	08-14628 08-00150	
PA32-260 PA32-300	68796-00	Muffler (OH)	08-00150	
1,702,000	68793-00	Stack (OH)	08-00154	
PA-32-300/ 32R-300 / 32RT-300 / 32R-301	A38137-02	Left Rear Exhaust Stack	08-16265	
	A38137-03	Left Center Exhaust Stack	08-16266	
	A38137-04	Left Front Exhaust Stack	08-16267	
	A38137-05	Right Front Exhaust Stack	08-16268	
	A38137-06 A38137-07	Right Center Exhaust Stack Right Rear Exhaust Stack	08-16269 08-16270	
PA34-200-I	78463-10	LH Tailpipe (OH)	08-00158	
1 A04-200-1	78463-10	RH Tailpipe (OH)	08-00159	
PA38-112	77669-02	Muffler (OH)	08-00160	
PA-44-180	86299-07	Muffler (OH)	08-00161	
	A89366-005	Seminole Right Rear Exhaust Stack	08-17686	
	A86202-004	Right Front Exhaust Stack	08-17685	
	A89366-011 A89364-005	Seminole Left Rear Exhaust Stack	08-17691	
Beechcraft	A35-950004-7	Seminole Cover Carb Heat Shroud Beechcraft Left Hand Tailpipe	08-17687 08-16271	
Descrictan	A35-950004-17	Exhaust Clamp Set With Hardware	08-16272	
	A35-950004-9	Right Hand Tailpipe	08-16273	
B-V35/A36	35-950005-1	LH Stack (OH)	08-00164	
	35-950005-3	RH Stack (OH)	08-00165	
D 1/05/400	701-4	LH Muffler (N)	08-00166	
B-V35/A36	701-20 701-5	LH Muffler (N) RH Muffler (OH)	08-00167 08-00168	
	701-19	RH Muffler (OH)	08-00169	
	35-950004-9	RH Tailpipe (OH)	08-00171	
	35-950005-61	LH Tailpipe (N)	08-00172	
	35-950005-57	RH Tailpipe (N)	08-00173	
	35-950004-7	LH Tailpipe (N)	08-00176	
	A189	RH Muffler	08-16041	
	A492-43 A35-950004-7	LH Muffler LH Tailpipe	08-16042	
	A35-950004-7	Exhaust Clamp Set	08-16271 08-16272	
	A35-950004-17	RH Tailpipe	08-16273	
B-35H-P	492-27	RH Muffler (OH)	08-00174	
	A96-950002-7	Riser Cyl. #4 (OH)	08-18725	
B-Sundowner	099001-127	Muffler (OH)	08-00206	
B-Sport	099001-126	Muffler (OH)	08-00207	
Bellanca Citabria	3-1493R 3-1493L	Muffler (OH) Muffler (OH)	08-00209 08-00210	
Bellanca 8KCAB	099001-046	Muffler (OH)	08-00210	
Bellanca 8GCBC	099001-046	Muffler (N)	08-13106	
Bellanca: Scout & Decathlon 8GCBC, 8KCAB, 7ECA	A099001-703	Shroud Assembly -7ECA /8 GCBC	08-18765	
Grumman AA1 Yankee	099001-113	Muffler (OH)	08-00218	
Grumman AA1 A&B	099001-137	Muffler (OH)	08-00219	
Grumman AA1/ AA5/ AA5A/ AA5B	AWI099001-102	Straight Riser (N)	08-07523	
Grumman AA5B Tiger Grumman AA5A Cheetah	A099005-184 099005-195	Riser Muffler (OH)	08-16040 08-00221	
Grumman AA5A Cheetan Grumman AA5B Tiger	099005-195	Muffler (OH)	08-00221	
Grumman AA5/AA5A	099005-195	Muffler (OH)	08-00221	
Mooney M20	630060-503	200 Muffler (OH)	08-00224	
Mooney M-20	A630053-013	Upper Riser	08-16030	
Mooney M20J	A630119-501	Tailpipe	08-16039	
Musketeer	AWI099001-120	Straight Riser (N)	08-13107	
	A35-950005-39 A35-950005-37	Hi Perf RH Collector Hi Perf LH Collector	08-15989 08-15990	

SEE WEBSITE FOR AIRCRAFT MODEL ELGIBILITY

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#### **ACORN EXHAUST PARTS**



Acorn Welding is Canada's largest aircraft exhaust company and the world's largest radial and vintage aircraft exhaust company. Acorn provides exhaust, engine mounts, fuel tanks, and carb air boxes for Cessna, Piper, Beechcraft, along with many other makes and models.

Description	Application	Part No.	Price
Acorn Airbox Flapper Standoff	Cessna 172 / 180 / 182	08-18371	
Acorn Carb Heat Box Shroud - 2.5" Hose	Cessna 172	08-18276	
Acorn Muffler Assembly with 15" Tailpipe	Cessna 172 / 177	08-17741	
Acorn Muffler Collector	Cessna 180 / 182	08-18001	
Acorn Carb Heat Box Shroud - 2" Hose	Cessna 172 / 177	08-18277	
Acorn Muffler Assembly	Piper PA-28	08-18061	
Acorn Riser Right Position / Aft Stack Assembly	Piper PA-44	08-18188	
Acorn Exhaust Collector Center Slip Riser	Cessna 180 / 182 / 185 / 188	08-18023	
Acorn Flapper Assembly	Cessna 180 / 182 / 185 / 188	08-17821	
Acorn Carb Air Box Flapper Assembly	Cessna 172	08-17822	
Acorn Riser - Cylinder #5	Cessna R172 / 336 / 337 / T337	08-18207	
Acorn Right Hand Forward Stack	Piper PA-28	08-18316	
Acorn Right Front Exhaust Stack - Cylinder #1	Piper PA-30 / PA-39	08-18323	
Acorn Carb Air Box	Cessna 172	08-17746	
Acorn Carb Air Box Flapper Assembly	Cessna 172	08-17823	
Acorn Left Rear Exhaust Stack	Piper PA-44	08-18175	
Acorn Riser - Cylinder #1	Cessna 172 XP / 336 / 337 / 337P	08-18203	
Acorn Riser - Cylinder #4	Cessna 172 XP / 336 / 337 / 337P	08-18206	
Acorn Airbox Center Panel	Cessna 172	08-18368	
Acorn Muffler Shroud Assembly	Cessna 152	08-17779	
Acorn Stack Assembly Left Forward Position	Piper PA28	08-17918	
Acorn Exhaust Riser - Left	Cessna 206 / 207 / 210	08-18024	
Acorn Exhaust Riser - Right	Cessna 206 / 207 / 210	08-18059	
Acorn Airbox Top Skin	Cessna 180 / 182 / 185 / 188	08-18243	
Acorn Left Rear Exhaust Stack - Cylinder #4	Piper PA-30 / PA-39	08-18336	
Acorn Left Hand Aft Stack with Tab	PA-28	08-17765	
Acorn Left Exhaust Collector / Statck Assembly	Cessna 182S/T	08-17861	
Acorn Stack Assembly Right Hand Forward	PA-28	08-17938	
Acorn Right Hand Aft Stack	PA-28	08-17973	
Acorn Riser - Cylinder #2	R172 / 336 / 337 / T337	08-18204	
Acorn Riser - Cylinder #6	R172 / 336 / 337 / T337	08-18208	

**VISIT OUR WEBSITE FOR ADDITIONAL ACORN PRODUCTS** 



Cessna 150

NICROCRAFT EXHAUST PARTS BUILT TO TAKE THE HEAT

Aircraft Spruce & Specialty Co. offers fully overhauled and factory new exhaust components for use in most general aviation aircraft. Manufactured by Wall Colmonoy Corp. Nicrocraft exhaust parts are built to the latest original equipment specifications. Heat-resistant 321 stainless steel is used in the construction of all new p arts. Bellows are made of Inconel alloy for superior heat resistance. Individual exhaust components and complete systems are available for virtually all single and twin engine Cessna, Piper, Beech, Bellanca, Grumman, Mooney, and Rockwell aircraft. (Please provide your complete aircraft and engine model and serial numbers, year of aircraft, and exact components required.) Most components are available for immediate shipment.

#### **CESSNA EXHAUST PARTS**

			CESSI	NA EXI
Application	Description	OEM	Part No.	Price
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Clamp Assembly	186-8	08-16093	
Cessna 180, S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Clamp Assembly	192-001	08-16094	
Cessna 170B, 172, 172A	Clamp Assy.	221-5	08-16101	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Clamp Assembly	568-06	08-16120	
Cessna 172B thru 172H; F172F thru F172K; P172D; 175B,C	Clamp Assembly	568-31	08-16121	
Cessna : 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Clamp Assembly	596-0005	08-16122	
Cessna 210B, C, D, E, F, G, H, J, K, L, M, N	Clamp Assembly	596-02	08-16123	
Cessna 205, 206, U206A,thru,F, P206, P206A thru E, 210B thru N	Collector LH	1250263-2, 1250256-3	08-00850	
Cessna 205, 206, U206A,thru,F, P206, P206A thru E, 210B thru N	Collector RH	1250264-2, 1250257-3	08-00851	
Cessna T310P, Q, R, 320D, E,F; 401, A, B; 402, A, B	Header, LH	8026-36	08-16139	
Cessna T310P, Q, R, 320D, E,F; 401, A, B; 402, A, B	Header, RH	8026-25	08-16138	
180B, C, D, E, F	Heat Muffler	0750130-44	08-00556	
182B, C, D, E, F	Heat Muffler	0750130-9	08-00554	
Cessna 205, 206, U206A, thru, F, P206, P206A thru E, 210B thru N	Heat Muffler LH	1250250-5	650-43	
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Heat Muffler	225-5	08-16108	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Heat Muffler	CEM0007	08-16154	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Heat Muffler	CEM0008	08-16155	
Cessna 210B	Heat Muffler RH	650-99	08-16134	
Cessna 152	Muffler	0454009-5	08-03629	
& A152 (S/N 978 & up)	Muffler	0454009-6	08-03628	
Cessna R172	Muffler	1455009-3	08-00341	
Cessna 180, 182	Muffler	0750161-28, 0750161-89	08-01313	
Cessna 172 I thru Q, 177	Muffler	1754001-15, 1754001-9, 1754001-22	08-03635	
Cessna 310R	Muffler	8282-1	08-16140	
Cessna 172R; 172S	Muffler	WCC9954100-9	08-16165	
Cessna 150G, H, J, K, L, M A150K, L, M, F150G, H, J, K, L, M, FA150K, L	Muffler LH	0450400-3	8300-3	
C170, 172, A, Cont 0-300/ C145	Muffler LH	0550157-9	221-9	
Cessna 172B thru H, F172F thru K, P172D, 175B, C	Muffler LH & RH	0550176-59	568-110	
Cessna 150G, H, J, K, L, M, A150K, L, M, F150G, H, J, K, L, M, FA150K, L	Muffler RH	0450400-26	8300-4	

Application	Description	OEM	Part No.	Price
C170,172,A,Cont 0-300/ C145	Muffler RH	0550157-32	08-00551	
C210B	Muffler RH	1250251-16	08-00849	
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Muffler w/ Heat Shield	650-95	08-16132	
Cessna 337 (Rear Engine)	Muffler, Rear	CEM0022	08-16157	
Cessna 170B, 172, 172A	Riser	221-7	08-16102	
Cessna 170B, 172, 172A	Riser	221-8	08-16103	
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Riser	223-01	08-16105	
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Riser	223-02	08-16106	
Cessna 180 S/N 30000 thru 32150 w/ Continental Engine O-470-A or O-470-J	Riser	223-03	08-16107	
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Riser	596-30	08-16124	
Cessna 210B, C, D,E, F, G, H, J, K, L, M, N	Riser	650-18	08-16127	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Riser	8300-13	08-16146	
Cessna 170B, 172, 172A	Shroud Assy., LH	221-15	08-16104	
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Shroud Assy., LH	650-47	08-16129	
Cessna 210B	Shroud Assy., RH	650-46	08-16128	
Cessna	Spring	186-218	08-16091	
C172 O-320	Stack	1754007-1	08-00844	
C172 O-320	Stack	1754008-1	08-00846	
C172 O-320	Stack	1754009-1	08-00847	
C172 O-320	Stack	1754010-1	08-00848	
Cessna 180, 182, 185	Stack	CES0002	08-16158	
Cessna 180, 182, 185	Stack	CES0003	08-16159	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Assy., LH Engine Inbound	BES0007	08-16152	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Assy., LH Engine Outbound	BES0005	08-16150	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Assy., RH Engine Inbound	BES0006	08-16151	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack Assy., RH Engine Outbound	BES0008	08-16153	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Stack, LH	BES0002	08-16149	
Cessna 170B, 172, 172A	Tailpipe	221-33	08-16099	
Cessna 170B, 172, 172A	Tailpipe	221-4	08-16100	
Cessna 205; 206; U206; U206A, B, C, D, F; P206, P206A, B, C, D, E	Tailpipe	650-67	08-16131	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Tailpipe	8300-7	08-16147	
Cessna 150G thru 150M; A150K, L, M; F150G thru M; FA150K, L	Tailpipe	8300-8	08-16148	
Cessna	Tension Spring	186-225	08-16092	

## ROCRAFT EXHAUST PA

#### **NICROCRAFT EXHAUST PARTS - PIPER**



Wall Colmonoy Corp. Nicrocraft exhaust components fully overhauled and factory new for use in most general aviation aircraft.

- Built to the latest original equipment specifications.
  Heat-resistant 321 stainless steel construction of all factory new parts.
  Bellows are made of Inconel alloy for superior heat resistance.

Application	Description	OEM	Part No.	Price
Piper PA-18	Muffler	12433-15	08-00242	
Piper PA-12, PA-14, PA-16, PA-20, PA-22, PA-25	Muffler	10308-03	08-03631	
Piper PA-38-112	Muffler	77669-02	08-12411	
Piper PA-44-180	Muffler	PIM0010	08-16163	
Piper PA-28-180, S/N 28-1 thru 28- 1760	Muffler	PIM0002	08-16160	
Piper PA-28-151, PA- 161, PA-180, PA-181	Muffler (2 req.)	66894-03	08-03633	
Piper PA-28R-180, PA- 28-R200, PA-28RT-201, PA-28- 236, PA-32-300, PA-32-301, PA- 32R-300, PA-32R-301	Muffler (2 req.) / (3 req.) for 236	67517-00	08-03632	
Piper PA-28-140, PA-28-150, PA-28-160	Muffler w/o Shroud	99482-00	08-03630	
Piper PA-28-150, -160, -180	Muffler, Front (Shroud not included)	PIM0008	08-16161	
Piper PA-28-150, -160, -180	Muffler, Rear (Shroud not included)	PIM0009	08-16162	
Piper PA-28-181, S/N 2843001 & ON	Muffler, Forward	85477-02	08-17166	
Piper PA-28-181, S/N 2843001 & ON	Muffler, Rear	85477-05	08-17167	



## **SR-22 CIRRUS EXHAUST PARTS**

Nicrocraft SR-22 Cirrus mufflers and heat exchangers are FAA/PMA approved. The mufflers and heat exchangers are built out of 321 stainless steel with inconel baffles, and carries a one year, unlimited hour warranty.

Model #	Description	Installation Eligibility Make	Installation Eligibility Model	Part Number	Price
WCC 14836-002	Muffler	Cirrus Design Corporation	SR22 S/N 0320 and up	08-17057	
WCC 14837-001	Heat Exchanger	Cirrus Design Corporation	SR22 S/N 0320 thru 2437	08-17059	



#### **EXHAUST MUFFLER FOR CESSNA 180/182/185**

Exhaust Muffler with Cones for the Cessna 180/182/185 aircraft.

P/N 08-17949 .....-----

#### **BEECHCRAFT EXHAUST PARTS**

Application	Description	OEM	Part No.	Price
Beech FEEA,F33C, S/N CJ-26 & UP / C33A,E33A S/N CE-290 & UP	Collector LH	35-9016- 1S, 35- 9016-1SR	08-00853	
Beech FEEA,F33C, S/N CJ-26 & UP / C33A,E33A S/N CE-290 & UP	Collector RH	35-9016- 1S, 35- 9016-1SR	08-00854	
Beechcraft B33, S/N CD-736 THRU CD-813	Heat Muf- fler LH w/o Shroud	186-30	186-30	
Beechcraft H35, J, K, M, N, P35	Heat Muffler LH	492-43	08-00555	
Beechcraft 36,A36 S/N E-1 And Up / S35,V35,V35A,V35B, S/N D-7310 AND UP	Heat Muffler RH	701-19	701-19	
Beechcraft Model 76 Duchess	Muffler	8295-205	08-16145	
Beechcraft H35; J35; K35; M35; N35; P35	Muffler RH	492-27	08-16115	
Beechcraft C33A; E33A, C; F33A, C; G33; S35; V35, A, B; 36; A36	Muffler and Shroud Assembly, RH	701-21	08-16135	
Beechcraft H35; J35; K35; M35; N35; P36	Shroud As- sembly	492-42	08-16116	
Beechcraft C33, E32	Shroud Assembly RH	701-50	08-16136	
Beechcraft B33 Thru E33 S/N CD-1 Thru CD-1254	Stack Assembly LH	35-950118	08-03627	
Beechcraft B33 Thru E33 S/N CD-1 Thru CD-1254	Stack Assembly RH	35-950116	08-03626	
Beechcraft Model 76 Duchess	Stack, Cylinder #1	8295-101	08-16141	
Beechcraft Model 76 Duchess	Stack, Cylinder #2	8295-102	08-16142	
Beechcraft Model 76 Duchess	Stack, Cylinder #3	8295-103	08-16143	
Beechcraft Model 76 Duchess	Stack, Cylinder #4	8295-104	08-16144	

#### **OVERHAULED EXHAUST PARTS**



Wall Colmonoy Corp. Nicrocraft exhaust components fully overhauled and factory new for use in most general aviation aircraft.

- · Built to the latest original equipment specifications.
- Heat-resistant 321 stainless steel construction of all factory new parts.
- · Bellows are made of Inconel alloy for superior heat resistance.

Aircraft	Description / OEM#	Part No.	Price
Beechcraft C33A, E33A, F33A, C, S35, 36, A36	Heater Muffler RH w/o shroud / #701-19	701-19R	
Cessna 210B	Heater Muffler LH / #1250250-15	1250250-5R	
Piper PA-18	Muffler / #12433-15	12433-15R	

# ROTAR EXHAUST SYST

#### **CESSNA 152**



Model Number/ Exhaust Assembly	Description	Part No.	Price
0454023-3 / 0454021-1	Riser Assembly RH AFT	08-15736	
0454023-4 / 0454021-1	Riser Assembly RH FWD	08-15737	
0454009-6 / 0454021-1	Muffler Assembly	08-15738	
0454010-9 / 0454021-1	Shroud Assembly (2 Piece)	08-15739	
0454023-2 / 0454021-1	Riser Assembly LH FWD	08-15740	
0454023-1 / 0454021-1	Riser Assembly LH AFT	08-15741	
0454010-1 / 0454011-200	Shroud Assembly (2 Piece)	08-15743	
0454002-4 / 0454011-200	Riser Assembly RH FWD	08-15745	
0454002-2 / 0454011-200	Riser Assembly RH AFT	08-15746	
0454002-11 / 0454011-200	Riser Assembly LH FWD	08-15747	
0454002-10 / 0454011-200	Riser Assembly LH AFT	08-15748	

## **CESSNA 172**



Model No.	Description	Part No.	Price
9954100-3	Shroud Assembly	08-15751	
9954100-9	Muffler Assembly	08-15752	
9954100-7	Riser RF (1754010-1)	08-15753	
9954100-4	Riser RR (1754007-1)	08-15754	
9954100-6	Riser LF (1754009-3)	08-15755	
9954100-5	Riser LR (1754008-3)	08-15756	
1555014-2	Clamp	08-15757	
0454013-1	Carb Heat Shroud	08-15758	
1750011-4	Carb Heat Box	08-16323	



#### **AEROTAR CESSNA C152 ENGINE MOUNT**

Aerotar Engine Mount Exchange for Cessna C152 (+\$650 Core Exchange Charge)

P/N 08-16335 .....
Aerotar Engine Mount Outright for Cessna C152.

P/N 08-19062 .....----(This part is considered oversize.)

#### CESSNA 180 / 182 / 185



Model No.	Description	Part No.	Price
0750238-210	Stack - RH OR LH	08-16326	
0750161-22	2 -5/8" Clamp without PIN	08-16329	
0750161-24	2 -5/8" Clamp with PIN	08-16330	
0750161-40	Shroud Assembly	08-16331	

#### **CESSNA 310 / 414**



Model No.	Description	Part No.	Price
0851053-1	Heat Shield Shroud Half IB - LH or RH	08-16332	
0851053-5	Heat Shield Shroud Half OB - LH or RH	08-16333	

### PIPER PA-28R (18012001201) ARROW I/II/III/IV

Model No.	Description	Part No.	Price
67517-000	Muffler	08-15759	
67651-000	Shroud Assembly - 2	08-15760	
104628-002	PA-28-181 Muffler	08-15784	
99600-000	Shroud Assembly - 3	08-15761	
67808-000	Shroud Bottom	08-21797	
63243-002	Clamp	08-15762	

#### **PIPER PA-23-250T**

Aerotar Piper with Lycoming T10-540 Engine PA-23-250T.

•	, <u> </u>		
Model No.	Description	Part No.	Price
77981	Strut Turbo Left Hand	05-21792	
77983	Turbo Support	05-21793	
LW-10119	Support Turbo Top Right Engine	05-21794	
LW-10985	Heat Shield Manifold	05-21795	
77982	Strut Turbo Right Hand	05-21796	

Aerotar Exhaust Systems for Piper PA-34-200 Seneca w/Lycoming IO/LIO 360 Engine.

Model No.	Model No. Description		Price
78463-017	Tail Pipe Shroud - Right Engine	08-16341	
78463-009	Tail Pipe Shroud - Left Engine	08-16342	

## POWER FLOW SYSTEMS INC. EXHAUST SYSTEMS



Power Flow Systems, Inc., the world leader in designing, manufacturing, and retailing of FAA Certified High Performance aircraft tuned exhaust systems. Their Tuned Exhaust System is totally different. When you break down their exhaust system, you have two "sets" of pipes; the primary (header/collector combination) and the secondary (pipe after the collector). The primary contains four independent tubes that all join at the "4-1 Collector". As each "exhaust puff" of spent fuel travels through the primaries, it leaves a vacuum behind. In their tuned exhaust system, they have adjusted the length of each tube so that the vacuum reaches the collector just in time to "suck out" the exhaust from the next cylinder. The exhaust gases are not only being pushed out by the cylinder, but "extracted" by the vacuum, so a bigger, fresher charge will enter the cylinder during the next cycle. A tuned exhaust system really promotes a smoother, cooler, and finally more powerful runsystem really promotes a smoother, cooler, and finally more powerful running engine.

Airplane	Type of System	Power Flow P/N	Our P/N	Price
0	Classic Ceramic	PFS-13204-Ceramic	08-05957	
Cessna 172 C-172 w/ O-320	Short Stack Polished	PFS-13204-InternalC	08-05958	
	Classic Polished	PFS-13204-O360	08-00359	
0 470 475 0 470	Classic Ceramic	PFS-13204-O360-Ceramic	08-05960	
Cessna 172 or 175 C-172 w/ O-360	Short Stack Polished	PFS-13204-O360-InternalC	08-05961	
	Short Stack Ceramic	PFS-13204-InternalCCER	08-05962	
	Classic Polished	PFS-13704	08-00360	
	Classic Ceramic	PFS-13704-Ceramic	08-05963	
Cessna 177 C-177 w/ O-320	Short Stack Polished	PFS-13704-InternalC	08-05964	
	Short Stack Ceramic	PFS-13704-InternalCCER	08-05965	
	Classic Polished	PFS-13704-O360	08-00361	
	Classic Ceramic	PFS-13704-0360-Ceramic	08-05966	
Cessna 177A C-177 w/ O-360	Short Stack Polished	PFS-13704-0360-InternalC	08-05967	
	Short Stack Ceramic	PFS-13704-0360-InternalCCER	08-05968	
	Classic Polished	PFS-13705	08-00880	
	Classic Ceramic	PFS-13705-Ceramic	08-05969	
Cessna 177B (0-360)	Short Stack Polished	PFS-13704-InternalC	08-05970	
	Short Stack Ceramic	PFS-13705- InternalCCER	08-05971	
	Classic Ceramic	PFS-15102-Ceramic	08-07165	
C-177RG w/ IO-360/390 **Revised Application	Short Stack Polished	PFS-13706	08-07163	
	Short Stack Ceramic	PFS-13706-Ceramic	08-07164	
Cessna 180 / 182 / 185	Polished Finish	PFLOWPMCF-180	08-19086	
Cessna 205 / 210	Polished Finish	PFLOW205210	08-19087	

FOR ALL APPLICATIONS AND FINISHES VISIT OUR WEBSITE AT WWW.AIRCRAFTSPRUCE.COM

## XHAUST SYSTE

#### VETTERMAN RV EXHAUST SYSTEM









Vetterman Exhaust has been manufacturing exhaust systems for the Van's Aircraft RV series since 1990. Exhaust systems for all RV models & Van's approved engine models are available. All systems are manufactured from MIL Spec 321 stainless steel, which is mandrel bent, trimmed to length and tack welded on a Lycoming engine. This method assures the best fit possible. All systems incorporate ample slip & ball joints which greatly reduces breaking potential. All systems include blow proof gaskets, stainless exhaust nuts & washers for installation. Also include tail pipe mounting kits or pipe support brackets. Some systems also include a cabin heat muff.

Aircraft	Description	Part Number	Price
RV-3	O-320 Conical Mount 4 Pipe Systems	08-00583	
RV-3	O-320 Dynofocal Mount 4 Pipe Systems	08-00584	
RV-3	O-360 Dynofocal Mount 4 Pipe Systems	08-00585	
RV-4	O-320 Conical Mount 4 Pipe Systems	08-00586	
RV-4	O-320 Dynofocal Mount 4 Pipe Systems	08-00587	
RV-4	O-360 Dynofocal Mount 4 Pipe Systems	08-00588	
7-7A,8-8A, (O-360/320)	*Includes tail pipe mounting kit	08-00591	
RV-6,7,8,9A (O-320-H2AD)	*Includes tail pipe mounting kit	08-00592	
RV 7-7A (IO- 360 AIA 200)	*Includes tail pipe mounting kit	08-00593	
RV8 (IO-360)	*Includes tail pipe mounting kit	08-00594	
RV 8A (IO-360)	*Includes tail pipe mounting kit	08-00595	

NOTE: EACH OF THESE SYSTEMS WILL NOT INTERCHANGE BETWEEN AIRCRAFT AND ENGINE MODELS. THESE SYSTEMS ARE DESIGNED AND INTENDED FOR USE ON RV AIRCRAFT ONLY. PRICES DO NOT INCLUDE SHIPPING CHARGES.

#### PA-11 STYLE EXHAUST STACKS



Piper PA-11 Style Exhaust Stack with Starter (Left). Experimental Use Only. Longer down pipes to clear starter, Left Hand. Can be used on Piper J-3, but some modifications of cowling may be necessary. Starter Left......P/N 05-12465..... 

## **SNOWLINE RV-6 & RV-6A CROSSOVER**



The material used on these systems is 1-3/4" O.D. x .035 wall 321 stainless steel tubing. 2 models are available; one for Lycoming engines up to 180 H.P. and the other for the Lycoming IO-360 (200 H.P. engine). Bending is performed using an inside mandrel which the tube is drawn over during bending to maintain the inside diameter. Flanges are made from 1/4" stainless steel. This heavy materialgreatly reduces warping & cracking. Tail pipes are attached to the header with a slip joint. Simply slide the tail pipes onto the header, position the end of the pipe as desired in the bottom opening, and attach with the stainless steel retaining clamp. One heat muff has been provided on the front cross-tube. This muff is intended for carburetor heat. If an injection system is being used, this muff can be used for cabin heat. An optional cabin heat muff can be ordered when carburetor heat requires the use of the standard heat muff. All hardware is provided to install the system. Stainless Steel nuts, bolts, washers, blow-proof gaskets, 2 stainless clamps for attaching tail pipes to the firewall or engine mount. U-type clamp attaches the cable housing securely in place.

RV-6/RV-6A Crossover Exhaust System (To 180 H.P.)

P/N 08-05790 ..... ---

Optional Cabin Heat Muff......P/N 08-00679 .....----

\*Will not work with front mounted injectors

THE RV-6/RV-6A EXHAUST SYSTEMS ARE RECOMMENDED FOR THESE AIRCRAFT ONLY. FOR OTHER EXPERIMENTALS, THE RV-4 SYSTEM MAY FIT BETTER UNDER COWLS AS IT IS BUILT TIGHTER TO THE ENGINE.

## AT SHIELDS – HEAT BOXES



#### VHT FLAMEPROOF COATINGS

Originally designed for NASA's reentry spacecraft. Designed to withstand temps. up to 1500°F (816°C) VHT FlameProof coatings are capable of withstanding extreme environments of spacecraft, satellites, military aircraft, and motor sports. It survives where other paints can't, shields & protects, maintains the finish, prevents rust & corrosion, and resists oils & solvents. For aircraft applications the typical use is on high temperature steel components such as exhaust & turbocharging systems. Excellent for use as a heat resistant and anti-corrosion coating on exhaust manifolds and turbine casings.

Flat Aluminum 16 oz. aerosol :	sprayP/N 08-00713
Flat Black 16 oz. aerosol spray	yP/N 08-00714



#### THERMO-TEC HEAVY-DUTY SPRAY ADHESIVE

Thermo-Tec's Heavy-Duty Spray Adhesive is a fast-drying, quick-bonding, high temperature contact adhesive. Use it wherever you need a secure, long-lasting, easy-to-apply bond. It is available in a generous 16.75 oz. can.

P/N 08-01026 .....-

#### HI-HEAT COATING

Finish off a clean and well-protected Exhaust Insulating Wrap application. Will protect the wrap from abrasion and harmful liquid spills. Extra resins and binders toughen the surface, extend the life of wrap by protecting it from friction, and seal the pores to minimize the penetration of harmful liquids. The 11 oz. coating comes in black and aluminum colors.

Black	.P/N 08-06725	
Aluminum	P/N 08-06730	



#### **EXHAUST HEAT SHIELD**

This heat shield is placed on exhaust where fuel lines, cable, etc. are close to exhaust and where heat may be a problem. Mounts with stainless radiator type clamp (not included). Fits exhaust pipes up to 2.5" diameter. Very popular on RV's and other homebuilt aircraft. Single Unit......P/N 08-00050 .....

Double Unit ......P/N 08-00051 .....--

#### **ENGINE MOUNT HEAT SHIELDS**



Heat damaged O-470 & O-520 engine mounts are a definite problem area. You can easily protect these engine mounts from further damage with these heat shields. The aircraft manufacturers overlook providing heat protection in these areas when they designed and

produced the aircraft. INSPECT ENGINE MOUNTS. Flaking paint, deterioration or pitting leads to cracking, and breakage – in other words, an UNSAFE CONDITION. If you want long-lasting protection from corrosion damage, the solution is install custom engine mount heat shields that are FAA & STC/PMA approved.

- HEAT Manifold

**Engine Mount** 

Avoid downtime and save money on airplane maintenance with this practical new device. The heat shields are built from an extremely durable 6061-T6 aluminum alloy and install in minutes. The complete kit includes installation hardware, instructions & copy of the Supplemental Type Certificate.

For Cessnas: Heat shield kit for 180, 180A-H, 180J, 180K, 182, .....P/N 08-01660.....-Heat shield kit 185A-E,A185F. Fits Standard and 3 bladed mounts. P/N 08-00767.....---

Replace. Intake Shields (heavy duty) PMA'd. P/N 08-00769.....---

#### **CESSNA C-180/182 HEAT SHIELD KIT**



Heat related corrosion caused by the exhaust system in the bed tubes and diagonal tubes of Cessna 180/182 engine mounts has been discovered on most models. Loree Air, Inc. designed and built the first set of heat shields in 1987. They were flight tested for three years and found to stop all damage from that heat source. The heat shield kit is now FAA approved and ready for installation on your aircraft. The kit, includes all the hardware, instructions and documentation......P/N 05-12279.....



#### CARBURETOR INTAKE **ASSEMBLIES (HEAT BOXES)**

P/N A40599 for Continental A-65 through C-125. Also fits Lyc. 0-235, 0-290, 0-320 engines with MA3SPA, MA4SPA carburetors.

Complete assembly includes heat box, filter, gaskets. studs and pins. Not for Certified Aircraft, Homebuilts Only.

Component	Part No.	Price
Heat Box	50256	
Filter	A40599	
Gasket	35923	
Studs (4 required)	24306	
Pins (4 required)	24308	
Bottom Carb. Gasket	21323	
A40522 Assembly	08-01300	

#### CARBURETOR HEAT BOX CESSNA 150



Used on Cessna 150. Also fits Cessna 120, 140, and PA-22 Tripacer. Order filter, gaskets, studs & pins separately. Not FAA/PMA Approved. P/N 641534.....

Cable 'B' Nut ......P/N 05-16245 .....

Heat Box for Cessna 170 - Similar to P/N 641534 above, but larger

P/N 08-01625 .....----



#### **HEAT BOX FOR MA4-5** CARBURETORS

Similar to Cessna 170 box. Fits Lyc. 0-360, 0-470, etc. Uses brackett BA-5110 filter.



#### **CARBURETOR INTAKE BOX BRACKET FOR CESSNAS**

This carburetor intake box bracket mounts on top of the heat box and attaches to the engine to provide support for the heat box. Fits Cessna 150.

P/N 08-01305 ..... ---

#### CARBURETOR HEAT BOX REPAIR KITS



Prevent carburetor heat box cracking - a common problem on Cessna 150 aircraft and Cont. O-200 engine. Kit consists of actuating shaft, 2 bearing assemblies and arm. Kit no. FG100 fits Cont. 0-200-A, B, C Engines. Kit No. FG105 fits Cont. 0-300-A, B, C, D, E engines. Model FG100 .....Kit No. 08-01309 .....----ModelFG105 ......Kit No. 08-01310 ......---

#### **ECONOMY CARB HEAT BOX REPAIR KITS**



These kits include new shaft & bearings. Kit for Cont. C-85, C-90, 0-200 Engine P/N 07-00110 .....

Kit for Cont. C-145, 0-300 Engine P/N 07-00120 .....

Requires FAA form 337 for installation on certified aircraft

## CARB HEAT BOX ARM HOLE REPAIR KIT

Use this kit to repair an elongated hole in the carburetor heat box actuating arm. Kit comes complete with new bolt and attaching hardware made of stainless steel......P/N 07-00130 .....



## CARBURETOR INDUCTION **MANIFOLD (INTAKE SPIDER)**

For O-200 engine ......P/N 35145A-1.....----For A-65,C-75,C-85 & C-90 engines. P/N 35145 .....-------------------------



#### RAPCO REPLACEMENT EXHAUST GASKETS

High quality, economical stainless and copper beaded gaskets. Extra thick spiral wound style available "Blow Proof"

Г	0.1	RAPCO	Use	As Replaceme	ent For:	Use on These	<b>D</b> . N	Price
	Style	P/N	OEM P/N	Airborne P/N	Superior P/N		Part No.	Each
	Solid Solid	RA630365	630365	N/A	SA630365	IO-360-A, C, D, G, H, J, K	08-05215	
	Spiral Wound	RA970	N/A	970	N/A	IO-360-A, C, D, G, H,J, K TSIO-360-A, B	08-05270	
CONTINENTAL	Solid O	RA632837	632837 21493	157	SA 632837	A-65, A-75,C-85-12F, C-90-8F,12F, 14F, -16F,E-165,E-185,E-225,O-200-A,B,O-300-	08-05237	
O	Spiral Wound	RA627429	627429	999	SA 627429	A,C,D,O-470-A,E,J E-165, E-185, E-225O-200-A, B, O-300-A, C, DO-470-A, E, J	08-05229	
	Spiral Wound	RA628260	628260	972	SA628260	O-470-B, G, K, L, M,P, R, S, U,IO-470-D, U, V, TSIO-470-B TSIO-520-B, C, D GTSIO-520-C, D	08-05260	
	Solid O	RA75118	75118 73720 67196 77611	160	N/A	0-290,0-320,IO-320,0-340,0-360,HO-260- B,IO-360-A,-B,-C,HIO-360-A,-B-C,V0- 435,TVO-435,G0-480,GSO-480,ISGO-480,O- 540-A,-B,-E,-G,IO-540-A,-C,-D,-G,-J,-K,IG0- 540-A,IGS0-540-A,10-720-A	08-05218	
MING	Spiral Wound	RA77611	77611	1000	SL77611		08-05211	
LYCOMING	Spiral Wound	RALW15486	LW15486	971	N/A		08-05286	
	Solid	RA985	3503			R-985-AN-1,-3,-4,-6,-6B,-10,12,-12B,-14B	08-64452	

## REPLACEMENT GASKET FOR WOODWARD GOVERNORS

Part Name	Part No.	Price		
- art Hame	for Part No.	Model Eligibility	i ditiito.	1 1100
Propeller Governor Gasket	Woodward Gov. 206684 Pratt & Whitney 3039526	PT6A-20/20A/-20B/-21/-25C/-27/-28/-34/ -34AG/-34B/-36/-38/-41/-42/-42A/-60A/ -60AG/-61/-67A/-67AF/-67AG/-67B/ -67D/-67R/-67T/PT6A-45A/-45B/-45R/ -65B/-65AG/-65AR/-65R/-114/ -114A/ -135/-135A	08-06264	
Propeller Governor Gasket	Woodward Gov. 206685 Pratt & Whitney 3118953-01	PT6A-6/-6A-/6B/-11/-11AG/-15AG/-20/-20A/-20B/-34/ -34AG/-34B/-36/-38/-41/-42/-42A/-45/-45A/-45B/ -45R/-60A/-60AG/-61/-65B/-65R/-67/-67A/-67AF/ -67AG/-67B/-67D/-67R/-67T/-110/-112/-121	08-07154	



#### **2577256 PRECISION** AIRMOTIVE GASKET PEX-1

Gasket part number 365533 is no longer available from Precision Airmotive. The new gasket, part number 2577258 is available and should be used in place of 365533.

P/N 07-01312 .....----



#### **TCM VACUUM PUMP GASKET 653487**

TCM vacuum pump gasket 653487. This is for the Continental 0200 and the 0470. P/N 08-00297.



#### SILICONE VALVE **COVER GASKETS**

These reinforced silicone with fiberglass valve cover gaskets are (.093) 3/32. The torque needed is 25/27 inch pounds. Won't sponge or tear & come with a lifetime warranty from the manufacturer......P/N 05-11931 .....

THESE GASKETS ARE NOT FAA APPROVED.



## LYCOMING ASSEMBLY DRIVE **GASKET SL73818**

Lycoming Assembly Drive Gasket SL73818. Replacement for Textron Lycoming P/N 73818. P/N 08-00306 .....-

REAL PREMIUM SILICONE VALVE COVER GASKETS

REAL are twice as thick as typical gaskets and have been hot oil and dry heat tested at 300°F. Only REAL gaskets seal uneven surfaces, eliminate corrosion, and reduce maintenance costs. They may be reused, are installed dry, and maintain screw torque. Indefinite shelf life. Highly recommended by Rutan Aircraft Factory.



Part No.	Model No.	Product	Description	Price
08-13810	RG-08527-10	Valve Cover Gaskets	Package of 10 - PMA Approved. Fits Models: Ken Royce 90-5G, 110-7F, 110-7G. Le Blond Engine 85-5F, 90-5F.	-
08-13876	RG-117236-18	Valve Cover Gaskets	Package of 18 - PMA Approved. Fits Models: Wright Early R-1820-40, R-1820-60, R-1820-70, R-1820-87, R-1820-95, R-1820-97 (4 Holes), R-2600-20, R-2600-22, R-2600-35, R-3350-23, R-3350-23A, R-3350-57, R-3350-59	
08-13801	RG-1302-42-4	Valve Cover Gaskets	Set of 4 - de Havilland Gipsy	
08-13879	RG-138861-18	Valve Cover Gaskets	Package of 18 - Fits Models: Wright Late R-1300, R-1820-55, R-1820-66, R-1829-56, R-1829-71, R-1829-72W, R-1829-76, R-1829-80, R-1829-86 (6 Holes).	
08-13864	RG-139203-36	Valve Cover Gaskets	Package of 36 - PMA Approved. Fits Models: Pratt & Whitney R-2800-CB Series.	
08-13814	RG-1843-18	Valve Cover Gaskets	Package of 18 - PMA Approved. Fits Models: Lycoming R-680 Series.	
08-13872	RG-2677-18	Valve Cover Gaskets	Package of 18 - PMA Approved. Fits Models: 975-11, Whirlwind (4 Holes).	
08-13874	RG-2767-18	Valve Cover Gaskets	Package of 18 - Fits Models: Wright J6-5, J6-7, J6-9 (2 Holes).	
08-13806	RG-30106-14		Package of 14 - PMA Approved. Fits Models: Jacobs L-6.	
08-13808	RG-4331-14	Valve Cover Gaskets	Package of 14 - PMA Approved. Fits Models: JACOBS R-755 Series.	
08-13804			Package of 18 - Fits Models: Huoasi Model 6, Nanchang CJ6A, Yak Model 18.	
08-13869	RG-7926-14		Package of 14 - Fits Models: Warner 165-185 For 4 cylinders.	
08-13862	RG-88962-18	Valve Cover Gaskets	Package of 18 - PMA Approved. Fits Models: Pratt & Whitney R-1340, R-1830, R-200 to R-2000, R-2800 (3 Holes).	
08-13822	RG-90560-18	Valve Cover Gaskets	Package of 18 - PMA Approved. Fits Models: Pratt & Whitney R-985 Series, Wasp Jr. (4 Holes).	
08-13811	RG-08527	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Ken Royce 90-5G, 110-7F, 110-7G. Le Blond Engine 85-5F, 90-5F.	
08-13877	RG-117236	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Wright Early R-1820-40, R-1820-60, R-1820-70, R-1820-87, R-1820-95, R-1820-97 (4 Holes), R-2600-20, R-2600-22, R-2600-29A, R-2600-35, R-3350-23, R-3350-23A, R-3350-57, R-3350-59.	
08-13802	RG-1302-42	Valve Cover Gaskets	1 each -de Havilland Gipsy	
08-13880	RG-138861	Valve Cover Gaskets	1 each - Fits Models: Wright Late R-1300, R-1820-55, R-1820-66, R-1829-56, R-1829-71, R-1829-72W, R-1829-76, R-1829-80, R-1829-86 (6 Holes).	
08-13865	RG-139203	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Pratt & Whitney R-2800-CB Series.	
08-00782	RG-14724	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Franklin 6A8-215, B8F, B9F.	
08-01322	RG-17727	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Franklin 6A-350; 4A-235; 6A4-150-B3, -B4, -B5, -B6; 6A4-165-B3, B4, B6; 6A4-200-C6; 6AS-350; 6AS-335.	
08-13816	RG-1843	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Lycoming R-680 Series.	
08-13796	RG-20254		1 each - PMA Approved. Fits Models: Continental W-670 Series.	
08-13795	RG-20254-14		1 package of 14 - PMA Approved Fits Models: Continental W-670 Series.	
08-13875	RG-2676		1 each - Fits Models: Wright J6-5, J6-7, J6-9 (2 Holes).	
08-13871	RG-2677		1 each - PMA Approved. Fits Models: Wright 975-11, Whirlwind (4 Holes).	
08-13807	RG-30106		1 each - PMA Approved. Fits Models: Jacobs L-6.	
08-13809	RG-4331		1 each - PMA Approved. Fits Models: JACOBS R-755 Series.	
08-13784	RG-45483		1 each - Fits Models: Lycoming O-145 Series.	
08-13805	RG-5171		1 each - Fits Models: Huoasi Model 6, Nanchang CJ6A, Yak Model 18.	
08-13870	RG-7926		1 each - Fits Models: Warner 165-185.	
08-13863	RG-88962	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Pratt & Whitney R-1340, R-1830, R-200 to R-2000, R-2800 (3 Holes).	
08-13823	RG-90560	Valve Cover Gaskets	1 each - PMA Approved. Fits Models: Pratt & Whitney R-985 Series, Wasp Jr. (4 Holes).	
08-13815	RG-942	Valve Cover Gaskets	1 each - Fits Models: R-56 (4 Holes). Variants: KINNER R-5, R-53, R-55, R-56.	
08-01321	RG-71450		1 each - PMA Approved. Fits Models: Lycoming IO-540-B, E, M Series; TIO/LTIO-540-A.	
08-01317	RG-534857		1 each - PMA Approved. Fits Models: Continental IO-346, O-470, IO-470, IO-520, IO-550, TSIO-520-Series.	
08-01316	RG-67193-SP		1 each - PMA Approved. Fits Models: Lycoming IO-360, IO-540, IO-720, GO-480, TIVO-540, VO/GO-435, VO-540.	
08-07384	RG-76036	Valve Cover Gasket (8 holes)	1 each - PMA Approved. Fits Models: Lycoming TO-360-C, TO-360-F, TIO/TIGO-541.	
08-01320	RG-532451	Valve Cover Gasket (7 holes)	1 each - PMA Approved. Fits Models: Continental E-165-2, E-185, E-225, O-470-A, O-470-E, O-470-J, IO-470-J, IO-470-K.	
08-01315	RG-530162	Valve Cover Gasket (6 holes)	1 each - PMA Approved. Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	
08-17184	RG-530928-NI	Lifter Cover Gasket	Continental: A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300	
08-01314	RG-75906-SP	Valve Cover Gasket (6 holes)	1 each - PMA Approved. Fits Models: Lycoming O-235, O-290, O-320, IO-320, IO-360, IO-360, HIO-360, O-540, IO-540, TIO-540-CIA.	
08-01319	RG-632459	Valve Cover Gasket (5 holes)	1 each - PMA Approved. Fits engines: Continental TSIO-520-Series; GTSIO-520-C,D,F,H,K,L,M,N; IO-550-G	
08-01318	RG-632310	Valve Cover Gasket (4 holes)	1 each - PMA Approved. Fits Models: Continental IO-360, TSIO-360, LTSIO-360.	

# **REAL GASKETS**

Part No.	Model No.	Product	Description	Price
08-13765	G-IV-A2	Valve Cover Gasket -	Set of 4. Bucker Tigre	
08-13769	RG-533355	Spanish Model Oil Filler Cap Gasket	1 each - PMA Approved. Size: 1/8 x 2 5/16 x 1 1/2 Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, E-185, E-225, GO-300, IO-346, IO-360, IO-470, IO-470-J,	
08-13777	RG-535823	Oil Filler Cap Gasket	IO-470-K, IO-520, IO-550, O-200, O-300, O-470, O-470-A, O-470-E, O-470-J, LTSIO-3  1 each - PMA Approved. Size: ID 1 1/8 x OD 1 3/4 Thickness 1/8	
			Fits Models: Continental IO-346, O-470, IO-470, IO-520, IO-550, TSIO-520-Series.  1 each - PMA Approved. Size: ID 1 1/2 x OD 2 5/16 Thickness 1/16 Fits Models:	
08-13773	RG-633240	Oil Filler Cap Gasket	Continental E-185, E-225, IO-470-J, IO-470-K, IO-346, IO-360, IO-520, IO-550, O-470, IO-470, O-470-A, O-470-E, O-470-J, LTSIO-360, TSIO-360, TSIO-520-Series.	
08-13778	RG-642892	Oil Filler Cap Gasket	1 each - PMA Approved. Size: 1/8" X 1-1/2" X 2-5/16" Fits Models: Continental IO-360, TSIO-360, LTSIO-360.	
08-13786 08-13787	RG-225 RG-250	Fuel Cap Gasket Fuel Cap Gasket	1 each - Size: 2 1/4 OD x 1 3/8 ID 1/8 thickness for Cessna. 1 each - Size: 2 1/16 OD X 1 1/2 ID X 1/8 thickness for Piper.	
08-13787	RG-250	Fuel Cap Gasket	1 each - Made of nitrile. For Cessna 170. Size: 4 1/4 OD X 3 1/4 ID X 3/16 thickness.	
08-13766	RG-5172		1 each - Fits Models: Yak.	
08-13790	RG-G0001	Fuel Cap Gasket Rocker Cover Gasket E-113C	Set of 2 - Aeronca	
08-13867	RG-7601		1 each - Fits Models: Warner 145.	
08-13799	RG-24335	Pushrod Tube Gasket	1 each - PMA Approved. Fits Models: Continental W-670 Series.	
08-13818	RG-690-D	Pushrod Tube Gasket	1 each - PMA Approved. Fits Models: Lycoming R-680 Series.	
08-13781	RG-18532-H	Top Cover	1 each - PMA Approved Size: 1/16 thick Fits Models: Franklin 4A-235,	
		·	6A4-150, 6A4-165, 6A4-200, 6AS-350, 6AS-335.  1 each - PMA Approved Size: 1/8 thick Fits Models: Franklin 6A4-145-A3, 6A4-150,	
08-00783	RG-18532-A	Top Cover Gasket - Airplane	6A4-150-B3, 6A4-145-B3, 6A-350-C1/C2, 6V4-200 SERIES, 6V-335 SERIES, 6V-350-A/B, 6VS-335-A/B, 6VS-335-A1A/A1B, YO-335-5, O-335-5/5A/5B/6/6B.	
08-13788	RG-300	Fuel Tank Cap Gasket	1 each - Size: 3 OD X 2 ID by 1/16 thickness for Piper.	
08-13791	RG-753121		1 each - Fits Models: Stearman.	
08-13768	RG-3577	Oil Sump Gasket	1 each - PMA Approved Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200.	
08-00781	RG-10366	Oil Pan Gasket	1 each PMA Approved. Size: 1/16 thick. Fits Models: Franklin 6A4-145-A3, 6A4-150-B3, 6A4-165-B3, 6V4-178-B33, 6V4-200-C32/C33, 6V-335-A/B, 6A-350-C1/C2, 6A-335-B/B1, 6VS-335-A/B, 6VS-335-A1A/A1B.	
08-13764	RG-G0014	Tappet Cover Gasket for E-113C	1 each - Aeronca	
08-13800	RG-20268	Lifter Body Gasket	1 each - PMA Approved. Fits Models: Continental W-670 Series.	
08-13803	RG-71294	Gipsy Rocker Cover Gasket	1 each - de Havilland Gipsy or Alpha Romeo radial engine	
08-13621	RG-72059	Dipstick Tube Base Gasket	1 each - PMA Approved. Fits Models: Lycoming IO-320, IO-360, IO-540, IO-540-B, E, M Series, HIO-360, O-235, O-290, O-320, O-360, O-480, O-540, TIO/LTIO-540-A.	
08-13820	RG-1111-C		1 each - FMA-PMA Approved. Fits Models: Lycoming R-680 Series.	
08-13819	RG-1111-C-18 RG-20266	Pushrod Tube	Package of 18 FMA-PMA Approved. Fits Models: Lycoming R-680 Series.  1 each - PMA Approved. Fits Models: Continental W-670 Series.	
08-13797	RG-20266-14	Nut Seal Pushrod Tube	1 package of 14 - PMA Approved. Fits Models: Continental W-670 Series.	
08-13783	RG-17864-1	Nut Seal Push Rod Tube Seal	1 each - PMA Approved. Takes 4 seals per cylinder. Fits Models: Franklin 4A-235,	
			6A4-150, 6A4-165, 6A4-200, 6AS-350, 6AS-335, 6A4-150. Set of 4 - PMA Approved. Fits Models: Continental IO-346,	
		Push Rod Tube Seal Pushrod Tube Seal	O-470, IO-470, IO-520, IO-550, TSIO-520-Series.  1 each - PMA Approved. Takes 2 per cylinder.	
08-00779	RG-17794	Lower	Fits Models: Franklin 4A-235, 6A4-165, 6A4-200, 6AS-350, 6AS-335.	
	RG-360PRT-6		6 Cylinders - PMA Approved. Real Gasket Corporation has received FAA-PMA	
08-01323	RG-520PRT-6	Cylinders	approval for improved design pushrod tube seals for continental engines. The seals are designed to provide 37% more sealing area at the point of contact	
08-01328	RG-360PRT-1	Pushrod Tube Seal Kit - One	with the pushrod tube, and vector spring pressure by its beveled top and companion washer.	
08-01326	RG-520PRT-1	Complete Cylinder		
08-13779	RG-550GPR-1	Pushrod Tube Seal Kit - One Complete Cylinder	Real pushrod tube seal. RG-550GPR-1. PMA Approved.	
08-13772	RG-200-D	Pushrod Tube Seal Kit - 1 Cyl for New Continental Cylinder	1 each - Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	
08-13774	VSC-2	TCM 6-Cylinder 470/520/550 Spring Compressor Tool	1 each - Fits Models: Continental E-185, E-225, IO-346, IO-470, IO-470-J, IO-470-K, IO-520, IO-550, IO-550G, O-470, O-470-A, O-470-E, O-470-J, TSIO-520-Series, TSIO-520-BE.	
08-13770	RG-200-RSW	Replacement Seal & Washer Kit for RG-200PR	1 Cylinder - FAA-PMA approved. Fits Models: Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300.	
08-13771	101BR	Ultra Copper Silicon		
08-13793	RG-8-32- BPS-20	Baffle Seal Fastener - Aluminum Binding Post & Screw Kit	1 package of 20 pieces - A package of 10 pair (post and screw) = 20 pieces.	
08-19047	RG-72812	Real Gasket Oil Sump Gasket or Oil Pan Gasket	Gasket is made of Interface Material-NI-2085 and is 1/16" (0.062) thick. Fits: Lycoming Engines O, IO, TIO, LTIO, AEIO-540, TEO-540, IO-580, AEIO-580 Series FAA-PMA approved for the above engines	



**TCM MAGNETO GASKET 649954** 

P/N 05-11920 .....-

TCM 649989 OIL COOLER **GASKET** P/N 08-13252 .....





**FUEL PUMP GASKET - 649962** 

P/N 08-13567 .....-----

## PT-6 NOZZLE GASKET

PT-6 Nozzle Gasket. Replacement part for Pratt & Whitney 3029566.

P/N 05-15099 .....----





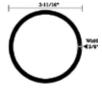
#### LYCOMING PROP GOVERNOR GASKET

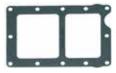
Propeller governor gasket for Lycoming 0-320 A & E Series engines ......P/N 72053 .....

#### LW12681 LYCOMING **MAGNETO GASKET**

Lycoming Magneto Gasket model # LW12681. For Lycoming 0320 all letter designations EXCEPT the "H" series.

P/N 08-00285 .....-





#### **TCM OIL GASKETS**

TCM 654555 Oil Cooler Gasket for Continental Engines ......P/N 06-02162 .....----

#### 1/8 INCH SILICONE VALVE COVER GASKETS

Valve cover gaskets are manufactured from a silicone rubber compounded especially for lubricating oil resistance and low compression set. It has a recommended temp. operating range of -67 to 446 F and will remain flexible while operating in the noted temp. range. One of the biggest benefits of replacing the factory cork gaskets with the Silicone rubber gaskets is that they are reusable and are easy to work with and are 1/8" thick silicone rubber.

Image	OEM Part No.	Application	Part Number	Price
	75906-SP	Lycoming O-235, O-290, O-320, IO320, O-360, IO-360, HIO-360, O-480, O-540, IO-540	05-11181	
	71450	Lycoming IO-540-B, E, M series, TIO/LTIO-540-A	05-11182	
	67193	Lycoming IO-360, VO/GO-435, GO-480, IO-540, VO-540, TIVO-540, IO-720	05-11183	
	632310	Continental IO-360, TSIO-360, LTSIO-360	05-11184	
	632459	Continental GTSIO-520 series, IO-550-G, TSIO-520-BE	05-11185	
	530162	Continental A-65, C-75, C-85, C-90, C-125, C-145, O-200, O-300, GO-300	05-11186	



### "O" SERIES LYCOMING **VALVE COVER GASKETS**

Note: 08-05882 is similar to 67193 and RG-67193 but not FAA Approved for Certified Aircraft. 08-01187 is similar to 75906 and RG-75906 but not FAA Approved for Certified Aircraft. These homebuilder's Lycoming valve cover gaskets replace the original cork gaskets which come standard on Lycoming 0-235, 0-320 and 0-360 engines. These new gaskets are molded from high temperature silicone rubber and do not harden over time so they can be re-used again

and again. This hi-tech silicone rubber offers a much lower compression set, so it is superior at maintaining an oil-tight seal for the life of the engine. NOT FAA approved. For experimental aircraft only.

P/N 08-01187 .....----



#### **ANGLED VALVE "IO"** SERIES LYCOMING VALVE COVER GASKETS

These gaskets are for the fuel injected "IO" series, sometimes referred to as the Ángle Valve cylinder Lycoming, as well. these gaskets are molded from the same high-temperature silicone rubber as the "O" series gaskets above, and do

not harden over time, so they can be reused again and again. This hi-tech silicone rubber offers a much lower compression set, so it is superior at maintaining an oil-tight seal for the life of the engine. They are not FAA approved and are not manufactured under a PMA. These are similar to Lycoming part number 67193 used on Angled valve Lycoming engines 

# SKETS - STU

#### **EXHAUST MANIFOLD NUTS**



Part No.	Thread Size	Туре	Engine Application	Price
21247	1/4-28	Brass	Cont., E185, IO470, IO520, GTSIO520, LTSIO520, TSIO520, IO550, IOF5550, TSIO550, TSIOF550, TSIOL550	
22022	5/16-24	Brass	Continental: A-65, C-75 thru C-90, O-200, O-300	-
STD1410	5/16-18	Steel	Lycoming	

#### GASCOLATOR GASKETS

Gascolator Gasket, Manufactured from fuel resistant Buna Rubber" material.

Description	Part No.	Price
2-1/4" OD. x 1-3/4" ID x 1/16" Buna and Cork material	05-11188	
2" OD. x 1-3/8" ID x 1/8" Buna Rubber material	05-11190	
2-1/8" OD. x 1-1/2" ID x 1/8" Buna Rubber material	05-11189	
2-1/4" OD. x 1-3/8" ID x 1/8" Buna Rubber material	05-11187	
2-1/4" OD. x 1-3/8" ID x 3/16" Buna Rubber material	05-11191	

#### **OIL COOLER GASKET SETS**

Our Part No.	Continental Part No.	Price ea.
08-76510	76510	

## **BLO-PROOF EXHAUST GASKETS**







These gaskets are manufactured in a 1-piece design in 7/64" thick steel. They have a split metal inner ring which provides an absolute seal and they are guaranteed not to blow off. Engine manufacturer's parts. 

Lycoming P/N 77611 for 4 & 6 Cylinder Engines..... --- Ea.



#### **EXHAUST GASKETS**

Continental P/N 21493 (now P/N 632837 stainless

Cont.#21493 for A-65 to 0-300	P/N 08-05237
Cont. #632837 Stainless Steel	P/N 08-13232 Ea.
Lycoming 0-320 except h series	P/N 77611



#### AIRBORNE BLO-PROOF **GASKETS**

2 gaskets used per cylinder, with raised beads interlocked facing the exhaust stack flange. Eight required for 4 cyl. engine, 12 for 6 cyl. engine.

Engine Model Number	Airborne P/N (Use 2/Cyl.)	Price
A-65 Series, C-85 Series, C-90 Series, O-200 Series, O-300 Series, GO-300 Series, E-185 Series, E-225 Series, O-470-A, -E, -J, IO-470-J, -K	00 00000	

1	IAUST STACK FLANGES MILD STEEL to 0-540 .P/N 33021Ea.
	STAINLESS STEEL C Series .P/N 33101 Ea.
Continental IO-470 thru IO-520 Lycoming 0-235 thru IO-360 Lycoming IO-540	P/N 33102 Ea.

#### LYCOMING STUDS

Description	Part No.	Price
25-22 Lycoming Stud250-20 X 2.75 LONG	07-18027	
25-8 Lycoming Stud250-20 X 1.00 LONG	07-14785	
25-8-P03 Lycoming Stud250-20 X 1.00 LONG	07-14786	
25C-10 Lycoming Stud250-20 X 1.25 LONG	07-14787	
25C-10-P03 Lycoming Stud250-20 X 1.25 LONG	07-14788	
25C-10-P07 Lycoming Stud250-20 X 1.25 LONG	07-14789	
25C-11 Lycoming Stud250-20 X 1.38 LONG	07-14790	
25C-11-P03 Lycoming Stud250-20 X 1.38 LONG	07-14791	
25C-11-P07 Lycoming Stud250-20 X 1.38 LONG	07-14792	
25C-12 Lycoming Stud250-20 X 1.50 LONG	07-14793	
25C-12-P03 Lycoming Stud250-20 X 1.50 LONG	07-14794	
25C-14 Lycoming Stud250-20 X 1.75 LONG	07-14795	
25C-14-P03 Lycoming Stud250-20 X 1.75 LONG	07-14796	
25C-14-P12 Lycoming Stud250-20 X 1.75 LONG	07-14797	
25C-16 Lycoming Stud250-20 X 2.00 LONG	07-14798	
25C-18 Lycoming Stud250-20 X 2.25 LONG	07-14799	
25C-19 Lycoming Stud250-20 X 2.38 LONG	07-14800	
25C-19-P03 Lycoming Stud250-20 X 2.38 LONG	07-14801	
25C-20 Lycoming Stud250-20 X 2.50 LONG	07-14802	
25C-21 Lycoming Stud250-20 X 2.63 LONG	07-14803	
25C-21-P03 Lycoming Stud250-20 X 2.63 LONG	07-14804	
25C-22 Lycoming Stud250-20 X 2.75 LONG	07-14805	
25C-22-P03 Lycoming Stud250-20 X 2.75 LONG	07-14806	
25C-22-P07 Lycoming Stud250-20 X 2.78 LONG	07-14807	
25C-29 Lycoming Stud250-20 X 3.63 LONG	07-14809	
25C-31 Lycoming Stud250-20 X 3.88 LONG	07-14810	

#### **EXHAUST STUDS** FOR CONTINENTAL ENGINES



These high quality exhaust/ engine studs produced from corrosion resistant 321 stainless steel in 5/16-18" or 5/16-24"

standard thread size with a length of 1.5" are a direct replacement for the TCM Continental part number 402-151 stud. FAA/PMA approved for the Continental engines C-75, C-85, C-90, O-200 series engines, and o-300 Stud for Continental Engines O-470, IO-470 ( 1/4"x20-1/4"x28)

P/N 08-07281 .....-----

#### STAINLESS STEEL EXHAUST STUDS FOR LYCOMING ENGINES



Produced from corrosion resistant 321 in 5/16 x 18 standard thread size and are a direct replacement for the Lycoming part number 31C12 stud. Stop stud corrosion and rust out problems, stop

expensive cylinder repair costs cause by broken studs, allow easy removal of exhaust systems for gasket replacement or inspection, but does not feature a safety wire hole (refer to p/n 08-06780 for safety wire hole feature). FAA approved for all Lycoming engines from 0-235 through 0-540.

CAD Plated Steel with out Safety Wire Hole ...... P/N 08-06279...... ---Stainless Steel With safety wire hole feature ...... P/N 08-06780.......



### STA-FLATZ \ CLAMP

Machined from billet 6061 aluminum and finished with gold anodize. This will reduce your chance of induction leaks, especially turbo charged engines! Experimental only. Not FAA approved... P/N 08-13906 .....----

## HAUST INSULATING PRODU

#### HIGH VELOCITY EXHAUST JACKET



An innovative way to insulate and block radiant heat. Cover the tubes vertically allowing for a consistent fit. The fit allows the exhaust system to expand as it comes up to operating temperatures without restrictions and provides air space for added insulation. Uses

Thermal Conduction Technology (TCT), developed by Thermo-Tec, and can be applied with the headers in the vehicle.

4–6 cyl. kit	P/N 08-00597
8 cyl. kit	P/N 08-00598



#### SPARK PLUG WIRE HEAT SHIELD

The ultimate protection for spark plug wires and boots from conductive and radiant heat. The dual-purpose sleeve has a surface that reflects over 90% of radiant heat, while the inside silica-based fabric prevents conductive heat from penetrating ..P/N 08-00612 .....

#### TURBO KIT



Designed to protect, improve performance, and eliminate turbo lag of a turbo charger. Fits a wide variety of turbines. The custom cut-to-fit kit comes with an excessive amount of material to cover turbos from the

ornancot automotive application to	neavy daty track applications.
4 cylinder kit	P/N 08-00613
6–8 cylinder kit	P/N 08-00614



#### MUFFLER/CAT HEAT SHIELD KIT

The 40"x 24" mylar Heat Shield is made up of woven silica with a flexible mylar finish. Can be installed between the catalytic converter, muffler, or any other component to reflect radiant heat away from the undercarriage of the car. The kit includes all necessary fasteners.

P/N 08-00616.....---

#### **HEAT TERMINATOR ULTRA-LITE**

Made of the highest-quality insulating materials available today. The material is made of a highly-textured aluminum composite surface on one side, with a hightemperature silica felt center and a durable mylar com-

posite facing. Uses Thermal Conduction Technology (TCT), developed by Thermo-Tec.

8"x 12"P/N 08-00617	10"x 18"P/N 08-00618
18"x 18"P/N 08-00619	18"x 24"P/N 08-00620
24"x 24"P/N 08-00621	24"x 36"P/N 08-00622



## STARTER HEAT SHIELD

Starters take in a lot of damaging heat that destroys the windings of the starter & solenoid. The Starter Heat Shield will reflect over 90% of radiant heat, adding life

to the starter and assuring reliable starts. The Starter Heat Shield is a universal kit that fits all starters.....P/N 08-00611.....----



#### THERMO SHIELD

Thermo-Shield protects hoses & wires from radiant heat. Used in applications where it is difficult or not practical to disconnect one end of the hose or wire. The adhesive-backed composite construction tape can easily be wrapped around the hose or wire to make a clean, professional appearance. 15"x 1.5" roll. P/N 08-00602.





Thermo-Flex Aluminum is a composite heat shield material with unlimited uses. The material is manufactured with a combination of materials to provide abra-

sion-resistance, thermal insulation, and physical containment of hoses and wiring. The combination of aluminum, silica, and stainless steel is combined to produce a sleeving that is flexible, lightweight, and strong. The aluminum-silica combination can be slit for applications such as wire looms or hose covering without disconnecting the ends of the wire or hoses. Thermo-Flex Aluminum can withstand extreme temperatures of up to 750°F. Packaged in 10 ft. lengths.

5/8"P/N 08-00623	1.25"P/N 08-00626
0.75"P/N 08-00624	1.5"P/N 08-00627
1" P/N 08-00625	3" P/N 08-00628



#### COOL-IT PLUG WIRE SLEEVES

This unique spark plug & ignition wire protector comes in five sporty colors; red, orange, blue, black & natural.

These dual-purpose sleeves enhance performance, reduce misfires, extend plug wire life and will not react with petroleum products. The double-wall construction keeps the wire and boot cooler in a hightemperature engine. Its universal size fits most boots, is easy to install

#### 6-Pack ......P/N 08-01030 .....------------------

#### COOL-IT MAT



Use the Cool-It Mat to battle excessive heat and noise that penetrate the driver compartment through the firewalls and floorboards. It is also perfect in doors, under hoods, and above transmission housings. The

highly-reflective mylar reflects heat away from surfaces, while the foil side is orientated away from the heat source to conduct any penetrating heat across its surface thus providing the ultimate in heat protection. The silica blanketing is a duel-density composite and is the main sound insulator. It is easy to trim and can be applied with the push-in fasteners provided or any weather strip adhesive ......P/N 08-00610 .....

#### THERMO-SLEEVE



Lamination of a high-temperature fabric to a highlyreflective foil is the makeup of Thermo-Sleeve, which provides protection from radiant heat for hoses and wires. Thermo-Sleeve's ultra light-weight construction

provides more insulating than traditional bulky rubber-coated fiberglass. The aluminized sleeving reflects over 90% of radiant heat, and is fireproof & oil resistant. Comes packaged in 12-ft lengths, and sold in 5 different inside diameter sizes.

12' 1/2" ID	P/N 08-00605
12' 1" ID	P/N 08-00606
12" 1-1/2' ID	P/N 08-00607
	P/N 08-00608
	P/N 08-00609

#### **HEAT BARRIER - ADHESIVE BACKED**



Aluminized Heat Barrier is made up of woven silica with a flexible aluminized finish. The highly reflective surface of the material is capable of withstanding radiant temperatures in excess of 2000°F. The adhesive backed composite construction material can easily be applied to any surface or wrapped around a hose or wire to make a clean professional appearance. Note:

Clean surface before applying. Adhesive is rated up to 300° F. Don't apply to any parts of exhaust system. This product is designed to block radiant heat only!

12" x 12"	P/N 08-00630
12" x 24"	P/N 08-00600
24" x 50 foot Roll	P/N 08-07660



#### **HEADER MANIFOLD BLANKET**

The Header Manifold Blanket provides excellent heatretention for exhaust headers and manifolds. This flexible heat shield simply clips into place on the upper portion of the header. The fabric side of the material should be facing the heat source, and the aluminized side facing away, offering protection from abrasion and harmful liquid spills. Available in two sizes: (2) 20" by 24" blankets for V6 & V8 applications, and (1) 36" x 40" blanket for

straight 6 & 4 cylinder engines. 20"x24" ......P/N 08-00603 .....-----



#### **GRAPHITE BLACK WRAP**

Traditionally, high-heat coating spray had to be applied to the exhaust wrap to color it black. Now new Graphite Black Wrap eliminates the process of coating the wrap with its patented Thermal Conduction Technology (TCT) high-heat color pigment. Graphite Black Wrap is available in 2" widths, in 50-ft rolls.

		,
Size	Part No.	Price
1" x 15	08-11153	
1" x 50	08-11021	
2" v 15	08-11154	

Size	Part No.	Price	
2" x 25	09-05231		
2" x 50	08-00596		
2" x 100	08-11023		

#### **GENERATION II COPPER HEADER WRAP**



Generation II Copper Header Wrap uses a proprietary coating developed by Thermo-Tec; improved Thermal-Conduction-Technology (T-C-T). Creates more horsepower & reduces underhood temps, increases exhaust scavenging, withstands continuous heat up to 2000°F, contains no asbestos. Sold in 1" or 2" wide, 50 ft rolls

with low profile 1/16" thickness. 1"X50.....P/N 08-11031.....----.....P/N 08-11032 ..... 2"X50



### THERMO-TEC CARBON FIBER **EXHAUST INSULATING WRAP**

Produced utilizing pulverized Lava rock called basalt. It is extremely pliable, resistant to discoloration and can withstand 2000 degrees Fahrenheit in direct continuous contact.

1"X50	P/N 08-13902
2"X50	P/N 08-13903

#### EXHAUST INSULATING WRAP

The original Exhaust Insulating Wrap was developed over 14 years ago by Thermo-Tec. Exhaust Insulating Wrap is an innovative way to create more horsepower and reduce under-hood temperatures. Wrapping headers maintains hotter exhaust gases that exit the system faster through decreased density. Increased exhaust scavenging is produced, along with lower intake temperatures. Exhaust Insulating Wrap withstands continuous heat up to 2000°F, and contains no asbestos. Thermo-Tec exhaust wrap will not over-insulate a system when properly installed due to a proprietary coating developed by Thermo-Tec -- Thermal Conduction Technology (TCT) -- that conducts heat across the wrap's surface. This coating controls heat build-up and dissipation. The Header Wrap is sold in 2" wide, 50'rolls with a low profile 1/6" thickness.

Size	Part No.	Price
1" x 15	08-11151	
1" x 50	08-11001	-
2" x 15	08-11152	-

Size	Part No.	Price
2" x 25	09-05230	
2" x 50	09-41600	
2" x 100	08-11003	

#### **EXHAUST WRAP KITS**

Now you can get everything you need for a complete, professional installation of our Exhaust Insulating Wrap, all in one package.Kits include Exhaust Insulating Wrap, Hi-Heat Coating and Snap Strap; available in Black and Original.

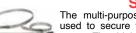
2" Original, 1 Roll	P/N 08-07204
2" Original, 2 Rolls	P/N 08-07205
	P/N 08-07206
	P/N 08-07207



#### CLAMP ON HEAT SHIELDS

Flexible clamp on pipe heat shield blocks over 95% of the damaging radiant heat of the exhaust.Provides the ultimate in protection. The kits come complete with all clamps and new stainless stand offs. Installs

in minutes. Incorporate Thermo-Tec's proprietary coating technology developed by Thermo-Tec, Thermal Conduction Technology. .....P/N 08-07073 .....----6" X 2'.....P/N 08-07074.....----



#### **SNAP STRAPS**

The multi-purpose stainless steel Snap Straps are used to secure the Exhaust Insulating Wrap -- and more. The high-temperature stainless steel straps

have a narrow profile to fit tight spots, and can be cut to the exact length needed. Snap Straps secure with easy-to-use slide-through fasteners. 18" 6 pack......P/N 08-13160 .....----9" 4 pack, 18" 2 pack ......P/N 09-05232 ......---

### ALUMINIZED HEAT BARRIER STOPS **UNWANTED HEAT TRANSFER**



Keep heat where you want it with this hi-tech aluminized heat blanket. Thickness, 0.060". Furnished in 3 sizes.

18"	x 20"	P/N 09-05234	
36"	x 20"	P/N 09-05233	
36"	x 40"	P/N 08-06735	



#### **KEVLAR HEAT SHIELD**

Can be used for various uses: As a header blanket, Improve driver comfort, Protect engines components, Continuous heat up to 1100 degrees F, and Reflects 90% of radiant heat up to 3000 degrees F.

## **KEVLAR MUFFLER COVER**



Handles continuous temperatures up to 1100deg F. Reduces radiant heat inside vehicle. Dampens muffler noise and vibration. Includes stainless steel straps for installation. Neat attractive appearance and is abrasion resistant.....P/N 08-07201 .....



#### PT-6 INSULATION BLANKET

PT-6 Insulation Blanket Pratt TSO 3011755. Replacement part for Pratt & Whitney 3011755. P/N 05-15101 .....-

#### ZIRCOFLEX™ FLEXIBLE CERAMIC HEATSHIELD

A flexible ceramic heat shield material that offers superb thermal barrier performance at minimal weight and minimal thickness. A thin aluminum backed foil, it

is lightweight at only 460g/m(2) and only 0.25mm thick. It is however, robust and easy to handle. It can be cut and installed by hand or machine, and is easily fixed in place using mechanical fasteners or high temperature adhesives. Each piece is 35.4" X 21.5" (900mm x 550mm.) Ceramic Heatshield P/N 08-07214 —
Double sided adhesive tape attachment kit ...P/N 08-07215 ..... Stainless Steel Strapping kit.....P/N 08-07216 .....----

#### ZIRCOFLEX I (SINGLE THICKNESS)

This is ZircoFlex® I in its single thickness (original) format. The material offers superb thermal barrier performance at minimal weight and minimal thickness. It is produced as a thin aluminum backed foil.

Description	Size	Part No.	Price
Zircoflex I Mini Roll	400mm x 100mm (Approx. 16" x 4")	08-07635	
Zircoflex I Small Sheet	297mm x 210mm (Approx. 12" x 8")	08-07636	
Zircoflex I Medium Sheet	550mm x 450mm (Approx. 22" x 18")	08-07637	
Zircoflex I Small Sheet with Adhesive	297mm x 210mm (Approx. 12" x 8")	08-07646	
Zircoflex I Medium Sheet with Adhesive	550mm x 450mm (Approx. 22" x 18")	08-07647	
Zircoflex I Large Sheet with Adhesive	900mm x 550mm (Approx. 35" x 22")	08-07648	

#### ZIRCOFLEX III (TRIPLE THICKNESS)

This is an engineered triple thickness ZircoFlex® format that offers yet more thermal performance coupled with significant rigidity when compared to the original ZircoFlex I® material. It is produced as an aluminum backed matrix.

Description	Size	Part No.	Price
Zircoflex III Large Sheet	900mm x 550mm (Approx. 35" x 22")	08-07645	
Zircoflex III Small Sheet with Adhesive	297mm x 210mm (Approx. 12" x 8")	08-07653	
Zircoflex III Medium Sheet with Adhesive	550mm x 450mm (Approx. 22" x 18")	08-07654	
Zircoflex III Large Sheet with Adhesive	900mm x 550mm (Approx. 35" x 22")	08-07655	

#### ZIRCOFLEX ACCESSORIES

Double Sided Adhesive Tape	P/N 08-07215
Stainless Steel Attachment Kit	P/N 08-07216

#### THERMO-GUARD FR



Thermo-Guard FR offers the best in heat and sound insulation. This lightweight, durable shield does everything: reduces sound, absorbs vibration, protects from radiant heat and provides an extra layer of insulating padding. The product features 100% synthetic fiber felt

that provides sound and comfort control and high-tech foil heat barrier that blocks more than 90% of radiant heat.

#### **EXPRESS SLEEVES**

Express Sleeves are just the thing that our customers have been looking for. An new easy to use sleeving which is a combination of a high temperature insulation material to a highly reflective mylar foil with a Velcro closure. The sleeving is designed to provide maximum protection for wires, hoses, and cables from the very damaging effect of radiant heat with an easy application. Simply pull apart the material, wrap around the wire, and re-close the sleeving. Express Sleeves reflect over 90% of radiant heat, is fireproof and fire resistant, and just looks good. Express

Size	Part No.	Price	Size	Part No.	Price
1-1/2" X 3"	09-02060		1/2" x 3	08-07202	
1-1/2" X 12"	09-02061		1/2" x 12	08-07203	

Sleeves come in 1 1/2" diameter in 3', & 12' lengths.



#### APS SILICONE VALVE **COVER GASKETS**

APS FAA/PMA Approved silicone rocker gaskets are reusable and remain flexible from -85 to + 401° F. They are resistant to leaking, deterioration by weathering, and petroleum-base lubricating oil.

CMI Engines Eligibility	Model No.	Part No.	Price
A40, A50, A65, A70, A75, A80, C75, C85, C90, C125, C145, O-200, O-300, GO-300 Series	APS-655706-S	07-20087	-
E165, E185, E225 Series	APS-653193-S	07-20083	
IO-240, IO/TSIO-360 Series	APS-655704-S	07-20085	
O-470-G,K,L,R,S,U; IO-470-D-F, H, L-N, S, U, V; TSIO-470-B, C, E	APS-655528-S	07-20084	
IO-520 (All Models), TSIO-520 - Some Models	APS-655528-S	07-20084	
TSIO-520-AE	APS-653193-S	07-20083	
TSIO-520-BE, GTSIO-520-C,D,F,H,K,L–N	APS-655705-S	07-20086	
IO-550-A-F,L	APS-655528-S	07-20084	
IO-550-G,N,P,R; TSIO-550-A-C,E,K	APS-655705-S	07-20086	

Lycoming Engines	Model No.	Part No.	Price
O-235, O-290, O-320, O-340 Series	APS-75906-S	07-20098	
IO360, AEIO-360, AIO-360, LIO-360, TO-360	APS-67193-S	07-20088	
IO-360, AEIO-360, HIO-360, HO-360, LO-360	APS-75906-S	07-20098	
IO-360-F1A, TO-360-C1A6D	APS-76036-S	07-20099	
GO-435, TVO-435, VO-435	APS-67193-S	07-20088	
O-470-A,E,J; IO-470-J,K,L	APS-653193-S	07-20083	
IO-540, AEIO-540, HIO-540, IGSO- 540, IVO-540, LTIO-540, TIO-540, TIVO-540, TVO-540, VO-540	APS-67193-S	07-20088	
IO-540, IGO-540, IGSO-540, LTIO-540, TIO-540	APS-71450-S	07-20092	
O-540, IO-540, AEIO-540, TIO-540	APS-75906-S	07-20098	
TIO-541-E1A4-C4, EAD4; TIGO-541-E1A, IO-540-J4A5, LTIO/TIO-540-V2AD	APS-76036-S	07-20099	
TIO-541-E1A4, E1B4, E1C4, EAD4; TIGO-541-E1A, IO-720-A1A, A1B, D1B, D1C, D1CD	APS-67193-S	07-20088	
IO-720-B1B,B1BD,C1B	APS-71450-S	07-20092	

Sample Engine Series Eligibility only. Not all models of each series are eligible.

#### SEE WEBSITE FOR AIRCRAFT MODEL ELIGIBILITY

### **APS PLENUM & PIPES** FOR CONTINENTAL ENGINES



APS® FAA/PMA-approved 550 crossflow style CMI plenum and intake pipes are manufactured using the latest casting and CNC machining technology. They are a direct replacement for their CMI counterparts.

APS Part No.	Description	Part No.	Price
APS-633730	PMA'd Intake Flange	07-20217	
APS-646206	#5 Cylinder PMA'd Intake Tube	07-20220	
APS-646207	#6 Cylinder PMA'd Intake Tube	07-20221	

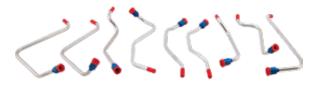


#### **APS ENGINE MOUNT LEGS** FOR LYCOMING ENGINES

APS® engine mounts are billet machined from A7075-T6 aircraft structural aluminum, their tensile strength is 70% higher than original cast mounts, and they have a black anodized finish.

Most 540 w/30° Small Engine Mounts......P/N 07-20214 .....----

#### **APS DRAIN TUBES**



APS® Oil Drain Back Tubes for Lycoming Engines APS® FAA/PMA-approved oil drain back tubes are a direct replacement for Lycoming tubes. These tubes are intended for certified and experimental applications.

Description	Part Number	Price
APS-11935 Drain Tube	07-20066	
APS-68759 Drain Tube	07-20089	
APS-68760 Drain Tube	07-20090	
APS-68761 Drain Tube	07-20091	
APS-71737 Drain Tube	07-20093	
APS-72702 Drain Tube	07-20094	
APS-72703 Drain Tube	07-20095	
APS-73027 Drain Tube	07-20096	
APS-74808 Drain Tube	07-20097	

#### **APS FUEL INJECTION LINES FOR** LYCOMING ENGINES



APS® offers stainless steel fuel injection lines for use with many of the popular Lycoming RSA style fuel injection assemblies. APS® stainless steel fuel injection line assemblies are manufactured to extreme standards and are 100% pressure tested at 80 psi for leaks.

Description	Part Number	Price
APS12098-110 Tube Assembly	07-20067	
APS12098-120 Tube Assembly	07-20068	
APS12098-200 Tube Assembly	07-20075	
APS12098-230 Tube Assembly	07-20078	
APS12098-250 Tube Assembly	07-20080	
APS12098-260 Tube Assembly	07-20081	