

# PULLEYS

## PULLEYS



### AN210A & AN210B (MS24566)

Anti-Friction Bearing Control Pulley with phenolic body and ball bearing with seal. The AN210A pulleys are dimensionally the same as the "B" pulleys but have metal-shielded bearings rather than removable composition-seal type bearings. The low allowable design load of the -3A and -3B pulleys is based on cable fatigue. AN210-1A, AN210-3A, AN210-1B and AN210-3B shall not be installed on frequently used aircraft controls to bend the cable more than 15° from a straight line.

**MS20220 (AN220)** Flight Control Pulley with phenolic body and ball bearing with seal. Also available with aluminum body (MS20220A). The low allowable load limit of the -1 pulley is based on cable fatigue. When used on frequently used aircraft controls the cable wrap angle should not be more than 15° from a straight line.

**MS20219 (AN219) Aircraft Secondary Control Pulley** with phenolic body and ball bearing with seal. MS20219A (AN219A) Pulley with anodized aluminum body and ball bearing with seal. The aluminum body is recommended for -1 and -3 pulleys. The -1 pulley shall not be installed in flight control systems.

**Examples of Part No.:** Phenolic Body - MS20219-1  
Aluminum Body - MS20219A1

**NAS383 Series Pulley** with phenolic body and graphite impregnated bronze sleeve. This is a low cost pulley widely used in aircraft, winches, cranes and remote mechanical actuation devices.

**A-223 and A-224 Pulleys** with plain phenolic bore are used as guide and secondary control pulleys in production aircraft.

**BB-128-1 and BB-120-1 Pulleys** have high pressure phenolic bodies and ball bearings with Teflon seals. Used in Christavia and many other aircraft.

## SPECIAL PULLEYS



### 1-1/2 Inch Pulley

For smooth control operation. Manufactured for aircraft float rudder operation, the pulleys can be used in virtually any application. Solid UHMW plastic for use in tough, caustic environments. Bushing insert is stainless steel with minimum lubrication required. Used with 1/16" thru 1/8" - 7x7 or 7x19 control cable. Bushing is clamped in pulley bracket. Pulley rotates on bushing. Pulley: 1-1/2" dia. x .283" wide. Bushing: 1/4" O.D. x 3/16" I.D. x .328" long. Weight: .26 oz. (including stainless bushing).....P/N 05-29725 ----- **ea.**

**2 Inch Pulley**  
Larger cables, bigger job? Wherever you need a tough, durable pulley, look no further. Replace your old worn out, sticky pulleys with NAP UHMW plastic for smooth control operation. Used with 3/32" thru 3/16" - 7x7 or 7x19 control cable. Bushing insert is stainless steel with minimum lubrication required. Bushing is clamped in pulley bracket. Pulley rotates on bushing. Fits DeHavilland Beaver floats Pulley: 2" dia. x .470" wide. Bushing: 5/16" O.D. x 1/4" I.D. x .487" long. Weight: .58 oz. (including stainless bushing).....P/N 05-29730 ----- **ea.**

## PIPER PULLEYS



| Fig. | Ref. #    | Description                             | O.D.   | I.D.  | Part No. | Price |
|------|-----------|---|--------|-------|----------|-------|
| 1    | 41171-000 | Pulley, trimcrank with bushing (fiber)  | 2 3/4" | 3/8"  | 05-02636 | ---   |
| 1a   | 40991-000 | Pulley (no slot)                        | 2 3/4" | 3/8"  | 05-02637 | ---   |
| 2    | 41001-008 | Pulley w/ bearing (fiber)(41001-010)    | 2 3/4" | 5/16" | 05-02638 | ---   |
| 3    | 80421-000 | Pulley (fiber)                          | 1 3/4" | 1/4"  | 05-02639 | ---   |
| 4    | 481-609   | Pulley (fiber)                          | 1 1/2" | 1/4"  | 05-02640 | ---   |
| 5    | 11200-000 | Pulley (fiber)                          | 1 1/8" | 1/4"  | 05-02641 | ---   |
| 6    | 43001-000 | Pulley (fiber)                          | 1"     | 1/4"  | 05-02642 | ---   |
| 7    | 43061-000 | Pulley, stabilizer screw (aluminum)     | 2 3/4" | 3/8"  | 05-02643 | ---   |
| 8    | 12983-000 | Pulley, double groove (aluminum)        | 2 3/4" | 3/8"  | 05-02644 | ---   |
| 9    | 10080-000 | Pulley, trimcrank (aluminum)            | 2 3/4" | 3/8"  | 05-02645 | ---   |
| 10   | 11008-000 | Pulley, adj. screw(alum.) single groove | 4"     | 3/8"  | 05-02646 | ---   |
| 11   | 12982-000 | Pulley, adj. screw (alum.) dbl. groove  | 4"     | 3/8"  | 05-02647 | ---   |

## AIRCRAFT PULLEY OIL

Save the labor of re-oiling the control system every year! Aircraft pulley oil prevents pulley drag and stickiness.

Pulley Oil Pint.....P/N 05-04178 -----

**Pulley Oil Kit** - Includes: 1 Pint of Pulley Oil, 1 Needle, 1 Each 4.5" Extension, and 1 Each 8" Extension

P/N 05-04179 -----

**Pulley Oiler Kit** - Includes: 1 Needle oiler with oil, 1 each 4.5" extension & 1 each 8" extension

P/N 05-04180 -----

## ALUMINUM PULLEYS

Dimensions of these aluminum pulleys are same as equivalent size of MS20219 and MS20220 Phenolic Pulleys in table.

| Part No   | Cable Size (in.) | OD    | Groove Dia | Hub Dia. | Bore Dia. | Width | Price Each |
|-----------|------------------|-------|------------|----------|-----------|-------|------------|
| MS20219A1 | 1/16, 3/32       | 1.312 | 1.00       | .423     | .2500     | .438  | ---        |
| MS20219A3 | 1/16, 3/32       | 1.750 | 1.438      | .769     | .6250     | .438  | ---        |
| MS20220A1 | 1/8, 5/32, 3/16  | 1.755 | 1.255      | .475     | .3125     | .625  | ---        |
| MS20220A2 | 1/8, 5/32, 3/16  | 3.005 | 2.505      | .115     | .3125     | .625  | ---        |
| MS20220A3 | 1/8, 5/32, 3/16  | 4.255 | 3.755      | .115     | .3125     | .625  | ---        |
| MS20220A4 | 1/8, 5/32, 3/16  | 5.505 | 5.005      | .115     | .3125     | .625  | ---        |

## PHENOLIC PULLEYS

| Part Number | Cable Size (in.) | OD    | Groove Dia | Hub Dia. | Bore Dia. | Width | Load Limit (Lbs.) | Price Each |
|-------------|------------------|-------|------------|----------|-----------|-------|-------------------|------------|
| MS24566-1B  | 1/16, 5/64, 3/32 | 1.250 | .972       | .625     | .1900     | .297  | 300               | ---        |
| MS24566-2B  | 1/16, 5/64, 3/32 | 2.500 | 2.222      | .777     | .1900     | .297  | 500               | ---        |
| MS24566-3B  | 1/8, 5/32, 3/16  | 2.000 | 1.510      | .901     | .2500     | .484  | 600               | ---        |
| MS24566-4B  | 1/8, 5/32, 3/16  | 3.500 | 3.010      | .901     | .2500     | .484  | 1200              | ---        |
| MS20219-1   | 1/16, 3/32       | 1.312 | 1.000      | .423     | .2500     | .438  | 480               | ---        |
| MS20219-2   | 1/16, 3/32       | 1.750 | 1.438      | .423     | .2500     | .438  | 480               | ---        |
| MS20219-3   | 1/16, 3/32       | 1.750 | 1.438      | .769     | .6250     | .438  | 480               | ---        |
| MS20219-4   | 1/16, 3/32       | 2.625 | 2.312      | .423     | .2500     | .438  | 920               | ---        |
| MS20220-1   | 1/8, 5/32, 3/16  | 1.755 | 1.255      | .475     | .3125     | .625  | 500               | ---        |
| MS20220-2   | 1/8, 5/32, 3/16  | 3.005 | 2.505      | .475     | .3125     | .625  | 1680              | ---        |
| MS20220-3   | 1/8, 5/32, 3/16  | 4.255 | 3.755      | .475     | .3125     | .625  | 2500              | ---        |
| MS20220-4   | 1/8, 5/32, 3/16  | 5.505 | 5.005      | .475     | .3125     | .625  | 2500              | ---        |
| A-223       | 1/16, 3/32, 1/8  | 1.000 | .688       | ---      | .2500     | .281  | ---               | ---        |
| A-224       | 1/16, 3/32, 1/8  | 1.750 | 1.375      | ---      | .2500     | .250  | ---               | ---        |
| A-138 (NAS) | 1/16, 3/32, 1/8  | 1.250 | .875       | ---      | .2500     | .265  | ---               | ---        |
| A-123 (NAS) | 1/16, 3/32       | 2.000 | 1.500      | ---      | .2500     | .265  | ---               | ---        |
| A-124 (NAS) | 1/16, 3/32       | 2.500 | 2.000      | ---      | .2500     | .265  | ---               | ---        |
| A-130 (NAS) | 1/8, 5/32        | 2.000 | 1.375      | ---      | .3750     | .438  | ---               | ---        |
| A-120 (NAS) | 5/32, 3/16       | 3.000 | 2.375      | ---      | .3750     | .438  | ---               | ---        |
| BB-128      | 3/16             | 2.500 | 1.875      | ---      | .2500     | .440  | ---               | ---        |
| BB-120      | 3/16             | 3.000 | 2.375      | ---      | .2500     | .440  | ---               | ---        |

## MCS378 SERIES PULLEYS FOR CESSNAS



Aircraft Spruce stocks all pulleys required for Cessna single engine aircraft. Our MCS378 series pulleys replace the AN, NAS and S378 series pulleys commonly used on the Cessna aircraft. Pulley kits are available that contain all of the pulleys and cotter pins required for one aircraft.

**Approved Replacements for Cessna Pulleys - Cessna Model/Serial**  
120,140,140A,150,A150,A-A150,F150,FA150,FRA150,152,A152,F152,FA152,170,172,F172,FR172,172RG,FP172,P172,R172,175,177,177RG,F177RG,180,182,A182,F182,FR182,R182, TR182,T182,185,A185,188,A188, A 188,T188,205,206,P206,TU206,T206, TP206,U206,207,T207,208,210, P210, T210, T303, 310, T310, 320, 335, 336, 337, F337, P337, FP-337, T337, O-2, 340,401,402,404,411,414,421,425,441,500,501

\*Replaces the listed Cessna part numbers in the specific aircraft illustrated parts catalogs. Installer must verify applicability prior to installation.

| Model No.* | Replaces Cessna Part No.*                            | Part No. | Price |
|------------|--|----------|-------|
| MCS378-1   | S378-1 and S378-1L                                   | 05-03422 | ---   |
| MCS378-2   | S378-2, A124, AN210-2B and NAS383-2                  | 05-03423 | ---   |
| MCS378-3   | S378-3, S378-3L, A130, AN210-3B, BB-208 and NAS383-3 | 05-03424 | ---   |
| MCS378-4   | S378-4, A114, AN210-4B and NAS383-4                  | 05-03425 | ---   |
| MCS378-5   | S378-5   | 05-03426 | ---   |

## PULLEY KIT FOR CESSNAS

This kit contain all pulleys and cotter pins required to replace all flight control system pulleys in one airplane. Fits many Cessna 172 models. See our website for eligibility list. ....P/N 05-11977 -----