

Aircraft Spruce & Specialty Co.

LASAR® SYSTEM INFO REQUIREMENT SHEET

THE FOLLOWING ENGINE AND AIRCRAFT INFO IS NEEDED TO CORRECTLY DETERMINE LASAR® SYSTEM PART NUMBERS. WITH THIS INFORMATION IN HAND, PLEASE REFER TO L-1502 APPLICATION GUIDE OR TO THE APPROPRIATE APPROVED PARTS MATRIX TO DETERMINE THE CORRECT LASAR® SYSTEM COMPONENT PART NUMBERS.

AIRFRAME AND ENGINE MAKE AND MODEL

LASAR® INSTALLATIONS ARE AUTHORIZED FOR INSTALLATION THROUGH BOTH AIRFRAME AND ENGINE SUPPLEMENTAL TYPE CERTIFICATES (STC) ISSUED BY THE FAA. FOR THE TEXTRON LYCOMING 320 AND 360 SERIES ENGINES, THE AIRCRAFTS ENGINE MAKE AND MODEL NUMBER MUST BE LISTED IN THE STC NUMBER SA563CH & SE524CH, RESPECTIVELY. INSTALLATION IN EXPERIMENTAL AIRCRAFT DOES NOT REQUIRE REFERENCE TO THE STC.

AIRFRAME MODEL_____

ENGINE MODEL_____

ENGINE IGNITION BASE TIMING AND HORSEPOWER RATING

THE BASE TIMING ANGLE REPRESENTS THE NUMBER OF DEGREES BEFORE TOP DEAD CENTER THAT THE SPARK PLUGS MUST FIRE, AND IS USUALLY PRINTED ON THE ENGINES DATA PLATE. THIS ANGLE IS IMPORTANT BECAUSE IT DETERMINES THE FIRING ANGLE OF THE LASAR® SYSTEM WHEN OPERATING THE BACK UP MODE OPERATION. THE HORSE POWER RATING, IN PART, DETERMINES THE PROPER ENGINE PERSONALITY MAP AND IS NEEDED TO IDENTIFY THE CONTROLLER PART NUMBER.

BASE TIMING ANGLE_____

RATED HORSE POWER_____

MAGNETO DRIVE TYPE

THE DRIVE SYSTEMS OF THE CONVENTIONAL MAGNETOS BEING REMOVED MUST BE KNOWN TO ENSURE THAT THE LASAR® MAGNETOS WILL PROPERLY INTERFACE WITH THE EXISTING ENGINE ACCESSORY DRIVE GEAR AND MOUNTING PAD CONFIGURATION.

LEFT MAGNETO:

- DIRECT DRIVE
- IMPULSE COUPLED

RIGHT MAGNETO:

- DIRECT DRIVE
- IMPULSE COUPLED

SOURCE OF TACHOMETER SIGNAL CURRENTLY USED

LASAR® SYSTEMS USE FOUR POLE ROTORS AND DO NOT HAVE TRADITIONAL "P" LEADS OR TACHOMETER BREAKERS. THEREFORE COMPATIBILITY OF LASAR® SYSTEMS WITH ELECTRONIC TACHOMETERS WHICH DERIVE AN INPUT SIGNAL FROM ANY OF THE FOLLOWING SOURCES MUST BE VERIFIED BY THE TACH MANUFACTURER. REFER TO THE LATEST REVISION OF L-1502 INSTALLATION OPERATION AND TROUBLESHOOTING FOR DETAILS OF THE TACHOMETER SIGNAL GENERATED BY THE LASAR® CONTROLLER.

- TACH
- HALL EFFECT
- P LEAD

AIRFRAME VOLTAGE

TWO DIFFERENT LASAR® CONTROLLER DESIGNS ARE AVAILABLE TO WORK WITH EITHER 12 VOLT OR 24 VOLT NOMINAL AIRFRAME BUSES. LASAR® CONTROLLERS INTERPRET POWER INPUTS BELOW 6 VOLTS AS AN AIRCRAFT ELECTRICAL FAILURE AND AUTOMATICALLY SWITCH TO BACK UP MODE OPERATION. STARTER MOTOR CURRENT DRAW, BATTERY CONDITION AND LOCATION, AND BATTERY CABLE LENGTH AND CONDITION CAN LEAD TO EXCESSIVE VOLTAGE DROP DURING ENGINE CRANKING AND CAUSE HARD ENGINE STARTING.

12 VOLT AIRFRAME BUS 24 VOLT AIRFRAME BUS

DISTANCE FROM THE CONTROLLER TO BOTH LEFT AND RIGHT MAGNETOS
LOW VOLTAGE CONTROL HARNESSSES INCLUDE TWO WIRE BUNDLES, EACH TERMINATING IN CONNECTERS. THESE ATTACH IN TEN INCH PIGTAIL HARNESSSES WHICH ARE PART OF EACH LASAR® MAGNETO. THE DISTANCE FROM THE CONTROLLER TO EACH MAGNETO MUST BE KNOWN TO DETERMINE THE REQUIRED LENGTH OF THE TWO TERMINATED WIRE BUNDLES. ALL HARNESSSES WITH A BASE PART NUMBER LH1004-XXINCLUDE WIRES FOR A CHT, TACHOMETER AND COCKPIT ENUNCIATOR LIGHT INTERFACES.

INCHES FROM CONTROLLER TO LEFT MAG_____

INCHES FROM CONTROLLER TO RIGHT MAG_____

TYPE OF CYLINDER HEAD TEMPERATURE PROBE CURRENTLY INSTALLED
MOST LASAR® INSTALLATION (WITH THE EXCEPTION OF CERTAIN CESSNA 172 AND NON CERTIFIED AIRCRAFT) INCLUDE THE CYLINDER HEAD TEMPERATURE CONTROL FEATURE WHICH REQUIRES INPUT FROM A THERMISTOR TYPE TEMPERATURE PROBE INSTALLED IN THE CYLINDER GENERATING THE MOST HEAT DURING THE MAXIMUM ANGLE OF ATTACK CLIMB. THE TYPE OF PROBE CURRENTLY INSTALLED (IF ANY) MUST BE KNOWN TO DETERMINE THE CORRECT REPLACEMENT LASAR® PROBE.

DUAL POINT PROBES ARE AVAILABLE WHICH WILL DRIVE EXISTING CHT INSTRUMENTS AND PROVIDE THE NEEDED CHT SIGNAL TO THE LASAR® CONTROLLER. "J" TYPE PROBES CAN BE IDENTIFIED BY EITHER RED, WHITE, OR YELLOW AND BLACK LEADS, WHILE "K" PROBES USE RED AND BLACK LEADS.

NONE "J" TYPE "K" TYPE

Mag Series numbers (10- NUMBER IF BENDIX)?

What Spark plug do you have?

.....please return to the sales agent who sent this form to you.....

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