

SERVICE BULLETIN

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MODEL: ALL PROPULSION ENGINES

SUBJECT: FIELD TROUBLESHOOTING TACHOMETER/HOURMETER PN 11917

The tachometer/hourmeter used in propulsion engine instrument panels contains two separate electrical circuits with a common ground. One circuit operates the hourmeter, and the other the tachometer. The hourmeter circuit operates on 12 volts/alternator charging voltage supplied to the (+) terminal on the back of the instrument.

The tachometer circuit operates on AC voltage 6-8 volts, fed from one of the diodes in the alternator and supplied to the "tach inp." terminal while the engine is running, and the alternator producing battery charging voltage 13.0-14.8 volts D.C.

The following are procedures to follow when troubleshooting a fault in either of the two circuits in the tachometer/hourmeter.

HOURMETER FAULT

CHECK

1. Inoperative
 1. Check for proper DC voltage between (+) and (-) terminals.
 - A. Voltage present - meter defective - repair or replace.
 - B. Voltage not present - trace (+) and (-) electrical connections for fault. (Jump 12 Volts DC to meter (+) terminal to verify operation.)

TACHOMETER FAULT

CHECK

1. Inoperative
 1. Check for proper AC voltage between "Tach Inp." terminal and (-) terminal with engine running.
 - A. Voltage present - attempt adjusting meter through calibration access hole. No results, repair or replace meter.
 - B. AC voltage not present - check for proper alternator D.C. output voltage.
 - C. Check for A.C. voltage at tach terminal on alternator to ground.
 - D. Check electrical connections from "tach Inp." terminal to alternator connection.



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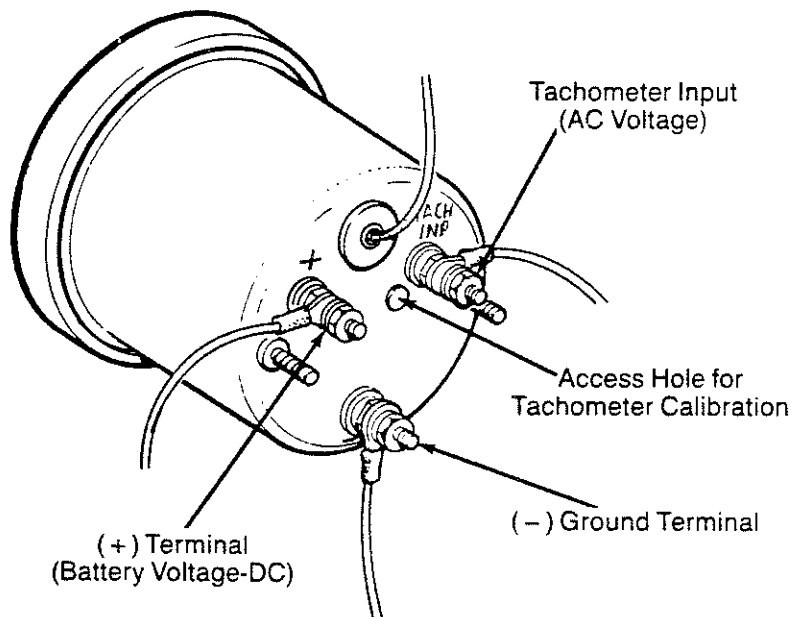
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2. Sticking

1. Check for proper A.C. voltage between "tach inp." terminal and (-) terminal.
2. Check for good ground connection between meter (-) Terminal and alternator.
3. Check alternator is well grounded to engine block at alternator pivot bolt.

3. Inaccurate

1. With hand-held tach on front crankshaft pulley retaining nut or strobe type tach read front crank shaft pulley R.P.M. Set engine R.P.M. with hand or strobe tach at 1500-1800 R.P.M.
2. Adjust tachometer with small Phillips type screwdriver through calibration access hole in rear of tachometer covered with translucent plug. Zero tach and bring to R.P.M. set by strobe or hand tach. (Verify R.P.M. at idle and at high speed 2500-3000 R.P.M.) (Adjust tach as needed.)



LATE MODEL TACHOMETER

Replaces Earlier Model as Shown on Page 2 of this Bulletin

