

ROBINSON HELICOPTER COMPANY

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SERVICE LETTER #30

DATE: 16 November 1987

TO: All Robinson R22 Owners, Operators & Service Centers

SUBJECT: Magneto Switch Wiring

AIRCRAFT AFFECTED:

R22s S/N 0002 thru S/N 0726, except S/N 0002 thru S/N 0077 which still have impulse coupling magnetos installed.

BACKGROUND: A discrepancy was found in the wiring of one R22 which allowed the engine to start in the full advance (25° BTDC) position. The engine may start in the advance position, but it is susceptible to engine kickback and possible damage to starter or ring gear.

PROCEDURE

1. Pull Mixture Control to Idle Cut-Off.
2. Disconnect P-lead (wire 15) from "SWITCH" terminal on engine left mag.
3. Disconnect wire 166 from "BO" terminal on Starting Vibrator and connect wire 166 to one test lead of VOM or continuity tester. Connect other test lead as indicated below and rotate Ignition Switch. Observe continuity.

OTHER TEST LEAD CONNECTED TO:	SWITCH POSITION	CORRECT CIRCUIT CONTINUITY
A. Airframe Ground.	START (Engine cranking)	Alternately open & close as engine cranks.
TURN MASTER SWITCH <u>OFF</u> AND PROCEED WITH B & C BELOW.		
B. P-lead (wire 15) disconnected from "SWITCH" terminal on engine left mag.	OFF R L BOTH START	Open. Open. Open. Open. Closed.
C. P-lead (wire 164) disconnected from "RETARD" terminal on engine left mag.	OFF R L BOTH START	Open. Open. Open. Open. Closed.

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4. Reconnect all wiring and perform routine mag check. Pilot should observe some loss of RPM when switching from BOTH to either R or L. If no RPM drop is observed, it could indicate an open circuit from the opposite mag thru the ignition switch to ground.
5. Correct any discrepancies before returning aircraft to service. (On one aircraft, wire 164 was found soldered to pin 34 on one side of the upper console harness plug and pin 35 on the other side). Refer to R22 Maintenance Manual for wiring schematics. Enter compliance with this Service Letter in Airframe Logbook.