

R44 SERVICE BULLETIN SB-76

DATE: 30 April 2010

TO: R44 II owners, operators, and maintenance personnel

SUBJECT: Air Conditioning Installation Upgrades

ROTORCRAFT AFFECTED: R44 II helicopters S/N 10001 thru 13032 equipped with air conditioning, unless previously accomplished.

TIME OF COMPLIANCE: Within next 150 flight hours or by 31 July 2010, whichever occurs first.

BACKGROUND: RHC has received reports of loose air conditioning compressor drive pulleys and failed low- and high-pressure cut-out switches. This bulletin requires increasing drive pulley retaining nut torque and installing improved-design cut-out switches.

COMPLIANCE PROCEDURE:

1. From RHC Customer Service (via RHC web site, fax, or phone), order one KI-201 for each affected R44 II helicopter equipped with air conditioning.
2. Remove left engine-cowling assembly.
3. Refer to R44 Illustrated Parts Catalog (IPC) Figure 19-19 dated JUL 2008 (or subsequent). Remove and discard palnut adjacent to pulley nut on D778-1 cartridge assembly. Verify pulley is not loose on shaft; replace D778-1 cartridge assembly if pulley is loose on shaft.
4. Special torque MS21042L6 nut to 480 in.-lb (includes self-locking torque). Install new palnut, standard torque to 29 to 60 in.-lb, and torque stripe per R44 Maintenance Manual (MM) Figure 2-1.
5. Apply B270-22 protectant (ref MM section 1.480), or zinc-chromate or epoxy primer, to exposed surfaces of cartridge assembly shaft.
6. Remove left aft seat back assembly.

(OVER)

7. Cut and discard ty-raps securing D799-2 (high-pressure cut-out) and D799-3 (low-pressure cut-out) switch assemblies wiring and connectors. Disconnect wiring at connectors and, to minimize refrigerant loss, quickly remove both switch assemblies from lines after loosening (each switch is mounted atop a schraeder valve).
8. Install red heat shrink on schraeder valve base on outboard, high-pressure line. Quickly install D799-2 revision K (or subsequent) high-pressure cut-out switch on same line. Special torque switch to 90 in.-lb.
9. Install blue heat shrink on schraeder valve base on inboard, low-pressure line. Quickly install D799-3 revision K (or subsequent) low-pressure cut-out switch on same line. Special torque switch to 90 in.-lb.
10. Refer to R44 IPC Figure 19-13 dated JUL 2008 (or subsequent). Connect one wire from D799-2 high-pressure cut-out switch to wire -1809. Connect one wire from D799-3 low-pressure cut-out switch to wire -1822. Connect remaining wire from each switch together. Neatly secure associated wiring and connectors with ty-raps but do not ty-rap to refrigerant lines.
11. Function check circuit by turning MASTER switch ON and verifying compressor clutch audibly energizes when selecting air conditioning switch from off to low or high positions.
12. Install left aft seat back assembly.
13. Per Pilot's Operating Handbook (POH), have qualified person run-up helicopter, check air conditioning function, and shutdown helicopter.
14. If required, service air conditioning refrigerant per MM section 11.320.
15. Make appropriate maintenance record entries.

Approximate Cost:

Parts: KI-201: \$175.00, if ordered by 31 July 2010.

Labor: 1 man-hour.
(2 man-hours if refrigerant servicing or D778 cartridge replacement is required.)