ROBINSON
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R44

SERVICE BULLETIN SB-67

DATE: 06 November 2008

TO: R44 II Owners, Operators, and Service Centers

SUBJECT: R44 II Fuel Hose Supports

ROTORCRAFT AFFECTED: R44 II Helicopters S/N 10001 thru 12566.

TIME OF COMPLIANCE: Within next 50 flight hours or by 31 January 2009, whichever occurs first.

BACKGROUND: In an accident, the engine may shift relative to the airframe structure and cause fuel hose damage. This service bulletin requires replacing support clamps with ty-raps on two fuel hoses. Under high load, the ty-raps will break to provide fuel hose slack, reducing the likelihood of a post-accident fuel leak.

COMPLIANCE PROCEDURE:

1. Remove C378-3 engine right cowling assembly and C003-10 right, aft seat back assembly.

2. Remove A785-31 air intake hose.

3. Refer to R44 IPC Figure 8-9B dated JUL 2008. Remove MS21919WDG11 (or WDG13) clamp attaching B283-3 hose assembly to firewall. Retain hardware. Discard clamp.

4. Refer to Figure 1. Attach MS21919WDG3 clamp to firewall using retained hardware, with fastener head toward hose as shown.

5. Insert MS3367-5-9 ty-rap through installed clamp and around B283-3 hose assembly. Cinch ty-rap until snug without overtightening and trim ty-rap tip flush with head.

6. Refer to R44 IPC Figure 4-31J dated JUL 2008. Remove MS21919WDG9 (or WDG11) clamp attaching B283-11 hose assembly to MS21919WDG14 clamp on lower frame. (Temporarily safety wire MS21919WDG14 clamp closed, if desired). Retain hardware. Discard removed clamp.

7. Refer to Figure 2. Attach MS21919WDG3 clamp to MS21919WDG14 clamp using retained hardware, with fastener head toward hose as shown. Torque nut to 37 in.-lb. Remove temporary safety wire, if used.

(OVER)

8. Insert MS3367-5-9 ty-rap through installed clamp and around B283-11 hose assembly. Cinch ty-rap until snug without overtightening and trim ty-rap tip flush with head.

9. Install air intake hose.

10. Install engine cowling assembly and aft seat back assembly.

11. Make appropriate maintenance record entries.

Approximate Cost:

Parts: No charge for (2) MS3367-5-9 ty-raps and (2) MS21919WDG3 clamps if ordered by 31 January 2009. Order must include helicopter serial number.

Labor: 0.5 man-hour.

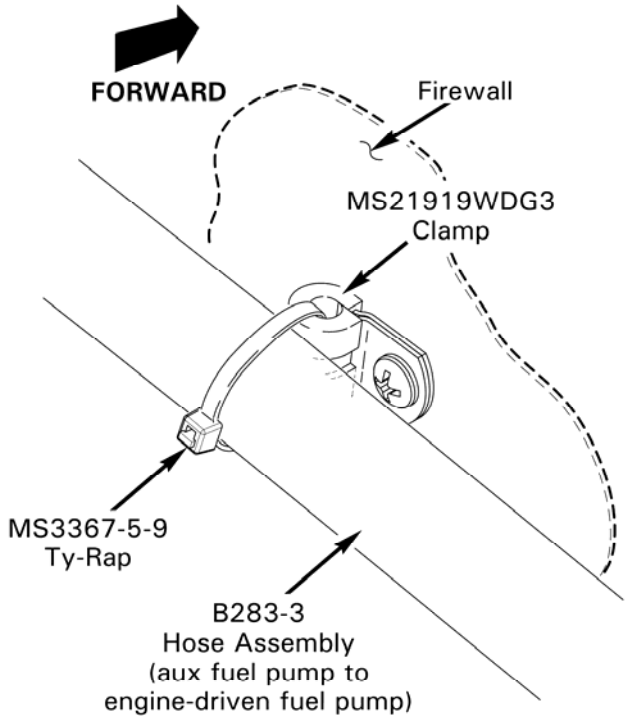

FIGURE 1

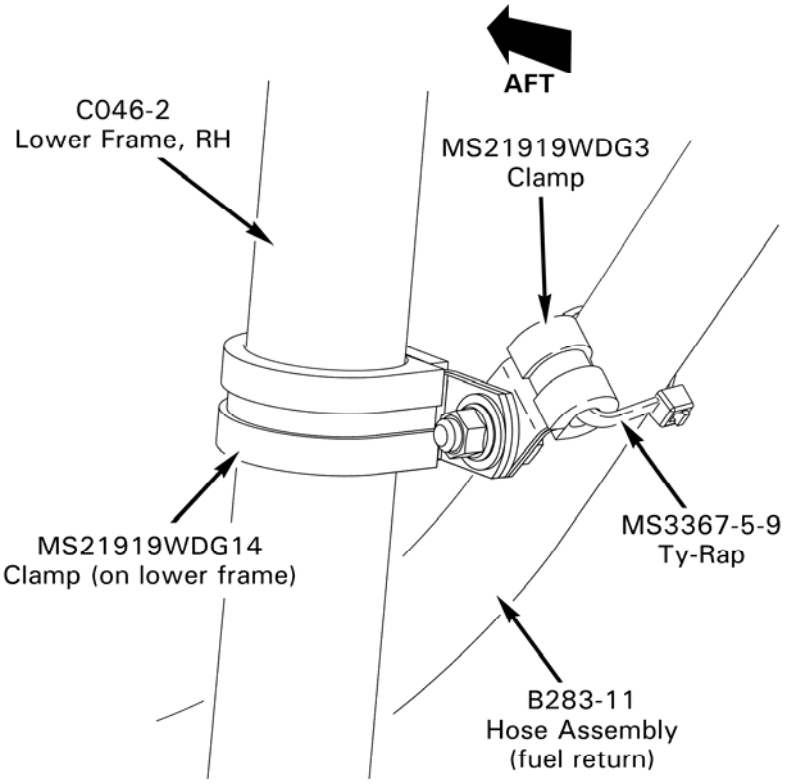

FIGURE 2

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R44

SERVICE BULLETIN SB-68

(supersedes Service Bulletin R44 SB-31)

DATE: 25 March 2009

TO: R44 and R44 II Owners, Operators, and Service Centers

SUBJECT: Rigid fuel line replacement

ROTORCRAFT AFFECTED: R44 Helicopters S/N 0001 thru 2043, and R44 II Helicopters S/N 10001 thru 12723, unless previously accomplished.

TIME OF COMPLIANCE: Within next 100 flight hours or by 31 July 2009, whichever occurs first.

BACKGROUND: In an accident, rigid fuel lines may be susceptible to damage. This service bulletin requires replacing rigid lines with flexible hoses to reduce the likelihood of a post-accident fuel leak.

COMPLIANCE PROCEDURE:

From RHC Customer Service (via RHC web site or by phone), order one KI-194 Kit for each affected R44-series (carbureted) helicopter, or one KI-195 Kit for each affected R44 II-series (fuel-injected) helicopter, and install per kit instructions. Kit instructions are available online at: www.robinsonheli.com/servelib.htm.

Approximate Cost:

Parts: R44 Helicopters S/N 1677 and subsequent, and R44 II Helicopters S/N 12100 and subsequent, are under warranty. No charge if ordered by 31 July 2009.

KI-194: R44 Helicopters S/N 0001 thru 1676, $185 if ordered by 31 July 2009.
KI-195: R44 II Helicopters S/N 10001 thru 12099, $295 if ordered by 31 July 2009.

Order must include helicopter serial number.

Labor: 4.0 man-hours for R44-series helicopters.
4.5 man-hours for R44 II-series helicopters.

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.

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R44 SERVICE BULLETIN SB-78B

DATE: 20 December 2010 **REV B:** 28 September 2012

TO: R44 and R44 II owners, operators, and maintenance personnel

SUBJECT: Bladder Fuel Tank Retrofit

ROTORCRAFT AFFECTED: R44 helicopters S/N 0001 thru 2064, and R44 II helicopters S/N 10001 thru 12890, unless previously accomplished.

TIME OF COMPLIANCE: As soon as practical, but no later than 30 April 2013.

BACKGROUND: This bulletin requires R44 helicopters with all-aluminum fuel tanks to be retrofitted with bladder-type tanks. In addition to a factory retrofit program, a field kit is now available. To improve the R44 fuel system's resistance to a post-accident fuel leak, this retrofit must be performed as soon as possible.

COMPLIANCE PROCEDURE:

Order one KI-196-1 kit for R44, or one KI-196-2 kit for R44 II, from RHC Customer Service and install per kit instructions. Kit includes main and auxiliary bladder tanks, installation hardware, hoses, and instructions. Kit instructions also available online at www.robinsonheli.com/servelib.htm.

Alternately, return helicopter to RHC for factory retrofit (ref. R44 SL-36).

Note: Retrofit requires substantial sheet-metal work. Paint refinishing for aesthetics may be desired.

Approximate Cost:

Parts: $6800 for KI-196-1 or -2 kit. Reference helicopter model and serial number. Fuel tanks are supplied painted white.

Labor: Approximately 40 man-hours (paint refinishing not included).

Note: Normal Service Center discounts do not apply. (Refer to RHC memo dated 28 May 1997.)

ROBINSON
HELICOPTER COMPANY

Safety Notice SN-9

Issued: Jul 82 Rev: Jun 94

MANY ACCIDENTS INVOLVE DYNAMIC ROLLOVER

A dynamic rollover can occur whenever the landing gear contacts a fixed object, forcing the aircraft to pivot about the object instead of about its own center of gravity. The fixed object can be any obstacle or surface which prevents the skid from moving sideways. Once started, dynamic rollover cannot be stopped by application of opposite cyclic alone. For example, assume the right skid contacts an object and becomes the pivot point while the helicopter starts rolling to the right. Even with full left cyclic applied, the main rotor thrust vector will still pass on the left side of the pivot point and produce a rolling moment to the right instead of to the left. The thrust vector and its moment will follow the aircraft as it continues rolling to the right. Quickly applying down collective is the most effective way to stop a dynamic rollover.

To avoid a dynamic rollover:

1) Always practice hovering autorotations into the wind and never when the wind is gusty or over 10 knots.

2) Never hover close to fences, sprinklers, bushes, runway lights or other obstacles a skid could catch on.

3) Always use a two-step liftoff. Pull in just enough collective to be light on the skids and feel for equilibrium, then gently lift the helicopter into the air.

4) Do not practice hovering maneuvers close to the ground. Keep the skids at least five feet above the ground when practicing sideward or rearward flight.