

**SERVICE BULLETIN SB-36**

**DATE:** 5 November 1999

**TO:** All R44 Owners, Operators, and Service Centers

**SUBJECT:** C188-3 Sprag Clutch

**ROTORCRAFT AFFECTED:**

R44 Helicopters S/N 0001 through 0541 and S/N 0543, 0550, 0556, and 0565.

**NOTE**

This SB expands the range of suspect sprag clutches from those specified in SB-32 to include C188-3 sprag clutch S/Ns 0453 through 0505. Some sprag clutches in the expanded range were shipped as replacement parts. Therefore, perform Step 1 of compliance procedure even if sprag clutch was replaced under SB-32.

**TIME OF COMPLIANCE:**

Part A: Within next 10 flight hours or by 30 November 1999, whichever occurs first.

Part B: Within next 50 flight hours or by 31 January 2000, whichever occurs first.

**BACKGROUND:** Two sprag clutches outside the suspect range of SB-32 have been found with cracked sprag ends necessitating expansion of the suspect range.

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**COMPLIANCE PROCEDURE:**

1. Check C188-3 sprag clutch data plate located on aft face of upper sheave. C188-3 sprag clutch S/Ns 0453 through 0505 must be replaced. No further action is required for sprag clutch S/Ns 0506 and subsequent.
2. For C188-3 S/N 0453 through 0505, insert enclosed Special Pilot Caution (page 3) between pages 4-8 and 4-9 in Normal Procedures section of Rotorcraft Flight Manual, then perform Part B of R44 SB-32.

(OVER)

**APPROXIMATE COST:**

**Parts:** No charge. (\$3600 core charge, when applicable, will be refunded if clutch core is returned to RHC within 15 days. Warranty applies to replacement clutch but does not include transportation or labor performed outside RHC factory).

**NOTE:** If sprag clutch was already replaced in compliance with SB-32 and is now required to be replaced a second time to comply with SB-36, RHC will issue \$200 labor credit to the service center performing the labor for SB-36.

Order must reference C188-3 sprag assembly S/N.

## U R G E N T

### SPECIAL PILOT CAUTION

*To be inserted in the Normal Procedures Section of the Rotorcraft Flight Manual of all aircraft affected by R44 SB-36.*

*Also distribute copies to all pilots flying these aircraft.*

Date: 5 November 1999

#### **To: All R44 Pilots**

Some sprags in overrunning clutches have been found cracked in service. A broken sprag could conceivably prevent the clutch from overrunning when entering autorotation. Until the clutch in this aircraft has been replaced, do not enter practice autorotations by rapidly closing or "chopping" the throttle. "Chopping" the throttle could result in a sudden loss of rotor RPM if the clutch failed to disengage.

Enter autorotation by first lowering collective and then rolling off just enough throttle to produce a small visible split between the rotor and engine tachometer needles. If the clutch fails to disengage, immediately complete a power recovery. Perform hovering autos only after checking the function of the overrunning sprag clutch prior to lift-off, then smoothly rolling off the throttle from a low hover with the skids no more than two feet above the ground.

Be sure to perform the sprag clutch check (split tach needles) before every flight, not just the first flight of the day.

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*This page may be removed from the Flight Manual following clutch replacement.*