

SERVICE BULLETIN SB-34

DATE: 21 June 1999

TO: All R44 Owners, Operators, and Service Centers

SUBJECT: Tail Rotor Gearbox Output Shaft Bearing Preload

ROTORCRAFT AFFECTED: R44 Helicopters S/N 0002 thru 0616 except 0440, 0542, 0583, 0592, 0602, 0611, and 0614.

TIME OF COMPLIANCE: Within next 100 flight hours or by 30 September 1999, whichever occurs first.

BACKGROUND: Two R44 C021-1 tail rotor gearboxes have been found with spalling on the output shaft bearings. The gearboxes were returned to RHC after repeated tail rotor chip lights. To prevent further occurrences, bearing preload must be reduced on C021-1 Rev F and prior gearboxes by reducing the C117 shim stack 0.002 inches.

COMPLIANCE PROCEDURE:

1. Order KI-146 kit.
2. Refer to figure on page 2. Cut safety wire and remove four MS20074-04-06 bolts securing C112-2 cap. Place a container under gearbox. Slide C112-2 cap away from gearbox and allow oil to drain into container (tail may be pulled down to promote oil drainage). Wipe cap and gearbox mating surfaces clean (cap o-ring and seal will be reused).
3. Slide C117 shims out of gearbox housing. Measure thickness of each shim.
CAUTION: Do not scratch shaft.
4. Select one C117 shim from step 3 that is 0.002 inch thicker than one shim from KI-146 kit.
5. Replace shim selected in step 4 with shim from KI-146 kit. (Installed shim must be cut for removal.) Replacement shim location in shim stack is not critical.
6. Position C117 shim stack against bearing and slide C112-2 cap into position.
7. Install MS20074-04-06 retaining bolts, torque to 60 inch-pounds, and safety wire.
8. Fill gearbox with new A257-2 gear oil. Torque filler vent plug to 100 inch-pounds and safety wire.

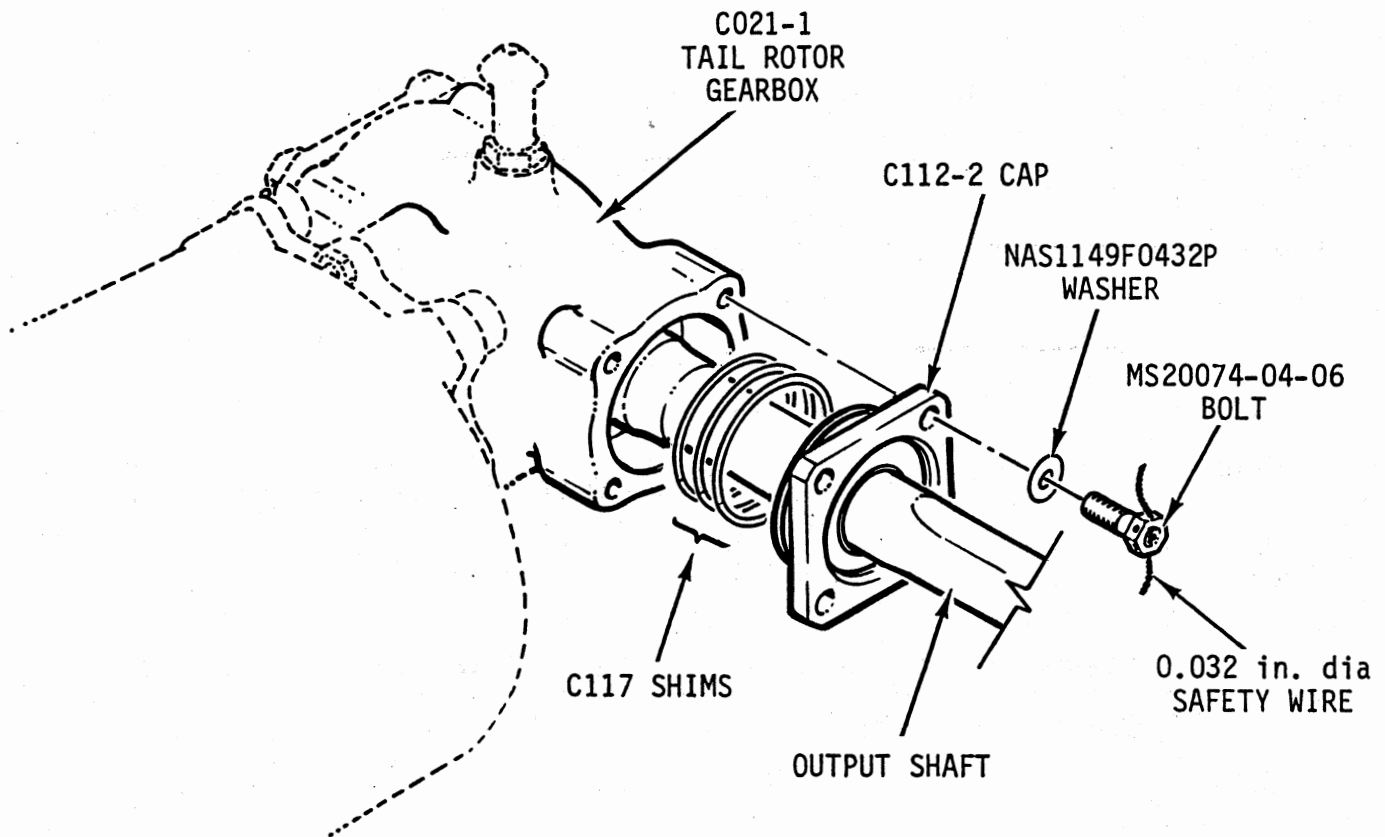
(OVER)

9. Mark gearbox with a 0.25 inch diameter white painted dot between sight gage and data plate.
10. Make appropriate maintenance record entry.

Approximate Cost:

Parts: No charge if ordered by 31 August 1999. Order must include helicopter serial number.

Labor: 1.0 manhour.



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