

R66 SERVICE BULLETIN SB-20B
(supersedes R66 SB-14 and R66 SB-20A)

DATE: 07 November 2016 **REV B:** 20 December 2017

TO: R66-series Owners, Operators, and Maintenance Personnel

SUBJECT: Tail Rotor Drive Shaft Bearings

ROTORCRAFT AFFECTED: R66 Helicopters S/N 0003 thru 0752. Spare D224-3 tail rotor drive shafts are also affected. Spare D224-4 tail rotor drive shafts are affected by part B only.

TIME OF COMPLIANCE: Original compliance time was no later than 31 January 2017. Compliance time is unchanged.

BACKGROUND: Part A of this bulletin requires upgrading the hanger bearing assembly at the forward yoke of the D224-3 tail rotor drive shaft assembly to a larger bearing. Part B of this bulletin requires applying sealant to both the hanger bearing and the damper bearing (further aft on the shaft) to prevent seal rotation and possible loss of lubricant. As indicated by the compliance procedure, older tail rotor drive shafts may have already been modified with larger hanger bearings and all new parts include larger hanger bearings; these shafts will not require hanger bearing replacement but will still require part B. The newest versions of both bearings have data plates and tighter seal fits and do not require sealant.

COMPLIANCE PROCEDURE:

Part A:

D224-3 drive shafts **with** a B900-11 modification data plate have the larger hanger bearing and do not require KI-235 kit installation. Also, all D224-4 drive shafts have larger hanger bearings and do not require KI-235 kit installation.

1. Refer to Figure 1. If a D224-3 tail rotor drive shaft assembly **without** a B900-11 modification data plate is installed, order one KI-235 bearing upgrade kit from RHC Customer Service and install kit per kit instructions.
2. Remove (pink-colored) Special Pilot Caution for R66 SB-14, dated 25 June 2015, from Pilot's Operating Handbook.
3. Make appropriate maintenance record entries to reflect compliance with Part A of this bulletin. No change to helicopter weight and balance.

(OVER)

Part B:

Refer to Figure 1. If a data plate is installed on the C041-13 arm or damper bearing housing, then the damper bearing is latest version and no sealant is required; if a data plate is installed on the D195-3 yoke or hanger bearing housing, then the hanger bearing is latest version and no sealant is required. Bearings without data plates require sealant per the following:

1. If D224 shaft is installed in tailcone: Remove forward inspection plug assembly from tailcone. Remove B322-2 cover from atop tailcone third bay, or if antenna is installed, pull associated avionics circuit breakers and remove antenna. Remove tailcone cowling per R66 Maintenance Manual (MM) § 53-23.
2. Visually inspect forward and aft faces of hanger and damper bearings (refer to R66 Illustrated Parts Catalog Figures 65-5 & 65-7) and verify minimum 0.5 inch length of B270-1 sealant anywhere along junction of black seal and bearing outer race.
3. As applicable, clean accessible portion of bearings lacking sealant with cotton swabs dampened with acetone. Using a smooth, rounded tool of sufficient length, apply a minimum 0.5 inch long bead of B270-1 sealant at most accessible junction of seal and bearing outer race; sealant contact with housing is permissible. Allow sealant to cure. Sealant is required on both bearing faces (forward and aft).
4. Install forward plug assembly and verify security. Install B322-2 cover, or install antenna and push in associated circuit breakers. Verify cover or antenna security. Install tailcone cowling per MM § 53-23.
5. Make appropriate maintenance record entries to reflect compliance with Part B of this bulletin. No change to helicopter weight and balance.

APPROXIMATE COST:

Part A:

Parts: \$950 for one KI-235 kit, if required.
Labor: 5 man-hours.

Part B:

Parts: \$30.25 for B270-1 sealant (2 oz).
Labor: 1 man-hour.

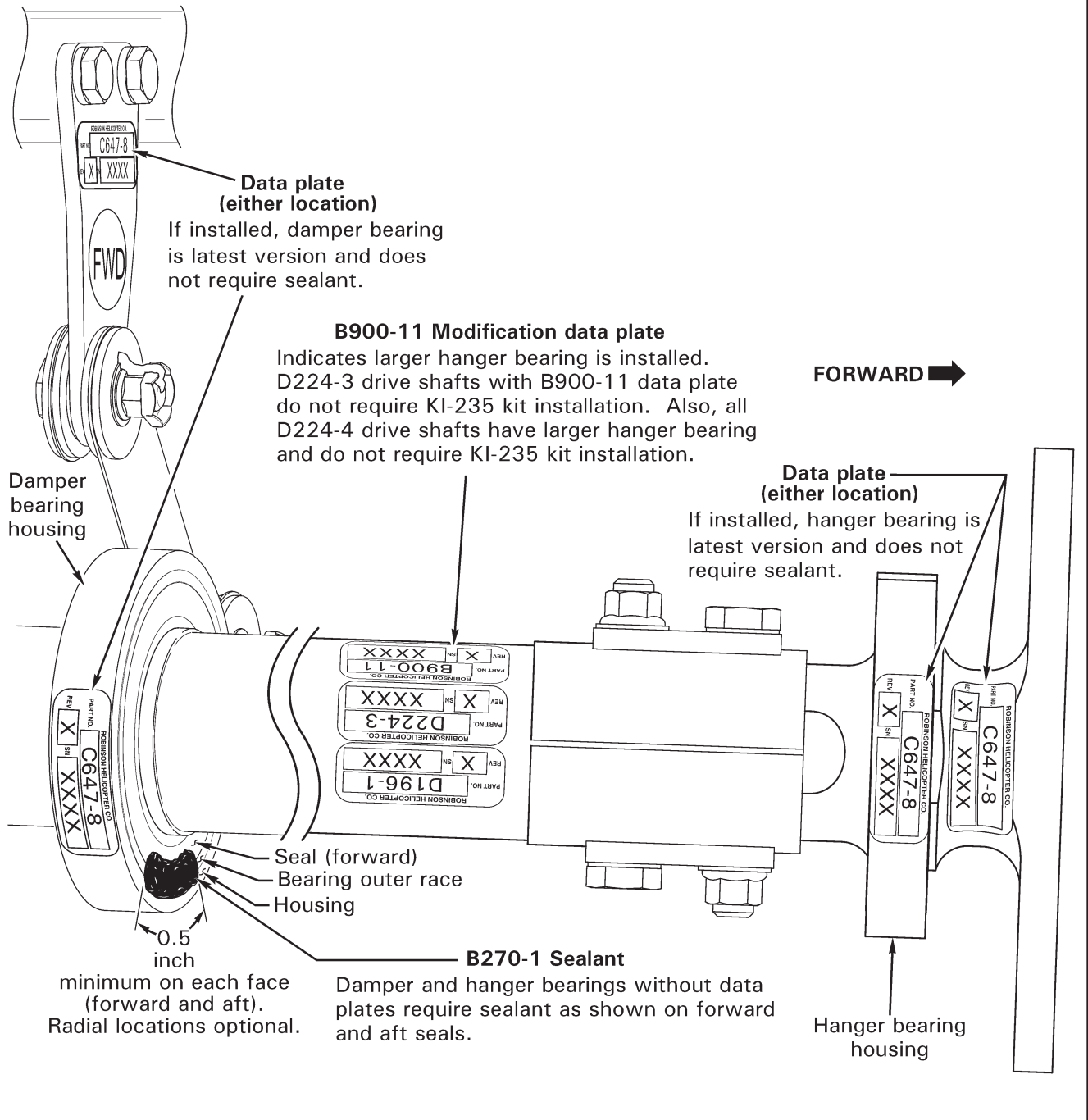


FIGURE 1

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