R44 SERVICE BULLETIN SB-119A
(supersedes R44 SB-119)

R66 SERVICE BULLETIN SB-45A
(supersedes R66 SB-45)

DATE: 11 May 2026 **REV A:** 22 May 2026

TO: R44-series & R66 Owners, Operators, and Maintenance Personnel

SUBJECT: Hydraulic Servo-to-Swashplate Push-Pull Tube Connections

AFFECTED AIRCRAFT:

R44 Helicopter S/Ns 2819 & prior,
R44 II Helicopter S/Ns 14878 & prior,
R44 Cadet Helicopter S/Ns 30108 & prior,
R66 Helicopter S/Ns 1467 & prior.

TIME OF COMPLIANCE: At the next 100-hour inspection or annual inspection, whichever occurs first.

BACKGROUND: The flight control connections between the hydraulic servos and the swashplate are highly loaded and require close attention during scheduled inspections. Recent investigations indicate non-compliance with Maintenance Manual (MM) procedures, which can result in serious injuries or fatalities. This Service Bulletin implements a one-time inspection to identify and correct loose or damaged flight control connections caused by any non-compliance.

COMPLIANCE PROCEDURE:

1. As required, remove all screws from right hand side of mast fairing and open fairing. Fully raise collective on R44-series helicopters.

2. Examine area around the (3) hydraulic servo-to-swashplate push-pull tube connections for any evidence of looseness, such as broken torque stripe or residue buildup from operation while loose. Note all findings, identifying both residue & source for follow-up examination. Residue may be fretting dust, magnetic-metal, non-magnetic metal, corrosion products, grease, etc. Metallic residue may indicate structural damage and requires careful attention. Residue may be visible on adjacent structure (such as splatter on mast fairing interior) and not on the source part itself.

CAUTION

Use LPS PreSolve to clean hydraulic parts; do not use alcohol.

(OVER)

3. Refer to Figure 1. Clean hydraulic servo-to-swashplate push-pull tube connections and remove old torque stripe. Remove & discard (3) stamped nuts from bolts. Completely loosen (3) stamped nuts on rod ends, and completely loosen (3) stamped nuts on clevises; exercise care to loosen stamped nuts only and not AN316-6R nuts.

> NOTE
>
> Using a currently calibrated torque wrench, complete torque checks prior to disassembling or replacing components.

4. Perform AN316-6R nut torque check as follows:
   a. Hold adjacent clevis immobile & apply 75 in.-lb tightening torque to (6) AN316-6R nuts. If nut does not rotate on threads, proceed to step 4.b. If nut rotates on threads, insufficient clamp-up during operation is indicated; flag rotated nut(s) as “75 in.-lb”.
   b. Hold adjacent clevis immobile & apply standard 110 in.-lb tightening torque to remaining unflagged AN316-6R nuts. If nut rotates on threads, insufficient clamp-up during operation may be indicated; flag rotated nut(s) as “110 in.-lb”.
5. Perform D210-5 nut torque check as follows:
   a. Hold NAS6605-9 bolt immobile & apply 180 in.-lb tightening torque to (3) D210-5 nuts. If nut does not rotate, proceed to step 5.b. If nut rotates on threads, insufficient clamp-up during operation is indicated; flag rotated nut(s) as “180 in.-lb”.
   b. Hold NAS6605-9 bolt immobile & apply standard 240 in.-lb tightening torque to remaining unflagged D210-5 nuts. If nut rotates on threads, insufficient clamp-up during operation may be indicated; flag rotated nut(s) as “240 in.-lb”.
6. If any nut rotated on threads, refer to Table 1. Inspect and/or replace components associated with only the nut(s) flagged in steps 4 or 5. If no nut rotated on threads, Table 1 does not apply. Rounded AN316-6R or D210-5 nuts without damaged threads or fretting may be replaced individually as required. Verify all sources of residue in step 2 have been appropriately identified and addressed.

> NOTE
>
> Apply B270-21 protectant to push-pull tube threaded hole and servo threaded hole before assembly. Do not apply B270-21 to parts until LPS PreSolve has evaporated.

7. Install (3) new B330-16 stamped nuts on (3) NAS6605-9 bolts. Standard torque stamped nuts per R44 MM § 23-32 or R66 MM § 20-32.
8. While holding adjacent clevis immobile, standard torque (6) B330-19 stamped nuts per R44 MM § 23-32 or R66 MM § 20-32.

9. Refer to Figure 1. Clean and dry surfaces for torque stripe application. Fully lower collective. Apply torque stripe. When applying torque stripe to the D200-1 clevis-to-piston connection, the stripe must be visible from the right side of the aircraft and extend from the clevis, across all hardware, to the piston; ensure torque stripe does not contact retainer when piston is in lowest position.

10. Coat all exposed threads with B270-21 protectant. Ensure B270-21 does not disturb torque stripe.

11. Close and secure mast fairing.

12. If any loose hardware was detected during torque checks, notify ts1@robinsonheli.com of findings. In Subject, specify R44 or R66 & S/N, helicopter total time, and registration. In body of email, briefly describe fault(s) found and location(s).

    Example:

    "[Subject]: R44 sn 0001, 5525 TTAF, NX44RH.
    [Body]: AN316-6R nut on forward LH clevis moved at 110 in-lb. Thread check was satisfactory."

13. Make appropriate maintenance record entries.

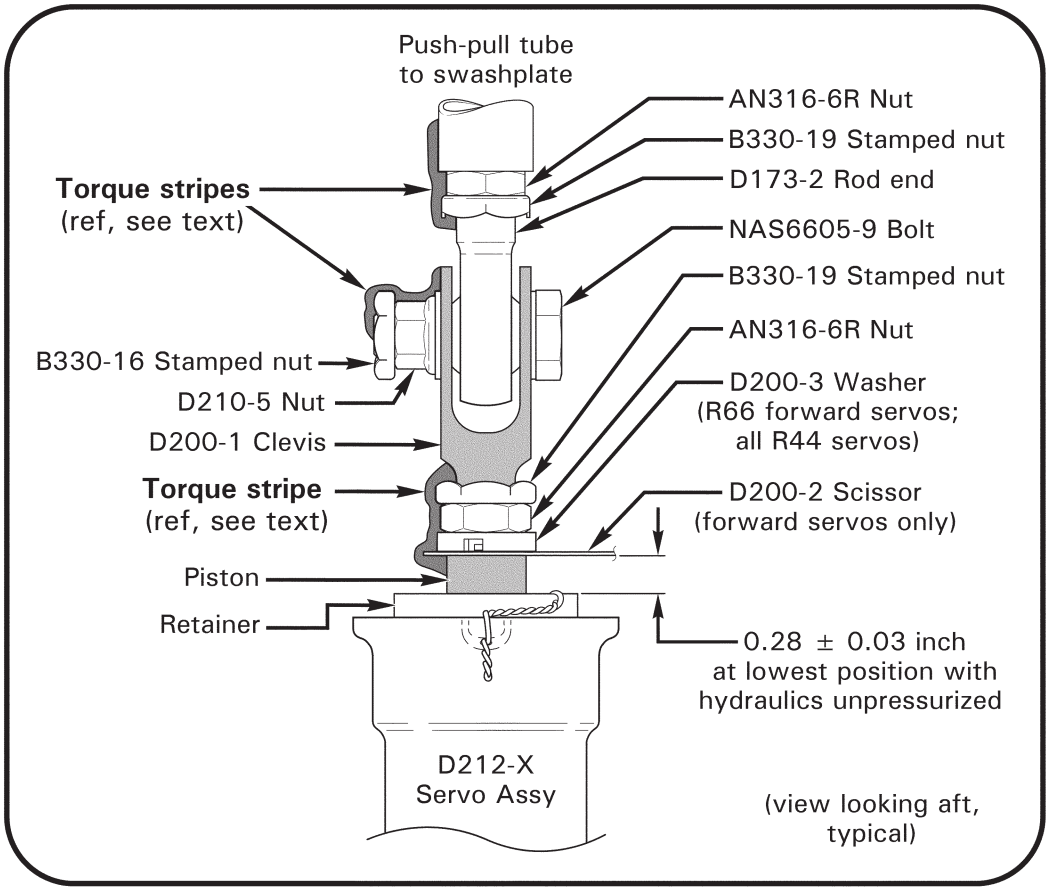

Figure 1: Hydraulic Servo-to-Swashplate Push-Pull Tube Connection (3 Places)

NOTE

Refer to the appropriate Maintenance Manual for removal, installation, or adjustment of any components for actions required by Table 1.

Affected Nut	Torque Applied	Action to Perform **if Affected Nut Rotated on Threads**
AN316-6R nut against push-pull tube	75 in.-lb	Replace push-pull tube assembly.[1]
	110 in.-lb	• Measure and record push-pull tube assembly overall length. • Remove D173-2 rod end and inspect clamped parts for fretting or damaged threads. If any such damage is found, replace push-pull tube assembly.[1] • If no such damage is found, inspect threaded hole minor diameter per Figure 2. If threaded hole diameter check fails inspection, replace push-pull tube assembly.[1] • Reassemble as required to recorded length.
AN316-6R nut on clevis	75 in.-lb	Remove D212 servo[2] and replace with serviceable unit. Replace nut, stamped nut, clevis, washer, and scissor.
	110 in.-lb	• Measure and record dimension between D200-1 clevis hole center and top of servo piston shaft. • Remove nut, stamped nut, clevis, washer, and scissor and inspect clamped parts for fretting or damaged threads. If any such damage is found, remove D212 servo[2] and replace with serviceable unit. Replace remaining clamped parts. • If no such damage is found, inspect piston threaded hole minor diameter per Figure 2. If threaded hole diameter check fails inspection, remove D212 servo[2] and replace with serviceable unit. Replace remaining clamped parts. • Reassemble as required to recorded dimension.
D210-5 nut	180 in.-lb	• Measure and record dimension between D200-1 clevis hole center and top of servo piston shaft. • Replace bolt, nut, washer, and clevis[3].
	240 in.-lb	• Measure and record dimension between D200-1 clevis hole center and top of servo piston shaft. • Disassemble bolt, nut, and washer from clevis. Inspect clamped parts for damage such as fretting, thread deformation, hole elongation, etc. If any such damage is found, replace all clamped parts[3]. If no such damage is found, reassemble clamped parts[3].

Notes:
1: Adjust replacement push-pull tube assembly to recorded length of removed push-pull tube assembly.
2: Submit removed D212 servo to RHC for repair.
3: Adjust clevis height to recorded dimension (1.40±0.03 inches; refer to MM).

Table 1: Maintenance Action Required Upon Nut Rotation

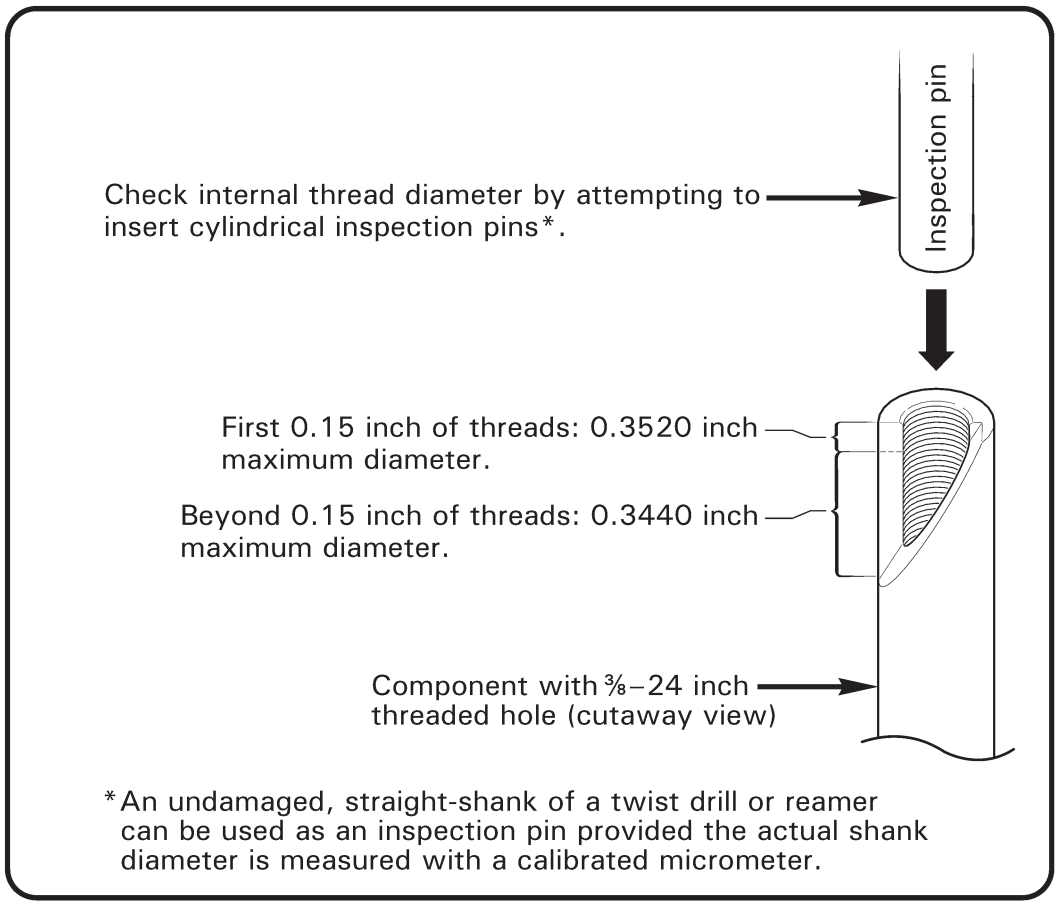

Figure 2: Component Internal Threaded Hole Diameter Check

APPROXIMATE COST:

Parts: (3) B330-16 stamped nuts, ($0.95 each)
Labor: 2 labor-hours for inspection. Rectification labor, if needed, is as required.