R44 SERVICE BULLETIN SB-120

DATE: 30 October 2026

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

SUBJECT: Clutch Assembly Magnetic Plug Retrofit and Inspection

EFFECTIVITY: C018-2, -3, -4, and -5 clutch assemblies without factory-installed B569-1 magnetic plugs are affected by this bulletin. Factory-installed B569-1 magnetic plugs began production in October 2026 and have a dot of orange paint applied to head; see Reference Image on page 5.

TIME OF COMPLIANCE: Within 100 flight hours, but before the next 500-hour clutch lubricant inspection, or by 30 October 2027, whichever occurs first.

BACKGROUND: Excessive wear of internal clutch components can result in momentary sprag clutch slippage. This bulletin requires the installation of (2) B569-1 magnetic plugs in all clutch assemblies to capture ferrous debris. The 100-hour/annual inspection requirements in the R44 Maintenance Manual (MM) will be revised to include an inspection of these magnetic plugs. This bulletin also requires a one-time ground run and inspection if clutch assembly time in service is 1000 hours or more, or if time in service is unknown.

COMPLIANCE PROCEDURE:

> NOTE
>
> Do not drain clutch assembly or replace existing fluid prior to performing compliance procedure. Existing fluid must remain in clutch for valid inspection results.

Part A Screw Replacement

1. As required, order (2) B569-1 magnetic plugs.

> **CAUTION**
>
> Do not allow magnets to strike metallic surfaces with force. Abrupt contact can break magnet. B569-1 magnetic plugs with damaged magnets or compromised magnet plating are unairworthy.

2. Remove C706-1 tailcone fairing assembly. Remove hardware securing C723-6 cover to C723-1 bulkhead assembly and remove cover.

(OVER)

COMPLIANCE PROCEDURE (continued):

Part A Screw Replacement (continued)

3. Refer to Figure 1. Rotate upper sheave by hand to locate B289-3 screw in both forward and aft retainers. If either screw is not present, then clutch assembly must be removed from service.

NOTE
Ensure B569-1 magnetic plug is clean prior to installation.

4. Rotate upper sheave until forward retainer's B289-3 screw is at highest position. Remove screw. Install B569-1 magnetic plug (#3 Phillips) and torque to 50 inch-pounds.
5. Rotate upper sheave until aft retainer's B289-3 screw is at highest position. Remove screw. If fluid level is not visible, top off fluid with A257-4 lubricant. Install B569-1 magnetic plug and torque to 50 inch-pounds.
6. If clutch assembly time in service is 1000 hours or more, or if time in service is unknown, perform ground run and magnetic plug inspection per Part B. If clutch assembly time in service is less than 1000 hours, continue to step 7.
7. Apply minimum 0.1 inch diameter dot of orange torque seal or paint to head of both B569-1 magnetic plugs for future identification.
8. Install C723-6 cover on C723-1 bulkhead assembly. Install C706-1 tailcone fairing assembly; connect antenna cable(s) and ground wire(s).
9. Make appropriate maintenance record entries.

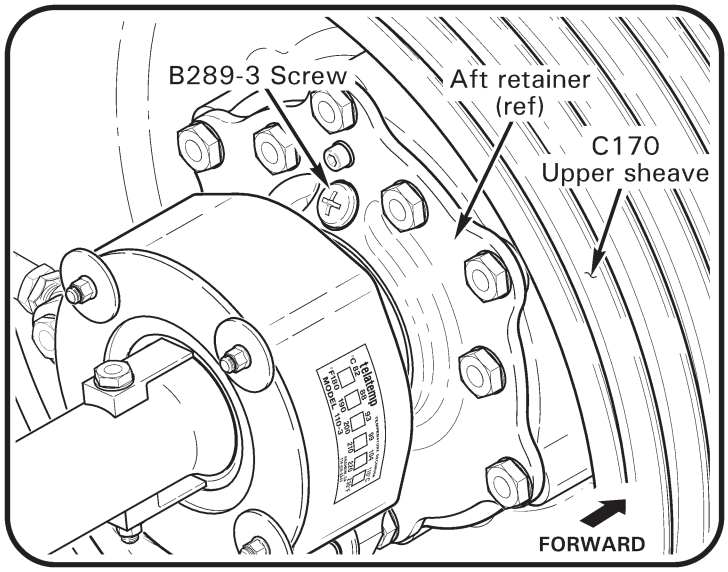

Figure 1: B289-3 Screw Location in C168-5 Retainer

COMPLIANCE PROCEDURE (continued):

Part B Ground Run & Magnetic Plug Inspection

NOTE
One-time ground run and magnetic plug inspection is only required if clutch assembly time in service is 1000 hours or more, or if time in service is unknown.

1. Secure disconnected antenna cable(s) and ground wire(s) to prevent contact with drive train.
2. Have a qualified person perform ground run as follows:
   a. Run up helicopter to 102% RPM per applicable Pilot's Operating Handbook (POH) Section 4.
   b. From 102% RPM, abruptly close throttle to bring engine RPM to idle; ensure tachometer needles split appropriately.
   c. Wait for rotor RPM to match engine RPM, then increase throttle to 102% RPM.
   d. Repeat steps 2.b. and 2.c. four (4) times.
   e. Continue ground run as required to ensure total duration of run is at least 5 minutes.
   f. Shut down helicopter.
3. Rotate upper sheave until forward retainer's B569-1 magnetic plug is at highest position. Carefully remove plug and ensure magnet retains all collected debris.
4. Fill a clean, nonmagnetic container with a few ounces of aviation gasoline (avgas). Hold magnetic plug carefully and submerge in avgas to remove as much oil as practical without disturbing magnetic debris. Allow magnetic plug to air dry.

NOTE
10x magnification may be useful as a visual aid during debris measurement and particle evaluation.

5. Measure and record combined debris and magnet height using a 0.01 inch resolution scale per Figure 2 Step 1.
6. Use a clean, lint-free cloth to collect all debris from magnetic plug; set cloth aside for later inspection.
7. Measure and record magnet height using a 0.01 inch resolution scale per Figure 2 Step 2.
8. Calculate debris height by subtracting magnet height from total height of magnet with debris. Debris height = [(step 5 measurement) – (step 7 measurement)]. Record result.

(OVER)

COMPLIANCE PROCEDURE (continued):

Part B Ground Run & Magnetic Plug Inspection (continued)

9. If calculated debris height is less than or equal to 0.02 inch, proceed to step 10. If calculated debris height exceeds 0.02 inch, record failed inspection result.
10. Visually inspect debris on cloth(s) collected in step 6. Debris may be black flake(s), chip(s), small particle accumulation, and/or thin metallic slivers. If any piece of debris exceeds 0.050 inch in any direction, record failed inspection result.
11. If plug failed step 9 or step 10 inspection, reinstall B289-3 screw. If inspection results are acceptable, ensure B569-1 magnetic plug is clean, then reinstall in clutch and torque to 50 inch-pounds; apply minimum 0.1 inch diameter dot of orange torque seal or paint to head of magnetic plug for future identification.
12. Rotate upper sheave until aft retainer's magnetic plug is at highest position. Carefully remove plug to ensure magnet retains all collected debris. Repeat steps 4 thru 11 for aft magnetic plug.
13. If either magnetic plug failed step 9 or step 10 inspections, remove clutch assembly from service and submit to an RHC-authorized Component Maintenance Service Center for evaluation. Indicate on attached removal tag the failed inspection results and time since clutch assembly's last lubricant inspection and servicing (ref. MM § 7.210).
14. Install C723-6 cover on C723-1 bulkhead assembly. Install C706-1 tailcone fairing assembly; connect antenna cable(s) and ground wire(s).
15. Make appropriate maintenance record entries.

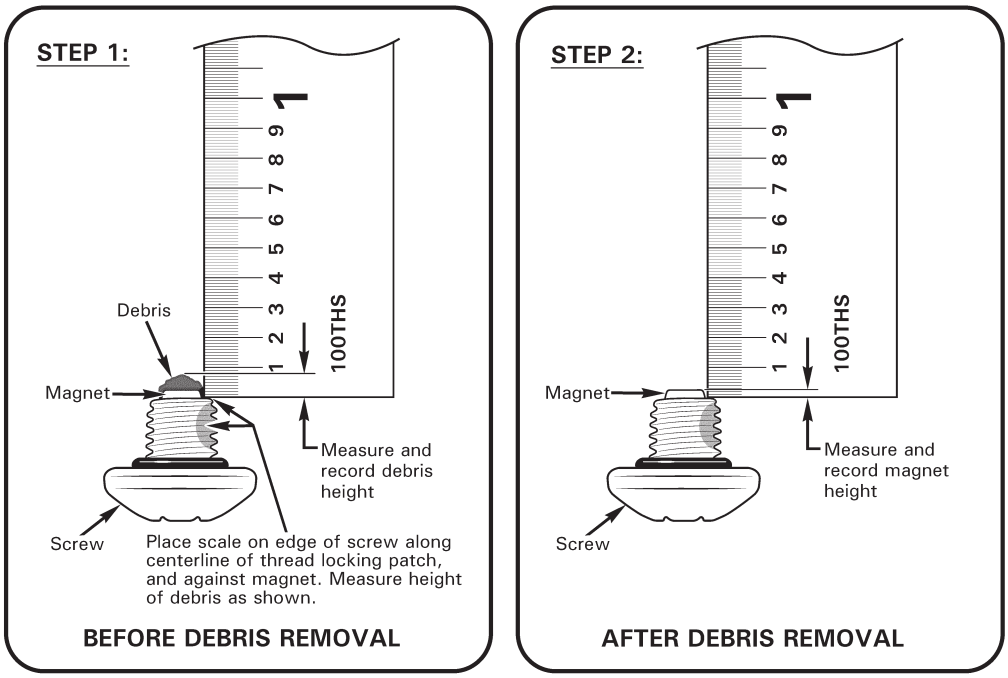

Figure 2: B569-1 Magnetic Plug Debris Measurement

Reference Image: Factory-installed B569-1 Magnetic Plug

APPROXIMATE COST:

Parts: (2) B569-1 Magnetic Plugs ($66.00 each)
Labor: (2) labor-hours

Aircraft Under Warranty Period:

(2) B569-1 magnetic plugs will be provided at no charge. Up to (2) labor-hours will be reimbursed at $140.00 USD per labor-hour allowance rate. When submitting warranty claim to your RHC Service Center, include reference to this Service Bulletin in Subject.

To Order Parts:

Contact your local RHC Service Center. Reference this Service Bulletin and provide the part number(s) and quantity required, aircraft serial number(s), and whether the aircraft is still covered under warranty.

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