A Textron Company

TECHNICAL BULLETIN **505-26-35**

5 August 2026

MODEL AFFECTED: **505**

SUBJECT: **505 LIVE MOUNT ASSEMBLY SLS-010-200-203/-204/-303/-304 SERVICING ON AIRCRAFT, INTRODUCTION OF.**

HELICOPTERS AFFECTED: **ALL**

COMPLIANCE: At customer's option.

DESCRIPTION:

This Technical Bulletin introduces maintenance tasks that can be performed at the field level, including gas chamber packing replacement, Fluorinert fluid replenishment, Schrader valve body replacement, and cavity purging for troubleshooting. These tasks are intended for use when unacceptably high in-flight Main Rotor 2/rev vibrations are experienced and all probable causes listed in the Maintenance Manual have been investigated.

APPROVAL:

The engineering design aspects of this bulletin are Transport Canada Civil Aviation (TCCA) approved.

CONTACT INFO:

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Approved for public release.

MANPOWER:

Approximately 8.0 man-hours are required to complete this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

WARRANTY:

There is no warranty credit applicable for parts or labor associated with this bulletin.

MATERIAL:

Required Material:
The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Supply Center. Materials list is for one LIVE Mount Assembly.

Part Number	Nomenclature	Qty (Note)
AS3209-231	Gas Chamber packing	1
MS27436-C1	Schrader Valve Assembly	1 (2)
NAS6603-13	Hardware Gas Chamber (bolt)	6 (1)
140-060-3	Hardware Gas Chamber (washer)	6 (1)
NAS1149E0332P	Hardware Gas Chamber (washer)	6 (1)
NAS9926-3L	Hardware Gas Chamber (nut)	6 (1)
AS3209-244	Upper / Lower cap (packing)	1 (2)
NAS1149F0432P	Upper / Lower cap (washer)	16 (1)
NAS9926-4L	Upper / Lower cap (nut)	16 (1)
AS4824A12	Crush seal tuning port fittings	2 (2)
SLS-010-275-101	Slotted bolt	1 (3)

NOTES:
1. As required.
2. As required if a leak is detected during pressure check.
3. As required if damage to bolt is observed.

Consumable Material:
The following material is required to accomplish this bulletin, but may not require ordering, depending on the operator's consumable material stock levels. This material may be obtained through your Bell Supply Center.

Part Number	Nomenclature	Qty (Note)	Reference *
2900-00569-00	Fluorinert Fluid	1(1)	Fluorinert Fluid TMC-3283 (2.75L jug) Commercially Available
083CV (or equivalent)	Loctite Thread Locker	1	Commercially Available

2100-09016-02	Corrosion Preventive Compound (gr 2)	1(1)	C-104
2100-10442-00	Corrosion Preventive Compound (gr 1)	1(1)	C-101
2400-00220-00	Ultrachem Assembly Fluid No 1.	1(1)	C-024

* C-XXX numbers refer to the consumables list in the BHT-ALL-SPM, Standard Practices Manual

NOTES:

1. Quantity indicated is the format that the product is delivered in. Actual quantity required to accomplish the instructions in this bulletin may be less than what has been delivered.

SPECIAL TOOLS:

- Westward 45JW45 valve core torque tool or equivalent.
- Parker flexible nylon tubing (NN-2-031) 1/8 OD 1/16 ID 5 feet (1.52 meters). https://ph.parker.com/ca/en/product/flexible-nylon-tubing-n-series/nn-2-031 or equivalent.
  Alternately, Clear polyurethane rubber tubing, (5648K67) 1/8 OD 1/16 ID 5 feet (1.52 meters). https://www.mcmaster.com/products/polyurethane/tubing-2~/?s=1%2F8+polyurethane or equivalent.
- Parker flexible nylon tubing, (NR-4-035) clear nylon tubing, 1/4 OD 0.180” ID 14 inches (35.5 cm) or equivalent.
- 500 ml syringe or equivalent.
- 1-liter graduate container or equivalent.
- Big Blu micro leak detector (to detect micro leaks) or equivalent. https://www.refrigtech.com/big-blu/
- Soft face mallet.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-505-IPB, Illustrated Parts Catalog
BHT-505-MM, Maintenance Manual
BHT-CMM-V, Component Maintenance Manual Vendor

PUBLICATIONS AFFECTED:

BHT-505-MM, Maintenance Manual

ACCOMPLISHMENT INSTRUCTIONS:

-NOTE-

This procedure can be performed on both LIVE mounts or on a single LIVE mount that is suspected of having an issue.

1. Prepare the helicopter for maintenance.

2. With a permanent ink marker, make a mark at the split lines and take pictures to ensure reassembly in the same position.

-NOTE-

Opening the LIVE mount to the atmosphere, either by removing the Schrader valve or removing the gas chamber cap, requires the Fluorinert fluid replenishment procedure to be accomplished. Once nitrogen pressure is depleted, Fluorinert fluid will bubble, allowing air to become trapped in bottom chamber. This trapped air can degrade ride quality.

3. Access gas chamber cap (2, Figure 1) of LIVE mount assembly. (DMC-505-A-53-40-01-00A-520A-A, DMC-505-A-53-40-02-00A-520A-A, DMC-505-A-53-40-03-00A-520A-A, DMC-505-A-53-40-04-00A-520A-A).

WARNING

Wear appropriate personal protective equipment and remain clear of path during release of pressured gas. Make sure to release all nitrogen pressure in the next steps.

-NOTE-

Fluorinert fluid TMC-3283 is the newest 2026 qualified fluid. Any previous Fluorinert fluid utilized (now obsolete) must be extracted from the LIVE mount prior to new Fluorinert fluid being utilized during the refilling procedure. Keep used Fluorinert fluid in a tightly sealed container until you have enough for a pickup. Fluorinert fluid can be recycled and/or disposed of with local hazardous waste collectors.

4. Deplete the nitrogen pressure from LIVE mount utilizing servicing work aid adapter or equivalent. Capture any Fluorinert fluid that may leak out during de-pressurization and set aside in a 1-liter sized graduated sealed container.

5. Remove hardware (3) securing gas chamber cap (2). Capture Fluorinert fluid during gas chamber cap (2) removal. Remove gas chamber cap (2).

6. Using a syringe and short tube extension, extract Fluorinert fluid from the bottom of the upper cap chamber (2, Figure 2). Capture extracted Fluorinert fluid.

7. Slowly remove slotted bolt (1) from the bottom of the upper cap chamber (2) to open access to port. Some small amounts of residual nitrogen pressure could be trapped.

8. Using a syringe and short tube extension, extract Fluorinert fluid from the upper cap chamber area (4, Figure 1) by accessing through slotted bolt port opening. Capture Fluorinert fluid.

-NOTE-

Cut polyurethane/nylon tubing to length with a sharp knife. Do not use cutters to not damage/crush the end opening.

9. As a guide to help insert the smaller diameter tubing (see photo below), first insert Parker flexible nylon tubing (NR-4-035), clear nylon tubing with 1/4" OD and 0.180" ID, cut to 14 inch (35.5 cm) length, or an equivalent, horizontally through the slotted bolt port opening and into the tuning port tube (6).

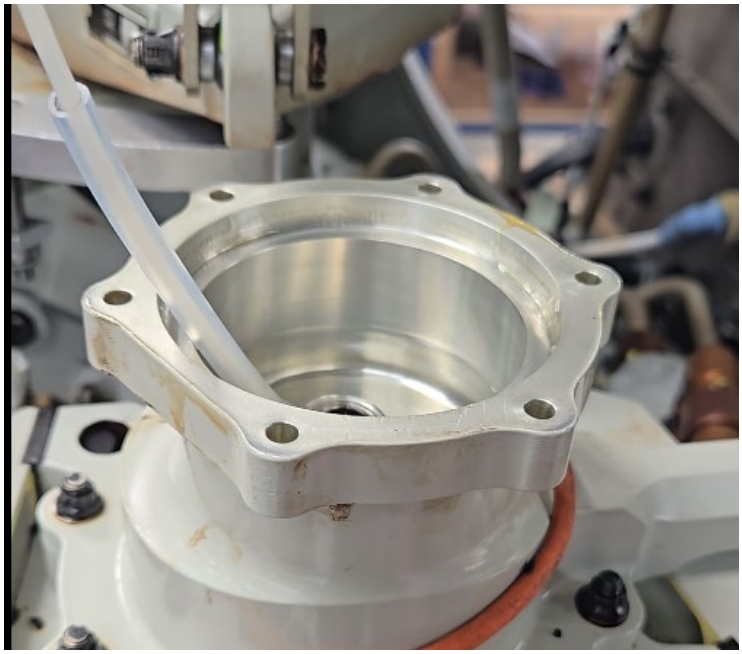


Photo showing tube and guide inserted into tuning port through slotted bolt port opening.

10. Guide the 1/16” polyurethane/nylon tubing (through the larger diameter guide tube) horizontally through the slotted bolt port opening and into the tuning port tube (6) until approximately 28 inches (71 cm) have been inserted. This will position the tube opening at the lowest point of the tuning port tube.

11. Using a 500 ml syringe (see photo below), extract as much Fluorinert fluid as possible from the tuning port tube (6) lowest point. Capture Fluorinert fluid. As you apply suction on syringe, move 1/16” polyurethane/nylon tube back and forth a few inches in tuning port tube (6) listening for complete Fluorinert fluid extraction.

Photo showing use of syringe, to extract Fluorinert fluid from lowest point.

12. Measure amount of captured Fluorinert fluid. A fully serviced LIVE mount will have between 690 ml and 720 ml of Fluorinert fluid depending on length of tuning port tube (6) in place.

13. If total quantity of Fluorinert fluid captured is less or LIVE mount needed constant repressurizing, a leak most likely exists, which could be very minute and difficult to detect. Provided two example videos available to download showing a minute leak. https://bh.my.salesforce.com/sfc/p/300000000EQR/a/Pd000005LsCD/aF4MVxucn4Th6uCQg2cPE8tNSkMuWzkrHXUlxgdeFS8

    https://bh.my.salesforce.com/sfc/p/300000000EQR/a/Pd000005LrRR/aqPKF4f8JfM_.nUEv37MqdsZPMmRmf6DJN64jxaAcJo

14. To help detect any suspect leaks (with Fluorinert fluid completely drained):

    a. Temporarily reinstall gas chamber cap (2) with same packing if found in good condition. Apply assembly fluid (C-024). Torque hardware (3) 50 to 55 inch-pounds (5.7 to 6.2 Nm).

    b. Service LIVE mount with nitrogen (DMC-505-A-12-10-08-00A-214A-A). Instead of 165 to 185 PSI (1138 to 1241 kPa), for this step pressurize to 230 PSI (1586 kPa). Remove servicing work aid.

    c. Using Big Blu micro leak detector or equivalent, apply to LIVE mount assembly at Schrader valve, at tuning port tube union fittings, at all bolted junctions including the elastomer as shown in Figure 3.

    d. Look for any signs of bubbles identifying a leak. If necessary, leave pressurized overnight and measure any drop in pressure considering temperature change variations.

WARNING

Wear appropriate personal protective equipment and remain clear of path during release of pressured gas. Make sure to release all nitrogen pressure in the next steps.

15. If a leak is found at any of following locations: Schrader valve, tuning port tube union fittings or at gas chamber bolted junction, upper/lower cap refer to Figure 3 for corrective action instructions.

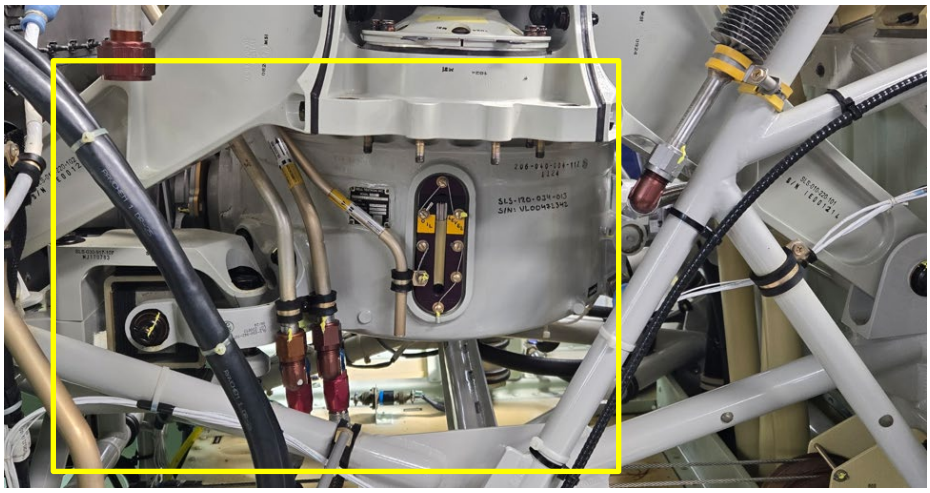


Photo shows lower cap housing removed to access and change crush seals at union fittings. To remove the upper or lower cap, the union fittings must be disconnected.

16. Once all leak points have been addressed and pressure tested at 230 PSI (1586 kPa) confirmed as good with no leaks, proceed with refill instructions below.

WARNING

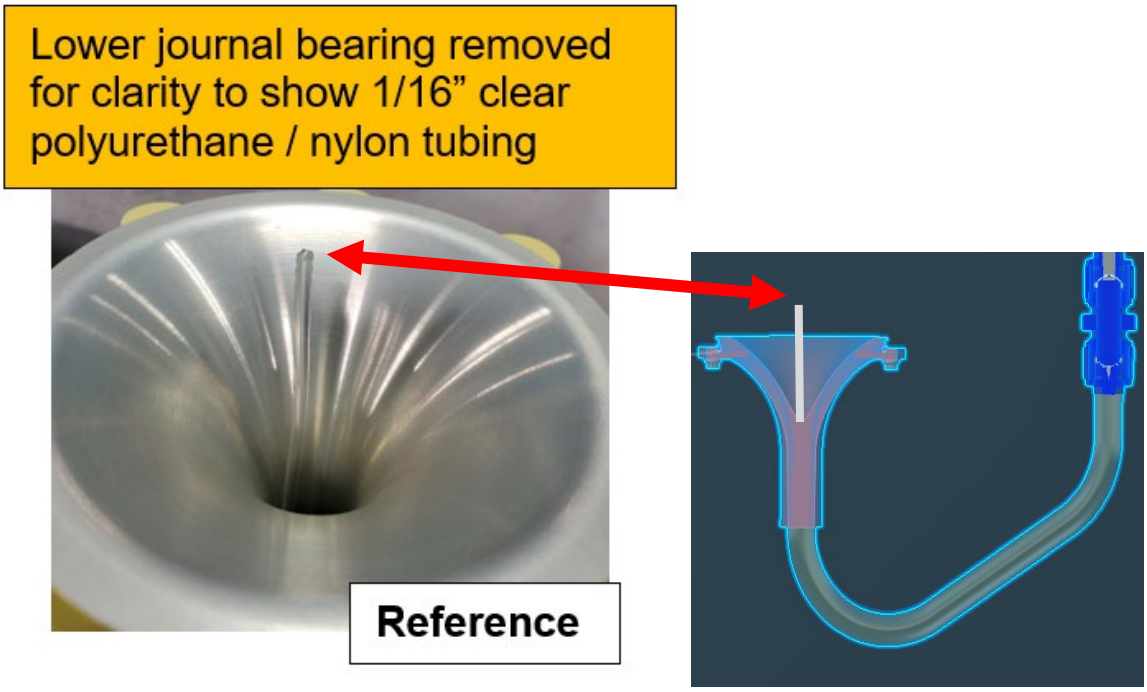
Wear appropriate personal protective equipment and remain clear of path during release of pressured gas. Make sure to release all nitrogen pressure in the next steps.

17. Remove hardware (3) securing gas chamber cap (2, Figure 1).

-NOTE-

For best results, heat the first 3 inches (7.6 cm) of 1/16" polyurethane/nylon tube to straighten prior to inserting.

18. Position 1/4" OD guide into tuning port then insert 1/16" clear polyurethane/nylon tubing a minimum of about 36 inches (91.4 cm) into tuning port, pushing far enough to position polyurethane/nylon tube up against bottom of lower journal bearing face.



a. As the polyurethane/nylon tubing is inserted, feel and listen as the straightened tube end reaches the lower chamber elastomer.

b. Polyurethane/nylon tube must be up against lower journal bearing elastomer. The purpose of this polyurethane/nylon tube position is to act as an air bleed port during LIVE mount filling.

19. Measure 720 ml of Fluorinert fluid TMC-3283 with a syringe or graduated container.

20. Slowly pour Fluorinert fluid into the upper cap chamber. Keep polyurethane/nylon tubing pointing upwards allowing trapped air to escape lower chamber area as Fluorinert fluid is being added.

21. As the Fluorinert fluid quantity nears 550 ml, fluid should start to show in the upper cap chamber bottom slightly above the slotted bolt port opening.

22. Install the 500 ml syringe on the 1/16” polyurethane/nylon tubing.

23. Utilize syringe suction to determine if air or liquid is being extracted from the lower journal bearing area.

24. While slowly adding Fluorinert fluid use the syringe to extract excess air up until level is flush with the bottom of slotted bolt port opening.

25. Pull polyurethane/nylon tubing out, readjust Fluorinert fluid level as needed to have it just above the slotted bolt port opening.

26. Tap the bottom lower chamber with a soft face mallet to free up any clinging air bubbles. Tap softly as required until bubbles are no longer seen coming up to surface.

27. With Fluorinert fluid level just above the slotted bolt port opening, install slotted bolt (1, Figure 2) into port opening, torque 150 to 200 inch-pounds (16.9 to 22.6 Nm).

28. Fill remainder of upper cap chamber with Fluorinert fluid up to 0.250 inch (6.35 mm) below the chamber bolt flange (7, Figure 1).

29. Verify the exact quantity of Fluorinert fluid utilized during the filling process. Total amount required for a dry LIVE mount is between 690 ml and 720 ml. If it is suspected that air remains trapped in the lower chamber not allowing the full quantity to be added, restart the drain and refill process (recover Fluorinert fluid TMC-3283).

30. As required, install a new replacement Schrader valve (1) if not already accomplished during the pressurization leak check procedure from Figure 3.

31. Install replacement packing AS3209-231 (8) on gas chamber cap (2) as follows:

    a. Apply Ultrachem assembly Fluid No 1 (C-024) to packing. Install gas chamber cap (2) in correct orientation matching the two flats for proper orientation.

    b. Apply Corrosion preventive compound (C-104) to the bolt shanks, install hardware (3) securing gas chamber. Countersunk washers go under the bolt heads.

    c. Torque hardware 50 to 55 inch-pounds (5.7 to 6.2 Nm).

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32. Service LIVE mount (DMC-505-A-12-10-08-00A-214A-A). Bring pressure reading to 180 PSI (1241 kPa) and keep regulated pressure applied for 5 minutes.

-NOTE-

If both LIVE mounts were serviced, the pressure drop between the LH and RH LIVE mounts should be equal indicating the fluid in both are absorbing the same amount of nitrogen and there are no leaks.

33. Inspect LIVE mount for any signs of leaking while pressure is applied. If aircraft is left to sit overnight, repressurize next morning prior to flight.

34. Install Main Rotor 2/rev vibration measurement equipment (DMC-505-A-18-11-02-00A-330A-A).

-NOTE-

The following is a typical scenario: After the first flight, the pressure could drop from 180 PSI (1241 kPa) to as low as 110 PSI (758 kPa) due to nitrogen absorption in the Fluorinert Fluid. If both LIVE mounts were serviced, the pressure drop on both should be close to equal. After every subsequent nitrogen pressure refill back to 180 PSI (1241 kPa), the pressure drop should gradually diminish until final required pressure of 165 to 180 PSI (1138 to 1241 kPa) is reached. Up to 5 flights and nitrogen pressure refills is considered normal. The ride quality should improve as pressure stabilizes.

35. Prepare helicopter for flight. Have aircraft flown at or above 115 knots for approximately 10 minutes to generate 2/rev vibration from the Main Rotor to help with Fluorinert fluid nitrogen absorption. Take 2/rev data reading from 100 kts up to VH (max continuous power) DMC-505-A-18-11-02-00A-372A-A.

36. After landing, following a complete shutdown:

    a. Take a reading of LIVE mount pressure prior to reservicing. Record new measured pressure value in Table 1 line flight #1 (after landing) for both LH and RH.

    b. Record highest 2/rev values measured from 100 kts up to VH (max continuous power) Table 1 line flight #1 (after landing).

    c. Service LIVE mount assembly (DMC-505-A-12-10-08-00A-214A-A). Bring pressure reading to 180 PSI and keep regulated pressure applied for 5 minutes.

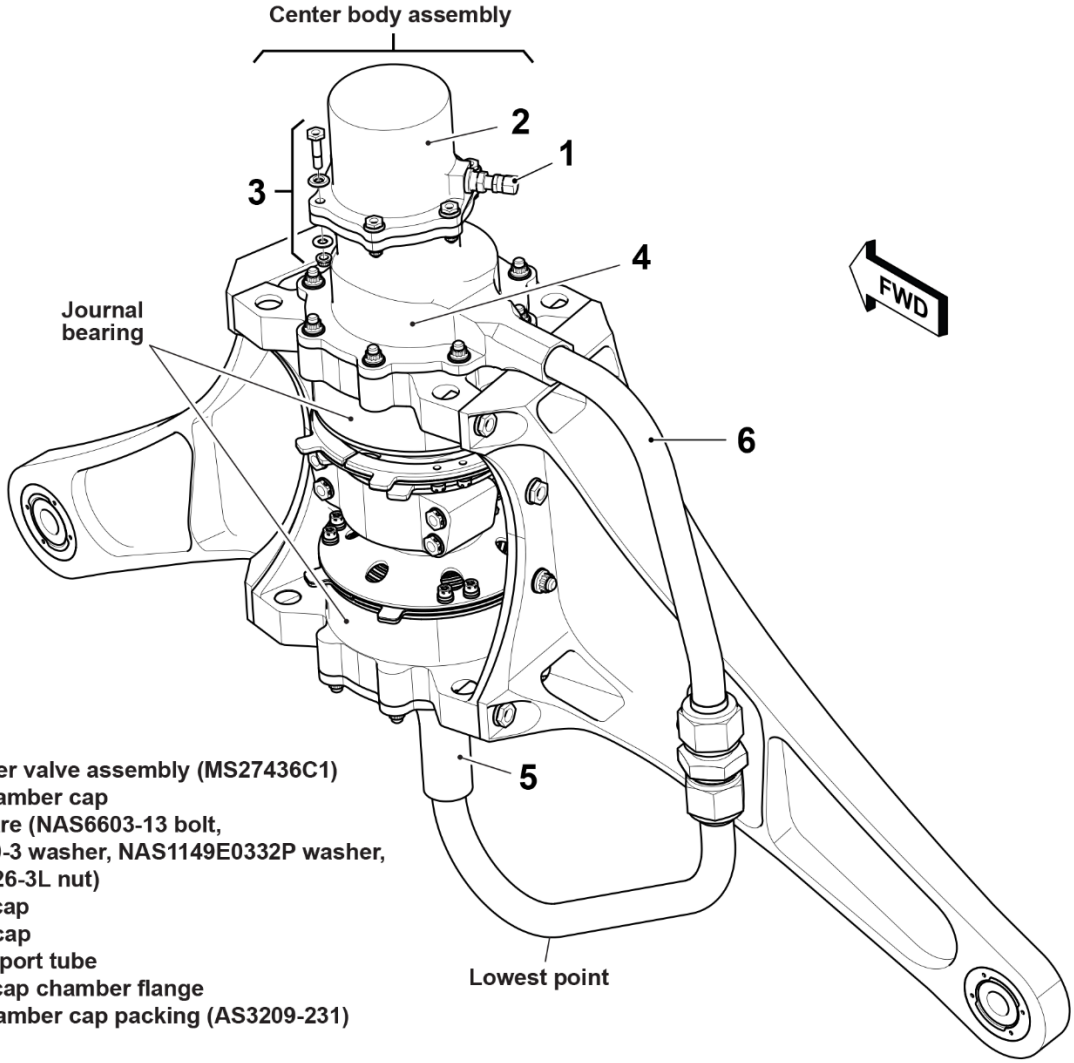
-NOTE-

The following are typical satisfactory 2/rev level ranges to expect on a Bell 505. Without Frahm damper kit installed, 2/rev levels will vary on average between .8 IPS up to 1.2 IPS at VH (max continuous power). With a Frahm damper kit installed, 2/rev levels will vary on average between .5 IPS and 0.8 IPS at VH (max continuous power).

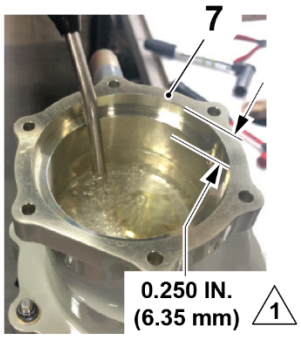
37. Prepare helicopter for second flight. Repeat flight and/or Fluorinert fluid refill procedure as necessary until ride quality is satisfactory. Record values in Table 1 to track progress between flights.

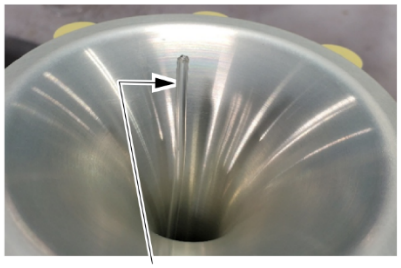
38. Apply Corrosion preventive compound (C-101) to LIVE mount assembly hardware as needed.

39. Make an entry in the helicopter logbook and historical service records indicating compliance with this Technical Bulletin.



1. Schrader valve assembly (MS27436C1)
2. Gas chamber cap
3. Hardware (NAS6603-13 bolt, 140-060-3 washer, NAS1149E0332P washer, NAS9926-3L nut)
4. Upper cap
5. Lower cap
6. Tuning port tube
7. Upper cap chamber flange
8. Gas chamber cap packing (AS3209-231)





Lower journal bearing removed for clarity to show 1/16" clear polyurethane / nylon tubing

NOTE

1 Fill remainder of upper cap chamber with Fluorinert fluid up to 0.250 inch (6.35 mm) below the bolt flange (7).

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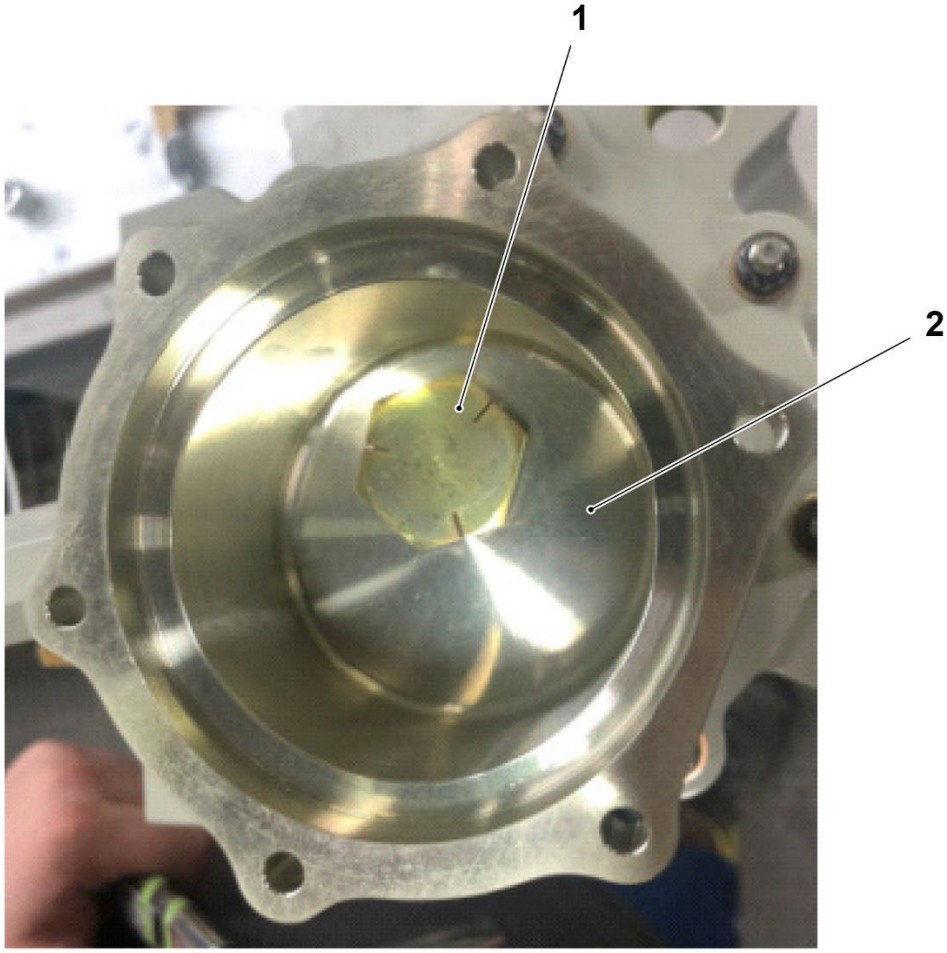
FIGURE 1 - LIVE Mount Assembly Servicing on Aircraft



1. Slotted bolt (SLS-010-275-101)
2. Upper cap chamber

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FIGURE 2 - LIVE Mount Assembly Servicing on Aircraft

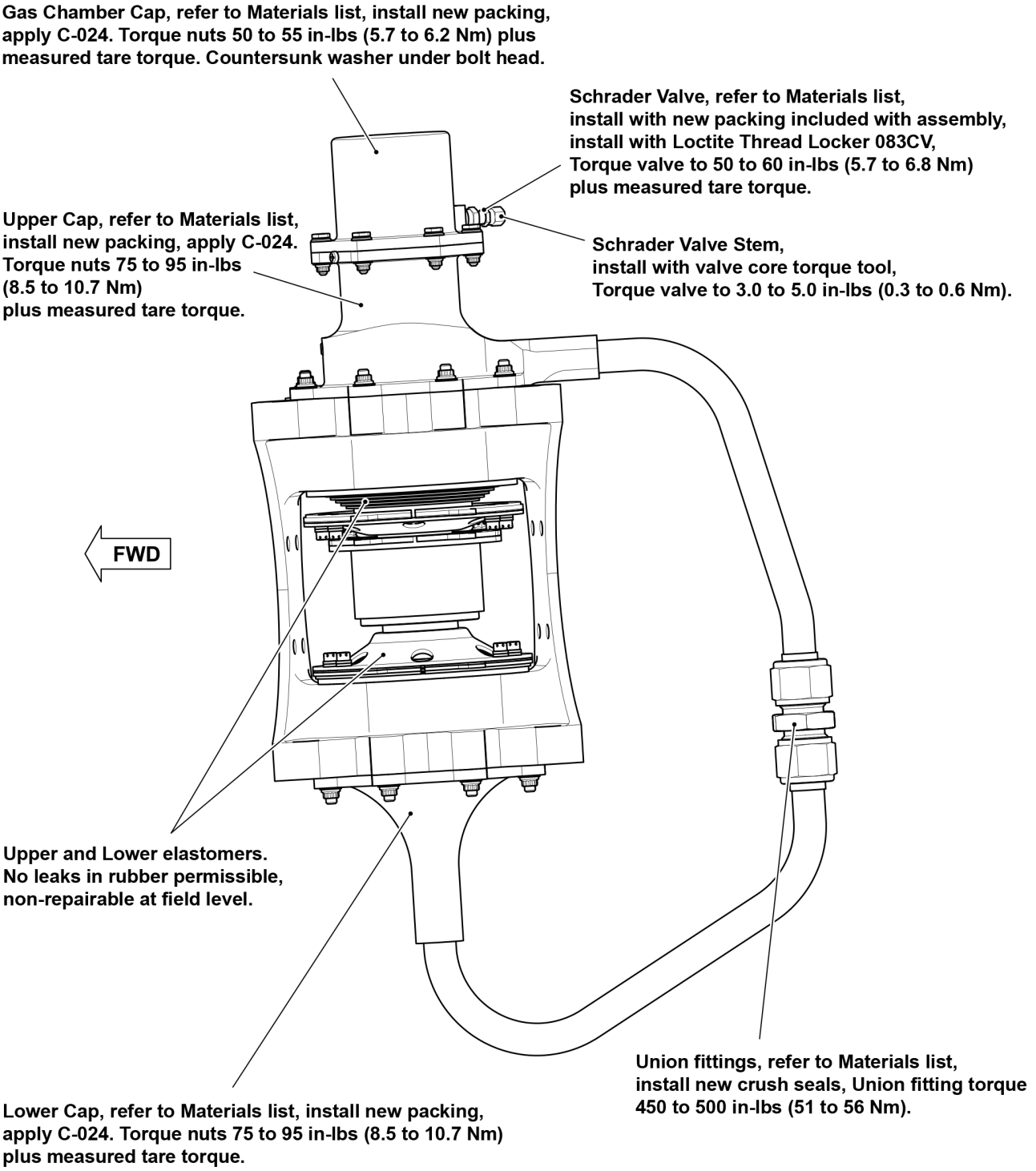

FIGURE 3 - If a Leak is Detected at any of these Identified Locations

Flight #	Pressure LH	Pressure RH	Highest readings 2/rev IPS_speed in kts up to VH (normally LAT channel / Pilot seat RH)		Comments/ Observations
Before first flight	180 PSI (1241 kPa)	180 PSI (1241 kPa)			
1 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	
2 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	
3 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	
4 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	
5 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	
6 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	
7 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	
8 (after landing)			100	IPS	
			110	IPS	
			120	IPS	
			VH	IPS	

TABLE 1 - Recorded Pressure and Measured Vibration Levels for each Flight