Bell Helicopter
A Textron Company

TECHNICAL BULLETIN 212-11-211
21 March 2011

MODEL AFFECTED: **212**

SUBJECT: **NUMBER ONE ENGINE JACKSHAFT SUPPORT INSPECTION AND MODIFICATION OF.**

HELICOPTERS AFFECTED: **Model 212 helicopters serial number 30501 through 30999, 31101 through 31311, 32101 through 32142 and 35001 through 35103.**

[Model 212 helicopters serial number 31312 and subsequent, 32143 and subsequent, 35104 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: **Part 1:** Recommended.

Part 2: At customer's option**.**

DESCRIPTION:

Bell Helicopter has been made aware of a possible fouling condition that may exist between the number one jackshaft support and the forward firewall of the intake cowling. This Technical Bulletin provides an inspection procedure to verify adequate clearance between the N1 jackshaft support and if a fouling condition exists, the corrective action to be taken. Applicability of this bulletin to any spare parts shall be determined prior to its installation on an affected aircraft.

APPROVAL:

The engineering design aspects of this bulletin are FAA/ODA approved.

CONTACT INFO:

For any questions regarding this bulletin, please contact:

Bell Helicopter Product Support Engineering - Medium Helicopters
Tel: 450-437-6201 / 1-800-363-8028 / psemedium@bellhelicopter.textron.com

MANPOWER:

Approximately 3.0 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 Helicopter Textron Supply Center.

Part Number	Nomenclature	Qty
412-060-024-101	Snubber Assembly	1
212-060-700-131	Spacer	1
212-060-700-133	Spacer	2
MS27039-1-21	Screw	3
NAS1149C0316R	Washer	3

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 Helicopter Textron Supply Center.

Part Number	Nomenclature	Qty	Reference *
AMS3276 1 pt	Sealant	1	C-599
299-947-152, TY III	Adhesive	1	C-314
P-P-101	Abrasive 400 grit	1	C-423
MILC81706 CL1AFORM11	Alodine 1200	1	C-100
513X395/910X710	Primer	1	C-204

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

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

	Longitudinal		Lateral*	
Weight	**Arm**	**Moment**	**Arm**	**Moment**
+0.2 Lbs	153 in.	+31 in-Lbs	-17.0 in.	-3.0 in-Lbs
+0.1 kgs	3886 mm	+3.5 kg x mm/100	-432 mm	-0.4 kg x mm/100

* In lateral calculations, - is left and + is right.

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

BHT-212-IPB Illustrated Parts Breakdown
BHT-212-MM Maintenance Manual
BHT-MED-SRM-1 Structural Repair Manual
BHT-ALL-SRM Structural Repair Manual
BHT-ALL-SPM Standard Practices Manual

PUBLICATIONS AFFECTED:

BHT-212-IPB Illustrated Parts Breakdown

ACCOMPLISHMENT INSTRUCTIONS:

Part 1:

1. Prepare helicopter for maintenance.

2. Open forward transmission cowling (1, Figure 1).

3. Remove left hand air inlet cowling (2).

4. Inspect N1 Jackshaft support bearing boss for wear on the forward side of the boss see Figure 2.

5. If wear is found proceed to Part 2 of this Technical Bulletin.

6. If no wear is found reinstall left hand air inlet cowling (2) and latch in place.

7. Close forward transmission cowling (1).

8. Make an entry in helicopter historical service records indicating compliance with Part 1 of this Technical Bulletin.

Part 2:

1. Prepare helicopter for maintenance.

2. Open forward transmission cowling (1, Figure 1).

3. Remove left hand air inlet cowling (2).

4. Inspect N1 Jackshaft support bearing boss for wear on the forward side of the boss see Figure 2.

5. Maximum permissible wear on the 1.22” (31.0 mm) Diameter boss is 0.060” (1.53mm) after clean up Figure 2 View A.

6. Blend damaged area including any sharp edges smooth with minimum material removal using 400 grit paper (C- 423).

7. Chemical film treat (C-100).

8. Prime repaired surface (C-204).

9. Remove the forward and aft outboard two support retaining screws and the forward inboard support retaining screw (3, Figure 3) and washers (4) from the support and discard.

10. Apply a thin film of sealant (C-599) to the top and bottom of the faying surfaces of the two spacers (6).

11. Apply a thin film of sealant (C-599) to the top and bottom of the faying surfaces of spacer (5).

12. Install the two spacers (6), one on the forward and one on the aft outboard holes on top of the support.

13. Install one spacer (5) on the forward inboard hole on top of the support.

14. Place the Snubber Plate Assembly P/N 412-060-024-101(1) on top of the spacers (5 and 6) as shown in figure 3.

15. Apply sealant (C-599) to the shank only of the three screws (2) and install with washers (4) through the Snubber Assembly (1), spacers (5 and 6), and support. Torque the three screws 20-25 in/lbs.

16. Remove the transition duct (2, Figure 4) from the inlet cowling (1) by removing the two screws (3) and washers (4) securing the transition duct to the intake cowling assembly.

17. Reinstall the left hand air inlet cowling (2, Figure 1) without the transition duct installed and latch in place.

18. With a bright light verify that there is clearance between the N1 jackshaft support and the forward firewall. If the firewall is still contacting the N1 jackshaft support please contact Product Support Engineering.

19. Remove left hand air inlet cowling (2).

20. Reinstall the transition duct (2, Figure 4) on the inlet cowling by installing the two screws (3) and washers (4).

21. Reinstall the left hand air inlet cowling (2, Figure 1) and latch in place.

22. Close and latch transmission cowling (1).

23. Make an entry in helicopter historical service records indicating compliance with Part 2 of this Technical Bulletin.

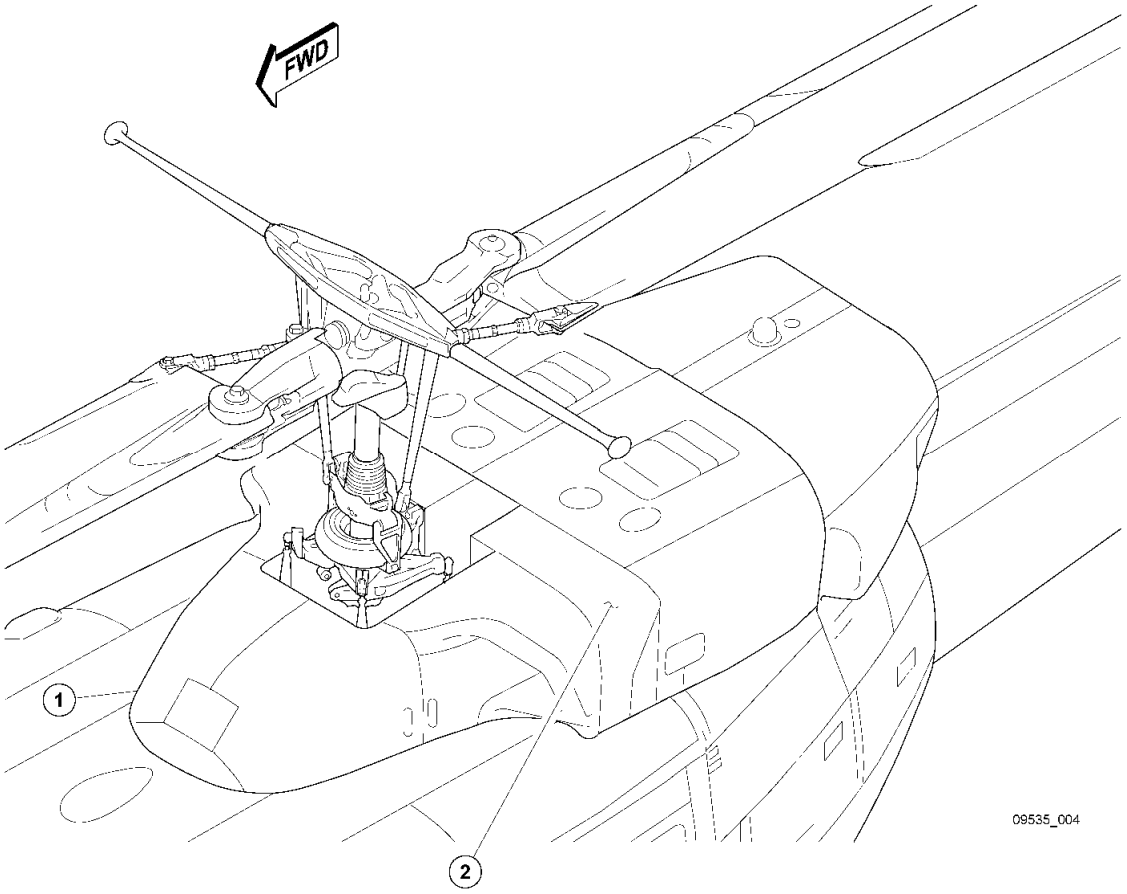
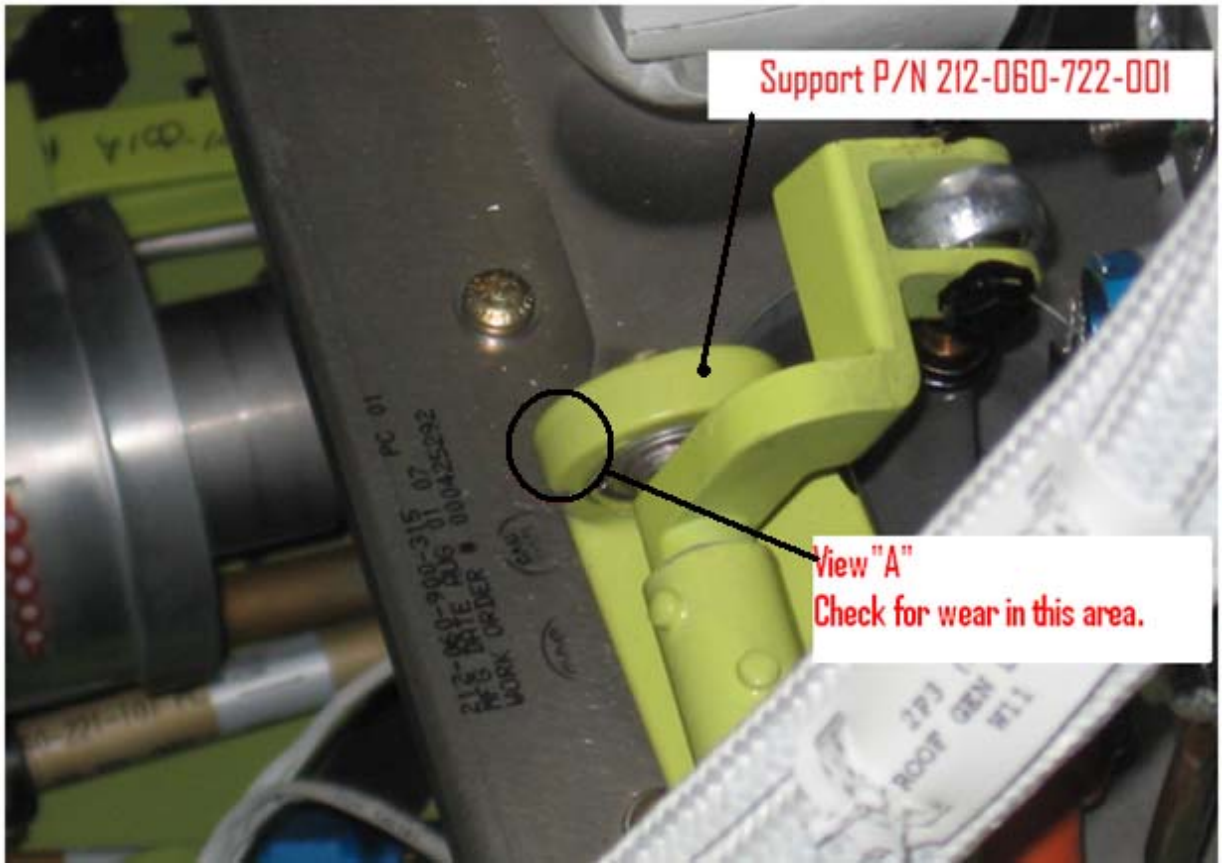


Figure 1


Support P/N 212-060-722-001
View "A"
Check for wear in this area.

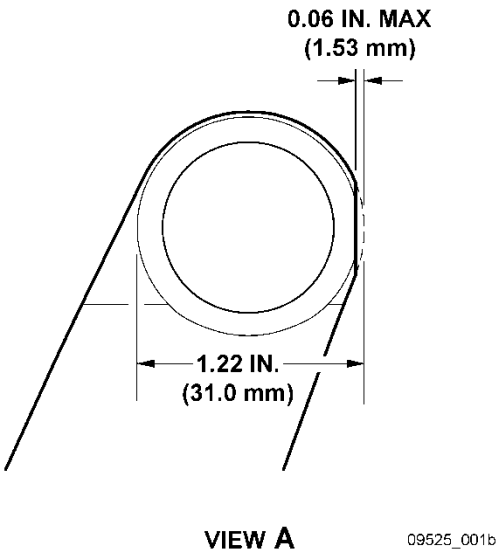

0.06 IN. MAX
(1.53 mm)
1.22 IN.
(31.0 mm)
VIEW A
09525_001b

Figure 2

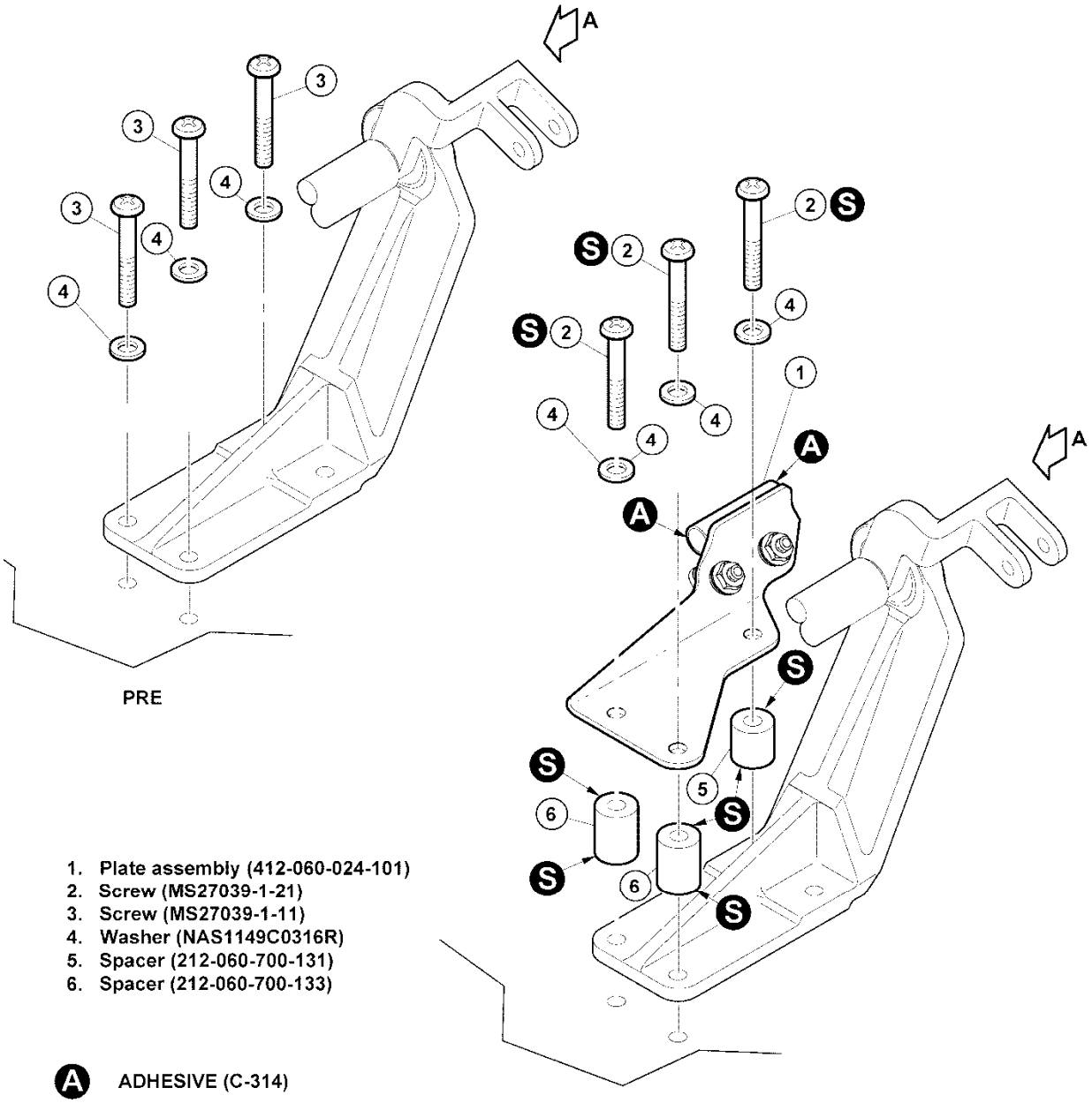
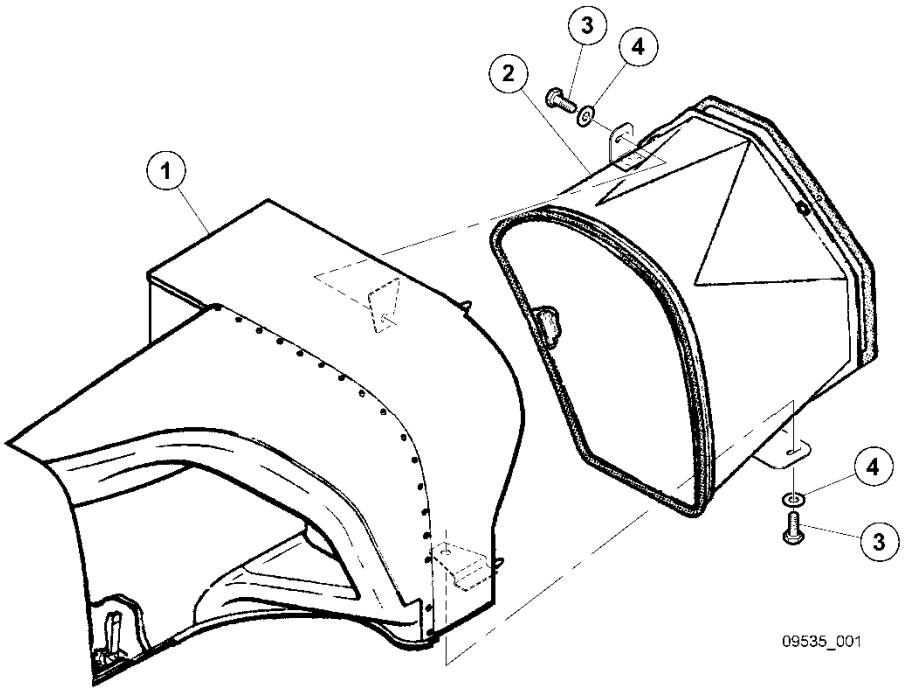

A
PRE
POST
1. Plate assembly (412-060-024-101)
2. Screw (MS27039-1-21)
3. Screw (MS27039-1-11)
4. Washer (NAS1149C0316R)
5. Spacer (212-060-700-131)
6. Spacer (212-060-700-133)
A ADHESIVE (C-314)
S SEALANT (C-559)
NOTE
1 Seal is made from 120-104-1-0013 material.
09525_001a_c01

Figure 3



1. Engine air inlet cowling
2. Forward transition duct
3. Bolt
4. Washer

Figure 4