

TECHNICAL BULLETIN
Bell Helicopter **TEXTRON**
A Subsidiary of Textron Inc.

NO 407-99-15

DATE 02-26-99

PAGE NO. 1 of 24

DATE
REV.

MODELS AFFECTED: 407

SUBJECT: **FUEL SHUTOFF VALVE CAVITY AND SHOULDER RESTRAINT INSTALLATION, IMPROVEMENT OF.**

HELICOPTERS AFFECTED: 407, Serial Numbers 53000 through 53256 as defined below:

PART I, S/N 53000 through 53256. [Helicopters 53257 and subsequent will have the intent of Part I of this bulletin accomplished before delivery.]

PART II, S/N 53000 through 53032 and 53034 through 53039. [Helicopters 53033, 53040 and subsequent will have the intent of Part II of this bulletin accomplished before delivery.]

PART III, S/N 53000 through ship 53064. [Helicopters 53065 and subsequent will have the intent of Part III of this bulletin accomplished before delivery.]

PART IV, S/N 53000 through 53152, 53154 through 53157, 53159 through 53167. [Helicopters 53153, 53158, 53168 and subsequent will have the intent of Part IV of this bulletin accomplished before delivery.]

COMPLIANCE: At the option of the customer.

DESCRIPTION:

This Technical Bulletin introduces many improvements to the forward facing passenger shoulder restraint installation and the fuel system tightness.

PART I describes the installation of improved passenger shoulder restraint, inertia reel attachment.

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PART II describes the replacement of the fuel valve outlet flex-line.

PART III describes the addition of a drain to the fuel shut-off valve cavity.

PART IV describes the addition of better seal/washers under the bolts that secure the flanges of the transfer tube between the main and forward fuel reservoirs.

APPROVAL:

The engineering design aspects of this Technical Bulletin are Transport Canada approved.

MANPOWER:

PART I: Approximately 8.0 man-hours are necessary to complete modification to one side (R/H) of the aircraft as per part I of this Bulletin. If both sides (R/H and L/H) are modified, additional 4.0 more man-hours will be necessary.

PART II: Approximately 0.5 man-hours are necessary to complete Part II of this bulletin.

PART III: Approximately 2.5 man-hours are necessary to complete Part III of this bulletin.

PART IV: Approximately 4.0 man-hours are necessary to complete Part IV of this bulletin.

Estimated man-hours are based on hands-on time and can change due to the personnel and facilities available.

WARRANTY:

The owners/operators of 407 helicopters who comply with the instructions outlined in this bulletin are eligible for a special 100% warranty credit toward the purchase of the parts in the "REQUIRED MATERIAL" section of Part I through IV, with the exception of the restraint, the LH doubler, and the LH bracket assembly in Part I, of this bulletin.

In order to receive this credit, the customers must proceed as follows:

1. The customers must order the replacement parts from an approved BHTI supply source.

2. The customers must comply with the instructions outlined in this bulletin no later than 31 December 1999.
3. The customers must send a completed Malfunction Report (MR) to BHT Warranty Administration. A copy of the invoice referencing parts used to accomplish this bulletin must be attached to the Malfunction Report.

- NOTE -

The customers who fail to comply with the instruction in the bulletin after 31 December 1999 are **not** eligible for the special warranty credit provisions listed above.

MATERIALS REQUIRED:

The following material is required for the accomplishment of Part I through IV of this Bulletin and can be procured through your Bell Helicopter Textron Supply Center.

PART I

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
407-030-511-135S	DOUBLER (R/H)	1
407-030-501-109	BRACKETASSEMBLY (R/H)	1
407-030-511-133S	DOUBLER (L/H)	1 (NOTE 1)
407-030-501-111	BRACKET ASSEMBLY (L/H)	1 (NOTE 1)
407-370-720-101	RESTRAINT ASSEMBLY	1 (NOTE 1)
MS20470AD4-4-5	RIVET	12(NOTE 2)
MS20470AD4-6	RIVET	6 (NOTE 2)
M7885/6-6-03	RIVET	3 (NOTE 2)
M7885/6-6-04	RIVET	3 (NOTE 2)
60-003-4N8	GROMMET	2 (NOTE 2)

NOTE 1: You can modify the R/H side only or both the R/H and the L/H sides. Modification of the L/H side is at the option of the operator.

NOTE 2: If you choose to modify the L/H side also, double the quantity shown for these items.

PART II

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
70-080H000V045	HOSE	1

PART III

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
130-055-6N	TUBING-NYLON	1
AN231-4	GROMMET	1

PART IV

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
NAS1523AA4R	SEAL/WASHER	8

CONSUMABLE MATERIAL:

The following consumable material is necessary to complete Part I through IV of this Technical Bulletin; however, this material is considered consumable (bench stock) material and may not require ordering, depending on the operators consumable material stock levels. This material can be obtained through your Bell Helicopter Textron Supply Center.

PART I

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>REF.NO.</u>
MIL-P-85582, TY1, CL 2	PRIMER (*)	C-204
MILS8802CLB2 PT	SEALANT	C-308
MIL-C-81706 CL1AFORM11	ALODINE	C-100
299-947-066 TY1	ADHESIVE	C-301

(*) As an alternate use MIL-P-23377.

PART II

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>REF.NO.</u>
MILS8802CLB2 PT	SEALANT	C-308

PART III

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>REF.NO.</u>
MILS8802CLB2 PT	SEALANT	C-308
MIL-C-81706 CL1AFORM11	ALODINE	C-100
MIL-P-85582, TY1, CL2	PRIMER (NOTE 1)	C-204
299-947-107T2CL4 4OZ	ADHESIVE (NOTE 2)	C-311

NOTE 1: As an alternate use MIL-P-23377

NOTE 2: As an alternate you can use A-1231-B

PART IV

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>REF.NO.</u>
MILS8802CLB2 PT	SEALANT	C-308

SPECIAL TOOLS:

Cobalt drill bits #40 and 0.375 inch diameter.

WEIGHT AND BALANCE:

All the modifications described in this bulletin have a negligible effect on the Weight & Balance.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

Bell 407 Maintenance Manual BHT-407-MM

Chapter 28-00-00, Paragraphs, 28-32, 28-34, 28-51, 28-53, 28-69, 28-70, 28-1, 28-76, 28-77 and 28-78.

Chapter 25-99-00, Paragraphs 25-29, 25-30, 25-31, 25-51, 25-52, 25-53 and 25-79.

Bell 407 Illustrated Parts Manual BHT-407-IPB

Chapter 25-99-00, Figures 25-3, 25-4, 25-6, 25-7, 25-9 and 25-10.

Chapter 28-99-00, Figures 28-2 and 28-5.

Chapter 53-99-00, Figure 53-36.

Structural Repair Manual BHT-206-SRM-1

Standard Practices Manual BHT-ALL-SPM

PUBLICATIONS AFFECTED:

Bell 407 Maintenance Manual BHT-407-MM

Chapter 25-99-00, Paragraphs 25-22, 25-24, 25-29, 25-30, 25-31, 25-46, 25-48, 25-51, 25-52, 25-53, 25-71, 25-73 and 25-79.

Bell 407 Illustrated Parts Manual BHT-407-IPB

Chapter 25-99-00, Figures 25-3, 25-4, 25-6, 25-7, 25-9, 25-10, 25-13 and 25-16.

Chapter 28-99-00, Figures 28-2, 28-5 and 28-13.

ACCOMPLISHMENT INSTRUCTIONS:

PART I: Installation of Improved Aft Forward - Facing Passenger Shoulder Restraint

- NOTE -

Accomplishment of Part II may be done simultaneously with Part I.

1. Remove the interior trim panels and the seats necessary to get access to the airframe structure (refer to the Maintenance Manual, Chapter 25).

- NOTE -

The modification to the R/H side shoulder-restraint retaining bracket assembly will improve the sealing of the fuel shutoff valve cavity. Modification to the L/H is at the option of the operator.

2. Remove components that follow from the R/H aft passenger bulkhead fuel valve cavity. (Refer to the Maintenance Manual, Chapter 28.)

- NOTE -

Make sure that all of the fuel-system components opened ports are capped and plugged.

- a) The fuel shutoff valve.
 - b) The fuel inlet flex hose.
 - c) The fuel outlet flex hose.
 - d) The fuel pressure transducer.
3. Remove the existing bracket, 407-030-501-105, from the R/H frame, 407-030-511-102, as follows (refer to Illustrated Parts Breakdown Manual, Chapter 53, Figure 53-56):
 - a) Remove the six screws that attach the bracket to the frame.
 - b) Use a plastic scraper to break the sealant around the bracket.
 - c) Disconnect the shoulder restraint from the lap belt.
 - d) Remove the bracket and the inertia reel assembly from the shutoff valve cavity while you feed the shoulder belt through the frame cutout.
 4. Remove the shoulder restraint inertia reel from the bracket, 407-030-501-105, as follows (refer to the Maintenance Manual, Chapter 25):
 - a) Retain the inertia reel, the belt assembly, and the four attaching screws MS24694-S50, for subsequent installation.

- NOTE -

If the belt is impregnated by the fuel odors, replace with a new assembly, 407-030-720-101. When you order a replacement shoulder restraint unit, specify the aircraft serial number to obtain the same seat belt color.

- b) Discard the bracket and the retaining screws.
5. Prepare the frame for installation of the new doubler and the new bracket assembly as follows:
- a) Remove the existing Velcro material (if necessary) and the two insulation proofings, 407-070-630-135, from the forward face of the frame.
 - b) Remove and discard the existing grommet from the periphery of the oval shaped hole.
 - c) Use a soft plastic scraper to remove sealant from the inner face of the frame.
6. Prepare the new doubler for installation on the frame as follows (refer to Figure 1):

- NOTE -

Correctly identify the top/bottom section of the doubler before completing the following steps.

- a) Draw a line across the top of the doubler (1) at 0.43 inch parallel to the upper edge of the rectangular shaped cutout (refer to Sheets 1 and 2).
- b) Position the doubler (1) on the inner face of the frame to get correct alignment of the doubler with the existing hole cutout in the frame. Ensure that the line drawn on the doubler (1), in Step a), aligns with the center of all three top screw holes.
 - I) Temporarily secure the doubler (1) to the frame.
 - II) Transfer all (six) screw holes 0.205/0.208 inch diameter from the frame to the doubler (1).

- c) Remove the doubler (1) from the frame. Drill eighteen 0.125 inch diameter holes in the doubler at the location shown on Details A and B.
 - d) For correct alignment, use the six holes drilled in Step b to temporarily install the doubler (1) on the forward face of the frame.
 - I) Use the doubler as a template, and a felt pen or grease pencil to draw rectangular shape hole on the forward face of the frame.
 - II) Transfer the eighteen 0.125 inch diameter holes from the doubler (1) to the frame.
 - III) Remove the doubler (1). Deburr all holes in the frame and the doubler (1).
7. Enlarge the existing hole in the frame to match the shape drawn in Step 6.d)I):
- a) Deburr the edges of the cutout in the frame and sand the contour of the cutout with a 400 grit minimum sand paper.
 - b) Surface treat (C-100) and prime (C-204) all the bare metal surfaces on the doubler (1) and the frame.
8. Install the doubler (1) on the aft face of the frame as follows (refer to Figure 2):
- a) Apply the sealant (C-308) to the surface of the doubler (1) common with the frame.
 - b) Use the three rivets, M7885/6-6-03, and twelve rivets, MS20470AD4-4-5, wet with sealant to install the doubler (1) on the aft face of the frame. Do not install the rivets common to the bracket assembly (2) at this time.
 - c) Seal around the edges of the doubler and coat all the rivets with the sealant (C-308) as shown on Sheet 2.
9. Prepare the bracket assembly (2) for the installation as follows (refer to Figure 2):
- a) Put the new bracket assembly (2) on the aft face of the doubler (1). Make sure you keep a gap of approximately 0.020 inch minimum between the inboard side of the bracket assembly (2) and the inboard flange of the frame (see Sheet 2).

- b) Transfer the three 0.205/0.208 inch diameter holes and the two 0.125 inch diameter holes to the lower flange of the bracket (2).
 - c) Transfer the four 0.125 inch diameter holes to the top flange of the bracket (2).
 - d) Remove the bracket (2) and deburr all the holes. Restore the surface finish as necessary (C-100 & C-204).
10. Install the bracket assembly (2) to the frame as follows (refer to Figure 2):
- a) Apply layer of sealant (C-308) to the top and bottom attachment flanges of the bracket (2).
 - b) Apply a thick layer of sealant (C-308) to the periphery of the bracket (2). Pay attention to the lower corners of the bracket (2).
 - c) Put the bracket (2) against the aft face of doubler.
 - d) Temporarily attach the bracket (2) to the aft face of the frame/doubler assembly and proceed as follows:
 - I) Seal around periphery of the bracket (2) and the doubler (1) with sealant (C-308).
 - II) Examine for voids in the sealant. If a void exists, remove the bracket and repeat Steps 9a) and 9b) as necessary until sufficient sealing of the bracket is obtained.
 - e) Use the three rivets, M7885/6-6-04, and the two rivets, MS20470AD4-6, wet with sealant (C-308) to attach the bottom flange of the bracket (2).
 - f) Use the four rivets, MS20470AD4-6, wet with sealant (C-308) to attach the top flange of the bracket (2).
 - g) Apply a layer of (C-308) on all the dome nuts and the rivets to make sure you get complete sealing of the fuel valve cavity.
 - h) Let the sealant cure.
11. Install the two plastic grommets (3) on each side of the new cutout in the frame and use the adhesive, 299-947-066. Let the adhesive cure at room temperature for 12 hours.

12. Install the shoulder-restraint inertia reel to the bracket assembly (2) as follows:
 - a) Unwind the belt from the shoulder restraint inertia reel and feed through the new cutout in frame.
 - b) Use the four screws, MS24694-S50 to attach the reel to the bracket assembly (2).
 - c) Connect the shoulder strap to the lap belt assembly.

- NOTE -

You can do Part II and/or Part III, if you choose, at this time.

13. If you choose, you can do Steps 3 through 11 for the L/H side frame. Use the doubler (4) and the bracket assembly (5).
14. Remove all the debris from the fuel shutoff valve cavity.
15. Install all the components you removed in Steps 1 and 2 (refer to the Maintenance Manual, Chapters 25 and 28).
16. Do an operational check of the fuel system.
17. Annotate the aircraft technical records to indicate the compliance with Part I of this Technical Bulletin.

PART II: Replacement of Flex Hose, Fuel Shutoff Valve Outlet Port

- NOTE -

Accomplishment of Part II may be done simultaneously with Part I.

1. Get access to the fuel shut-off valve (refer to Maintenance Manual, Chapter 28, Paragraph 28-76).
2. Disconnect, remove, and discard the existing hose, 70-080H000V043 (item 4, Figure 3), from the fuel outlet port of the valve (2) and the rigid tube.
3. Install the new longer hose, 70-080H000V045, to the fuel outlet port of the valve (2) and the rigid tube.

- NOTE -

You can do Part III, if you choose, at this time.

4. Install the components you removed in Step 1 (refer to the Maintenance Manual, Chapter 28, Paragraph 28-78).
5. Do an operational check of the fuel system.
6. Annotate the aircraft technical records to indicate the compliance with Part II of this Technical bulletin.

PART III: Addition of Drain to the Fuel Shutoff Valve Airframe Cavity

- NOTE -

Accomplishment of Part III may be done simultaneously with Part I and/or Part II.

1. Get access to the fuel shut-off valve cavity (refer to the Maintenance Manual, Chapter 28, Paragraph 28-76).

- NOTE -

The relation between the holes drilled must be between level and 1.5 degree down to help the drainage of the fuel valve cavity.

CAUTION

MAKE SURE THAT THE INBOARD HOLE IS NOT INTO THE BEND RADIUS OF THE STIFFENER, P/N 407-030-507-123.

CAUTION

CATCH ALL THE DEBRIS DURING DRILLING PROCESS USING A VACUUM.

2. Drill the drain hole provision through the fuel shut-off valve cavity and the side-body fairing as follows (refer to Figure 4):

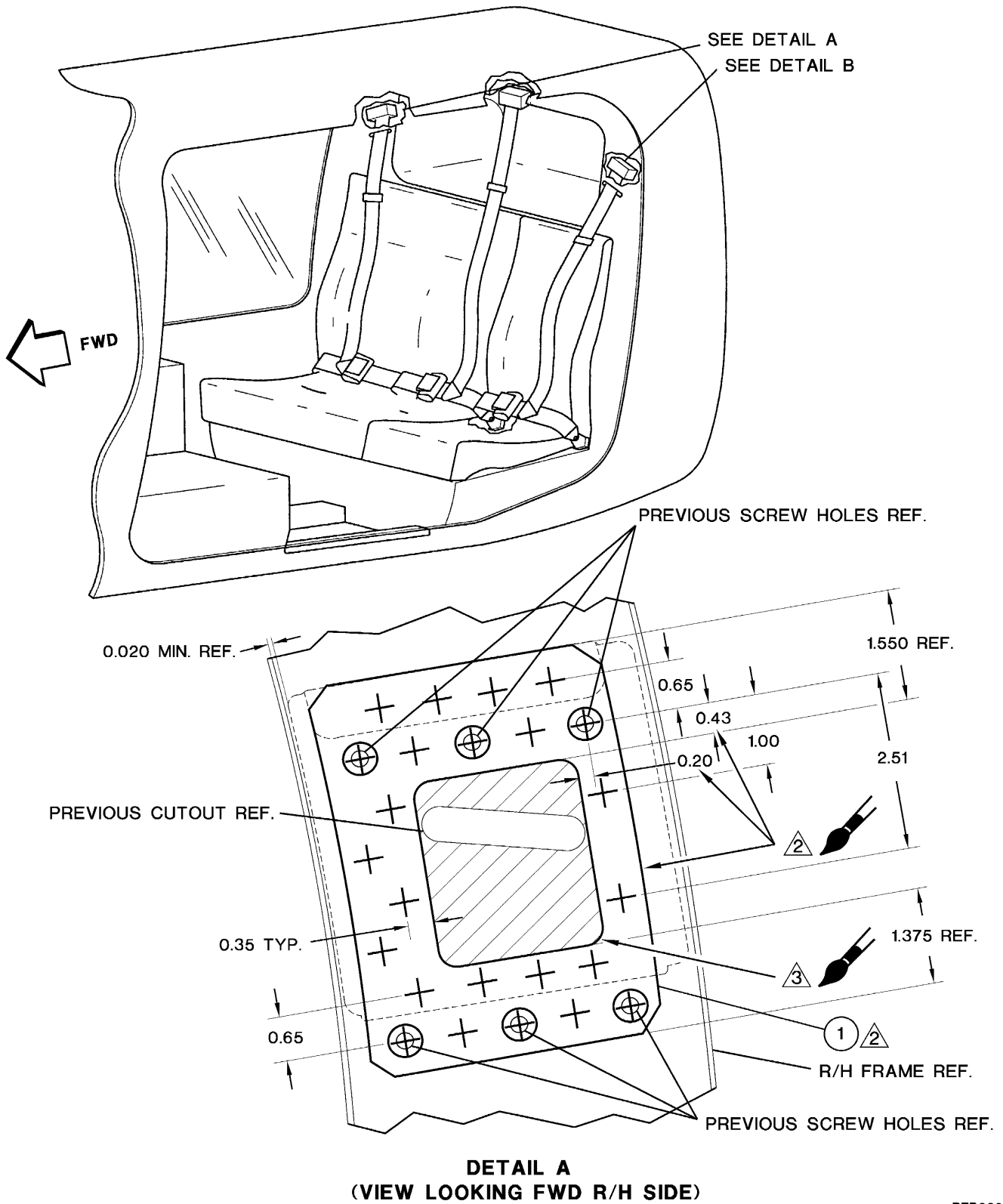
- a) Find and drill a #40 size pilot hole through the bottom stiffener, 407-030-507-123, found at the bottom of the fuel shut-off valve cavity. Make sure your drill is between level position and 1.5 degrees down. Keep drilling beyond the stiffener, through the side-body fairing assembly.
 - b) From the inside of the fuel shut-off cavity, gradually enlarge the hole in the stiffener only to the final dimension of 0.375 inch diameter.
 - I) Deburr the hole.
 - II) Alodine treat (C-100) and prime (C-204) all bare metal surfaces.
 - c) From the outside surface of the side-body fairing, use a cobalt drill bit to gradually enlarge the hole to the final dimension of 0.375 inch diameter.
 - I) Examine the edge of hole after drilling to make sure that the laminate is not damaged.
 - II) Seal the edge of the hole with the sealant (C-308).
3. Install the transfer tube (3) between the fuel shut-off valve cavity and the side body fairing as follows (refer to Figure 4):
- a) Use a 400 grit sandpaper to sand the outside surface of the nylon tubing (3).
 - b) Apply a layer of sealant (C308) to the outside surface of the tube (3) and insert the tube through the stiffener.
 - c) Align the tube with the hole through the side body fairing and push the tube until it protrudes to the exterior.
 - d) Cut the ends flush or within 0.03 inch of protrusion maximum with the stiffener and the outside skin surface.
 - e) Examine for voids in the sealant around both ends of the tube (3). Touch-up the sealant as needed.
4. Install the drain grommet (2) on the surface of the fairing, over the new hole. Use adhesive (C-311), and let cure.
5. Ensure the flat edge of the grommet is offset with the vertical plane as shown in Figure 4.

6. Install the components removed in Step 1 (refer to Maintenance Manual, Chapter 28, Paragraph 28-78).
7. Do an operational check of the fuel system.
8. Annotate the aircraft technical records to indicate the compliance with Part III of this Technical Bulletin.

PART IV: Installation of Improved Seal/Washers NAS1523AA4R, Fuel Cells Interconnect Line

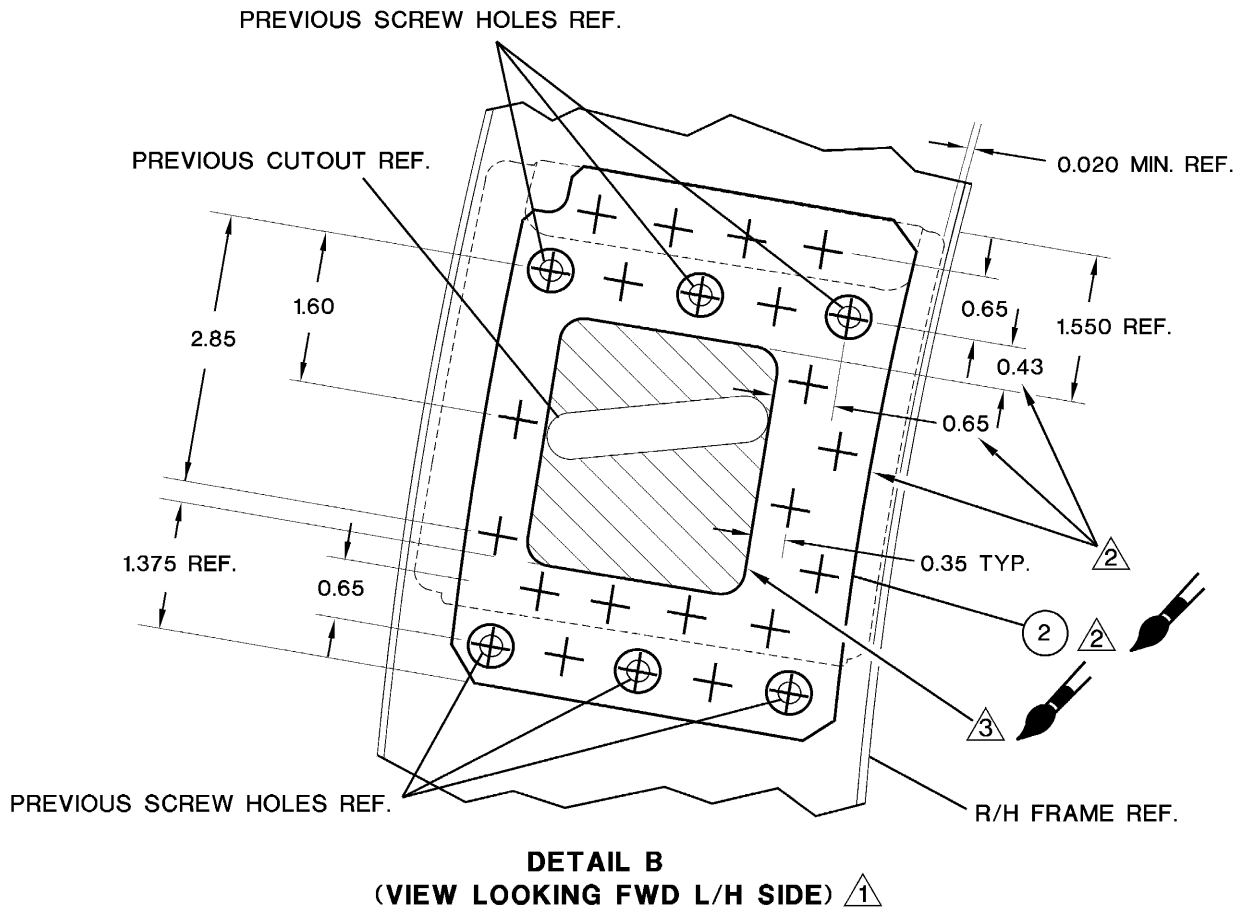
1. Defuel the aircraft (refer to Maintenance Manual, Chapter 28, Paragraph 12-9).
2. Proceed as follows (refer to Maintenance Manual, Chapter 28, Paragraph 28-32 and Figure 5) to remove the fuel transfer pump assembly from the forward fuel cell to get access to the forward end of transfer hose (4).
 - a) At the forward flange retainer (3), remove one bolt (1) at a time that attaches the forward end of the hose (4) and replace existing washer with the new seal/washer (2).
 - b) Install the bolt (1).
 - c) Repeat the Steps 2a) and 2b) for the remaining three bolts (1) that attach the forward retainer (3).
3. Remove the fuel boost pump assembly from the main fuel cell to get access to the aft end of the transfer hose (4). Proceed as follows (refer to the Maintenance Manual, Chapter 28, Paragraph 28-51 and Figure 5):
 - a) At the aft flange retainer (5), remove one bolt (1) at a time that attaches the aft end of the hose (4) and replace the existing washer with the new seal/washer (2).
 - b) Install the bolt (1).
 - c) Repeat the Steps 2a) and 2b) for the remaining three bolts (1) that attach the aft flange retainer (5).
4. Install the fuel transfer pump assembly (refer to Maintenance Manual, Chapter 28, Paragraph 28-34).

5. Install the main boost transfer pump assembly (refer to Maintenance Manual, Chapter 28, Paragraph 28-53).
6. Do an operational check of the fuel system.
7. Annotate the aircraft technical records to indicate the compliance with Part IV of this Technical Bulletin.



RTB00201

Figure 1. AFT Passenger, Forward Facing Seat, Shoulder Restraint Doubler Installation and Frame Rework (Sheet 1)



LEGEND

- 1. Doubler 407-030-511-135 (R/H)
- 2. Doubler 407-030-511-133 (L/H)



Drill 0.205/0.208 diameter rivet holes from the frame to the doubler.



Drill 0.125 diameter rivet holes.



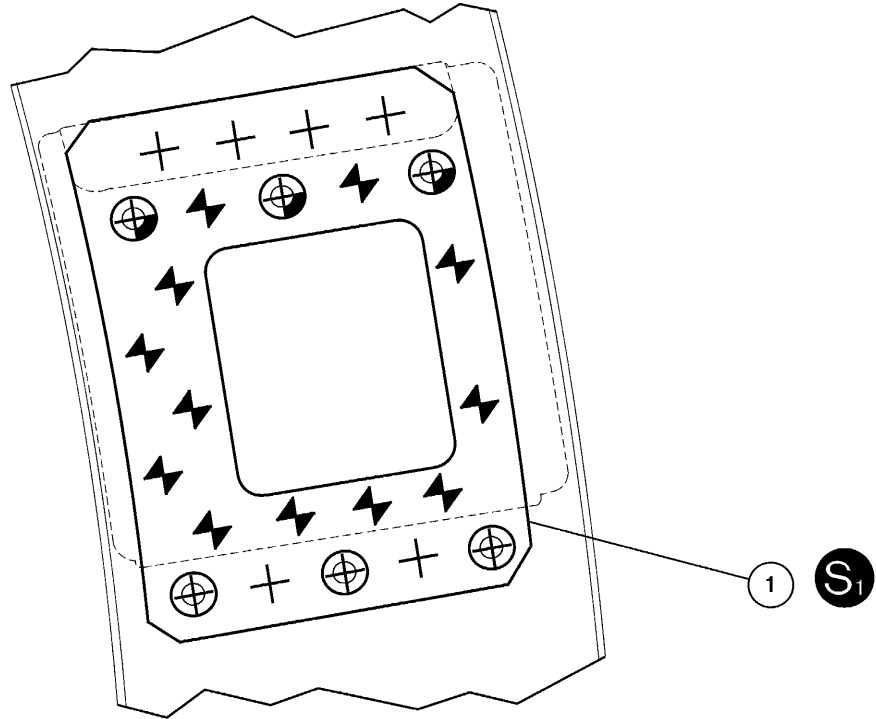
Wet unreduced polyamide primer (C-204)

NOTES

- Modification of the L/H side is at the option of the operator.
- Align the doubler with the frame. Use the existing 0.202/0.203 dia. holes and cutout in the doubler.
- Make cutout in the frame copied from the doubler.
- 4. All the dimensions are in inches.

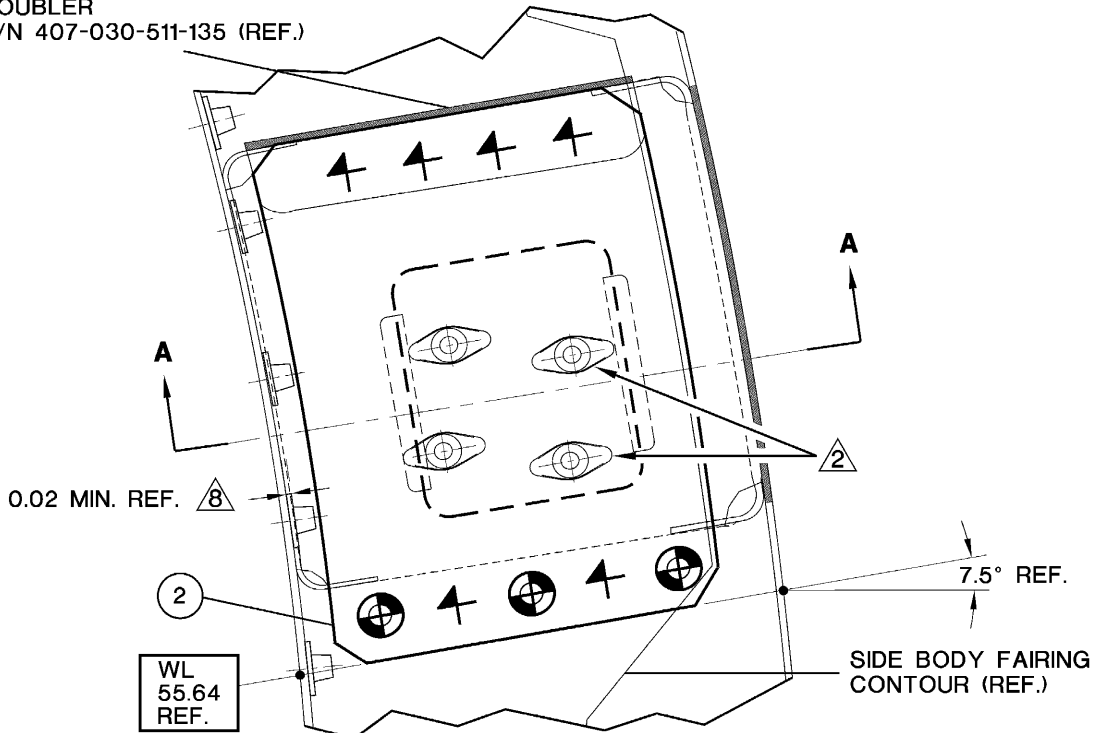
RTB00202

Figure 1. AFT Passenger, Forward Facing Seat, Shoulder Restraint Doubler and Frame Rework (Sheet 2)



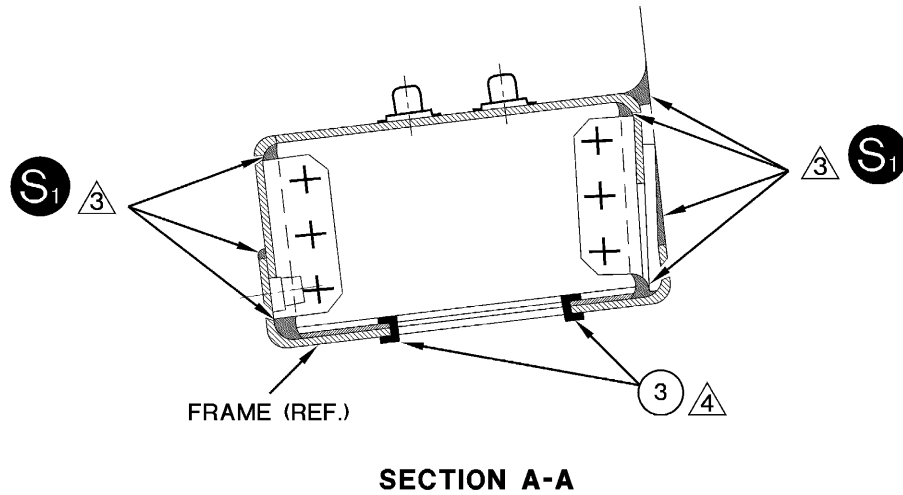
**VIEW LOOKING FWD R/H FRAME
(DOUBLER INSTALLATION)**

DOUBLER
P/N 407-030-511-135 (REF.)



**VIEW LOOKING FWD R/H FRAME
(BRACKET INSTALLATION)**

FIGURE 2. AFT Passenger, Forward Facing Seat, Shoulder Restraint Doubler and Bracket Assembly Installation (Sheet 1)



LEGEND

1. Doubler 407-030-511-135 (R/H) shown /-133 (L/H) opposite
2. Bracket Assembly 407-030-501-109 (R/H) shown /-111 (L/H) opposite
3. Grommet 60-003-4N8



Rivet M7885/6-6-03



Rivet M7885/6-6-04 $\triangle 5$ $\triangle 6$



Rivet MS20470AD4-4-5



Rivet MS20470AD4-6 $\triangle 5$ $\triangle 6$ $\triangle 7$

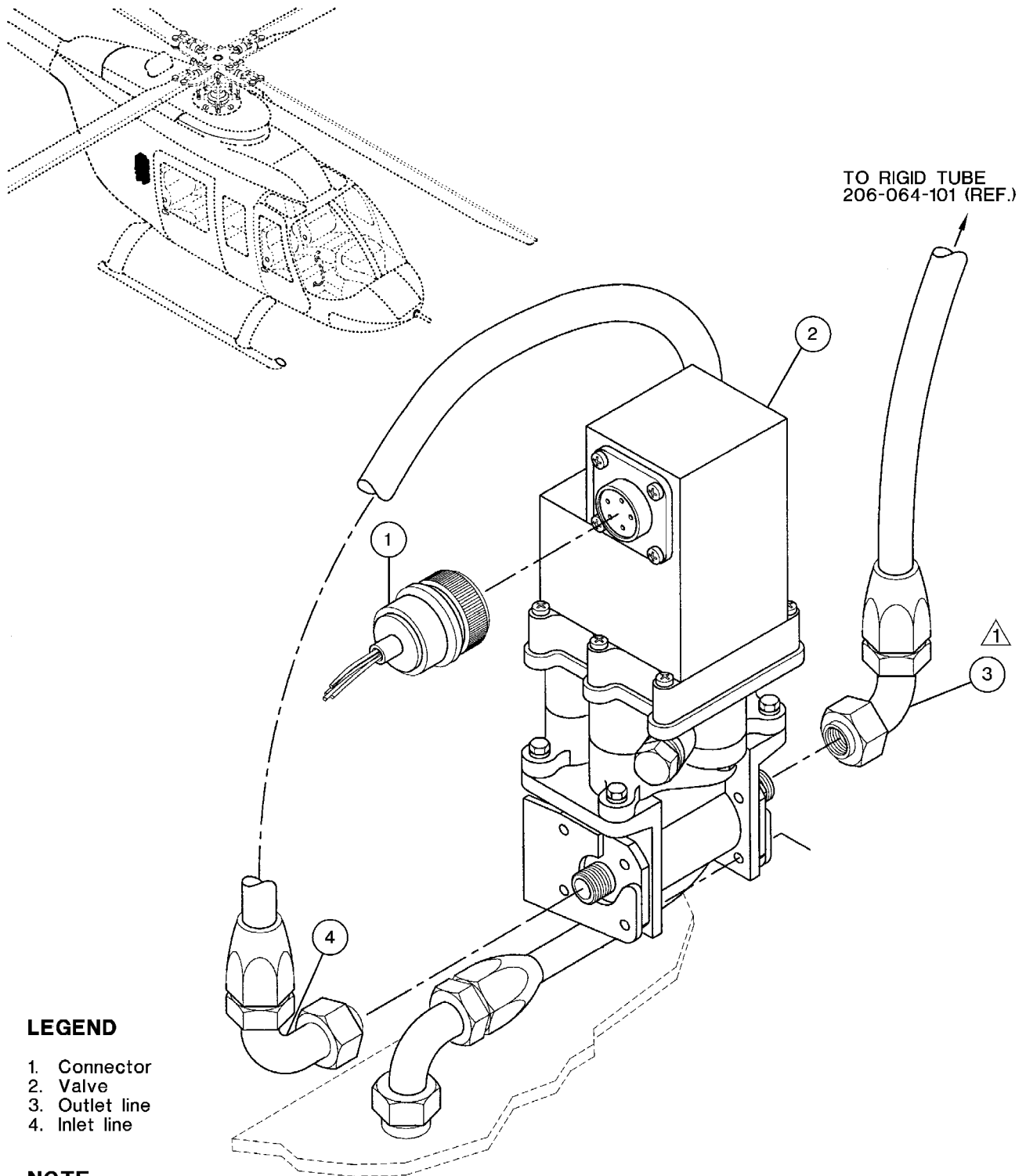


MIL-S-8802 TYPE 2, CLB2 (C-308)

NOTES

1. All rivets installed with the head far side.
- $\triangle 2$ Retain the inertia reel with the screws, P/N MS24694-550.
- $\triangle 3$ Seal all the joints as indicated (C-308).
- $\triangle 4$ Bond the grommets with the adhesive, P/N 299-947-066.
- $\triangle 5$ Install these rivets only when the bracket assembly is in position.
- $\triangle 6$ Common to the frame, the doubler and the bracket assembly.
- $\triangle 7$ Refer to the Structural Repair Manual (BHT-206-SRM-1) for the alternative rivets.
- $\triangle 8$ Maintain a 0.020 inch gap between the inboard side of the bracket assembly and the inboard flange of the frame.
- $\triangle 9$ The doubler is not shown for clarity.

FIGURE 2. AFT Passenger, Forward Facing Seat, Shoulder Restraint Doubler and Bracket Assembly Installation (Sheet 2)



LEGEND

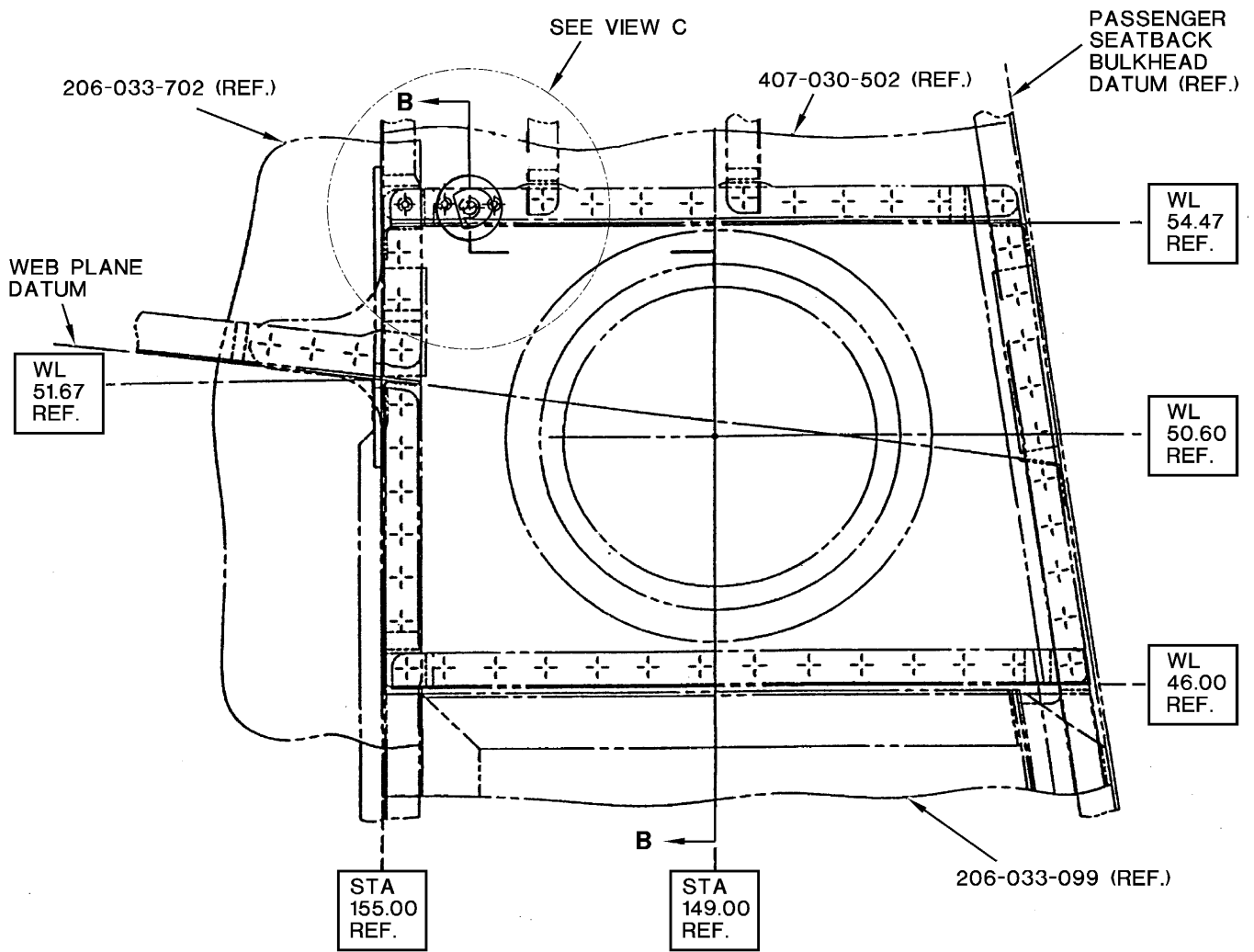
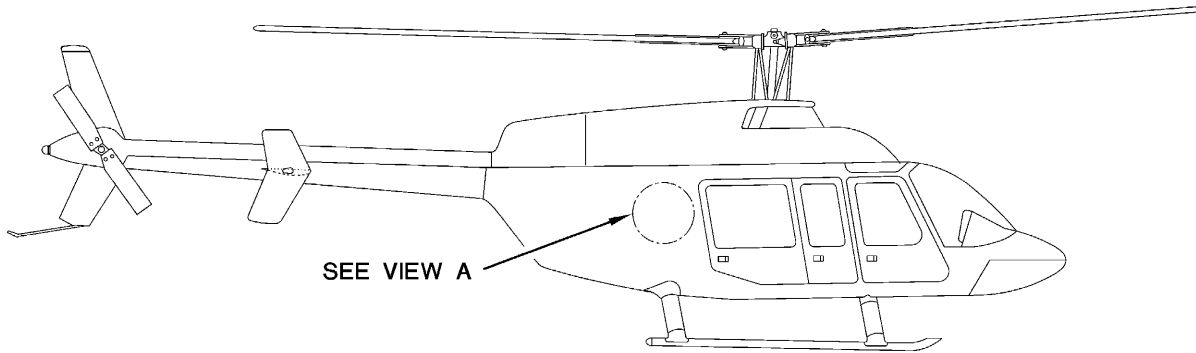
- 1. Connector
- 2. Valve
- 3. Outlet line
- 4. Inlet line

NOTE

△ Remove hose 70-080H000V043 and install hose 70-080H000V045.

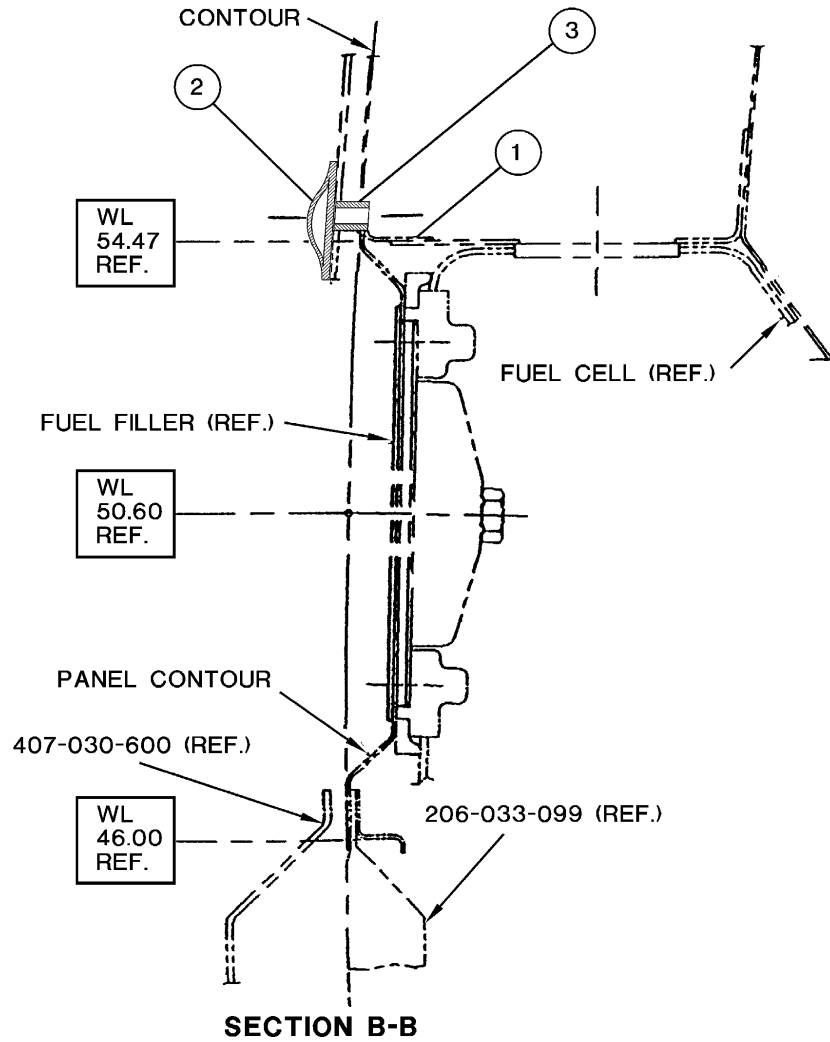
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Figure 3. Replacement of Flex Hose, Fuel Shutoff Valve Outlet Line



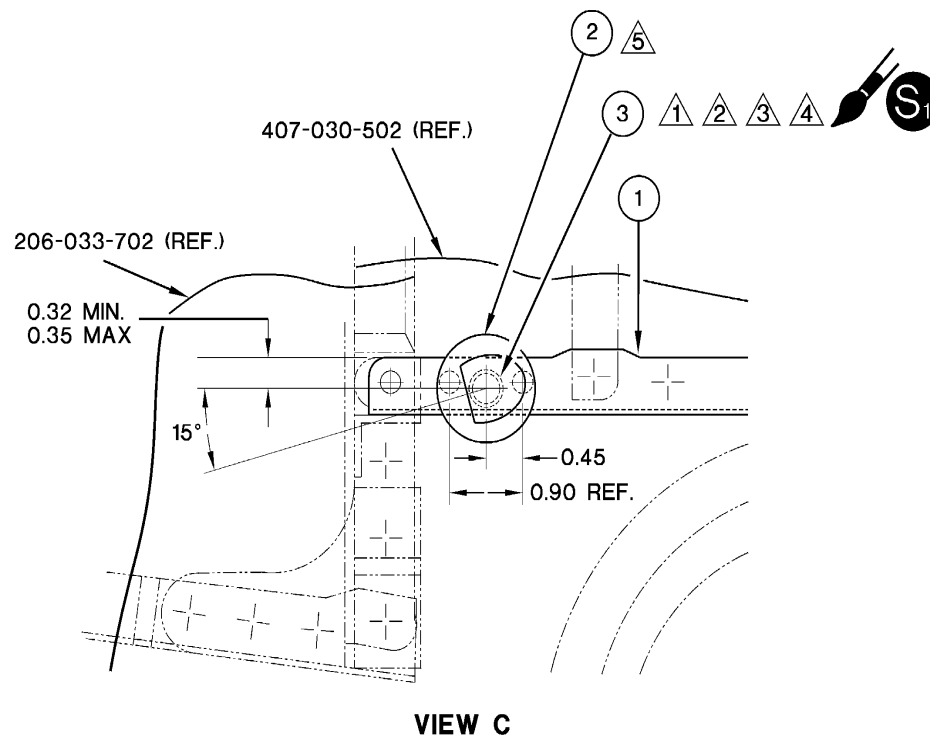
VIEW A LOOKING INBD R/H SIDE

Figure 4. Addition of Drain to Fuel Shutoff Valve Cavity (Sheet 1)



RTB00207

**Figure 4. Addition of Drain to Fuel Shutoff Valve
Cavity (Sheet 2)**



LEGEND

- 1. Stiffener 407-030-507-123
- 2. Grommet AN231-4
- 3. Tubing-Nylon 130-055-6N16



MIL-P-85582 TYPE 1, CL2 (C-204)



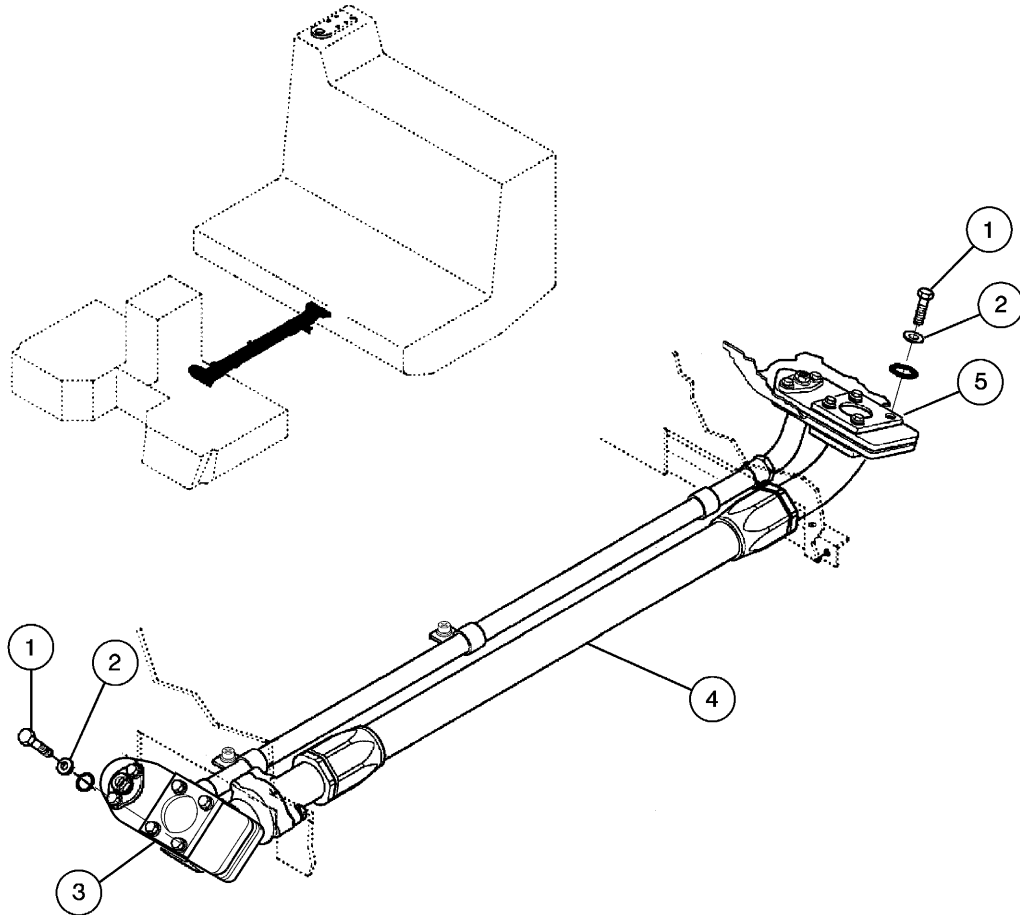
MIL-S-8802 TYPE 2, CLB2 (C-308)

NOTES

- 1. Drill 0.375 hole through stiffener (inner structure) and external skin (side-body fairing). Seal edges of holes with sealant (C-308).
- 2. Length of tube shall be determined at installation. Put a light layer of adhesive on the exterior surface of tube and put it through the hole in stiffener and the fairing while sealant is still wet. Trim both ends of the tube to be flush or within 0.03 protrusion from inboard structure and outside skin.
- 3. Nylon tubing must be securely fastened and form a complete seal to inboard structure and outside skin using sealant (C-308).
- 4. Make sure hole clears inboard structure bend radius.
- 5. Use adhesive (C-311) and bond grommet AN231-4 to external skin surface. Paint grommet to match exterior paint colours.
- 6. All dimensions are in inches.

RTB00209

**Figure 4. Addition of Drain to Fuel Shutoff Valve Cavity
(Sheet 3)**



LEGEND

1. Bolt NAS6704U12B
2. Washer NAS1523AA4R
3. Forward retainer 206-063-643-001
4. Transfer hose assembly 407-362-002-101
5. Aft retainer 206-063-643-001

NOTE

Remove the bolts one at a time and replace the existing washer, NAS1149D0416K under the head of the bolt by washer, NAS1523AA4R (8 places).

Figure 5. Fuel Cells Interconnect Line, Improved Seal/Washers Installation