

**Service Bulletin No: 55-004**  
**Modification No: INSPECTION**

**Ref No: 224**  
**ATA Chapter: 55**

**STABILIZERS - HORIZONTAL STABILIZER - HINGE BRACKETS  
FASTENER INSPECTION AND POSSIBLE REWORK**

**1. Planning Information**

**A. Effectivity**

All Pilatus PC-6 aircraft.

Fairchild built PC-6 aircraft MSN 2001 thru 2092.

Horizontal stabilizer assemblies held as spares.

**B. Concurrent Requirements**

None.

**C. Reason**

**(1) Problem**

During a routine inspection the rivets of the hinge bracket assemblies were found to be sheared or missing.

**(2) Cause**

It is suspected that the problem is caused by the application of too much force to the ends of the horizontal stabilizer during ground handling.

**NOTE:** Larger 'DO NOT PUSH' placards for the horizontal stabilizer can be installed (Ref. SB 55-002).

**(3) Solution**

The LH and RH hinge bracket assemblies must be inspected. Damaged rivets and screws must be replaced. If old standard screws are installed, they must be replaced with the latest production standard screw.

**D. Description**

This Service Bulletin gives the data and instructions to do the inspection and rework as follows:

- Inspect the rivets and the screws of the LH and RH hinge brackets.
- Replace damaged rivets.
- Replace old standard or damaged screws with the latest production standard screws.
- Replace any damaged or lose bonding strap fasteners (if installed).
- Replace any damaged hinge bracket assemblies if necessary.

**E. Compliance**

Mandatory.

Accomplishment of this Service Bulletin is necessary at or before the next scheduled maintenance (100 Hour Inspection or Annual Inspection) and within 12 months from the issue date of this Service Bulletin.

For spare parts in stores, accomplishment of this Service Bulletin is necessary at or before installation on an aircraft and within 12 months from the issue date of this Service Bulletin.

**F. Approval**

The technical content of this Service Bulletin is approved under the authority of DOA No. EASA. 21J. 357.

PILATUS advises Operators/Owners to check with their local Airworthiness Authorities for any changes, local regulations or sanctions that may affect the embodiment of this Service Bulletin.

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**H. Manpower**

	Inspection	Rivet	Fastener	Hinge Bracket Assy (One Pair)	Hinge Bracket Assy (Two Pairs)
Preparation	<b>2.0</b>	-	-	-	-
Inspection	<b>0.5</b>	-	-	-	-
Replacement	-	<b>2.0</b>	<b>3.0</b>	<b>9.0</b>	<b>15.0</b>
Close up	<b>6.0</b>	-	-	-	-
<b>TOTAL MAN-HOURS</b>	<b>8.0</b>	<b>2.0</b>	<b>3.0</b>	<b>9.0</b>	<b>15.0</b>

**NOTE:** Man-hours figures do not include the time required to cure sealants, paints and adhesives.

**I. Weight and Balance****(1) Weight Change**

Not affected.

**(2) Moment Change**

Not affected.

**J. Electrical Load Data**

Not changed.

**K. Software**

Not changed.

**L. References**

Aircraft Maintenance Manual (AMM): 20-40-10, 55-11-11.

Structural Repair Manual (SRM): 51-00-03, 51-00-06.

**M. Publications Affected**

None.

**N. Interchangeability of Parts**

Pre-SB 55-004 screws (old standard) are not interchangeable on Post-SB 55-004 aircraft.

**2. Material Information****A. Material - Price and Availability**

Operators that require additional information and/or Service Bulletin Material should contact their authorized Pilatus Service Center, or Pilatus Customer Support on [www.pilatus-aircraft.com](http://www.pilatus-aircraft.com)  
→ contact us.

**NOTE:** Part Numbers given in this Service Bulletin are correct at the time of approval. Pilatus Aircraft Ltd. reserves the right to change the part numbers as necessary.

**B. Warranty**

Not applicable.

**C. Material Necessary for Each Aircraft****(1) Material to be Procured**

Not applicable.

**(2) Operator Supplied Parts**

PART NO.	DESCRIPTION	QTY	REMARKS
6304.0021.51	HINGE BRACKET LH	A/R	REF. FIG. 1, ITEM 5
6304.0021.52	HINGE BRACKET RH	A/R	REF. FIG. 1, ITEM 5
6304.0028.01	SPACER	A/R	REF. FIG. 1, ITEM 2
931.54.41.753	SCREW, PAN HEAD, 5 x 20 mm (NFL22271BC050020L)	A/R	REF. FIG. 1, ITEM 1
935.13.16.018	SCREW, PAN HEAD, 4 x 12 mm (PPDS 935.13.16.0XX, M4*12)	A/R	REF. FIG. 1, ITEM 9
938.07.31.104	NUT, HEX, ST, CD-PL, 4 x 5,5 mm (4PA108)	A/R	REF. FIG. 1, ITEM 6
938.07.31.105	NUT, HEX, ST, CD-PL, 5 x 6,2 mm (5PA106)	A/R	REF. FIG. 1, ITEM 4
938.71.51.105	WASHER, CRES, 5,3 x 1 mm (L23111-050CA)	A/R	REF. FIG. 1, ITEM 3
938.78.13.204	WASHER, SUPALLOY, CD-PL, 4,3 x 0.8 mm (FS3508.021/4.3/10*0.8)	A/R	REF. FIG. 1, ITEM 7
939.16.81.275	RIVET, UNIVERSAL HEAD 3 x 6 mm (SN213127-3-6)	A/R	
939.16.81.280	RIVET, UNIVERSAL HEAD 3 x 10 mm (SN213127-3-10)	A/R	
939.16.81.326	RIVET, UNIVERSAL HEAD 4 x 10 mm (SN213127-4-10)	A/R	OVERSIZE
939.16.81.344	RIVET, UNIVERSAL HEAD 5 x 10 mm (SN213127-5-10)	A/R	OVERSIZE
971.39.21.501	STRAP, BONDING (FWN6210-P244-85BLAU)	A/R	Ref. Fig. 1, Item 8

**NOTE:** Operators are to supply the expendable parts listed in the referenced procedures (Ref. Para. 1.L.) in addition to the parts listed above.

(3) Operator Supplied Materials (Ref. the Consumable Materials List AMM, 20-31-00)

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
P01-010	SOLVENT	A/R	
P02-009	ABRAISIVE CLOTH	A/R	GRADE 120
P02-011	ABRAISIVE CLOTH	A/R	GRADE 240
P02-014	ABRAISIVE CLOTH	A/R	GRADE 400
P02-016	SCOTCH-BRITE	A/R	VERY FINE GRADE
P02-031	ABSORBENT PAPER	A/R	
P04-039	CORROSION PREVENTATIVE, CA1000	A/R	
P07-001	CCC SOLUTION	A/R	
P07-007	PRIMER	A/R	
P08-073	SEALANT	A/R	

**NOTE:** Operators are to supply the consumable materials listed in the referenced procedures (Ref. Para. 1.L.) in addition to the materials listed above.

**(4) Material Necessary for Each Spare**

PART NO.	DESCRIPTION	QTY	REMARKS
6304.0021.51	HINGE BRACKET LH	A/R	REF. FIG. 1, ITEM 5
6304.0021.52	HINGE BRACKET RH	A/R	REF. FIG. 1, ITEM 5
6304.0028.01	SPACER	A/R	REF. FIG. 1, ITEM 2
931.54.41.753	SCREW, PAN HEAD, 5 x 20 mm (NFL22271BC050020L)	A/R	REF. FIG. 1, ITEM 1
935.13.16.018	SCREW, PAN HEAD, 4 x 12 mm (PPDS 935.13.16.0XX, M4*12)	A/R	REF. FIG. 1, ITEM 9
938.07.31.104	NUT, HEX, ST, CD-PL, 4 x 5,5 mm (4PA108)	A/R	REF. FIG. 1, ITEM 6
938.07.31.105	NUT, HEX, ST, CD-PL, 5 x 6,2 mm (5PA106)	A/R	REF. FIG. 1, ITEM 4
938.71.51.105	WASHER, CRES, 5,3 x 1 mm (L23111-050CA)	A/R	REF. FIG. 1, ITEM 3
938.78.13.204	WASHER, SUPALLOY, CD-PL, 4,3 x 0.8 mm (FS3508.021/4.3/10*0.8)	A/R	REF. FIG. 1, ITEM 7
939.16.81.275	RIVET, UNIVERSAL HEAD 3 x 6 mm (SN213127-3-6)	A/R	
939.16.81.280	RIVET, UNIVERSAL HEAD 3 x 10 mm (SN213127-3-10)	A/R	
939.16.81.326	RIVET, UNIVERSAL HEAD 4 x 10 mm (SN213127-4-10)	A/R	OVERSIZE
939.16.81.344	RIVET, UNIVERSAL HEAD 5 x 10 mm (SN213127-5-10)	A/R	OVERSIZE
971.39.21.501	STRAP, BONDING (FWN6210-P244-85BLAU)	A/R	Ref. Fig. 1, Item 8

**D. Reidentified Parts**

Not applicable.

**E. Tooling - Cost and Availability:**

PART NO.	DESCRIPTION	QTY	REMARKS
-	WARNING SIGN	1	DO NOT OPERATE FLIGHT CONTROLS
-	BRIGHT LIGHT SOURCE	1	LOCAL SUPPLY
-	INSPECTION MIRRORS	A/R	LOCAL SUPPLY
-	NON-METALLIC SCRAPER	A/R	LOCAL SUPPLY
-	INSTALLATION JIG	A/R	LOCAL SUPPLY

**3. Accomplishment Instructions - Part 1 - On Aircraft**

**WARNING:** MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

**WARNING:** WHEN YOU DRILL CUT OR ABRASE MATERIALS YOU MUST WEAR THE CORRECT PROTECTIVE EQUIPMENT (GLOVES, FILTER MASKS AND FACE-SHIELDS/SAFETY-GLASSES/GOGGLES). ABRASIVE DUST CAN GET IN YOUR LUNGS OR ON YOUR SKIN AND CAUSE INJURY OR SKIN IRRITATION. DO NOT INHALE DUST. WHEN AUTHORIZED, MAKE THE AREA MOIST BEFORE YOU MANUALLY ABRASE TO PREVENT AIRBORNE DUST PARTICLES. WHEN AUTHORIZED, USE A HAND-HELD ABRASION/GRINDER/SANDER TOOL THAT IS EXPLOSION PROOF WITH A SUCTION SYSTEM TO REMOVE DUST PARTICLES. MAKE SURE THAT THE WORK AREA IS FULLY VENTILATED. OBEY YOUR LOCAL REGULATIONS WHEN YOU COLLECT AND DISCARD THE DUST AND OTHER UNWANTED MATERIALS.

**WARNING:** BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURER'S HEALTH AND SAFETY INSTRUCTIONS.

**CAUTION:** USE ONLY THE TOOLS AND MATERIALS GIVEN IN THIS PROCEDURE TO REMOVE MATERIAL. USE OF INCORRECT ABRASIVE MATERIALS CAN CAUSE CROSS CONTAMINATION WITH EMBEDDED PARTICLES. THIS CAN CAUSE CORROSION.

**CAUTION:** MAKE SURE THAT ALL THE APPLICABLE HOLES ARE DRILLED AND REAMED PERPENDICULAR TO THE SURFACE AND ARE CONCENTRIC WITH THE ORIGINAL HOLE POSITIONS.

**NOTE:** AMM references given are applicable for holders of AMM Doc. 01975.

**NOTE:** During the accomplishment of this Service Bulletin, it is recommended to:

- Take photographs of the installation
- Record in detail any damage found
- Include these in the relevant maintenance records.

This will also help during possible installation of replacement parts.

**A. General**

If you do the inspection with the horizontal stabilizer removed from the aircraft it is not necessary to do the Preparation and Close Up procedures.

**B. Preparation**

- (1) On aircraft with electrically operated stabilizer trim, open and install a safety clip to the circuit breakers:

STAB TRIM  
RUDDER TRIM

- (2) Put a warning sign 'DO NOT OPERATE THE FLIGHT CONTROLS' in the cockpit.
- (3) Open the access panels FT2 and FT3 and disconnect the tension springs.



**C. Inspection of the Hinge Bracket Assy Installation (Ref. Fig. 1)**

- (1) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the work areas.
  - (2) Examine the left and right hinge bracket assemblies (5) for security of attachment to the structure:
    - Make sure there are no cracks, loose rivets or loose screws (1).
    - Use an inspection mirror and bright light source to examine the upset rivet heads from inside the horizontal stabilizer.
    - Get access through the access hole adjacent to the hinge bracket assemblies (5).
    - If you find loose, sheared or missing rivets, do the replacement procedure given in Step 3.D.
    - If you find loose screws (1), do the replacement procedure given in Step 3.E.
    - If you find that the connection of the electrical bonding strap (8) (if installed) is loose, do the fastener replacement procedure in Step 3.F.
    - If the hinge bracket assemblies (5) are damaged you must replace them, do the replacement procedure given in Step 3.G.
    - If you find damage to the front spar that cannot be removed by the installation of oversize rivets, you must contact Pilatus Aircraft Ltd for repair instructions.
- NOTE:** Aircraft with no electrical bonding strap (8) installed between the fairing assy and the left hinge bracket assy (5) have a rivet installed at this position.
- (3) Examine the top and bottom screw (1) at each hinge bracket (eight positions):
    - Make sure the screws (1) are pan head P/N 931.54.41.753 (NFL22271BC050020L) standard.
    - If the screws (1) are a different standard, do the replacement procedure given in Step 3.E. for each screw.

**D. Hinge Bracket Assy - Rivet Replacement (Ref. Fig. 1)**

- CAUTION:** MAKE SURE THAT THE HINGE BRACKET ASSEMBLIES (5) ARE IN THE CORRECT POSITION WHEN YOU REPLACE THE RIVETS. IF IN DOUBT, REMOVE THE HINGE BRACKET ASSEMBLIES (5) FROM THE AIRCRAFT AND INSTALL THEM AGAIN IN ACCORDANCE WITH STEP 3.G.
- (1) Remove the horizontal stabilizer (Ref. AMM 55-11-11, Page Block 401) if not removed already.
  - (2) Use the applicable diameter drills to remove any damaged or loose rivets (Ref. SRM 51-00-03, Page Block 1).
  - (3) Remove any loose or flaking paint with a non-metallic scraper.
  - (4) Remove the rivet tails and unwanted particles from the work area with a vacuum cleaner.
  - (5) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the rivet hole area.

- (6) Examine the front spar, the horizontal stabilizer skin and the hinge bracket assy (5) for cracks and other damage:
- If the front spar or the horizontal stabilizer skin has damage that cannot be removed by the installation of oversize rivets, contact Pilatus Aircraft Ltd for repair instructions.
  - If the hinge bracket assemblies (5) are damaged you must replace them, do the replacement procedure given in Step 3.G.
- (7) Measure the diameter of the missing rivet holes at several positions for each hole to check for elongation:
- The diameter must be between 3,1 and 3,22 mm (0.122 and 0.127 in.).
  - You must fit oversize rivets at hole positions outside of this tolerance (Ref. Step 3.D.(9)).
  - If any hole diameter is larger than 4,32 mm (0.170 in.) (4,2 mm H12) through the spar assy or 5,32 mm (0.209 in.) (5,2 mm H12) through the horizontal stabilizer skin, this damage cannot be removed with an oversize rivet.
- (8) Installation of Replacement Rivets of the same Diameter
- (a) Apply CCC solution (Material No. P07-001) to all bare metal surfaces and holes (Ref. AMM 20-40-10, Page Block 201).
- CAUTION:** MAKE SURE THAT YOU INSTALL ALL OF THE RIVETS WITHIN THE APPLICATION TIME OF THE SEALANT. OBEY THE MANUFACTURER'S INSTRUCTIONS.
- (b) Install the rivets (P/N 939.16.81.275 or 939.16.81.280) wet with sealant (Material No. P08-073) at missing locations (Ref. SRM 51-00-03, Page Block 1). Make sure that you choose the correct rivet length to form the upset head. Obey the manufacturer's instructions.

## (9) Installation of Oversize Rivets

**CAUTION:** THE MAXIMUM RIVET DIAMETER YOU CAN INSTALL THROUGH THE FRONT SPAR OF THE HORIZONTAL STABILIZER IS NOMINAL DIAMETER 4 mm (SN213127-4-10) (P/N 939.16.81.326). DO NOT INSTALL A NOMINAL DIAMETER 5 mm RIVET (SN213127-5-10) (P/N 939.16.81.344) AT THESE HOLE POSITIONS.

If necessary when the holes are elongated or oversize you can install oversize rivets (P/N 939.16.81.326 or P/N 939.16.81.344 as applicable) as follows:

- (a) Drill the holes to a diameter of:
  - 4 mm (5/32 in.) for 4 mm rivets (applicable to oversize holes through front spar or horizontal stabilizer skin) or
  - 5 mm (3/16 in.) for 5 mm rivets (applicable to oversize holes through horizontal stabilizer skin only).
- (b) Ream the holes to a diameter of:
  - Between 4,2 and 4,32 mm (0.165 and 0.170 in.) (4,2 mm H12) for 4 mm rivets (applicable to oversize holes through front spar or horizontal stabilizer skin) or
  - Between 5,2 and 5,32 mm (0.205 and 0.209 in.) (5,2 mm H12) for 5 mm rivets (applicable to oversize holes through horizontal stabilizer skin only).
- (c) Deburr the holes.
- (d) Remove the unwanted particles from the work area with a vacuum cleaner.
- (e) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the work area.
- (f) Make sure that the oversize rivet limitations are obeyed (where D is the nominal rivet diameter):
  - 1 The minimum edge margin distance = 2 x D.
  - 2 The minimum rivet pitch = 4 x D.
  - 3 The maximum rivet pitch = 8 x D.
- (g) Apply CCC solution (Material No. P07-001) to all bare metal surfaces and holes (Ref. AMM 20-40-10, Page Block 201).

**CAUTION:** MAKE SURE THAT YOU INSTALL ALL OF THE RIVETS WITHIN THE APPLICATION TIME OF THE SEALANT. OBEY THE MANUFACTURER'S INSTRUCTIONS.

- (h) Install the rivets (P/N 939.16.81.326 or 939.16.81.344) wet with sealant (Material No. P08-073) at missing locations (Ref. SRM 51-00-03, Page Block 1). Make sure that you choose the correct rivet length to form the upset head. Obey the manufacturer's instructions.

- (10) Let the sealant cure in accordance with the manufacturer's instructions.

- (11) Apply primer (Material No. P07-007) and the necessary surface protection to the rivets and any adjacent bare metal surfaces to match the aircraft external paint scheme (Ref. SRM 51-00-06, Page Block 1).

**E. Hinge Bracket Assy - Removable Fastener Replacement (Ref. Fig. 1)**

**CAUTION:** MAKE SURE THAT THE HINGE BRACKET ASSY (5) IS IN THE CORRECT POSITION WHEN YOU REPLACE THE REMOVABLE FASTENERS AT THE SCREW POSITIONS. IF IN DOUBT, REMOVE THE HINGE BRACKET ASSY (5) FROM THE AIRCRAFT AND INSTALL IT AGAIN IN ACCORDANCE WITH STEP 3.G.

- (1) Remove the horizontal stabilizer (Ref. AMM 55-11-11, Page Block 401) if not removed already.
- (2) Remove the nut (4), the washer (3), the screw (1) and the spacer (2). Make a note of the hole position for each spacer (2) as you remove it. This is necessary for when you install it again.
- (3) Discard the nut (4), the washer (3) and the screw (1).
- (4) Examine the spacer (2) for damage and replace it if necessary.
- (5) Remove any loose or flaking paint with a non-metallic scraper.
- (6) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the fastener hole area.
- (7) Examine the front spar assy with the removable fasteners removed for cracks and other damage:
  - If you find damage, you must contact Pilatus Aircraft Ltd for repair instructions.
- (8) Examine the hinge bracket assemblies (5) for damage and replace them if necessary. Do the procedure given in Step 3.G.
- (9) Measure the diameter of the screw (1) holes at several positions for each hole to check for elongation:
  - The diameter must be between 5 and 5,12 mm (0.197 and 0.202 in.).
- (10) Apply corrosion preventative (Material No. P04-039) to the un-threaded shaft and head of the new screw (1) (P/N 931.54.41.753), the new washer (3) (P/N 938.71.51.105) and the spacer (2) (P/N 6304.0028.01).
- (11) Put the screw (1), the spacer (2) and the washer (3) into position. Install each spacer (2) at the same position with the notes you made during 3.E.(2) if possible.
- (12) Make sure that you can get a clearance of between 0,05 and 0,25 mm (0.002 and 0.010 in.) from the radius edge of the spacer (2) and the hinge bracket assy (5) (Ref. Fig. 3 View C). If necessary, do the spacer adjustment procedure (Ref. Step 3.H.).
- (13) Install the new nut (4) (P/N 938.07.31.105).
- (14) Make sure that the nut (4) is within safety (a minimum of one full thread of the screw (1) comes through the nut (4)).

- (15) Apply primer (Material No. P07-007) and the necessary surface protection to the fasteners and bare metal surfaces to match the aircraft external paint scheme (Ref. SRM 51-00-06, Page Block 1).

**F. Hinge Bracket Assy - Electrical Bonding Lead Connection - Fastener Replacement (Ref. Fig. 1)**

**CAUTION:** MAKE SURE THAT THE HINGE BRACKET ASSY (5) IS IN THE CORRECT POSITION WHEN YOU REPLACE THE BONDING STRAP FASTENERS. IF IN DOUBT, REMOVE THE HINGE BRACKET ASSEMBLIES (5) FROM THE AIRCRAFT AND INSTALL THEM AGAIN IN ACCORDANCE WITH STEP 3.G.

- (1) Remove the horizontal stabilizer (Ref. AMM 55-11-11, Page Block 401) if not removed already.
- (2) Remove and discard the nut (6), the washer (7), the screw (9) and the bonding strap (8).
- (3) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the fastener hole.
- (4) Examine the horizontal stabilizer with the bonding strap (8) fasteners removed for cracks and other damage:
  - If you find damage, you must contact Pilatus Aircraft Ltd for repair instructions.
- (5) Examine the hinge bracket assy (5) for damage and replace it if necessary. Do the procedure given in Step 3.G.
- (6) Examine the fastener hole and make sure that the surface protection has been removed from the horizontal stabilizer skin and the hinge bracket assy (5). If necessary, proceed as follows:
  - (a) Remove any loose or flaking paint with a non-metallic scraper.
  - (b) Carefully remove any surface protection from an area between 1 and 3 mm (0.039 and 0.118 in.) larger than the contact surfaces of the fasteners at each end of the hole. Use abrasive cloth (Material No. P02-011) and scotch-brite (Material No. P02-016) to get a very smooth surface.
- (7) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the fastener hole and adjacent areas.
- (8) Apply CCC solution (Material No. P07-001) to all bare metal surfaces and holes (Ref. AMM 20-40-10, Page Block 201).
- (9) Put the new electrical bonding strap (8) (P/N 971.39.21.501), the new screw (9) (P/N 935.13.16.018) and the new washer (7) (P/N 938.78.13.204) into position.
- (10) Install the new nut (6) (P/N 938.07.31.104).
- (11) Apply primer (Material No. P07-007) and restore the surface finish as necessary to match the aircraft external paint scheme (Ref. SRM 51-00-06, Page Block 1).

**G. Hinge Bracket Assemblies - Replacement (Ref. Fig. 1 and Fig. 2)**

- (1) Make the installation jig from steel or aluminum alloy as shown in Fig. 2.  
**NOTE:** The installation jig is necessary to correctly position hinge brackets. Operators that have difficulty to make the installation jig can contact Pilatus Aircraft Ltd for additional support.
- (2) Remove the horizontal stabilizer (Ref. AMM 55-11-11, Page Block 401) if not removed already.
- (3) Remove the nuts (4), the washers (3), the screws (1) and the spacers (2) at eight positions. Make a note of the hole position for each spacer (2) as you remove it. This is necessary for when you install it again.
- (4) Discard the nuts (4), the washers (3) and the screws (1).
- (5) Examine the spacers (2) for damage and replace them if necessary.
- (6) Remove and discard the nut (6), the washer (7), the screw (9) and the bonding strap (8) if installed.  
**NOTE:** Aircraft with no electrical bonding strap (8) installed between the fairing assy and the left hinge bracket assy (5) have a rivet installed at this position.
- (7) Use the applicable diameter drills to carefully remove the rivets at each hinge bracket assy (5) position (Ref. SRM 51-00-03, Page Block 1).
- (8) Remove the hinge bracket assemblies (5).
- (9) Remove any loose or flaking paint with a non-metallic scraper.
- (10) Remove the rivet tails and unwanted particles from the work area with a vacuum cleaner.
- (11) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the work area.
- (12) Examine the front spar and the horizontal stabilizer skin with the hinge bracket assemblies (5) removed for cracks and other damage:
  - If you find damage, you must contact Pilatus Aircraft Ltd for repair instructions.
- (13) Measure the diameter of the screw (1) holes at several positions for each hole to check for elongation:
  - The diameter must be between 5 and 5,12 mm (0.197 and 0.202 in.).
- (14) Install the new hinge bracket assemblies (5) on the installation jig with the bolts, washers and nuts.
- (15) Torque tighten the nuts to 14,7 Nm (130 lbf in).
- (16) Put the hinge bracket assemblies (5) into position on the front spar assy and the horizontal stabilizer skin. Hold the components in position with clamps and gripper pins or equivalent at each rivet/fastener position.

- (17) Remove one gripper pin at a time and transfer drill the holes as follows:
  - (a) Immediately install the gripper pin back into each hole after it has been drilled and reamed.
  - (b) Transfer drill the rivet holes through the front spar assy to diameter 4,1 mm (5/32 in.) and then ream to a diameter of between 4,2 and 4,32 mm (0.165 and 0.170 in.) (4,2 mm H12).
  - (c) Transfer drill the rivet holes through the horizontal stabilizer to diameter 4,8 mm (3/16 in.) and then ream to a diameter of between 5,2 and 5,32 mm (0.205 and 0.209 in.) (5,2 mm H12).
- (18) Make sure that the oversize rivet limitations are obeyed (where D is the nominal rivet diameter):
  - (a) The minimum edge margin distance =  $2 \times D$ .
  - (b) The minimum rivet pitch =  $4 \times D$ .
  - (c) The maximum rivet pitch =  $8 \times D$ .
- (19) Temporarily put the screws (1) and the spacers (2) into position. Install each spacer (2) at the same position with the notes you made during 3.G.(3) if possible.
- (20) Make sure that you can get a clearance of between 0,05 and 0,25 mm (0.002 and 0.010 in.) from the radius edge of each spacer (2) and the hinge bracket assy (5) (Ref. Fig. 3 View C). If necessary, do the spacer adjustment procedure (Ref. Step 3.H.).
- (21) Remove all of the parts and deburr all of the holes.
- (22) Remove the unwanted particles from the work area with a vacuum cleaner.
- (23) Remove the hinge bracket assemblies (5) from the installation jig.
- (24) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the work area, all of the fastener holes and all of the parts.
- (25) Apply CCC solution (Material No. P07-001) to all bare metal surfaces and holes (Ref. AMM 20-40-10, Page Block 201).
- (26) Apply primer (Material No. P07-007) over the CCC solution but do not apply it in inside any of the fastener holes (Ref. SRM 51-00-06, Page Block 1).
- (27) Let the primer dry in accordance with the manufacturer's instructions.
- (28) For the bonding strap (8) hole only, remove any surface protection from an area between 1 and 3 mm (0.039 and 0.118 in.) larger than the contact surfaces of the fasteners at each end of the hole. Use abrasive cloth (Material No. P02-011) and scotch-brite (Material No. P02-016) to get a very smooth surface.
- (29) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean the work area, all of the fastener holes and all of the parts.
- (30) Apply CCC solution (Material No. P07-001) to any bare metal surfaces around the bonding strap (8) hole (Ref. AMM 20-40-10, Page Block 201).

(31) Do Steps 3.G.(14) and (15) again to install the hinge bracket assemblies (5) onto installation jig.

**CAUTION:** MAKE SURE THAT YOU INSTALL ALL OF THE RIVETS WITHIN THE APPLICATION TIME OF THE SEALANT. OBEY THE MANUFACTURER'S INSTRUCTIONS.

(32) Obey the manufacturer's instructions and apply a layer of sealant (Material No. P08-073) to the faying surfaces of the:

- Hinge bracket assemblies (5)
- Horizontal stabilizer skin
- Front spar assy.

(33) Put the hinge bracket assemblies (5) into position on the front spar assy and the horizontal stabilizer skin. Hold the components in position with clamps and gripper pins or equivalent at each fastener position.

(34) Remove one gripper pin at a time and install the fasteners as follows:

- (a) Install the rivets (P/N 939.16.81.326) wet with sealant (Material No. P08-073) through the spar assy (Ref. SRM 51-00-03, Page Block 1).
- (b) Install the rivets (P/N 939.16.81.344) wet with sealant (Material No. P08-073) through the horizontal stabilizer skin (Ref. SRM 51-00-03, Page Block 1).
- (c) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and remove any unwanted sealant.
- (d) Let the sealant cure in accordance with the manufacturer's instructions.
- (e) Apply corrosion preventative (Material No. P04-039) to the un-threaded shaft and head of the new screws (1) (P/N 931.54.41.753), the new washers (3) (P/N 938.71.51.105) and the spacers (2) (P/N 6304.0028.01).
- (f) Put the screws (1), the spacers (2), the washers (3) into position.
- (g) Install the new nuts (4) (P/N 938.07.31.106).

(35) Make sure that each nut (4) is within safety (a minimum of one full thread of the screw (1) comes through the nut (4)).

(36) Install the bonding strap (8) as follows:

- (a) Put the new electrical bonding strap (8) (P/N 971.39.21.501), the new screw (9) (P/N 935.13.16.018) and the new washer (7) (P/N 938.78.13.204) into position.
- (b) Install the new nut (6) (P/N 938.07.31.104).

(37) Apply primer (Material No. P07-007) to the heads of the rivets and screws and restore the surface finish to match the aircraft external paint scheme (Ref. SRM 51-00-06, Page Block 1).



**H. Spacer Adjustment Procedure (Ref. Fig. 3)**

- (1) Do this procedure when you cannot get the necessary clearance gap of the spacer (2) from the hinge bracket assy during installation (Ref. Fig. 3, View C).
- (2) Use a 5,2 mm (0.20 in.) drill or a small round file to elongate the hole in the spacer (2) as follows (Ref. Fig. 2, View B):
  - (a) Elongate the hole until you can install the spacer (2) correctly as shown on Fig. 3, View C.
  - (b) Elongate the hole a maximum of 2,0 mm (0.08 in.).
  - (c) If you still cannot install the spacer (2) correctly, replace the hinge bracket (Ref. Step 3.G.) or contact Pilatus Aircraft Ltd for a recommended solution.
- (3) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-010) and fully clean all bare metal areas.
- (4) Apply CCC solution (Material No. P07-001) to all bare metal surfaces (Ref. AMM 20-40-10, Page Block 201).
- (5) Apply primer (Material No. P07-007) over the CCC solution (Ref. SRM 51-00-06, Page Block 1).
- (6) Let the primer dry in accordance with the manufacturer's instructions.

**I. Close up**

- (1) If you removed the horizontal stabilizer:
  - (a) Install the horizontal stabilizer (Ref. AMM 55-11-11, Page Block 401).
- (2) Remove all tools and materials. Make sure the work areas are clean.
- (3) Connect the tension springs and close the access panels FT2 and FT3.
- (4) On aircraft with electrically operated stabilizer trim, remove the safety clip and close the circuit breakers:

STAB TRIM  
RUDDER TRIM

- (5) Remove the warning sign 'DO NOT OPERATE THE FLIGHT CONTROLS'.

**J. Documentation**

Make an entry in the Aircraft Logbook that this Service Bulletin has been accomplished.

**4. Accomplishment Instructions - Part 2 - Spare Parts in Stores**

**WARNING:** MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

**WARNING:** WHEN YOU DRILL CUT OR ABRABE MATERIALS YOU MUST WEAR THE CORRECT PROTECTIVE EQUIPMENT (GLOVES, FILTER MASKS AND FACE-SHIELDS/SAFETY-GLASSES/GOGGLES). ABRASIVE DUST CAN GET IN YOUR LUNGS OR ON YOUR SKIN AND CAUSE INJURY OR SKIN IRRITATION. DO NOT INHALE DUST. WHEN AUTHORIZED, MAKE THE AREA MOIST BEFORE YOU MANUALLY ABRABE TO PREVENT AIRBORNE DUST PARTICLES. WHEN AUTHORIZED, USE A HAND-HELD ABRASION/GRINDER/SANDER TOOL THAT IS EXPLOSION PROOF WITH A SUCTION SYSTEM TO REMOVE DUST PARTICLES. MAKE SURE THAT THE WORK AREA IS FULLY VENTILATED. OBEY YOUR LOCAL REGULATIONS WHEN YOU COLLECT AND DISCARD THE DUST AND OTHER UNWANTED MATERIALS.

**WARNING:** BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURER'S HEALTH AND SAFETY INSTRUCTIONS.

**CAUTION:** USE ONLY THE TOOLS AND MATERIALS GIVEN IN THIS PROCEDURE TO REMOVE MATERIAL. USE OF INCORRECT ABRASIVE MATERIALS CAN CAUSE CROSS CONTAMINATION WITH EMBEDDED PARTICLES. THIS CAN CAUSE CORROSION.

**CAUTION:** MAKE SURE THAT ALL THE APPLICABLE HOLES ARE DRILLED AND REAMED PERPENDICULAR TO THE SURFACE AND ARE CONCENTRIC WITH THE ORIGINAL HOLE POSITIONS.

**NOTE:** AMM references given are applicable for holders of AMM Doc. 01975.

**NOTE:** During the accomplishment of this Service Bulletin, it is recommended to:

- Take photographs of the installation
- Record in detail any damage found
- Include these in the relevant maintenance records.

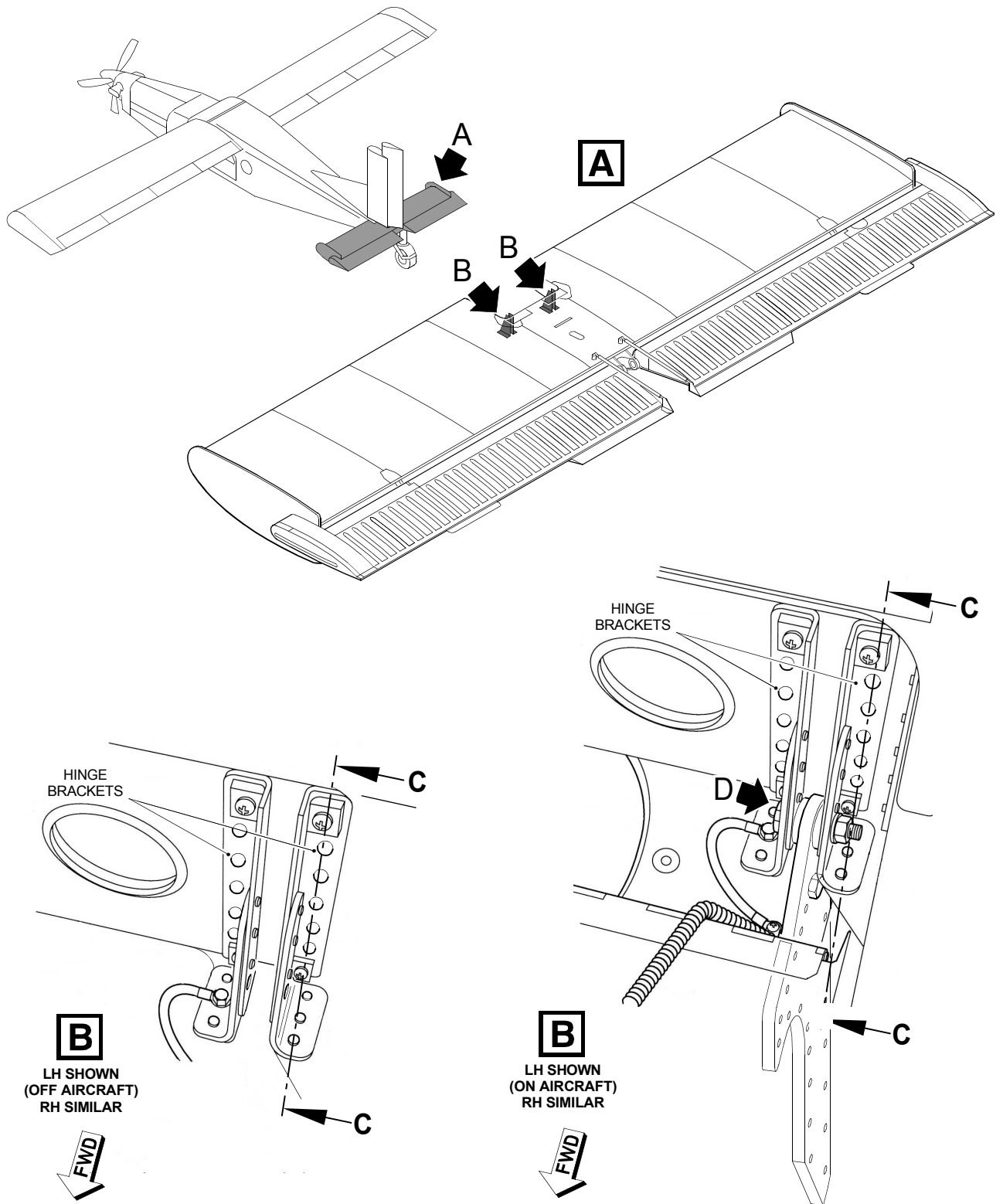
This will also help during possible installation of replacement parts.

**A. Inspect the Horizontal Stabilizers Stored as Spares (Ref. Fig. 1 and Fig. 2)**

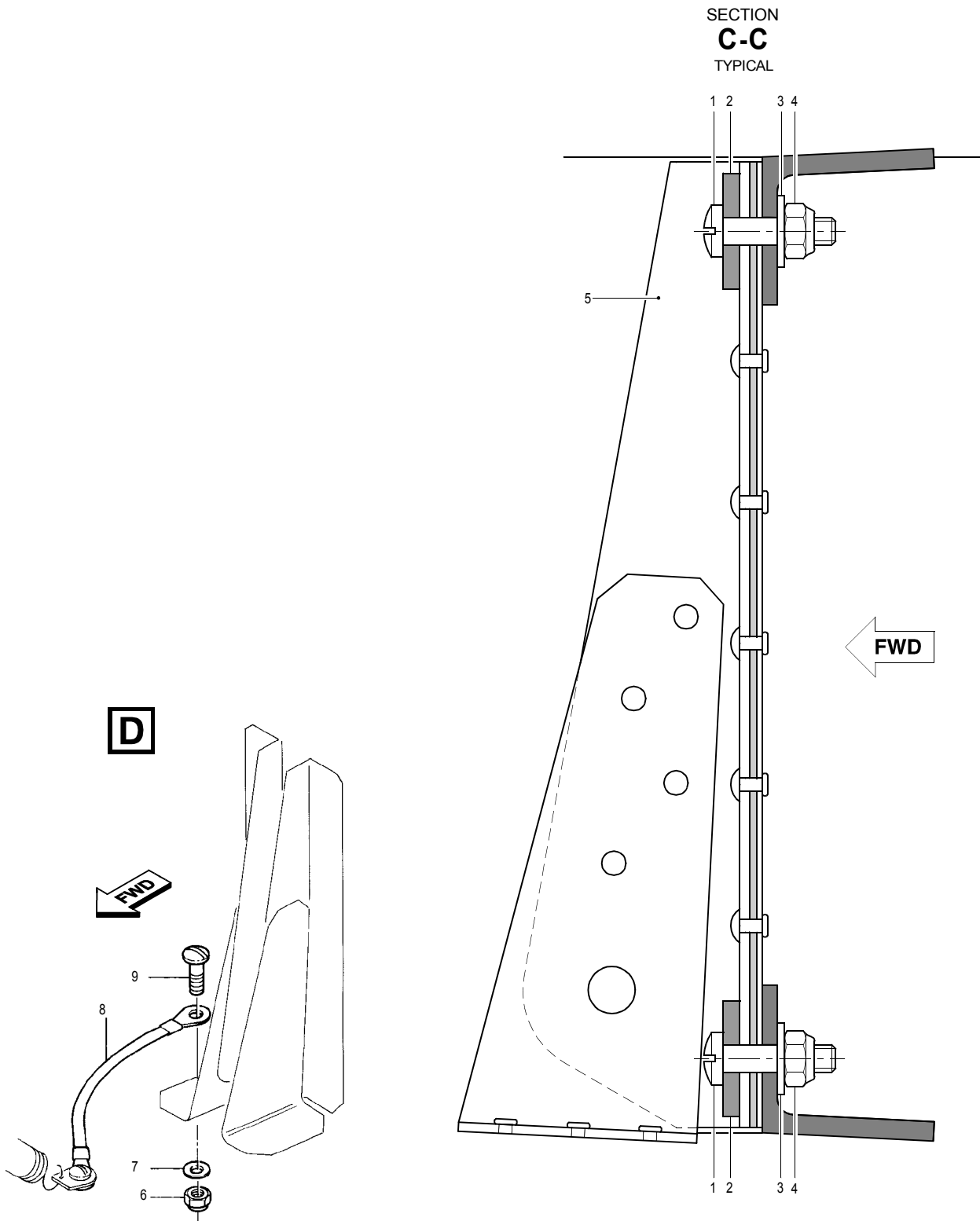
- (1) Do the inspection procedure given in Steps 3.C.(1) thru 3.C.(3) and if necessary the replacement procedures given in Step 3.D., Step 3.E., Step 3.F. and/or Step 3.G.

**B. Documentation**

Make an entry on the serviceable label (attached to the part) that this Service Bulletin has been accomplished.

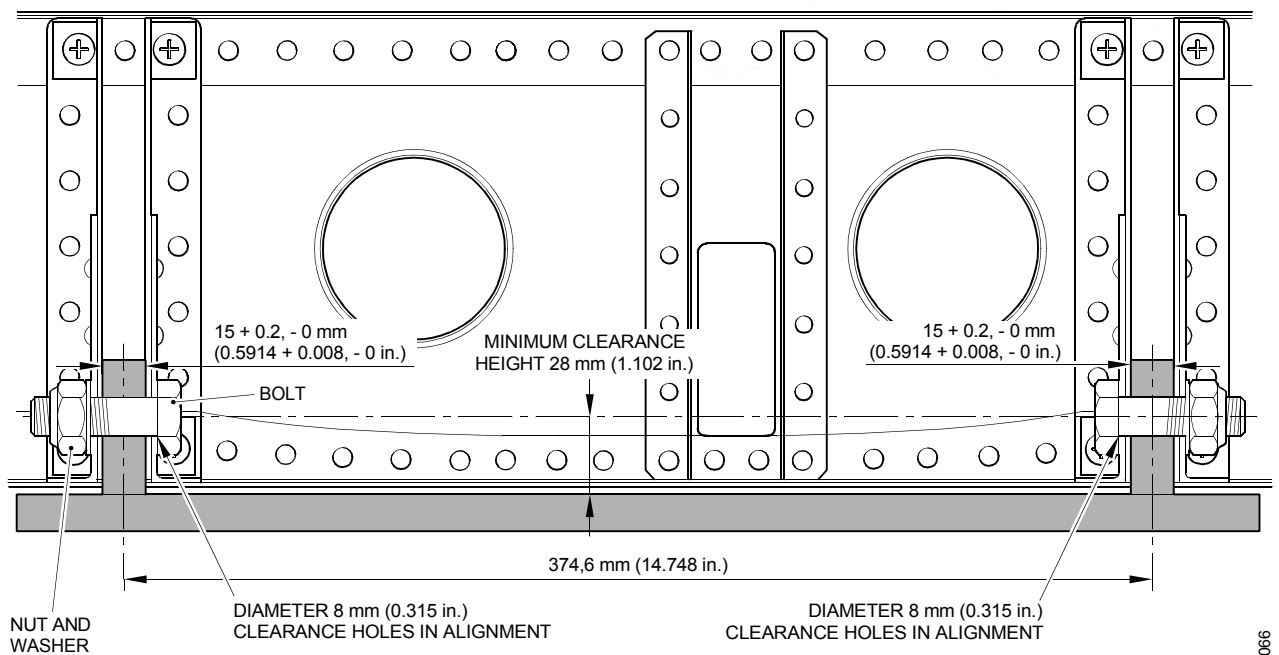
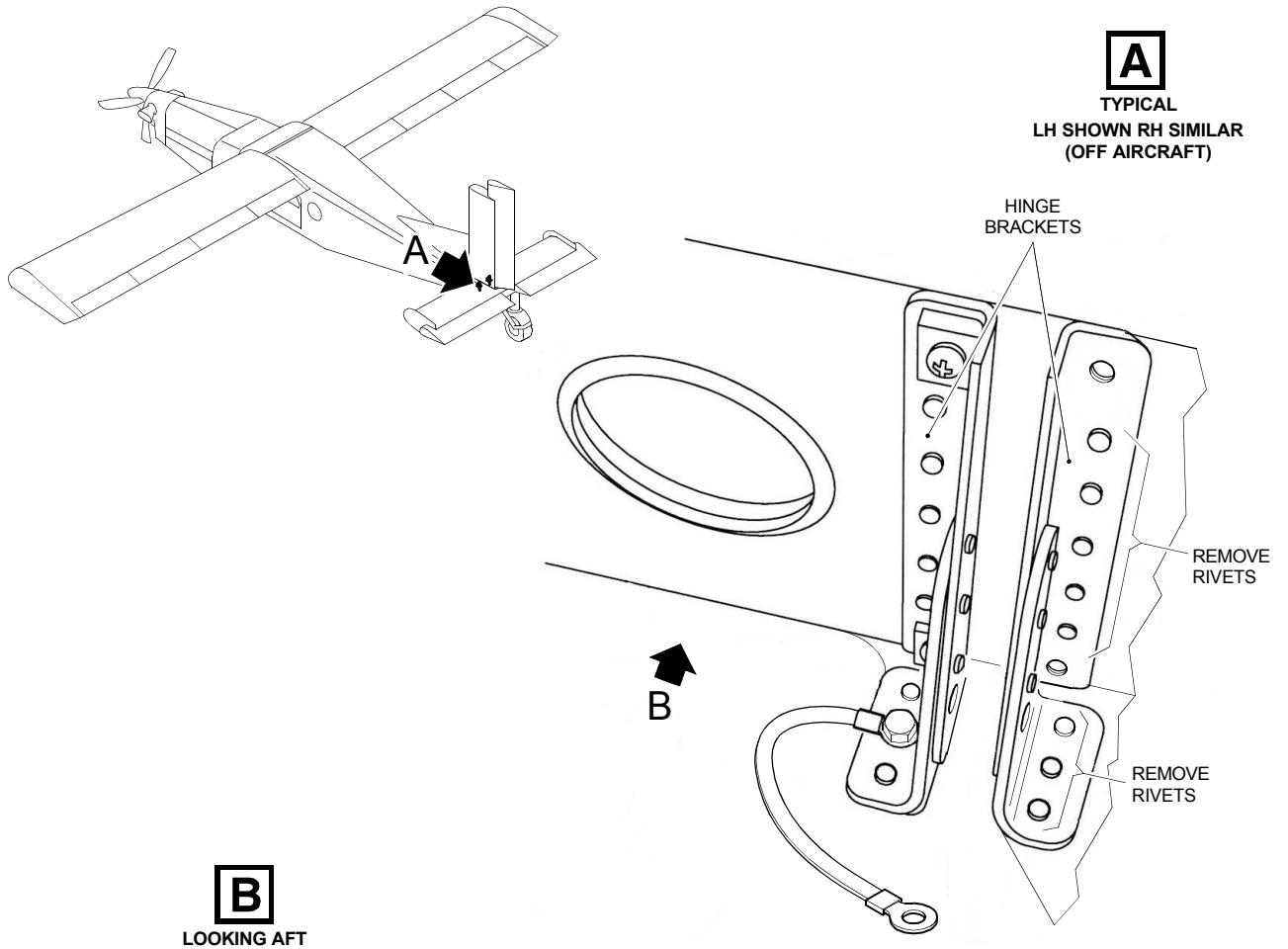


Horizontal Stabilizer - Hinge Bracket Assy - Inspection and Fastener Replacement  
Figure 1 (Sheet 1 of 2)



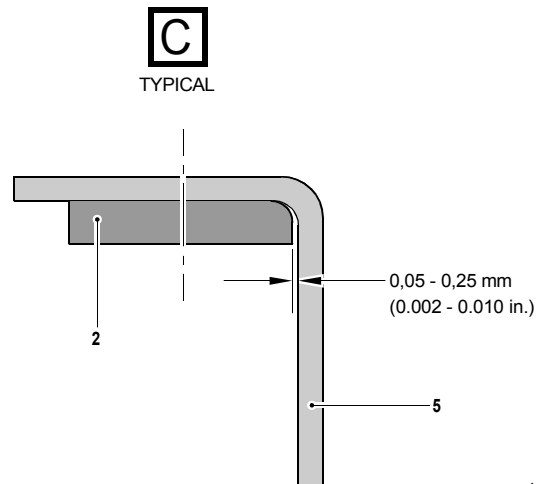
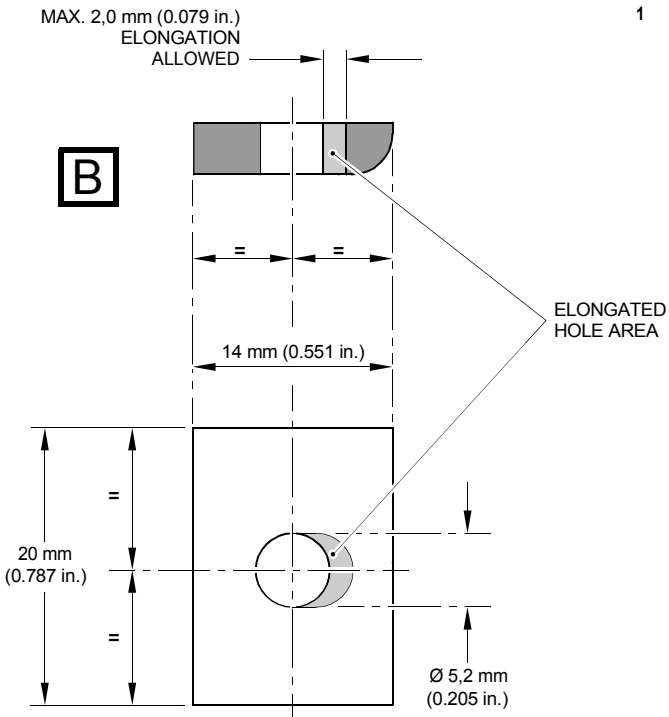
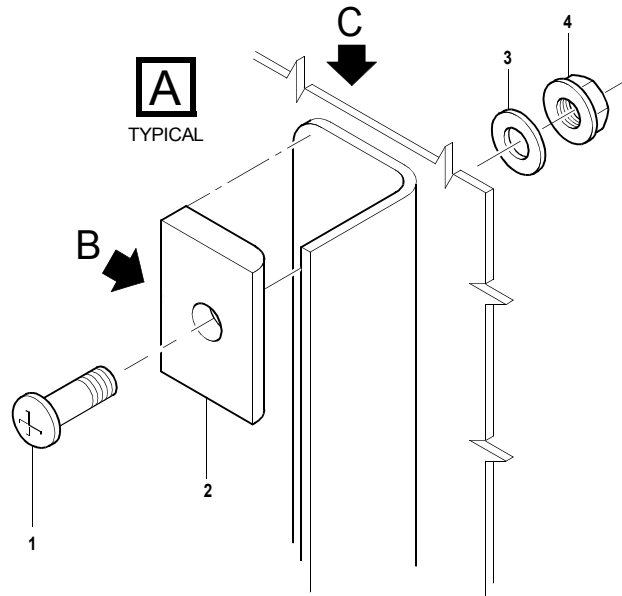
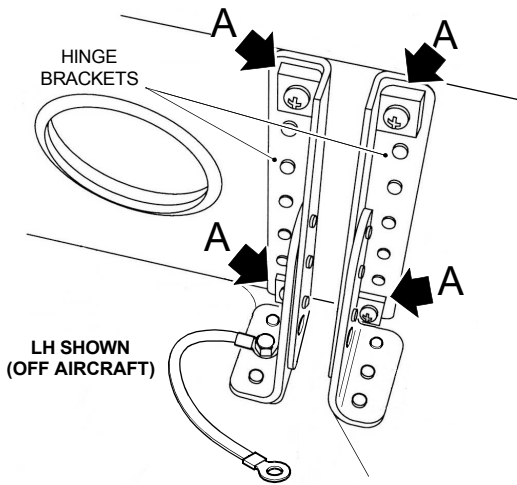
SB 3066

Horizontal Stabilizer - Hinge Bracket Assy - Inspection and Fastener Replacement  
Figure 1 (Sheet 2 of 2)



SB 3066

Hinge Bracket - Replacement and Installation Jig Detail  
Figure 2



Spacer Adjustment  
Figure 3

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