Service Bulletin No:	**55-005**	**Ref No:**	**225**
Modification No:	**EC-12-0422, EC-13-0405, EC-14-0131, EC-16-0430**	**ATA Chapter:**	**55**

STABILIZERS - ELEVATOR AND RUDDER
MODIFICATION OF THE HINGE BOLT INSTALLATION

1. Planning Information

A. Effectivity

Pilatus PC-6 aircraft up to MSN 995.

Fairchild built PC-6 aircraft MSN 2001 thru 2092.

All CONFIG 1 elevator and rudder assemblies held as spares.

This modification is incorporated during production on aircraft MSN 996 and subsequent and all elevator and rudder assemblies supplied as spares after the issue date of this Service Bulletin.

This modification is incorporated during production partially on aircraft MSN 989 thru 995.

Aircraft MSN 996 and subsequent which have replaced the elevator and rudder assemblies between aircraft delivery and the effective date of the Service Bulletin can also be affected if CONFIG 1 spares are installed.

NOTE: In this Service Bulletin the configurations are defined as:

- CONFIG 1 - Refers to aircraft and elevator and rudder assemblies held as spares pre-SB 55-003 and/or pre-SB 55-005
- CONFIG 2 - Refers to aircraft and elevator and rudder assemblies held as spares post-SB 55-003 and/or post-SB 55-005.

B. Concurrent Requirements

None.

This Service Bulletin supersedes Service Bulletins SB 55-001 (Ref. 205) and SB 55-003 (Ref. 208). All relevant information is incorporated and amended in this Service Bulletin.

C. Reason

(1) Problem

CONFIG 1 cases were reported of partial or complete detachment of the elevator or rudder resulting in reduced control of the aircraft.

(2) Cause

CONFIG 1 bolts are installed in anchor nuts and safetied with lockwire. Limited access can result in loose bolt installations, which thereafter are subject to rotation which results in lockwire fatigue failure.

(3) Solution

This Service Bulletin gives the data and instructions as follows to incorporate the installations previously recommended in SB 55-003 (CONFIG 2) and gives instructions for initial and repeat inspections until the modifications changes are done:

(a) All PC-6 Aircraft within one month (Part 1):

1 Do a configuration check.

2 For CONFIG 2 aircraft, if no CONFIG 1 parts are installed - no further action is necessary.

3 For CONFIG 1 aircraft, the elevator and rudder must be removed, checked and installed with a new procedure that gives better access.

(b) All PC-6 CONFIG 1 Aircraft every 100 Flying Hours (FH) (Part 2):

1 The elevator and rudder must be removed, checked and installed with the new procedures until the modification to CONFIG 2 (Part 3) is done.

(c) All PC-6 CONFIG 1 Aircraft within 13 months (Part 3):

1 Make new access holes to give access to the attaching parts and remove the anchor nuts.

2 Install the rudder and elevator with new bolts and nuts safetied with cotter pins.

3 Install the top hinge bolt on the rudder with the head up.

4 Do the center hinge bolt modification of the RH aileron.

(d) All PC-6 CONFIG 1 Elevator and rudder spares within 13 months or before installation on Aircraft (Part 4):

1 Cut access holes and remove the anchor nut from the nose ribs.

D. Description

This Service Bulletin gives the data and instructions necessary to:

(1) Part 1 - On Aircraft - Inspection

(a) Configuration Check.

(b) CONFIG 1 - Rudder and Elevator Inspection (removal, check and installation).

(2) Part 2 - On Aircraft - CONFIG 1 - Repeat Inspections

(a) Rudder and Elevator Inspection (removal, check and installation).

(3) Part 3 - On Aircraft - Modification from CONFIG 1 to CONFIG 2

This Service Bulletin gives the data and instructions to incorporate the modification previously recommended in SB 55-003:

(a) Cut access holes in the elevator and rudder.

(b) Remove the anchor nuts from the nose rib and replace the hinge bolts and nuts.

(c) Replace the hinge bolts and nuts at the center hinge of the RH aileron.

(d) Safety the new nuts with cotterpins.

Operators with elevators and rudders with Part Numbers (P/N) not listed in Para 2.F. shall also embody the modification. The P/N is not re-identified, but the parts are marked post-SB 55-005 in accordance with the work steps given in Para 5.

(4) Part 4 - Spares - Modification from CONFIG 1 to CONFIG 2

This Service Bulletin gives the data and instructions to cut access holes and remove the anchor nut from the nose rib for elevators and rudders held as spares.

Operators with elevators and rudders with Part Numbers (P/N) not listed in Para 2.F. can also embody the modification. The P/N is not re-identified, but the parts are marked post-SB 55-005 in accordance with the work steps given in Para 6.

E. Compliance

Mandatory.

The configuration check (Part 1) must be done within one month after the issue date of this Service Bulletin.

The inspection check of CONFIG 1 (Part 1) aircraft must be done within one month after the issue date of this Service Bulletin and thereafter (Part 2) every 100 Flying Hours (FH) until the modification to CONFIG 2 (Part 3) is done.

The modification of CONFIG 1 aircraft to CONFIG 2 (Part 3) must be done within 13 months after the issue date of this Service Bulletin.

Elevator and rudder assemblies that are CONFIG 1 and held as spares must be modified to CONFIG 2 (Part 4) before installation on an aircraft or within 13 months of the issue of this Service Bulletin, whichever occurs first. All modification changes of Part 3 must be done at the same time.

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.

G. Copyright and Legal Statements

purpose. This document contains trade secrets, confidential and/or proprietary information of us and technical data subject to export control laws and regulations, including the U.S. Export Administration Regulations (EAR). Disclosure or distribution of this document contrary to the EAR, and other laws and regulations, is strictly forbidden. The above restrictions may apply to data on all pages of this document.

H. Manpower

	Inspection		Modification (CONFIG 1 to CONFIG 2)	
	CONFIG 1	CONFIG 2	Aircraft	Spares
Preparation	**1.0**	**1.0**	**1.0**	**-**
Modification - Elevators	**-**	**-**	**5.0**	**5.0**
Modification - Rudder	**-**	**-**	**2.5**	**2.5**
Modification - Aileron	**-**	**-**	**2.0**	**-**
Installation	**2.0**	**0.5**	**2.0**	**-**
Test	**1.0**	**-**	**1.0**	**-**
Close up	**0.5**	**0.5**	**0.5**	**-**
TOTAL MAN-HOURS	***4.5***	***2.0***	***14.0***	***7.5***

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) (Doc. No. 01975): 06-40-00, 20-10-01, 20-31-00, 20-40-10, 20-50-01, 27-00-00, 27-15-00, 27-20-00, 27-25-00, 27-30-00, 27-32-00, 55-21-11, 55-41-11, 57-61-11.

M. Publications Affected

Aircraft Maintenance Manual (AMM) (Doc. No. 01975): 06-40-00, 55-21-11, 55-41-11, 57-61-01.

Illustrated Parts Catalogue (IPC) (Doc. No. 02039): 55-21-01, 55-23-01, 55-41-01, 55-43-01, 57-61-01.

N. Interchangeability of Parts

CONFIG 1 and CONFIG 2 elevator and rudder assemblies are not interchangeable.

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 → 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 - Part 1 and Part 2 - On Aircraft Inspections

(1) Operator Supplied Materials (Ref. AMM, 20-31-00)

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
P01-008	WHITE SPIRIT	AR	
P02-001	LOCKWIRE (STANDARD)	AR	
P02-006	LOCKWIRE (HEAT RESISTANT)	AR	
P02-007	LOCKWIRE (STANDARD)	AR	
P02-031	ABSORBENT PAPER	AR	
P04-028	GREASE	AR	
P04-029	PASTE, INSTALLATION	AR	
P10-013	CPC	AR	
-	PERMANENT MARKER	AR	LOCAL SUPPLY
-	TAPE	AR	LOCAL SUPPLY

D. Material Necessary for Each Aircraft - Part 3 - On Aircraft - Modification from CONFIG 1 to CONFIG 2

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. Part numbers of items delivered are correct when dispatched. This could lead to differences between those part numbers quoted in this Service Bulletin and the delivered parts, if parts are superseded. Operators are requested to check the IPC for delivered parts which differ from those listed in the Service Bulletin Materials List.

(1) Material to be Procured

NEW PART NO.	DESCRIPTION	OLD PART NO.	QTY	DISP. CODE	FIGN O.	ITEM NO.
113.30.06.021	CLASS 1 BOLT, M6 X 28, 5/9, 5	932.53.47.119/ 113.30.06.001	2 1	N	6 7	5 1
113.30.06.022	BOLT .2500-28UNF X 29	932.19.21.129	1	N	6	31
116.40.06.147	CLASS 1 BOLT, M6 X 56,5/10,5	932.12.31.407	1	N	8	4
6302.0045.01	COVER, ACCESS	-	2 1	N	4 5	2 1
932.19.21.108	BOLT, HEX, ST, CD-PL, 6.4*35.7 (AN4-13)	932.19.21.132	1	N	6	22
935.13.16.002	SCREW, PAN HD, ST, CD-PL, 3.0*10.0 (PPDS-99-0154, M3*10)	-	8 4	N	4 5	1 3
938.08.46.103	NUT, HEX, CRW, ST, CD-PL, 6.0*6.0 (NFL22453BC060L)	938.42.15.104/ 938.42.15.304 938.07.31.106	2 1 1	N	6 7 8	1 4 7
938.08.71.204	NUT, HEX, ST, CD-PL, 6.4*7.5 (MS17825-4)	938.07.68.205	1 1	N	6 6	25 28
938.42.15.301	ANCHOR NUT, 2-LUG, CRES, AG-PL, 3.0 (3SR1005)	-	8 4	N	4 5	3 2
938.71.60.008	WASHER, CRES, 6.4*1.6 (DIN125A/6.4/ 12*1.6,RBST)	938.71.60.008	1	N	8	5
938.75.11.101	WASHER, CSK 90°, ST, CD-PL, 6.4*2.0 (MS20002C4)	938.77.11.114	1	N	6	30
938.77.10.202	WASHER, CSK 90°, ST, CD-PL, 6.4*1.6 (MS21299C4)	938.77.11.114	1	N	6	23
938.77.11.114	WASHER, ST, CD-PL, 6.4*0.8 (NAS1149F0432P)	938.77.11.114/ 938.78.11.104/ 938.78.11.204	1 2 1	N	6 6 7	26 4 2
938.77.11.115	WASHER, ST, CD-PL, 6.4*1.6 (NAS1149F0463P)	-	2 1	N	6 7	2 3
938.78.11.204	WASHER, SUPALLOY, CD-PL, 6.4*2.0 (FS3508.021/6.4/14*2.0)	938.77.11.114	1	N	6	27

Disposition Codes: D - Discard / N - New / S- Return to Stores

NEW PART NO.	DESCRIPTION	OLD PART NO.	QTY	DISP. CODE	FIGN O.	ITEM NO.
939.27.81.006	RIVET, SO, CSK, AL, CCC, 2.4 (NAS1097AD3)	-	24	N	-	-
940.17.02.317	COTTER PIN, CRES, PASS, 1.2*19.1 (MS24665-88)	-	2 1 1	N	6 7 8	3 5 6
940.17.02.502	COTTER PIN, MON, 1.6*19.1 (MS24665-191)	-	1	N	6	29
940.17.02.511	COTTER PIN, MON, 2.0*19.1 (MS24665-267)	-	1	N	6	24

Disposition Codes: D - Discard / N - New / S- Return to Stores

(2) Operator Supplied Materials (Ref. AMM, 20-31-00)

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
P01-008	WHITE SPIRIT	AR	
P02-001	LOCKWIRE (STANDARD)	AR	
P02-013	ABRASIVE CLOTH	AR	GRADE 320
P02-014	ABRASIVE CLOTH	AR	GRADE 400
P02-016	ABRASIVE PADS	AR	VERY FINE GRADE
P02-031	ABSORBENT PAPER	AR	
P04-028	GREASE	AR	
P04-029	PASTE, INSTALLATION	AR	
P07-007	PRIMER	AR	
P07-021	CCC TOUCH-UP	AR	
P08-071	SEALANT	AR	
P10-013	CPC	AR	

E. Material Necessary for Part 4 - Spares - Modification from CONFIG 1 to CONFIG 2

NOTE: The material listed below is sufficient for two elevators and one rudder.

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. Part numbers of items delivered are correct when dispatched. This could lead to differences between those part numbers quoted in this Service Bulletin and the delivered parts, if parts are superseded. Operators are requested to check the IPC for delivered parts which differ from those listed in the Service Bulletin Materials List.

(1) Material to be Procured

NEW PART NO.	DESCRIPTION	OLD PART NO.	QTY	DISP. CODE	FIGN O.	ITEM NO.
6302.0045.01	COVER ASSY, ACCESS	-	2 1	N	1 2	2 1
935.13.16.002	SCREW, PAN HD, ST, CD-PL (PPDS-99-0154, M3*10)	-	8 4	N	1 2	1 3
938.42.15.301	ANCHOR NUT, 2-LUG, CRES, AG-PL (3SR1005)	-	8 4	N	1 2	3 2
939.27.81.006	RIVET, SO, CSK, AL, CCC (NAS1097AD3)	-	24	N	-	-

Disposition Codes: D - Discard / N - New / S- Return to Stores

(2) Operator Supplied Materials (Ref. AMM, 20-31-00)

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
P01-008	WHITE SPIRIT	AR	
P02-031	ABSORBENT PAPER	AR	
P07-007	PRIMER	AR	
P07-021	CCC TOUCH-UP	AR	
P08-071	SEALANT	AR	

F. Reidentified Parts

Old Part Number	Description	New Part Number / Identification
113.50.06.011	Elevator Assy LH	113.50.06.014 (Post-SB 55-005) <1>
113.50.06.012	Elevator Assy RH	113.50.06.013 (Post-SB 55-005) <1>
113.40.06.018	Rudder Assy, Elec Trim	113.40.06.048 (Post-SB 55-005) <1>
6302.0010.51	Rudder Assy, Mech Trim	6302.0010.51 (Post-SB 55-005) <1>
6302.0010.52	Rudder Assy, Elec Trim	6302.0010.52 (Post-SB 55-005) <1>
6305.0010.00	Elevator Assy, H2	6305.0010.00 (Post-SB 55-005) <1>
6305.0010.52	Elevator Assy LH, H4	6305.0010.52 (Post-SB 55-005) <1>
6305.0010.53	Elevator Assy RH, H4	6305.0010.53 (Post-SB 55-005) <1>
6305.0010.54	Elevator Assy LH	113.50.06.016 (Post-SB 55-005) <1>
6305.0010.55	Elevator Assy RH	113.50.06.015 (Post-SB 55-005) <1>

NOTE: <1> The post-SB 55-003 and the post-SB 55-005 configurations are the same and are identified as CONFIG 2 in this Service Bulletin.

G. Tooling - Cost and Availability:

PART NO.	DESCRIPTION	QTY	REMARKS
-	WARNING SIGN	1	DO NOT OPERATE FLIGHT CONTROLS
-	STRIKING TOOL, DIA. 5 mm (PIN PUNCH)	1	LOCAL SUPPLY, REF. FIG. 9
904.10.89.110	TORQUE WRENCH (0 Nm to 5 Nm (0 to 44.2 lbf in))	1	OR EQUIVALENT
904.10.89.141	TORQUE WRENCH (4 to 20 Nm (35 to 177 lbf in))	1	OR EQUIVALENT

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

WARNING: MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES. INJURY OR DEATH CAN OCCUR IF YOU DO NOT OBEY THE WARNINGS AND CAUTIONS.

WARNING: BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURER'S HEALTH AND SAFETY INSTRUCTIONS AND ALL THE APPLICABLE LOCAL INSTRUCTIONS. CONSUMABLE MATERIALS CAN BE DANGEROUS AND CAN CAUSE DEATH OR INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

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

NOTE: The AMM references given are applicable to aircraft MSN 825 and up. For aircraft up to MSN 824, operators can refer to the procedures given in the equivalent publications as necessary.

A. 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.

B. Configuration Check - Elevator (Ref. Fig. 1)

(1) Do a configuration check of the outer hinge configuration of the LH elevator assy (2):

(a) Remove access panel EB2 (Ref. AMM. 06-40-00, Page Block 1). If access panel EB2 is not installed, the LH elevator assy (2) is CONFIG 1.

(b) Remove access panel EB1 (Ref. AMM. 06-40-00, Page Block 1).

(c) Do a check of the hinge bolt installation:

- The CONFIG 1 hinge bolt (3) is installed into an anchor nut (5) and the head of the bolt (3) is safetied with lockwire to a locking screw (12)
- The CONFIG 2 hinge bolt (6) is installed into a castellated nut (7) that is safetied with a cotter pin (8).

(2) Do a configuration check of the outer hinge configuration of the RH elevator assy (1):

(a) Remove access panel ET2 (Ref. AMM. 06-40-00, Page Block 1). If access panel ET2 is not installed, the RH elevator assy (1) is CONFIG 1.

(b) Remove access panel ET1 (Ref. AMM. 06-40-00, Page Block 1).

(c) Do a check of the hinge bolt installation:

- The CONFIG 1 hinge bolt (3) is installed into an anchor nut (5) and the head of the bolt (3) is safetied with lockwire to a locking screw (12)
- The CONFIG 2 hinge bolt (6) is installed into a castellated nut (7) that is safetied with a cotter pin (8).

(3) Do a configuration check of the center hinge configuration:

- The CONFIG 1 installation has self-locking nuts (9)
- The CONFIG 2 installation has castellated nuts (10) that are safetied with cotter pins (11).

C. Configuration Check - Rudder (Ref. Fig. 2)

Do a configuration check of the top hinge configuration of the rudder assy (1):

(1) Remove access panel EL5 (Ref. AMM. 06-40-00, Page Block 1). If access panel EL5 is not installed, the rudder assy (1) is CONFIG 1.

(2) Remove access panel EL4 (Ref. AMM. 06-40-00, Page Block 1).

(3) Do a check of the hinge bolt installation:

- The CONFIG 1 hinge bolt (4) is installed from the bottom of the support bracket (5) into an anchor nut (2) and the head of the bolt (4) is safetied with lockwire to a locking screw (9)
- The CONFIG 2 hinge bolt (6) is installed from the top of the support bracket (5) into a castellated nut (7) that is safetied with a cotter pin (8).

D. Configuration Check - Aileron (Ref. Fig. 8)

Do an configuration check of the RH aileron assy:

- The CONFIG 1 (PRE MODIFICATION) installation has the hinge bolt (1) installed into a self-locking nut (3)
- The CONFIG 2 (POST MODIFICATION) installation has the hinge bolt (4) installed into a castellated nut (7) and safetied with a cotter pin (6).

E. Inspection of the Elevator and Rudder - CONFIG 1

(1) Remove the elevators (Ref. AMM 55-21-11 CONFIG 1, Page Block 401).

(2) Elevators - Hinge Bearing Inspection (Ref. Fig. 3)

(a) Hold the left and right outer integral supports (3) and remove the nuts (4), washers (5) and screws (1).

(b) Remove the left and right outer integral supports (3) from the horizontal stabilizer.

(c) Examine the bearings (2):

1 Make sure that the bearings (2) are not loose, damaged, corroded, seized or worn.

2 Remove damaged, loose or worn bearings (2) and install new replacement bearings (2) (Ref. AMM 20-50-01, Page Block 201).

NOTE: The bearings (2) are bonded or swaged into the outer integral supports (3).

(3) Elevator Hinges - Anchor Nut Check and Outer Integral Support Installation (Ref. Fig. 1)

NOTE: The LH elevator assy (2) and the RH elevator assy (1) can have different types of anchor nut (5).

(a) Examine the type of anchor nut (nylon insert or metal stop):

1 Put the tape onto the 5 mm diameter striking-tool (pin punch) at a distance Y of 8,000 mm (0.315 in) from the end of the tool (Ref. Fig. 9).

2 Put the 5 mm diameter striking-tool (pin punch) through the hinge holes for the bolt (3) as follows:

- Tilt the tool a small amount as you push it through bore of the second rib attachment fitting
- Continue to push the tool through the bore gently with its leading edge in contact with the surface of the bore
- Do this until you feel the tool edge against the first thread of the anchor nut (5).

3 Measure the distance X:

- Nylon insert type - X is approximately between 2,000 and 3,000 mm (0.079 and 0.118 in)
- Metal stop type - X is approximately zero.

(b) Make a record of the type of anchor nuts (5) (nylon or metal) installed at each hinge location.

(c) Install each elevator hinge bolt and the left or right outer integral supports as follows:

CAUTION: THE TORQUE VALUES GIVEN IN STEP 3.E.(3)(c)7 DO NOT INCLUDE THE RUN-DOWN TORQUE. MAKE SURE THAT THE SELF-LOCKING NUT IS SERVICEABLE AND ADD THE RUN-DOWN TORQUE. THIS IS NECESSARY FOR THE BOLT (3) TO BE TORQUED CORRECTLY.

NOTE: The procedure to install the left outer integral support is the same as the right outer integral support.

1 Apply a layer of grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank and the threads of the bolt (3).

2 If during Step 3.E.(3)(b), the anchor nut (5) is recorded as nylon type:

- Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and clean the grease or installation paste from the threads of the bolt (3).

3 Put the left or right outer integral support into position on the elevator.

4 Put the washer (4) on the bolt (3) and insert the bolt (3) through the hole in the elevator rib, bearing and into the anchor nut (5).

5 Do a check that you can turn the bolt (3) in the anchor nut (5) with your fingers:

- When you can turn the bolt (3) in the anchor nut (5) with your fingers, the self-locking anchor nut (5) is unserviceable
- When the anchor nut (5) is unserviceable, you must accomplish 'Part 3 - On Aircraft - Modification from CONFIG 1 to CONFIG 2' of this Service Bulletin (Ref. Para. 5.).

6 Measure the run-down torque necessary to turn the bolt (3) in the anchor nut (5).

CAUTION: DO NOT APPLY ANY CORRECTION FACTOR FOR THE GREASE OR INSTALLATION PASTE TO THE TORQUE VALUE OF THE BOLT (3). THIS CAN CAUSE THE BOLT (3) TO BE TORQUED INCORRECTLY.

7 Torque the bolt (3) to 5,1 Nm (45 lbf in) plus the recorded run-down torque (Ref. Step 3.E.(3)(c)6).

8 Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

9 Do a check for gaps between the head of the bolt (3), washer (4) and the rib. No gaps are allowed.

CAUTION: DO NOT USE THE OLD LOCKWIRE TAB (PRE-SB 55-001) TO SAFETY THE BOLT (3). THE BOLT (3) IS NOT SAFETIED CORRECTLY WHEN YOU USE THE OLD LOCKWIRE TAB.

10 Safety the bolt (3) with lockwire (Material No. P02-006 or P02-007) to the locking screw (12) as shown (Ref. Fig. 1, View E) (Ref. AMM 20-10-01, Page Block 201).

11 Apply corrosion preventative (Material No. P10-013) to the head of the bolt (3), the locking screw (12) and the lockwire.

(4) Elevators - Installation (Ref. Fig. 3 and Fig. 6)

CAUTION: MAKE SURE THAT THE ELEVATOR IS CORRECTLY SUPPORTED DURING INSTALLATION. DAMAGE TO THE AIRCRAFT OR EQUIPMENT CAN OCCUR IF THE ELEVATOR IS NOT CORRECTLY SUPPORTED.

(a) Put the elevator in position on the horizontal stabilizer.

(b) At the center of the elevator (Ref. Fig. 6):

1 Install the washers (10) and (11) and nuts (9) and (12).

2 Torque the nuts (9) and (12) to between 3,5 and 4,0 Nm (31 and 36 lbf in) plus the run-down torque.

3 Apply corrosion preventative (Material No. P10-013) to the washers (10) and (11) and nuts (9) and (12).

(c) At the outboard hinges (Ref. Fig. 3):

CAUTION: DO NOT GET GREASE OR INSTALLATION PASTE ON THE THREADS OF THE SCREWS. THE SCREWS CANNOT BE INSTALLED CORRECTLY WITH GREASE OR INSTALLATION PASTE ON THE SCREW THREADS.

1 Apply grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank of the screws (1).

2 Put the screws (1) in position and install the washers (5) and nuts (4) with your fingers:

- When you can turn the screws (1) in the nuts (4) with your fingers, the self-locking nuts (4) are unserviceable
- When the nuts (4) are unserviceable, you must discard and replace them.

3 Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

4 Tighten the nuts (4) and screws (1).

5 Apply corrosion preventative (Material No. P10-013) to the nuts (4), washers (5) and heads of the screws (1).

(d) Connect the push rod (Ref. Fig. 6):

1 Put the push rod (13) of the balance tab in position and install the bolt (8), washer (7) and nut (6).

2 If a trim tab is installed:

- Adjust the angle of the trim tab to that noted during removal
- Do this again after the next flight.

(5) Remove the rudder (Ref. AMM 55-41-11 CONFIG 1, Page Block 401).

(6) Rudder - Top Hinge Bearing Inspection (Ref. Fig. 3)

(a) Hold the top outer integral support (7) and remove the nuts (10), washers (9) and screws (8).

(b) Remove the top integral support (7) from the vertical stabilizer.

(c) Examine the bearing (6):

1 Make sure that the bearing (6) is not loose, damaged, corroded, seized or worn.

2 Remove a damaged, loose or worn bearing (6) and install a new replacement bearing (6) (Ref. AMM 20-50-01, Page Block 201).

NOTE: The bearing (6) is bonded or swaged into the outer integral support (7).

(7) Rudder Top Hinge - Anchor Nut Check and Outer Integral Support Installation (Ref. Fig. 2)

(a) Examine the type of anchor nut (nylon insert or metal stop):

1 Use the 5 mm diameter striking-tool (pin punch) with tape applied at a distance Y of 8,000 mm (0.315 in) from the end of the tool (Ref. Step 3.E.(3)(a)1 and Fig. 9).

2 Put the 5 mm diameter striking-tool (pin punch) through the hinge holes for the bolt (3) as follows:

- Tilt the tool a small amount as you push it through bore of the second rib attachment fitting
- Continue to push the tool through the bore gently with its leading edge in contact with the surface of the bore
- Do this until you feel the tool edge against the first thread of the anchor nut (2).

3 Measure the distance X:

- Nylon insert type - X is approximately between 2,000 and 3,000 mm (0.079 and 0.118 in)
- Metal stop type - X is approximately zero.

(b) Make a record of the type of anchor nut (2) (nylon or metal) installed at the top hinge location.

(c) Install the rudder hinge bolt and the top outer integral support as follows:

CAUTION: THE TORQUE VALUES GIVEN IN STEP 3.E.(7)(c)7 DO NOT INCLUDE THE RUN-DOWN TORQUE. MAKE SURE THAT THE SELF-LOCKING NUT IS SERVICEABLE AND ADD THE RUN-DOWN TORQUE. THIS IS NECESSARY FOR THE BOLT (4) TO BE TORQUED CORRECTLY.

1 Apply a layer of grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank and the threads of the bolt (4).

2 If during Step 3.E.(7)(b), the anchor nut (2) is recorded as nylon type:

- Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and clean the grease or installation paste from the threads of the bolt (4).

3 Put the top outer integral support into position on the rudder.

4 Put the washer (3) on the bolt (4) and insert the bolt (4) through the hole in the rudder rib, bearing and into the anchor nut (2).

5 Do a check that you can turn the bolt (4) in the anchor nut (2) with your fingers:

- When you can turn the bolt (4) in the anchor nut (2) with your fingers, the self-locking anchor nut (2) is unserviceable
- When the anchor nut (2) is unserviceable, you must accomplish 'Part 3 - On Aircraft - Modification from CONFIG 1 to CONFIG 2' of this Service Bulletin (Ref. Para. 5.).

6 Measure the run-down torque necessary to turn the bolt (4) in the anchor nut (2).

CAUTION: DO NOT APPLY ANY CORRECTION FACTOR FOR THE GREASE OR INSTALLATION PASTE TO THE TORQUE VALUE OF THE BOLT (4). THIS CAN CAUSE THE BOLT (4) TO BE TORQUED INCORRECTLY.

7 Torque the bolt (4) to 5,1 Nm (45 lbf in) plus the recorded run-down torque (Ref. Step 3.E.(7)(c)6).

8 Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

9 Do a check for gaps between the head of the bolt (4), washer (3) and the rib. No gaps are allowed.

CAUTION: DO NOT USE THE OLD LOCKWIRE TAB (PRE-SB 55-001) TO SAFETY THE BOLT (4). THE BOLT (4) IS NOT SAFETIED CORRECTLY WHEN YOU USE THE OLD LOCKWIRE TAB.

10 Safety the bolt (4) with lockwire (Material No. P02-006 or P02-007) to the locking screw (9) as shown (Ref. Fig. 1, View D) (Ref. AMM 20-10-01, Page Block 201).

11 Apply corrosion preventative (Material No. P10-013) to the head of the bolt (4), the locking screw (9) and the lockwire.

(8) Rudder - Installation (Ref. Fig. 3 and Fig. 7)

CAUTION: MAKE SURE THAT THE RUDDER IS CORRECTLY SUPPORTED DURING INSTALLATION. DAMAGE TO THE AIRCRAFT OR EQUIPMENT CAN OCCUR IF THE RUDDER IS NOT CORRECTLY SUPPORTED.

(a) Put the rudder in position with the outer integral support in position on the top of the vertical stabilizer.

(b) On aircraft with mechanically operated trim:

- Put the rudder trim cables in position.

(c) At the bottom connection with the rudder shaft (10) (Ref. Fig. 7):

1 Apply a layer of grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank and threads of the bolts (6).

2 Install the bolts (6), washers (8) and nuts (9).

CAUTION: DO NOT APPLY CORRECTION FACTOR FOR THE GREASE OR INSTALLATION PASTE TO THE TORQUE VALUE OF THE BOLT (6). THIS CAN CAUSE THE BOLT (6) TO BE TORQUED INCORRECTLY.

3 Torque the bolts (6) to between 2,5 and 3,0 Nm (22 and 27 lbf in) plus the run-down torque.

4 Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

5 Apply corrosion preventative (Material No. P10-013) to the head of the bolts (6), nuts (9), and washers (8).

6 On aircraft with electrical trim:

- Connect the electrical plug (7) to the trim tab connector at the bottom of the rudder.

(d) At the top hinge position (Ref. Fig. 3):

CAUTION: DO NOT GET GREASE OR INSTALLATION PASTE ON THE THREADS OF THE SCREWS. THE SCREWS CANNOT BE INSTALLED CORRECTLY WITH GREASE OR INSTALLATION PASTE ON THE SCREW THREADS.

1 Apply grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank of the screws (8).

2 Put the screws (8) in position and install the washers (9) and nuts (10) with your fingers:

- When you can turn the screws (8) in the nuts (10) with your fingers, the self-locking nuts (10) are unserviceable
- When the nuts (10) are unserviceable, you must discard and replace them.

3 Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

4 Tighten the nuts (10) and screws (8).

5 Apply corrosion preventative (Material No. P10-013) to the nuts (10), washers (9) and heads of the screws (8).

(e) On aircraft with manually operated trim:

1 Connect the trim tab cables to the trim tab actuating lever. Safety the cable ends with lockwire (Material No. P02-001) (Ref. AMM 20-10-01, Page Block 201).

2 Adjust the rudder trim tab cables to hand tension. Safety the turnbuckles with lockwire (Material No. P02-001) (Ref. AMM 20-10-01, Page Block 201).

F. Test

(1) Remove the warning notice from the cockpit.

(2) On aircraft with electrically operated stabilizer trim, remove the safety clip and close the circuit breaker:

STAB TRIM

(3) On aircraft with electrically operated rudder trim, remove the safety clip and close the circuit breaker:

RUDDER TRIM

(4) Do the adjustment/test of the elevator controls (Ref. AMM 27-30-00, Page Block 501).

(5) Do the adjustment/test of the elevator balance tabs (Ref. AMM 27-32-00, Page Block 501).

(6) Do the adjustment/test of the rudder (Ref. AMM 27-20-00, Page Block 501).

(7) Do the adjustment/test of the rudder trim tab (Ref. AMM 27-25-00, Page Block 501).

G. Close-up

(1) Remove all the equipment, tools and materials from the work area. Make sure that the work area is clean.

(2) Install the access panels ET1, EB1, EL4 and FL2.

(3) For CONFIG 2 aircraft, install the access panels ET2, EB2 and EL5.

(4) On aircraft with manually operated rudder trim:

- Install the three access panels EL2, EL3 and EL4 on the left side of the rudder.

(5) On aircraft with electrically operated stabilizer trim, remove the safety clip and close the circuit breaker:

STAB TRIM
RUDDER TRIM

H. Documentation

Make an entry in the Aircraft Logbook:

- CONFIG 1 - That Part 1 of the Service Bulletin has been incorporated
- CONFIG 2 - That this Service Bulletin has been incorporated.

4. Accomplishment Instructions - Part 2 - On Aircraft - CONFIG 1 - Repeat Inspections

WARNING: MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES. INJURY OR DEATH CAN OCCUR IF YOU DO NOT OBEY THE WARNINGS AND CAUTIONS.

WARNING: BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURER'S HEALTH AND SAFETY INSTRUCTIONS AND ALL THE APPLICABLE LOCAL INSTRUCTIONS. CONSUMABLE MATERIALS CAN BE DANGEROUS AND CAN CAUSE DEATH OR INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

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

NOTE: The AMM references given are applicable to aircraft MSN 825 and up. For aircraft up to MSN 824, operators can refer to the procedures given in the equivalent publications as necessary.

A. 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.

B. Repeat Inspections

(1) Do the procedures for inspection of the elevator and rudder - CONFIG 1, given in Step 3.E.

(2) Do the procedures for test, given in Step 3.F.

(3) Do the procedures for close up, given in Step 3.G.

C. Documentation

Make an entry in the Aircraft Logbook that Part 2 of the Service Bulletin has been incorporated.

5. Accomplishment Instructions - Part 3 - On Aircraft - Modification from CONFIG 1 to CONFIG 2

WARNING: MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES. INJURY OR DEATH CAN OCCUR IF YOU DO NOT OBEY THE WARNINGS AND CAUTIONS.

WARNING: WHEN YOU DRILL, CUT OR ABRADE MATERIALS YOU MUST WEAR THE CORRECT PROTECTIVE EQUIPMENT (GLOVES, FILTER MASKS AND FACE-SHIELDS/ SAFETYGLASSES/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 ABRADE TO PREVENT AIRBORNE DUST PARTICLES.
- 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 DRILL OR ABRADE PAINTS, FILLERS, OR ANY OTHER MATERIALS.
- 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 AND ALL THE APPLICABLE LOCAL INSTRUCTIONS. CONSUMABLE MATERIALS CAN BE DANGEROUS AND CAN CAUSE DEATH OR INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

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. YOU CAN DO DAMAGE THAT CANNOT BE REPAIRED IF YOU DRILL OUTSIDE OF THE LIMITS.

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

NOTE: The AMM references given are applicable to aircraft MSN 825 and up. For aircraft up to MSN 824, operators can refer to the procedures given in the equivalent publications as necessary.

A. Preparation

(1) Remove the elevators (Ref. AMM 55-21-11, Page Block 401).

(2) Remove the rudder (Ref. AMM 55-41-11, Page Block 401).

(3) Put a warning notice in the cockpit to tell personnel ‘DO NOT OPERATE THE FLIGHT CONTROLS’.

B. Modification - Elevators (Ref. Fig. 4)

NOTE: The procedure to modify the RH elevator assembly is the same as the LH elevator assembly.

(1) Make the new access hole:

(a) Make a paper template with a hole diameter 90,00 mm (3.54 in).

(b) Put the paper template in position on the nose skin so that the hole as shown on Fig. 4.

(c) Make marks around the hole in the paper template to show the cut line for the access hole.

(d) Remove the paper template.

(e) Use suitable cutting tools to cut a diameter 90,00 mm (3.54 in) hole in the nose skin.

(f) Make the edges of the hole smooth and remove all sharp edges. Use abrasive cloth (Material No. P02-013 and P02-014) and abrasive pads (Material No. P02-016) as necessary.

(g) Put the new cover (2) (P/N 6302.0045.01) in position so that it is concentric with the hole. Make sure that the curve of the cover (2) is a good fit with the curve of the nose skin.

(h) Use the four holes in the cover (2) to drill four 3,100 mm (0.122 in) attachment holes through the nose skin.

(i) Remove the cover (2).

(j) Use a new anchor nut (3) (P/N 938.42.15.301) as a template to mark the rivet positions at the four new attachment holes.

(k) Drill 2,50 mm (0.10 in) holes at the rivet positions.

(l) Deburr the holes.

(m) Remove the swarf and unwanted material from the work area.

(n) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and fully clean the work area. Clean the surfaces until moist absorbent paper stays clean when applied to the surface.

(o) Apply CCC solution (Material No. P07-001) to the bare metal areas and let it dry (Ref. AMM 20-40-10, Page Block 201).

(p) Apply epoxy primer (Material No. P07-007) over the CCC solution and let it dry in accordance with the manufacturer's instructions.

(q) Use sealant (Material No. P08-071) to wet install the four anchor nuts (3) with NAS1097AD3 rivets (P/N 939.27.81.006).

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

(2) Remove the anchor nut:

(a) Drill out the two rivets (5) and remove the nut plate (4) (Ref. Fig. 4, Sheet 2).

NOTE: The flanged bush remains attached to the rib by two or four rivets.

(b) Remove the swarf, rivet tails and unwanted material from the work area.

(c) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and fully clean the work area. Clean the surfaces until moist absorbent paper stays clean when applied to the surface.

(d) Apply sealant (Material No. P08-071) to fill the two holes in the flanged bush/rib.

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

(3) Install the cover:

(a) Apply topcoat in accordance with the manufacturer's instructions on the new cover (2) (P/N 6302.0045.01) to match the aircraft color scheme.

(b) Let the topcoat dry in accordance with the manufacturer's instructions.

(c) Install the new cover (2) with four new screws (1) (P/N 935.13.16.002).

(d) Apply primer (Material No. P07-007) and topcoat in accordance with the manufacturer's instructions on the heads of the screws (1) to match the aircraft color scheme.

(e) Let the topcoat dry in accordance with the manufacturer's instruction.

(4) Do the elevator balancing procedure (Ref. AMM 27-00-00, Page Block 201).

(5) Use a permanent marker pen to re-identify the elevator (Ref. Para. 2.F.).

NOTE: This is because the elevator assembly is an interchangeable component.

C. Modification - Rudder (Ref. Fig. 5)

(1) Make the new access hole:

(a) Make a paper template with a hole diameter 90,00 mm (3.54 in).

(b) Put the paper template in position on the nose skin so that the hole is as shown on Fig. 5.

(c) Make marks around the hole in the paper template to show the cut line for the access hole.

(d) Remove the paper template.

(e) Use suitable cutting tools to cut a diameter 90,00 mm (3.54 in) hole in the nose skin.

(f) Make the edges of the hole smooth and remove all sharp edges. Use abrasive cloth (Material No. P02-013 and P02-014) and abrasive pads (Material No. P02-016) as necessary.

(g) Put the new cover (1) (P/N 6302.0045.01) in position so that it is concentric with the hole. Make sure that the curve of the cover (1) is a good fit with the curve of the nose skin.

(h) Use the four holes in the cover (1) to drill four 3,100 mm (0.122 in) attachment holes through the nose skin.

(i) Remove the cover (1).

(j) Use a new anchor nut (2) (P/N 938.42.15.301) as a template to mark the rivet positions at the four new attachment holes.

(k) Drill 2,50 mm (0.10 in) holes at the rivet positions.

(l) Deburr the holes.

(m) Remove the swarf and unwanted material from the work area.

(n) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and fully clean the work area. Clean the surfaces until moist absorbent paper stays clean when applied to the surface.

(o) Apply CCC solution (Material No. P07-001) to the bare metal areas and let it dry (Ref. AMM 20-40-10, Page Block 201).

(p) Apply epoxy primer (Material No. P07-007) over the CCC solution and let it dry.

(q) Use sealant (Material No. P08-071) to wet install the four anchor nuts (2) with NAS1097AD3 rivets (P/N 939.27.81.006).

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

(2) Remove the anchor nut:

(a) Drill out the two rivets (5) and remove the nut plate (4) (Ref. Fig. 5, Sheet 2).

NOTE: The flanged bush remains attached to the rib by two or four rivets.

(b) Remove the swarf, rivet tails and unwanted material from the work area.

(c) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and fully clean the bare metal areas. Clean the surfaces until moist absorbent paper stays clean when applied to the surface.

(d) Apply sealant (Material No. P08-071) to fill the two holes in the flanged bush and rib.

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

(3) Install the cover:

(a) Apply topcoat in accordance with the manufacturer's instructions on the new cover (1) (P/N 6302.0045.01) to match the aircraft color scheme.

(b) Let the topcoat dry in accordance with the manufacturer's instruction.

(c) Install the new cover (1) with four new screws (3) (P/N 935.13.16.002).

(d) Apply primer and topcoat in accordance with the manufacturer's instructions on the heads of the screws (3) to match the aircraft color scheme.

(e) Let the topcoat dry in accordance with the manufacturer's instruction.

(4) Do the rudder balancing procedure (Ref. AMM 27-00-00, Page Block 201).

(5) Use a permanent marker pen to re-identify the rudder (Ref. Para. 2.F.).

NOTE: This is because the rudder assembly is an interchangeable component.

D. Install the Elevator (Ref. Fig. 6)

(1) Replace the center hinge bolts and nuts:

CAUTION: DO NOT REMOVE A HINGE BOLT BEFORE YOU RELEASE THE TENSION ON THE CABLES. DO NOT LOOSEN THE CABLES TOO MUCH AS THEY CAN COME OFF THE PULLEYS. REMOVE ONLY ONE HINGE BOLT AT A TIME. DAMAGE TO THE AIRCRAFT OR EQUIPMENT CAN OCCUR.

(a) Release the tension at the turnbuckles for the elevator operating cables (Ref. AMM 27-31-11, Page Block 401).

(b) Remove and discard the nut (17), the washer (16) and the bolt (14) with the washer (15) from the LH attachment.

CAUTION: DO NOT GET GREASE ON THE THREADS OF THE BOLT. THE BOLTS CANNOT BE TIGHTENED CORRECTLY WHEN GREASE IS APPLIED TO THE THREADS.

(c) Apply a layer of grease (Material No. P04-028) to the shank of the bolt (22) (P/N 932.19.21.108).

(d) Install the new bolt (22) (P/N 932.19.21.108) with the new washer (23) (P/N 938.77.10.202) in the LH attachment.

(e) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease.

(f) Install the new washer (26) (P/N 938.77.11.114) and the new nut (25)(P/N 938.08.71.204) on the bolt (22).

(g) Torque the nut (25) to between 3,4 and 4,5 Nm (30 and 40 lbf in) plus the run-down torque.

(h) Remove and discard the nut (19), the washer (18) and the bolt (21) with the washer (20) from the RH attachment.

CAUTION: DO NOT GET GREASE ON THE THREADS OF THE BOLT. THE BOLTS CANNOT BE TIGHTENED CORRECTLY WHEN GREASE IS APPLIED TO THE THREADS.

(i) Apply a layer of grease (Material No. P04-028) to the shank of the bolt (31) (P/N 113.30.06.022).

(j) Install the new bolt (31) (P/N 113.30.06.022) with the new washer (30) (P/N 938.75.11.101) in the RH attachment.

(k) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease.

(l) Install the new washer (27) (P/N 938.78.11.204) and the new nut (28) (P/N 938.08.71.204) on the bolt (31).

(m) Torque the nut (28) to between 3,4 and 4,5 Nm (30 and 40 lbf in) plus the run-down torque.

(n) Safety the nut (25) with the new cotter pin (24) (P/N 940.17.02.511) (Ref. AMM 20-10-01, Page Block 201).

(o) Safety the nut (28) with the new cotter pin (29) (P/N 940.17.02.502) (Ref. AMM 20-10-01, Page Block 201).

CAUTION: DO NOT GET CORROSION PREVENTATIVE ON THE BEARINGS. CORROSION PREVENTATIVE CAN CONTAMINATE AND DAMAGE THE BEARINGS.

(p) Apply corrosion preventative (Material No. P10-013) to the heads of the bolts (22) and (31), nuts (25) and (28), washers (23), (26), (27) and (30) and the cotter pins (24) and (29).

(2) Tighten the turnbuckles sufficiently to keep the elevator operating cables on the pulleys.

NOTE: The cables are tensioned during the adjustment/test of the elevator controls.

CAUTION: MAKE SURE THAT THE ELEVATOR IS CORRECTLY SUPPORTED DURING INSTALLATION. DAMAGE TO THE ELEVATOR CAN OCCUR IF IT IS NOT CORRECTLY SUPPORTED.

(3) Put the elevator in the installed position.

(4) Apply a layer of grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank and the threads of the new bolt (5) (P/N 113.30.06.021).

(5) Install the bolt (5) the new washers (4) (P/N 938.77.11.114) and (2) (P/N 938.77.11.115), and the new nut (1) (P/N 938.08.46.103).

CAUTION: DO NOT APPLY ANY CORRECTION FACTOR FOR THE GREASE OR INSTALLATION PASTE TO THE TORQUE VALUE OF THE NUT (1). THIS CAN CAUSE THE NUT (1) TO BE TORQUED INCORRECTLY.

(6) Torque the nut (1) to between 3,2 and 6,2 Nm (32 and 55 lbf in) plus the run-down torque.

(7) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

(8) Safety the nut (1) with the new cotter pin (3) (P/N 940.17.02.317) (Ref. AMM 20-10-01, Page Block 201).

CAUTION: DO NOT GET CORROSION PREVENTATIVE ON THE BEARINGS. CORROSION PREVENTATIVE CAN CONTAMINATE AND DAMAGE THE BEARINGS.

(9) Apply corrosion preventative (Material No. P10-013) to the head of the bolts (5), nut (1), washers (2) and (4) and the cotter pin (3).

(10) Install the washers (10) and (11), and the nuts (9) and (12).

(11) Torque the nuts (9) and (12) to between 3,5 and 4,0 Nm (31 and 36 lbf in) plus the run-down torque.

(12) Apply corrosion preventative (Material No. P10-013) to the nuts (9) and (12) and washers (10) and (11).

(13) Put the control rod (13) in position and install the bolt (8), washer (7) and nut (6).

(14) If a trim tab is installed:

- Adjust the angle of the trim tab to that noted during removal
- Do this again after the next flight.

E. Install the Rudder (Ref. Fig. 7)

CAUTION: MAKE SURE THAT THE RUDDER IS CORRECTLY SUPPORTED DURING INSTALLATION. DAMAGE TO THE RUDDER CAN OCCUR IF IT IS NOT CORRECTLY SUPPORTED.

(1) Put the rudder in the installed position.

(2) On aircraft with mechanically operated trim:

(a) Put the rudder trim cables in position.

(3) Apply a layer of grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank and threads of the new bolt (1) (P/N 113.30.06.021).

(4) Install the bolt (1) the new washers (2) (P/N 938.77.11.114) and (3) (P/N 938.77.11.115), and the new nut (4) (P/N 938.08.46.103).

CAUTION: DO NOT APPLY CORRECTION FACTOR FOR THE GREASE OR INSTALLATION PASTE TO THE TORQUE VALUE OF THE NUT (4). THIS CAN CAUSE THE NUT (4) TO BE TORQUED INCORRECTLY.

(5) Torque the nut (4) to between 3,2 and 6,2 Nm (32 and 55 lbf in) plus the run-down torque.

(6) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

(7) Safety the nut (4) with the new cotter pin (5) (P/N 940.17.02.317) (Ref. AMM 20-10-01, Page Block 201).

CAUTION: DO NOT GET CORROSION PREVENTATIVE ON THE BEARINGS. CORROSION PREVENTATIVE CAN CONTAMINATE AND DAMAGE THE BEARINGS.

(8) Apply corrosion preventative (Material No. P10-013) to the head of the bolts (1), nut (4), washers (2) and (4) and the cotter pin (5).

(9) Apply a layer of grease (Material No. P04-028) or installation paste (Material No. P04-029) to the shank and threads of the new bolts (6).

(10) Install the bolts (6), washers (8) and nuts (9).

CAUTION: DO NOT APPLY CORRECTION FACTOR FOR THE GREASE OR INSTALLATION PASTE TO THE TORQUE VALUE OF THE BOLT (6). THIS CAN CAUSE THE BOLT (6) TO BE TORQUED INCORRECTLY.

(11) Torque the bolts (6) to between 2,5 and 3,0 Nm (22 and 27 lbf in) plus the run-down torque.

(12) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

(13) Apply corrosion preventative (Material No. P10-013) to the head of the bolts (6), nuts (9), and washers (8).

(14) On aircraft with electrical trim:

(a) Connect the electrical plug (7) to the trim tab connector at the bottom of the rudder.

(15) On aircraft with manually operated trim:

(a) Connect the trim tab cables to the trim tab actuating lever. Safety the cable ends with lockwire (Material No. P02-001) (Ref. AMM 20-10-01, Page Block 201).

(b) Adjust the rudder trim tab cables to hand tension. Safety the turnbuckles with lockwire (Material No. P02-001) (Ref. AMM 20-10-01, Page Block 201).

F. RH Aileron Center Hinge - Modification (Ref. Fig. 8)

(1) Remove the nut (3) and the washer (2).

(2) Give support to the aileron trim lever and remove the bolt (1).

(3) Apply a layer of grease (Material No. P04-028) or installation paste (Material No. P04-029) to the new bolt (4) (P/N 116.40.06.147).

(4) Install the new bolt (4), the new washer (5) (P/N 938.71.60.008) and the new nut (7) (P/N 938.08.46.103).

CAUTION: DO NOT APPLY ANY CORRECTION FACTOR FOR THE INSTALLATION PASTE TO THE TORQUE VALUE OF THE NUT (7). THIS CAN CAUSE THE NUT (7) TO BE TORQUED INCORRECTLY.

(5) Torque the nut (7) to between 3,2 and 6,2 Nm (32 and 55 lbf in) plus the run-down torque.

(6) Make absorbent paper (Material No. P02-031) moist with white spirit (Material No. P01-008) and remove the unwanted grease or installation paste.

(7) Safety the nut (7) with the new cotter pin (6) (P/N 940.17.02.317) (Ref. AMM 20-10-01, Page Block 201).

CAUTION: DO NOT GET CORROSION PREVENTATIVE ON THE BEARINGS. CORROSION PREVENTATIVE CAN CONTAMINATE AND DAMAGE THE BEARINGS.

(8) Apply corrosion preventative (Material No. P10-013) to the head of the bolt (4), nut (7), washer (5) and cotter pin (6).

G. Test

(1) Remove the warning notice from the cockpit.

(2) On aircraft with electrically operated stabilizer trim, remove the safety clip and close the circuit breaker:

STAB TRIM

(3) On aircraft with electrically operated rudder trim, remove the safety clip and close the circuit breaker:

RUDDER TRIM

(4) Do the adjustment/test of the elevator controls (Ref. AMM 27-30-00, Page Block 501).

(5) Do the adjustment/test of the elevator balance tabs (Ref. AMM 27-32-00, Page Block 501).

(6) Do the adjustment/test of the rudder (Ref. AMM 27-20-00, Page Block 501).

(7) Do the adjustment/test of the rudder trim tab (Ref. AMM 27-25-00, Page Block 501).

(8) Do the adjustment/test of the aileron trim (Ref. AMM 27-15-00, Page Block 501).

H. Close-up

(1) Remove all the equipment, tools and materials from the work area. Make sure that the work area is clean.

(2) Install the access panels ET1, ET2, EB1, EB2, EL4, EL5 and FL2.

(3) On aircraft with manually operated rudder trim:

(a) Install the three access panels EL2 and EL3 on the left side of the rudder.

I. Documentation

Make an entry in the Aircraft Logbook that Part 3 of this Service Bulletin has been incorporated.

6. Accomplishment Instructions - Part 4 - Spares - Modification from CONFIG 1 to CONFIG 2

WARNING: MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES. INJURY OR DEATH CAN OCCUR IF YOU DO NOT OBEY THE WARNINGS AND CAUTIONS.

WARNING: WHEN YOU DRILL, CUT OR ABRADE MATERIALS YOU MUST WEAR THE CORRECT PROTECTIVE EQUIPMENT (GLOVES, FILTER MASKS AND FACE-SHIELDS/ SAFETYGLASSES/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 ABRADE TO PREVENT AIRBORNE DUST PARTICLES.
- 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 DRILL OR ABRADE PAINTS, FILLERS, OR ANY OTHER MATERIALS.
- 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 AND ALL THE APPLICABLE LOCAL INSTRUCTIONS. CONSUMABLE MATERIALS CAN BE DANGEROUS AND CAN CAUSE DEATH OR INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

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. YOU CAN DO DAMAGE THAT CANNOT BE REPAIRED IF YOU DRILL OUTSIDE OF THE LIMITS.

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

NOTE: The AMM references given are applicable to aircraft MSN 825 and up. For aircraft up to MSN 824, operators can refer to the procedures given in the equivalent publications as necessary.

A. Elevators

All pre-modification Elevator Assemblies held as spares.

- Do the modification of the elevators given in Para. 5.B.

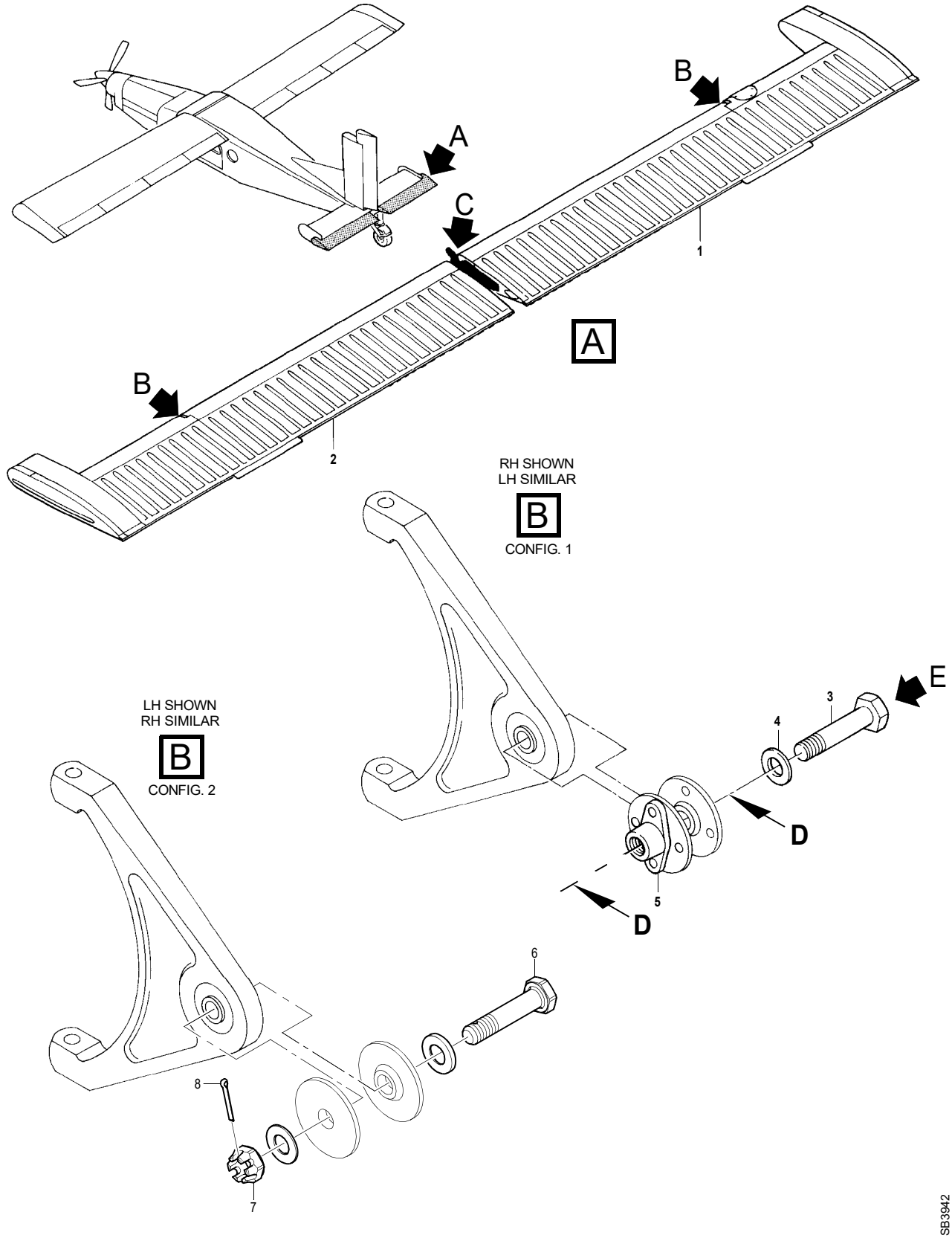
B. Rudder

All pre-modification Rudder Assemblies held as spares:

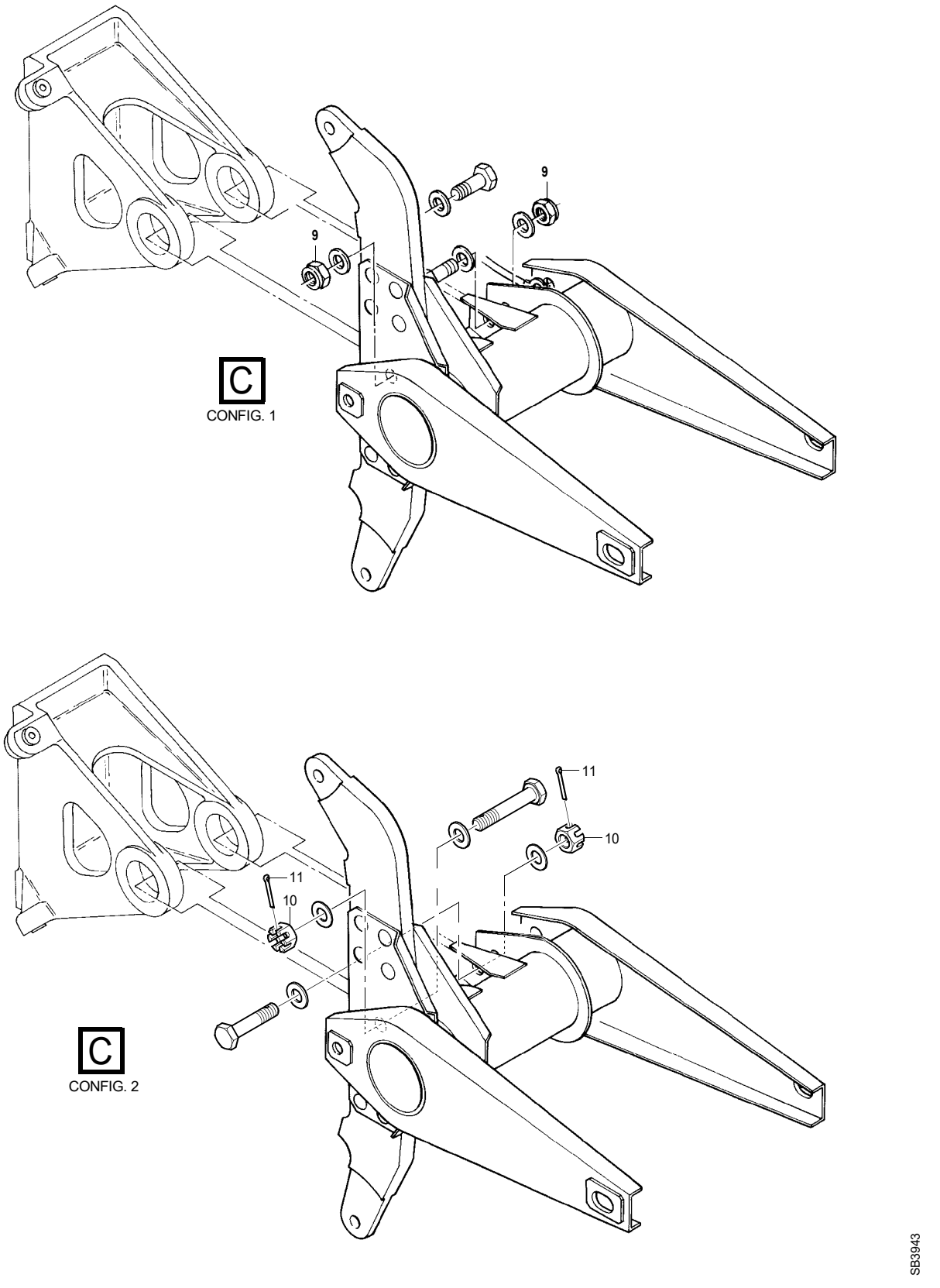
- Do the modification of the rudder given in Para. 5.C.

C. Documentation

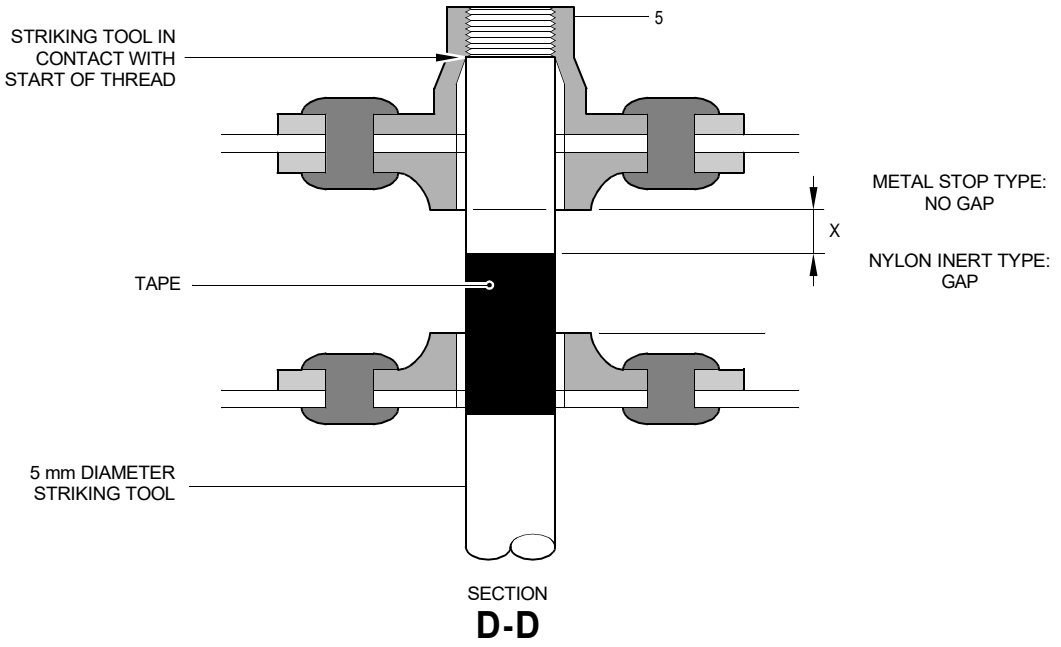
Make an entry on the serviceable label (attached to the part) that Part 4 of this Service Bulletin has been accomplished.

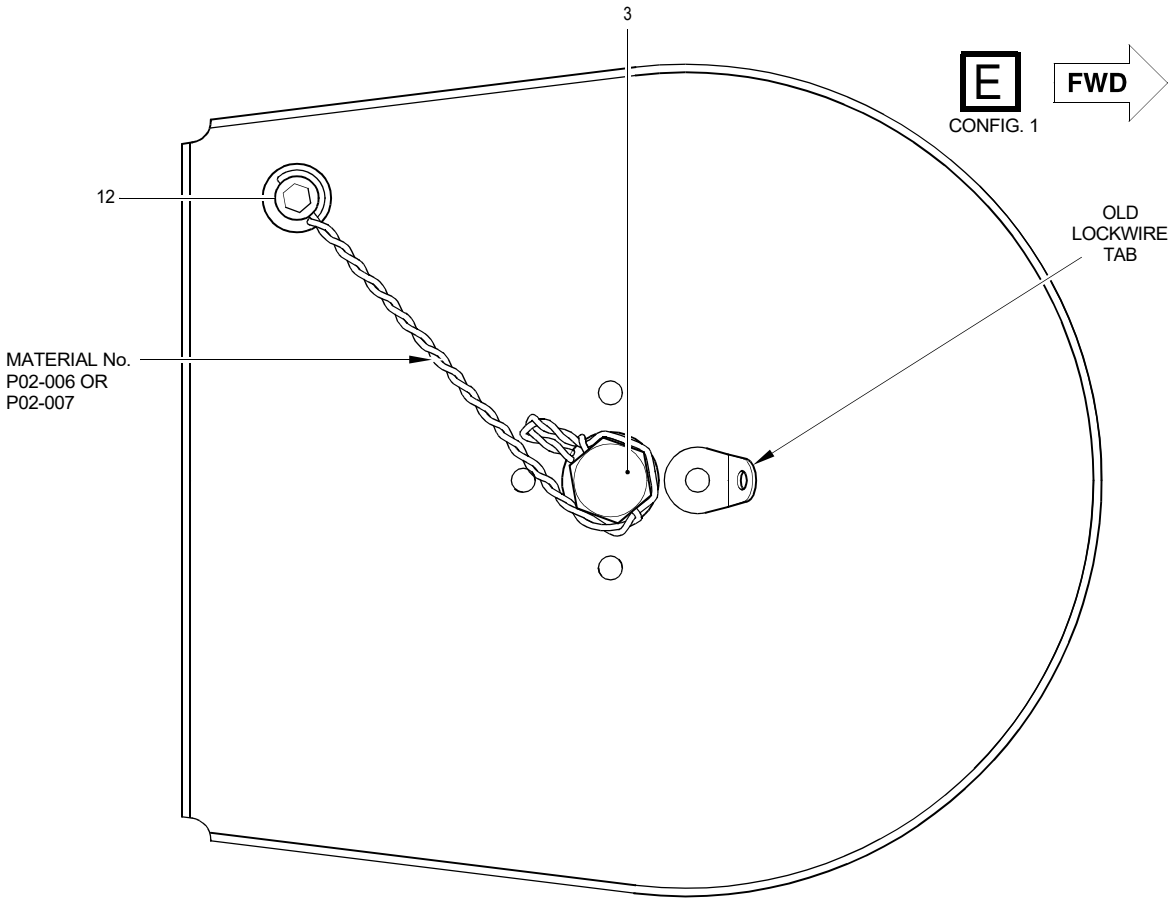


Elevator - Configuration Check and Inspection
Figure 1 (Sheet 1 of 3)

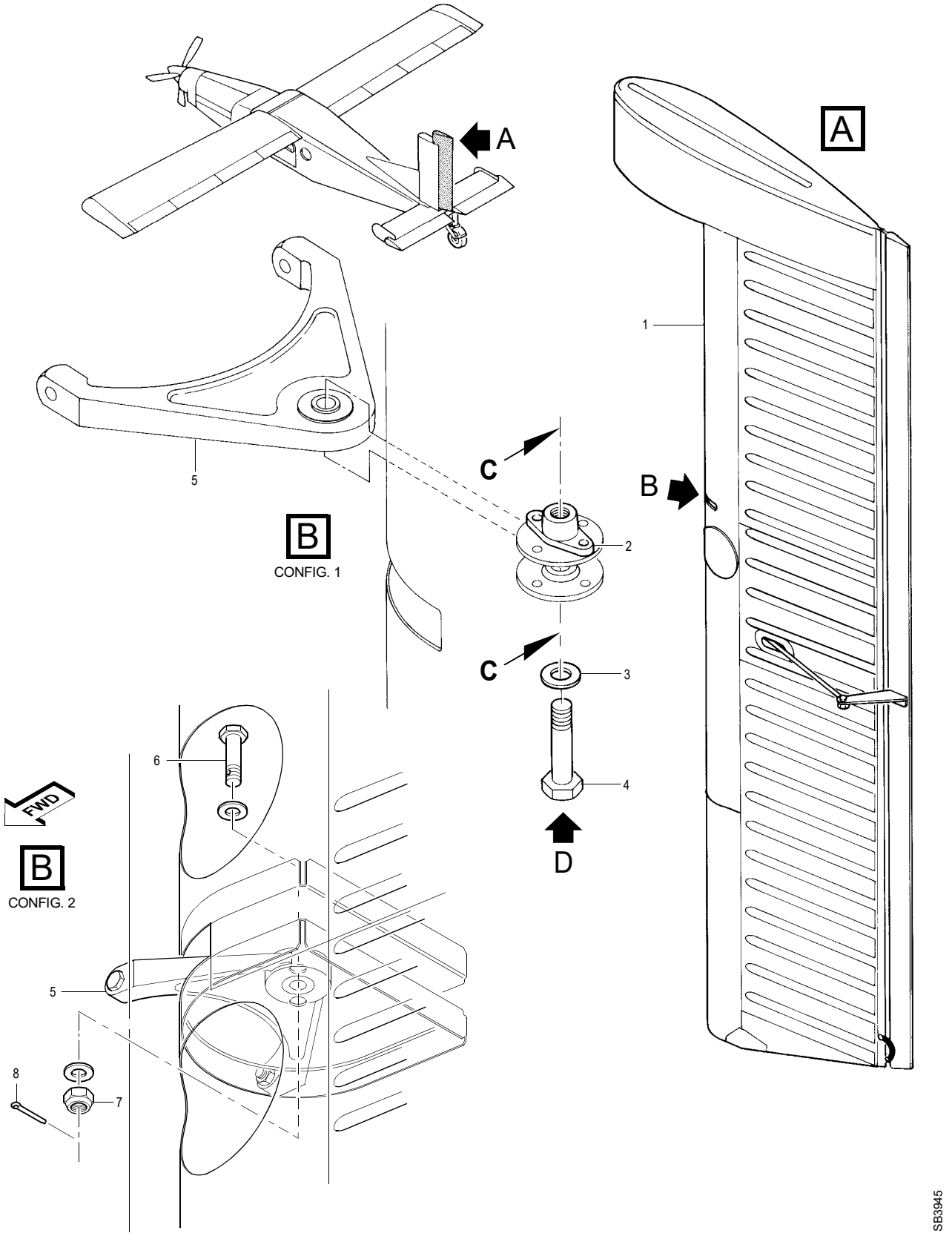


Elevator - Configuration Check and Inspection
Figure 1 (Sheet 2 of 3)

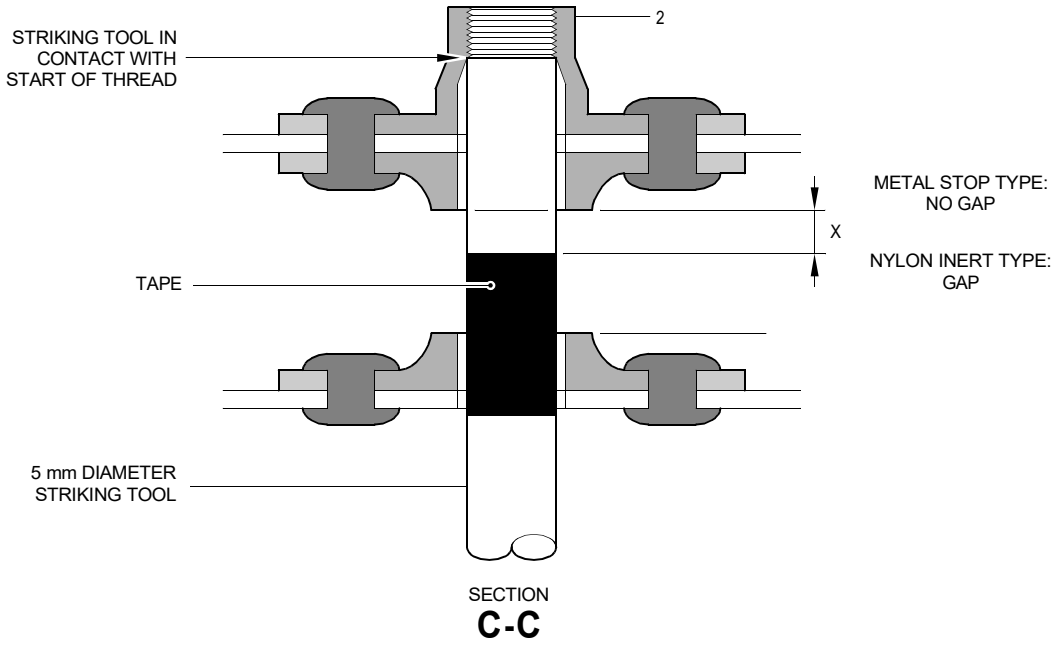


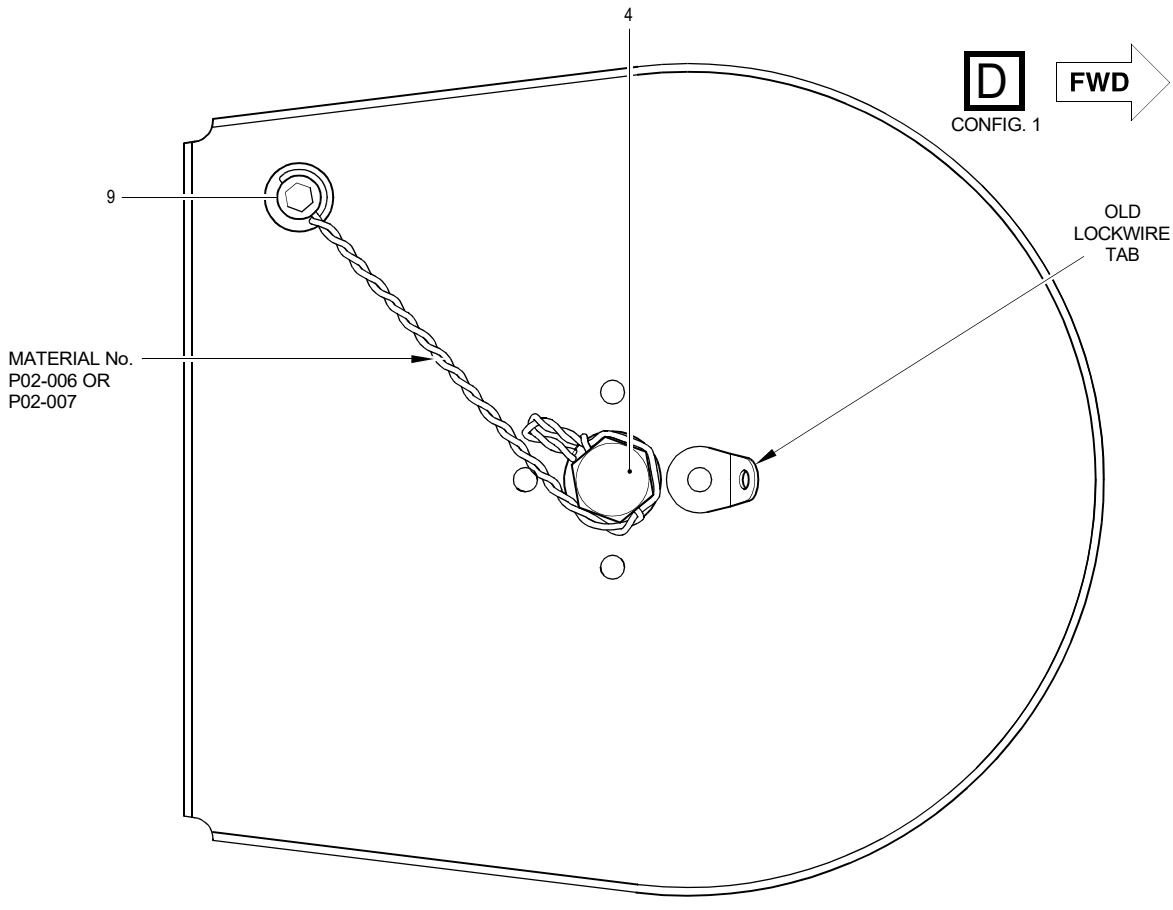


Elevator - Configuration Check and Inspection
Figure 1 (Sheet 3 of 3)

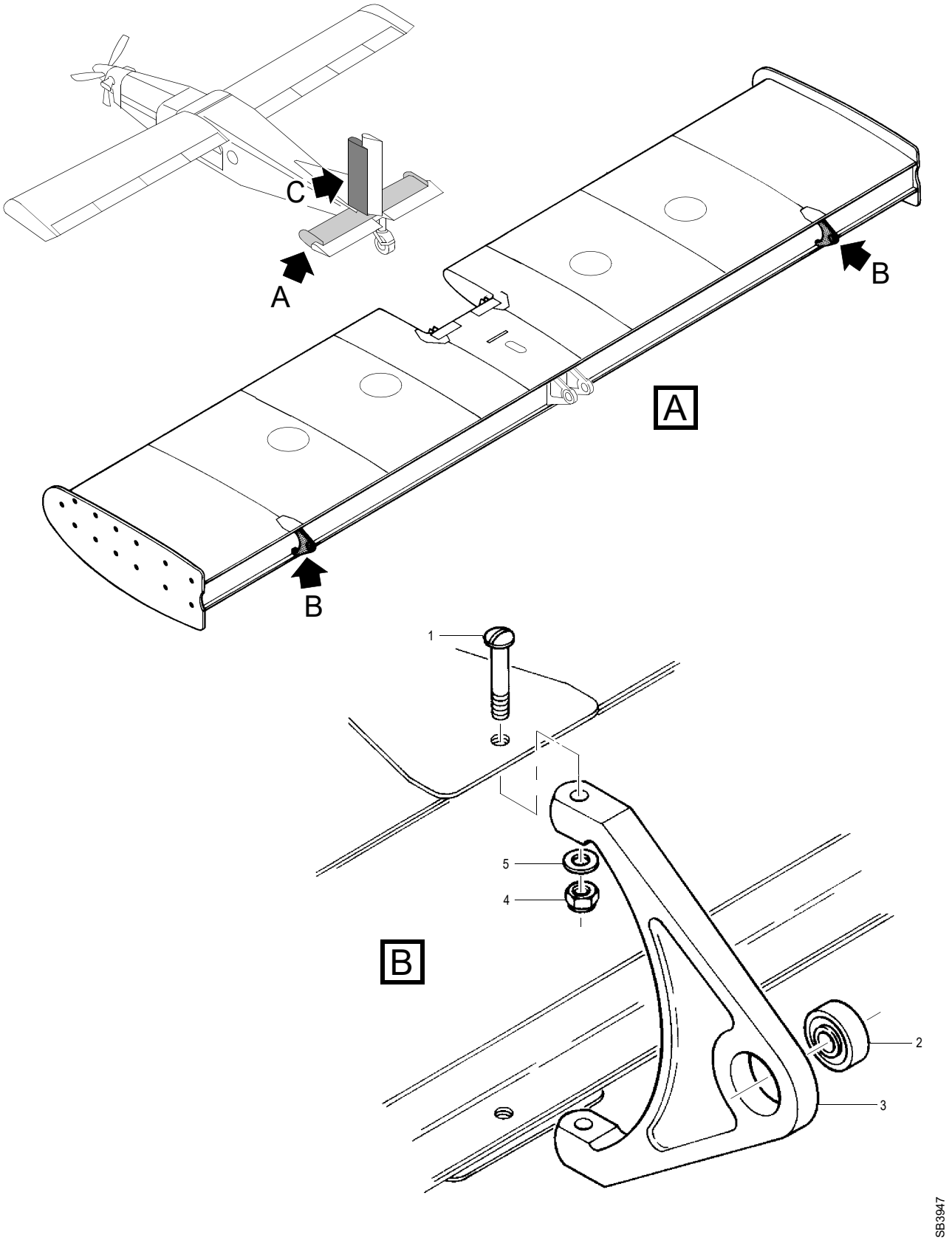


Rudder - Configuration Check and Inspection
Figure 2 (Sheet 1 of 2)

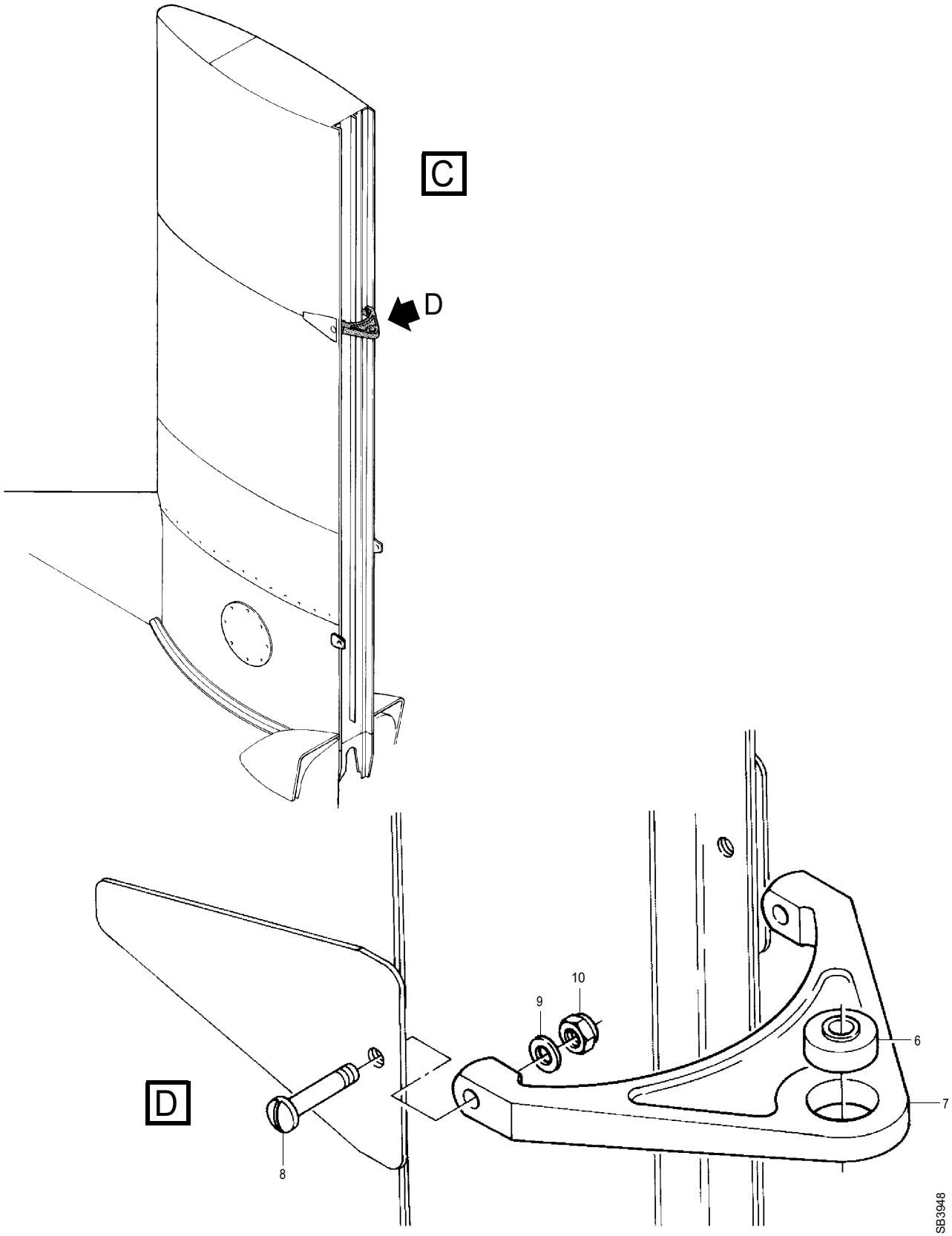




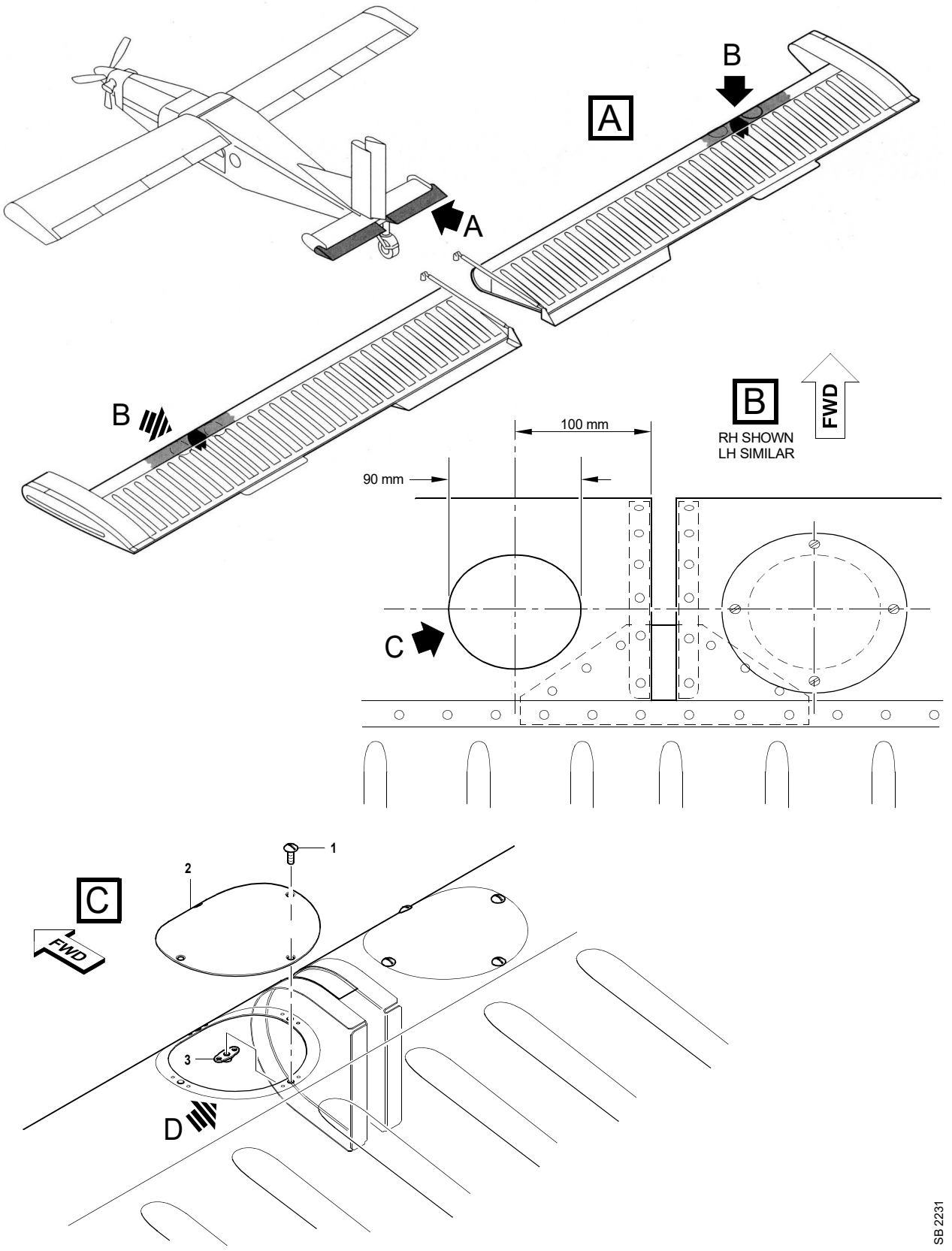
Rudder - Configuration Check and Inspection
Figure 2 (Sheet 2 of 2)



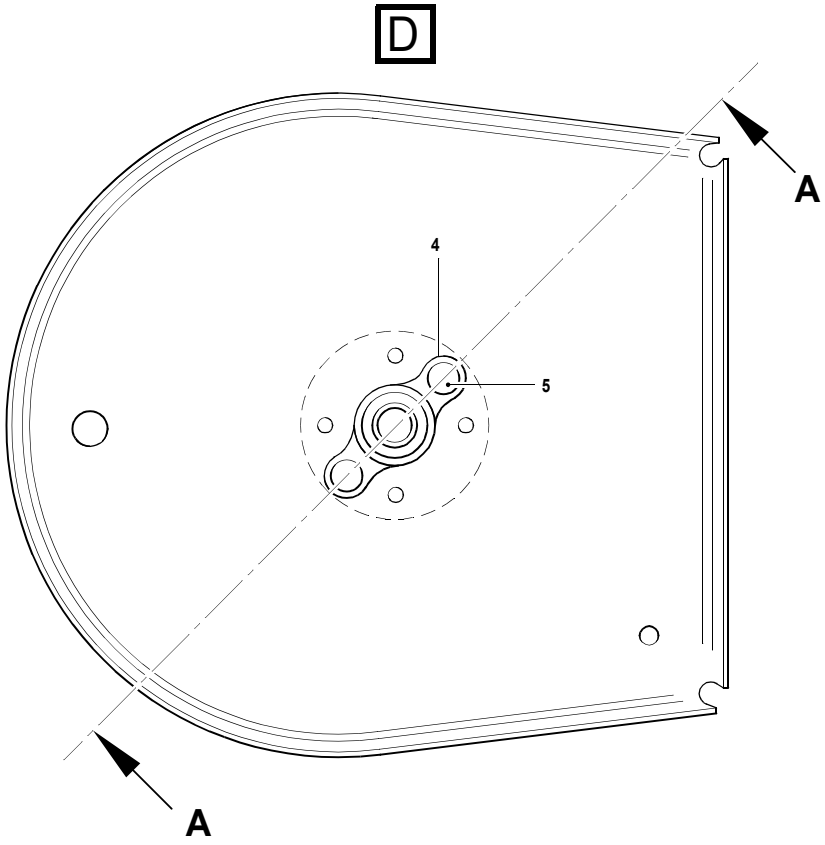
Horizontal and Vertical Stabilizer - Hinge Bearing Checks
Figure 3 (Sheet 1 of 2)



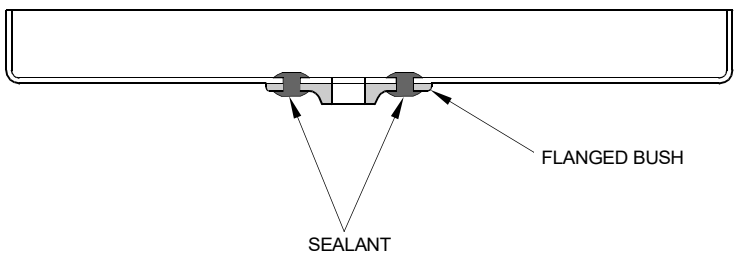
Horizontal and Vertical Stabilizer - Hinge Bearing Checks
Figure 3 (Sheet 2 of 2)



Elevator - Modification
Figure 4 (Sheet 1 of 2)

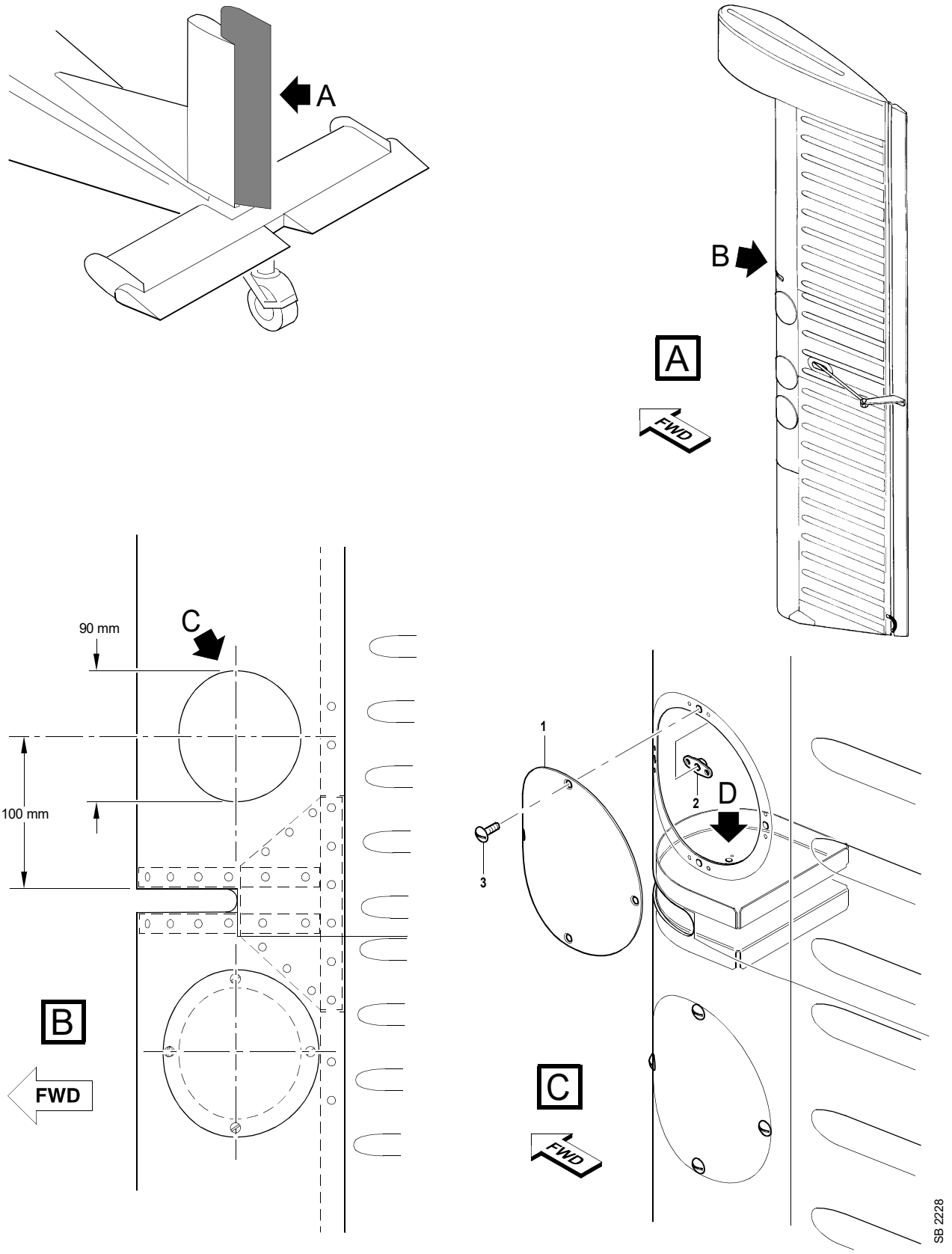


SECTION
A-A
ANCHOR NUT REMOVED

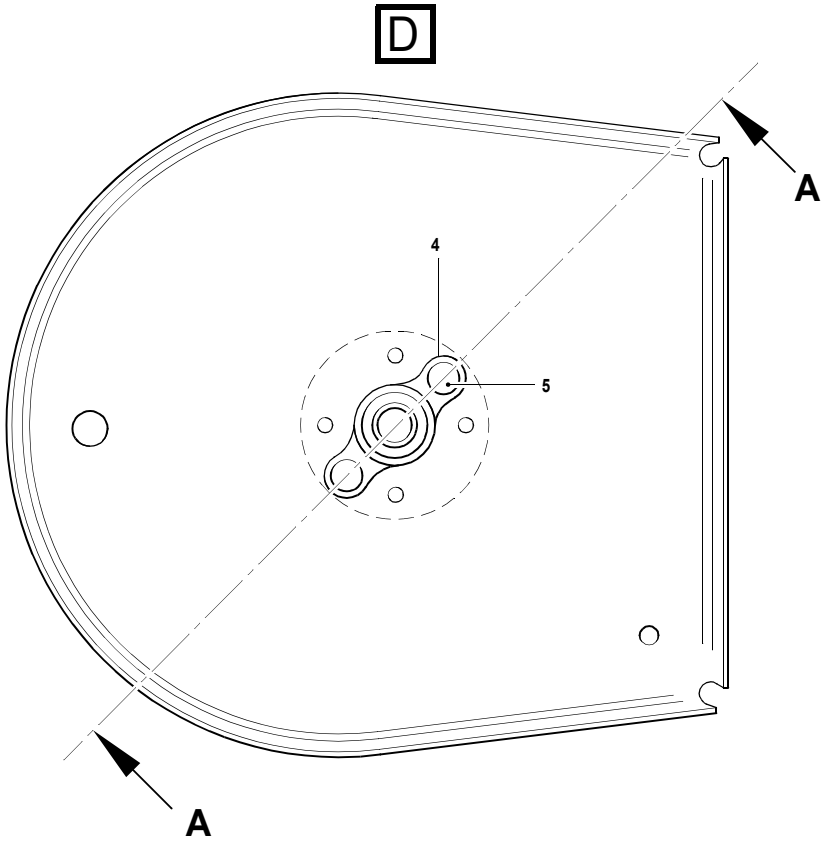


SB 2254

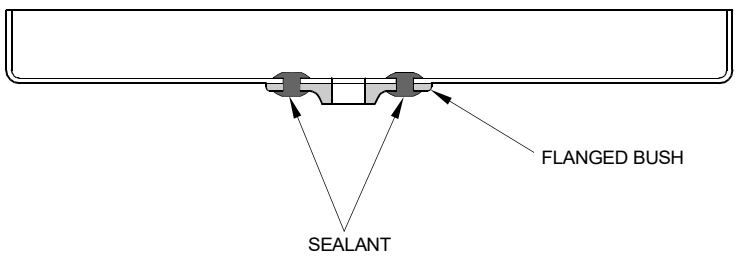
Elevator - Modification
Figure 4 (Sheet 2 of 2)



Rudder - Modification
Figure 5 (Sheet 1 of 2)

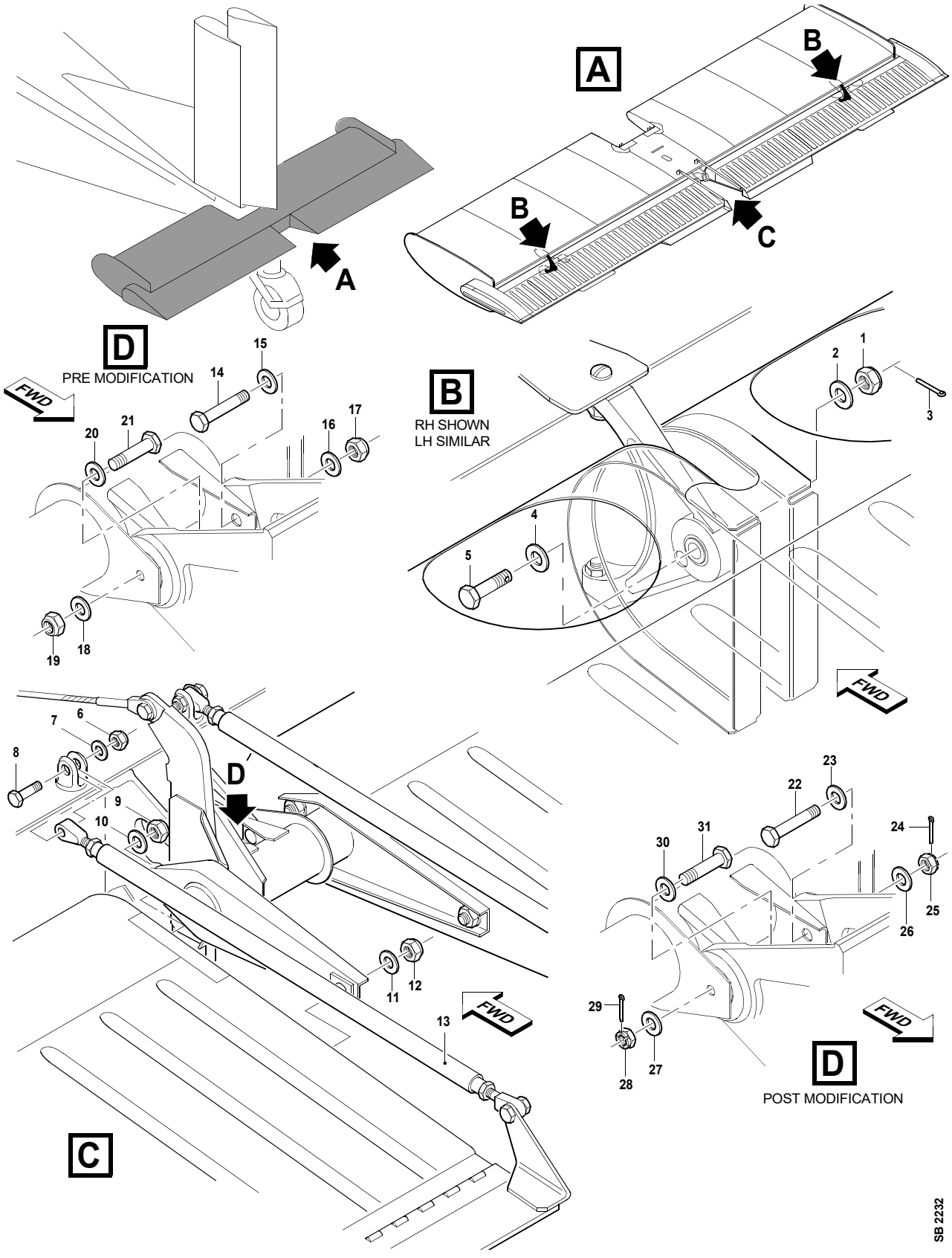


SECTION
A-A
ANCHOR NUT REMOVED

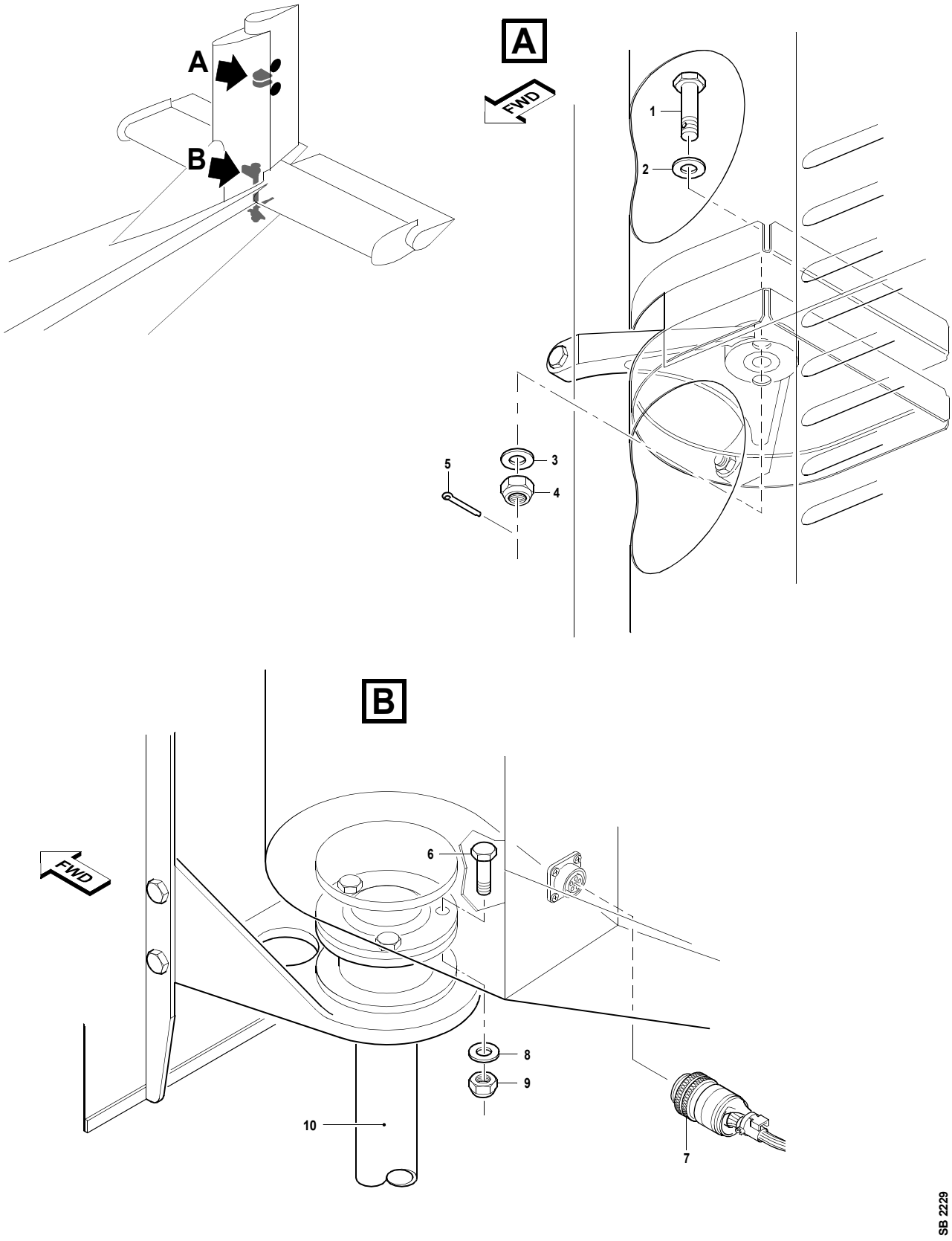


SB 2254

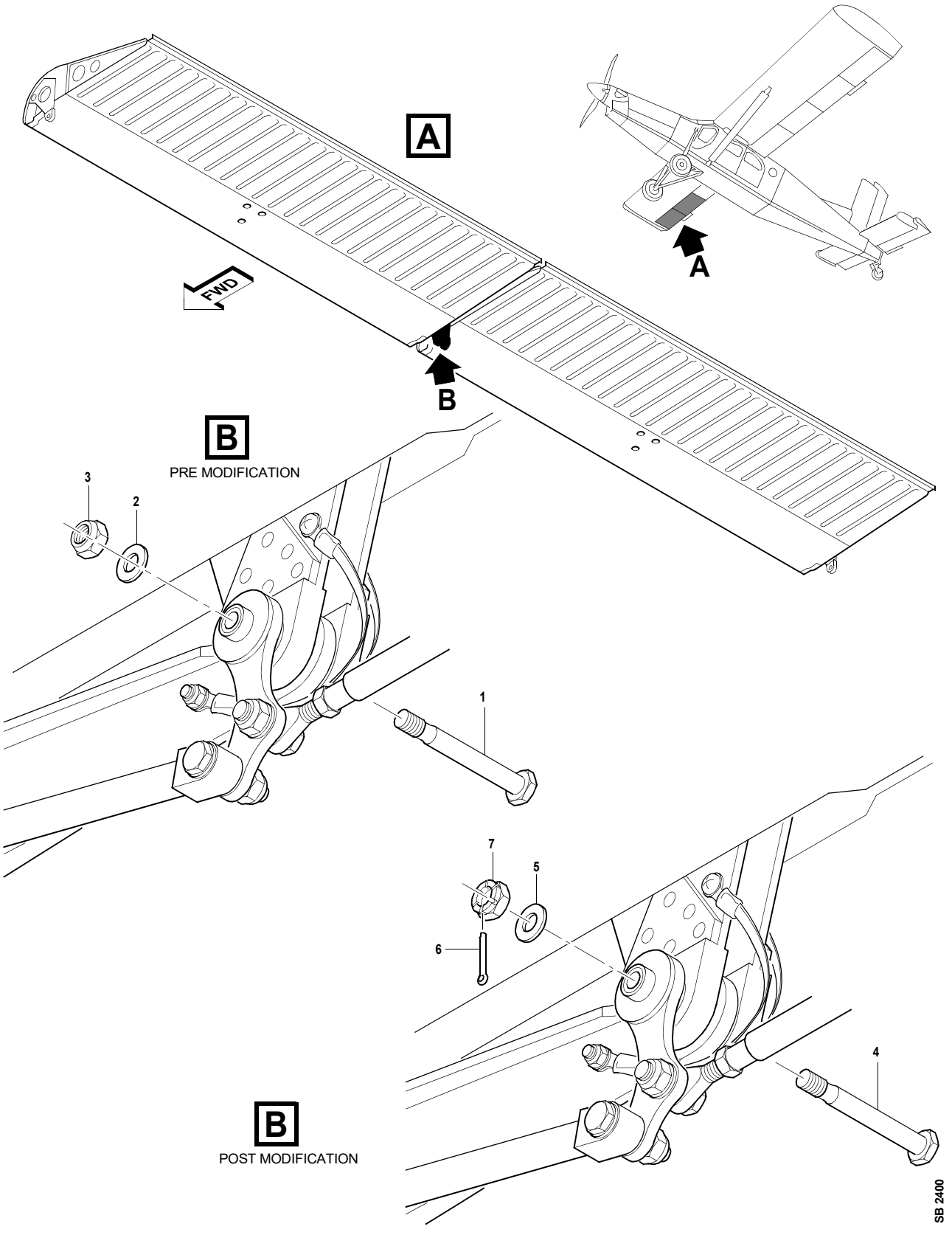
Rudder - Modification
Figure 5 (Sheet 2 of 2)



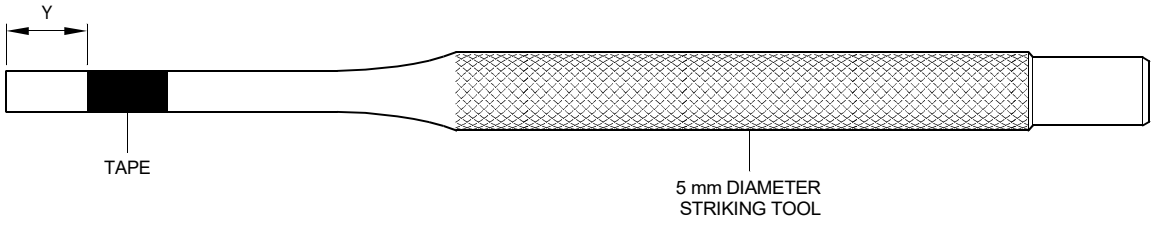
Elevator - Installation
Figure 6



Rudder - Installation
Figure 7



RH Aileron Hinge Bolt - Modification
Figure 8



SB3949

Striking Tool, Diameter 5 mm (Pin Punch)
Figure 9

INTENTIONALLY BLANK