CHAPTER

55

STABILIZERS

CHAPTER 55
STABILIZERS

Subject/Page	Date	COC
EFFECTIVE PAGES		
1 thru 2	Jun 15/2009	
55-CONTENTS		
1	Feb 15/2008	
2	Feb 15/2008	
3	Feb 15/2008	
O 4	Jun 15/2009	
O 5	Jun 15/2009	
6	BLANK	
55-00-01		
601	Oct 10/2003	
602	BLANK	
55-05-02		
201	Oct 10/2006	
202	BLANK	
55-05-03		
201	Jun 10/2005	
202	Jun 10/2005	
203	Oct 10/2006	
204	Oct 10/2006	
205	Oct 10/2006	
206	Oct 10/2006	
207	Oct 10/2006	
208	Oct 10/2006	
209	Oct 10/2006	
210	Oct 10/2006	
211	Oct 10/2006	
212	Oct 10/2006	
R 213	Jun 15/2009	
214	Oct 10/2006	
215	Oct 10/2006	
216	Oct 10/2006	
217	Oct 10/2006	
218	Oct 10/2006	
219	Oct 10/2006	
220	Oct 10/2006	
221	Oct 10/2006	
222	Oct 10/2006	
223	Oct 10/2006	
55-05-03 (cont)		
224	Oct 10/2006	
225	Oct 10/2006	
226	Oct 10/2006	
227	Oct 10/2006	
228	Oct 10/2006	
229	Oct 10/2006	
230	Oct 10/2006	
231	Oct 10/2006	
232	Oct 10/2006	
233	Oct 10/2006	
234	Oct 10/2006	
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256	Oct 10/2006	
257	Oct 10/2006	
258	Oct 10/2006	
259	Oct 10/2006	
260	Oct 10/2006	
261	Oct 10/2006	
262	Oct 10/2006	
55-05-03 (cont)		
263	Oct 10/2006	
264	Oct 10/2006	
265	Oct 10/2006	
266	Oct 10/2006	
267	Oct 10/2006	
268	Oct 10/2006	
269	Feb 15/2008	
270	Feb 15/2008	
271	Feb 15/2008	
272	Feb 15/2008	
273	Feb 15/2008	
274	Feb 15/2008	
275	Feb 15/2008	
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278	Feb 15/2008	
279	Feb 15/2008	
280	Feb 15/2008	
281	Feb 15/2008	
282	BLANK	
55-10-00		
201	Oct 10/2005	
202	Jun 15/2008	
203	Oct 10/2005	
204	Oct 10/2005	
205	Oct 10/2005	
206	BLANK	
55-10-01		
A 801	Jun 15/2009	
A 802	Jun 15/2009	
A 803	Jun 15/2009	
A 804	Jun 15/2009	
55-10-10		
401	Oct 10/2006	
402	Jun 10/2004	
403	Oct 10/2006	
404	Oct 10/2006	
405	Oct 10/2006	
406	Oct 10/2003	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

55-EFFECTIVE PAGES

CHAPTER 55
STABILIZERS

Subject/Page	Date	COC
55-10-10 (cont)		
407	Oct 10/2003	
408	Oct 10/2003	
409	Oct 10/2005	
410	BLANK	
55-30-00		
201	Oct 10/2005	
202	Oct 10/2005	
55-30-00		
401	Feb 15/2008	
R 402	Jun 15/2009	
O 403	Jun 15/2009	
O 404	Jun 15/2009	
405	Oct 15/2008	
406	Feb 15/2008	
R 407	Jun 15/2009	
R 408	Jun 15/2009	
R 409	Jun 15/2009	
410	Oct 10/2006	
411	Oct 10/2006	
412	Oct 10/2007	
413	Oct 10/2007	
414	Oct 10/2007	
415	Oct 10/2007	
416	BLANK	
55-30-00		
601	Oct 10/2003	
602	Oct 10/2003	
603	Oct 10/2003	
604	Feb 10/2006	
605	Oct 10/2003	
606	BLANK	
55-30-01		
601	Oct 15/2008	
602	Oct 15/2008	
603	Oct 15/2008	
604	Oct 15/2008	
55-32-11		
401	Jun 10/2005	
402	Jun 10/2007	

Subject/Page	Date	COC
55-32-11 (cont)		
403	Jun 10/2007	
404	Jun 10/2007	
405	Oct 15/2008	
406	Jun 10/2007	
407	Jun 10/2007	
408	Jun 10/2007	
409	Jun 10/2007	
410	Jun 10/2007	
55-33-11		
R 401	Jun 15/2009	
R 402	Jun 15/2009	
O 403	Jun 15/2009	
R 404	Jun 15/2009	
R 405	Jun 15/2009	
R 406	Jun 15/2009	
R 407	Jun 15/2009	
O 408	Jun 15/2009	
A 409	Jun 15/2009	
A 410	BLANK	
55-33-21		
401	Jun 10/2007	
402	Jun 10/2007	
403	Oct 10/2003	
404	Oct 10/2003	
55-33-31		
401	Feb 15/2009	
402	Feb 15/2009	
403	Feb 15/2009	
404	Feb 15/2009	

Subject/Page	Date	COC

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

55-EFFECTIVE PAGES

CHAPTER 55
STABILIZERS

55-CONTENTS

CHAPTER 55
STABILIZERS

CHAPTER 55
STABILIZERS

55-CONTENTS

CHAPTER 55
STABILIZERS

CHAPTER 55
STABILIZERS

RUDDER AND HORIZONTAL STABILIZERS - INSPECTION/CHECK

1. General

A. This procedure has one task. The task gives instructions to do a visual inspection of the internal area of the rudder and the horizontal stabilizers.

TASK 55-00-01-200-801

2. Examine the Composite Flight Controls

A. General

(1) Use the equipment listed below to examine the composite flight controls:

(a) Flexible Video Borescope with (4) four way articulation, .5 inch (12mm) diameter X 10 feet (3m) long insertion tube with forward and side viewing optical tip adapters.

(b) Flexible Fiberoptic Borescope with (4) four way articulation, .35 inch (8mm) diameter X 3 feet (1m) long insertion tube with forward and side viewing optical tip adapters.

(c) Flexible or rigid guide tube - Dekoron is a trade mark for a formable type metal cored tubing.

B. Location Zones

Zone	Area
320	Subzone - Vertical Fin and Rudder
330	Subzone - Left Horizontal Stabilizer and Elevator
340	Subzone - Right Horizontal Stabilizer and Elevator

C. Procedure

SUBTASK 55-00-01-010-001

(1) Remove the access panels that are necessary.

SUBTASK 55-00-01-290-001

(2) Put the borescope tube into an access hole that is 2 inches in diameter.

SUBTASK 55-00-01-290-002

(3) Move the borescope tube until you can see an area where an inspection is necessary.

NOTE: If you can not move the optical tip into the correct areas, use a guide tube.

SUBTASK 55-00-01-290-003

(4) Examine the area for these unsatisfactory conditions:

NOTE: Do not move the borescope tube while you examine an area.

(a) Signs of deterioration.

(b) Bulges and cracks on the skins and the ribs.

(c) Corrosion on the fasteners.

(d) Other signs of the stress.

SUBTASK 55-00-01-970-001

(5) Make a record of all the unsatisfactory conditions before you move the borescope to a different area.

SUBTASK 55-00-01-410-001

(6) Install the access panels.

END OF TASK

STABILIZER - FATIGUE INSPECTIONS - MAINTENANCE PRACTICES

1. General

A.

TASK 55-05-02-211-801

2. Internal - Special Detailed: Elevator Mast Tab Fitting

A. General

(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-02-211-001

(1) Do the inspection.

——————— END OF TASK ———————

TASK 55-05-02-211-802

3. Internal - Special Detailed: Elevator Tab Hinge Fittings 183A4211 Lug Assembly

A. General

(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-02-211-002

(1) Do the inspection.

——————— END OF TASK ———————

STABILIZER - STRUCTURAL INSPECTIONS - MAINTENANCE PRACTICES

TASK 55-05-03-210-801

1. INTERNAL - GENERAL VISUAL: INTERNAL - HORIZONTAL STABILIZER CENTER SECTION

A. General

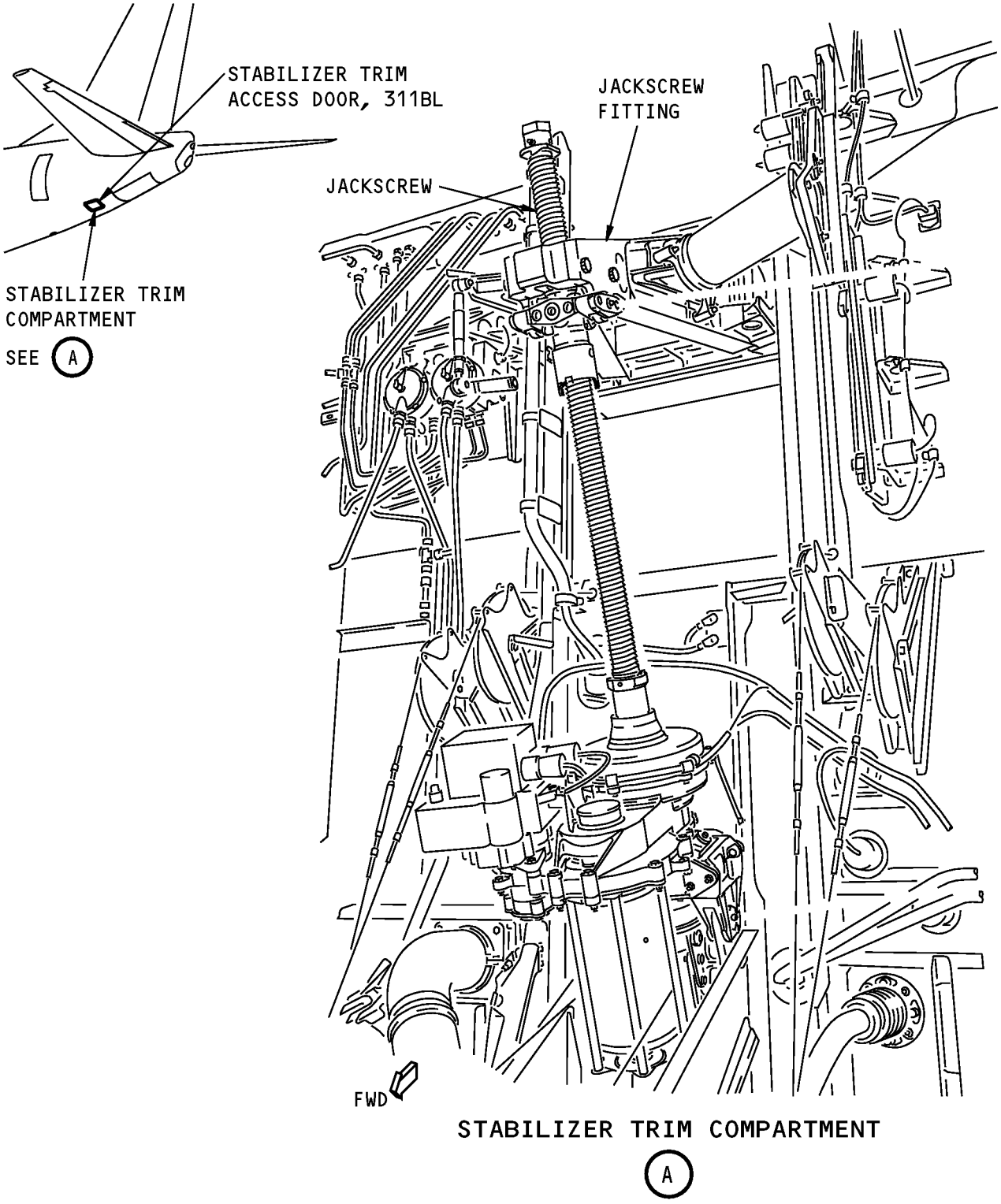
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-210-001

(1) Do the inspection.

END OF TASK



INTERNAL-GENERAL VISUAL: INTERNAL-HORIZONTAL STABILIZER CENTER SECTION
Figure 201/55-05-03-990-821

TASK 55-05-03-210-802

2. INTERNAL - GENERAL VISUAL: INTERNAL - STABILIZER TORSION BOX COMPARTMENT

A. General

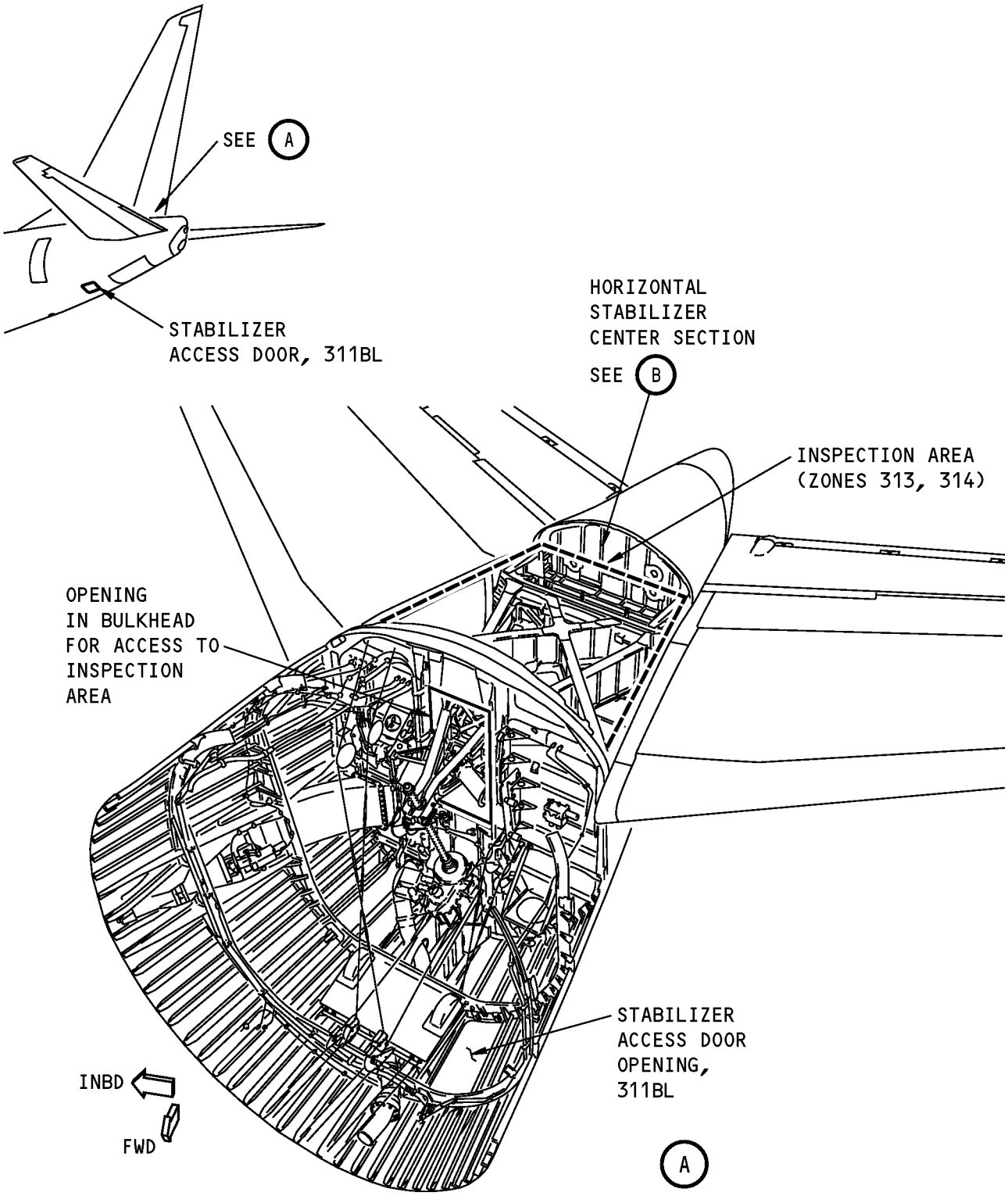
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-210-002

(1) Do the inspection.

———————— END OF TASK ————————



INTERNAL-GENERAL VISUAL: INTERNAL-STABILIZER TORSION BOX COMPARTMENT
Figure 202/55-05-03-990-820

TASK 55-05-03-210-803

3. INTERNAL - GENERAL VISUAL: INTERNAL - VERTICAL FIN LEADING EDGE

A. General

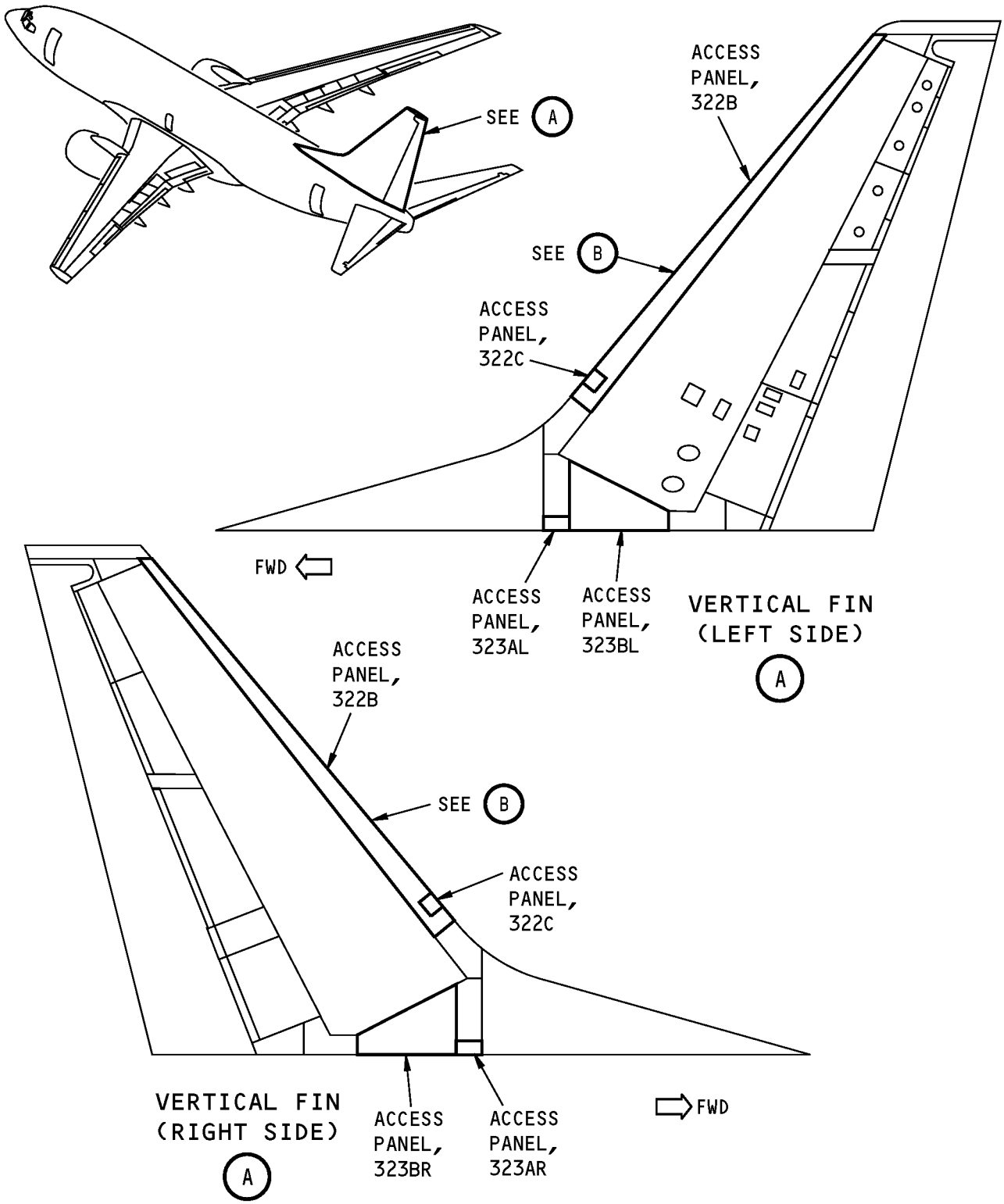
(1) This procedure is a scheduled maintenance task.

B. Inspection

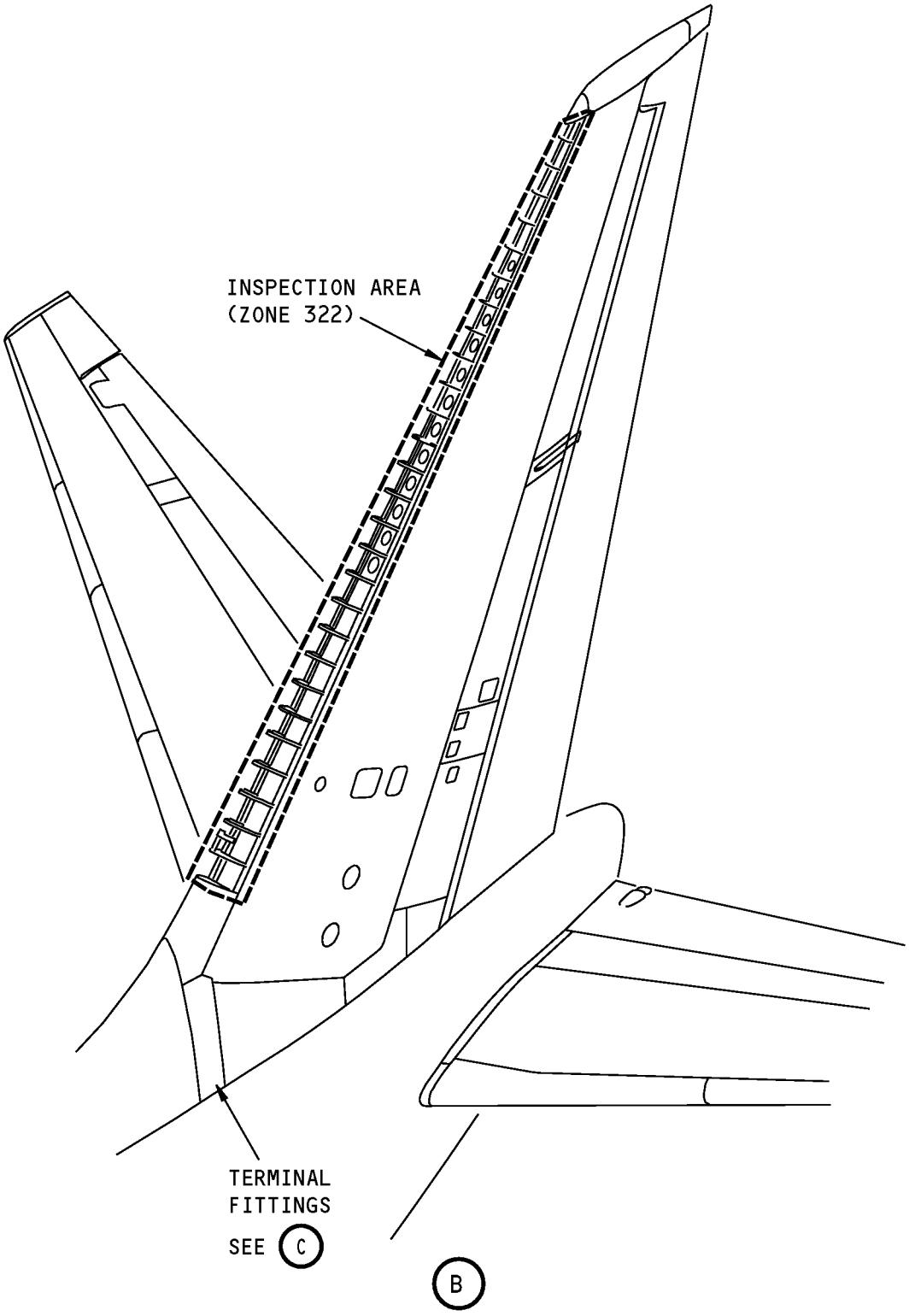
SUBTASK 55-05-03-210-003

(1) Do the inspection.

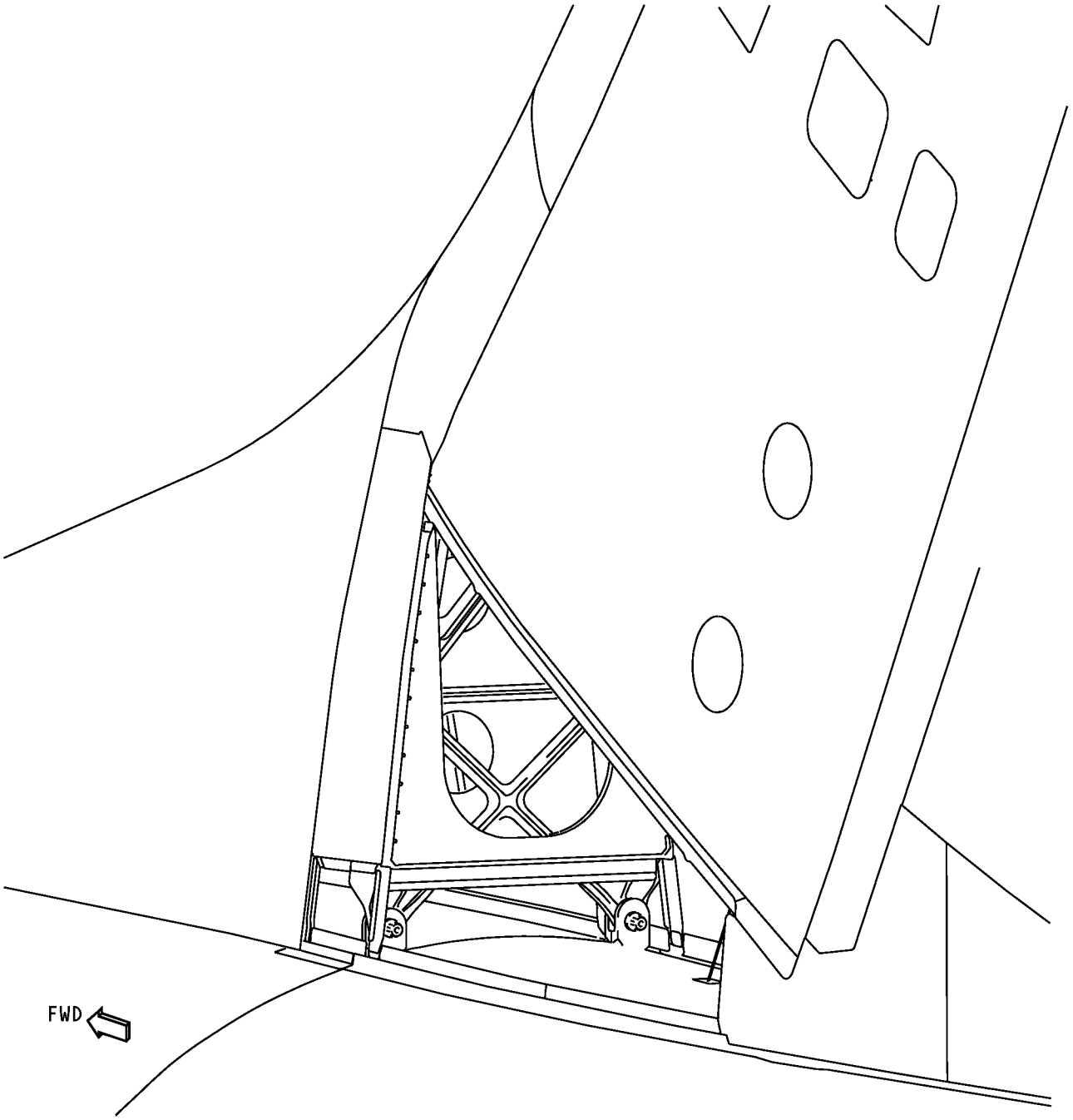
——————— END OF TASK ———————



INTERNAL-GENERAL VISUAL: INTERNAL-VERTICAL FIN LEADING EDGE
Figure 203 (Sheet 1 of 3)/55-05-03-990-812



INTERNAL-GENERAL VISUAL: INTERNAL-VERTICAL FIN LEADING EDGE
Figure 203 (Sheet 2 of 3)/55-05-03-990-812



TERMINAL FITTINGS

C

INTERNAL-GENERAL VISUAL: INTERNAL-VERTICAL FIN LEADING EDGE
Figure 203 (Sheet 3 of 3)/55-05-03-990-812

TASK 55-05-03-210-804

4. INTERNAL - GENERAL VISUAL: INTERNAL - VERTICAL FIN

A. General

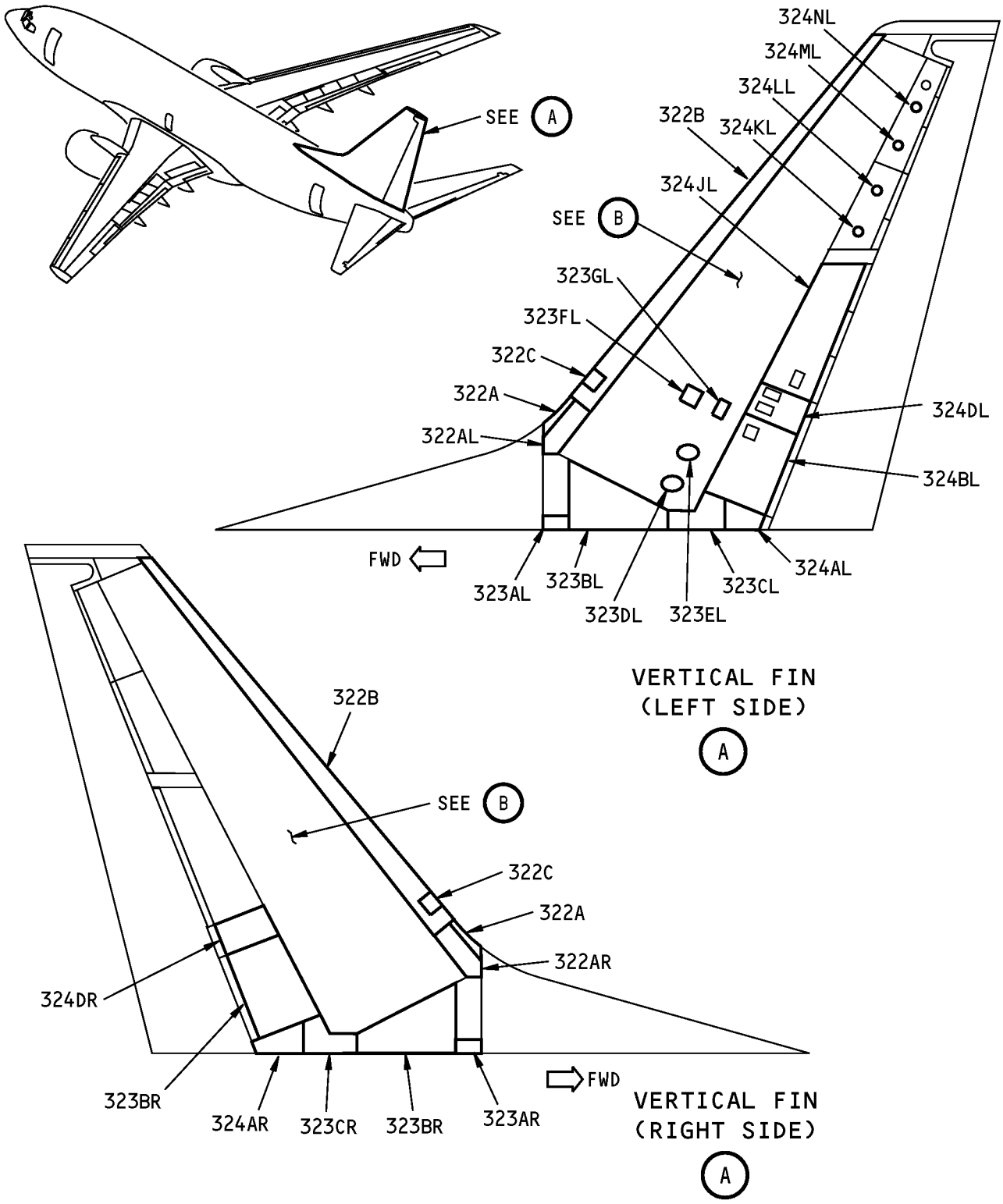
(1) This procedure is a scheduled maintenance task.

B. Inspection

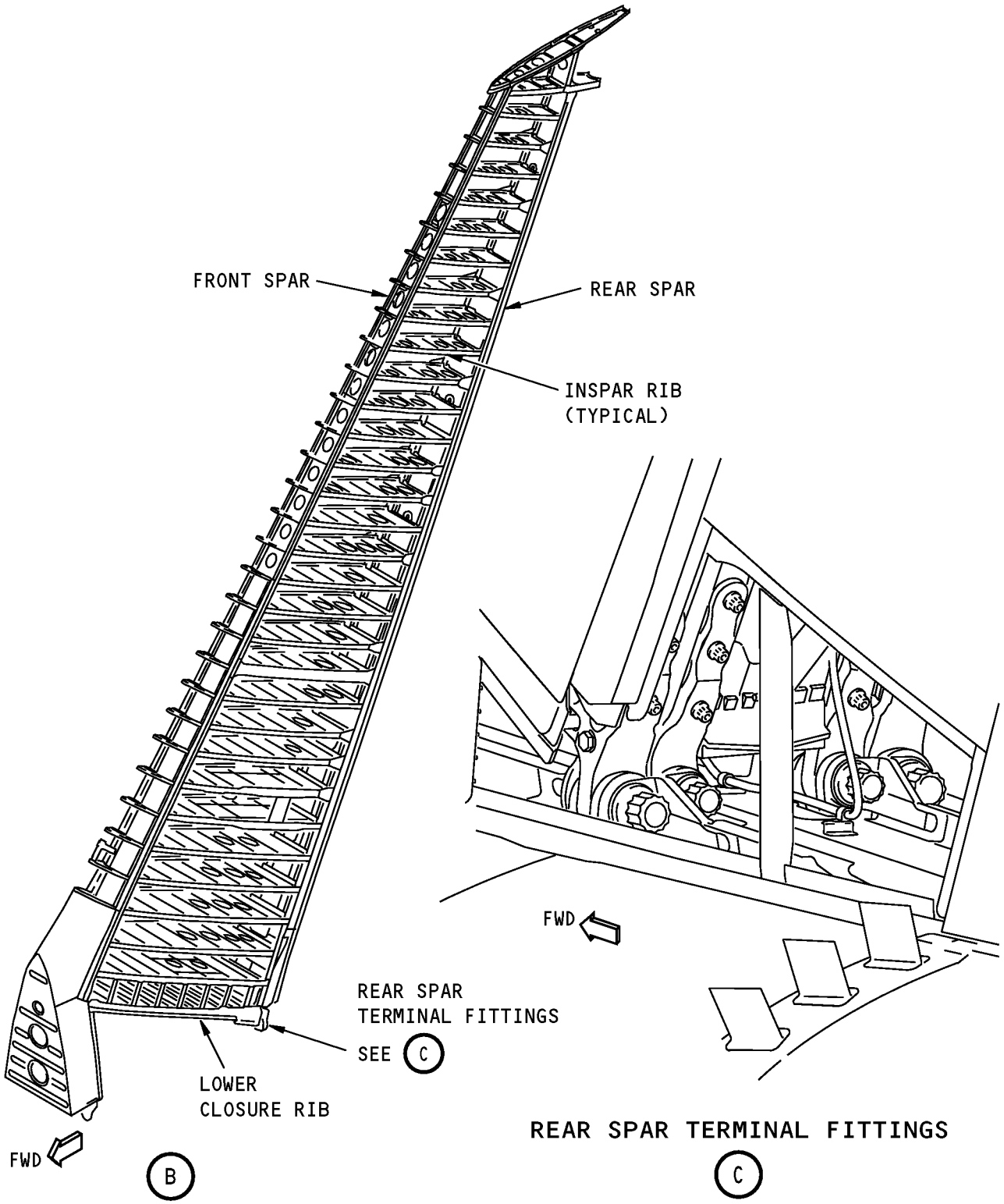
SUBTASK 55-05-03-210-004

(1) Do the inspection.

——————— END OF TASK ———————



INTERNAL-GENERAL VISUAL: INTERNAL-VERTICAL FIN
Figure 204 (Sheet 1 of 2)/55-05-03-990-813



INTERNAL-GENERAL VISUAL: INTERNAL-VERTICAL FIN
Figure 204 (Sheet 2 of 2)/55-05-03-990-813

TASK 55-05-03-210-805

5. INTERNAL - GENERAL VISUAL: INTERNAL - VERTICAL FIN TRAILING EDGE

A. General

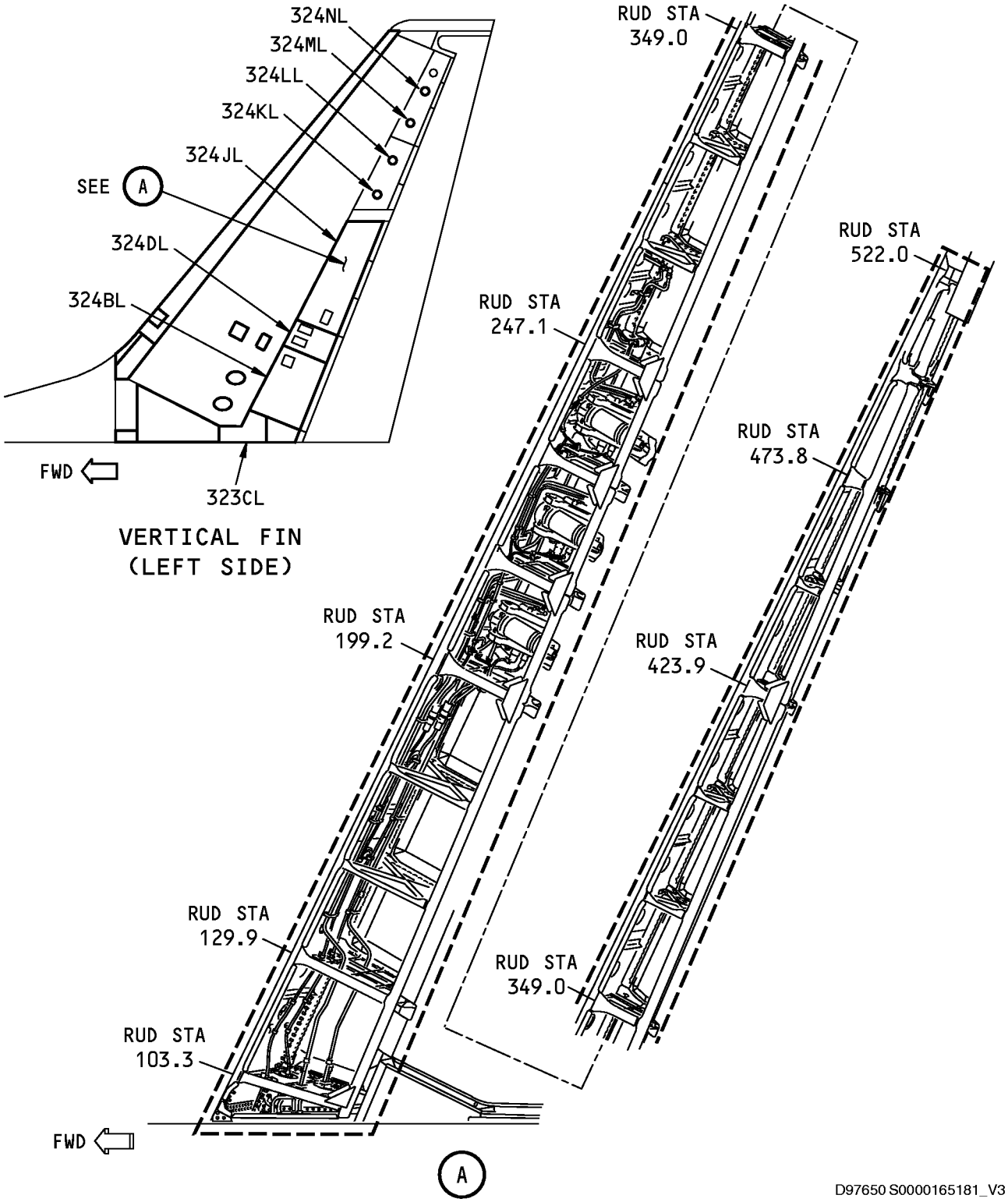
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-210-005

(1) Do the inspection.

———————— END OF TASK ————————



INTERNAL-GENERAL VISUAL: INTERNAL-VERTICAL FIN TRAILING EDGE
Figure 205/55-05-03-990-811

TASK 55-05-03-210-806

6. INTERNAL - GENERAL VISUAL: INTERNAL - LEFT HORIZONTAL STABILIZER LEADING EDGE

A. General

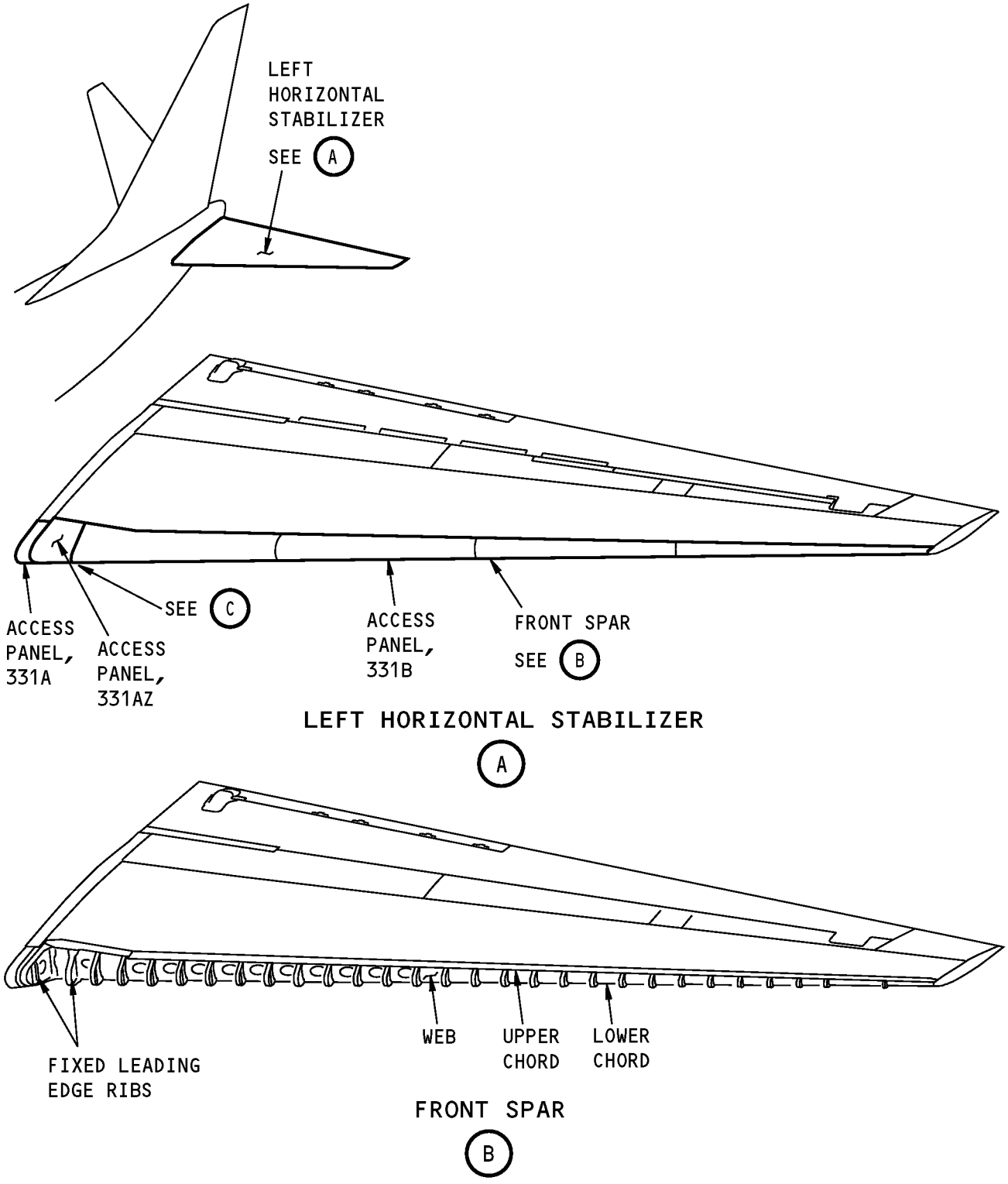
(1) This procedure is a scheduled maintenance task.

B. Inspection

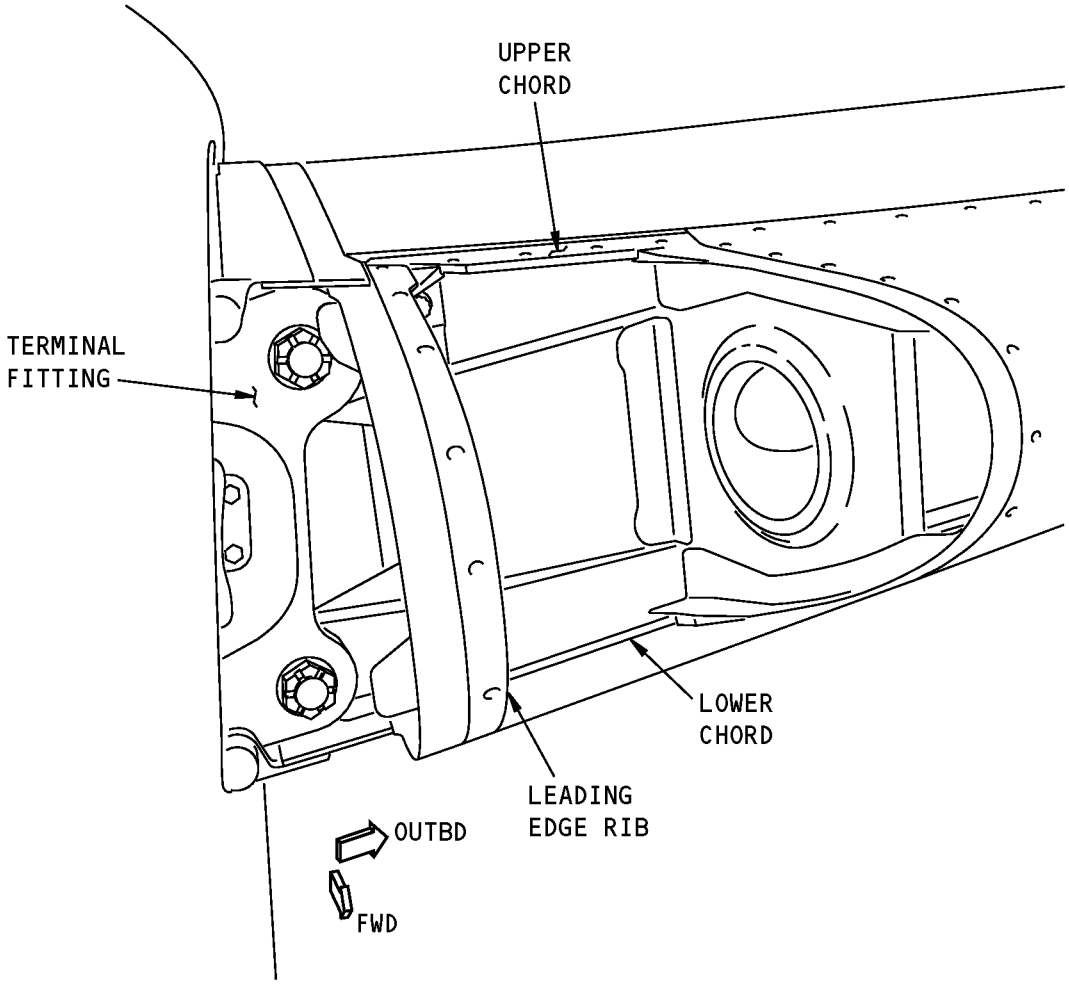
SUBTASK 55-05-03-210-006

(1) Do the inspection.

———————— END OF TASK ————————



INTERNAL-GENERAL VISUAL: INTERNAL-LEFT HORIZONTAL STABILIZER LEADING EDGE
Figure 206 (Sheet 1 of 2)/55-05-03-990-824



TERMINAL FITTING
(ACCESS PANELS 331A AND 331AZ REMOVED)

C

INTERNAL-GENERAL VISUAL: INTERNAL-LEFT HORIZONTAL STABILIZER LEADING EDGE
Figure 206 (Sheet 2 of 2)/55-05-03-990-824

TASK 55-05-03-210-807

7. INTERNAL - GENERAL VISUAL: INTERNAL - RIGHT HORIZONTAL STABILIZER LEADING EDGE

A. General

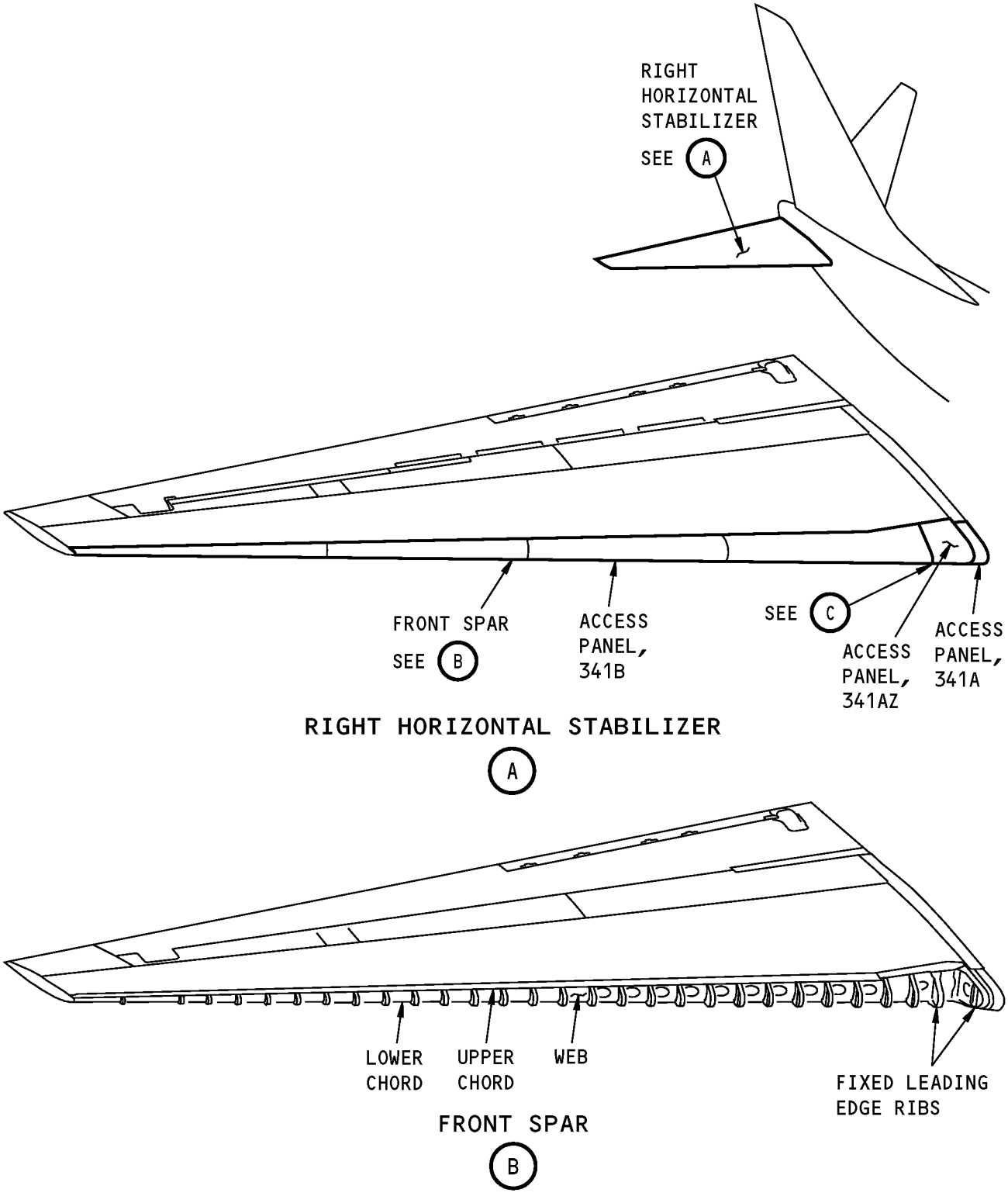
(1) This procedure is a scheduled maintenance task.

B. Inspection

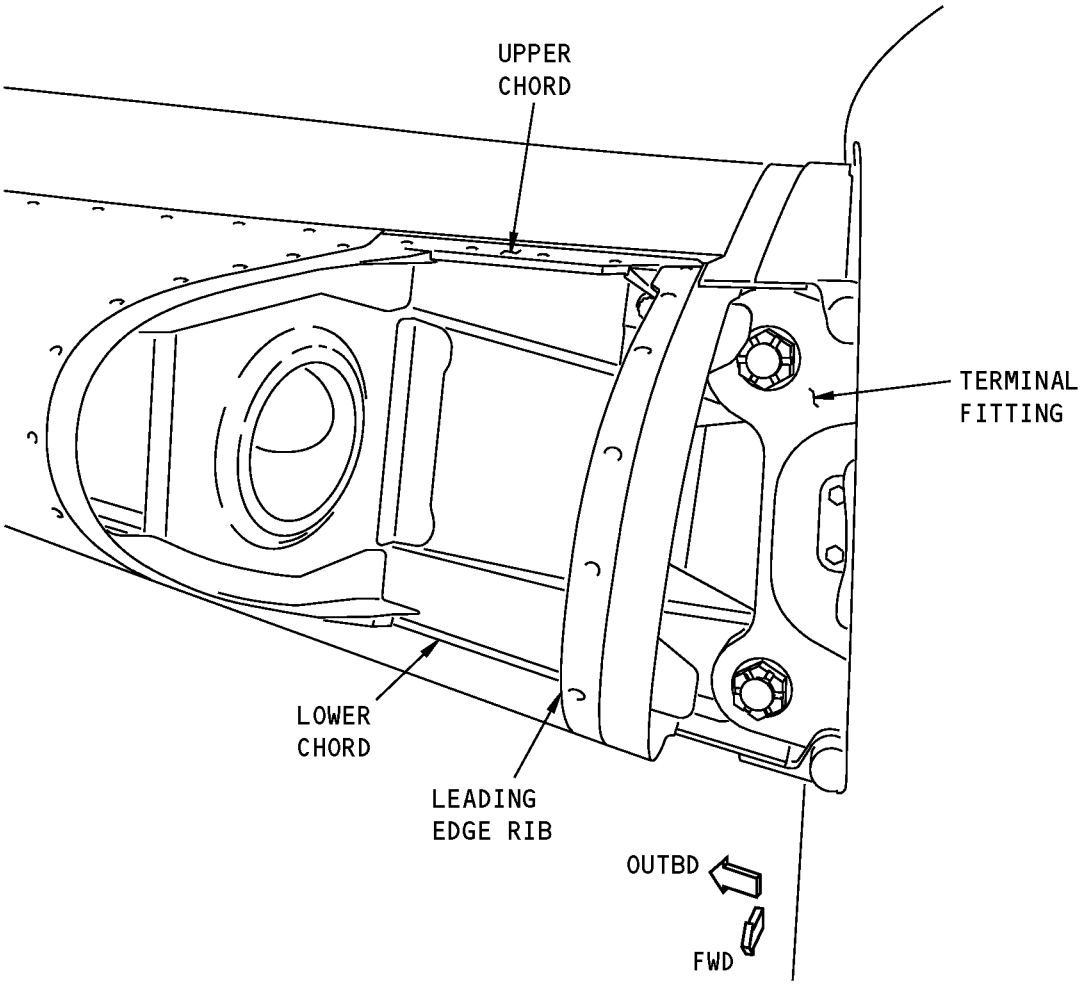
SUBTASK 55-05-03-210-007

(1) Do the inspection.

——————— END OF TASK ———————



INTERNAL-GENERAL VISUAL: INTERNAL-RIGHT HORIZONTAL STABILIZER LEADING EDGE
Figure 207 (Sheet 1 of 2)/55-05-03-990-825



TERMINAL FITTING
(ACCESS PANELS 341A AND 341AZ REMOVED)

C

INTERNAL-GENERAL VISUAL: INTERNAL-RIGHT HORIZONTAL STABILIZER LEADING EDGE
Figure 207 (Sheet 2 of 2)/55-05-03-990-825

TASK 55-05-03-210-808

8. INTERNAL - GENERAL VISUAL: INTERNAL - LEFT HORIZONTAL STABILIZER LEADING EDGE

A. General

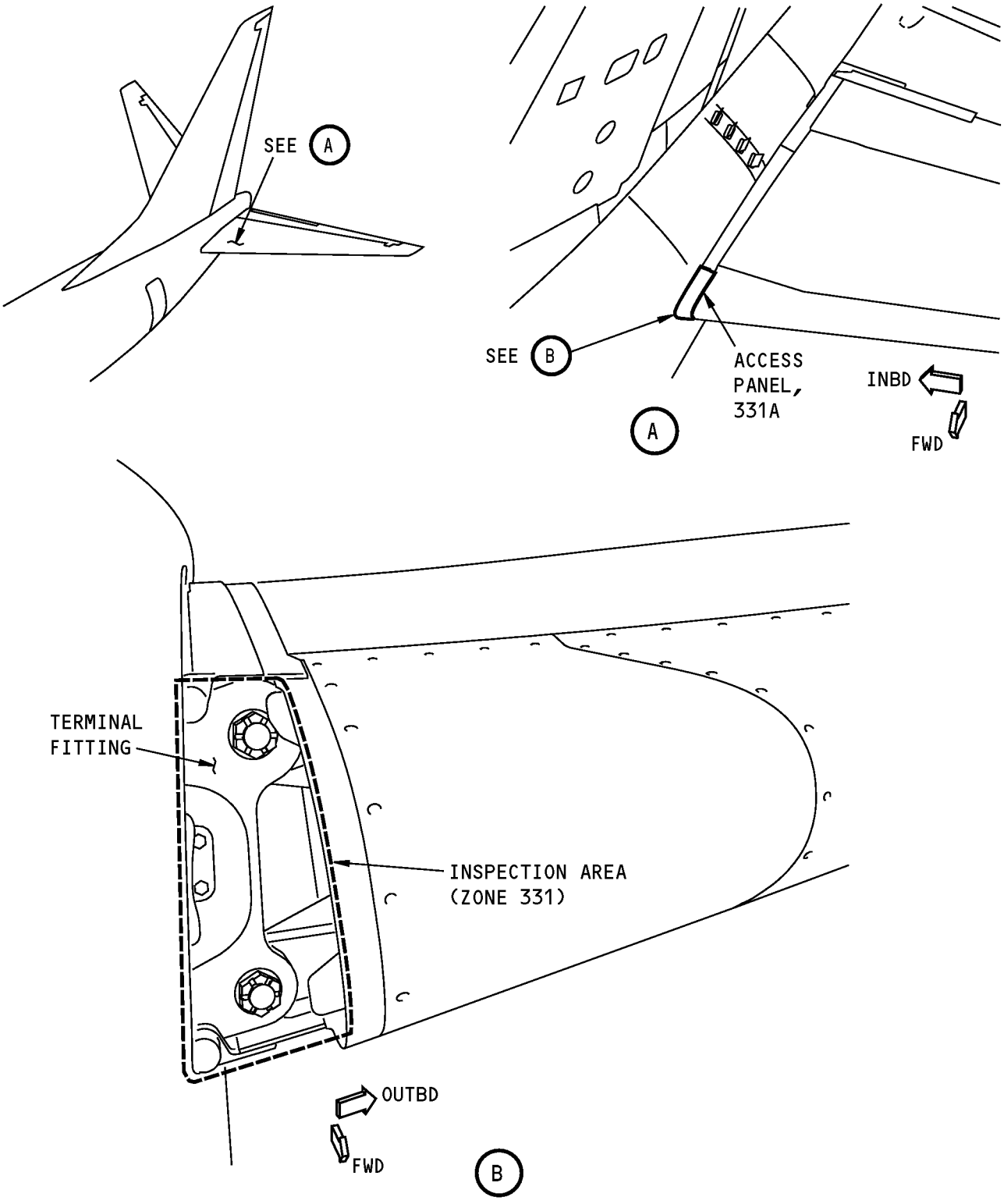
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-210-008

(1) Do the inspection.

———————— END OF TASK ————————



Left Horizontal Stabilizer Leading Edge General Visual (Internal)
Figure 208/55-05-03-990-808

TASK 55-05-03-210-809

9. INTERNAL - GENERAL VISUAL: INTERNAL - RIGHT HORIZONTAL STABILIZER LEADING EDGE

A. General

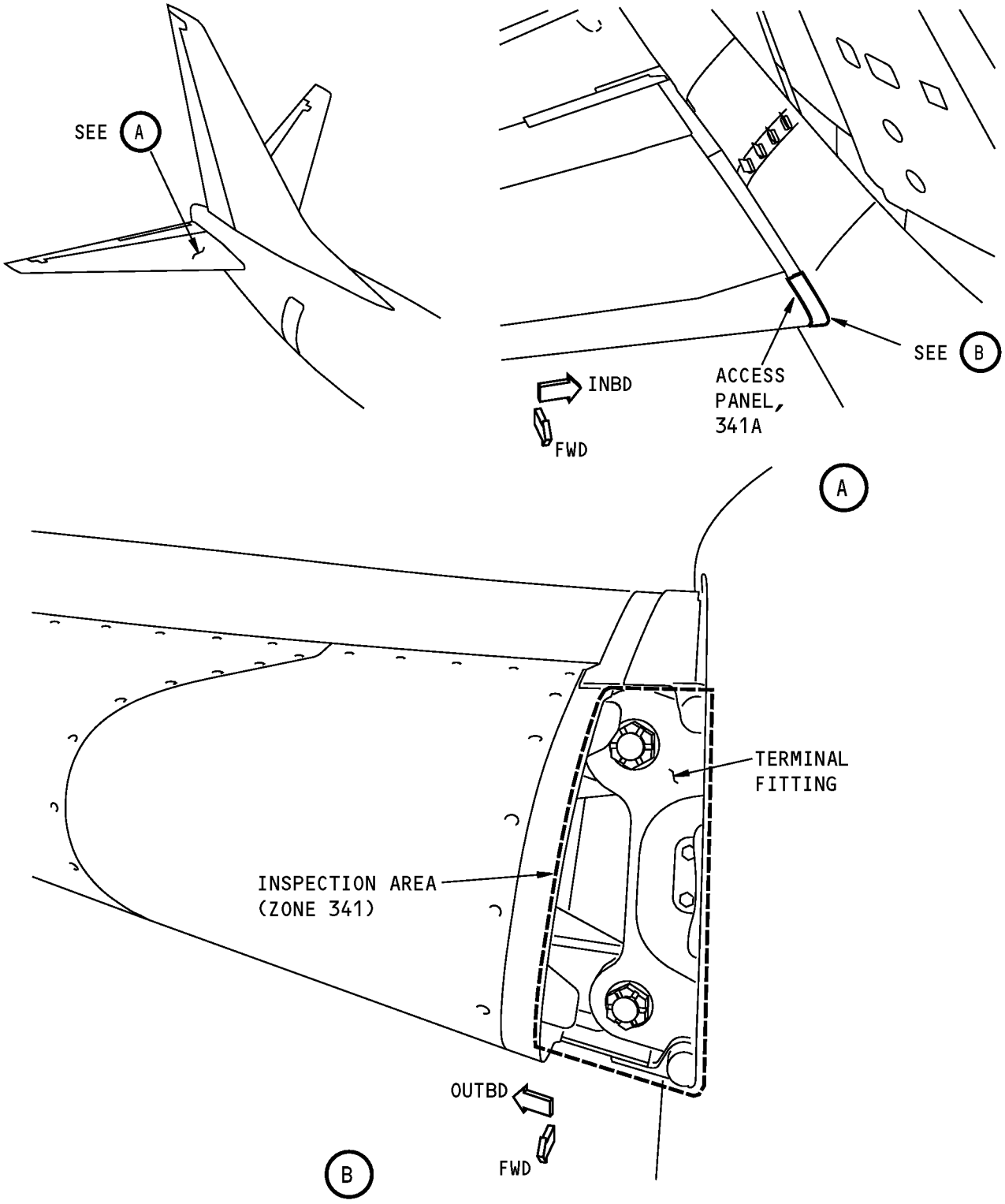
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-210-009

(1) Do the inspection.

———————— END OF TASK ————————



Right Horizontal Stabilizer Leading Edge General Visual (Internal)
Figure 209/55-05-03-990-807

TASK 55-05-03-210-810

10. INTERNAL - GENERAL VISUAL: INTERNAL - LEFT HORIZONTAL STABILIZER

A. General

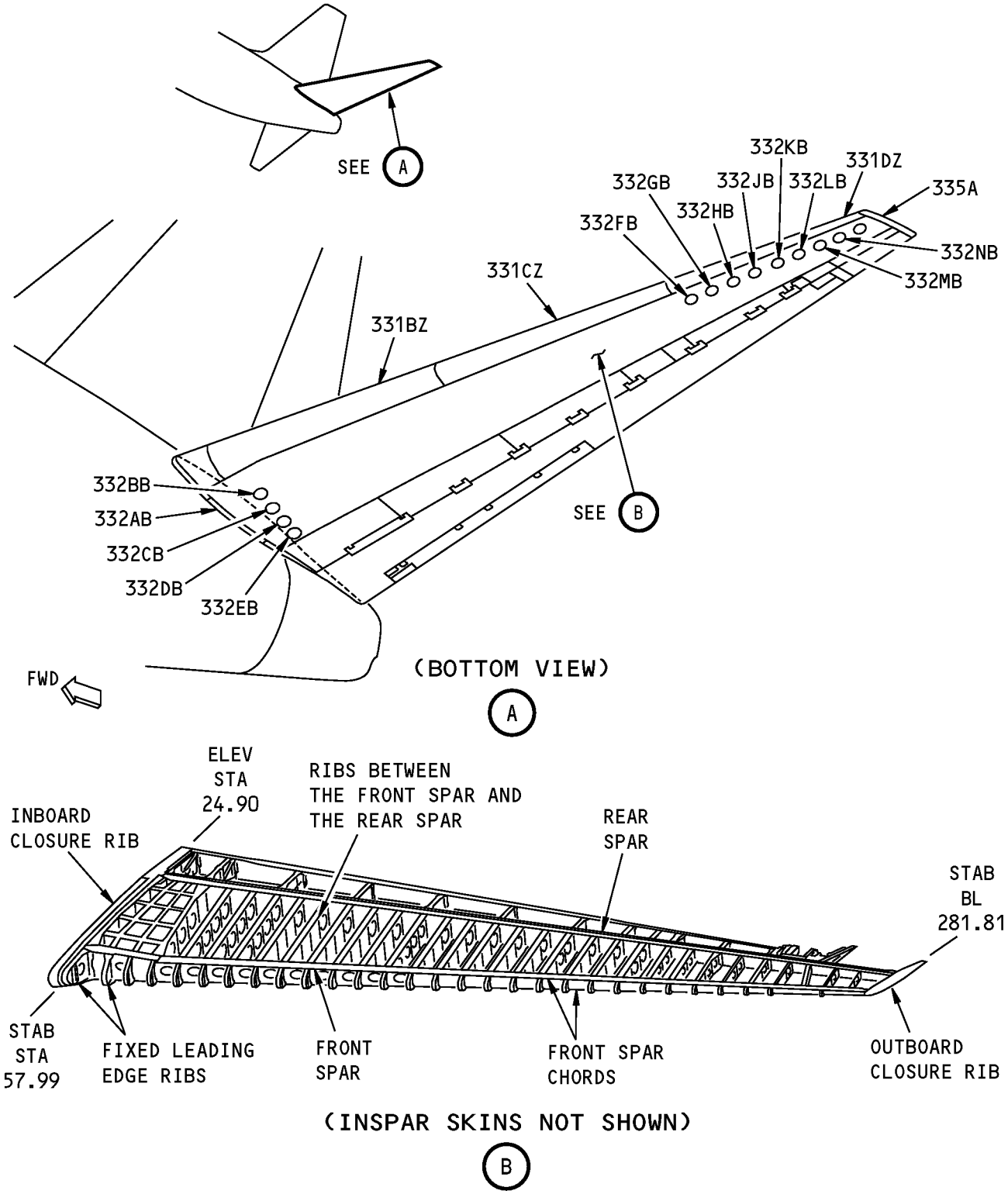
(1) This procedure is a scheduled maintenance task.

B. Inspection

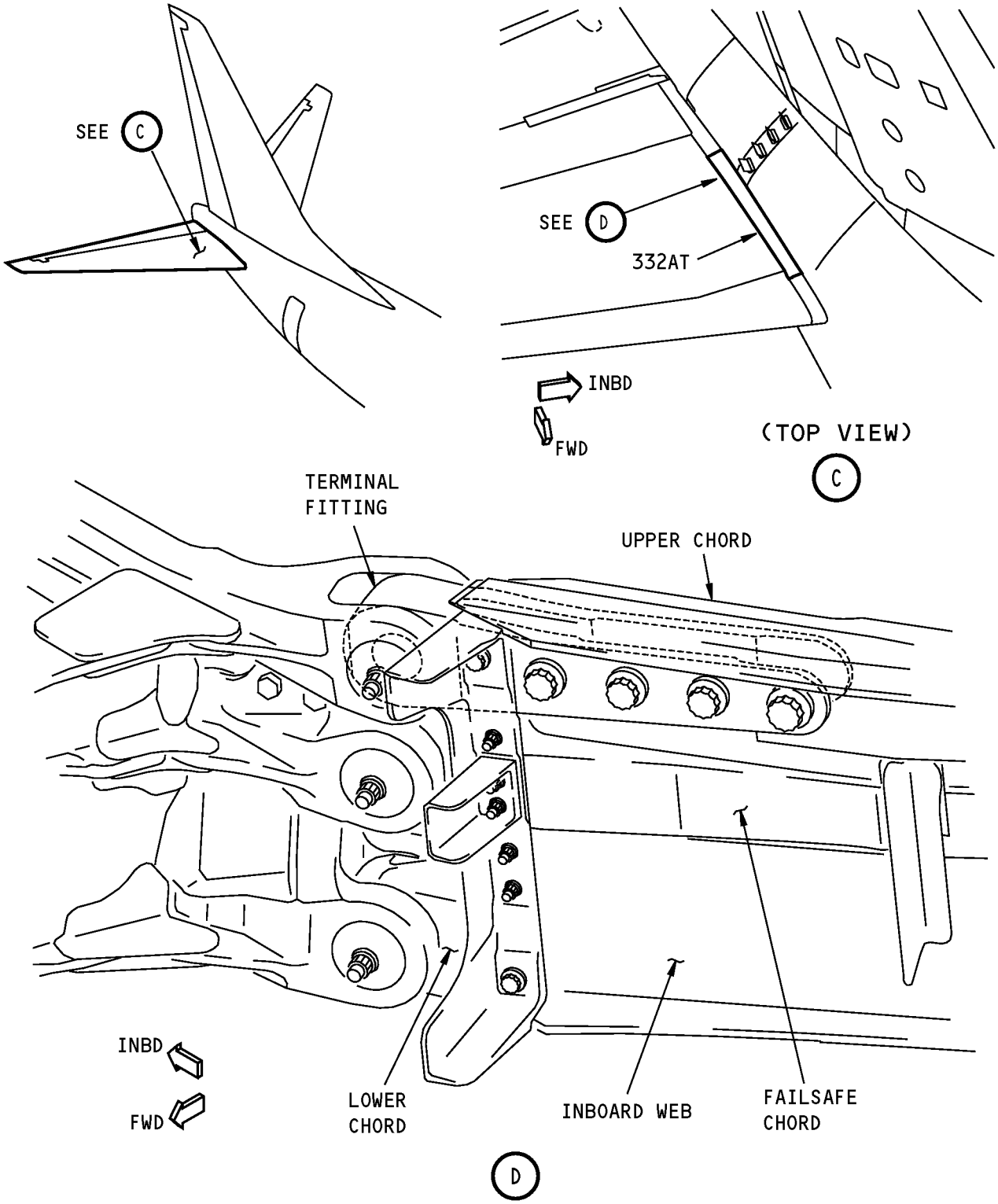
SUBTASK 55-05-03-210-010

(1) Do the inspection.

———————— END OF TASK ————————



INTERNAL-GENERAL VISUAL: INTERNAL-LEFT HORIZONTAL STABILIZER
Figure 210 (Sheet 1 of 2)/55-05-03-990-822



INTERNAL-GENERAL VISUAL: INTERNAL-LEFT HORIZONTAL STABILIZER
Figure 210 (Sheet 2 of 2)/55-05-03-990-822

TASK 55-05-03-210-811

11. INTERNAL - GENERAL VISUAL: INTERNAL - RIGHT HORIZONTAL STABILIZER

A. General

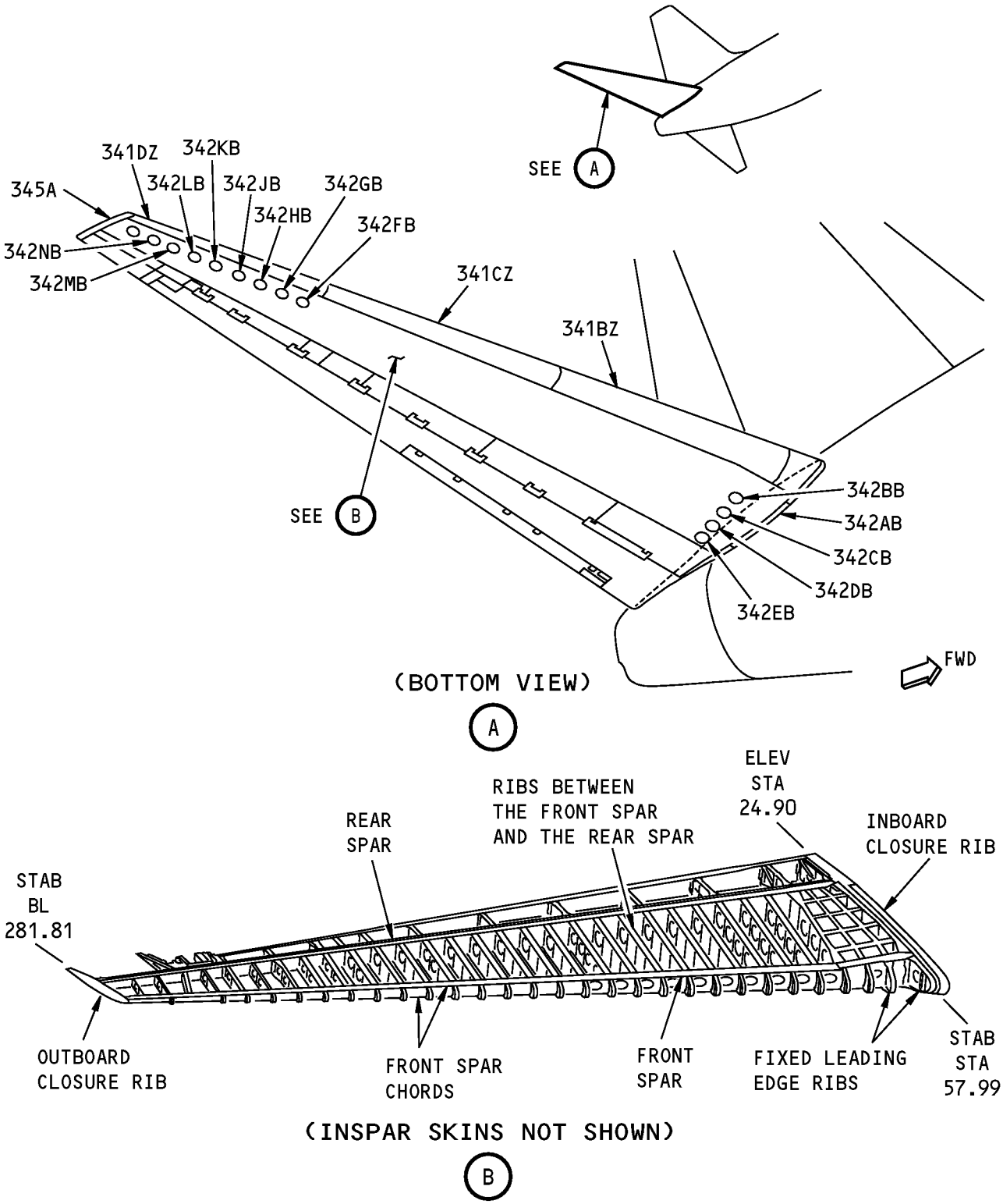
(1) This procedure is a scheduled maintenance task.

B. Inspection

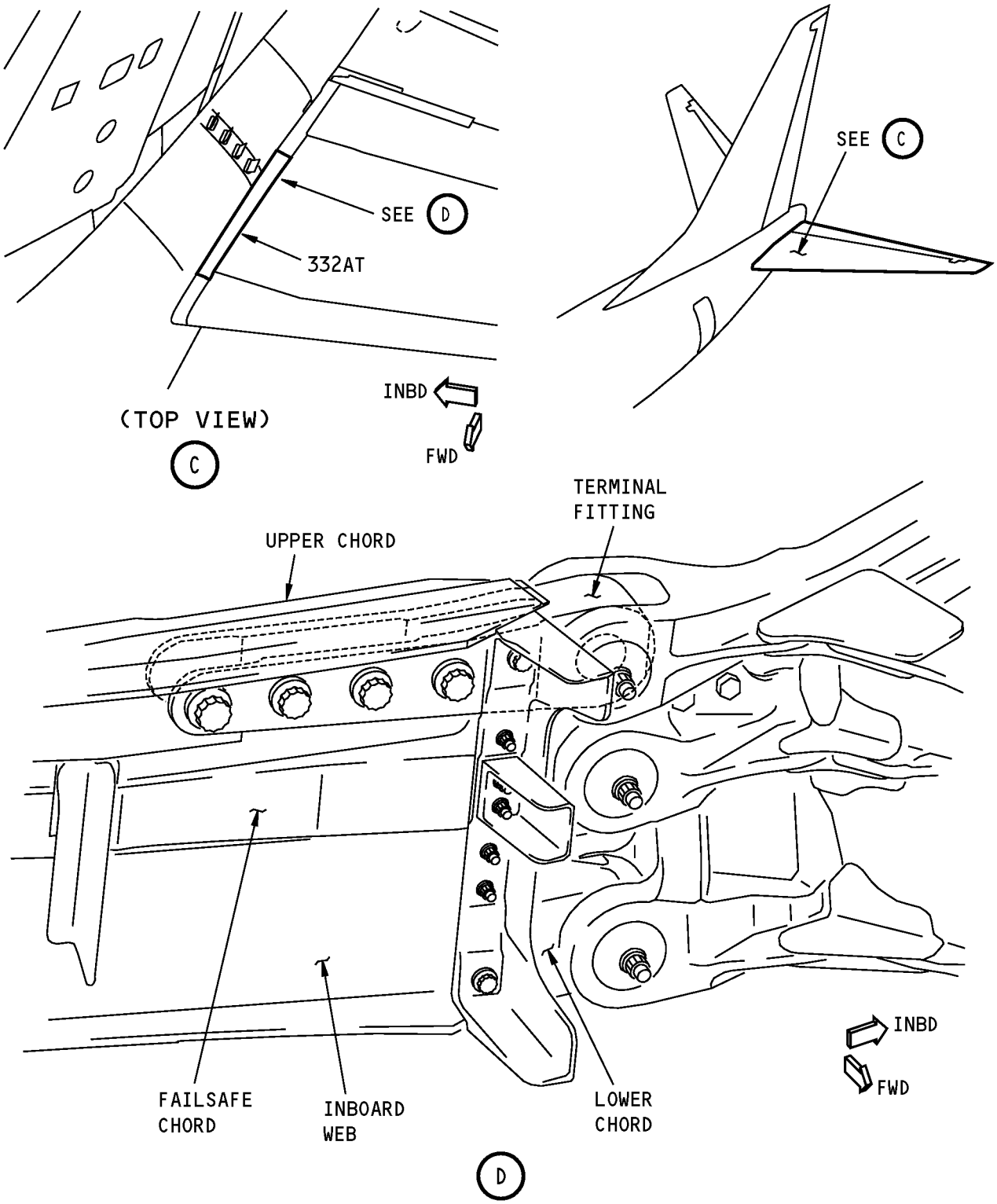
SUBTASK 55-05-03-210-011

(1) Do the inspection.

——————— END OF TASK ———————



INTERNAL-GENERAL VISUAL: INTERNAL-RIGHT HORIZONTAL STABILIZER
Figure 211 (Sheet 1 of 2)/55-05-03-990-823



INTERNAL-GENERAL VISUAL: INTERNAL-RIGHT HORIZONTAL STABILIZER
Figure 211 (Sheet 2 of 2)/55-05-03-990-823

TASK 55-05-03-210-812

12. INTERNAL - GENERAL VISUAL: INTERNAL - LEFT HORIZONTAL STABILIZER TRAILING EDGE

A. General

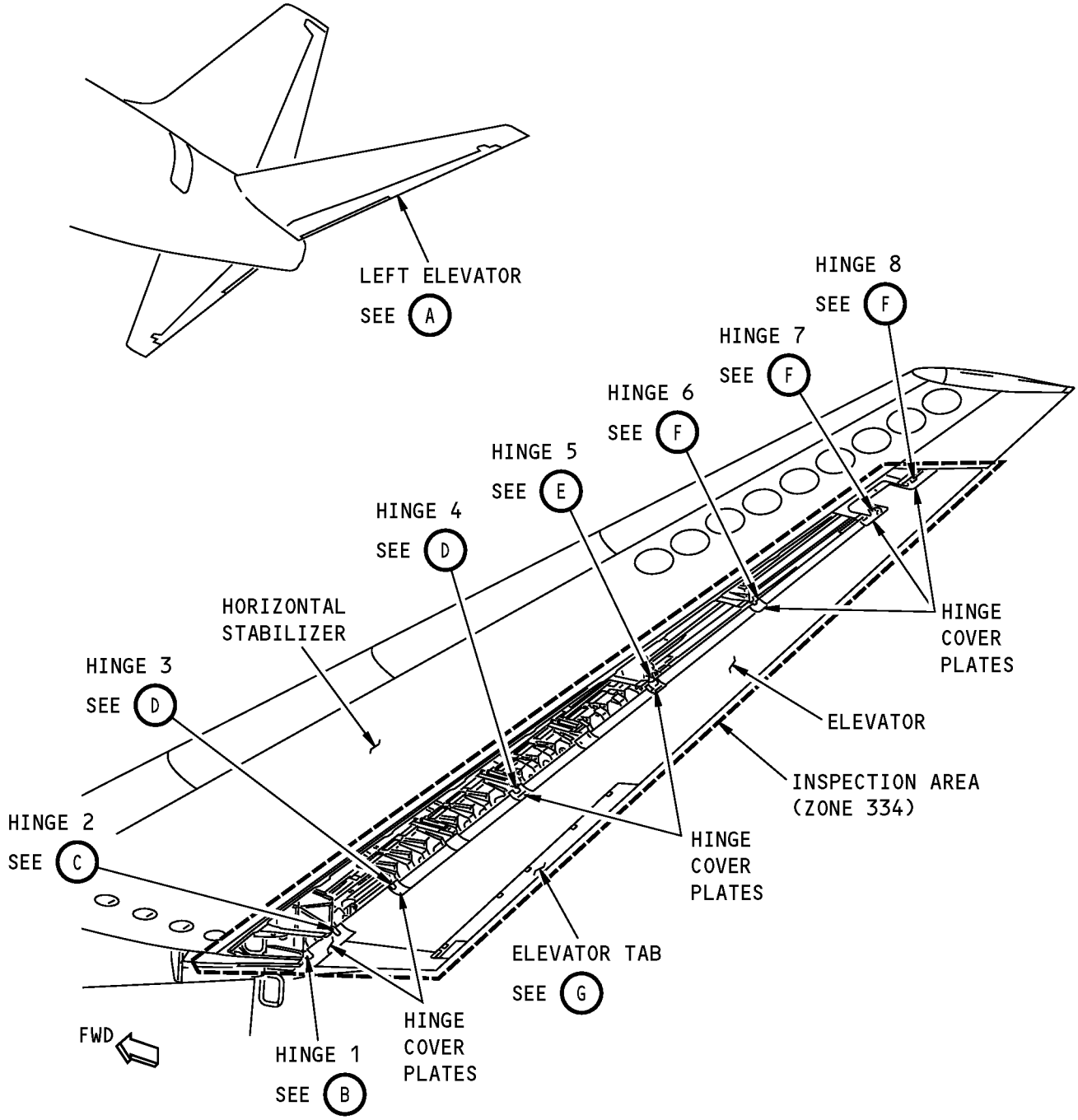
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-210-012

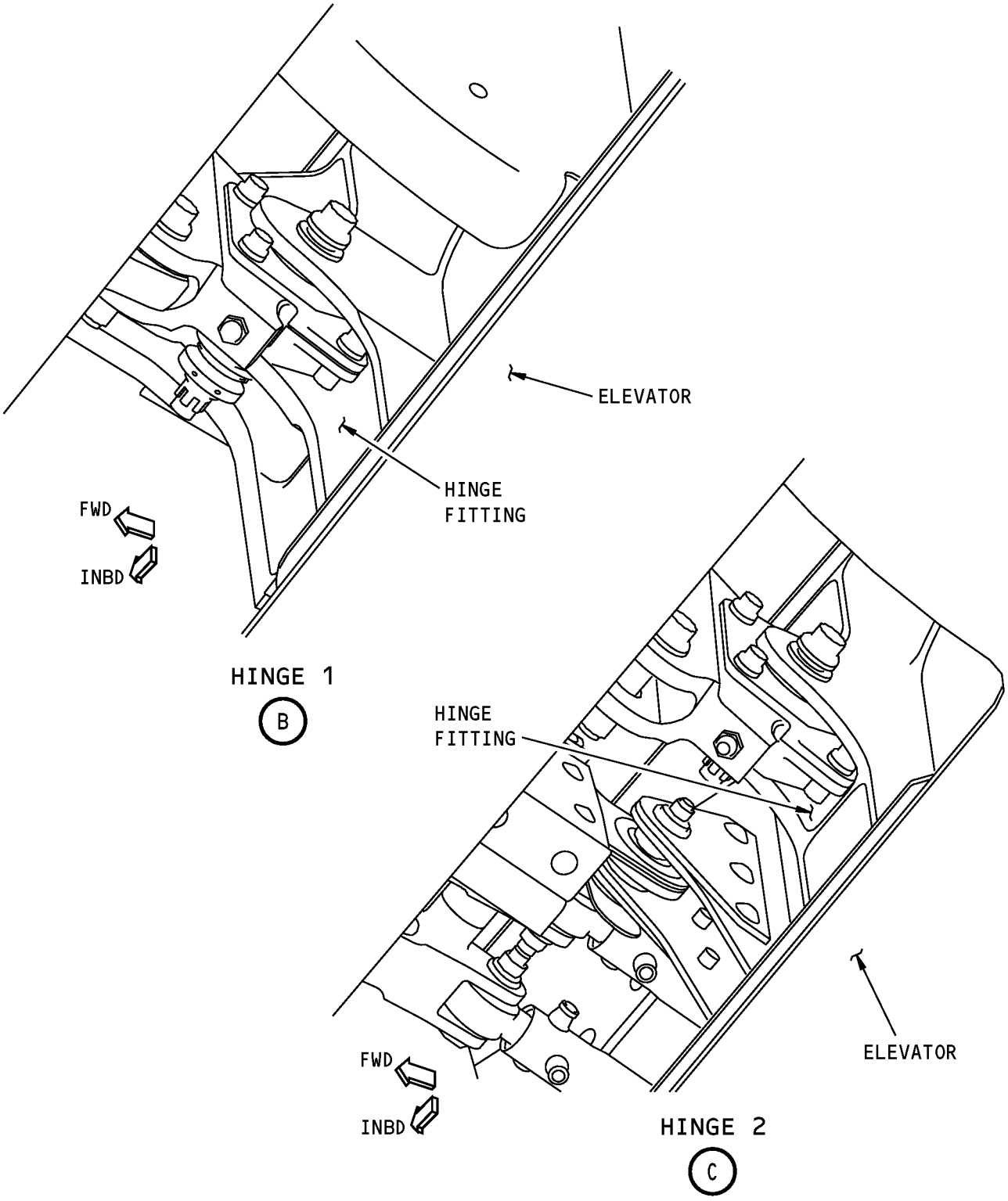
(1) Do the inspection.

———————— END OF TASK ————————

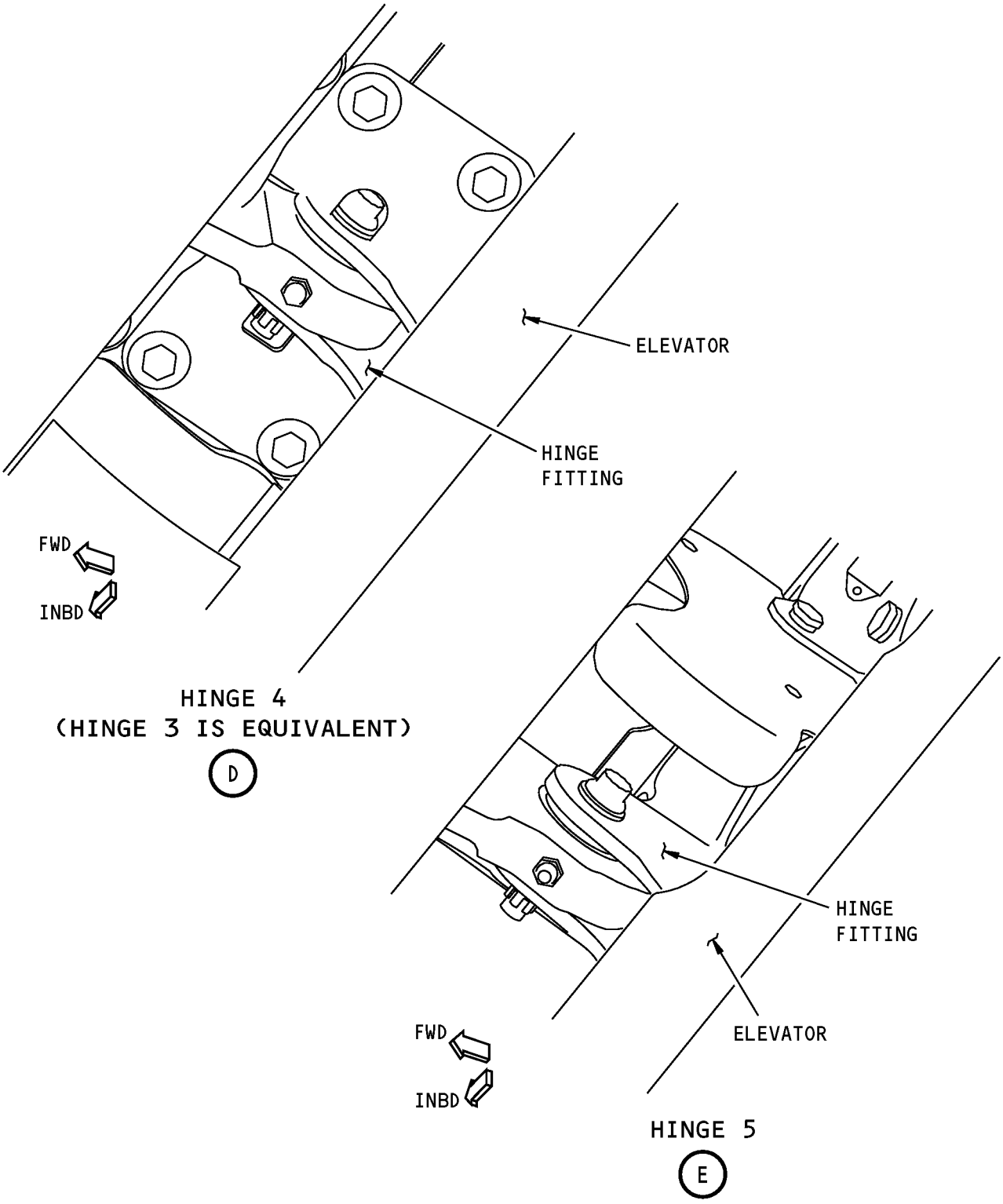


LEFT ELEVATOR
(LOWER TRAILING EDGE PANELS REMOVED)
A

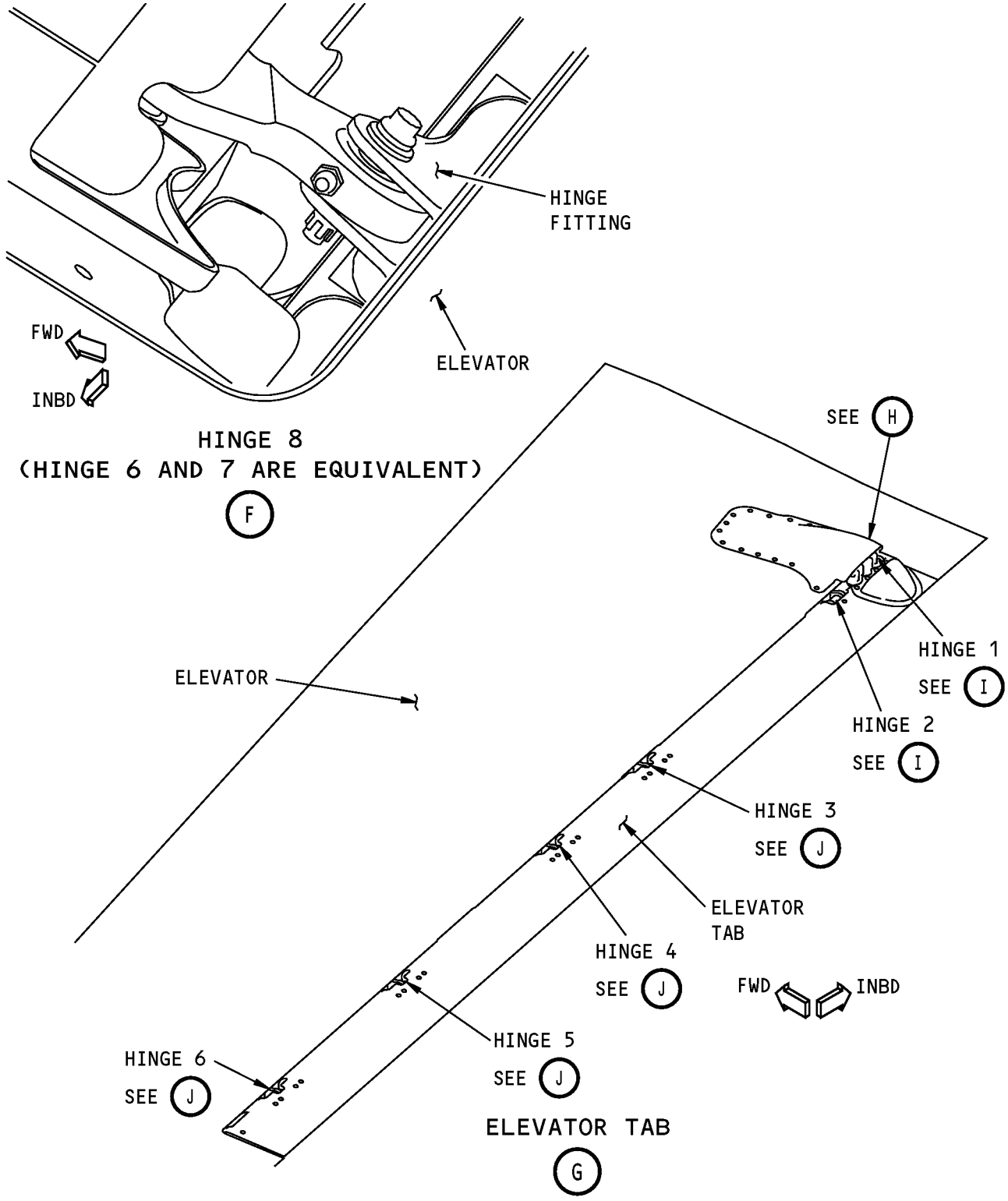
Left Elevator Hinge, Actuator, and Tab Mast Arm Fittings and Weight Support Structure - Detailed Inspection (Internal)
Figure 212 (Sheet 1 of 6)/55-05-03-990-818



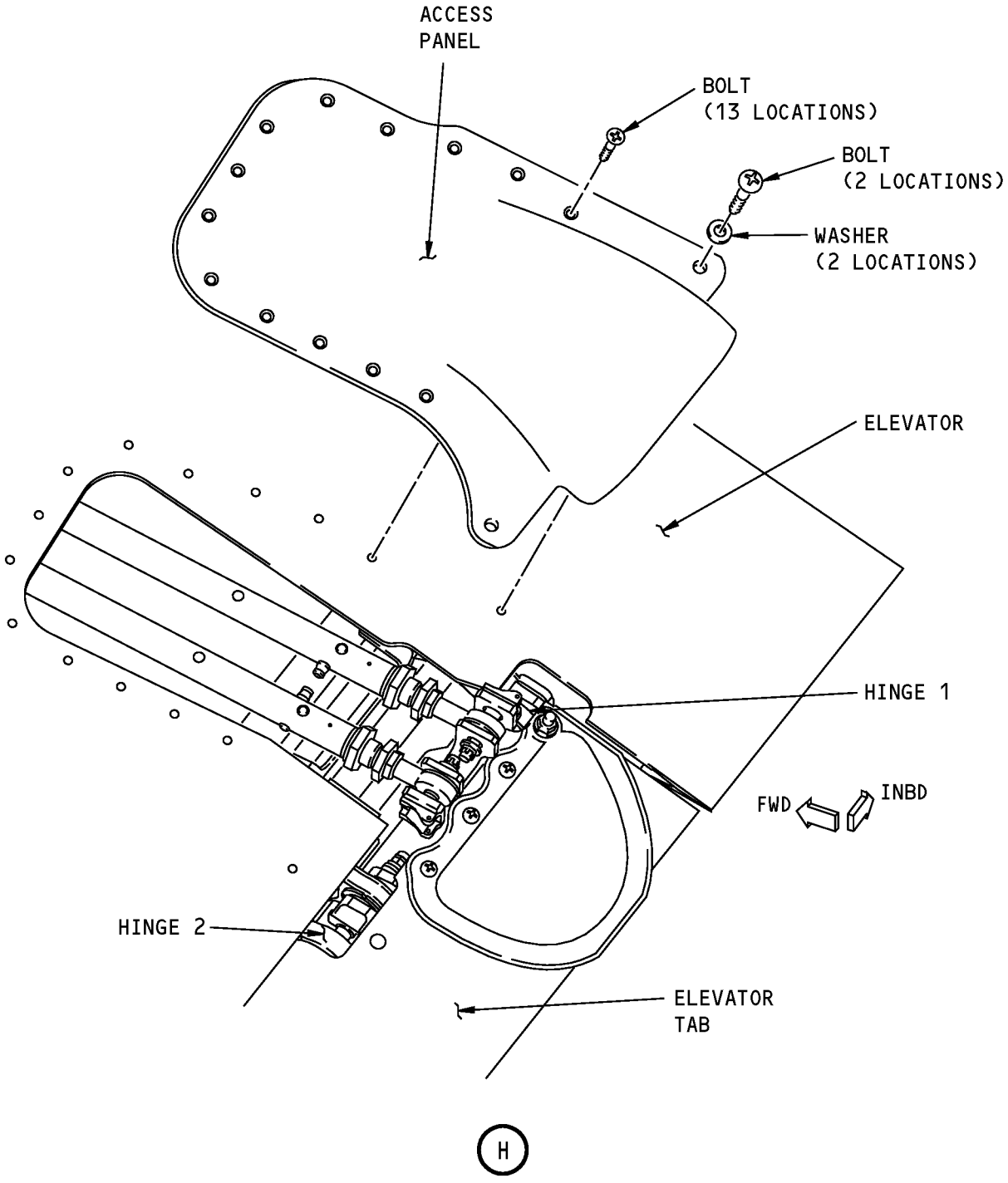
Left Elevator Hinge, Actuator, and Tab Mast Arm Fittings and Weight Support Structure - Detailed Inspection (Internal)
Figure 212 (Sheet 2 of 6)/55-05-03-990-818



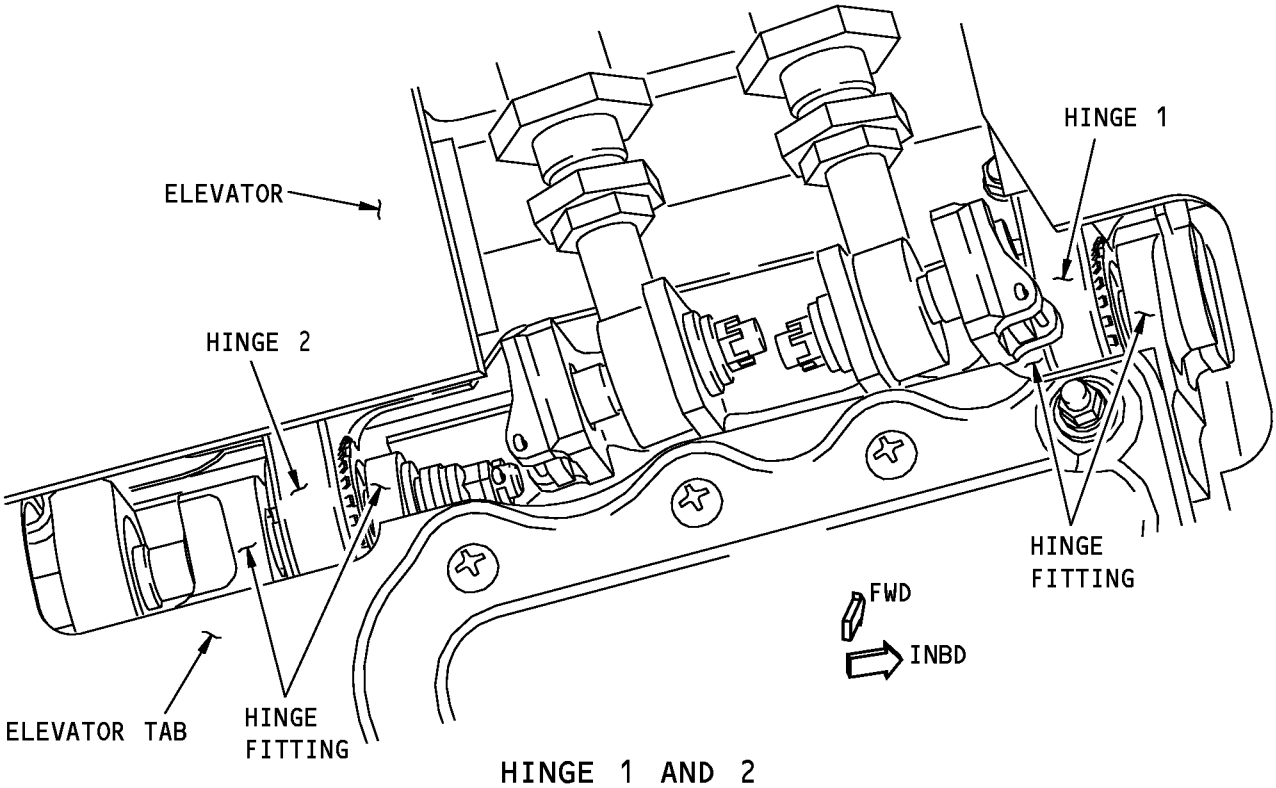
Left Elevator Hinge, Actuator, and Tab Mast Arm Fittings and Weight Support Structure - Detailed Inspection (Internal)
Figure 212 (Sheet 3 of 6)/55-05-03-990-818



Left Elevator Hinge, Actuator, and Tab Mast Arm Fittings and Weight Support Structure - Detailed Inspection (Internal)
Figure 212 (Sheet 4 of 6)/55-05-03-990-818

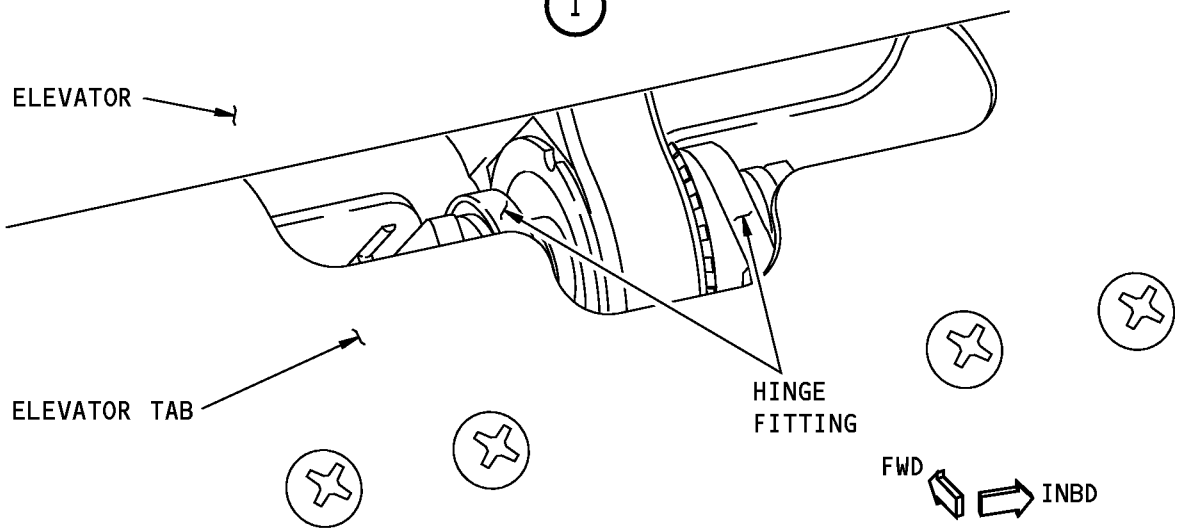


Left Elevator Hinge, Actuator, and Tab Mast Arm Fittings and Weight Support Structure - Detailed Inspection (Internal)
Figure 212 (Sheet 5 of 6)/55-05-03-990-818



HINGE 1 AND 2
(COVER REMOVED FOR CLARITY)

I



HINGE 3
(HINGE 4, 5 AND 6 ARE EQUIVALENT)

J

Left Elevator Hinge, Actuator, and Tab Mast Arm Fittings and Weight Support Structure - Detailed Inspection (Internal)
Figure 212 (Sheet 6 of 6)/55-05-03-990-818

TASK 55-05-03-210-813

13. INTERNAL - GENERAL VISUAL: INTERNAL - RIGHT HORIZONTAL STABILIZER TRAILING EDGE

A. General

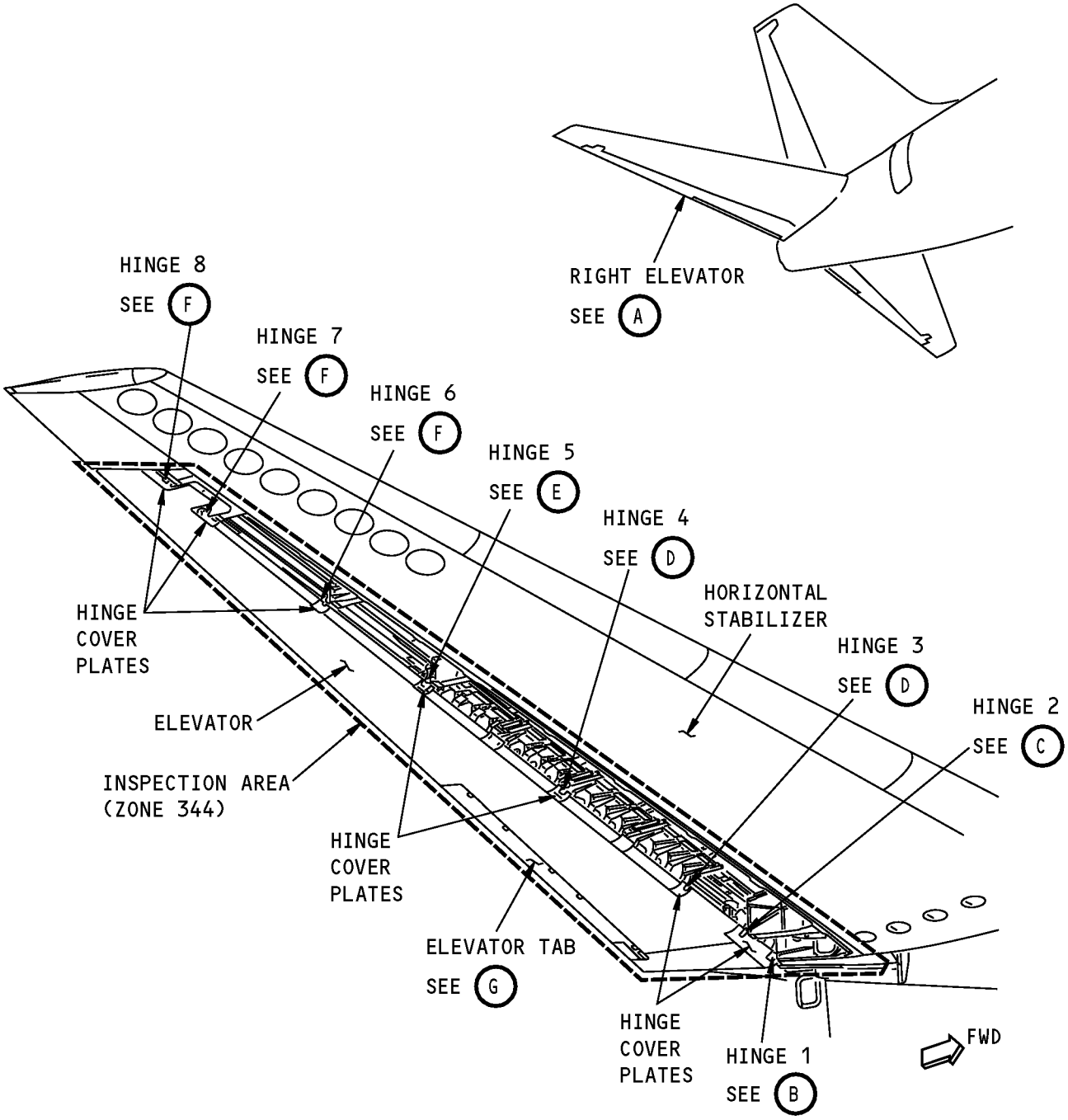
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-210-013

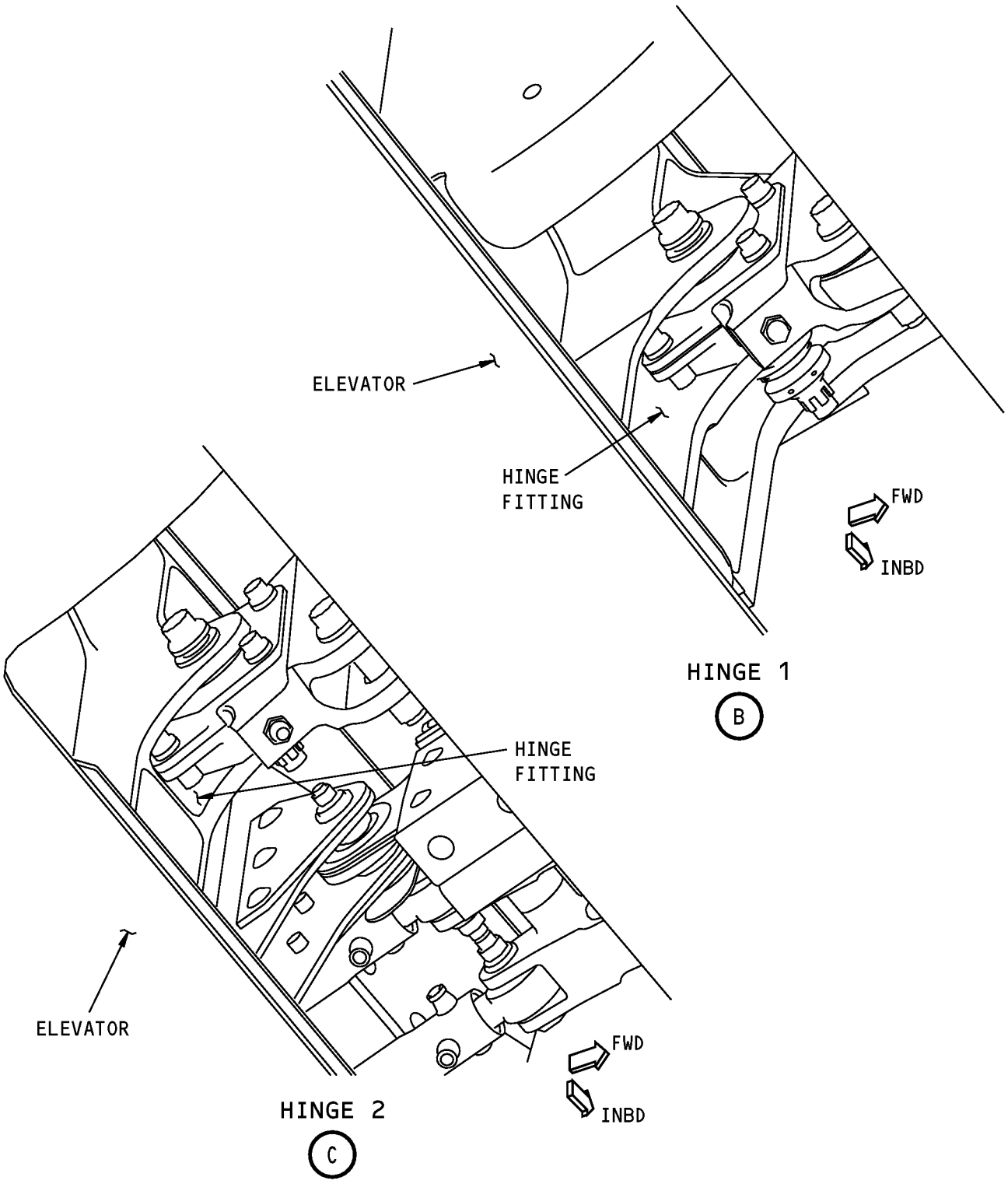
(1) Do the inspection.

———————— END OF TASK ————————

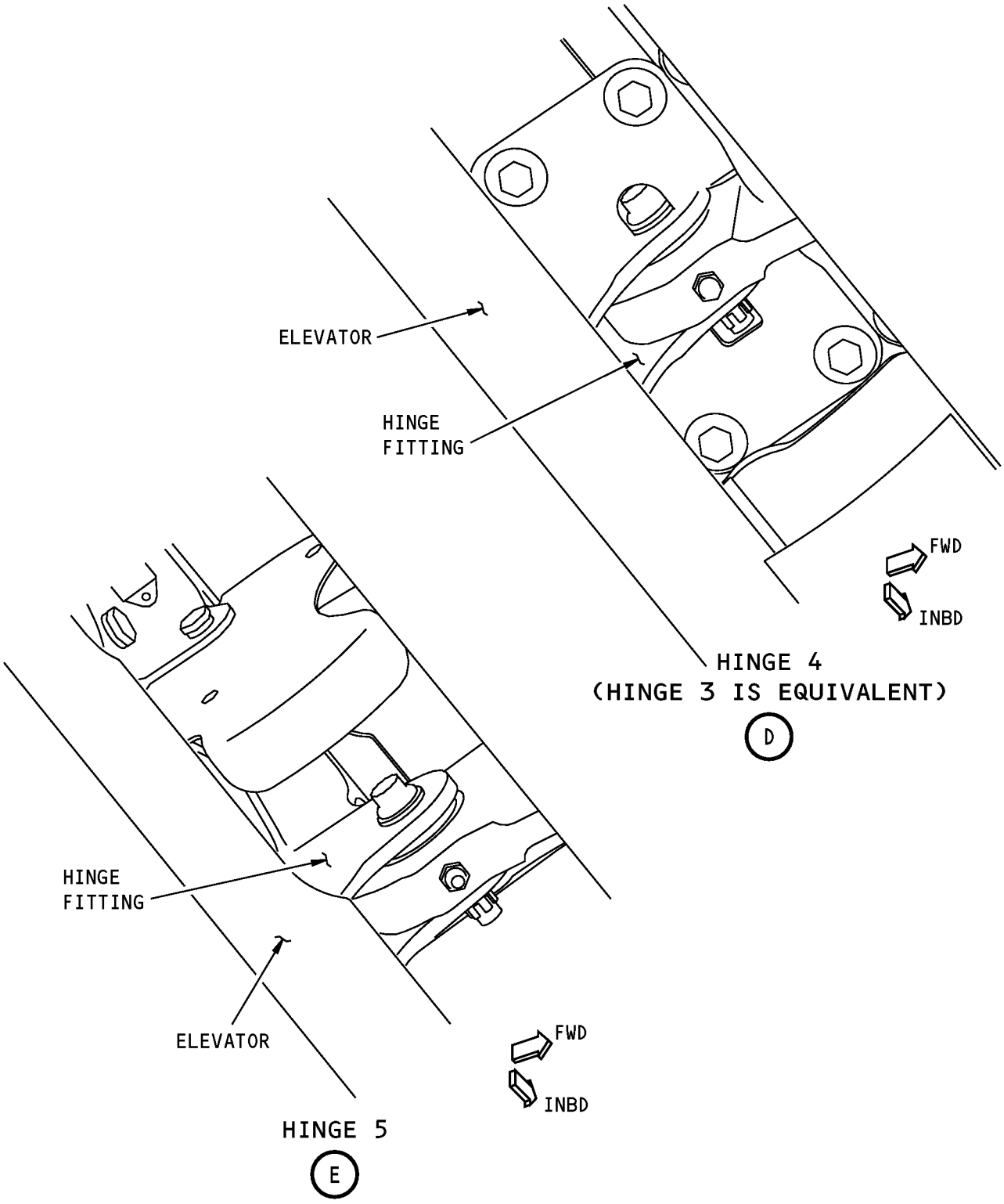


RIGHT ELEVATOR
(LOWER TRAILING EDGE PANELS REMOVED)
A

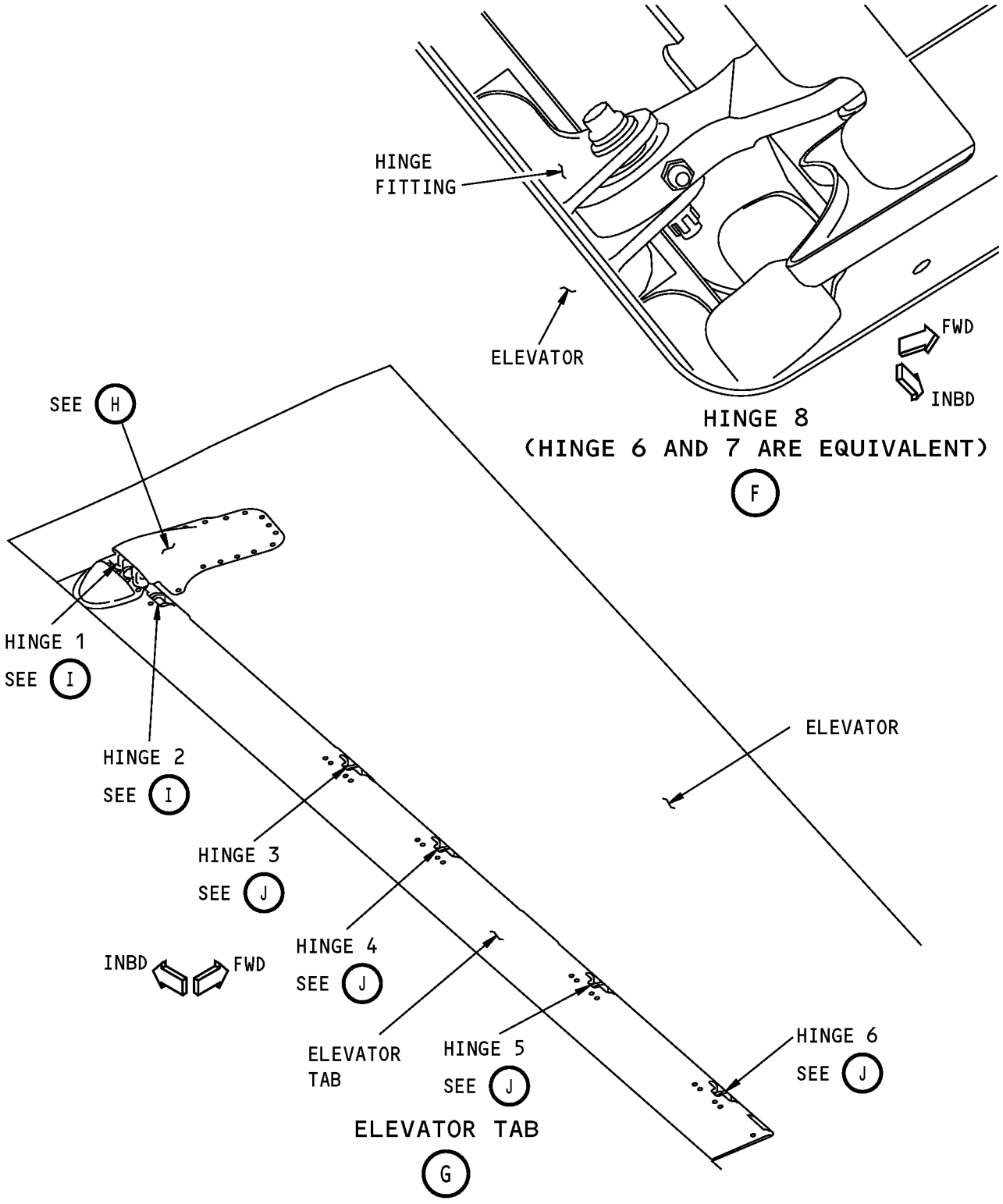
Right Elevator Hinge, Actuator, and Tab Mast Arm Fittings andWeight Support Structure - Detailed Inspection (Internal)
Figure 213 (Sheet 1 of 6)/55-05-03-990-819



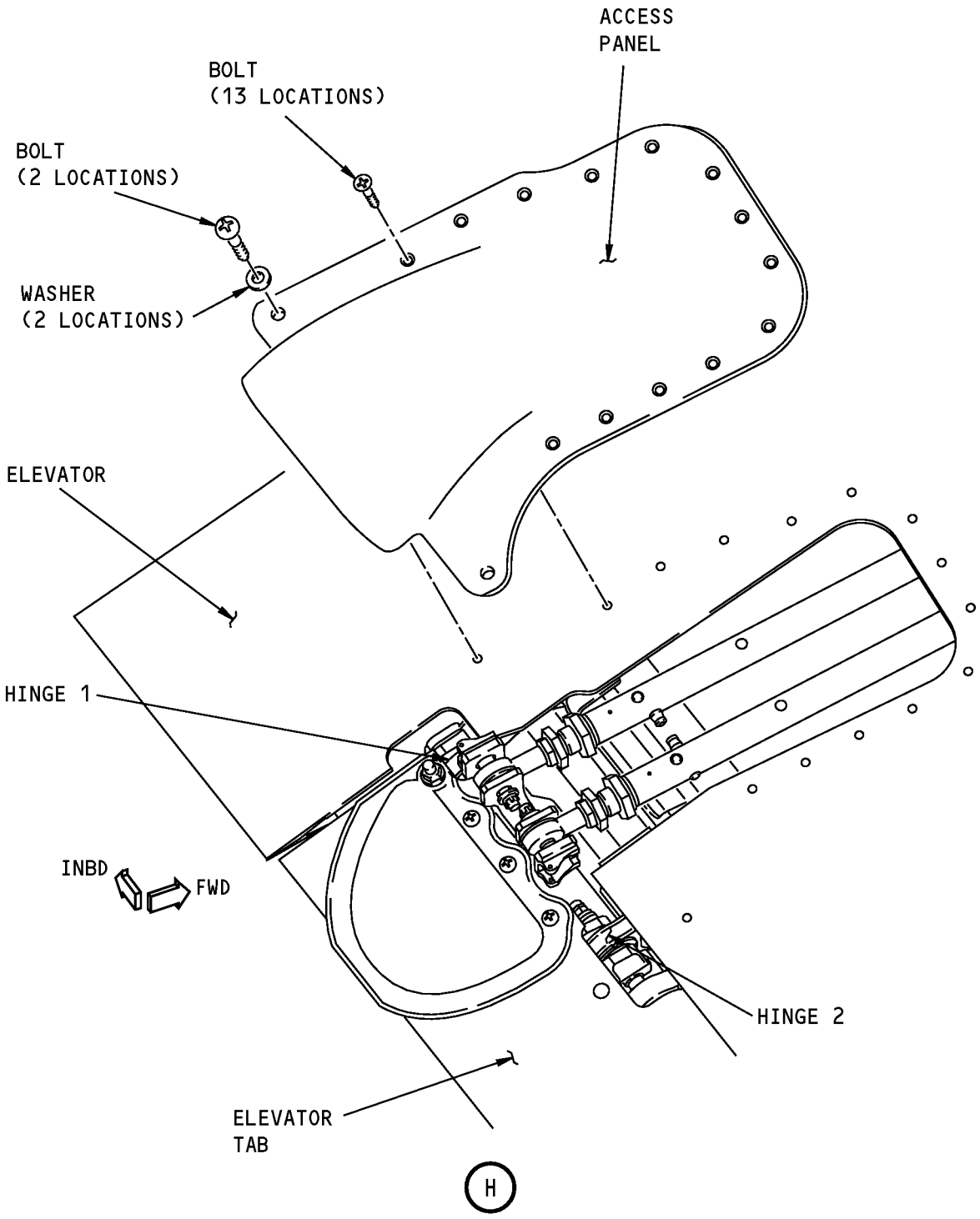
Right Elevator Hinge, Actuator, and Tab Mast Arm Fittings andWeight Support Structure - Detailed Inspection (Internal)
Figure 213 (Sheet 2 of 6)/55-05-03-990-819



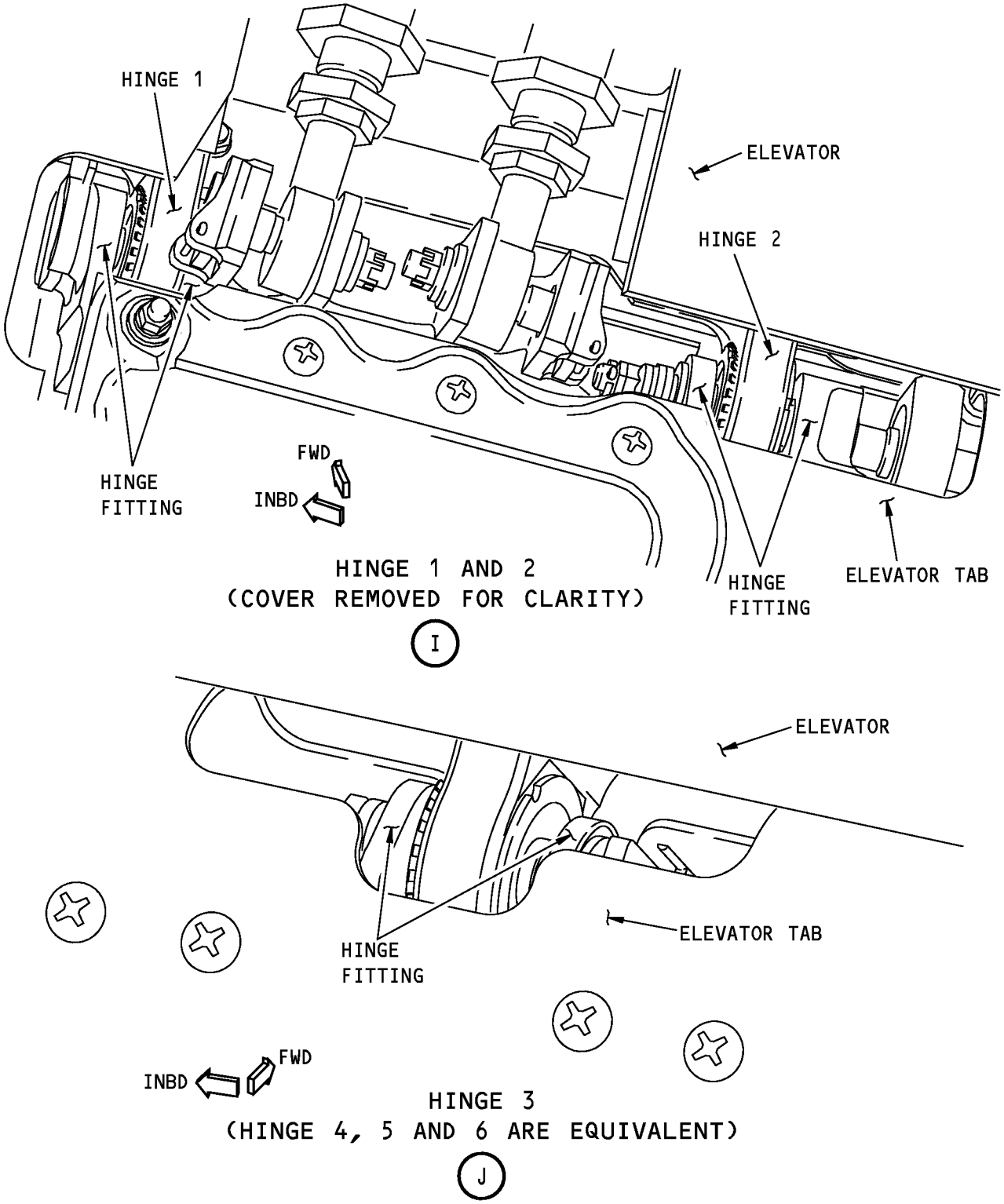
Right Elevator Hinge, Actuator, and Tab Mast Arm Fittings andWeight Support Structure - Detailed Inspection (Internal)
Figure 213 (Sheet 3 of 6)/55-05-03-990-819



Right Elevator Hinge, Actuator, and Tab Mast Arm Fittings andWeight Support Structure - Detailed Inspection (Internal)
Figure 213 (Sheet 4 of 6)/55-05-03-990-819



Right Elevator Hinge, Actuator, and Tab Mast Arm Fittings andWeight Support Structure - Detailed Inspection (Internal)
Figure 213 (Sheet 5 of 6)/55-05-03-990-819



Right Elevator Hinge, Actuator, and Tab Mast Arm Fittings andWeight Support Structure - Detailed Inspection (Internal)
Figure 213 (Sheet 6 of 6)/55-05-03-990-819

TASK 55-05-03-211-801

14. INTERNAL - DETAILED: LEFT ELEVATOR TAB SUPT FTGS ON FRONT SPAR AND TAB SPAR AT LEADING EDGE CUTOUTS

A. General

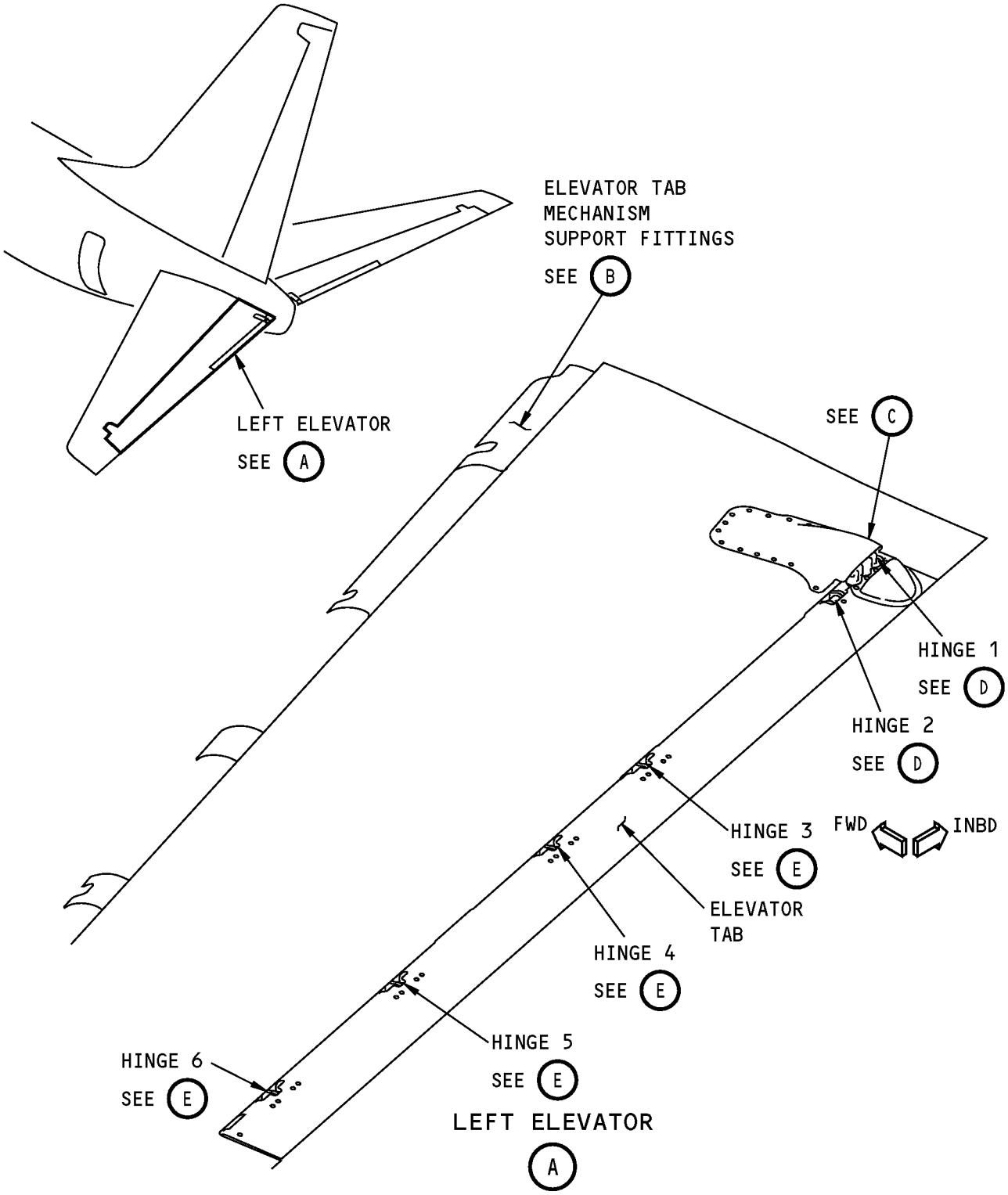
(1) This procedure is a scheduled maintenance task.

B. Inspection

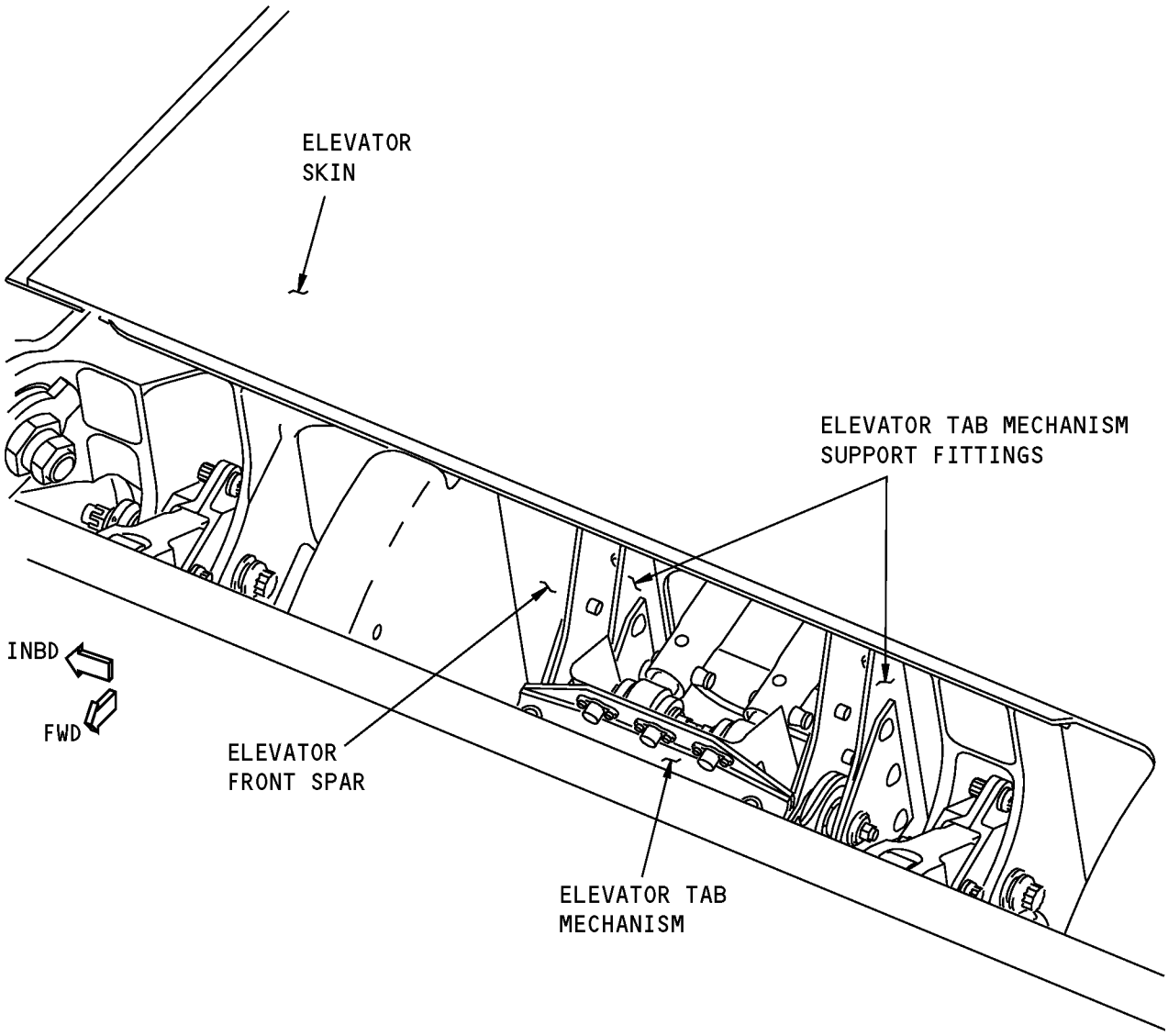
SUBTASK 55-05-03-211-001

(1) Do the inspection.

END OF TASK



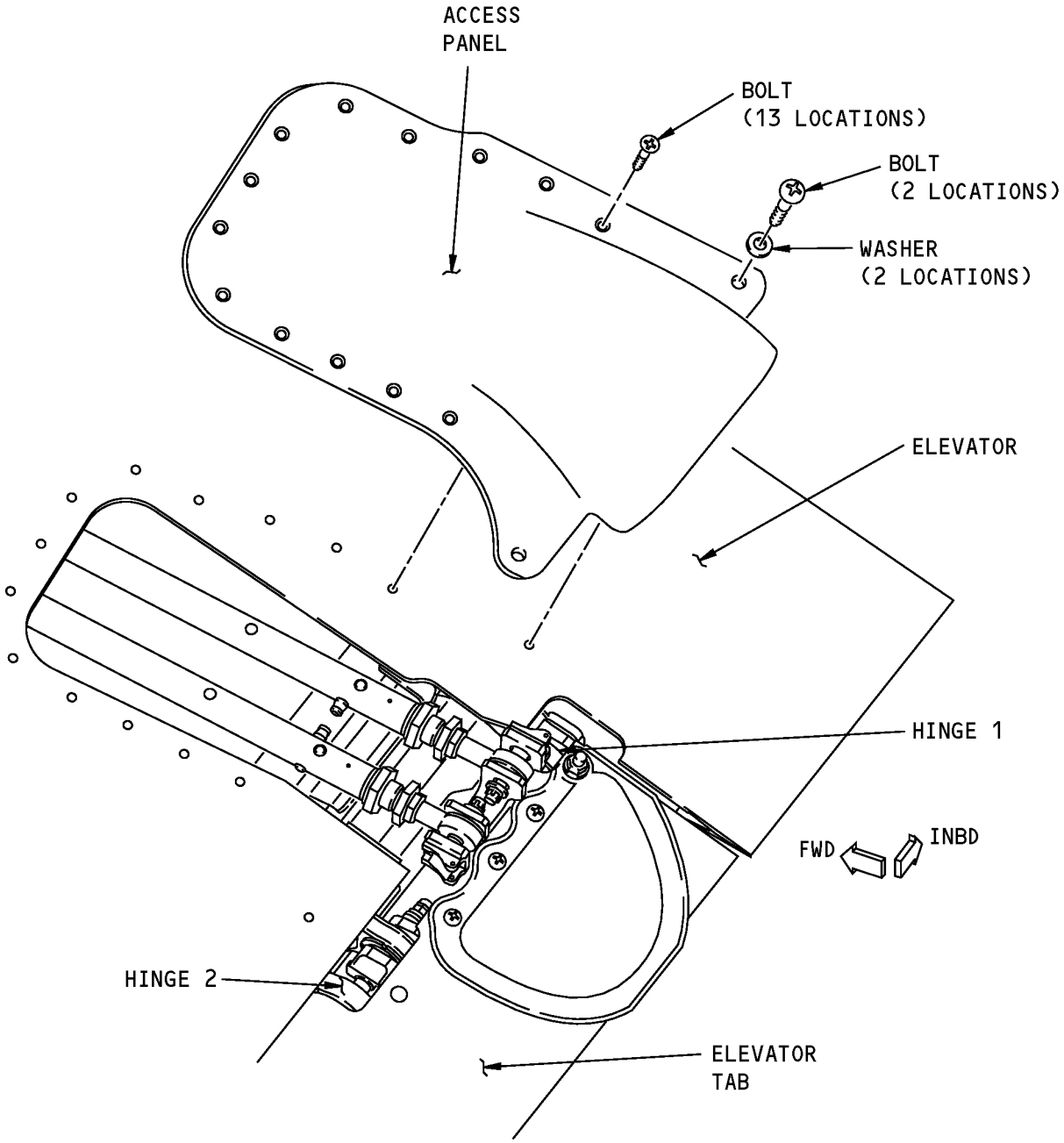
INTERNAL-DETAILED: LEFT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 214 (Sheet 1 of 4)/55-05-03-990-814



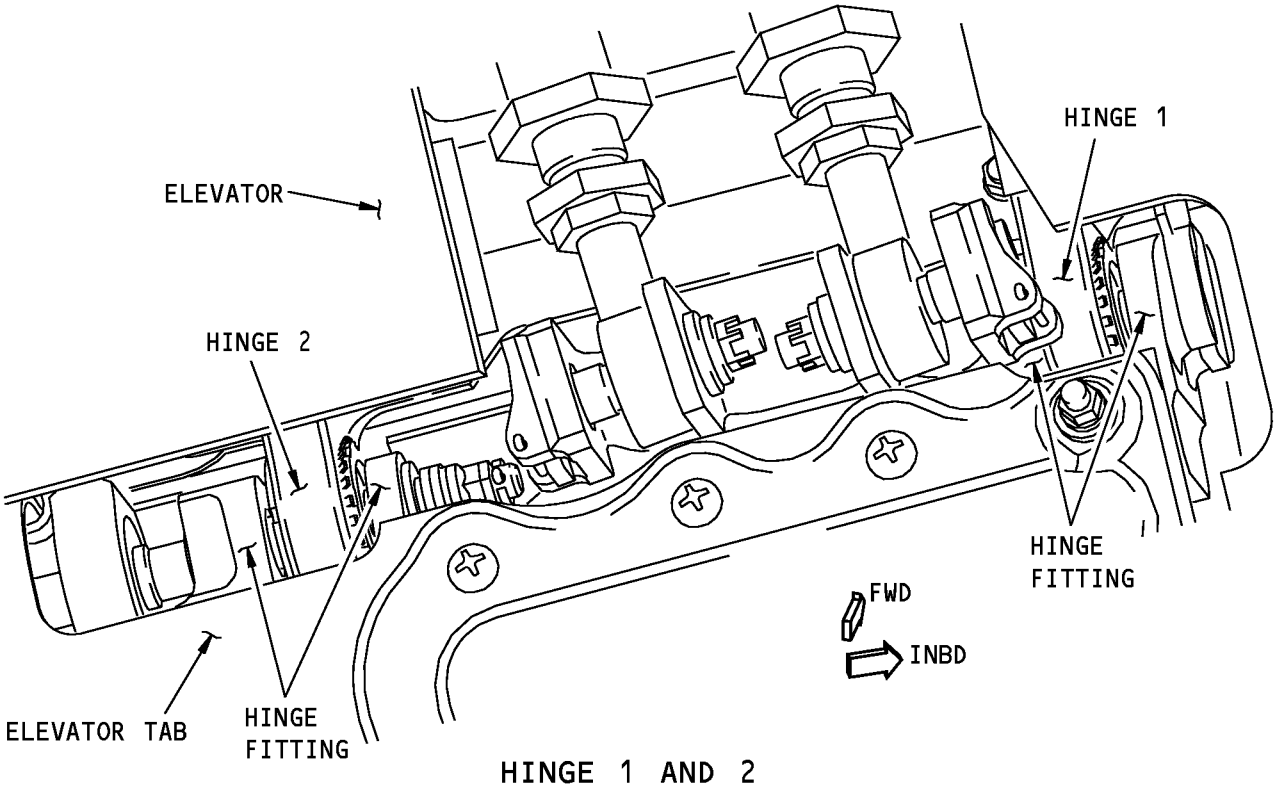
ELEVATOR TAB MECHANISM SUPPORT FITTINGS

B

INTERNAL-DETAILED: LEFT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 214 (Sheet 2 of 4)/55-05-03-990-814

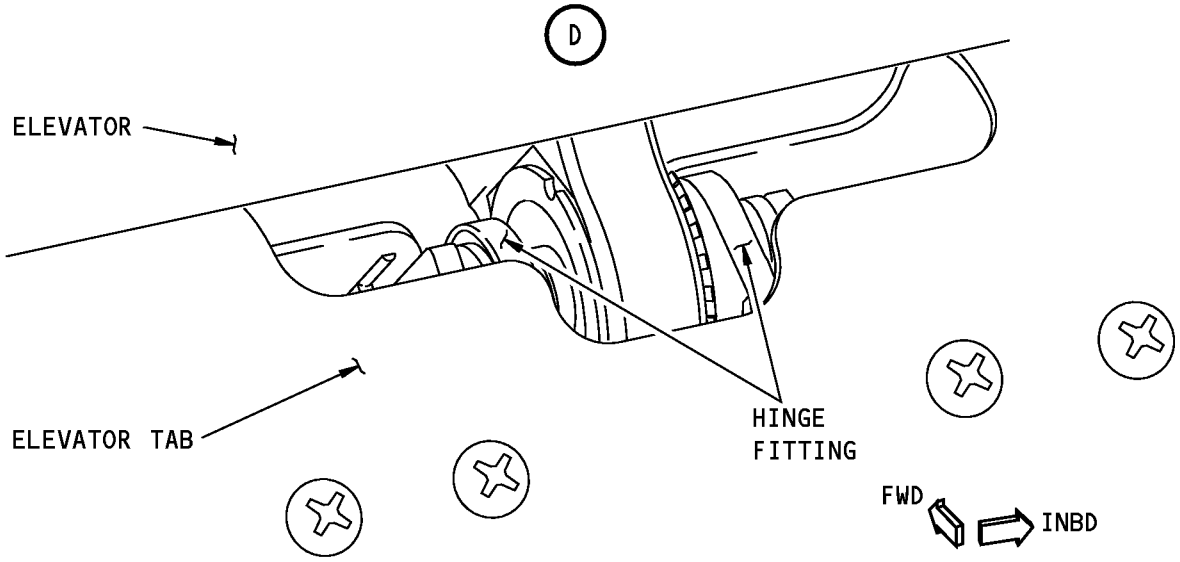


INTERNAL-DETAILED: LEFT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 214 (Sheet 3 of 4)/55-05-03-990-814



HINGE 1 AND 2
(COVER REMOVED FOR CLARITY)

D



HINGE 3
(HINGE 4, 5 AND 6 ARE EQUIVALENT)

E

INTERNAL-DETAILED: LEFT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 214 (Sheet 4 of 4)/55-05-03-990-814

TASK 55-05-03-211-802

15. INTERNAL - DETAILED: RIGHT ELEVATOR TAB SUPT FTGS ON FRONT SPAR AND TAB SPAR AT LEADING EDGE CUTOUTS

A. General

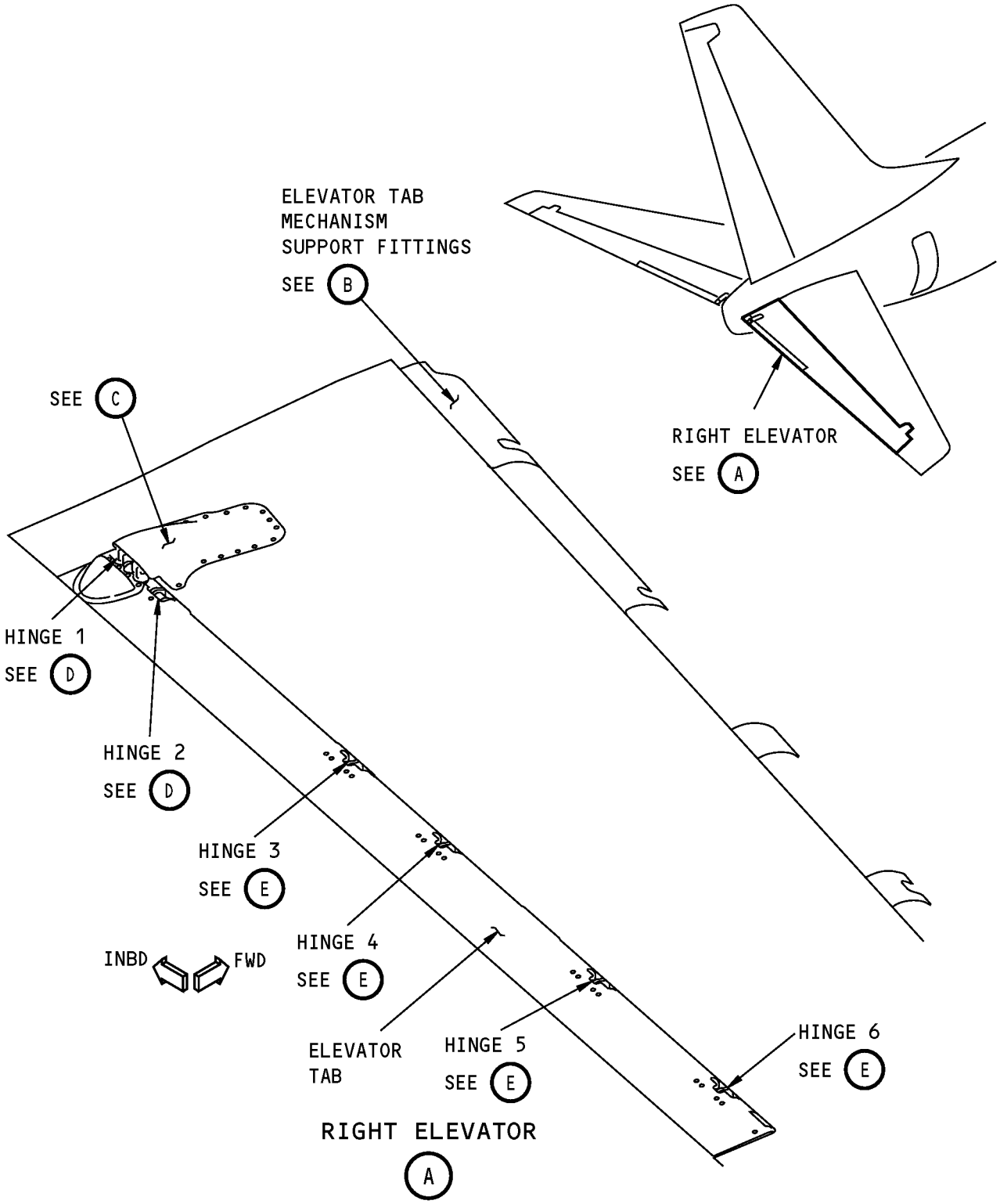
(1) This procedure is a scheduled maintenance task.

B. Inspection

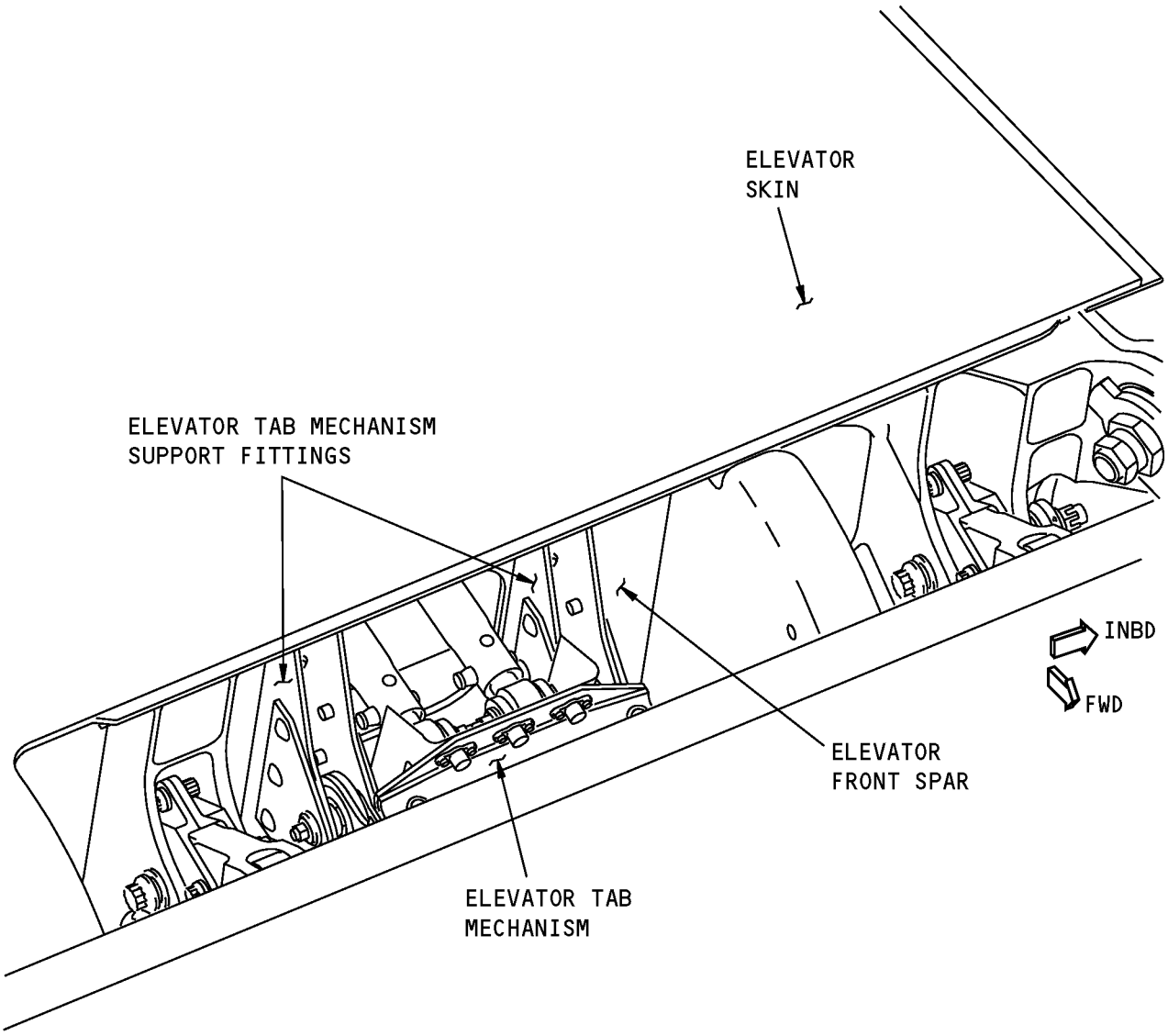
SUBTASK 55-05-03-211-002

(1) Do the inspection.

END OF TASK



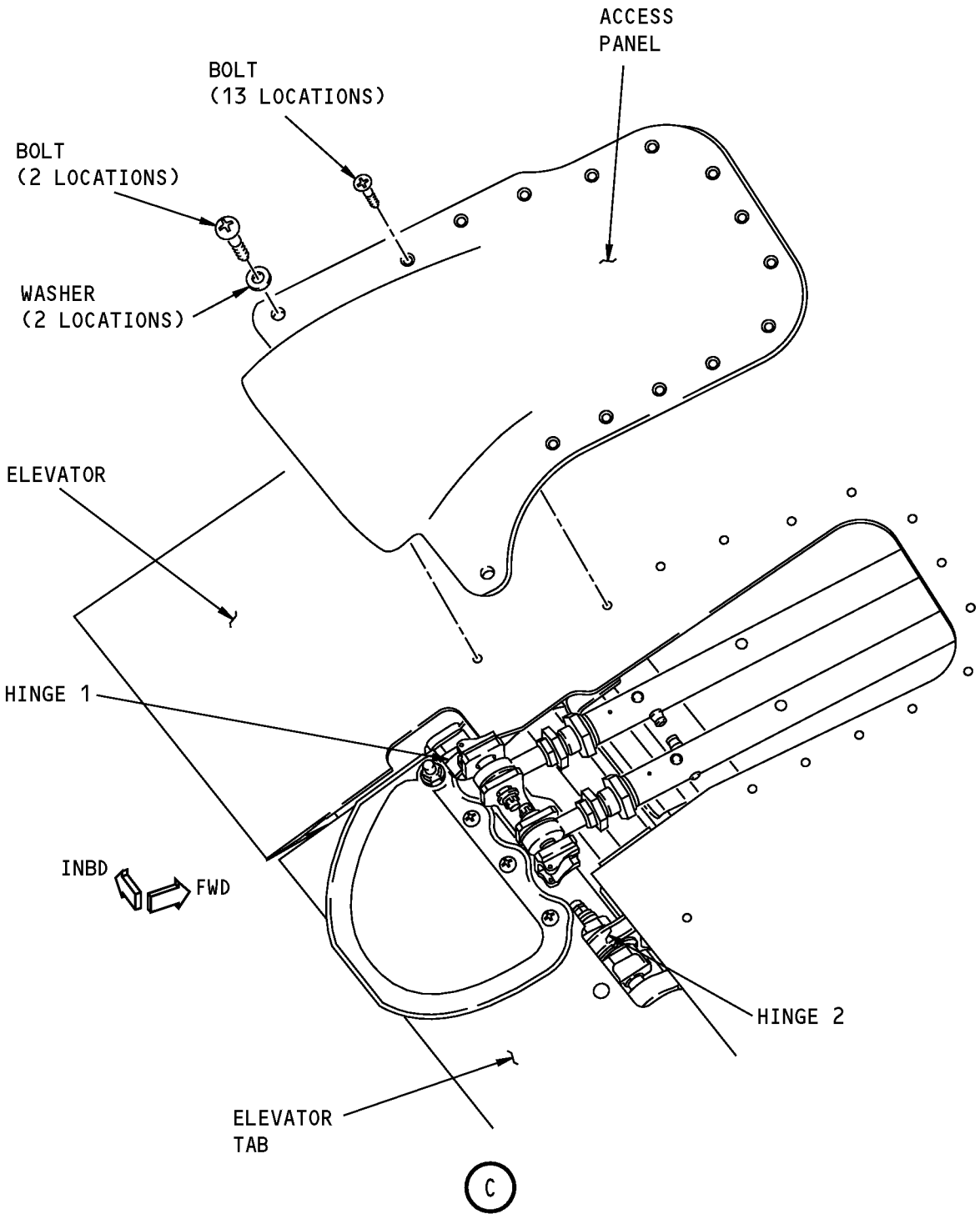
INTERNAL-DETAILED: RIGHT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 215 (Sheet 1 of 4)/55-05-03-990-815



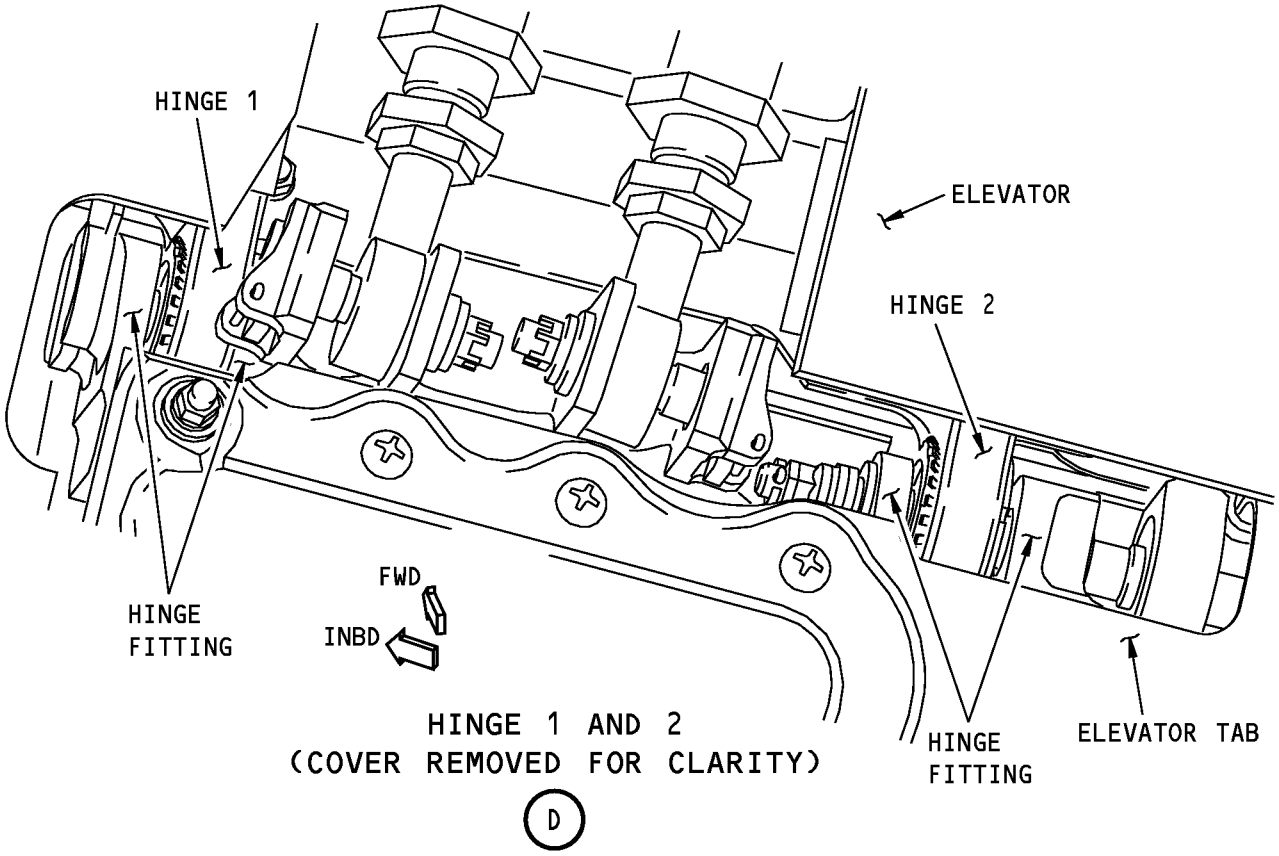
ELEVATOR TAB MECHANISM SUPPORT FITTINGS

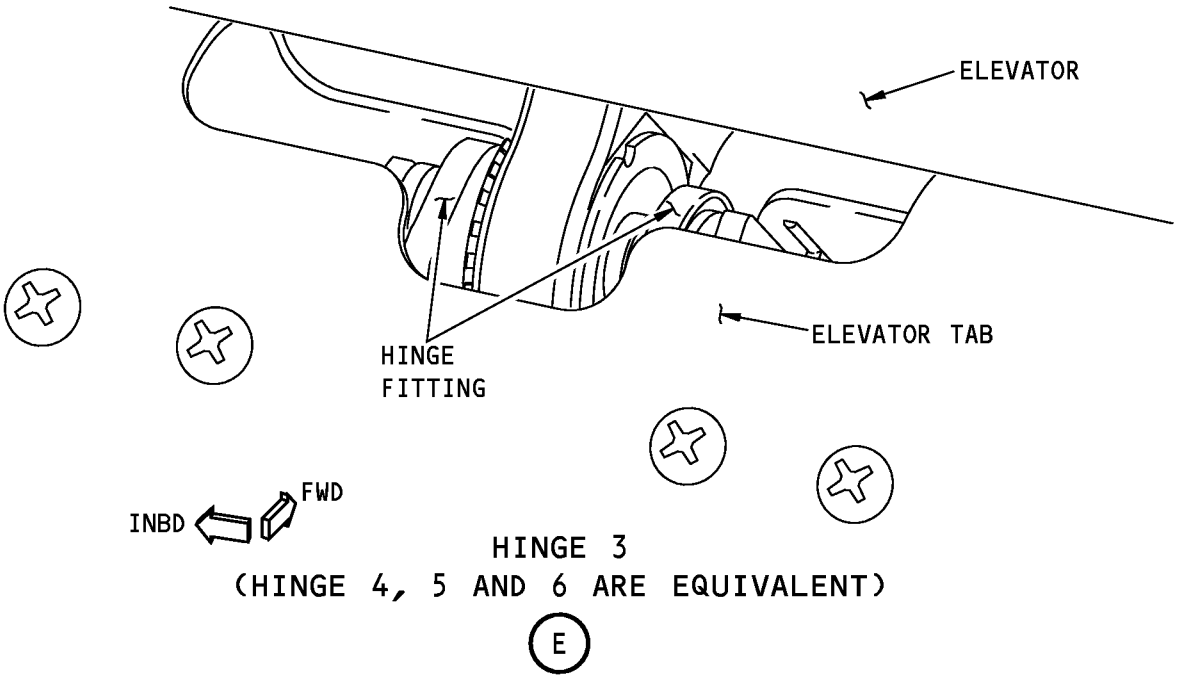
B

INTERNAL-DETAILED: RIGHT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 215 (Sheet 2 of 4)/55-05-03-990-815



INTERNAL-DETAILED: RIGHT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 215 (Sheet 3 of 4)/55-05-03-990-815





INTERNAL-DETAILED: RIGHT ELEVATOR TAB SUPT FTGS ON FRONT SPAR & TAB SPAR AT LEADING EDGE CUTOUTS
Figure 215 (Sheet 4 of 4)/55-05-03-990-815

TASK 55-05-03-210-814

16. INTERNAL - GENERAL VISUAL: INTERNAL - LEFT HORIZONTAL STABILIZER TRAILING EDGE

A. General

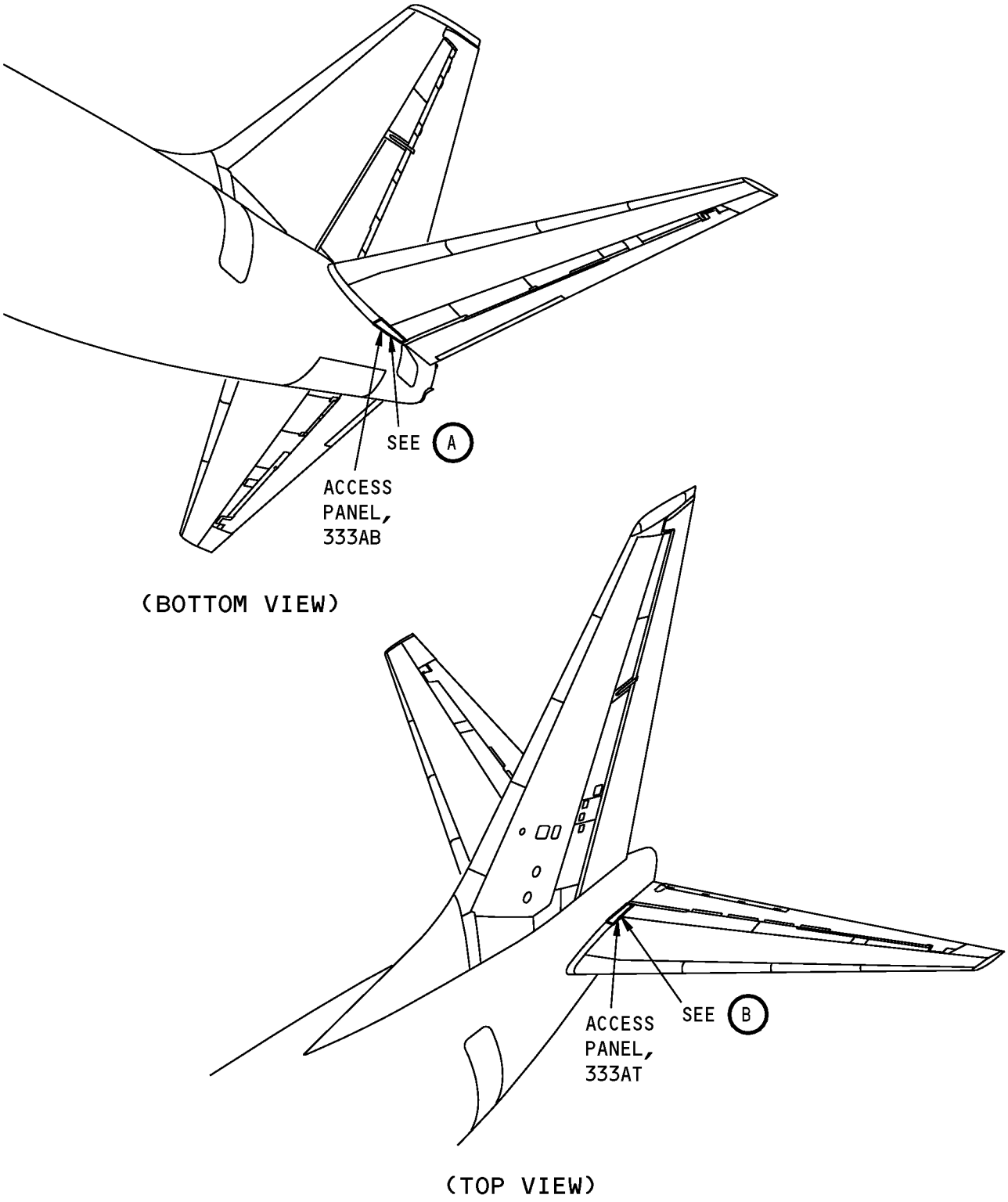
(1) This procedure is a scheduled maintenance task.

B. Inspection

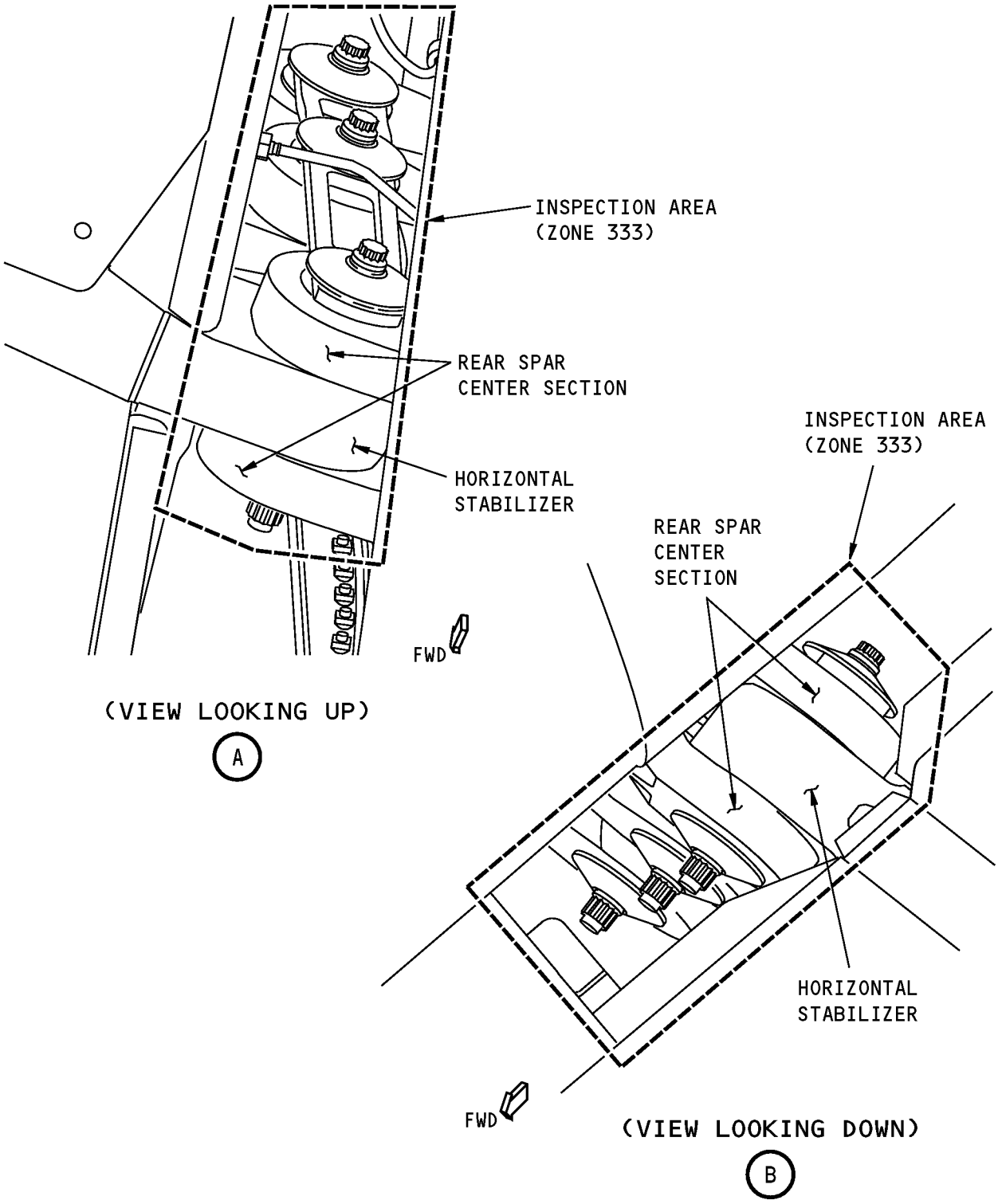
SUBTASK 55-05-03-210-014

(1) Do the inspection.

———————— END OF TASK ————————



Left Horizontal Stabilizer Trailing Edge General Visual (Internal)
Figure 216 (Sheet 1 of 2)/55-05-03-990-805



Left Horizontal Stabilizer Trailing Edge General Visual (Internal)
Figure 216 (Sheet 2 of 2)/55-05-03-990-805

TASK 55-05-03-210-815

17. INTERNAL - GENERAL VISUAL: INTERNAL - RIGHT HORIZONTAL STABILIZER TRAILING EDGE

A. General

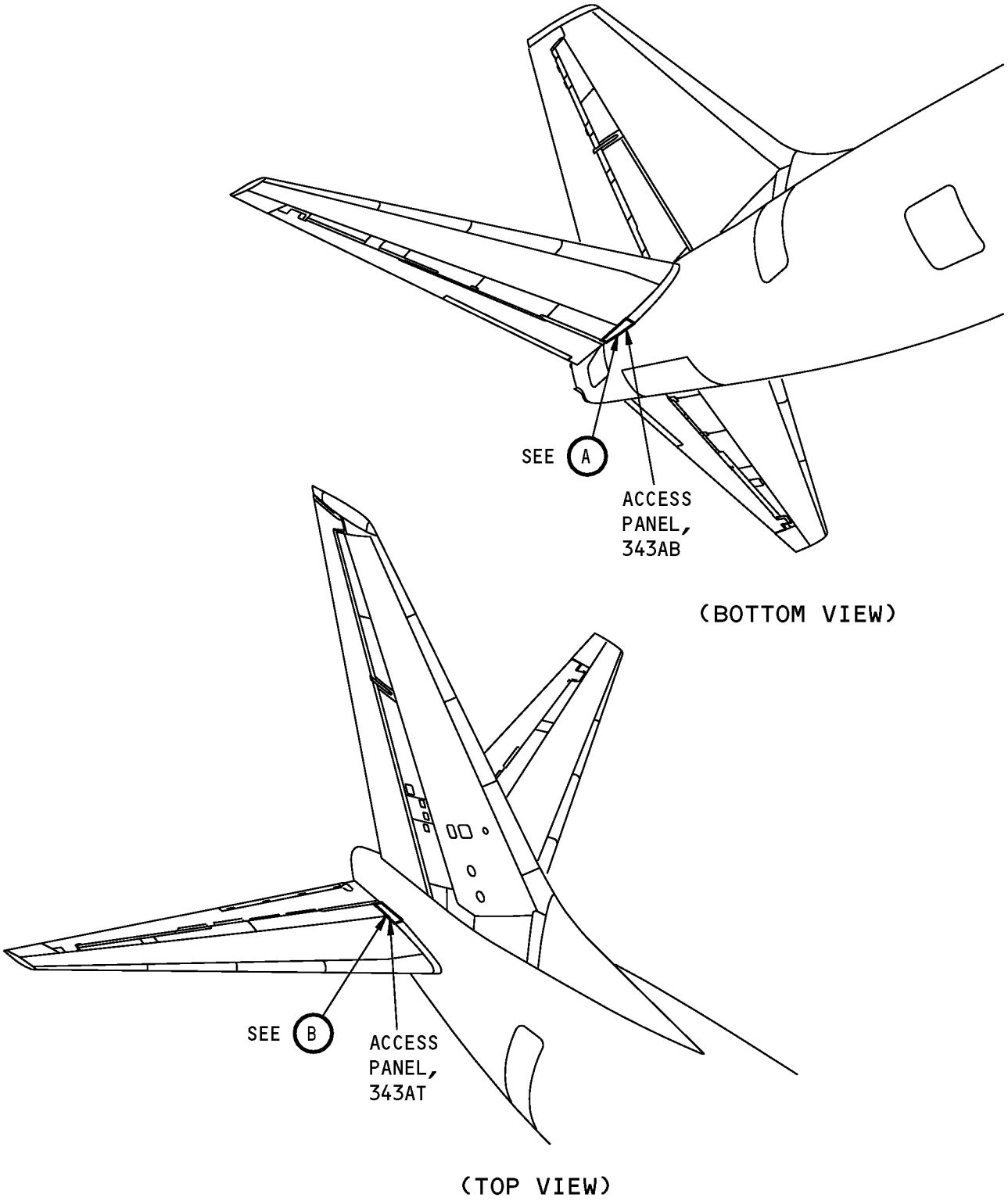
(1) This procedure is a scheduled maintenance task.

B. Inspection

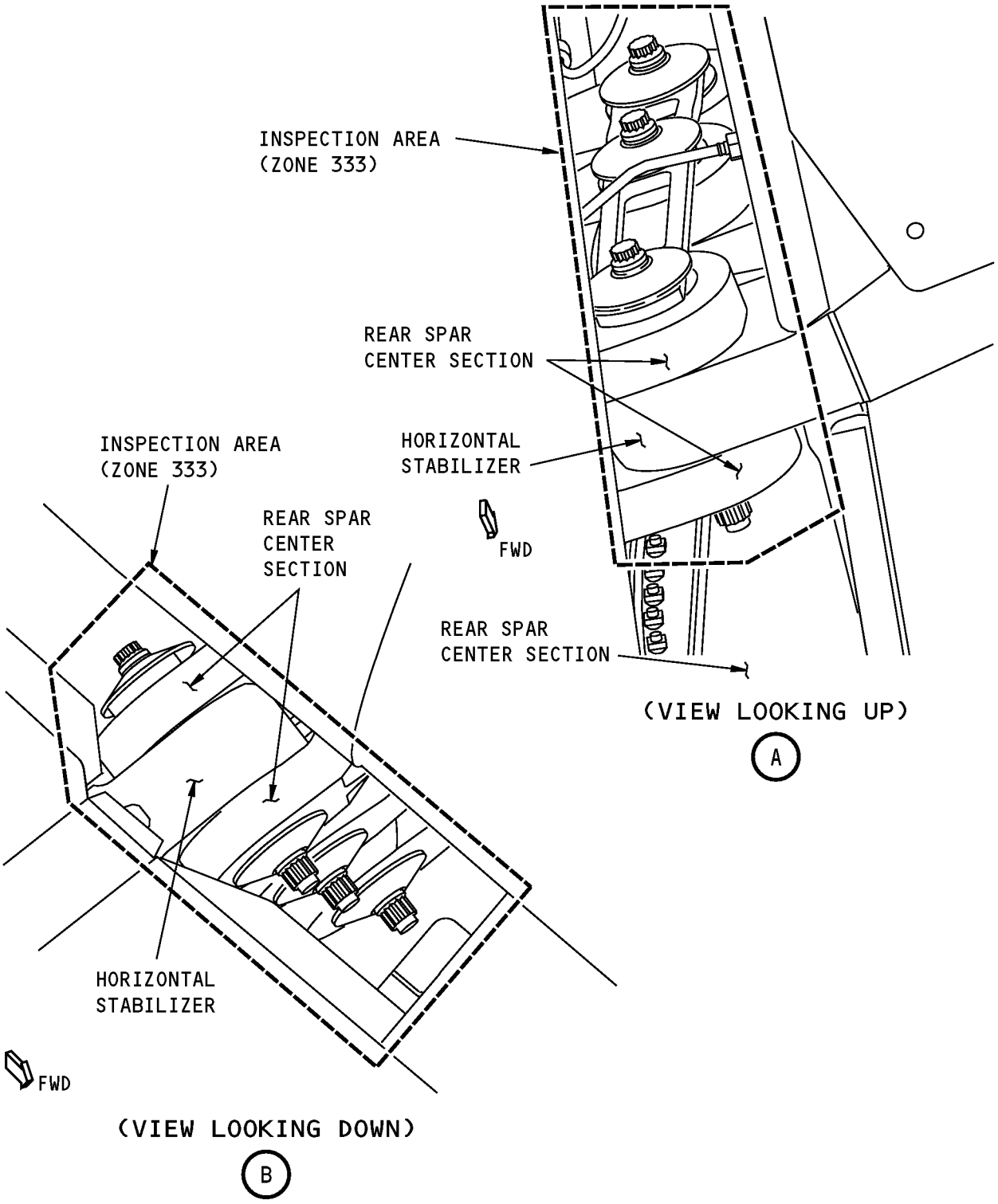
SUBTASK 55-05-03-210-015

(1) Do the inspection.

———————— END OF TASK ————————



Right Horizontal Stabilizer Trailing Edge General Visual (Internal)
Figure 217 (Sheet 1 of 2)/55-05-03-990-806



Right Horizontal Stabilizer Trailing Edge General Visual (Internal)
Figure 217 (Sheet 2 of 2)/55-05-03-990-806

TASK 55-05-03-211-803

18. INTERNAL - DETAILED: INTERNAL - LEFT ELEVATOR TAB HINGE FITTING

(Figure 218)

A. General

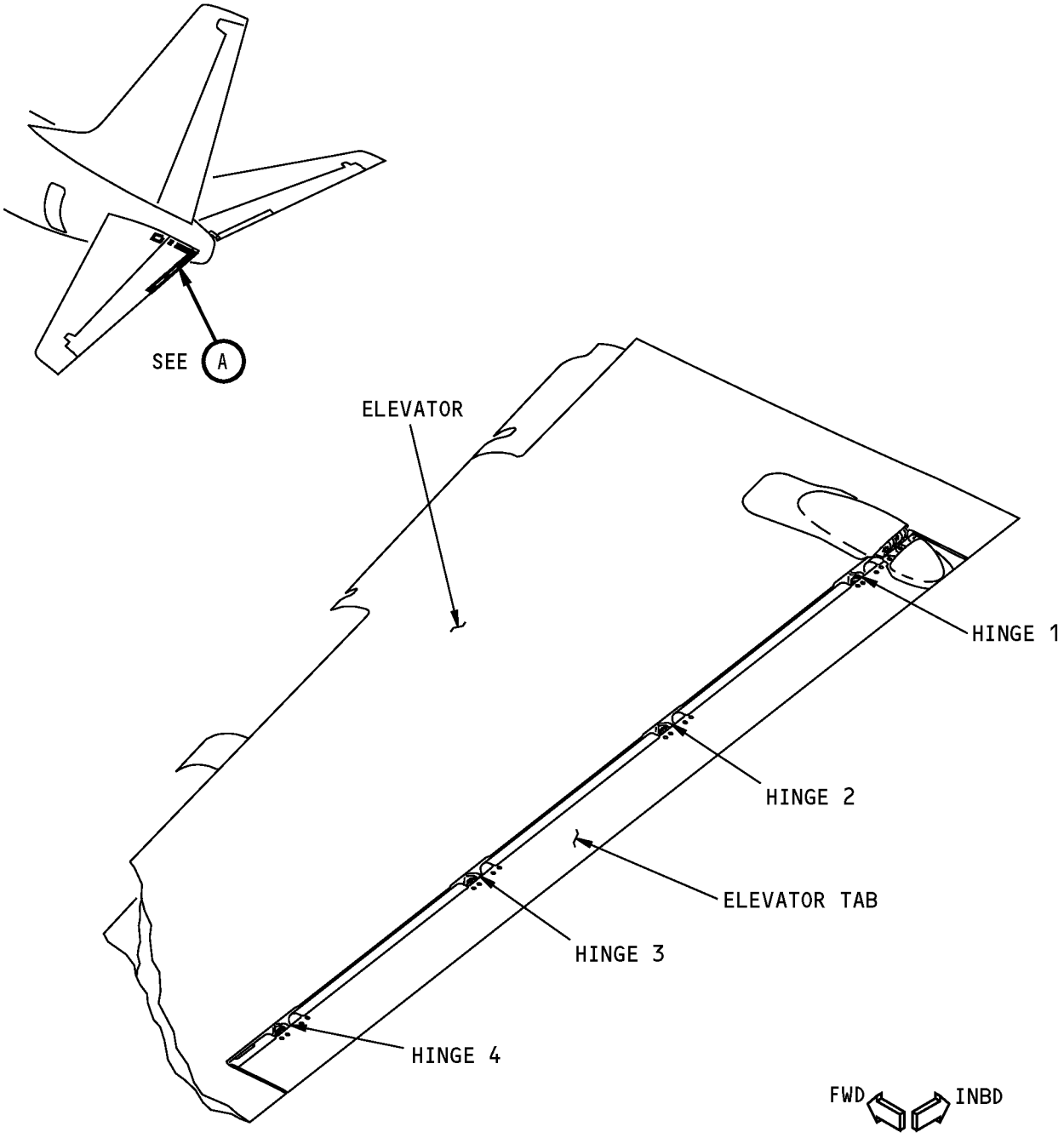
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-211-003

(1) Do the inspection.

———————— END OF TASK ————————



Left Elevator Tab
Figure 218/55-05-03-990-801

TASK 55-05-03-211-806

19. INTERNAL - DETAILED: INTERNAL - RIGHT ELEVATOR TAB HINGE FITTING

(Figure 219)

A. General

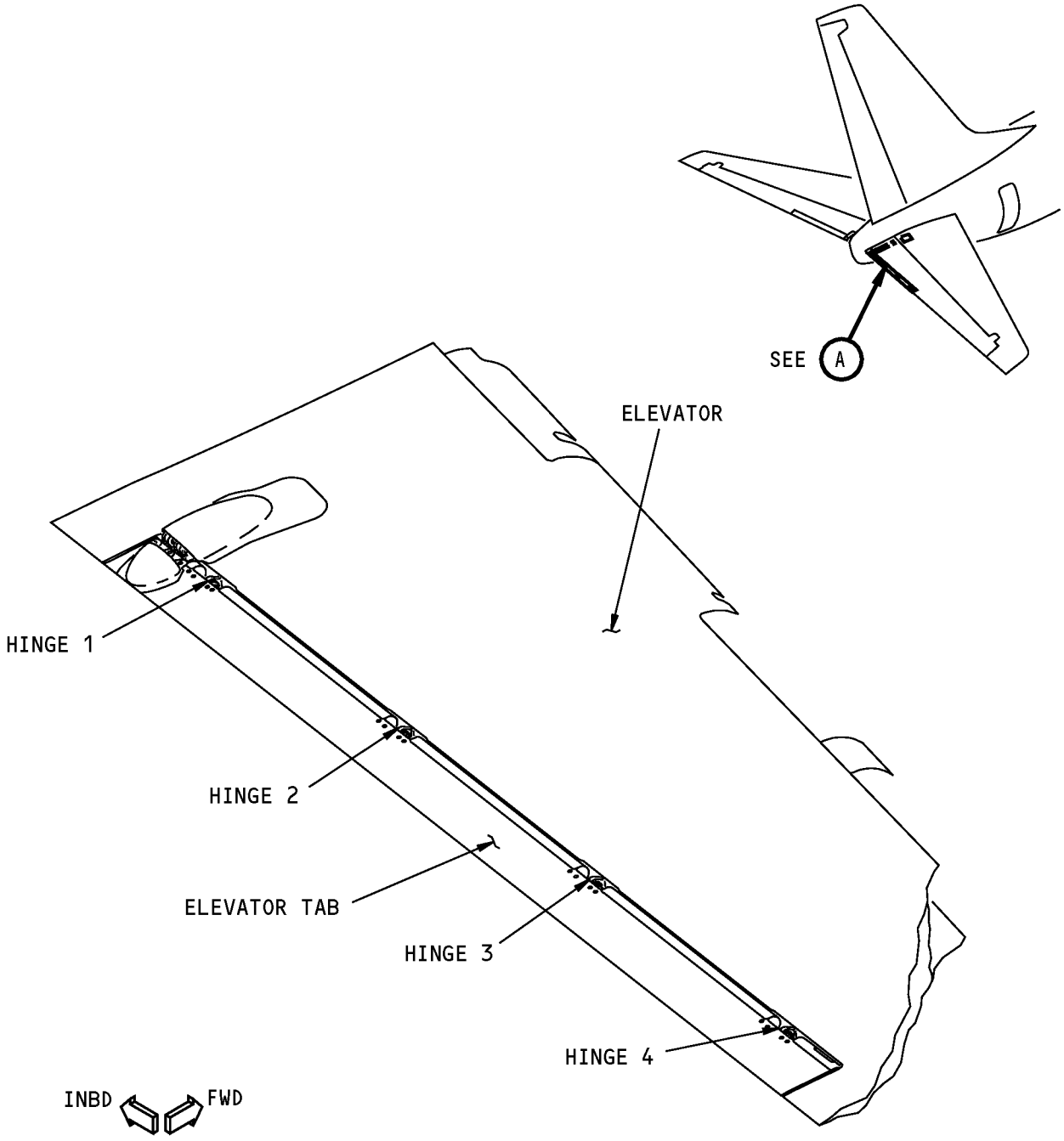
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-211-006

(1) Do the inspection.

——————— END OF TASK ———————



RIGHT ELEVATOR TAB

A

Right Elevator Tab
Figure 219/55-05-03-990-804

TASK 55-05-03-210-816

20. INTERNAL - GENERAL VISUAL: INTERNAL - RUDDER, ELEVATOR AND ELEVATOR TAB ATTACH FITTINGS

A. General

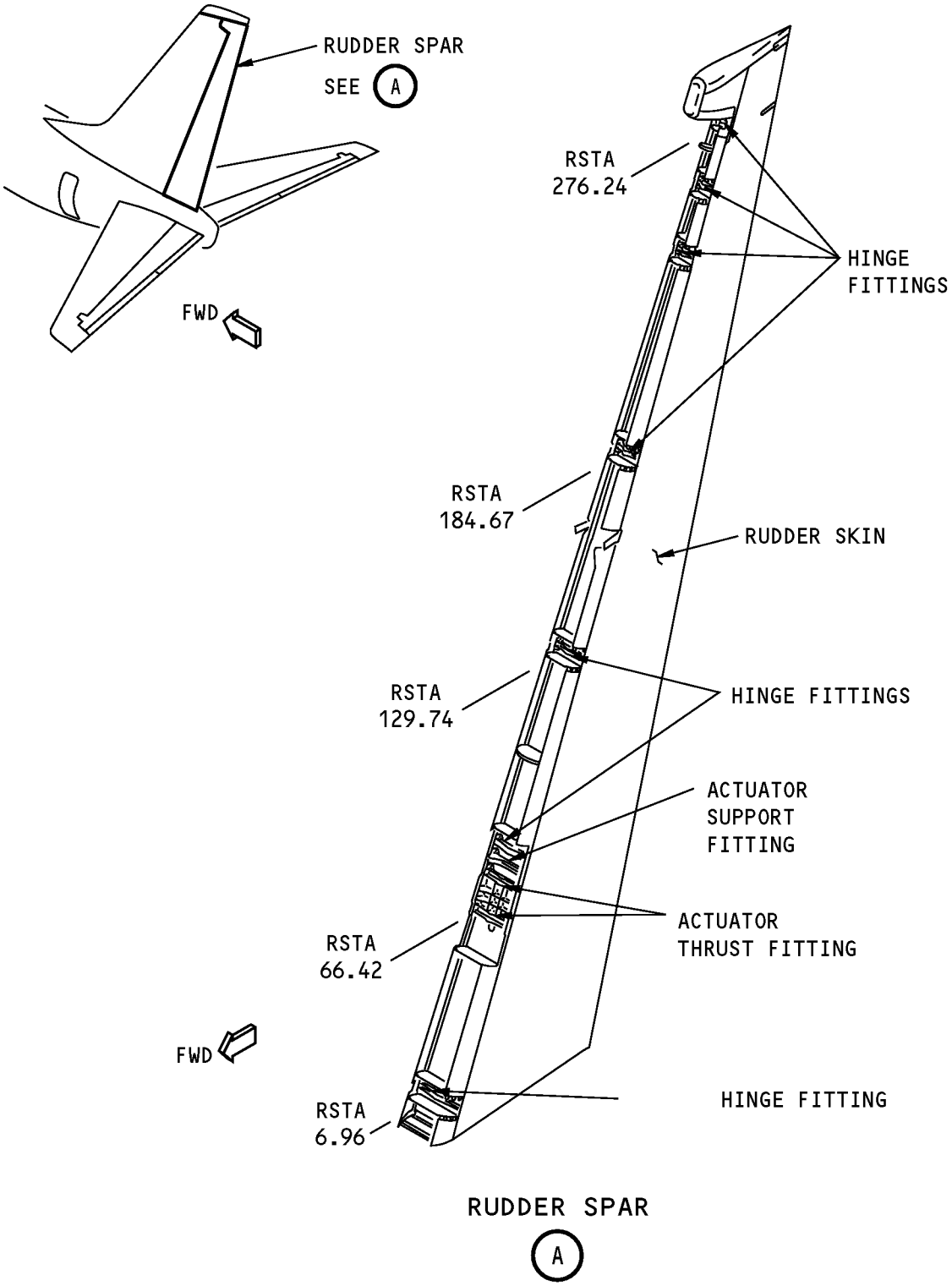
(1) This procedure is a scheduled maintenance task.

B. Inspection

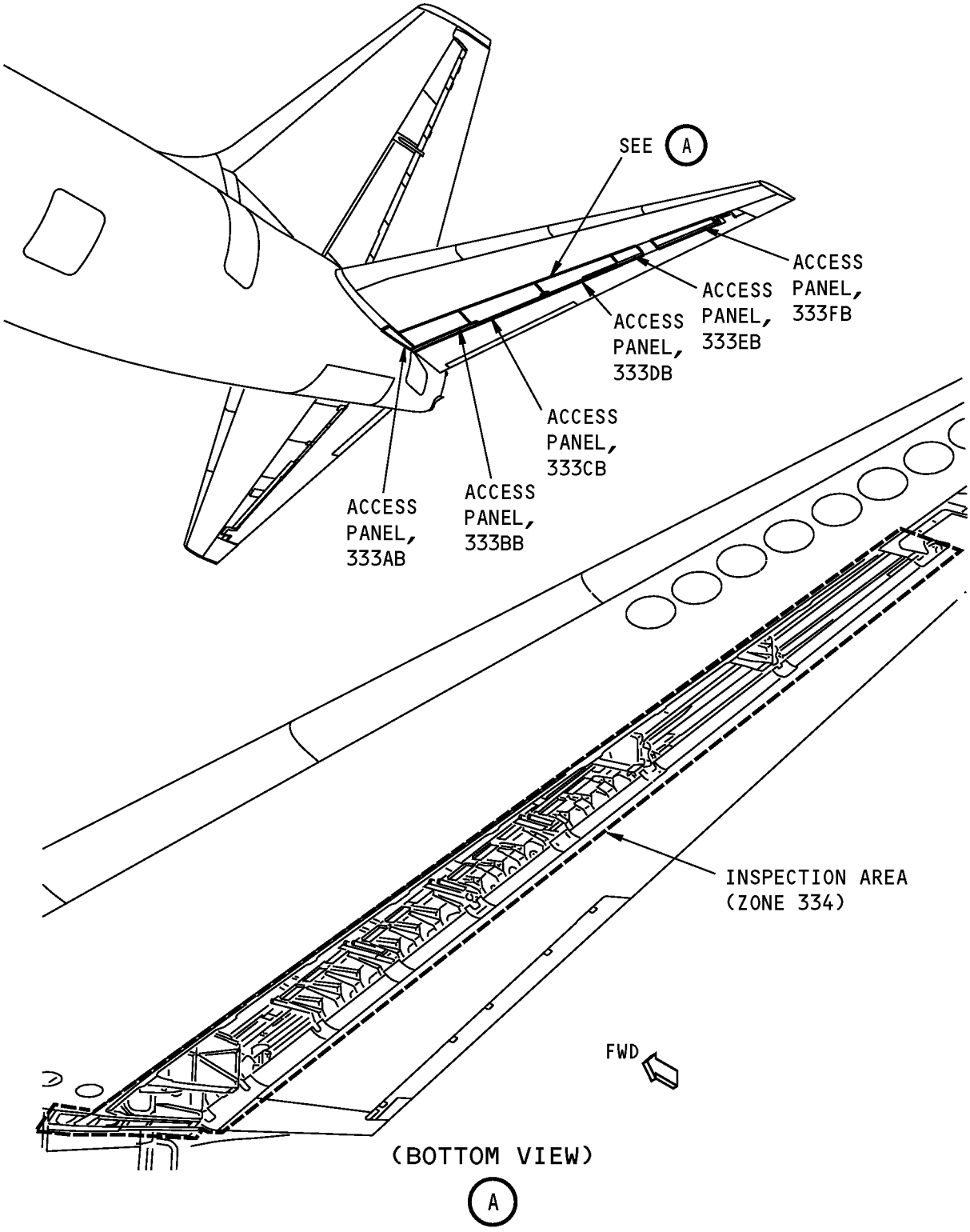
SUBTASK 55-05-03-210-016

(1) Do the inspection.

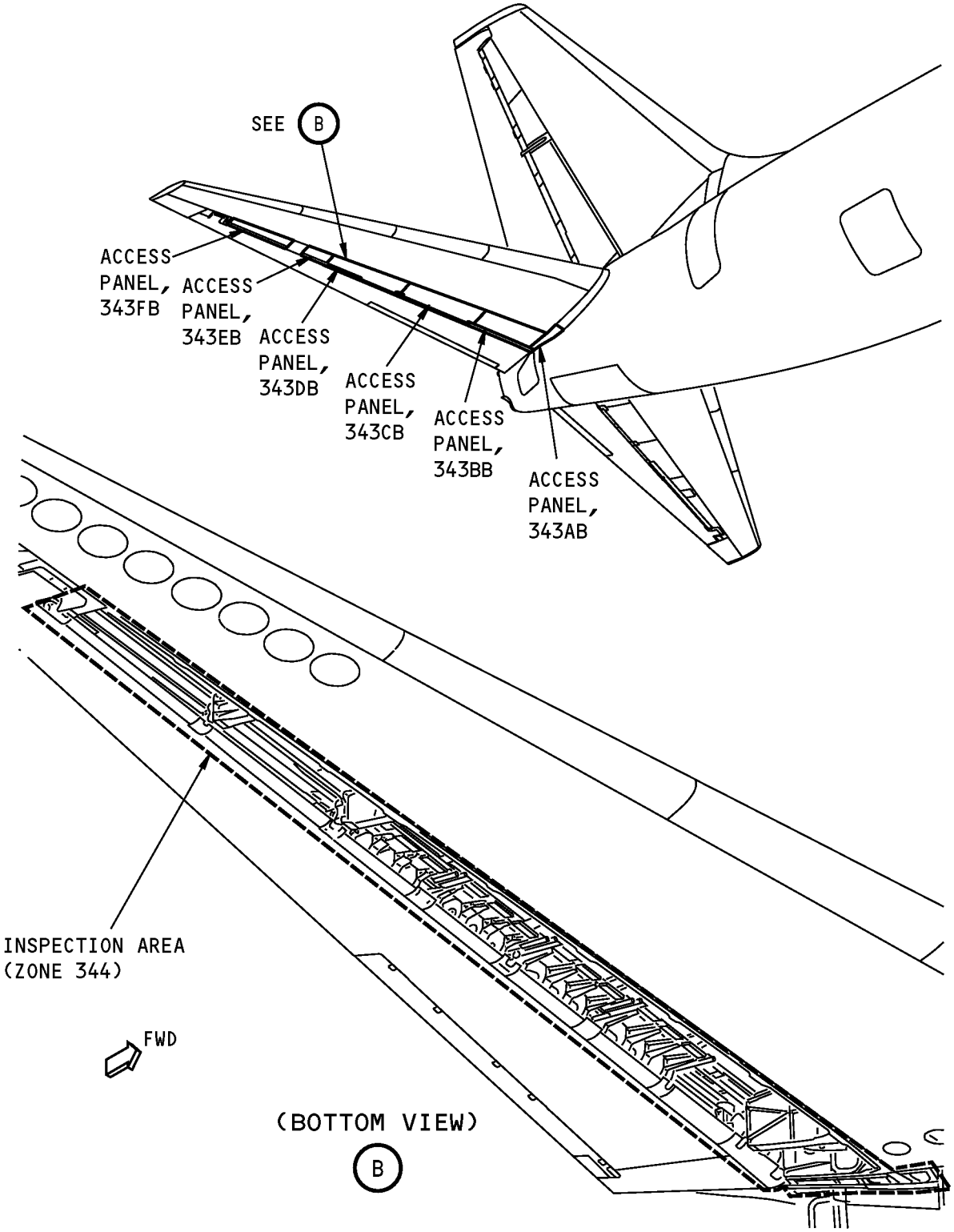
———————— END OF TASK ————————



INTERNAL-GENERAL VISUAL: INTERNAL-RUDDER, ELEVATOR & ELEVATOR TAB ATTACH FITTINGS
Figure 220/55-05-03-990-816



INTERNAL-GENERAL VISUAL: INTERNAL-RUDDER, ELEVATOR & ELEVATOR TAB ATTACH FITTINGS
Figure 221 (Sheet 1 of 2)/55-05-03-990-817



INTERNAL-GENERAL VISUAL: INTERNAL-RUDDER, ELEVATOR & ELEVATOR TAB ATTACH FITTINGS
Figure 221 (Sheet 2 of 2)/55-05-03-990-817

TASK 55-05-03-211-807

21. INTERNAL - DETAILED: LEFT ELEVATOR HINGE, ACTUATOR, AND TAB MAST ARM FTGS AND BALANCE WT SUPPT STRUC

A. General

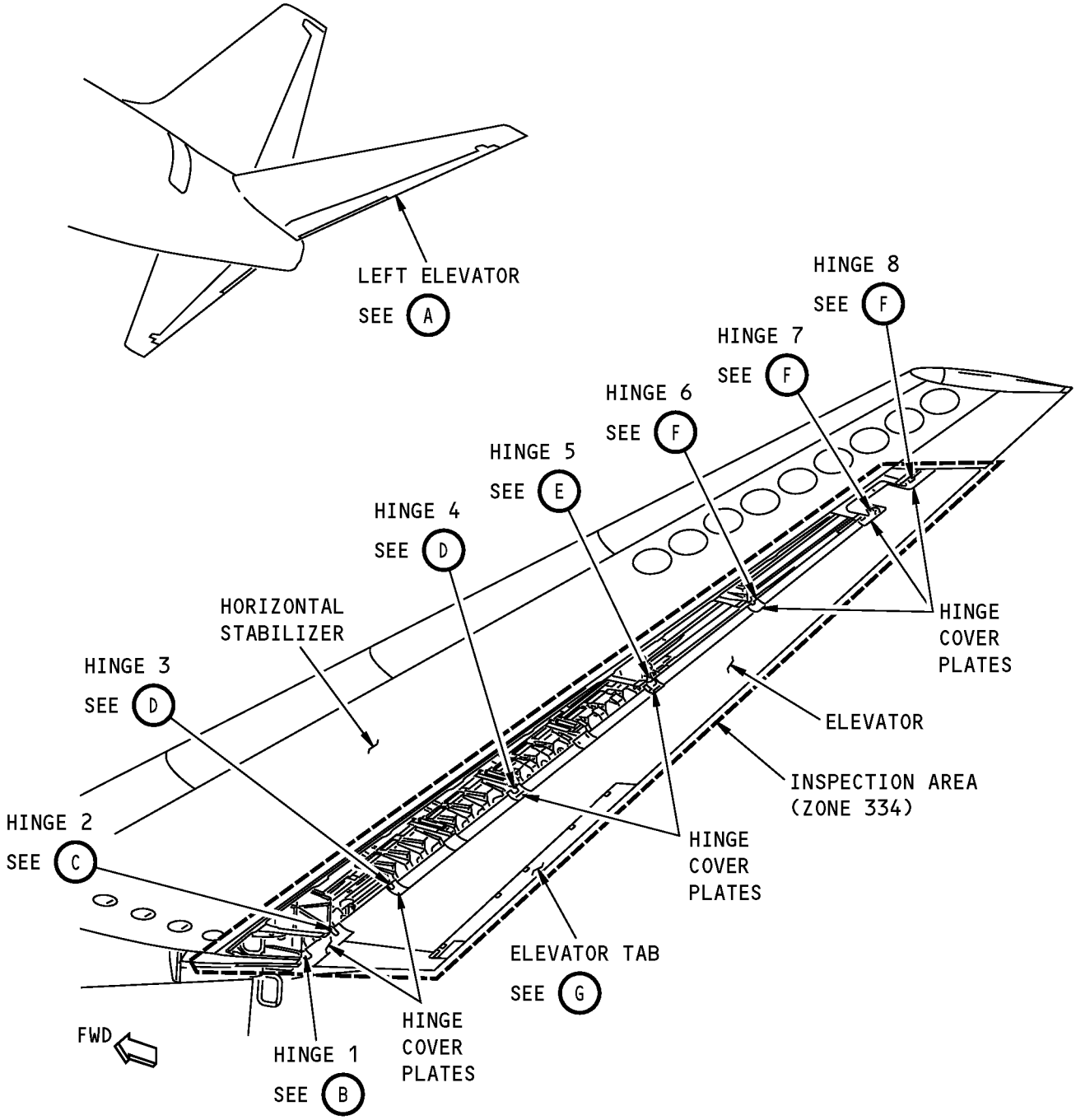
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-211-007

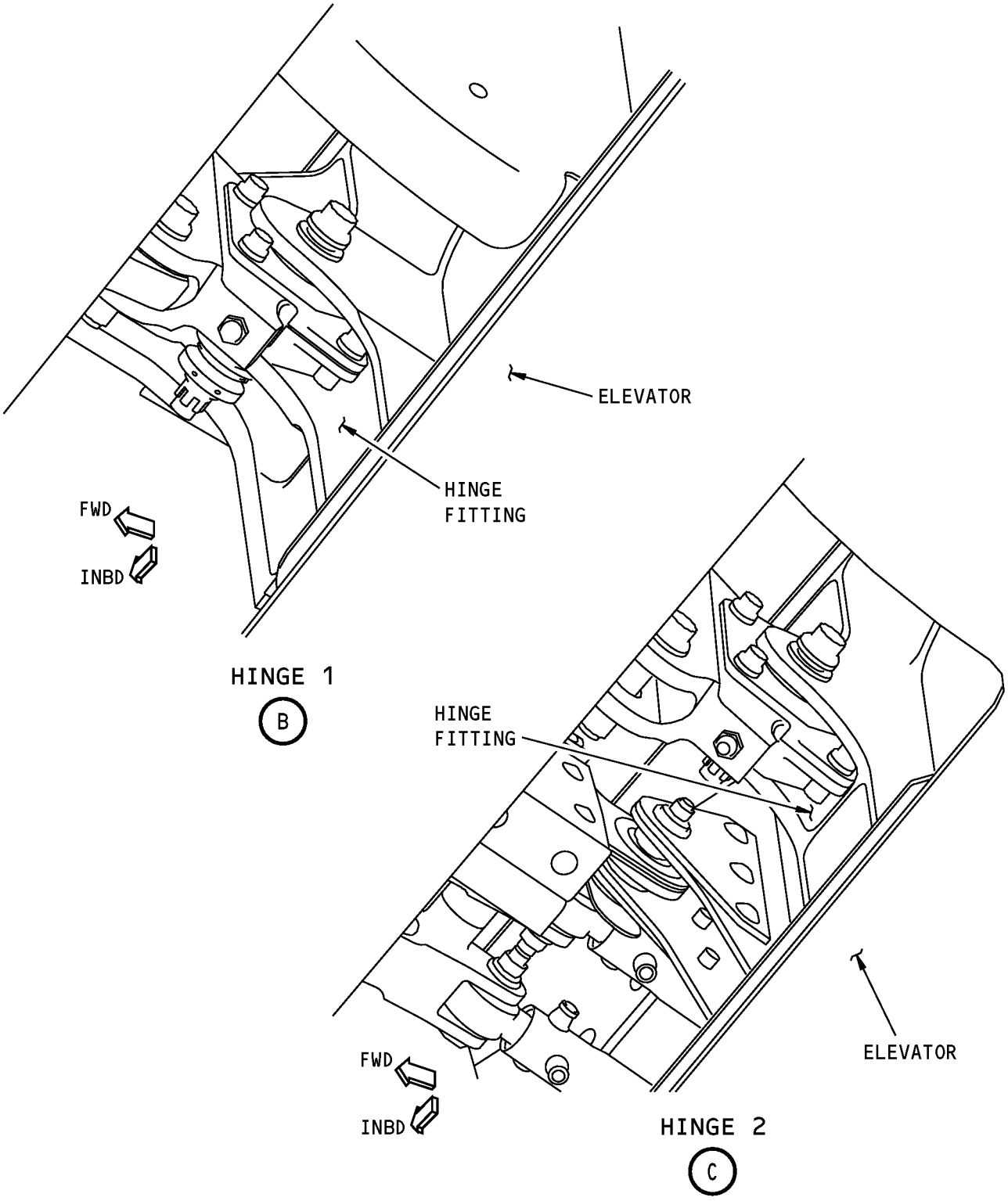
(1) Do the inspection.

END OF TASK

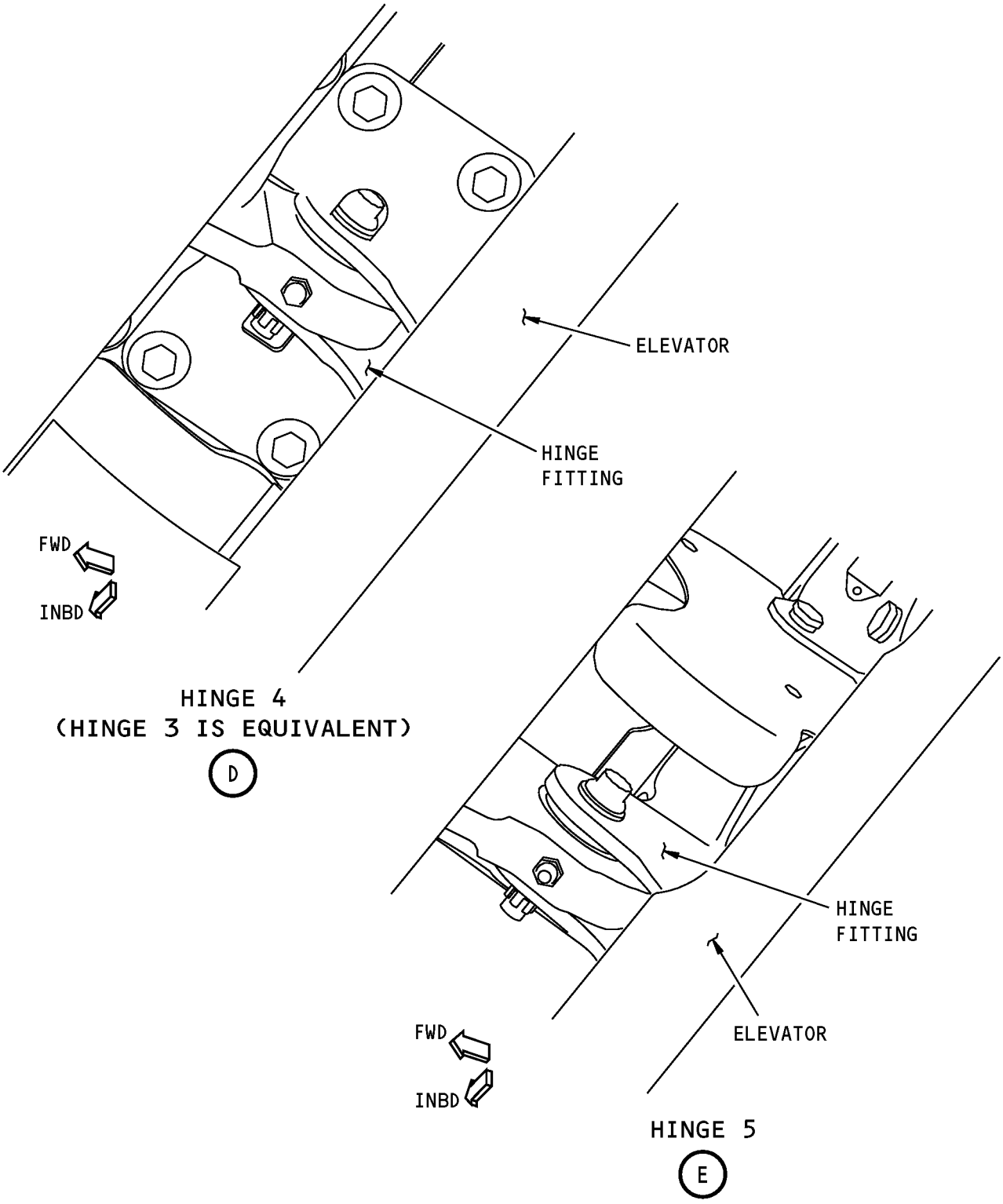


LEFT ELEVATOR
(LOWER TRAILING EDGE PANELS REMOVED)
A

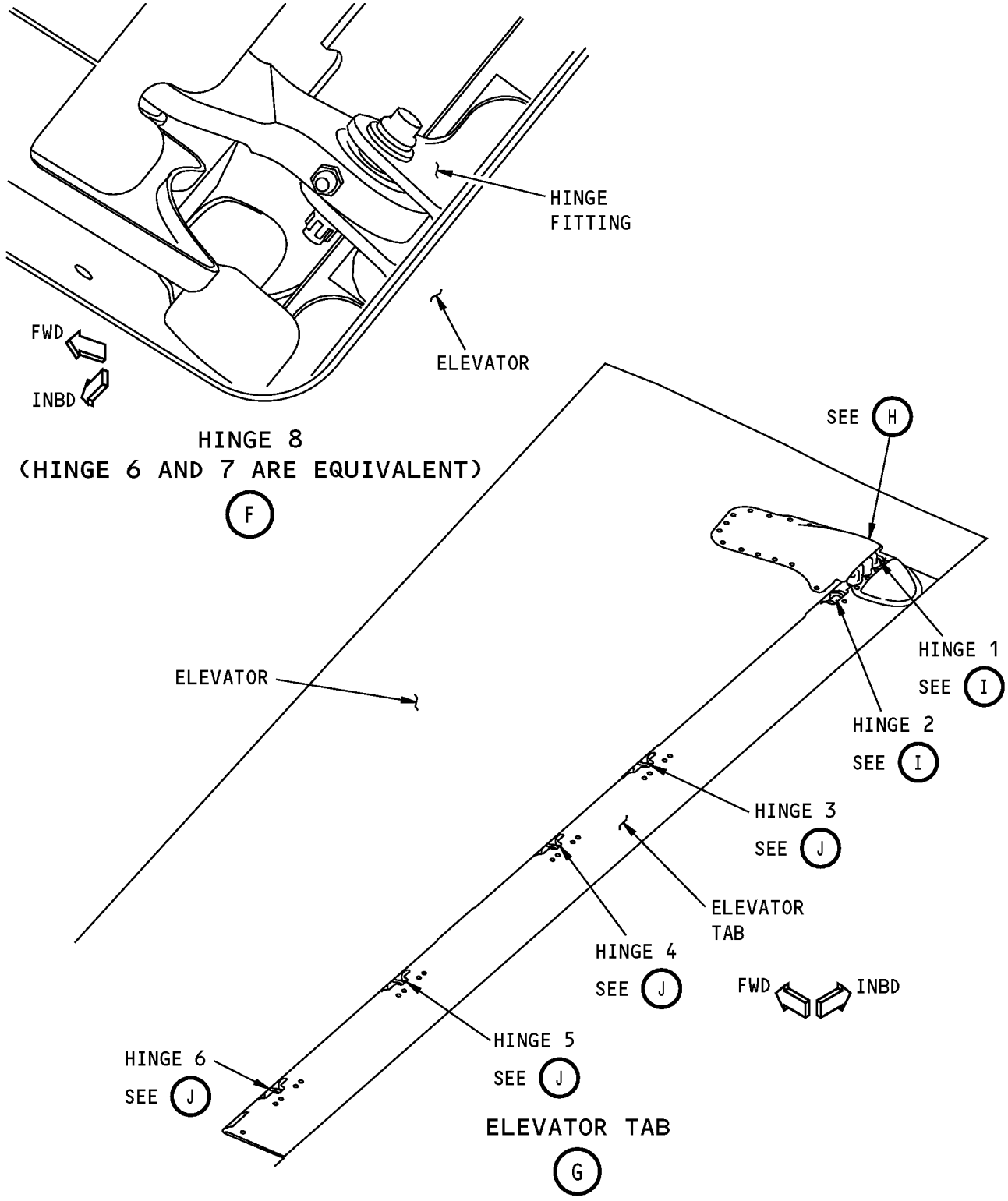
Lft Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 222 (Sheet 1 of 6)/55-05-03-990-809



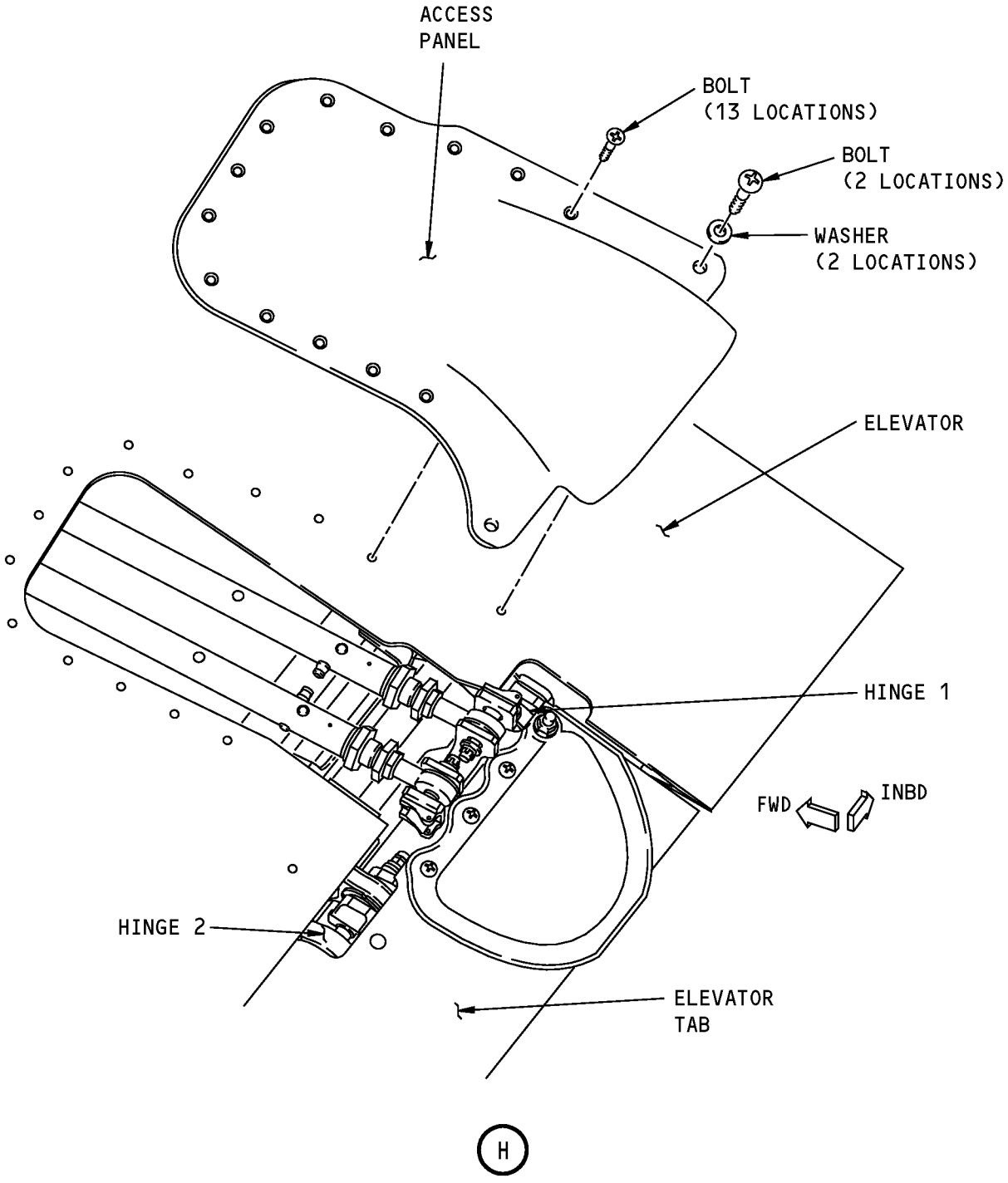
Lft Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 222 (Sheet 2 of 6)/55-05-03-990-809



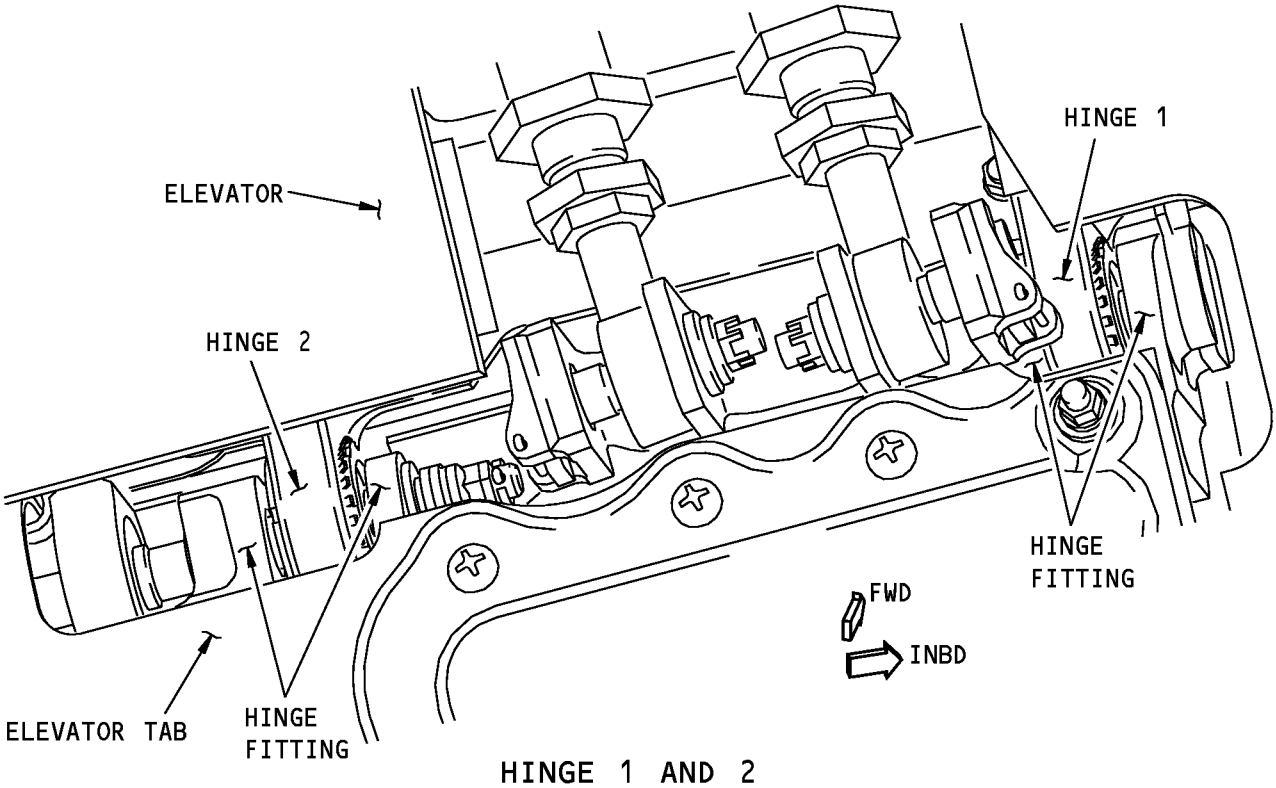
Lft Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 222 (Sheet 3 of 6)/55-05-03-990-809



Lft Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 222 (Sheet 4 of 6)/55-05-03-990-809

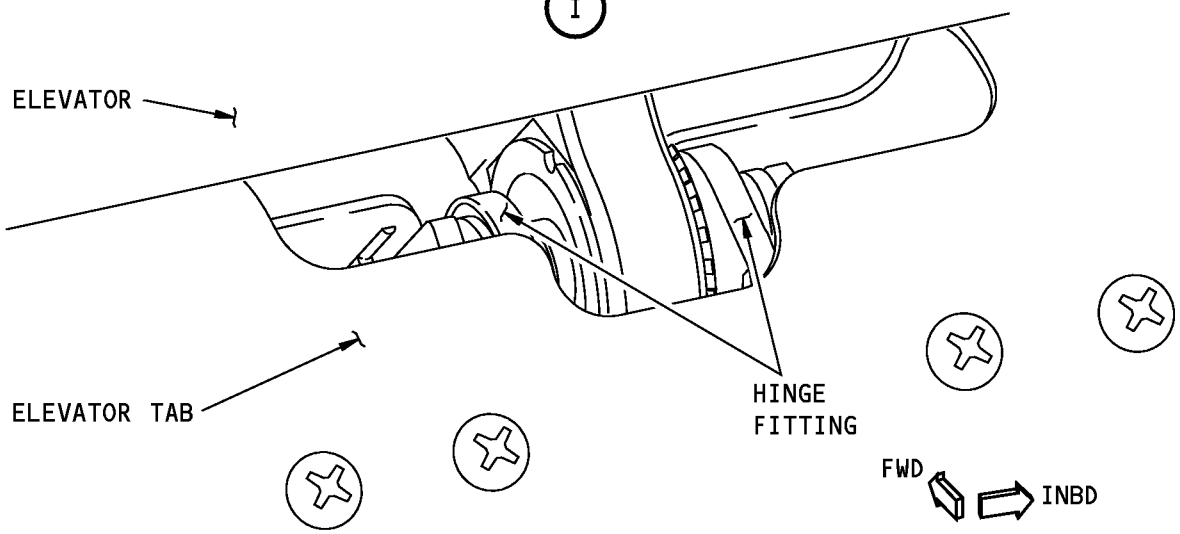


Lft Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 222 (Sheet 5 of 6)/55-05-03-990-809



HINGE 1 AND 2
(COVER REMOVED FOR CLARITY)

I



HINGE 3
(HINGE 4, 5 AND 6 ARE EQUIVALENT)

J

Lft Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 222 (Sheet 6 of 6)/55-05-03-990-809

TASK 55-05-03-211-808

22. INTERNAL - DETAILED: RIGHT ELEVATOR HINGE, ACTUATOR, AND TAB MAST ARM FTGS AND BALANCE WT SUPPT STRUC

A. General

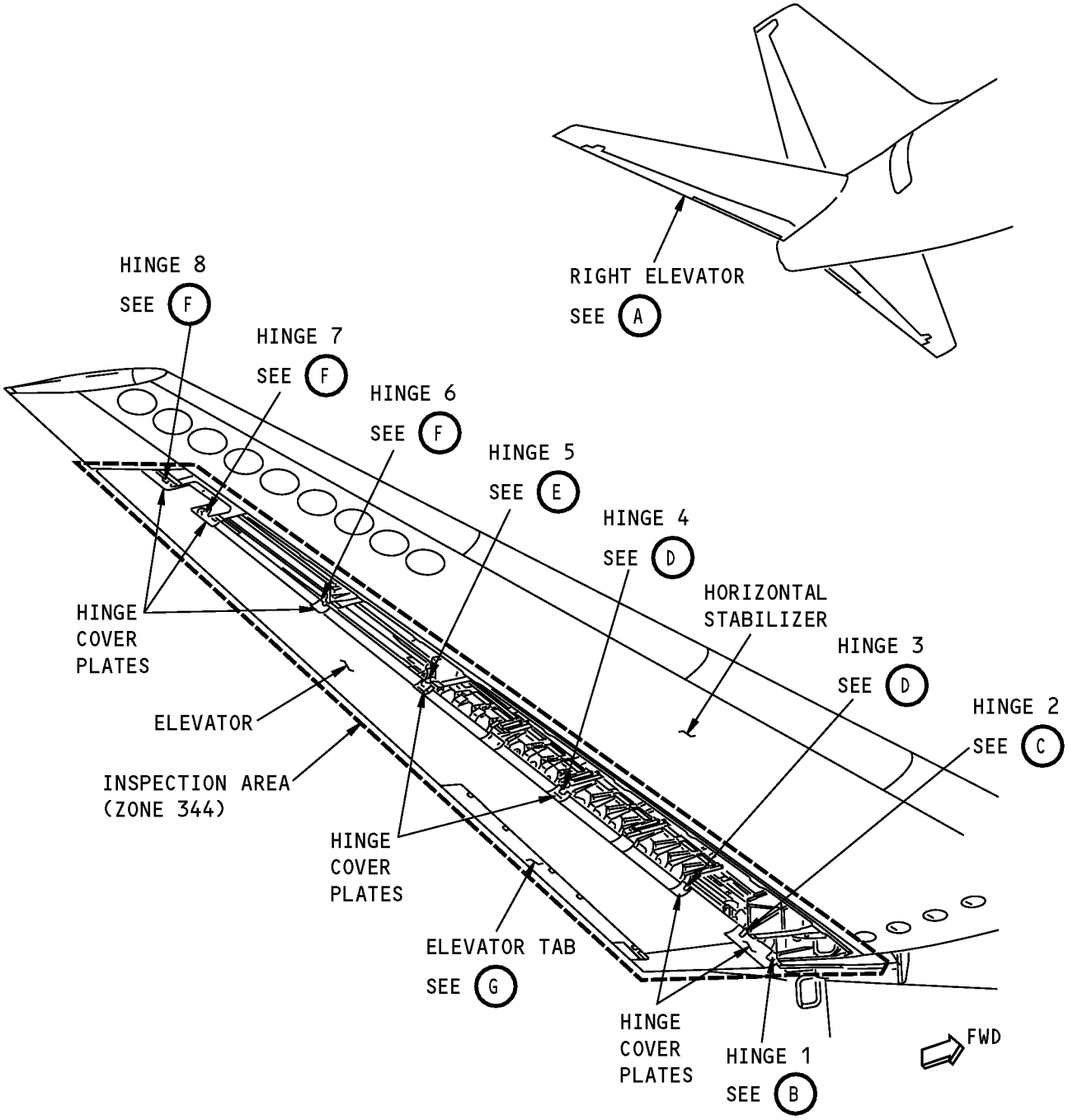
(1) This procedure is a scheduled maintenance task.

B. Inspection

SUBTASK 55-05-03-211-008

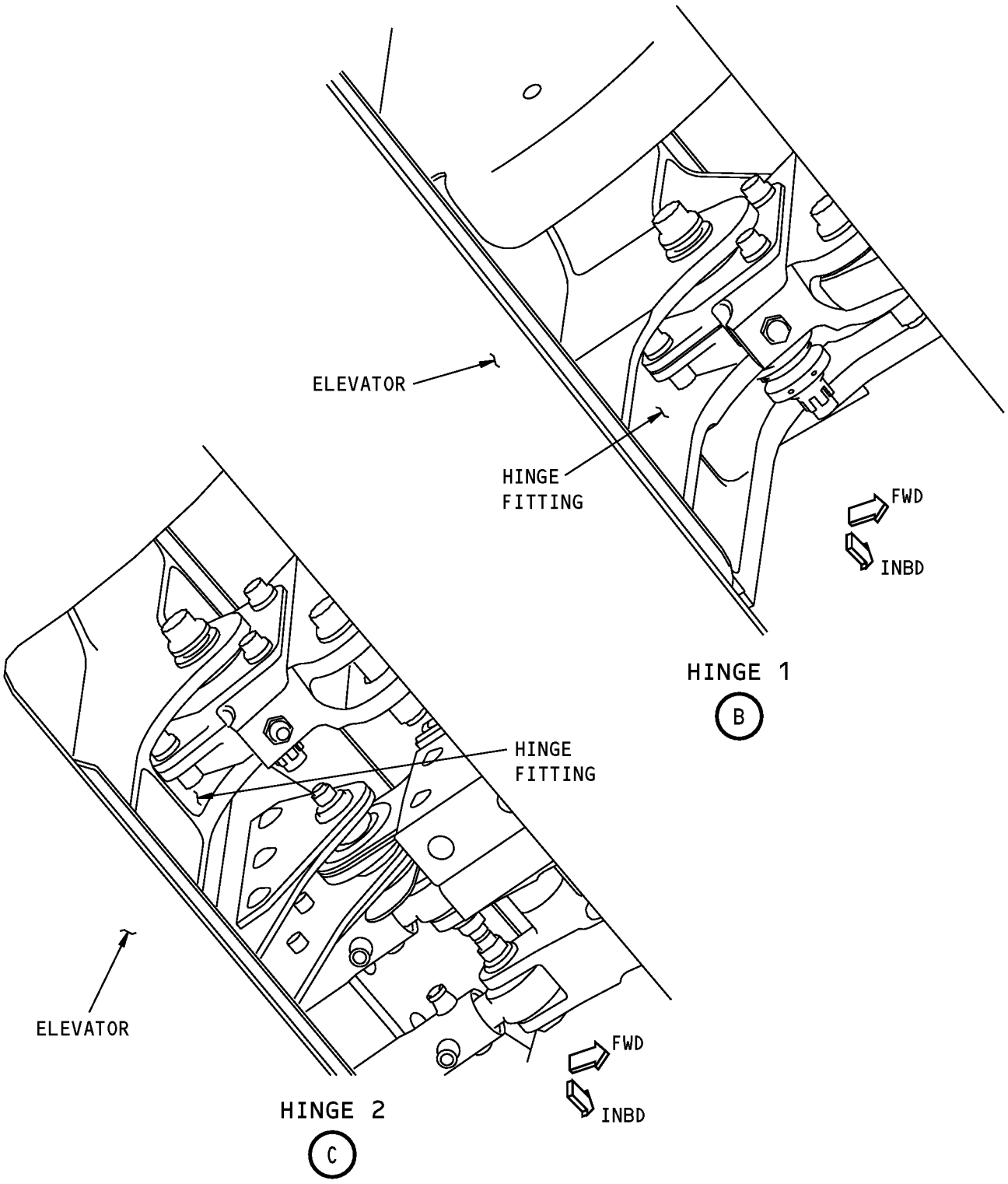
(1) Do the inspection.

END OF TASK

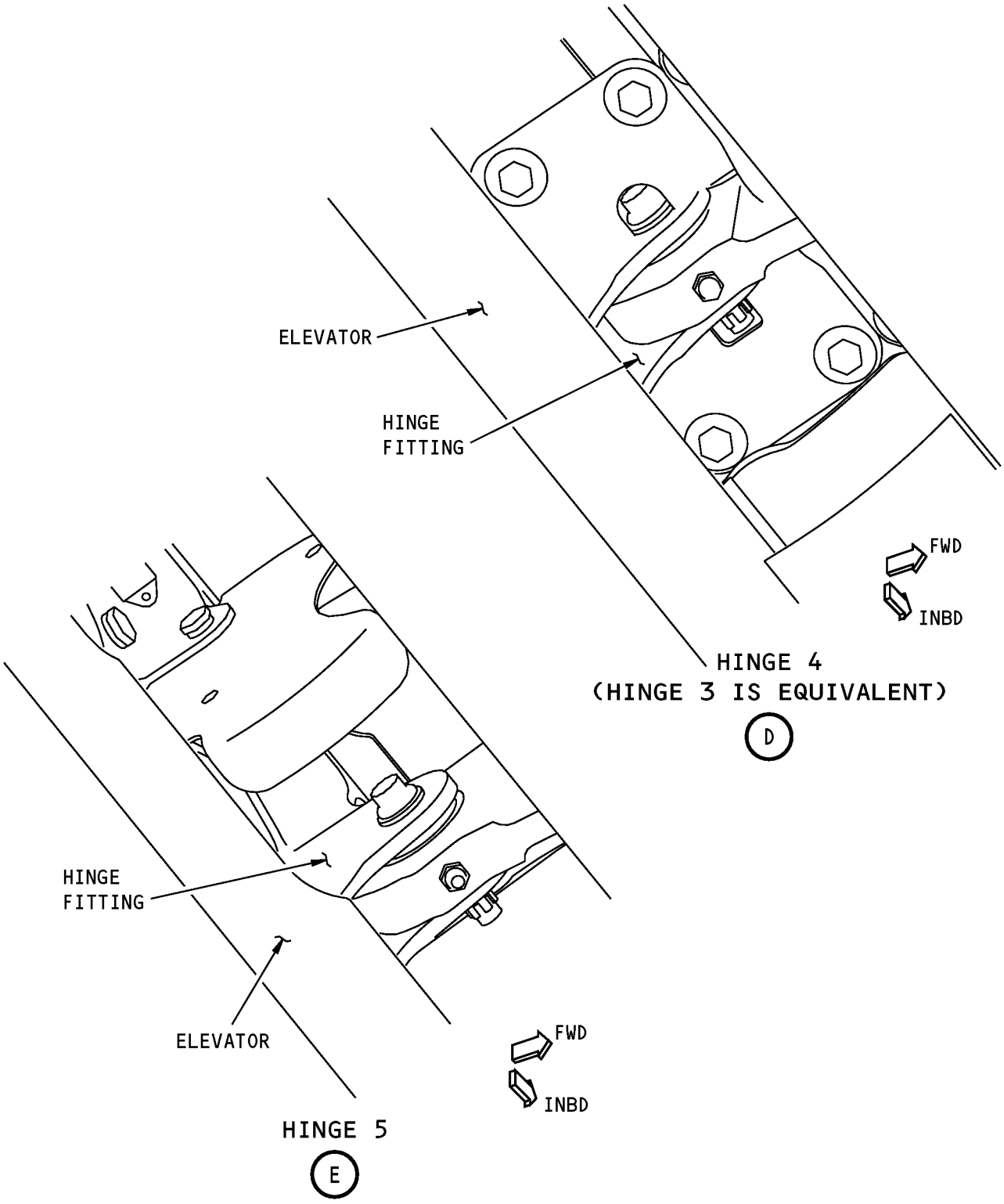


RIGHT ELEVATOR
(LOWER TRAILING EDGE PANELS REMOVED)
A

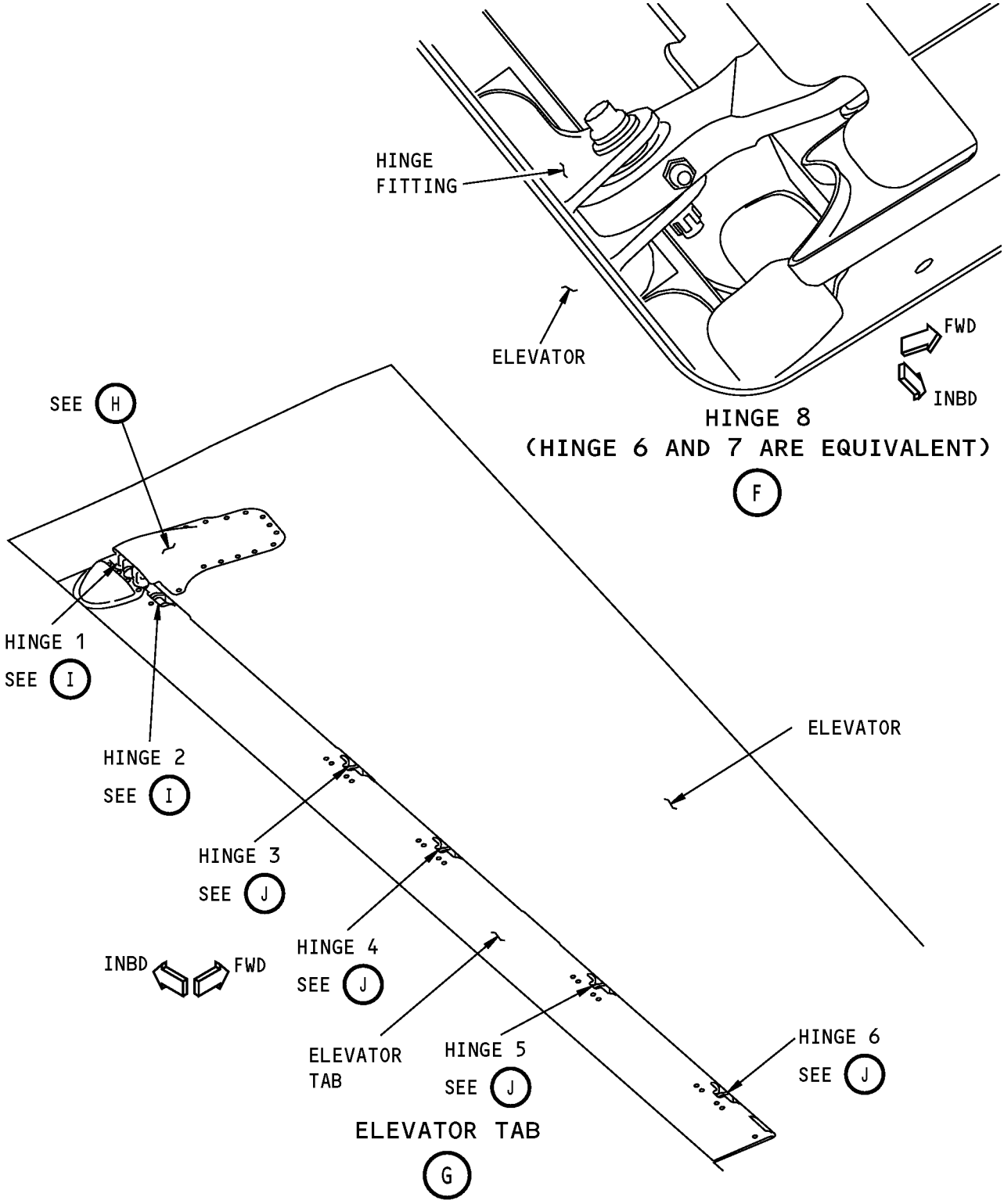
Rt. Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 223 (Sheet 1 of 6)/55-05-03-990-810



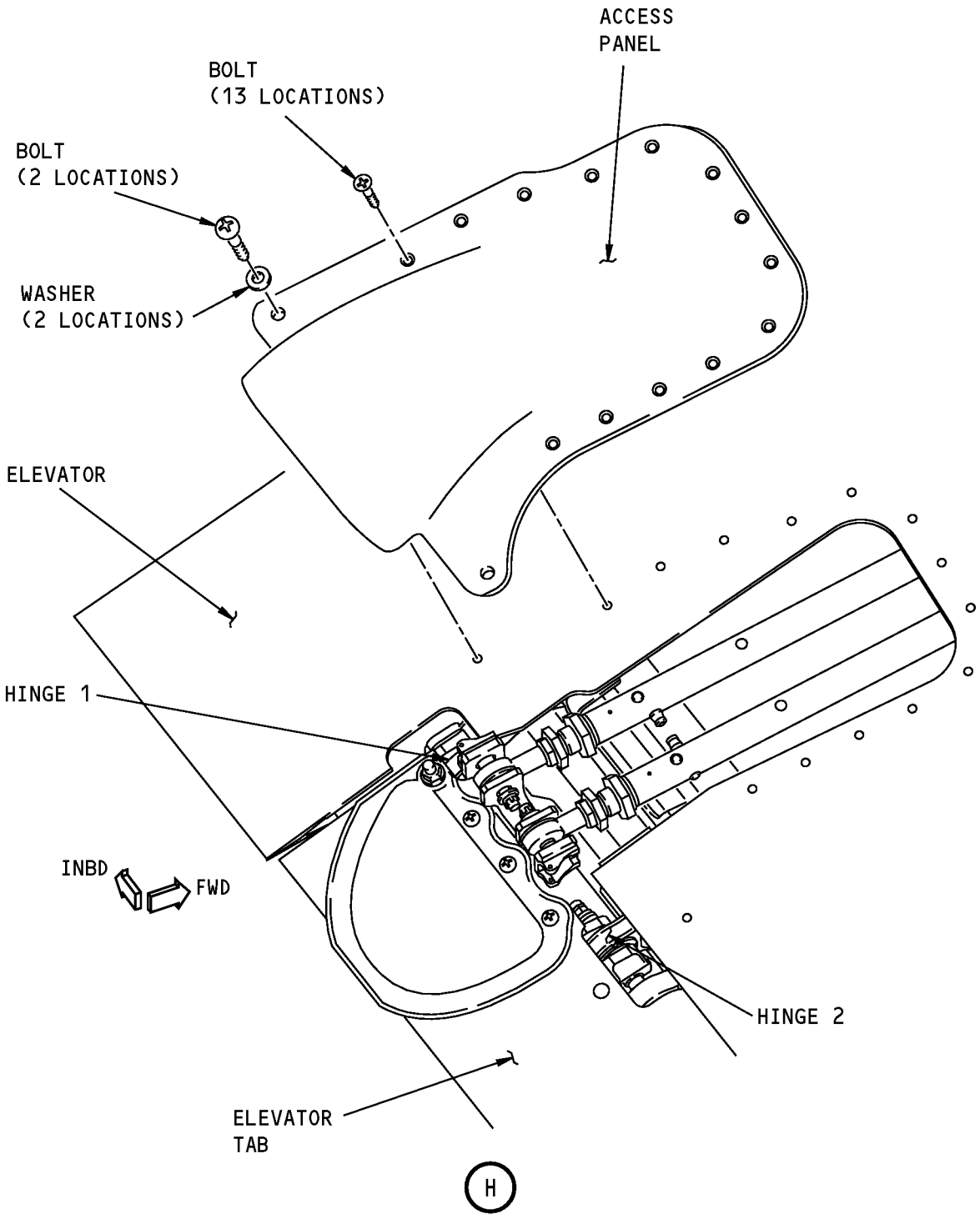
Rt. Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 223 (Sheet 2 of 6)/55-05-03-990-810



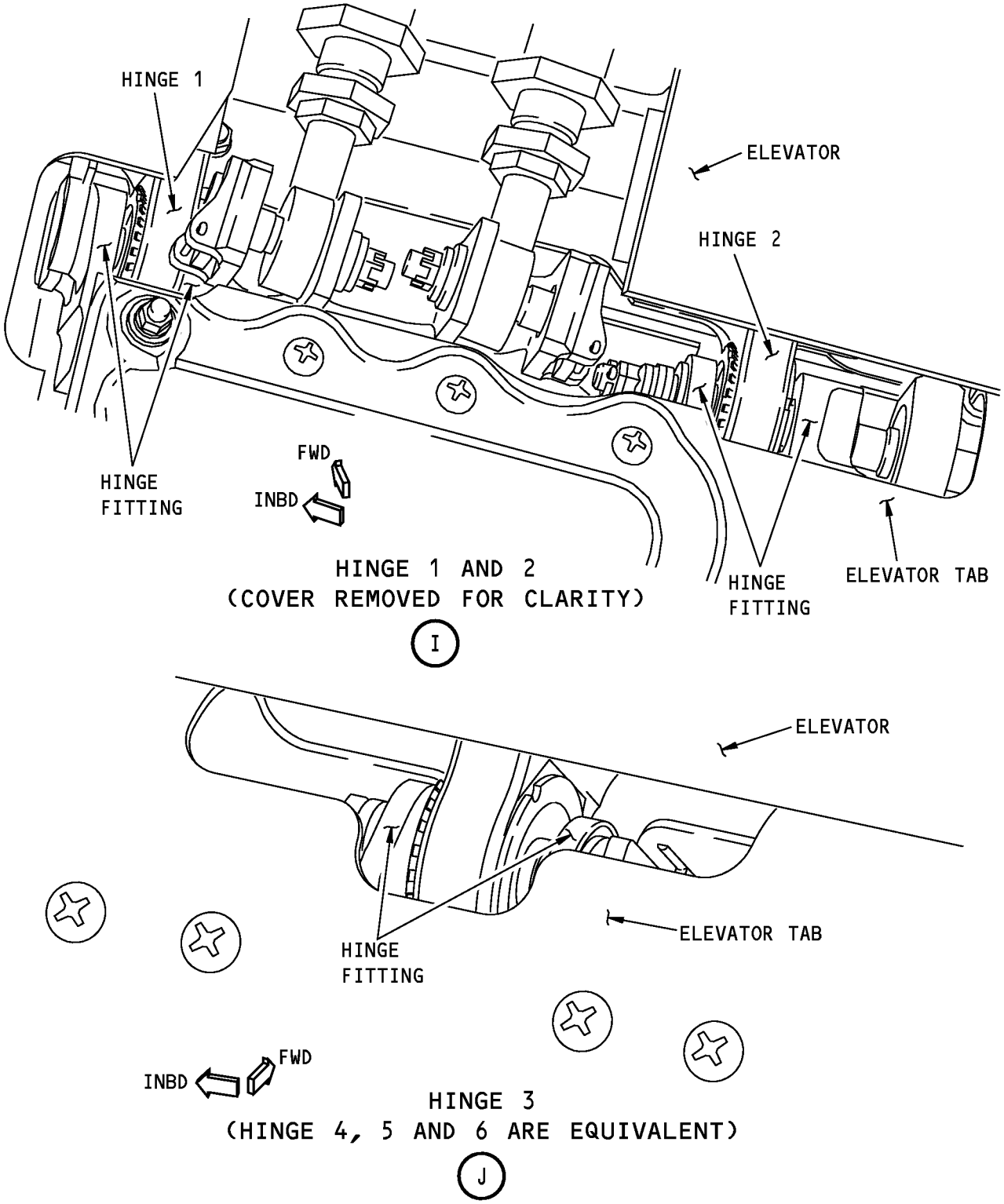
Rt. Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 223 (Sheet 3 of 6)/55-05-03-990-810



Rt. Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 223 (Sheet 4 of 6)/55-05-03-990-810



Rt. Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 223 (Sheet 5 of 6)/55-05-03-990-810



Rt. Ele. Hinge, Actuator, and Tab Mast Arm Ftgs and Balance WT Suppt
Figure 223 (Sheet 6 of 6)/55-05-03-990-810

HORIZONTAL STABILIZER - CORROSION PREVENTION

1. General

A. Corrosion has been found on the horizontal stabilizer rear spar, and filiform corrosion can occur on the inspar skin.

B. Corrosion can occur on the jackscrew support truss.

C. Corrosion has been found at the faying surfaces of the inspar skin and inspar rib chords.

D. Corrosion has been reported on the rear spar attachment bolts which may result in chrome plating flaking.

E. Corrosion has been found on the stabilizer and stabilizer center section clevises and lugs.

F. Corrosion and plating deterioration can occur on hinge pins at the horizontal stabilizer center section.

G. Corrosion has been found between the horizontal stabilizer skin panel and the forward flange of upper and lower trailing edge beams. The corroded areas, two to ten inches long, were found at several locations along the beam between elevator stations 23 and 213. Corrosion is caused by water trapped in the unsealed seam.

H. Corrosion has been found on the horizontal stabilizer pivot pins.

I. Corrosion has been found on the horizontal stabilizer attachment lugs.

J. Stress corrosion can cause broken lower attach bolt on the RH horizontal stabilizer. The attach bolts are made of a special alloy steel.

K. Corrosion has been found in the stabilizer center section attach fittings. The deepest corrosion was found on gap between the two flanged bushings in the lug holes. Corrosion spots can also occur on the lug faces.

L. Corrosion can occur on the surfaces of the horizontal stabilizer that touches the upper and lower trailing-edge skin and the trailing-edge beam. The corrosion is caused by moisture that can get into the joints between these parts.

M. Corrosion can occur on the elevator balance panels and similar structure to the elevator front spar.

N. Corrosion can occur between elevator nose skins and hinge fittings for elevator balance panels, and between hinge halves and adjacent faying structure.

O. Moisture can collect between the trailing edge skin panel mating surfaces.

TASK 55-10-00-910-801

2. Horizontal Stabilizer - Corrosion Prevention

A. General

(1) Make the regular inspection to prevent or find the start of corrosion. Missing fasteners, white powdery, or other corrosion deposits are signs of corrosion. Initiate the corrosion prevention practices to decrease the occurrence of corrosion.

(2) Following cleaning of suspected areas PAGEBLOCK 51-21-31/701, a full inspection is effective to ensure that protective finishes provided during manufacture remain intact.

(3) Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to Structural Repair Manual for details of corrosion removal.

(4) For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to decrease the corrosion process. Refer to PAGEBLOCK 51-21-91/701 for details on applying corrosion inhibiting compound. The finish system should be repaired at the first opportunity consistent with the maintenance schedule.

(5) Inspect trailing edge skin panels for delamination and the moisture. Moisture accumulation could cause corrosion on the aluminum sub-structure and possible skin panel delamination. Accumulations of water may be detected radio-graphically.

B. References

Reference	Title
51-21-31 P/B 701	CORROSION REMOVAL AND CONTROL - CLEANING/PAINTING
51-21-91 P/B 701	CORROSION INHIBITING COMPOUND - CLEANING/PAINTING

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
G00009	Compound - Organic Corrosion Inhibiting	BMS3-23

D. Location Zones

Zone	Area
330	Subzone - Left Horizontal Stabilizer and Elevator
340	Subzone - Right Horizontal Stabilizer and Elevator

E. Procedure

SUBTASK 55-10-00-370-001

(1) At first opportunity consistent with the scheduled maintenance activity, apply corrosion prevention treatment to the horizontal stabilizer.

SUBTASK 55-10-00-200-001

(2) Periodically inspect the stabilizer for damaged finish and evidence of corrosion.

SUBTASK 55-10-00-200-002

(3) Restore any damaged finish at the first opportunity. Apply water displacing corrosion inhibiting compound as the temporary corrosion protection meanwhile. On skin surfaces, apply corrosion inhibitor to rivet heads and panel edges where the paint has cracked or flaked and after 30 minutes wipe off the excess with a clean, dry rag.

SUBTASK 55-10-00-370-002

(4) Apply water displacing corrosion inhibiting compound annually to the aft side of the rear spar cavity. Pay particular attention to attachment points and faying surfaces.

SUBTASK 55-10-00-370-003

(5) Apply water displacing corrosion inhibiting compound annually to the fastener heads and skin joint on the upper and lower surfaces at the rear spar. Wipe off the excess with a clean, dry rag after a minimum of 30 minutes.

SUBTASK 55-10-00-370-004

(6) Apply water displacing corrosion inhibiting compound annually to jackscrew support truss with particular attention to attachment points. Do not apply the compound on the jackscrew.

SUBTASK 55-10-00-370-005

(7) Every 2 years, remove the leading edge, and spray water displacing corrosion inhibiting compound to the forward side of the rear spar with a proper extension tube. Pay particular attention to the upper and lower spar chords. Apply corrosion inhibitor at the intersection of skin and rib chords.

SUBTASK 55-10-00-370-006

(8) Apply water displacing corrosion inhibiting compound annually to exposed areas of the elevator spar, with particular attention to the attachment points.

SUBTASK 55-10-00-370-007

CAUTION: DO NOT APPLY CORROSION-INHIBITING COMPOUND TO THE SEALS OF THE ELEVATOR BALANCE PANEL. DO NOT APPLY IT TO THE AREAS THAT THE SEALS WILL TOUCH. THE CORROSION-INHIBITING COMPOUND CAUSES DAMAGE, OR DETERIORATION OF THE SEALS.

(9) Apply water displacing corrosion inhibiting compound annually to the elevator balance panels.

SUBTASK 55-10-00-370-008

(10) Apply water displacing corrosion inhibiting compound to the horizontal stabilizer terminal fittings.

SUBTASK 55-10-00-370-009

(11) Apply sealant, A00247 to prevent entrapment of water in the seams.

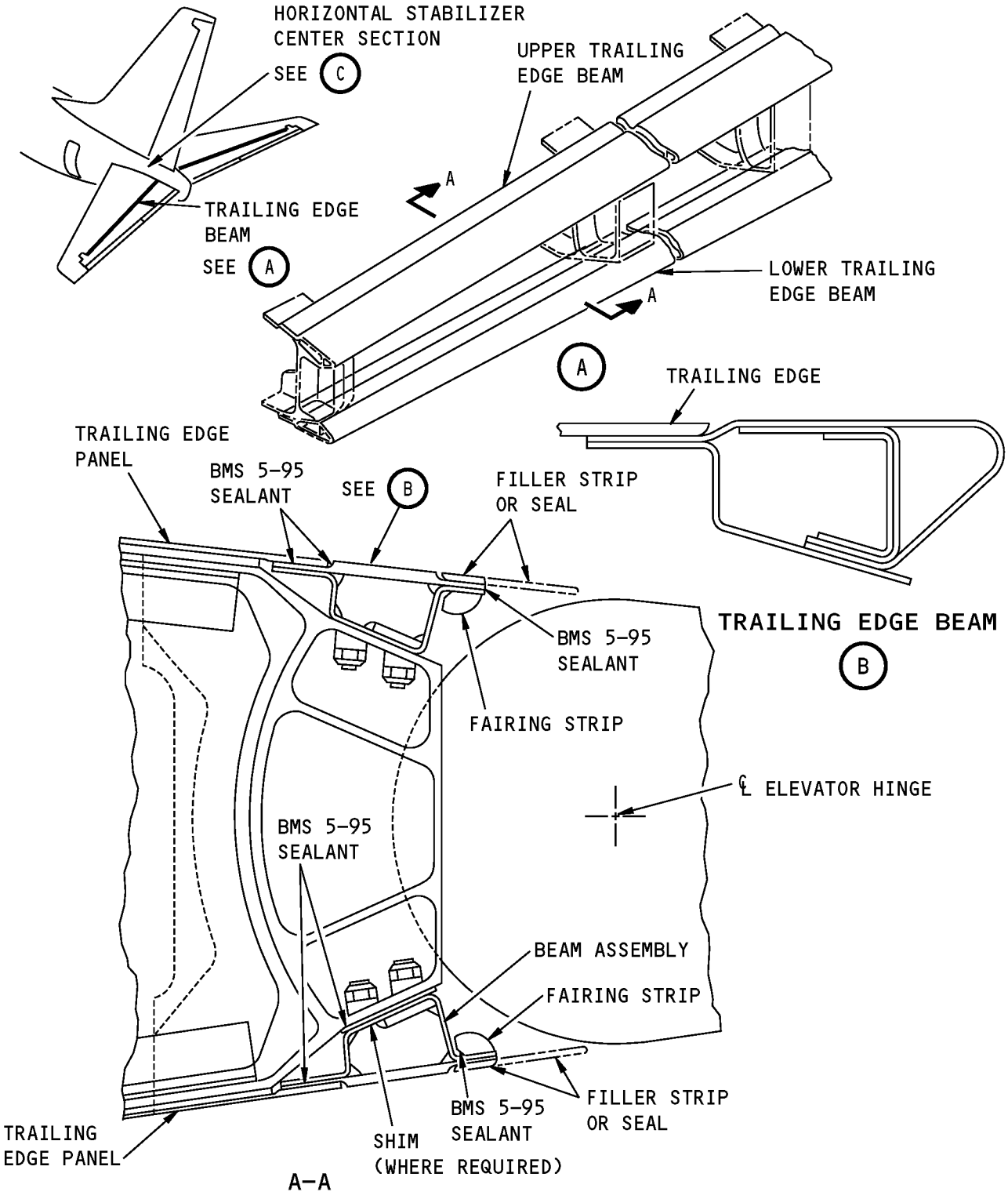
SUBTASK 55-10-00-200-003

(12) Frequency of Application

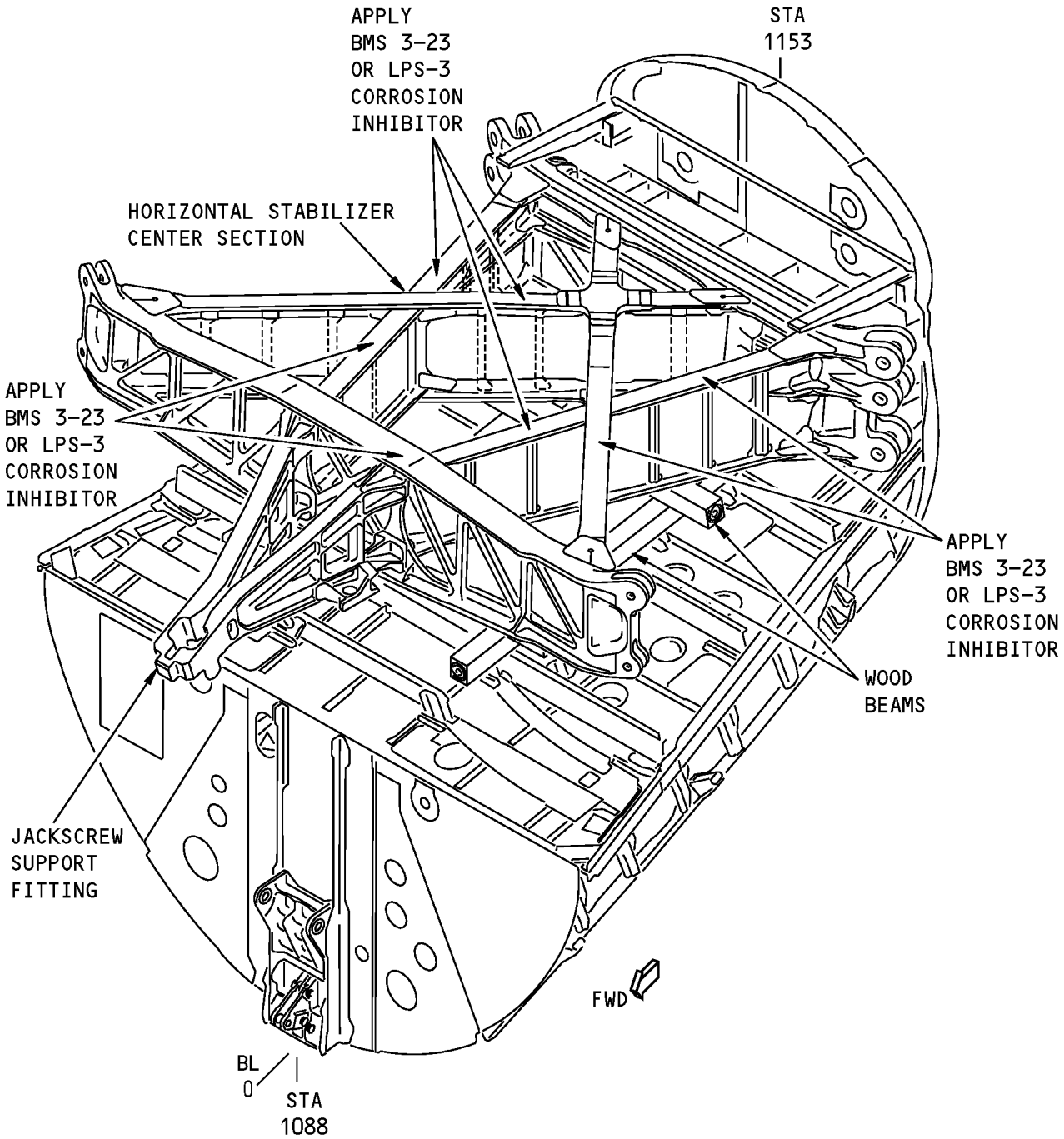
(a) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(b) Periodic application of corrosion inhibiting compound, G00009 is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

———————— END OF TASK ————————



Horizontal Stabilizer - Corrosion Prevention
Figure 201 (Sheet 1 of 2)/55-10-00-990-801



Horizontal Stabilizer - Corrosion Prevention
Figure 201 (Sheet 2 of 2)/55-10-00-990-801

HORIZONTAL STABILIZER CONDUCTIVE STRIP - REPAIRS

1. General

A. This section contains one task for the horizontal stabilizer conductive strip:

(1) Horizontal Stabilizer Conductive Strip Repair

TASK 55-10-01-300-801

2. Horizontal Stabilizer Conductive Strip Repair

A. References

Reference	Title
20-40-11-760-801	Electrical Bonding (P/B 201)
23-61-00-400-801	Static Discharger Installation (P/B 201)
SRM 51-70-04	Repair of Damage to the Edgeband of a Honeycomb Panel

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)

C. Consumable Materials

Reference	Description	Specification
A01076	Adhesive - Synthetic Rubber	BAC5010, Type 93 (BMS5-95, Class B)
B00102	Abrasive - Aluminum Oxide Coated Cloth	ANSI B74.18
B01003	Solvent - General Cleaning Of Composites (AMM 20-30-83/201) - Series 83	
C00033	Coating - Exterior Protective Enamel, Flexibility Use	BMS10-60, Type II
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79, Type III
C00851	Coating - Anodize For Aluminum	MIL-A-8625
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5
G50077	Abrasive - Aluminum Oxide Paper, 240 grit or finer	
G50256	Water, Regular	

D. Remove the Conductive Strip

SUBTASK 55-10-01-030-001

(1) Cut the conductive strip near the base of each static discharger found at the ends of the damaged area.

SUBTASK 55-10-01-020-001

(2) Remove the static dischargers if it is necessary.

SUBTASK 55-10-01-030-002

(3) Remove the damaged parts of the conductive strip.

(a) Remove the strip from the horizontal stabilizer where it is possible.

NOTE: Use care to prevent damage to the carbon fiber.

(b) Complete the removal of residue by sanding with 240 grit or finer abrasive paper, G50077.

E. Install the Conductive Strip

SUBTASK 55-10-01-350-001

(1) Make a new conductive strip from 6061–T4 bare sheet aluminum.

(a) Use the remaining conductive strip found above the static discharger locations as a template.

(b) Use this template to cut the new strip to make a correct fit.

(c) Drill holes in the new strip to align with the holes in the remaining strips.

SUBTASK 55-10-01-110-001

(2) Prepare the new conductive strip.

WARNING: DO NOT GET THE SOLVENT IN YOUR MOUTH, EYES, OR ON YOUR SKIN. DO NOT BREATHE IN THE FUMES FROM THE SOLVENT. MAKE SURE TO PUT ON PROTECTIVE SPLASH GOGGLES AND GLOVES WHEN USING THE SOLVENT. KEEP THE SOLVENT AWAY FROM SPARKS, FLAMES AND HEAT. THE SOLVENT IS POISONOUS AND FLAMMABLE AND CAN CAUSE INJURY OR DAMAGE IF NOT HANDLED PROPERLY.

(a) Use a Series 83 solvent, B01003 to clean the conductive strip.

(b) Dip the conductive strip in coating, C00851.

(c) Flush the conductive strip with clean water, G50256.

(d) Dry the conductive strip with a cotton wiper, G00034.

(e) Apply primer, C00175.

(f) For the side that you bond, rub smooth with abrasive cloth, B00102 on that side.

(g) Use a cotton wiper, G00034 to wipe that side clean.

SUBTASK 55-10-01-420-001

(3) Install the conductive strip:

WARNING: DO NOT GET THE SOLVENT IN YOUR MOUTH, EYES, OR ON YOUR SKIN. DO NOT BREATHE IN THE FUMES FROM THE SOLVENT. MAKE SURE TO PUT ON PROTECTIVE SPLASH GOGGLES AND GLOVES WHEN USING THE SOLVENT. KEEP THE SOLVENT AWAY FROM SPARKS, FLAMES AND HEAT. THE SOLVENT IS POISONOUS AND FLAMMABLE AND CAN CAUSE INJURY OR DAMAGE IF NOT HANDLED PROPERLY.

(a) Apply a Series 83 solvent, B01003 to the area where you removed the conductive strip.

(b) Clean the areas of the remaining conductive strip above the static discharger.

(c) Use a cotton wiper, G00034 to absorb the solvent before it dries.

NOTE: To prevent contamination on the surfaces, permit no more than 1 hour span from the time you clean to the time you bond.

(d) Use the Phosphoric Acid Containment System (PACS) Procedure to prepare the conductive strip and the repair area for bonding, SRM 51–70–10.

(e) Apply a thin layer of adhesive, A01076 to the trailing edge of the horizontal stabilizer and to the conductive strip.

(f) Do not apply adhesive, A01076 to the ends of the strip where it makes an overlap with the remaining strip.

NOTE: New and remaining strips must have a full electrical contact at areas that make an overlap.

(g) Remove the unwanted adhesive with a cotton wiper, G00034 lightly moist with a Series 83 solvent, B01003.

NOTE: Do not permit the solvent to get in the area that you bond.

(h) Apply pressure and dry the bond, SRM 51-70-04

SUBTASK 55-10-01-400-001

(4) To complete the static discharger installation, you must obey Static Discharger Installation, TASK 23-61-00-400-801 and the instructions that follow:

(a) Apply sealant if it is necessary to fill the space where the new conductive strip makes an overlap with the remaining strip.

(b) Using the bonding meter, COM-1550 to make sure that the resistance between the discharger base and the conductive strip is 0.1 ohm, Electrical Bonding, TASK 20-40-11-760-801.

(c) Measure the resistance between the tip and the base of the static dischargers, do this task: Static Discharger Installation, TASK 23-61-00-400-801.

F. Conductive Strip Finish

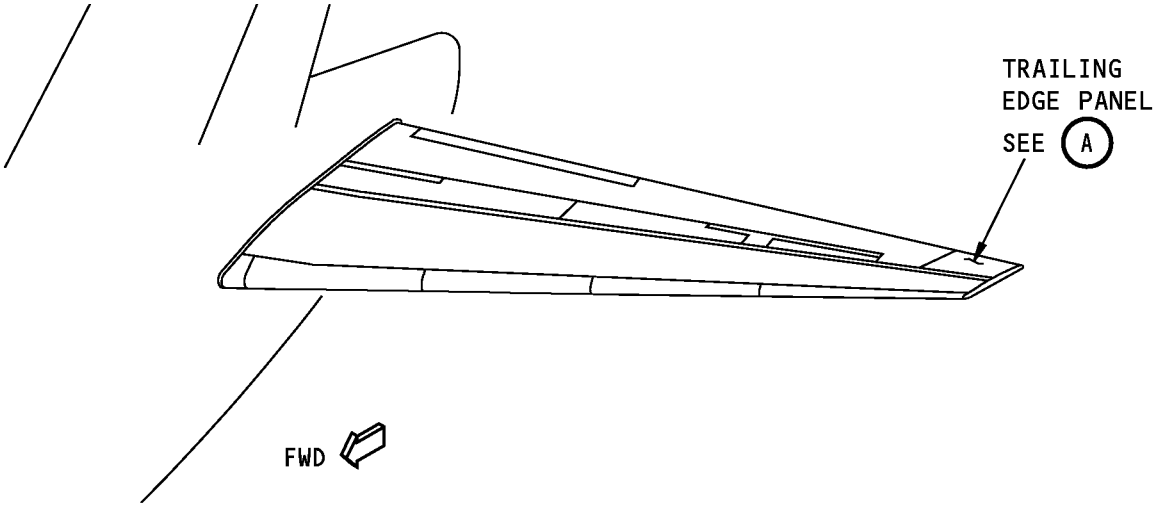
SUBTASK 55-10-01-370-001

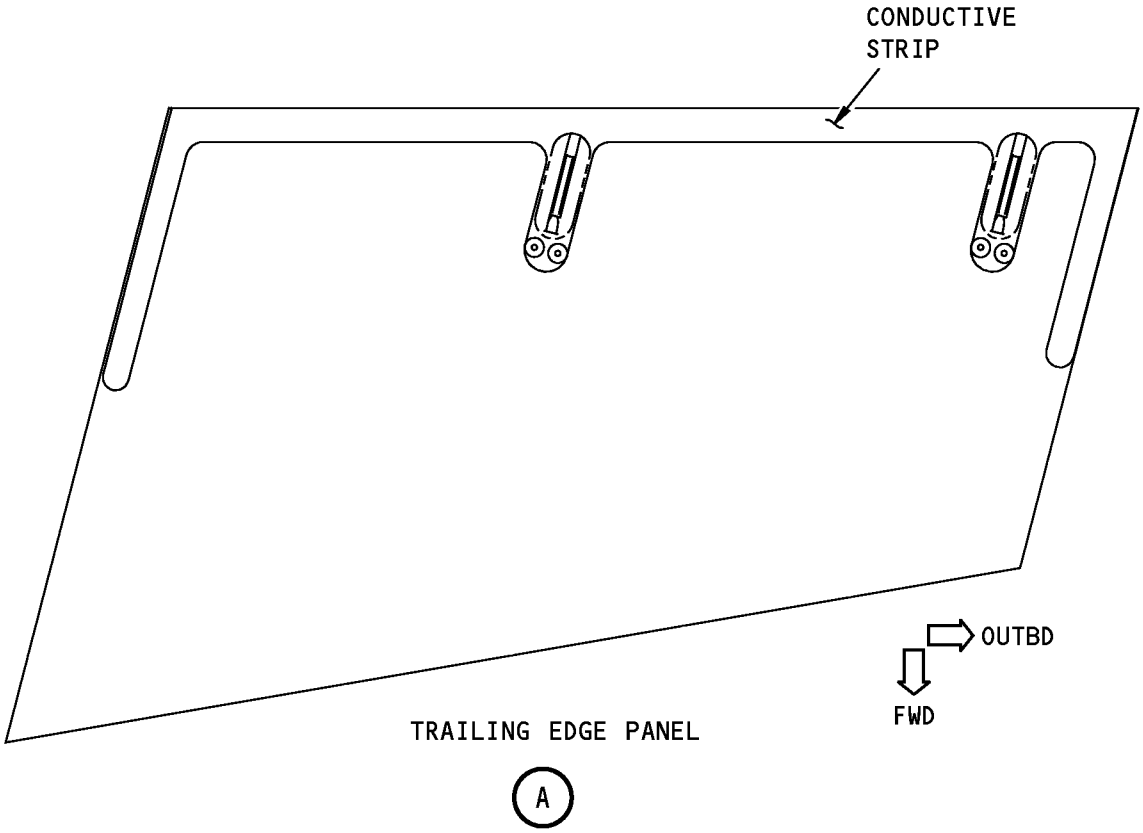
(1) Apply primer, C00175 to any exposed surfaces.

SUBTASK 55-10-01-370-002

(2) Apply coating, C00033 to cover the primer.

END OF TASK





1847324 S0000328555_V1

Horizontal Stabilizer Conductive Strip Repair
Figure 801/55-10-01-990-801

THRUST BRACE LINKS - REMOVAL/INSTALLATION

1. General

A. This procedure has two tasks:

(1) A removal of the thrust brace links.

(2) An installation of the thrust brace links.

B. The thrust brace links are located at the rear spar of the horizontal stabilizer center section.

C. There are four thrust brace links (two on each side).

TASK 55-10-10-000-801

2. Thrust Brace Links Removal

(Figure 401, Figure 402, Figure 403)

A. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
27-41-31-000-801	Horizontal Stabilizer Center Section Hinge Fitting Removal (P/B 401)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1672	Assembly - Lock, Stabilizer Trim (Part #: F71336-501, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
300	Empennage

D. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

E. Prepare for the Removal

SUBTASK 55-10-10-860-001

(1) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 55-10-10-860-002

(2) Set the stabilizer trim cutout switches to the CUTOUT position.

NOTE: The stabilizer trim cutout switches are installed on the control stand.

SUBTASK 55-10-10-860-003

(3) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

SUBTASK 55-10-10-860-004

(4) Use the stabilizer trim wheel on the control stand to set the horizontal stabilizer at zero degree (3 units of trim).

SUBTASK 55-10-10-480-002

(5) Install the lock, SPL-1672 on the stabilizer trim wheel at the control stand (TASK 27-41-31-000-801):

(a) Turn the trim wheel to put the handle at the top of the wheel.

(b) Adjust the height of the trim lock to put the trim wheel handle correctly on the yoke.

(c) Install the pin through the yoke.

(d) Install the safety pin.

SUBTASK 55-10-10-010-001

(6) Open this access panel:

(Figure 401)

Number	Name/Location
311BL	Stabilizer Trim Access Door

SUBTASK 55-10-10-480-001

(7) Install suitable wood beams to support the center section at approximately any horizontal position, (Figure 402).

F. Remove the Thrust Brace Links

SUBTASK 55-10-10-020-001

(1) Disconnect the upper inboard end, (Figure 401).

(a) Remove the cotter pin [6] and nut [5].

(b) Remove the two washers [7], the washer [4], and the bolt [3].

(c) Discard the two washers [7].

(d) Disconnect the thrust brace link [1] from the center section fitting.

SUBTASK 55-10-10-020-002

(2) Disconnect the lower inboard end, (Figure 401).

(a) Remove the cotter pin [6] and nut [5].

(b) Remove the two washers [7], the washer [4], and the bolt [8].

(c) Discard the two washers [7].

(d) Disconnect the thrust brace link [2] from the center section fitting.

SUBTASK 55-10-10-020-003

(3) Disconnect the upper outboard end.

(a) Remove the cotter pin [6] and nut [5].

(b) Remove the two washers [7], the washer [4], and the bolt [3].

(c) Discard the two washers [7].

(d) Remove thrust brace link [1] from the fitting.

SUBTASK 55-10-10-020-004

(4) Disconnect the lower outboard end.

(a) Remove the cotter pin [6] and the nut [5].

(b) Remove the two washers [7], the washers [4], and the bolt [3].

(c) Discard the two washers [7].

(d) Remove thrust brace link [2] from the fitting.

END OF TASK

TASK 55-10-10-400-801

3. Thrust Brace Link Installation

(Figure 401, Figure 402, Figure 403)

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
27-41-31-400-801	Horizontal Stabilizer Center Section Hinge Fitting Installation (P/B 401)
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1672	Assembly - Lock, Stabilizer Trim (Part #: F71336-501, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
D00633	Grease - Aircraft General Purpose	BMS3-33

D. Location Zones

Zone	Area
300	Empennage

E. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

F. Install the Thrust Brace Links

SUBTASK 55-10-10-420-001

(1) Connect the upper inboard end, (Figure 401).

(a) Install the thrust brace link [1] to the center section fitting.

1) Apply grease, D00633 to the shank and thread of bolt [3].

2) Install the two washers [7], the bolt [3] and the washer [4].

NOTE: The two washers [7] should be new washers.

3) Install the nut [5] and the cotter pin [6].

a) Tighten nut [5] to 440-540 pound-inches (49.7-61.0 Nm).

NOTE: If the cotter pin slot in the nut does not align with the cotter pin hole in the bolt within the specified torque range, tighten the nut to obtain cotter pin hole alignment, but do not exceed 650 pound-inches (73.4 Nm).

SUBTASK 55-10-10-420-002

(2) Connect the lower inboard end.

(a) Install the thrust brace link [2] to the center section fitting.

1) Apply grease, D00633 to the shank and thread of bolt [8].

2) Install the two washers [7], the bolt [8] and the washer [4].

NOTE: The two washers [7] should be new washers.

3) Install the nut [5] and the cotter pin [6].

a) Tighten the nut [5] to 440-540 pound-inches (49.7-61.0 Nm).

NOTE: If the cotter pin slot in the nut does not align with the cotter pin hole in the bolt within the specified torque range, tighten the nut to obtain cotter pin hole alignment, but do not exceed 650 pound-inches (73.4 Nm).

SUBTASK 55-10-10-420-003

(3) Connect the upper outboard end.

(a) Install the thrust brace link [1] to the fitting.

1) Apply grease, D00633 to the shank and thread of bolt [3].

2) Install the two washers [7], the bolt [3], and the washer [4].

NOTE: The two washers [7] should be new washers.

3) Install the cotter pin [6] and the nut [5].

a) Tighten the nut [5] to 440-540 pound-inches (49.7-61.0 Nm).

NOTE: If the cotter pin slot in the nut does not align with the cotter pin hole in the bolt within the specified torque range, tighten the nut to obtain cotter pin hole alignment, but do not exceed 650 pound-inches (73.4 Nm).

SUBTASK 55-10-10-420-004

(4) Connect the lower outboard end.

(a) Install the thrust brace link [2] to the fitting.

1) Apply grease, D00633 to the shank and thread of bolt [3].

2) Install the two washers [7], the bolt [3], and the washer [4].

NOTE: The two washers [7] should be new washers.

3) Install the cotter pin [6] and the nut [5].

a) Tighten the nut [5] to 440-540 pound-inches (49.7-61.0 Nm).

NOTE: If the cotter pin slot in the nut does not align with the cotter pin hole in the bolt within the specified torque range, tighten the nut to obtain cotter pin hole alignment, but do not exceed 650 pound-inches (73.4 Nm).

SUBTASK 55-10-10-080-002

(5) Remove the wood beams, (Figure 402).

SUBTASK 55-10-10-080-003

(6) Remove the lock, SPL-1672 from the stabilizer trim wheel at the control stand, (TASK 27-41-31-400-801).

SUBTASK 55-10-10-860-005

(7) Set the stabilizer trim cutout switches to the NORMAL position.

SUBTASK 55-10-10-410-002

(8) Close this access panel:

(Figure 401)

Number	Name/Location
311BL	Stabilizer Trim Access Door

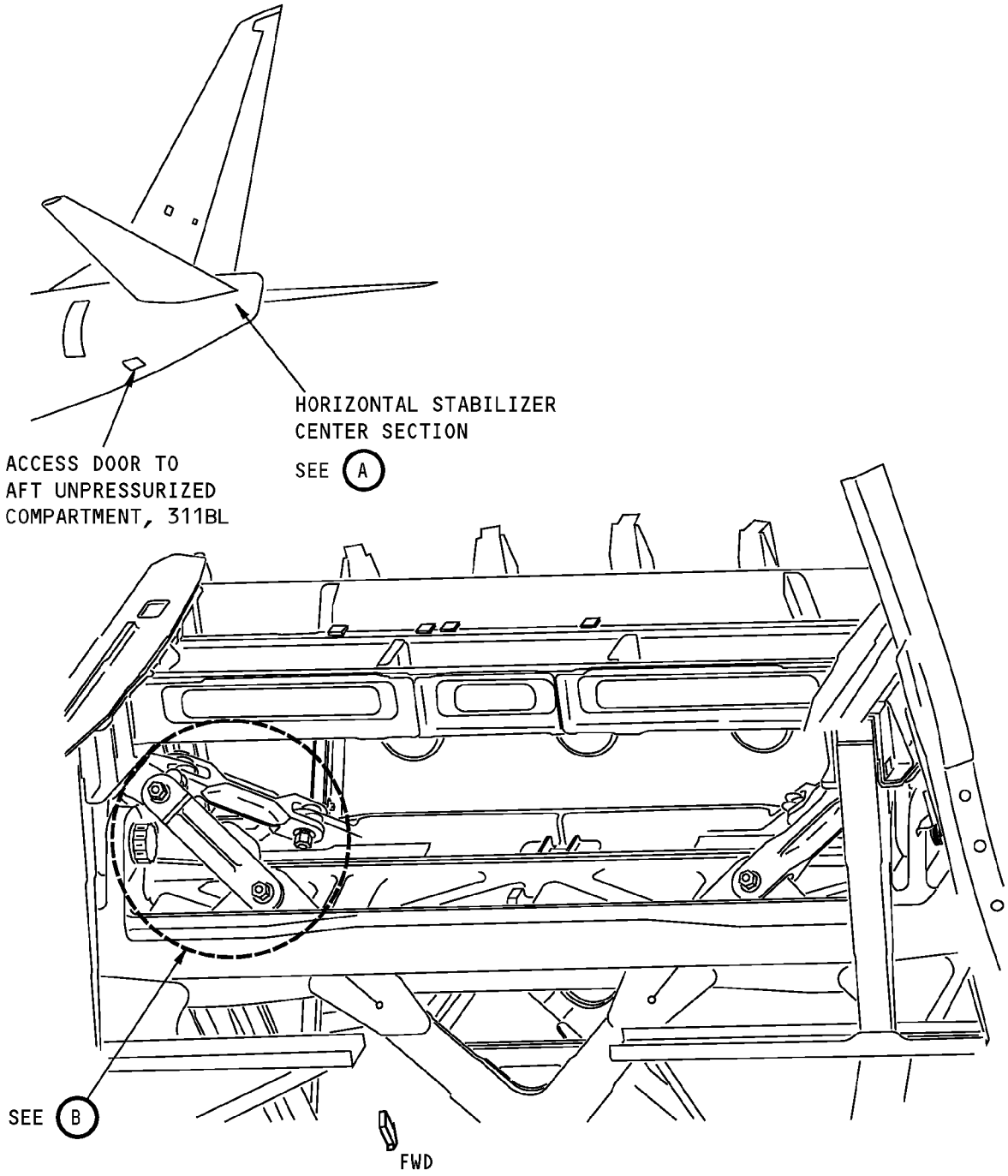
SUBTASK 55-10-10-860-006

(9) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 55-10-10-860-007

(10) Do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

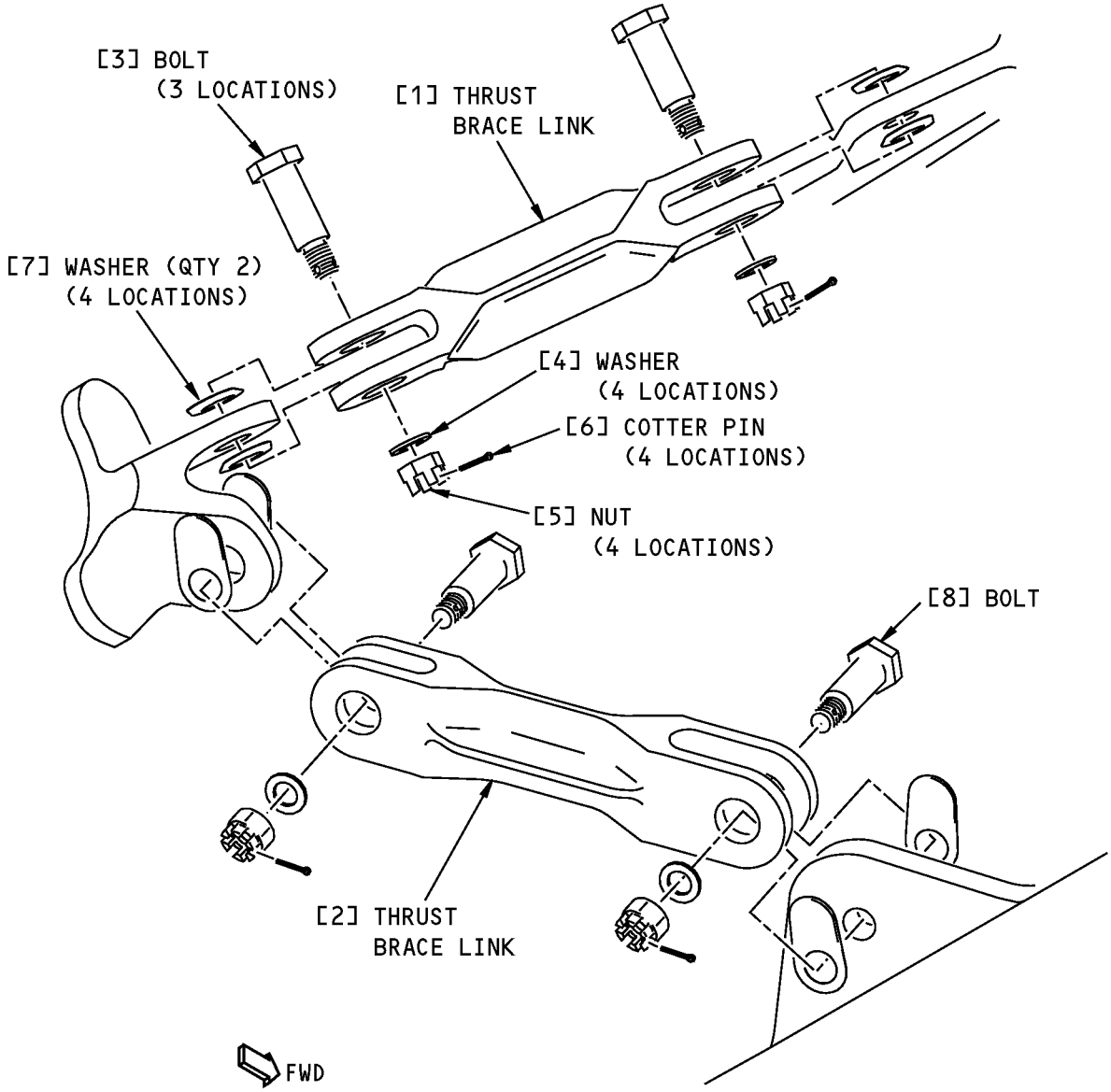
END OF TASK



HORIZONTAL STABILIZER CENTER SECTION

A

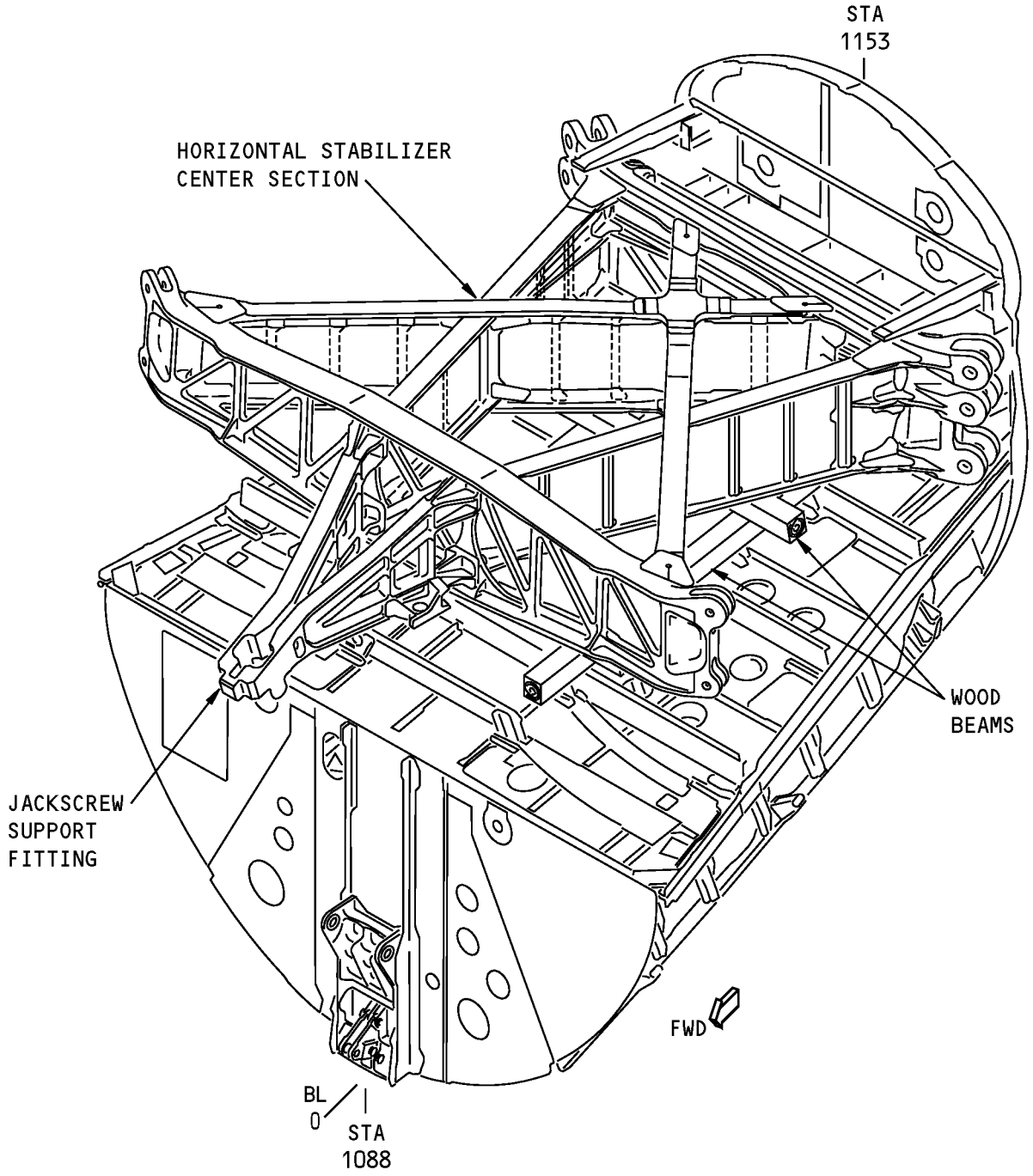
Thrust Brace Links Installation
Figure 401 (Sheet 1 of 2)/55-10-10-990-801



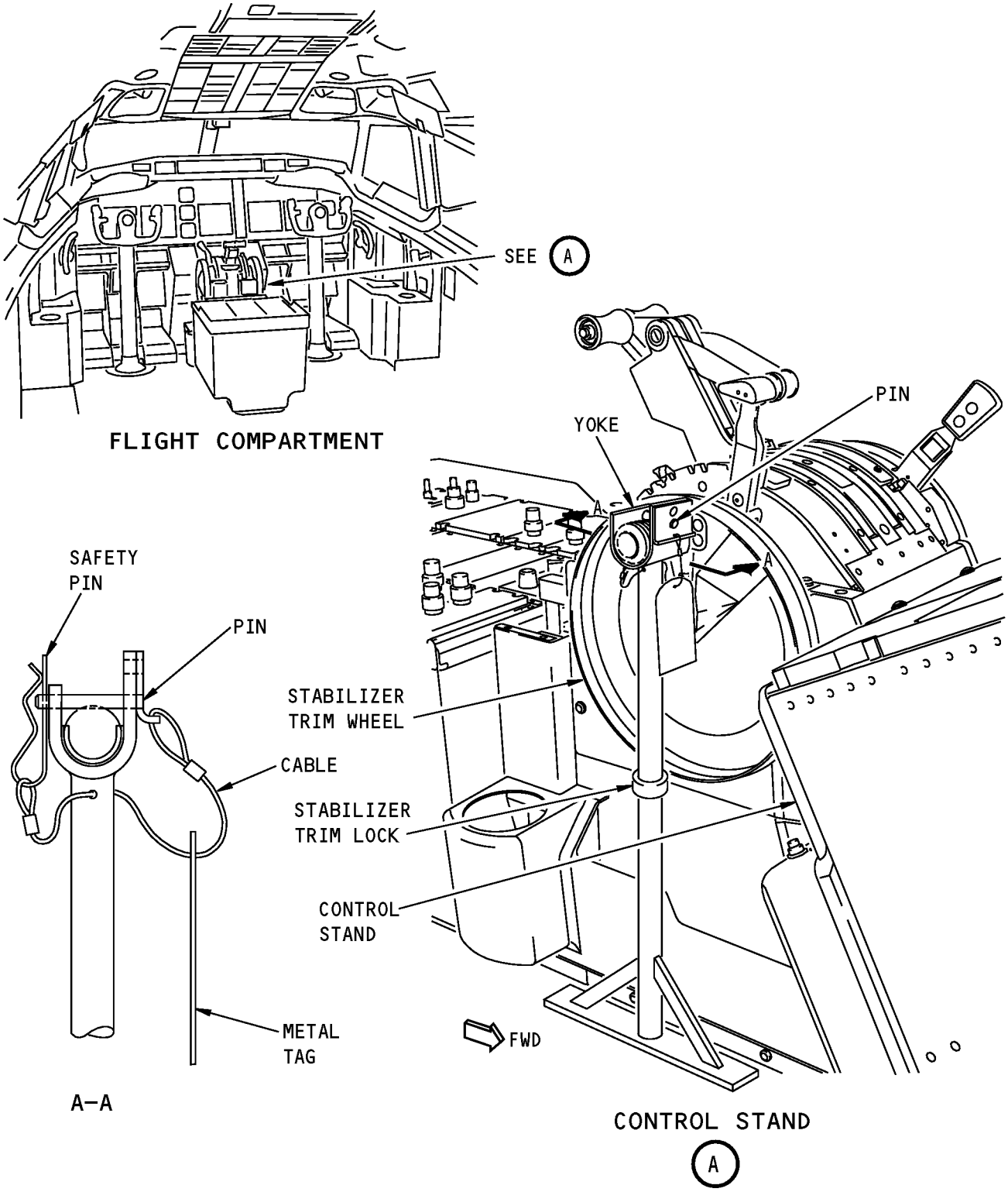
(LEFT SIDE IS SHOWN,
RIGHT SIDE IS OPPOSITE)

B

Thrust Brace Links Installation
Figure 401 (Sheet 2 of 2)/55-10-10-990-801



Horizontal Stabilizer Center Section Installation
Figure 402/55-10-10-990-802



Stabilizer Trim Lock Installation
Figure 403/55-10-10-990-803

VERTICAL STABILIZER (FIN) - CORROSION PREVENTION

1. General

A. Corrosion can occur on the vertical stabilizer skin, on the rear spar and at attach fittings.

B. Corrosion can occur on the rudder front spar and the attach fittings.

C. Moisture can collect between the trailing edge skin panel mating surfaces.

D. Corrosion and broken attach bolts have been found in the vertical stabilizer attach fitting. The attach bolts are made from H-11 or PH13-8M0 steel alloy, which can get cracks caused by stress corrosion.

TASK 55-30-00-910-801

2. Vertical Stabilizer (Fin) - Corrosion Prevention

A. References

Reference	Title
51-21-31 P/B 701	CORROSION REMOVAL AND CONTROL - CLEANING/PAINTING
51-21-91 P/B 701	CORROSION INHIBITING COMPOUND - CLEANING/PAINTING

B. Consumable Materials

Reference	Description	Specification
G00009	Compound - Organic Corrosion Inhibiting	BMS3-23

C. Location Zones

Zone	Area
320	Subzone - Vertical Fin and Rudder

D. Corrosion Prevention

SUBTASK 55-30-00-200-001

(1) Make the regular inspection to prevent or find the start of corrosion. Missing fasteners, white powdery, or other corrosion deposits are signs of corrosion. Initiate the corrosion prevention practices to decrease the occurrence of corrosion.

SUBTASK 55-30-00-200-002

(2) Following cleaning of suspected areas PAGEBLOCK 51-21-31/701, a full inspection is effective to ensure that protective finishes provided during manufacture remain intact.

SUBTASK 55-30-00-910-001

(3) Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to Structural Repair Manual for details of corrosion removal.

SUBTASK 55-30-00-370-001

(4) For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to decrease the corrosion process. Refer to PAGEBLOCK 51-21-91/701 for details on applying corrosion inhibiting compound. The finish system should be repaired at the first opportunity consistent with the maintenance schedule.

SUBTASK 55-30-00-370-002

(5) Frequency of Application

(a) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(b) Periodic application of corrosion inhibiting compound, G00009 is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

—————— END OF TASK ——————

VERTICAL STABILIZER (FIN) - REMOVAL/INSTALLATION

1. General

A. There are two tasks in this procedure. There is one task for the removal and one task for the installation of the vertical stabilizer. You must do these tasks in a hangar.

(1) The removal procedure has these parts:

(a) The removal of the access panels

(b) The installation of the rudder gust lock

(c) The removal of the rudder control cables

(d) The installation of the sling assembly

(e) The removal of the vertical fin.

(2) The installation procedure has these parts:

(a) The installation of the vertical fin

(b) The removal of the sling assembly

(c) The installation of the rudder control cables

(d) The removal of the rudder gust lock

(e) An adjustment of the rudder

(f) The installation of the access panels.

TASK 55-30-00-000-801

2. Vertical Stabilizer (Fin) Removal

(Figure 401, Figure 402)

A. References

Reference	Title
06-42-00-800-801	Finding an Access Door or Panel in the Empennage (P/B 201)
23-11-61-000-801	HF Antenna Coupler - Removal (P/B 401)
27-21-00-800-802	Remove Pressure from the Rudder Hydraulic Systems A, B, and Standby (P/B 201)
27-31-37-000-801	Elevator Feel Computer - Removal (P/B 401)
SRM 51-10-01	Structural Repair Manual

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1727	Lock - Ground, Rudder, PCU Removed (Part #: C27057-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-2032	Sling - Vertical Fin (Part #: C55010-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C55010-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
300	Empennage

D. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door
323AL	Vertical Fin, Front Spar Access Door
323AR	Vertical Fin, Front Spar Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

E. Prepare for the Removal.

SUBTASK 55-30-00-860-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

HAP 004, 005, 008-013, 015-026, 028-030

Row	Col	Number	Name
A	2	C01380	RADIO NAVIGATION ILS 1

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

HAP 001-013, 015-026, 028-030, 038, 041-054; HAP 037, 039, 040 POST SB 737-23-1299

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

HAP ALL

Row	Col	Number	Name
A	12	C01375	RADIO NAVIGATION VOR 2

HAP 048

Row	Col	Number	Name
D	2	C00857	COMMUNICATIONS HF 2

HAP 038, 041-054; HAP 037, 039, 040 POST SB 737-23-1299

SUBTASK 55-30-00-020-001

(2) Do this task: HF Antenna Coupler - Removal, TASK 23-11-61-000-801.

HAP ALL

SUBTASK 55-30-00-860-002

WARNING: RELEASE THE PRESSURE IN THE RUDDER HYDRAULIC SYSTEM. THE RUDDER CAN MOVE IF YOU PRESSURIZE THE SYSTEM. IF THE RUDDER MOVES, THE RUDDER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Do this task: Remove Pressure from the Rudder Hydraulic Systems A, B, and Standby, TASK 27-21-00-800-802.

SUBTASK 55-30-00-410-001

(4) To open the vertical fin access door, do this task: Finding an Access Door or Panel in the Empennage, TASK 06-42-00-800-801.

(a) Open these access panels:

Number	Name/Location
311BL	Stabilizer Trim Access Door
323AL	Vertical Fin, Front Spar Access Door
323AR	Vertical Fin, Front Spar Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

SUBTASK 55-30-00-480-001

(5) Install a rudder gust lock, SPL-1727 with a warning streamer.

F. Remove the Vertical Fin.

SUBTASK 55-30-00-020-002

(1) Disconnect the hydraulic tubes from the bottom of the fin and install caps.

SUBTASK 55-30-00-020-003

(2) Disconnect the electrical wires.

(a) Disconnect the VOR and HF cables, as applicable, in the stabilizer jackscrew compartment, above and aft of the pressure bulkhead.

SUBTASK 55-30-00-030-001

(3) Disconnect the pitot lines from the elevator feel computer assembly.

NOTE: Install tags on lines and port fittings to clearly show the correct connection location. See Elevator Feel Computer - Removal, TASK 27-31-37-000-801 for instructions on correct tubing removal.

SUBTASK 55-30-00-020-004

(4) Disconnect the rudder control cables from the power unit for the rudder control.

SUBTASK 55-30-00-020-005

(5) Disconnect the rudder control cables.

(a) Move the rudder trim indicator in the control cabin to NEUTRAL.

(b) Install the rig pin in the rudder centering unit output crank.

(c) Disconnect the rudder control cables from the turnbuckles in the stabilizer jackscrew compartment.

1) Install the cable clamps on the control cables.

SUBTASK 55-30-00-480-003

(6) Install the sling, SPL-2032, by the following steps:

(a) Install the three sling attach fittings to the applicable sides of the vertical fin, (Figure 401).

NOTE: Determine on which side you will put down the vertical fin. This will show which side of the vertical fin to install the sling attach fittings.

NOTE: No access doors need to be opened to install the attach fittings.

1) Remove the bolts on the vertical fin skin at the three applicable lift fitting locations.

2) Install the lift fittings with the accompanying bolts.

a) Add washers to lift fitting bolts, if bolts are too long.

b) Tighten fasteners to 25 pound-inches (2.8 Nm).

(b) Attach the sling assembly to the crane.

(c) At lift fitting #1 on both sides of the vertical fin, connect 50 foot (15 meter) length of 3/8 to 1/2 inch (9.5 to 12 mm) braided nylon rope.

NOTE: This rope will be a tether line.

(d) Put the sling assembly in its position.

(e) Connect the sling to the lift fittings on the vertical fin.

(f) Tighten the sling assembly to decrease the load on the fin attachment bolts.

SUBTASK 55-30-00-020-006

(7) Remove the vertical fin, (Figure 402).

(a) Remove the bolts and fasteners of the rear spar fittings on the left and right hand side of the airplane:

1) Remove the bolt [11], washer [12], retainer cap [13], lockwire [14], the antirotation lock [15] from the inboard rear spar fitting.

NOTE: If you remove the bolts to inspect them, remove one bolt at a time to keep the fin aligned.

2) Remove the cotter pin [22], the self-locking nut [21], the bolt [16], the washer [20], the two washers [18], and the washer [17] from the inboard rear spar fitting.

NOTE: There may be one more washer [20] for grip length adjustment.

3) Remove the self-locking nut [27], the bolt [23], washer [24], washer [25], washer [26], washers [19], and the washers [28] from the outboard rear spar fitting.

NOTE: There may be one more washer [26] for grip length adjustment.

NOTE: If you remove the bolts to inspect them, remove one bolt at a time to keep the fin aligned.

(b) Remove the bolts and the fasteners of the front spar fitting:

1) Remove the cotter pins [5], the nuts [4], the washers [2], the washers [3], the washers [6], and the bolts [1] from the front spar attach fittings.

NOTE: If you remove the bolts to inspect them, remove one bolt at a time to keep the fin aligned.

(c) Lift the vertical fin from the airplane. Make sure there are no side loads on the sling lift fittings.

(d) Lower the crane hook #1 to lay the vertical fin down in a horizontal position.

NOTE: Use the tether lines to position the fin horizontally.

SUBTASK 55-30-00-950-001

(8) Install a cover on the open structure on the fuselage.

SUBTASK 55-30-00-210-001

(9) To examine the leading edge of the vertical fin for aerodynamic smoothness, (SRM 51-10-01).

———————— END OF TASK ————————

TASK 55-30-00-400-801

3. Vertical Stabilizer (Fin) Installation

(Figure 401, Figure 402)

A. References

Reference	Title
06-42-00-800-801	Finding an Access Door or Panel in the Empennage (P/B 201)
23-11-00-730-801	HF Communication System - System Test (P/B 501)
23-11-61-400-801	HF Antenna Coupler - Installation (P/B 401)
27-21-00-800-801	Rudder Hydraulic System A, B, or Standby Pressurization (P/B 201)
27-21-00-800-802	Remove Pressure from the Rudder Hydraulic Systems A, B, and Standby (P/B 201)
27-21-00-820-808-001	Rudder Control Cables RA and RB Adjustment (P/B 501)
27-21-00-820-808-002	Rudder Control Cables RA and RB Adjustment (P/B 501)
27-31-37-400-801	Elevator Feel Computer - Installation (P/B 401)
34-51-00-730-801	VOR System - System Test (P/B 501)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1727	Lock - Ground, Rudder, PCU Removed (Part #: C27057-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-2031	Equipment - Alignment Pins and Guide, Vertical Fin Installation (Part #: C55009-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)
SPL-2032	Sling - Vertical Fin (Part #: C55010-33, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ) (Opt Part #: C55010-1, Supplier: 81205, A/P Effectivity: 737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)
D50004	Compound - Antiseize	BMS3-28

D. Location Zones

Zone	Area
300	Empennage

E. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door
323AL	Vertical Fin, Front Spar Access Door
323AR	Vertical Fin, Front Spar Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

F. Prepare to Install the Vertical Fin.

SUBTASK 55-30-00-860-003

WARNING: RELEASE THE PRESSURE IN THE RUDDER HYDRAULIC SYSTEM. THE RUDDER CAN MOVE IF THE SYSTEM IS PRESSURIZED. IF THE RUDDER MOVES, THE RUDDER CAN CAUSE INJURY TO PERSONS.

(1) Do this task: Remove Pressure from the Rudder Hydraulic Systems A, B, and Standby, TASK 27-21-00-800-802.

SUBTASK 55-30-00-010-001

(2) Open the vertical fin access doors (Figure 402).

(a) Open these access panels:

Number	Name/Location
311BL	Stabilizer Trim Access Door
323AL	Vertical Fin, Front Spar Access Door
323AR	Vertical Fin, Front Spar Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

SUBTASK 55-30-00-160-001

(3) Clean the bolts and the bolt holes that attach the fin with solvent, B00083.

SUBTASK 55-30-00-480-004

(4) Make sure that the lock, SPL-1727 with the warning streamer is installed.

G. Install the Vertical Fin.

SUBTASK 55-30-00-420-001

(1) Install the vertical fin, (Figure 401).

(a) Lift the fin into its position with the sling, SPL-2032.

NOTE: Use the tether lines to control the position of the fin while moving it.

1) Rotate vertical fin from a horizontal position to a vertical position by lifting crane hook #1.

(b) Use the alignment pin equipment, SPL-2031, to align the holes in the attachment fittings.

(c) Install the bolts, washers, and nuts that attach the left and right hand sides of the vertical fin to the rear spar.

1) Apply anti-seize compound, D50004 to the threads of bolt [16], bolt [23], nut [21], and nut [27].

2) Apply grease, D00015 only on the shank of bolt [16] and bolt [23].

3) Loosely install bolt [16], bolt [23], nut [21], nut [27], washer [17], washer [18], washers [19], washer [20], washer [24], washer [25], washer [26], and washers [28].

NOTE: There may be one more washer [20] or [26] for grip length adjustment.

a) If the gap on either side of the rear spar fitting is more than 0.003 inch (0.076 mm), add or remove shims from the [19] or [28] washers as necessary.

b) Apply sealant, A00247 between the washers [18] and the drag brace, (Figure 402).

c) Apply sealant, A00247 between the washers [25] and the drag brace, (Figure 402).

4) Tighten the rear spar bolts:

a) On the inboard fitting (Figure 402), tighten the bolt [16] to 6,500-7,500 pound-inches (734.4-847.4 Nm).

b) On the outboard fitting (Figure 402), tighten the bolt [23] to 7,500-8,500 pound-inches (847.4-960.4 Nm).

5) Install the cotter pin [22] in the inboard bolt [16] attach fitting.

6) Install the antirotation lock [15], retainer cap [13], washer [12], lockwire [14], and the bolt [11].

a) Apply anti-seize compound, D50004 to the threads of the bolt [11] and nut threads (bolt head) [16].

b) Tighten bolt [11] to 660-980 pound-inches (74.6-111 Nm).

(d) Apply a layer of the grease, D00015 only on the shank of the bolts [1] that attach the vertical fin at the front spar.

NOTE: Apply grease only to the shank of the bolts.

(e) Apply anti-seize compound, D50004, to the bolt threads and the nut threads.

(f) Install the two bolts [1], washers [2], washers [3], washers [6], and the nuts [4] that attach the vertical fin to the fuselage at the front spar fittings.

1) Tighten the nuts [4] to 50-1500 pound-inches (5.6-169.5 Nm).

NOTE: Maintain the required gaps shown in (Figure 402).

NOTE: Align nut with the cotter pin in the bolt.

2) Install the cotter pins [5].

SUBTASK 55-30-00-420-002

(2) Attach the rudder flight control cables.

(a) Connect the rudder control cables at the turnbuckles in the stabilizer jackscrew compartment.

(b) Remove the rig pin from the centering unit output crank.

HAP 038, 041-054; HAP 037, 039, 040 POST SB 737-23-1299

SUBTASK 55-30-00-020-007

(3) Do this task: HF Antenna Coupler - Installation, TASK 23-11-61-400-801.

HAP ALL

SUBTASK 55-30-00-410-003

(4) Connect the electrical cables.

(a) Connect the VOR cables, when it is necessary, in the jackscrew compartment above and aft of the pressure bulkhead.

SUBTASK 55-30-00-420-005

(5) Connect the pitot lines to the elevator feel computer assembly.

NOTE: See Elevator Feel Computer - Installation, TASK 27-31-37-400-801 for instructions on correct tubing installation.

SUBTASK 55-30-00-420-003

(6) Connect the rudder control cables at the rudder control power unit.

SUBTASK 55-30-00-420-004

(7) Connect the hydraulic lines.

SUBTASK 55-30-00-080-002

(8) Remove the sling and the lift fittings.

SUBTASK 55-30-00-080-003

(9) Remove the rudder gust lock and the warning streamer.

SUBTASK 55-30-00-860-004

(10) Check the rudder hydraulic system for leaks.

(a) Do this task: Rudder Hydraulic System A, B, or Standby Pressurization, TASK 27-21-00-800-801.

SUBTASK 55-30-00-860-005

(11) Do this task: Remove Pressure from the Rudder Hydraulic Systems A, B, and Standby, TASK 27-21-00-800-802.

SUBTASK 55-30-00-820-001

(12) Do this task: Rudder Control Cables RA and RB Adjustment, TASK 27-21-00-820-808-001 or Rudder Control Cables RA and RB Adjustment, TASK 27-21-00-820-808-002.

SUBTASK 55-30-00-730-001

(13) Do this task: VOR System - System Test, TASK 34-51-00-730-801.

H. Put the Airplane Back to Its Usual Condition.

SUBTASK 55-30-00-860-006

(1) Close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

HAP 004, 005, 008-013, 015-026, 028-030

Row	Col	Number	Name
A	2	C01380	RADIO NAVIGATION ILS 1

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

HAP 001-013, 015-026, 028-030, 038, 041-054; HAP 037, 039, 040 POST SB 737-23-1299

Row	Col	Number	Name
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name

HAP ALL

Row	Col	Number	Name
A	12	C01375	RADIO NAVIGATION VOR 2

HAP 048 (Continued)

Row	Col	Number	Name
HAP 048			
D	2	C00857	COMMUNICATIONS HF 2

HAP 038, 041-054; HAP 037, 039, 040 POST SB 737-23-1299

SUBTASK 55-30-00-730-002

(2) Do this task: HF Communication System - System Test, TASK 23-11-00-730-801.

HAP ALL

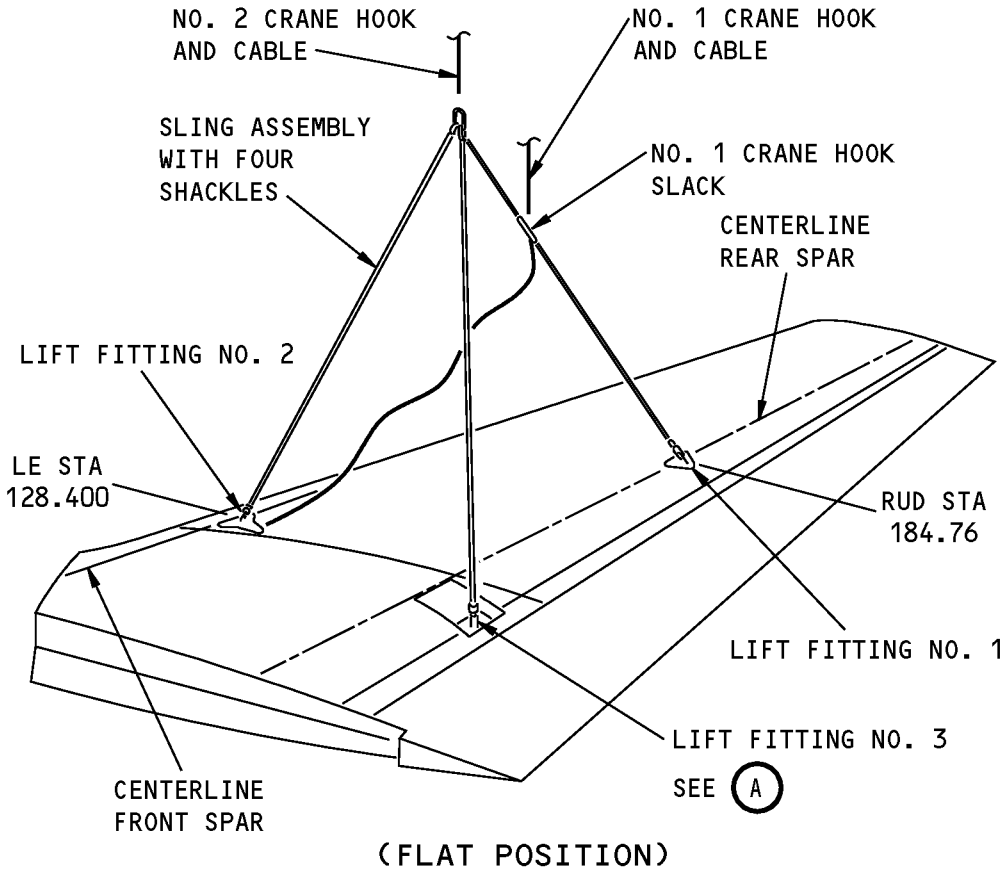
SUBTASK 55-30-00-410-004

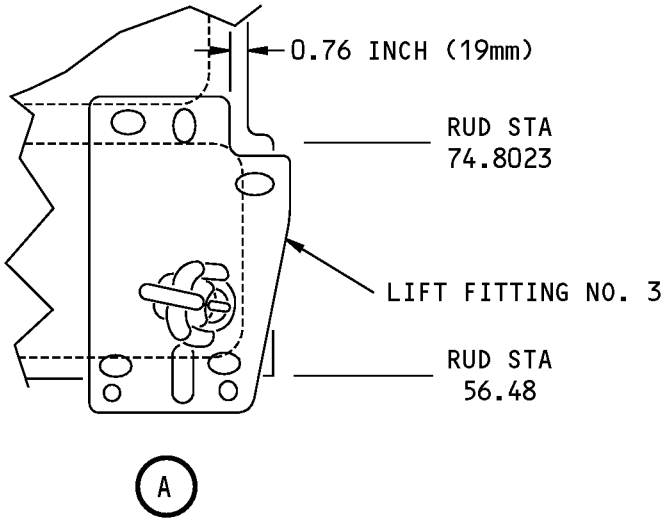
(3) Close the vertical fin access doors. Do this task: Finding an Access Door or Panel in the Empennage, TASK 06-42-00-800-801

(a) Close these access panels:

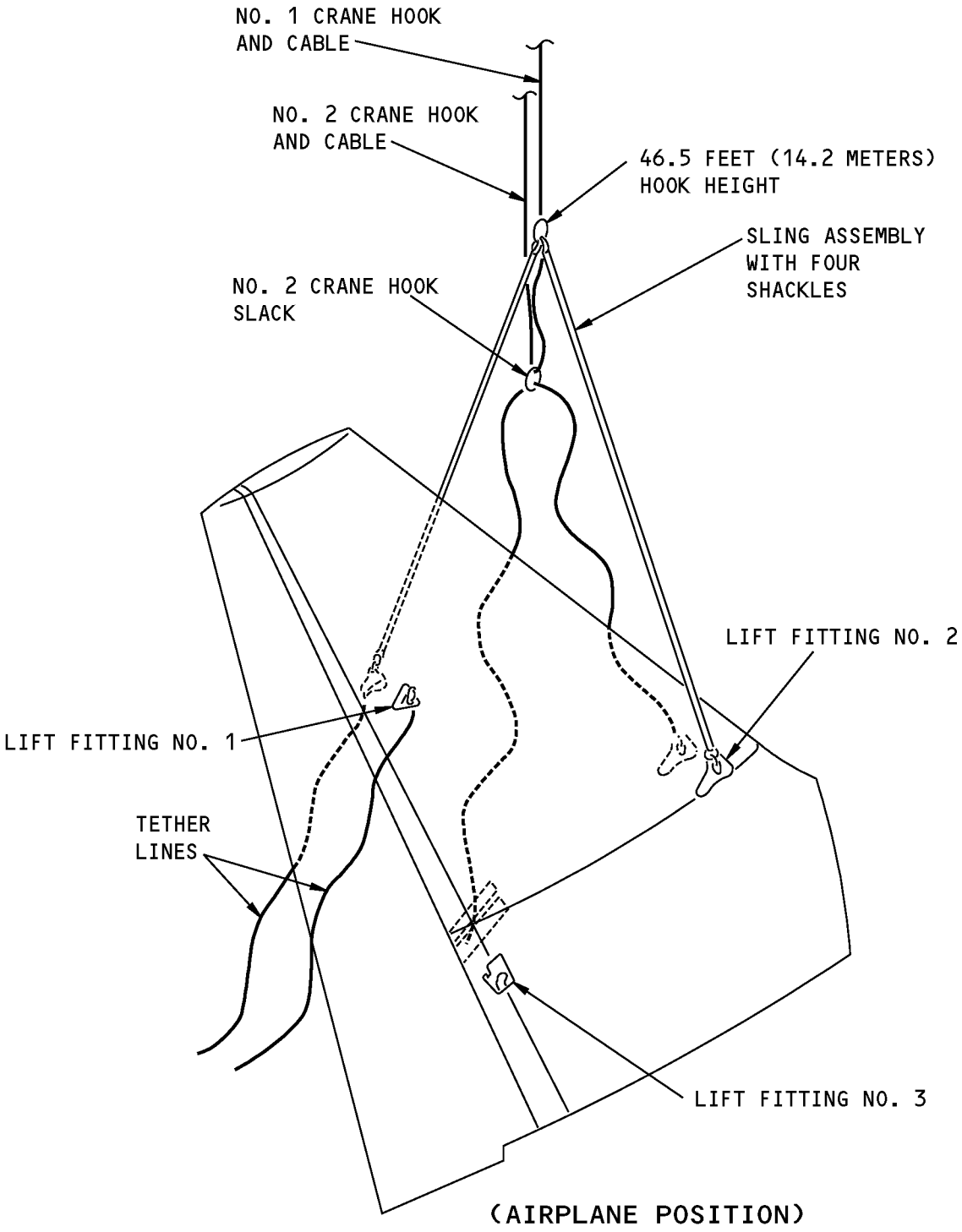
Number	Name/Location
311BL	Stabilizer Trim Access Door
323AL	Vertical Fin, Front Spar Access Door
323AR	Vertical Fin, Front Spar Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

END OF TASK

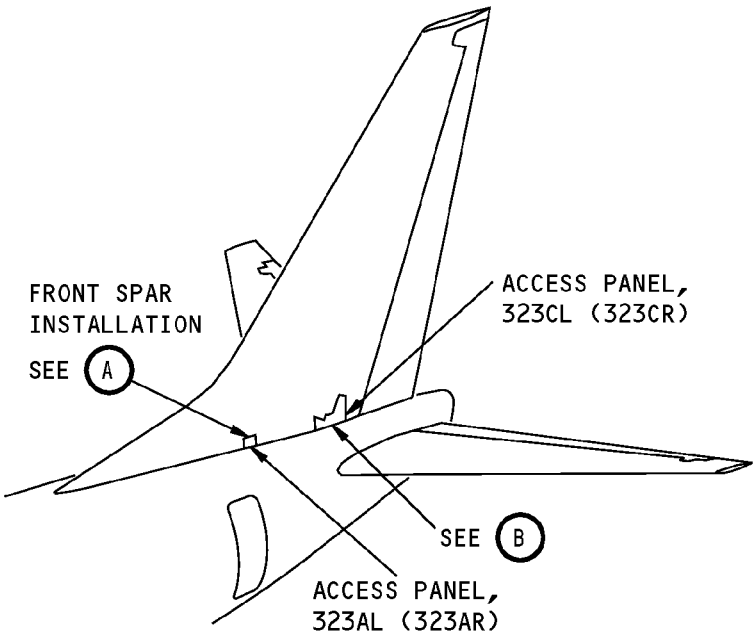




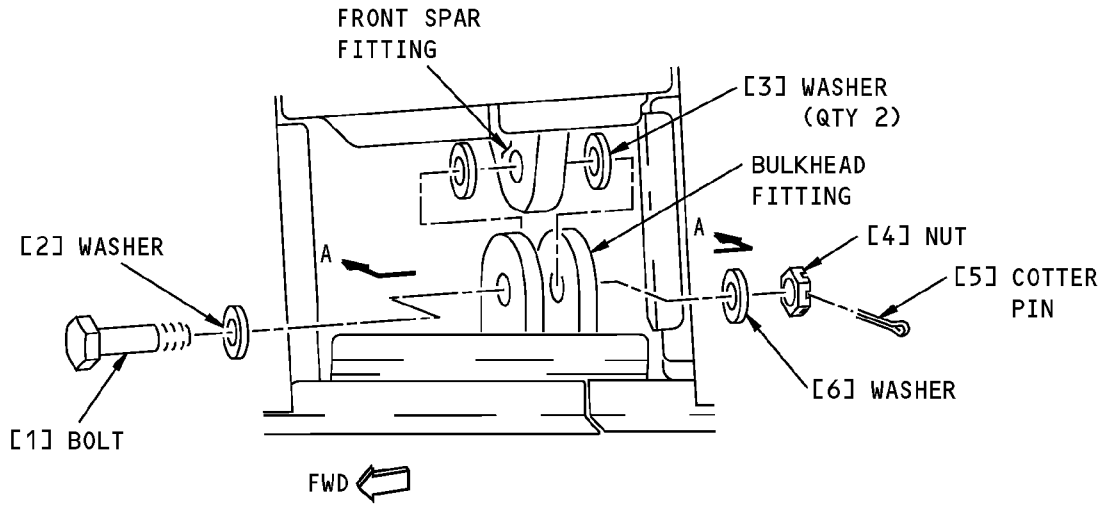
Vertical Fin Sling Installation
Figure 401 (Sheet 1 of 2)/55-30-00-990-802



Vertical Fin Sling Installation
Figure 401 (Sheet 2 of 2)/55-30-00-990-802



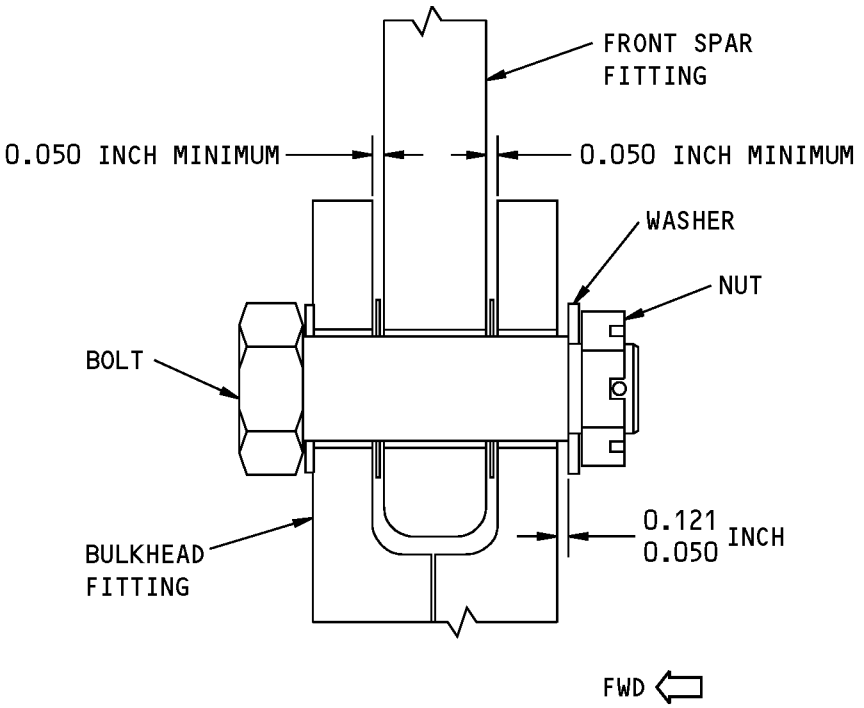
VERTICAL FIN
(LEFT SIDE IS SHOWN,
RIGHT SIDE IS EQUIVALENT)



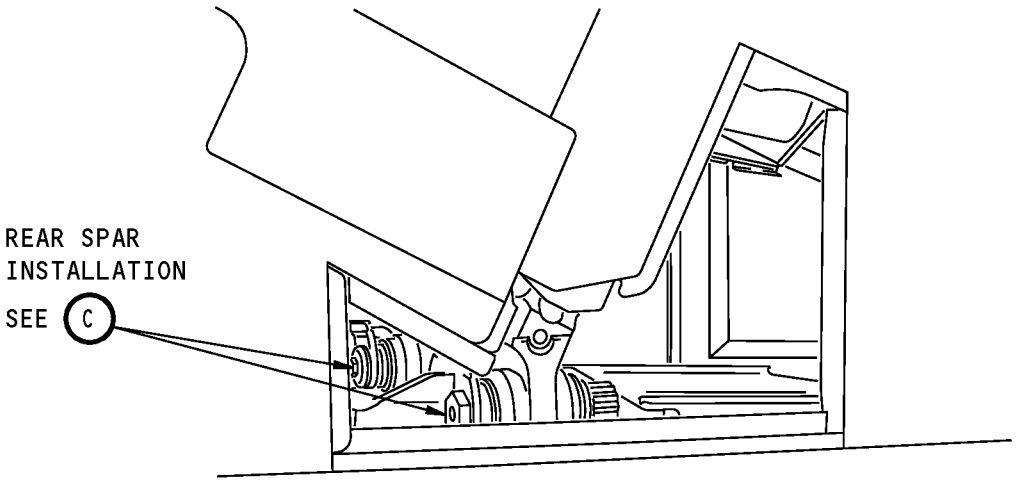
FRONT SPAR INSTALLATION
(ACCESS PANEL REMOVED)

A

Vertical Stabilizer (Fin) Installation
Figure 402 (Sheet 1 of 4)/55-30-00-990-803



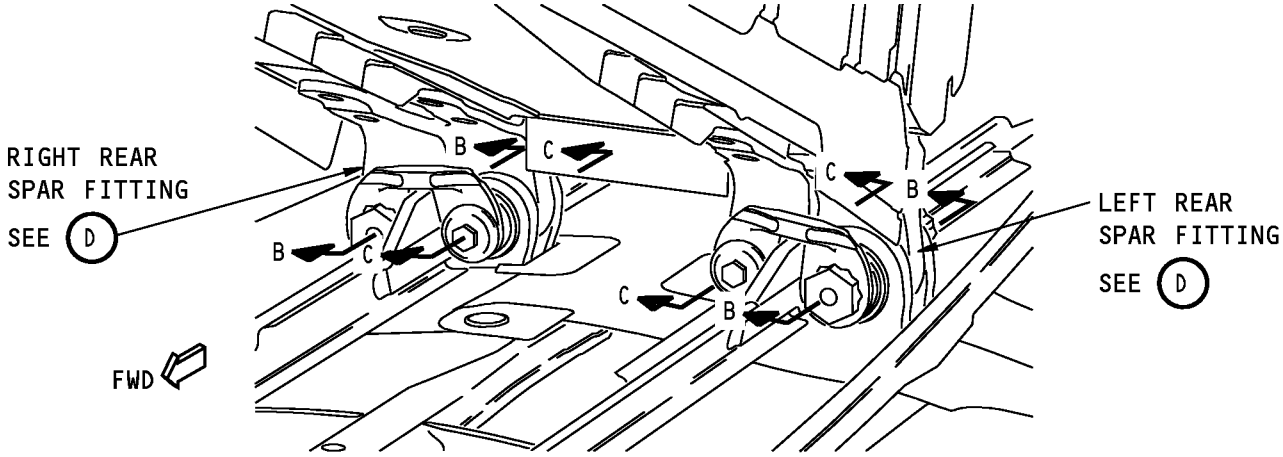
A–A



(ACCESS PANEL REMOVED)

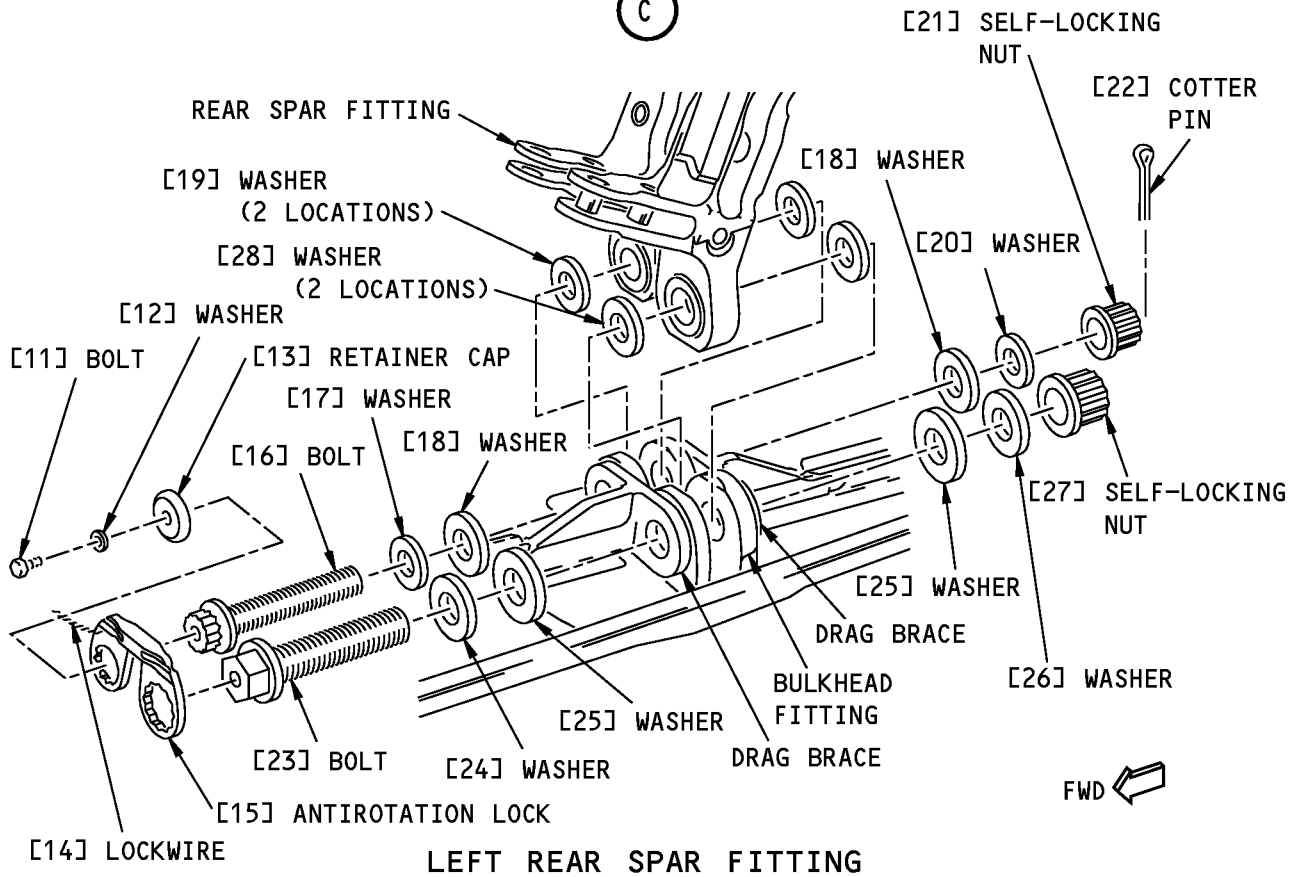
B

Vertical Stabilizer (Fin) Installation
Figure 402 (Sheet 2 of 4)/55-30-00-990-803



REAR SPAR INSTALLATION

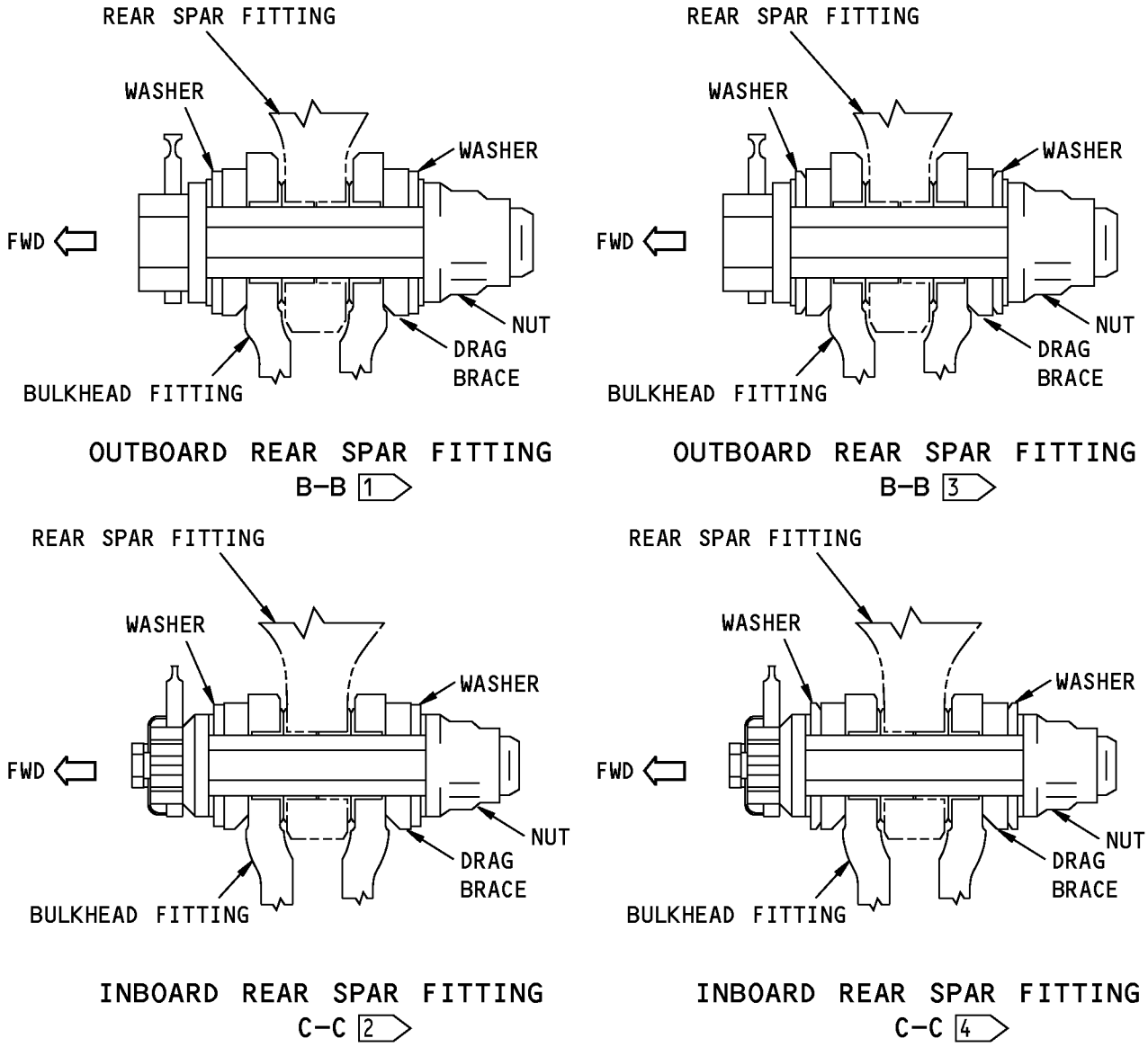
C



LEFT REAR SPAR FITTING
(RIGHT REAR SPAR FITTING IS OPPOSITE)

D

Vertical Stabilizer (Fin) Installation
Figure 402 (Sheet 3 of 4)/55-30-00-990-803



1 FOR P/N 17OA1614-1 D-SHAPED WASHERS
2 FOR P/N 17OA1614-2 D-SHAPED WASHERS
3 FOR P/N 17OA1614-9 CIRCULAR WASHERS
4 FOR P/N 17OA1614-8 CIRCULAR WASHERS

NOTE: IF THE P/N 17OA1614-1/-2 WASHERS ARE USED, CAUTION MUST BE TAKEN TO ENSURE THE WASHER IS POSITIONED PROPERLY WITH THE FLAT SIDE OF THE WASHER FACING THE RADIUS OF THE DRAG BRACE FITTINGS AND THAT WASHERS DO NOT ROTATE WHEN APPLYING TORQUE.

Vertical Stabilizer (Fin) Installation
Figure 402 (Sheet 4 of 4)/55-30-00-990-803

VERTICAL STABILIZER (FIN) - INSPECTION/CHECK

1. General

A. There is one task in this procedure, an inspection and a check of the vertical stabilizer (fin). To do the inspection, you measure the inner and outer diameters of the bolts and bushings which attach the fin to the fuselage.

B. If you do the inspection with the fin installed on the airplane, remove one bolt at a time. The alignment of the fin will not be changed.

TASK 55-30-00-200-801

2. Vertical Stabilizer (Fin) Inspection

(Figure 601)

A. References

Reference	Title
55-30-00-000-801	Vertical Stabilizer (Fin) Removal (P/B 401)
55-30-00-400-801	Vertical Stabilizer (Fin) Installation (P/B 401)

B. Location Zones

Zone	Area
300	Empennage

C. Procedure

SUBTASK 55-30-00-010-002

(1) Do this task: Vertical Stabilizer (Fin) Removal, TASK 55-30-00-000-801.

NOTE: If you do an inspection on the airplane, remove one bolt at a time. The fin will then stay in its position.

SUBTASK 55-30-00-220-001

(2) Examine the bolts and the bushings which attach the fin to the fuselage for worn areas.

(a) Measure the diameters of the bolts and the bushings.

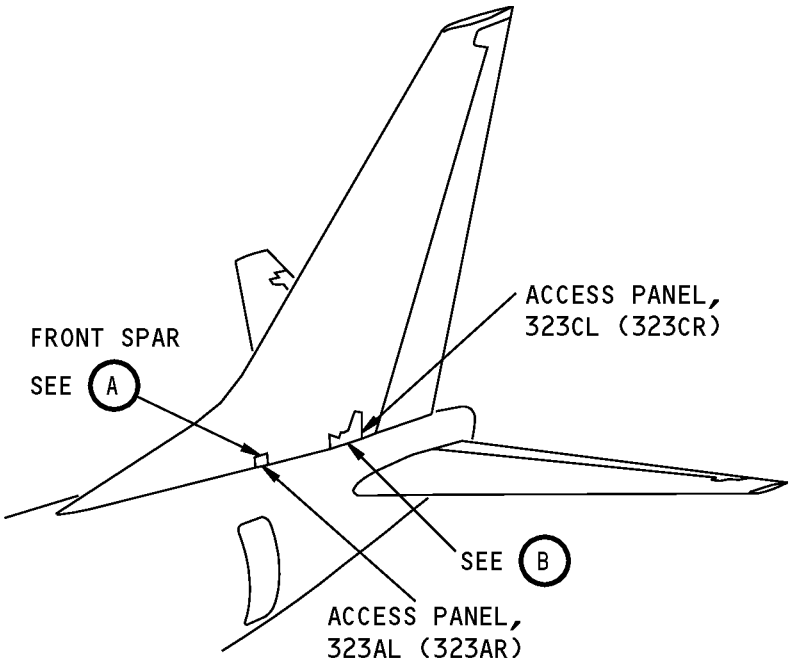
(b) Compare the dimensions you measured, with the permitted dimensions shown in (Figure 601).

(c) Repair or replace the parts which are not in the tolerance.

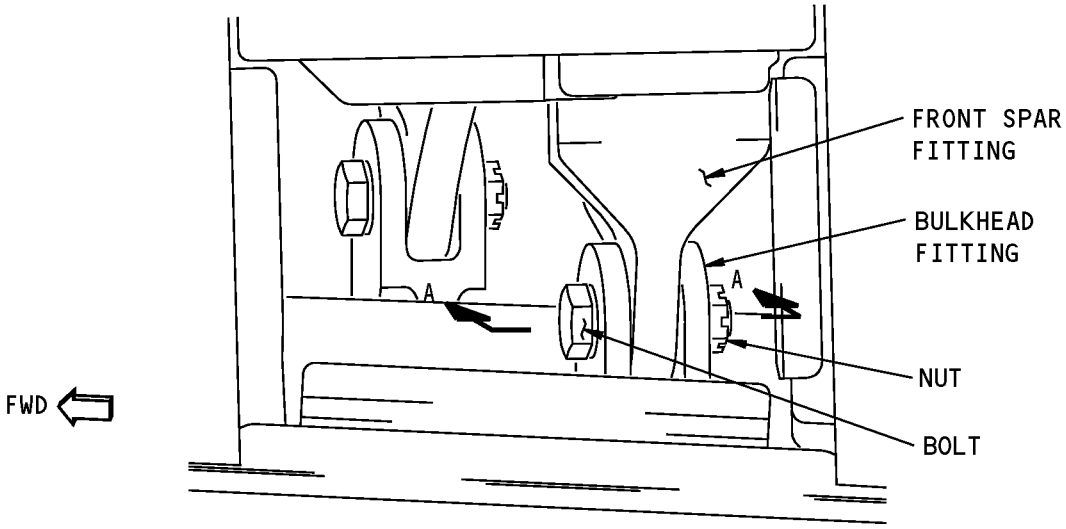
SUBTASK 55-30-00-410-005

(3) Do this task: Vertical Stabilizer (Fin) Installation, TASK 55-30-00-400-801.

———————— END OF TASK ————————



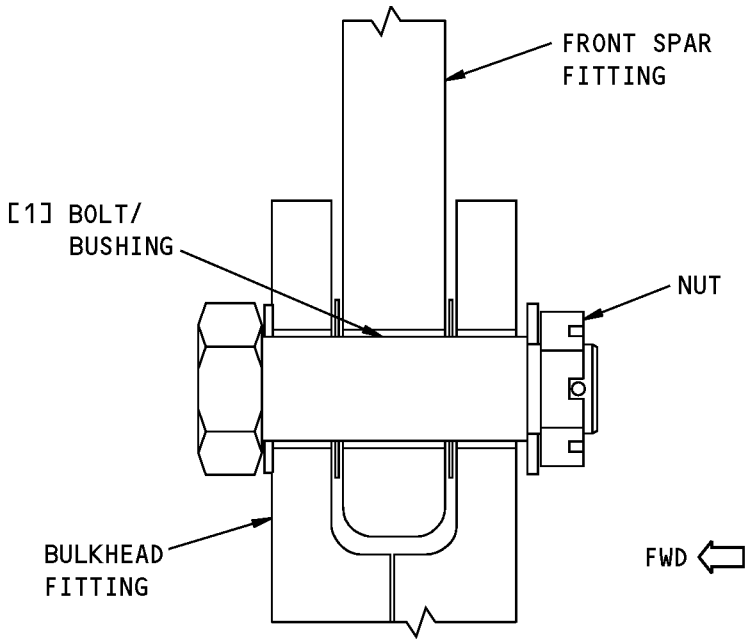
VERTICAL FIN
(LEFT SIDE IS SHOWN,
RIGHT SIDE IS EQUIVALENT)



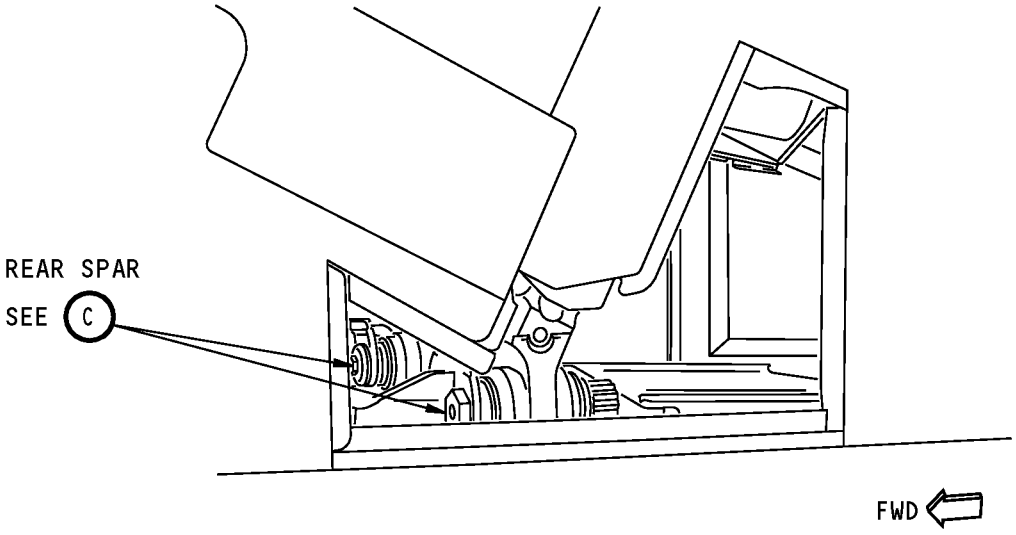
FRONT SPAR
(ACCESS PANEL REMOVED)

A

Vertical Stabilizer (Fin) Inspection
Figure 601 (Sheet 1 of 4)/55-30-00-990-801



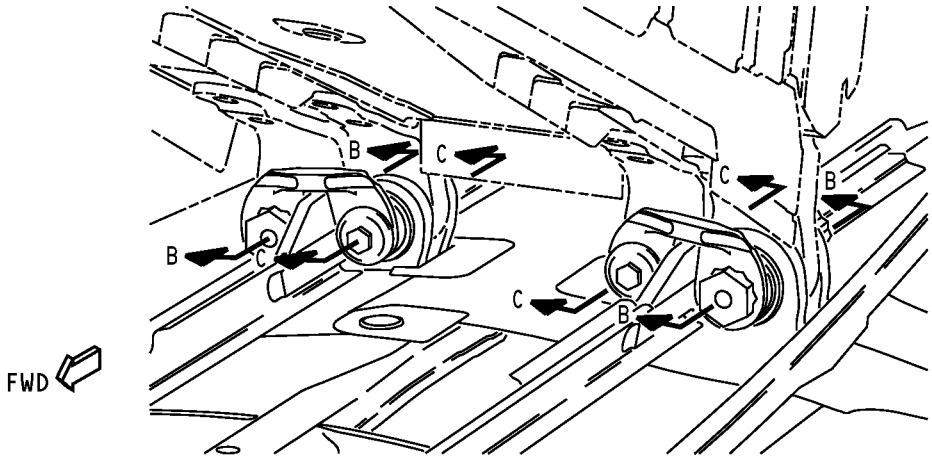
FRONT SPAR FITTING
A-A



(ACCESS PANEL REMOVED)

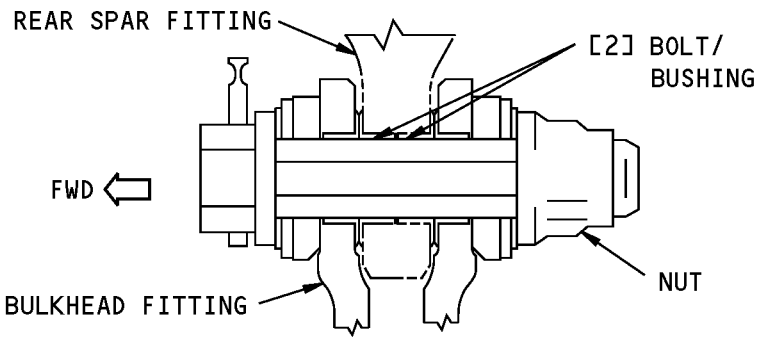
B

Vertical Stabilizer (Fin) Inspection
Figure 601 (Sheet 2 of 4)/55-30-00-990-801

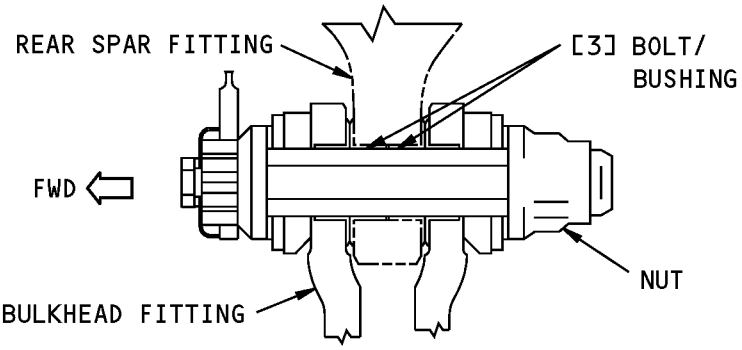


REAR SPAR

C



OUTBOARD REAR SPAR FITTING
B–B



INBOARD REAR SPAR FITTING
C–C

Vertical Stabilizer (Fin) Inspection
Figure 601 (Sheet 3 of 4)/55-30-00-990-801

INDEX NO.	PART NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART
				DIAMETER		PERMITTED WEAR DIMENSION INCHES/ (mm)	MAXIMUM DIAMETER CLEARANCE INCHES/ (mm)		
				MINIMUM INCHES/ (mm)	MAXIMUM INCHES/ (mm)				
1	172A0161-1	BUSHING (FRONT SPAR)	ID	0.8780 (22.301)	0.8790 (22.327)	0.8835 (22.441)	0.0100 (0.254)	X	
	170A1611-3	BOLT (FRONT SPAR)	OD	0.8730 (22.174)	0.8740 (22.200)	0.8685 (22.060)		X	X
2 [1]	172A0161-2	BUSHING (REAR SPAR)	ID	1.7530 (44.526)	1.7540 (44.552)	1.7600 (44.704)	0.0100 (0.254)	X	
	170A1611-1	BOLT (REAR SPAR)	OD	1.7480 (44.399)	1.7490 (44.425)	1.7420 (44.247)		X	X
3 [2]	172A0161-3	BUSHING (REAR SPAR)	ID	1.5030 (38.176)	1.5040 (38.202)	1.5095 (38.341)	0.0100 (0.254)	X	
	170A1611-2	BOLT (REAR SPAR)	OD	1.4980 (38.049)	1.4990 (38.075)	1.4925 (37.910)		X	X

[1] THIS BUSHING/BOLT SET IS IN THE OUTBOARD REAR SPAR FITTINGS.

[2] THIS BUSHING/BOLT SET IS IN THE INBOARD REAR SPAR FITTINGS.

Vertical Stabilizer (Fin) Inspection
Figure 601 (Sheet 4 of 4)/55-30-00-990-801

VERTICAL FIN LUG SEALING - INSPECTION/CHECK

1. General

A. There is one task in this procedure. An inspection of the vertical fin lug sealing.

NOTE: Obey all warnings and cautions given in the specified manual sections.

TASK 55-30-01-200-801

2. Vertical Fin Sealing Inspection

A. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)

B. Location Zones

Zone	Area
300	Empennage

C. Access Panels

Number	Name/Location
323BL	Vertical Fin, Forward Fin Access Door
323BR	Vertical Fin, Forward Fin Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

D. Procedure

SUBTASK 55-30-01-860-001

(1) Remove electrical power from the aircraft, do this task: Remove Electrical Power, TASK 24-22-00-860-812

SUBTASK 55-30-01-010-001

(2) Get access to the vertical fin lugs.

(a) Open these access panels:

Number	Name/Location
323BL	Vertical Fin, Forward Fin Access Door
323BR	Vertical Fin, Forward Fin Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

(3) Examine all areas for water ingress, corrosion damage and missing, insufficient, or cracked sealant (Figure 601).

NOTE: If no missing sealant is found, no further action is required.

SUBTASK 55-30-01-010-002

(4) Get access to the Stabilizer Trim

(a) Open the Stabilizer Trim Access panel 311BL

1) Examine the skin edges for any gaps

a) Make sure that the gaps have been filled with sealant

2) Examine the flight control cables, fittings, and pulleys for corrosion.

3) Examine the horizontal stabilizer jackscrew, ballnut, and gimbal pins for corrosion.

SUBTASK 55-30-01-410-001

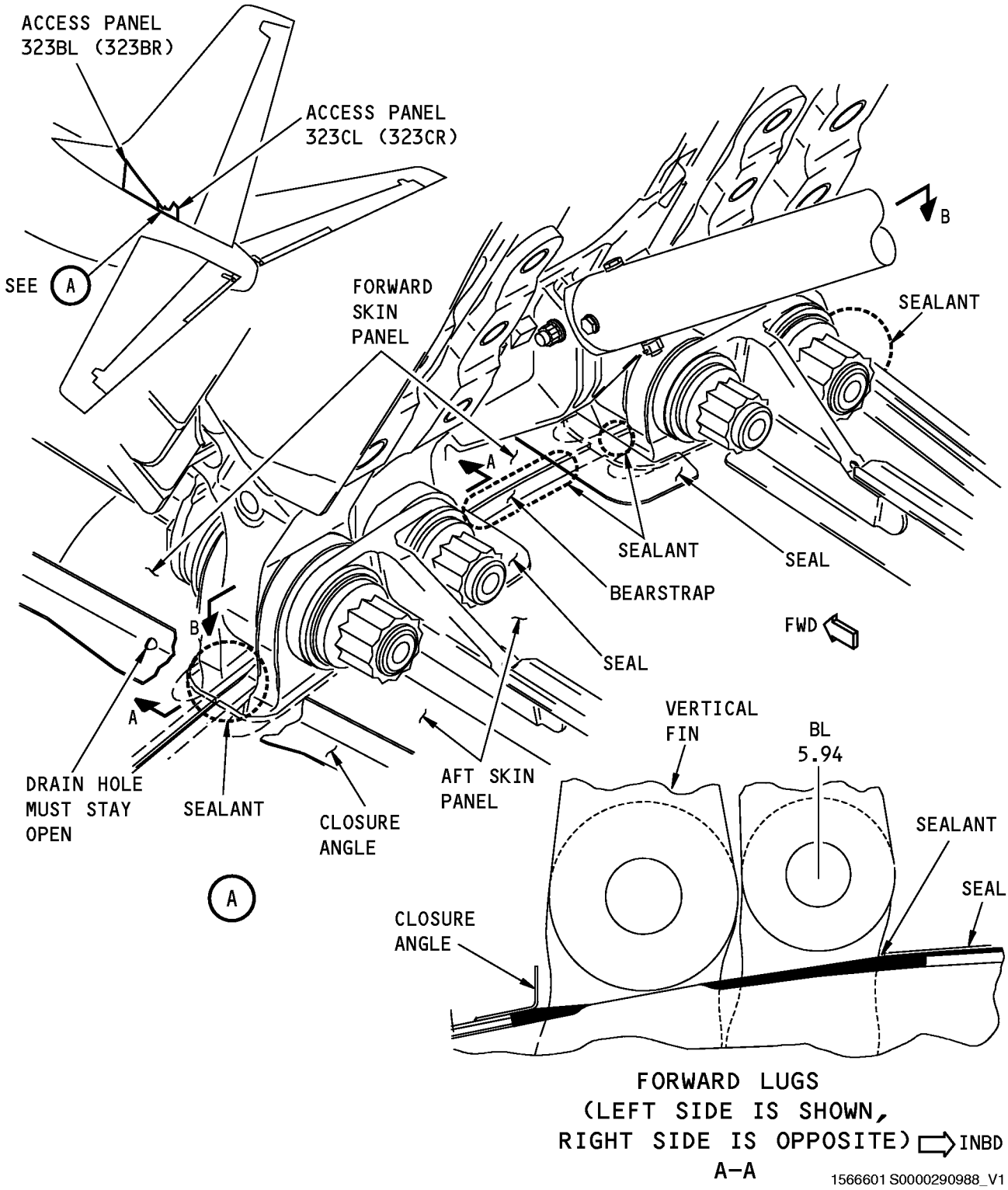
(5) Return the airplane back to it's original condition

Close these access panels:

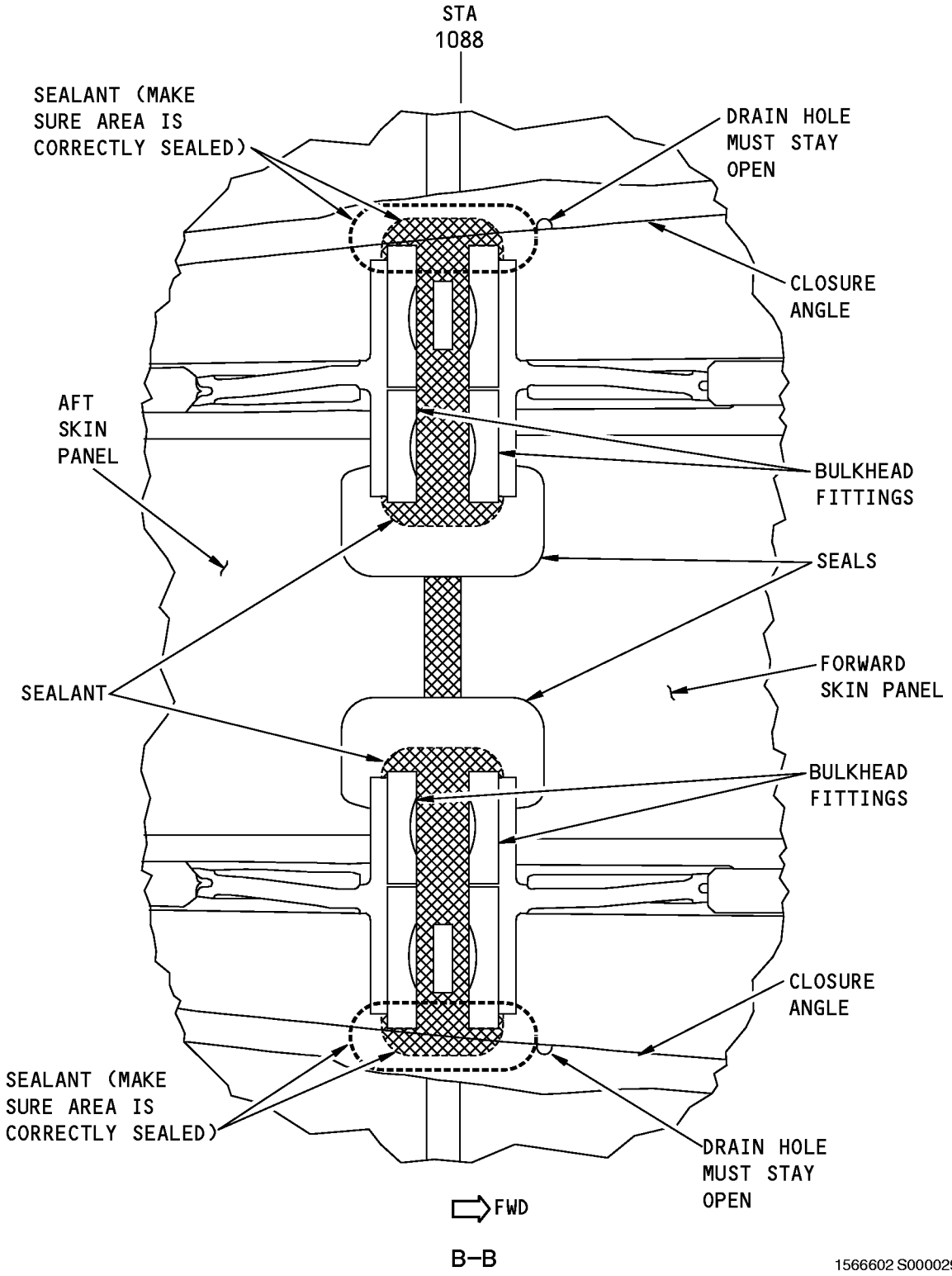
Number	Name/Location
323BL	Vertical Fin, Forward Fin Access Door
323BR	Vertical Fin, Forward Fin Access Door
323CL	Vertical Fin, Rear Spar Access Door
323CR	Vertical Fin, Rear Spar Access Door

(a) Do this task:Supply Electrical Power, TASK 24-22-00-860-811 Supply Electrical Power, TASK 24-22-00-860-811

——————— END OF TASK ———————



Vertical Fin Lugs - Inspection/Check
Figure 601 (Sheet 1 of 2)/55-30-01-990-801



Vertical Fin Lugs - Inspection/Check
Figure 601 (Sheet 2 of 2)/55-30-01-990-801

DORSAL FIN - REMOVAL/INSTALLATION

1. General

A. This procedure contains these tasks:

(1) Remove the dorsal fin.

(2) Install the dorsal fin.

TASK 55-32-11-000-801

2. Dorsal Fin Removal

(Figure 401)

A. References

Reference	Title
21-23-01-000-801	Overhead Distribution Duct Removal (P/B 201)
25-21-71-000-807	Entry Panel Removal (P/B 401)
25-80-00-000-801	Insulation Blanket Removal (P/B 401)

B. Location Zones

Zone	Area
321	Vertical Fin - Dorsal Fin

C. Procedure

SUBTASK 55-32-11-010-001

(1) Do this task: Entry Panel Removal, TASK 25-21-71-000-807

SUBTASK 55-32-11-010-002

(2) Remove the entry light lens on the center part of the aft lowered ceiling panel.

(a) Open the entry light lens.

(b) Remove the screws which attach the entry light fixture.

SUBTASK 55-32-11-010-003

(3) Do this task: Overhead Distribution Duct Removal, TASK 21-23-01-000-801.

SUBTASK 55-32-11-010-004

(4) Do this task: Insulation Blanket Removal, TASK 25-80-00-000-801.

SUBTASK 55-32-11-020-001

(5) Remove the dorsal fin.

(a) Remove the aft attach bolts from the fin.

(b) From the cabin, remove the forward attach bolts from the fin.

NOTE: Make a note of the type and the location of the bolts.

(c) Lift the dorsal fin from the fuselage.

END OF TASK

TASK 55-32-11-400-801

3. Dorsal Fin Installation

(Figure 401)

A. References

Reference	Title
21-23-01-400-801	Overhead Distribution Duct Installation (P/B 201)
25-21-71-400-807	Entry Panel Installation (P/B 401)
25-80-00-400-801	Insulation Blanket Installation (P/B 401)
51-31-00-390-804	Fillet Seal Application (P/B 201)

B. Location Zones

Zone	Area
321	Vertical Fin - Dorsal Fin

C. Procedure

SUBTASK 55-32-11-420-001

(1) Install the dorsal fin (Refer to (Figure 401)).

(a) Put the dorsal fin in its position on the airplane.

(b) Install the attach bolts on the fin.

SUBTASK 55-32-11-220-001

(2) Make sure the clearances are in the tolerance shown in (Figure 401).

(a) Make sure the full length of the lower dorsal seal touches the body.

SUBTASK 55-32-11-390-001

(3) To apply sealant to the attach bolts, do this task: Fillet Seal Application, TASK 51-31-00-390-804.

SUBTASK 55-32-11-410-002

(4) Do this task: Insulation Blanket Installation, TASK 25-80-00-400-801.

SUBTASK 55-32-11-410-003

(5) Do this task: Overhead Distribution Duct Installation, TASK 21-23-01-400-801.

SUBTASK 55-32-11-410-004

(6) Install the entry light fixture.

SUBTASK 55-32-11-410-005

(7) Do this task: Entry Panel Installation, TASK 25-21-71-400-807.

D. Aerodynamic Smoothness Requirements

SUBTASK 55-32-11-220-002

(1) This task gives the aerodynamic smoothness requirements for the Dorsal Fin and the Vertical Stabilizer to allow smooth airflow. This interface is located in an area where aerodynamic smoothness is very important.

(2) This task gives the aerodynamic smoothness requirements for the these components:

(a) Dorsal Fin

(b) Vertical Stabilizer

SUBTASK 55-32-11-220-003

(3) Do these steps to examine the clearance between the adjacent surfaces:

(a) Look for an unusually large clearance or a change in contour between adjacent surfaces.

(b) The clearance between these surfaces must agree with permitted tolerances.

1) Use the tolerances given in section A-A of Figure 402 to examine the clearance between the surfaces.

(4) If the measured value at each measurement location (points A1 thru A10) in Figure 402 is greater than the indicated tolerances, find and convert all of the measured misfair (step height) or clearance (gap width) values into a net effect value (NEV).

(a) Measure and record the misfair (step height) and the clearance (gap width) at each location A1–A10 of Figure 402.

(b) If all the measured values are within the tolerance as noted in view A-A Figure 402, then the interface meets the aerodynamic smoothness requirements.

(c) If one or more measured values exceed the tolerance values then do the steps that follow:

1) Convert each measured clearance (gap width) and misfair (step height) into a net effect value (NEV).

NEV for Clearance (Gap Width) Table

Clearance (Gap Width) INCHES	NET EFFECT VALUE
0.000	0.000
0.050	0.190
0.100	0.380
0.150	0.57
0.200	0.76
0.250	0.95
0.300	1.14
0.350	1.34
0.400	1.52
0.450	1.71
0.500	1.90

NEV for Misfair (step height) TABLE

Misfair (step height) INCHES	NET EFFECT VALUE
-0.150	2.74
-0.100	1.70
-0.075	1.20
-0.050	0.74
-0.040	0.56
-0.030	0.39

(Continued)

Misfair (step height) INCHES	NET EFFECT VALUE
-0.020	0.24
-0.010	0.10
0.000	0.00
0.010	0.12
0.020	0.40
0.030	0.73
0.040	1.09
0.050	1.49
0.075	2.56
0.100	3.72
0.150	6.24

a) Use the NEV tables and sheet 2 and sheet 3 of Figure 402 to linearly extrapolate the NEV.

2) Find the average NEV for the clearances and misfair measured from A1–A10.

a) Add all the NEV values at each point and divide this sum by the number of measurements.

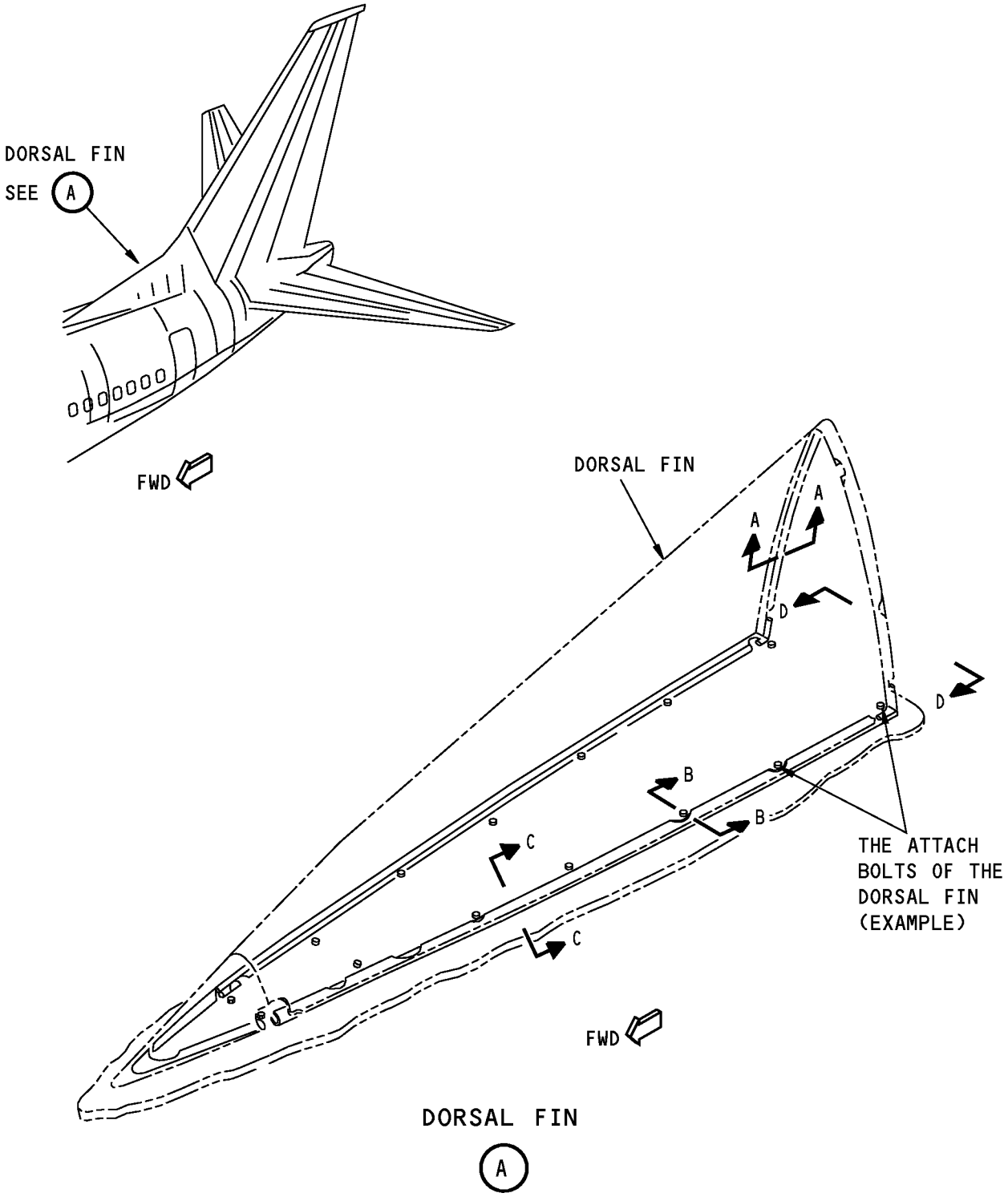
b) The result is the total NEV for the interface.

3) Check the NEV result against the net effect limit (NEL).

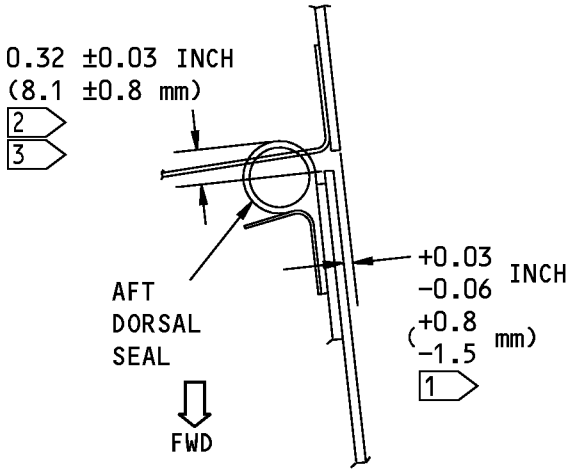
a) NEL is 1.0. If the NEV is less than or equal to the NEL, the surface clearance is aerodynamically acceptable.

b) If the calculated NEV is greater than the NEL, the clearance does not meet the aerodynamic smoothness requirements.

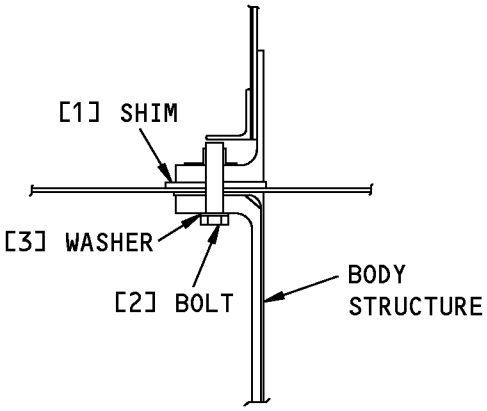
—————— END OF TASK ——————



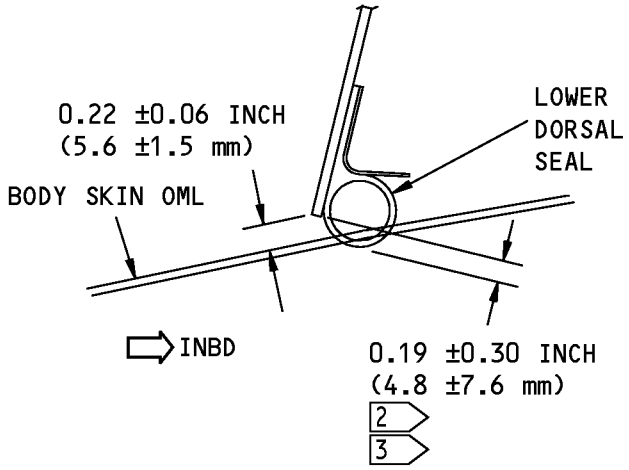
Dorsal Fin Installation
Figure 401 (Sheet 1 of 3)/55-32-11-990-801



A–A



ATTACHMENT FITTING
(TYPICAL, 14 LOCATIONS)
B–B



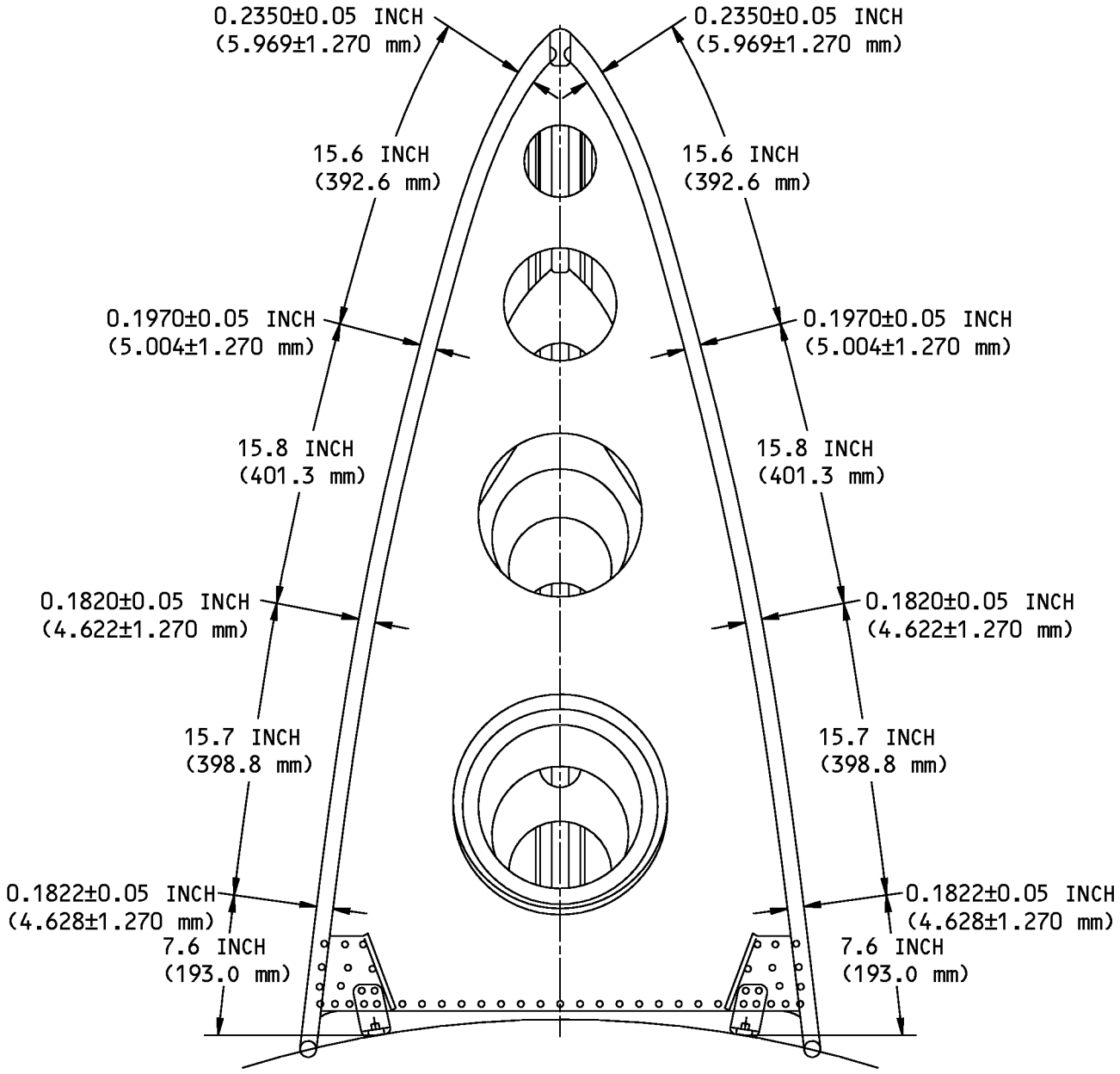
C–C

1 A POSITIVE TOLERANCE FOR THE FLUSHNESS SHOWS THE DORSAL FIN IS INBOARD OF THE VERTICAL FIN CONTOUR.

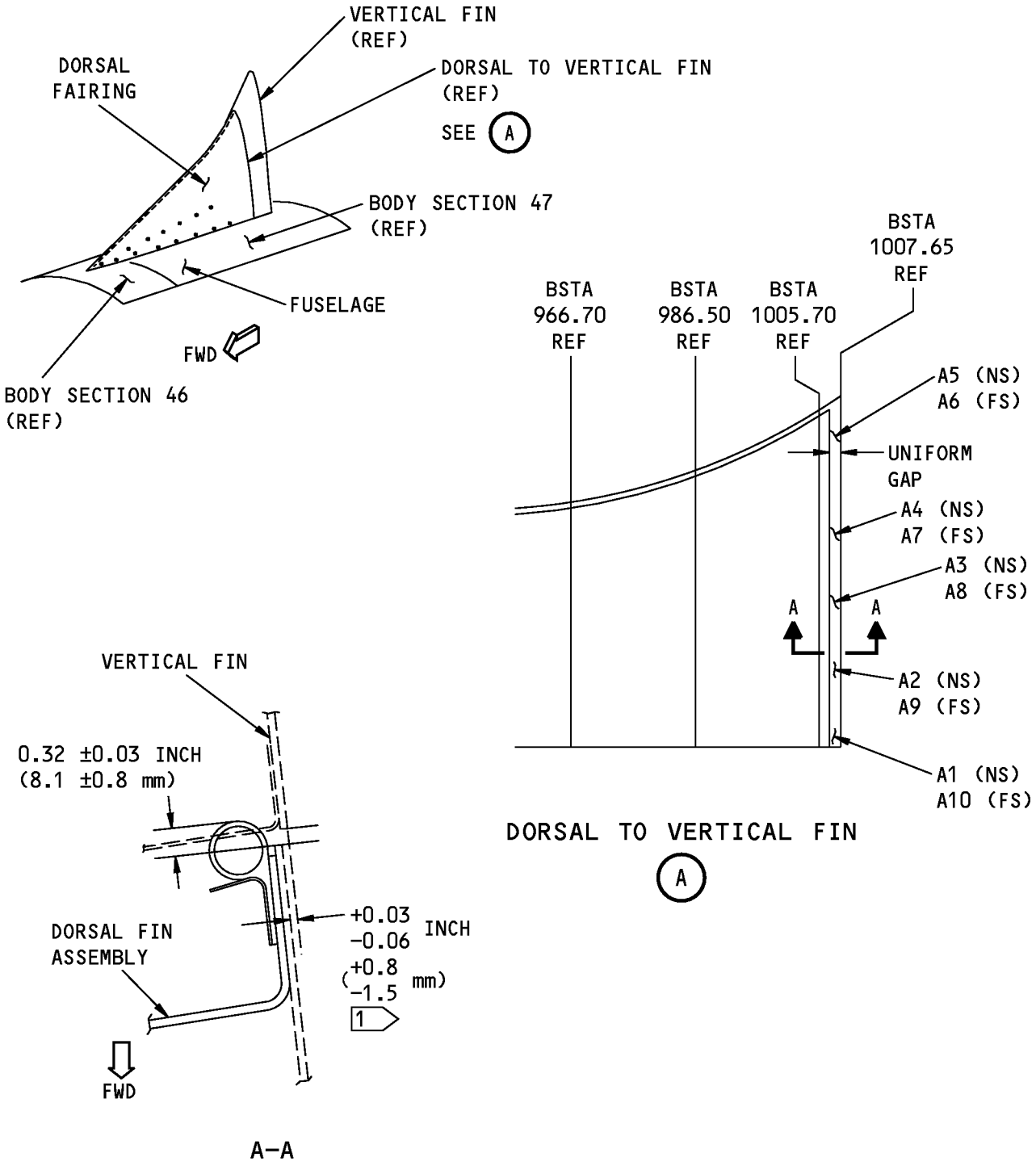
2 THIS DIMENSION IS FOR REFERENCE ONLY. NOT AN INSTALLATION REQUIREMENT.

3 APPROXIMATELY 1/3 OF THE SEAL DIAMETER SHOULD BE IN CONTACT.

Dorsal Fin Installation
Figure 401 (Sheet 2 of 3)/55-32-11-990-801



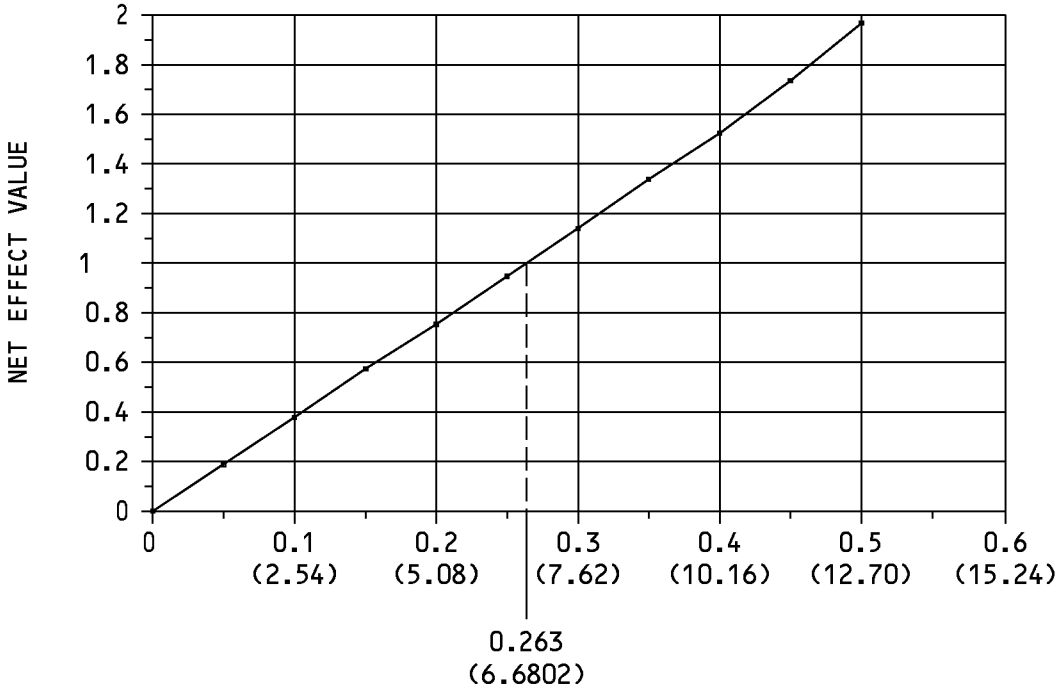
Dorsal Fin Installation
Figure 401 (Sheet 3 of 3)/55-32-11-990-801



1 A POSITIVE TOLERANCE FOR FLUSHNESS SHOWS THE DORSAL FIN IS INBOARD OF THE VERTICAL FIN CONTOUR

Aerodynamic Smoothness Requirements between Dorsal Fin and Vertical Fin
Figure 402 (Sheet 1 of 3)/55-32-11-990-802

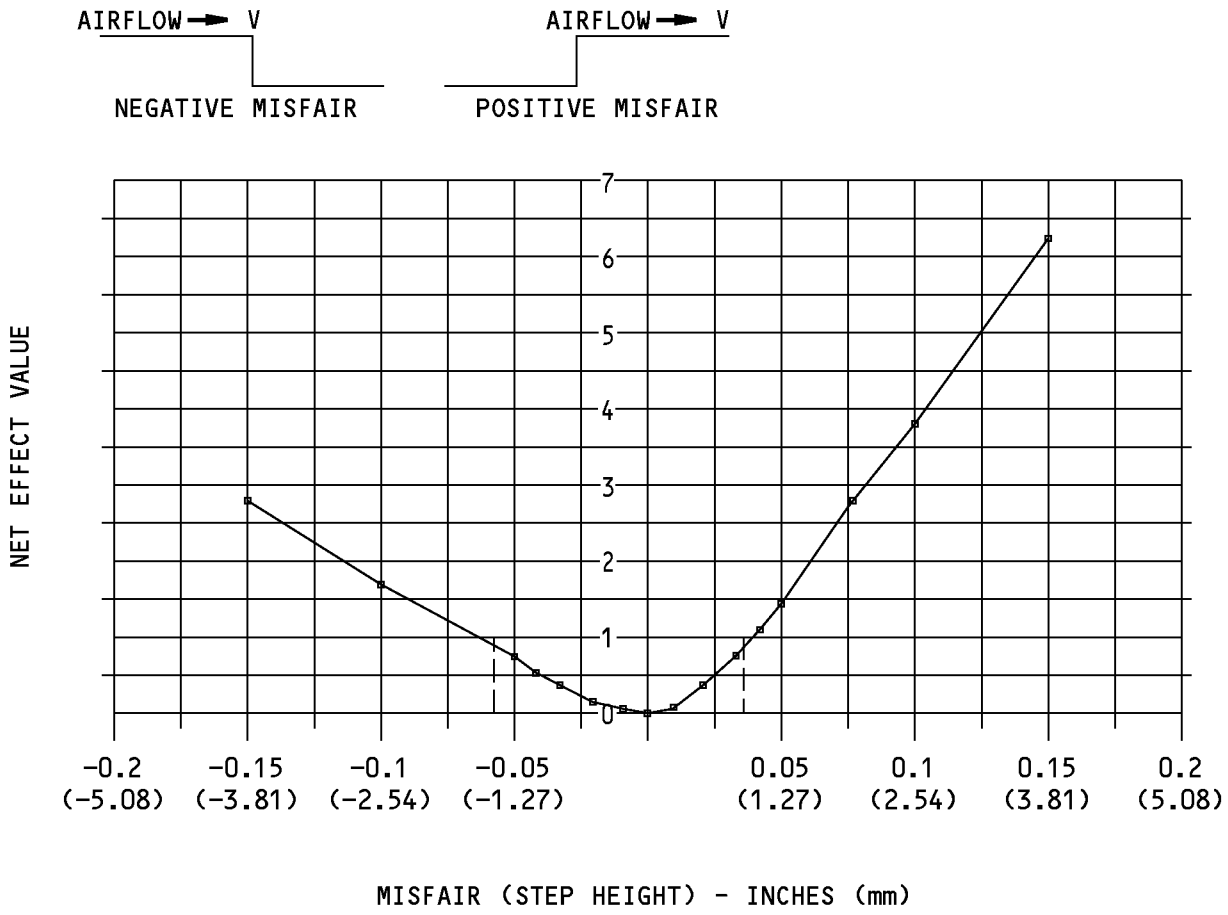
NET EFFECT VALUE CHART
DORSAL FAIRING TO VERTICAL FIN GAP



NOTE: THE NET EFFECT LIMIT (NEL) FOR THIS ITEM IS 1.0. IF ALL MEASURED CLEARANCE (GAP VALUES) FOR THIS ITEM ARE LESS THAN 0.263 INCHES (6.6802 mm) THEN PASSAGE OF THE NEL IS ASSURED AND AN ACTUAL NEL CALCULATION IS NOT REQUIRED.

Aerodynamic Smoothness Requirements between Dorsal Fin and Vertical Fin
Figure 402 (Sheet 2 of 3)/55-32-11-990-802

NET EFFECT VALUE CHART
DORSAL FAIRING TO VERTICAL FIN MISFAIR



NOTE: THE NET EFFECT LIMIT (NEL) FOR THIS IS 1.0 IF ALL MEASURED MISFAIR (STEP VALUES) FOR THIS ITEM ARE BETWEEN -0.064 INCHES (-1.6256 mm) AND +0.038 INCHES (0.09652 mm) THEN PASSAGE OF NEL IS ASSURED AND ACTUAL NEL CALCULATION IS NOT REQUIRED.

Aerodynamic Smoothness Requirements between Dorsal Fin and Vertical Fin
Figure 402 (Sheet 3 of 3)/55-32-11-990-802

VERTICAL STABILIZER (FIN) LEADING EDGE - REMOVAL/INSTALLATION

1. General

A. There are two tasks in this procedure:

(1) Vertical Stabilizer (Fin) Leading Edge Removal

(2) Vertical Stabilizer (Fin) Leading Edge Installation

TASK 55-33-11-000-801

2. Vertical Stabilizer (Fin) Leading Edge Removal

(Figure 401)

A. References

Reference	Title
55-33-21-990-801	Figure: Vertical Stabilizer Tip Installation (P/B 401)
SRM 51-10-01	Structural Repair Manual

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1558	Adapter - Access Panel, Leverage (Part #: 3008-550, Supplier: 55856, A/P Effectivity: 737-ALL) (Part #: B20004-21, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Location Zones

Zone	Area
322	Vertical Fin - Removable Fin Leading Edge

D. Access Panels

Number	Name/Location
322A	Vertical Fin, Fixed Leading Edge
322AL	Vertical Fin, Fixed Leading Edge
322AR	Vertical Fin, Fixed Leading Edge
322B	Vertical Fin, Removable Leading Edge
322C	Vertical Fin, Removable Leading Edge

HAP 038, 041-054, 102-999; HAP 037, 039, 040 POST SB 737-23-1299

E. Prepare for the Removal

SUBTASK 55-33-11-040-001

WARNING: REMOVE THE ELECTRICAL POWER FROM EACH HIGH FREQUENCY (HF) COMMUNICATION SYSTEM, BEFORE YOU REMOVE THE LEADING SECTIONS. HF SIGNALS CAN CAUSE ELECTRICAL SHOCKS AND INJURY TO PERSONS.

(WARNING PRECEDES)

(1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
HAP 038, 041-054; HAP 037, 039, 040 POST SB 737-23-1299			
E	11	C00839	COMMUNICATIONS HF 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
HAP 048			
D	2	C00857	COMMUNICATIONS HF 2

HAP ALL

F. Removal

SUBTASK 55-33-11-020-001

WARNING: KEEP PERSONS AWAY FROM THE AREA BELOW THE VERTICAL STABILIZER. INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT CAN OCCUR IF EQUIPMENT OR PARTS FALL.

CAUTION: BE CAREFUL WHEN YOU REMOVE THE LEADING EDGE. YOU CAN EASILY CAUSE DAMAGE TO THE LEADING EDGE FINISH.

(1) Hold the leading edge panel that you will remove, and do this step (Figure 401):

Open these access panels:

Number	Name/Location
322A	Vertical Fin, Fixed Leading Edge
322AL	Vertical Fin, Fixed Leading Edge
322AR	Vertical Fin, Fixed Leading Edge
322B	Vertical Fin, Removable Leading Edge
322C	Vertical Fin, Removable Leading Edge

SUBTASK 55-33-11-010-002

(2) Remove the fasteners from the applicable vertical fin leading edge access panels.

CAUTION: WHEN REMOVING PANEL FASTENERS, MAKE SURE THAT THE DRIVER BIT IS IN LINE WITH A FASTENER. THIS WILL PREVENT DRIVER BIT WOBBLE WHICH CAN CAUSE DAMAGE TO THE FASTENER RECESSES AND THREADS.

(a) The following can help remove the fasteners:

1) A leverage leverage access panel adapter, SPL-1558,

2) A leverage access panel adapter, SPL-1558,

3) A removal anti cam-out ribbed (ACR) bit,

NOTE: A combination removal/installation ACR bit is not recommended. The bit should have a hardness of 56-58 RC.

CAUTION: ONLY APPLY FASTENER REMOVAL COMPOUND TO THE BIT IF NEEDED. CLEAN THE BIT AFTER EACH USE. DO NOT APPLY FASTENER REMOVAL COMPOUND TO THE FASTENER RECESSES, HOLES, OR THREADS. THIS CAN CAUSE DAMAGE TO THE FASTENERS.

4) Apply a fastener removal compound on the driver bit if a fastener is difficult to remove.

SUBTASK 55-33-11-030-001

(3) With access panel 322C [5] removed (Figure 401), disconnect the upper end of the feedline tube [6].

SUBTASK 55-33-11-020-002

(4) With access panel 322AL [2] removed (Figure 401), remove both hose clamps [7] from feedline tube assembly and slide sleeve [8] back.

SUBTASK 55-33-11-010-004

(5) With access panel 322AL [2] removed (Figure 401) , remove coupler tray assembly cover [9] and disconnect lower end of feedline tube [6].

SUBTASK 55-33-11-010-005

(6) Remove fasteners from vertical stabilizer leading edge panel [4].

SUBTASK 55-33-11-010-006

(7) Remove fasteners from vertical stabilizer tip forward fairing (Figure 55-33-21-990-801) and remove.

SUBTASK 55-33-11-010-007

(8) Move vertical stabilizer leading edge [4] slightly up and remove.

SUBTASK 55-33-11-210-003

(9) To examine the leading edge for aerodynamic smoothness, (SRM 51-10-01).

SUBTASK 55-33-11-210-004

(10) Put a protective cover on the leading edge area.

——————— END OF TASK ———————

TASK 55-33-11-400-801

3. Vertical Stabilizer (Fin) Leading Edge Installation

(Figure 401)

A. References

Reference	Title
20-10-37 P/B 601	ELECTRICAL BONDING - INSPECTION/CHECK
20-50-11 P/B 201	STANDARD TORQUE VALUES - MAINTENANCE PRACTICES
51-21-41-370-801	Apply Alodine 1000 Solution (P/B 701)
55-33-21-990-801	Figure: Vertical Stabilizer Tip Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Meter - Bonding (Approved Explosion Proof & Intrinsically Safe) (Part #: C15292 (MODEL T477W), Supplier: 01014, A/P Effectivity: 737-ALL) (Part #: M1, Supplier: 3AD17, A/P Effectivity: 737-ALL) (Part #: M1B, Supplier: 3AD17, A/P Effectivity: 737-ALL)
SPL-1558	Adapter - Access Panel, Leverage (Part #: 3008-550, Supplier: 55856, A/P Effectivity: 737-ALL) (Part #: B20004-21, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796, Class III

D. Location Zones

Zone	Area
322	Vertical Fin - Removable Fin Leading Edge

E. Access Panels

Number	Name/Location
322A	Vertical Fin, Fixed Leading Edge
322AL	Vertical Fin, Fixed Leading Edge
322AR	Vertical Fin, Fixed Leading Edge
322B	Vertical Fin, Removable Leading Edge
322C	Vertical Fin, Removable Leading Edge

F. Installation

SUBTASK 55-33-11-010-003

(1) Remove the protective cover from the leading edge area.

SUBTASK 55-33-11-410-003

(2) Attach lower end of feedline tube [6] and install coupler tray assembly cover [9] (Figure 401).

SUBTASK 55-33-11-410-004

(3) Install sleeve [8] to feedline tube assembly and attach hose clamps [7] (Figure 401).

SUBTASK 55-33-11-420-001

WARNING: KEEP PERSONS AWAY FROM THE AREA BELOW THE VERTICAL STABILIZER. INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT CAN OCCUR IF EQUIPMENT OR PARTS FALL.

CAUTION: BE CAREFUL WHEN YOU INSTALL THE LEADING EDGE. YOU CAN EASILY CAUSE DAMAGE TO THE LEADING EDGE FINISH.

(4) Put the applicable leading edge panel in it's position on the stabilizer (Figure 401) and do these steps:

CAUTION: ALIGN THE LEADING EDGE ASSEMBLY ALONG THE FULL LENGTH OF THE EDGE BEFORE YOU INSTALL THE FASTENERS. IF YOU PUSH THE ASSEMBLY INTO ITS POSITION AND INSTALL THE FASTENERS, DAMAGE CAN OCCUR TO THE RIB CHORDS.

(a) Make sure you check the alignment of the leading edge assembly along the full length prior to installing the fasteners.

NOTE: If the leading edge assembly is not aligned or forced into position during installation, then the induced strains can cause tension cracks in the rib chords.

Close these access panels:

Number	Name/Location
322A	Vertical Fin, Fixed Leading Edge
322AL	Vertical Fin, Fixed Leading Edge
322AR	Vertical Fin, Fixed Leading Edge
322B	Vertical Fin, Removable Leading Edge
322C	Vertical Fin, Removable Leading Edge

SUBTASK 55-33-11-420-003

(5) Put the applicable vertical stabilizer tip forward fairing in its position on the stabilizer (Figure 55-33-21-990-801).

SUBTASK 55-33-11-420-002

(6) Install the fasteners that attach the vertical fin leading edge and vertical tip forward fairing.

CAUTION: WHEN INSTALLING FASTENERS, MAKE SURE THAT THE DRIVER BIT IS IN LINE WITH A FASTENER. THIS WILL PREVENT DRIVER BIT WOBBLE WHICH CAN CAUSE DAMAGE TO THE FASTENER RECESSES AND THREADS

(a) The following can help install the fasteners:

1) Use a leverage leverage access panel adapter, SPL-1558 to install the fasteners.
2) A leverage access panel adapter, SPL-1558.
3) Make sure that the fasteners have:

NOTE: If any fasteners need to be replaced, it is recommended that K-coated titanium bolts with cadmium plated Cres nut-plates be installed where applicable.

a) Correct grip length, and
b) Undamaged threads and recesses.

4) Remove any excess paint or debris on fastener recesses.

WARNING: ONLY LUBRICATE FASTENERS FOR ACCESS PANELS. LUBRICATION OF OTHER FASTENERS CAN CAUSE FAULTY EQUIPMENT AND HARM PERSONS.

5) Apply corrosion preventive compound, C00528 to the hole and the countersink.
6) Install fasteners with a fastener tool and an installation anti cam-out (ACR) driver bit.

NOTE: Use decreased lubricated fastener torques, (STANDARD TORQUE VALUES - MAINTENANCE PRACTICES, PAGEBLOCK 20-50-11/201).

NOTE: A combination removal/installation ACR bit is not recommended. The bit should have a hardness of 56-58 RC.

7) Immediately install the fasteners.

SUBTASK 55-33-11-400-001

(7) Do the steps that follow to install the part of the leading edge that contains the HF antenna:

(a) Clean the mating surfaces between the attach plates and the antenna feedlines with 180-grit abrasive paper.

(b) Clean the surfaces again with a clean cheesecloth moist with solvent.

(c) Apply alodine 1000 to the cleaned surfaces, do this task: Apply Alodine 1000 Solution, TASK 51-21-41-370-801

(d) Put the part of the leading edge that contains the HF antenna in the correct position.

NOTE: While you put it in the correct position, make sure the attach plate is below the antenna feedlines.

(e) Attach the antenna feedlines to the attach plates.

(f) Do a resistance check with a bonding meter, COM-1550 between the antenna feedline and attach plate (ELECTRICAL BONDING - INSPECTION/CHECK, PAGEBLOCK 20-10-37/601).

NOTE: The maximum resistance permitted is 0.0025 ohm.

(g) If the resistance between the antenna feedline and attach plate is more than 0.0025 ohm, clean the antenna feedline again.

SUBTASK 55-33-11-220-001

(8) Do a check of the leading edge panel as follows:

(a) Measure the gap at the edges of the panel:

1) Make sure that the gap for leading edge panels [1], [2], [3], and [4] is 0.08 inch +0.06 or -0.04 inch (2 mm +1.5 mm or -1.0 mm).

2) Make sure that the gap for leading edge access panel [5] is 0.08 inch +0.06 or -0.04 inch (2 mm +1.5 mm or -1.0 mm) on the upper edge and 0.14 inch +0.06 or -0.04 inch (3.56 mm +1.5 mm or -1.0 mm) on the bottom edge.

(b) Make sure that the misfair is less than or equal to 0.010 inch (0.254 mm).

(c) Make sure that the bolts are aligned within the tolerance of 0.002 inch (0.051 mm) below the surface to 0.004 inch (0.102 mm) above the surface.

SUBTASK 55-33-11-410-002

(9) Apply aerodynamic sealant, A00247 at the panel joints.

(a) Make sure that the cured sealant is aligned within the tolerance of 0.000 inch at the surface to 0.010 inch (0.254 mm) below the surface.

(b) Do not cover fasteners with aerodynamic sealant.

HAP 038, 041-054, 102-999; HAP 037, 039, 040 POST SB 737-23-1299

G. Put the Airplane Back to its Usual Condition.

SUBTASK 55-33-11-860-002

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

HAP 038, 041-054; HAP 037, 039, 040 POST SB 737-23-1299

E	11	C00839	COMMUNICATIONS HF 1

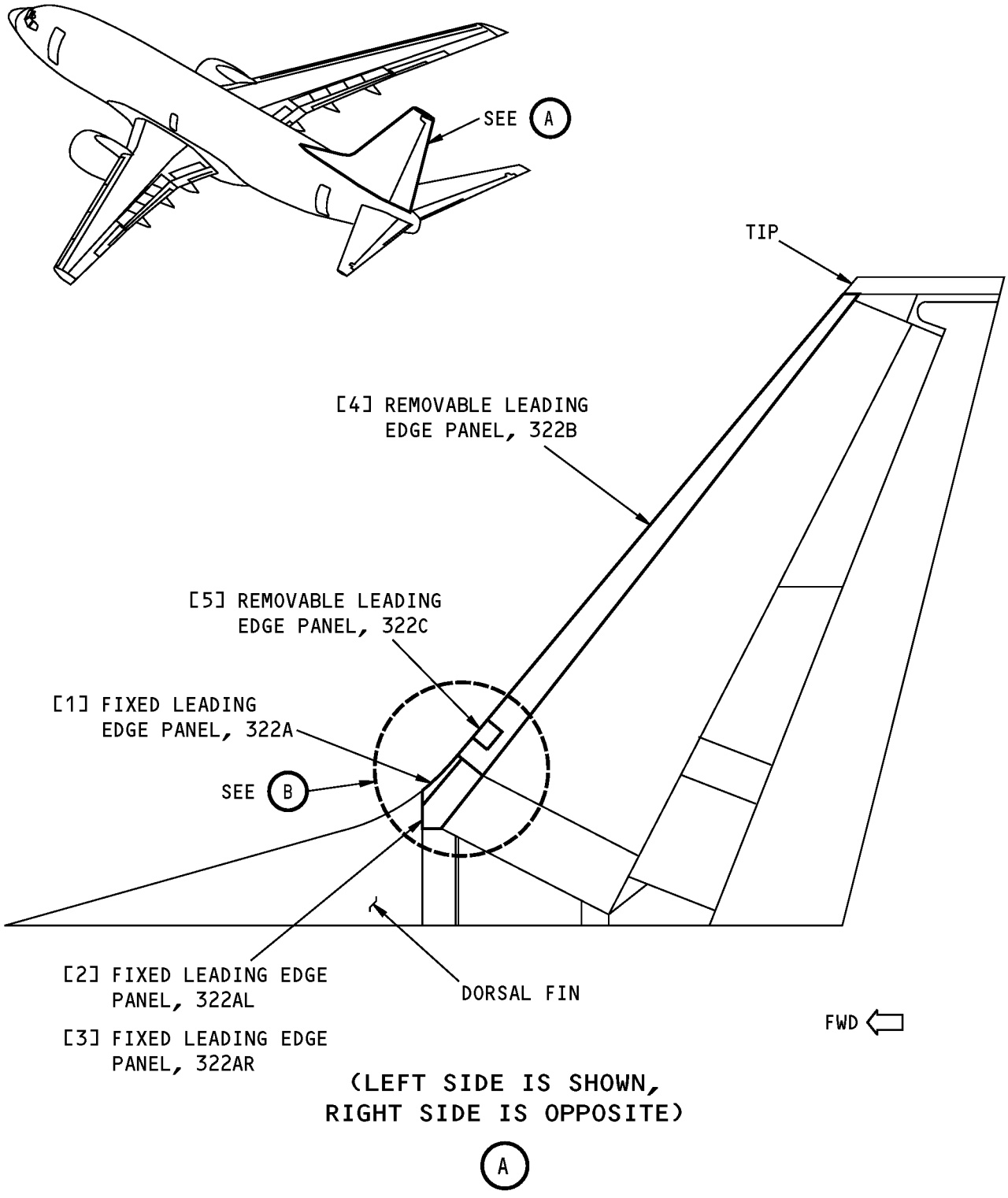
HAP 048 (Continued)

F/O Electrical System Panel, P6-1

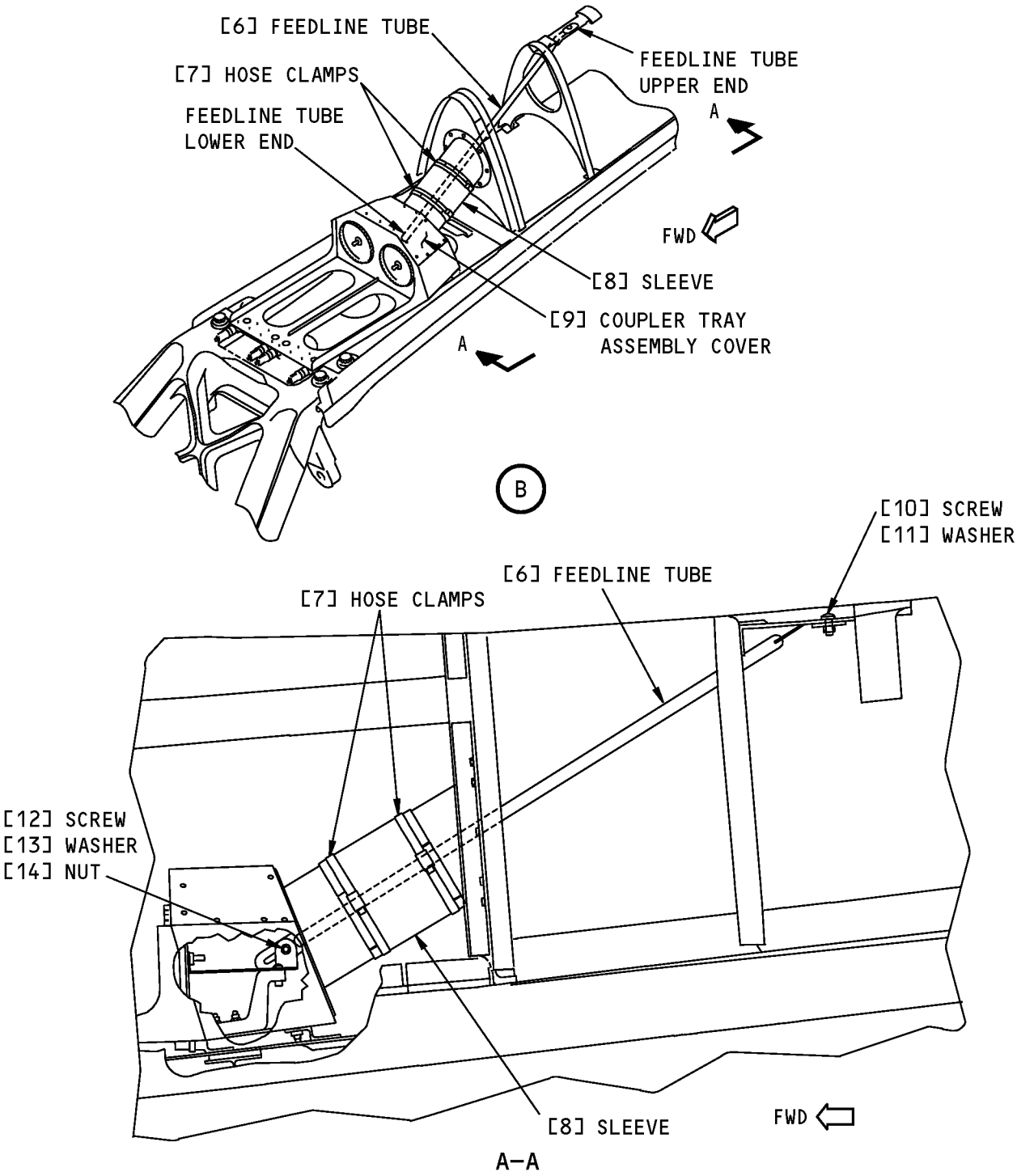
Row	Col	Number	Name
HAP 048			
D	2	C00857	COMMUNICATIONS HF 2

HAP ALL

——————— END OF TASK ———————



Vertical Stabilizer (Fin) Leading Edge Panels Installation
Figure 401 (Sheet 1 of 2)/55-33-11-990-801



Vertical Stabilizer (Fin) Leading Edge Panels Installation
Figure 401 (Sheet 2 of 2)/55-33-11-990-801

VERTICAL STABILIZER (FIN) TIP - REMOVAL/INSTALLATION

1. General

A. There are two tasks in this procedure. There is one task for the removal and one task for the installation of the vertical stabilizer (fin) tip.

B. The (fin) tip includes a forward, a middle and an aft fairing. You can remove the forward and the aft fairings independently. You must remove the forward fairing before you remove the middle fairing.

TASK 55-33-21-000-801

2. Vertical Stabilizer (Fin) Tip Removal

(Figure 401)

A. Location Zones

Zone	Area
326	Vertical Fin - Fin Tip

B. Procedure

SUBTASK 55-33-21-040-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

HAP 004, 005, 008-013, 015-026, 028-030

Row	Col	Number	Name
A	2	C01380	RADIO NAVIGATION ILS 1

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

HAP ALL

Row	Col	Number	Name
E	2	C00412	INSTR XFR

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	12	C01375	RADIO NAVIGATION VOR 2

SUBTASK 55-33-21-020-001

WARNING: MAKE SURE PERSONNEL STAY A MINIMUM OF 6 FEET (1.8 METERS) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF COMMUNICATION ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

(2) Remove the fairings on the (fin) tip.

(a) Remove the fasteners from the forward fairing.

(b) Remove the forward fairing.

(c) Disconnect the wires from the VOR antenna.

(d) Remove the fasteners from the middle fairing.

(e) Remove the middle fairing.

(f) Remove the fasteners from the aft fairing.

(g) Remove the aft fairing.

END OF TASK

TASK 55-33-21-400-801

3. Vertical Stabilizer (Fin) Tip Installation

(Figure 401)

A. References

Reference	Title
34-31-00-730-801	Instrument Landing System - System Test (P/B 501)

B. Location Zones

Zone	Area
326	Vertical Fin - Fin Tip

C. Procedure

SUBTASK 55-33-21-420-001

WARNING: MAKE SURE PERSONNEL STAY A MINIMUM OF 6 FEET (1.8 METERS) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF COMMUNICATION ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

(1) Install the fairings on the (fin) tip.

(a) Put the aft fairing in its position on the fin.

(b) Install the fasteners in the aft fairing.

(c) Put the middle fairing in its position.

(d) Install the fasteners on the middle fairing.

(e) Connect the VOR antenna wires.

(f) Put the forward fairing in its position.

(g) Install the fasteners on the forward fairing.

NOTE: Make sure all fasteners forward of the rear spar are installed between 0.010 inch (0.254 mm) below the surface and 0.002 inch (0.051 mm) above the surface. Do not shave the heads of the fasteners.

SUBTASK 55-33-21-860-001

(2) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
A	1	C01374	RADIO NAVIGATION VOR/MKR BCN 1

HAP 004, 005, 008-013, 015-026, 028-030

A	2	C01380	RADIO NAVIGATION ILS 1

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name

HAP ALL

E	2	C00412	INSTR XFR

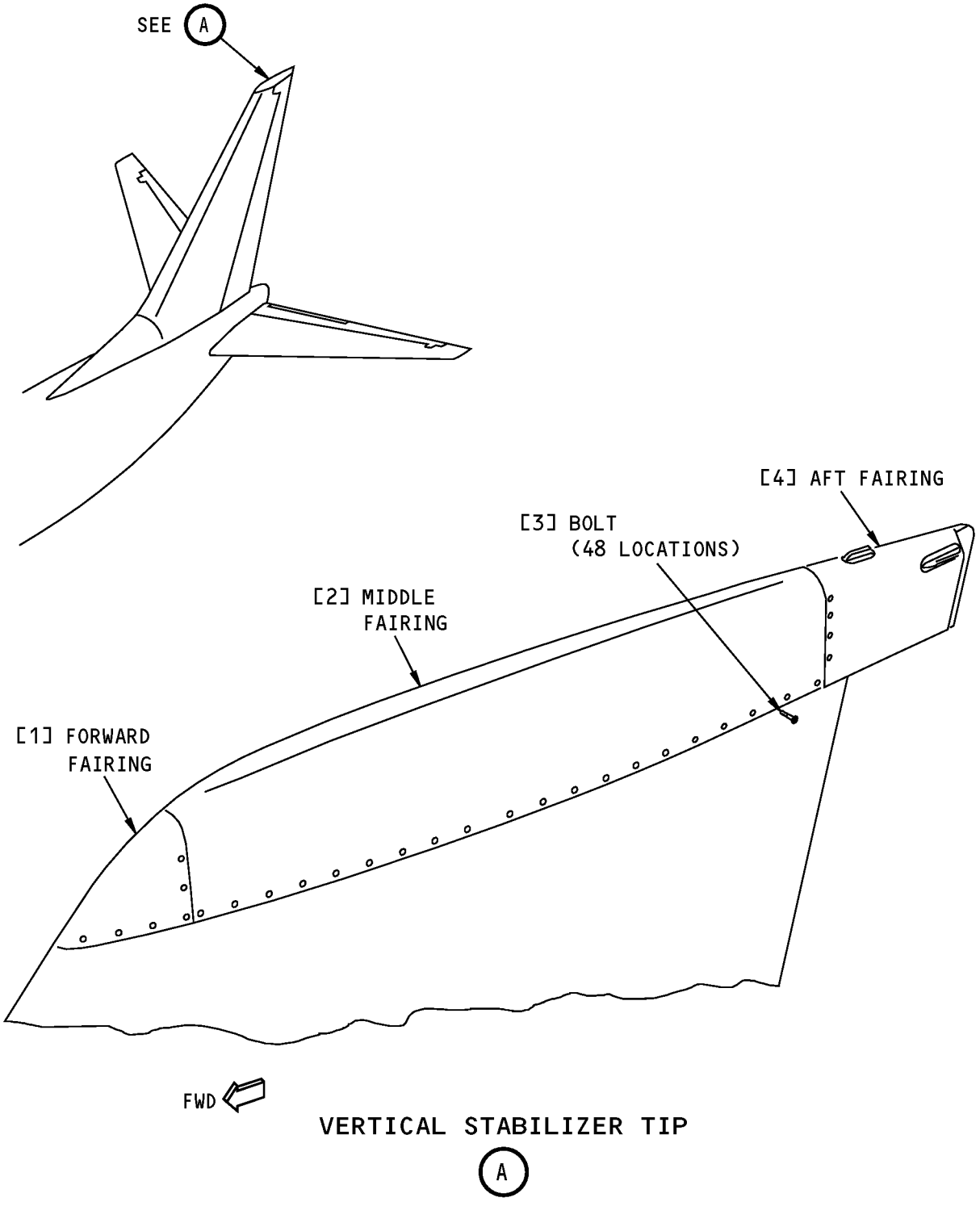
F/O Electrical System Panel, P6-1

Row	Col	Number	Name
A	12	C01375	RADIO NAVIGATION VOR 2

SUBTASK 55-33-21-730-001

(3) Do this task: Instrument Landing System - System Test, TASK 34-31-00-730-801.

——————— END OF TASK ———————



Vertical Stabilizer Tip Installation
Figure 401/55-33-21-990-801

VERTICAL STABILIZER (FIN) TRAILING EDGE PANELS - REMOVAL/INSTALLATION

1. General

A. There are two tasks in this procedure:

(1) Vertical Stabilizer (Fin) Trailing Edge Panels Removal

(2) Vertical Stabilizer (Fin) Trailing Edge Panels Installation

TASK 55-33-31-000-801

2. Vertical Stabilizer (Fin) Trailing Edge Panels Removal

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1558	Adapter - Access Panel, Leverage (Part #: 3008-550, Supplier: 55856, A/P Effectivity: 737-ALL) (Part #: B20004-21, Supplier: 81205, A/P Effectivity: 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ)

B. Location Zones

Zone	Area
324	Vertical Fin - Rear Spar To Trailing Edge

C. Access Panels

Number	Name/Location
324AL	Vertical Fin, Aft Fin Access Door
324BL	Vertical Fin, Trailing Edge Access
324BR	Vertical Fin, Trailing Edge Access
324DL	Trailing Edge Access
324DR	Vertical Fin, Trailing Edge Access
324JL	Vertical Fin, Access

D. Removal

SUBTASK 55-33-31-010-001

WARNING: PREVENT THE OPERATION OF THE RUDDER WHEN YOU DO WORK ON IT OR NEAR IT. THE RUDDER MOVES QUICKLY AND ITS FORCE IS VERY LARGE. IF THE RUDDER MOVES WHEN PERSONNEL ARE NEAR IT, IT CAN CAUSE INJURIES TO THEM.

WARNING: KEEP PERSONNEL AWAY FROM THE AREA BELOW THE VERTICAL STABILIZER. INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR IF EQUIPMENT OR PARTS FALL.

(1) Select the trailing edge panel that you will remove and do this step:

Open these access panels:

Number	Name/Location
324AL	Vertical Fin, Aft Fin Access Door
324BL	Vertical Fin, Trailing Edge Access
324BR	Vertical Fin, Trailing Edge Access

(Continued)

Number	Name/Location
324DL	Trailing Edge Access
324DR	Vertical Fin, Trailing Edge Access
324JL	Vertical Fin, Access

SUBTASK 55-33-31-010-002

(2) Remove the fasteners from the applicable vertical fin trailing edge access panels.

(a) The following can help remove the fasteners:

1) A leverage access panel adapter, SPL-1558.

(3) Remove the panel.

——————— END OF TASK ———————

TASK 55-33-31-400-801

3. Vertical Stabilizer (Fin) Trailing Edge Panels Installation

A. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. Location Zones

Zone	Area
324	Vertical Fin - Rear Spar To Trailing Edge

C. Access Panels

Number	Name/Location
324AL	Vertical Fin, Aft Fin Access Door
324AR	Vertical Fin, Aft Fin Access Door
324BL	Vertical Fin, Trailing Edge Access
324BR	Vertical Fin, Trailing Edge Access
324DL	Trailing Edge Access
324DR	Vertical Fin, Trailing Edge Access
324JL	Vertical Fin, Access

D. Installation

SUBTASK 55-33-31-400-001

WARNING: PREVENT THE OPERATION OF THE RUDDER WHEN YOU DO WORK ON IT OR NEAR IT. THE RUDDER MOVES QUICKLY AND ITS FORCE IS VERY LARGE. IF THE RUDDER MOVES WHEN PERSONNEL ARE NEAR IT, IT CAN CAUSE INJURIES TO THEM.

WARNING: KEEP PERSONNEL AWAY FROM THE AREA BELOW THE VERTICAL STABILIZER. INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR IF EQUIPMENT OR PARTS FALL.

(1) Select the trailing edge panel that you will install and do this step:

Close these access panels:

Number	Name/Location
324AL	Vertical Fin, Aft Fin Access Door
324AR	Vertical Fin, Aft Fin Access Door
324BL	Vertical Fin, Trailing Edge Access
324BR	Vertical Fin, Trailing Edge Access
324DL	Trailing Edge Access
324DR	Vertical Fin, Trailing Edge Access
324JL	Vertical Fin, Access

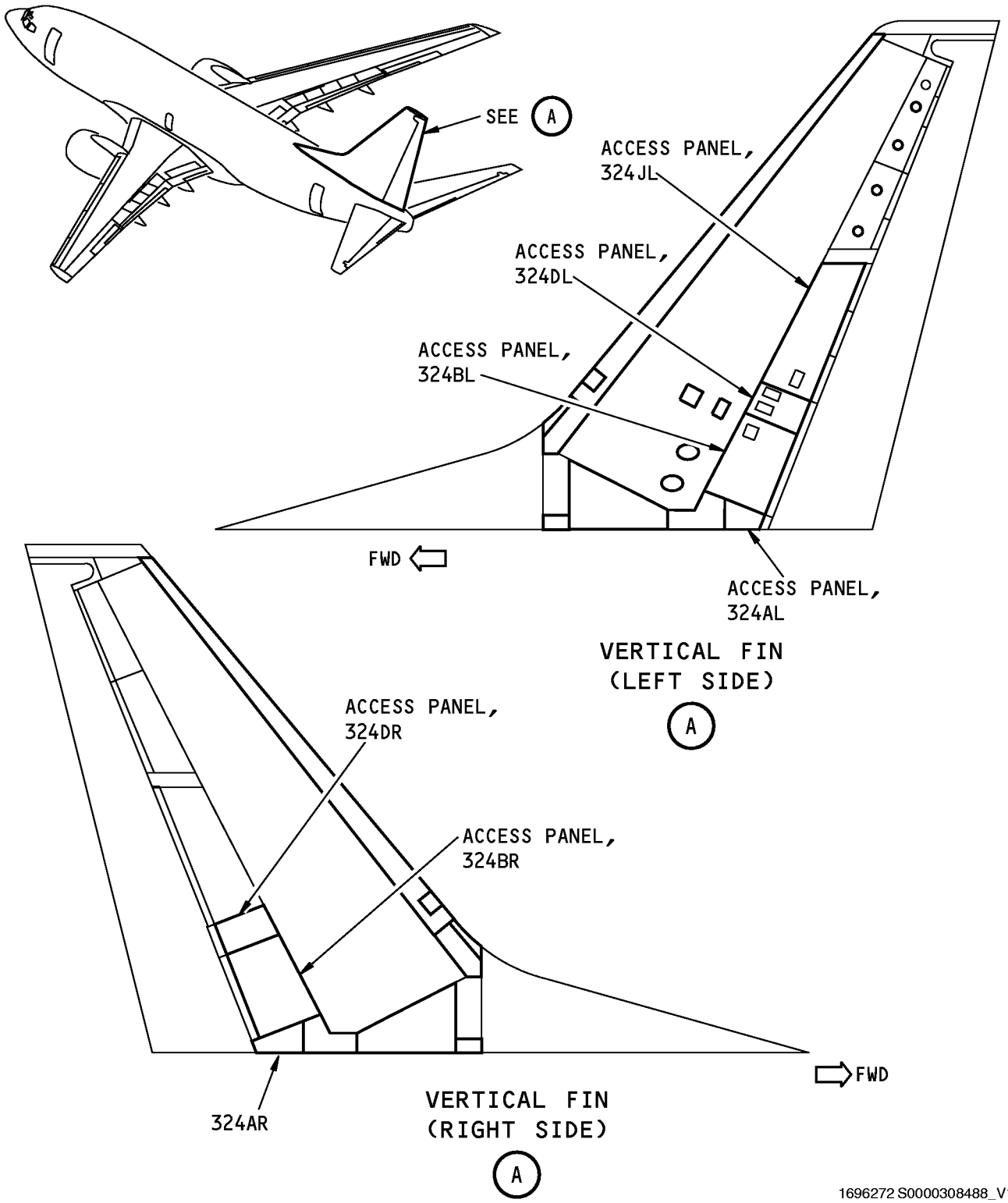
SUBTASK 55-33-31-410-001

(2) Install the fasteners that attach the trailing edge panels.

SUBTASK 55-33-31-410-002

(3) Fill gaps 0.40 in. (1.02 cm) and larger with aerodynamic sealant, A00247 per BAC 5030 and smooth flush with outside contour.

——————— END OF TASK ———————



Vertical Stabilizer (Fin) Trailing Edge Panels Installation
Figure 401/55-33-31-990-801