# **CHAPTER**

# 55

# **STABILIZERS**



# **CHAPTER 55 STABILIZERS**

Subject/Page	Date	coc	Subject/Pa	ge Date	COC	Subject/Pag	ge Date	COC
55-EFFECTIV	E PAGES		55-05-03	(cont)		55-05-03	(cont)	
1 thru 4	SEP 05/2018		219	May 05/2017		255	May 05/2017	
55-CONTENT	S		220	May 05/2015		256	May 05/2015	
1	Sep 05/2016		221	May 05/2017		257	May 05/2017	
2	Jan 05/2017		222	May 05/2015		258	May 05/2017	
3	Jan 05/2017		223	May 05/2017		259	May 05/2017	
4	Jan 05/2017		224	May 05/2015		260	May 05/2015	
5	Sep 05/2017		225	May 05/2017		261	May 05/2017	
6	Sep 05/2017		226	May 05/2015		262	May 05/2017	
7	May 05/2018		227	May 05/2017		263	May 05/2015	
8	Jul 25/2018		228	May 05/2017		264	May 05/2017	
9	Sep 05/2016		229	May 05/2015		265	May 05/2017	
10	BLANK		230	May 05/2017		266	May 05/2015	
55-05-01			231	May 05/2015		267	May 05/2017	
201	Sep 05/2016		232	May 05/2017		268	May 05/2017	
202	May 05/2017		233	May 05/2015		269	May 05/2015	
203	Sep 05/2016		234	May 05/2017		270	May 05/2017	
204	May 05/2017		235	May 05/2017		271	May 05/2015	
55-05-03			236	May 05/2015		272	May 05/2017	
201	May 05/2015		237	May 05/2017		273	May 05/2015	
202	May 05/2017		238	May 05/2015		274	May 05/2017	
203	May 05/2017		239	May 05/2017		275	May 05/2017	
204	May 05/2015		240	May 05/2015		276	May 05/2015	
205	Jan 05/2018		241	May 05/2017		277	May 05/2017	
206	May 05/2015		242	May 05/2017		278	May 05/2017	
207	May 05/2017		243	May 05/2015		279	May 05/2017	
208	May 05/2017		244	May 05/2017		280	May 05/2016	
209	May 05/2015		245	May 05/2017		281	May 05/2017	
210	May 05/2017		246	May 05/2015		282	May 05/2017	
211	May 05/2015		247	May 05/2017		283	Sep 05/2016	
212	May 05/2017		248	May 05/2017		284	May 05/2017	
213	May 05/2017		249	May 05/2015		285	Sep 05/2016	
214	Jan 05/2018		250	May 05/2017		286	May 05/2017	
215	May 05/2017		251	May 05/2015		287	May 05/2016	
216	May 05/2017		252	May 05/2017		288	May 05/2017	
217	Sep 05/2016		253	May 05/2015		289	May 05/2017	
218	May 05/2017		254	May 05/2017		290	May 05/2017	

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55-05-03	(cont)		55-10-01	(cont)		55-15-01	(cont)	
291	May 05/2016		404	Sep 05/2017		405	Sep 05/2017	
292	May 05/2017		405	Sep 05/2017		406	Sep 05/2017	
293	May 05/2016		406	Sep 05/2017		55-16-01		
294	May 05/2017		407	May 05/2017		401	Sep 05/2017	
295	May 05/2017		408	May 05/2017		402	Sep 05/2017	
296	May 05/2016		409	May 05/2017		403	Sep 05/2017	
297	May 05/2017		410	May 05/2017		404	Sep 05/2017	
298	May 05/2016		411	May 05/2017		405	Sep 05/2017	
298.1	May 05/2017		412	BLANK		406	May 05/2017	
298.2	May 05/2016		55-10-02			407	May 05/2017	
298.3	May 05/2017		401	Sep 05/2016		408	BLANK	
298.4	May 05/2017		402	Sep 05/2017		55-16-01		
298.5	May 05/2016		403	Sep 05/2017		801	Sep 05/2015	
298.6	May 05/2017		404	Sep 05/2017		802	BLANK	
298.7	May 05/2016		405	Sep 05/2017		55-16-02		
298.8	May 05/2017		406	Sep 05/2017		401	Sep 05/2017	
298.9	May 05/2016		407	May 05/2017		402	Sep 05/2017	
298.10	May 05/2017		408	May 05/2017		403	Sep 05/2017	
298.11	May 05/2016		409	May 05/2017		404	Sep 05/2017	
298.12	May 05/2017		410	Sep 05/2016		405	Sep 05/2017	
298.13	May 05/2017		55-11-01			406	May 05/2017	
298.14	May 05/2016		401	Sep 05/2017		55-17-01		
298.15	May 05/2017		402	Sep 05/2017		401	Jul 25/2018	
298.16	May 05/2016		403	Sep 05/2017		402	Sep 05/2017	
298.17	May 05/2017		404	May 05/2017		403	Jan 05/2018	
298.18	May 05/2016		405	Sep 05/2016		404	Jul 25/2018	
298.19	May 05/2017		406	Sep 05/2016		405	Jan 05/2018	
298.20	•		407	Sep 05/2016		406	Sep 05/2017	
298.21	•		408	Sep 05/2017		407	Sep 05/2017	
298.22	May 05/2017		409	Sep 05/2016		408	Jul 25/2018	
298.23	•		410	Sep 05/2016		409	Jul 25/2018	
298.24	May 05/2017		55-15-01			410	Jan 05/2018	
55-10-01			401	Sep 05/2017		411	Jan 05/2018	
401	May 05/2015		402	Sep 05/2017		412	Sep 05/2017	
402	Sep 05/2017		403	Sep 05/2017		413	Jan 05/2018	
403	Sep 05/2017		404	Sep 05/2017		414	Sep 05/2017	

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55-17-01	(cont)		55-30-03			55-34-01		
415	Jul 25/2018		401	May 05/2018		401	Sep 05/2017	
416	Sep 05/2017		402	May 05/2018		402	Sep 05/2017	
417	Sep 05/2017		403	May 05/2018		403	Jan 05/2018	
418	Sep 05/2017		404	May 05/2018		404	Sep 05/2017	
419	Sep 05/2017		405	May 05/2018		405	May 05/2017	
420	BLANK		406	May 05/2017		406	May 05/2017	
55-17-01			407	May 05/2017		407	May 05/2017	
601	Jul 25/2018		408	BLANK		408	BLANK	
602	Sep 05/2017		55-30-03			55-35-01		
603	Sep 05/2017		601	Jul 25/2018		401	Sep 05/2017	
604	May 05/2017		602	Jul 25/2018		402	Sep 05/2017	
605	May 05/2017		603	Jan 05/2018		403	Sep 05/2017	
606	May 05/2017		604	Jul 25/2018		404	Sep 05/2017	
607	Jan 05/2015		605	Jan 05/2018		405	Sep 05/2017	
608	BLANK		606	May 05/2017		406	Sep 05/2017	
55-18-01			607	May 05/2017		55-35-01		
701	Sep 05/2015		608	BLANK		801	Jul 25/2018	
702	Jan 05/2015		55-31-01			802	Jul 25/2018	
55-20-03			401	Sep 05/2017		803	Jul 25/2018	
801	May 05/2017		402	Sep 05/2017		804	Jul 25/2018	
802	Sep 05/2017		403	Sep 05/2017		805	Jul 25/2018	
803	Sep 05/2017		404	Sep 05/2017		806	Jul 25/2018	
804	Sep 05/2017		405	May 05/2017		807	Jul 25/2018	
805	Jan 05/2015		406	BLANK		808	Jul 25/2018	
806	BLANK		55-31-02			809	Jul 25/2018	
55-27-01			401	Sep 05/2017		810	Jul 25/2018	
401	Jul 25/2018		402	Sep 05/2017		811	Jul 25/2018	
402	Jul 25/2018		403	Sep 05/2017		812	Jul 25/2018	
403	Jul 25/2018		404	Sep 05/2017		813	Jul 25/2018	
404	Jul 25/2018		405	Sep 05/2017		814	Jul 25/2018	
405	Jul 25/2018		406	BLANK		815	Jul 25/2018	
406	Jul 25/2018		55-31-02	DLAIN		816	Jul 25/2018	
407	May 05/2017			0 05/0047		817	Jul 25/2018	
408	May 05/2017		601	Sep 05/2017		818	Jul 25/2018	
409	Jan 05/2017		602	Sep 05/2017		819	Jul 25/2018	
410	BLANK					820	Jul 25/2018	

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55-35-01	(cont)		55-38-03	(con	t)				
821	Jul 25/2018		805		Sep 05/2017				
822	Sep 05/2017		806		May 05/2017				
823	Sep 05/2017								
824	Sep 05/2017								
825	Sep 05/2017								
826	Sep 05/2017								
827	Sep 05/2017								
828	Sep 05/2017								
829	Jul 25/2018								
830	Jul 25/2018								
831	Jul 25/2018								
832	Jul 25/2018								
55-36-01									
401	Sep 05/2017								
402	Sep 05/2017								
403	Sep 05/2017								
404	May 05/2017								
55-36-02									
401	Sep 05/2017								
402	Sep 05/2017								
403	Sep 05/2017								
404	May 05/2017								
55-37-02									
401	Jul 25/2018								
402	Jul 25/2018								
403	Jul 25/2018								
404	Jul 25/2018								
405	May 05/2017								
406	May 05/2017								
407	May 05/2017								
408	BLANK								
55-38-03									
801	May 05/2015								
802	Jan 05/2018								
803	Sep 05/2017								
804	Jan 05/2018								

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	SECTION		
SUBJECT	<u>SUBJECT</u>	CONF PAGE	<u>EFFECT</u>
STABILIZERS - CORROSION INSPECTIONS - MAINTENANCE PRACTICES	55-05-01	201	ARO ALL
INTERNAL - GENERAL VISUAL: LEFT HORIZONTAL STABILIZER LEADING EDGE TASK 55-05-01-210-805		201	ARO ALL
INTERNAL - GENERAL VISUAL: RIGHT HORIZONTAL STABILIZER LEADING EDGE TASK 55-05-01-210-809		203	ARO ALL
STABILIZERS - STRUCTURAL INSPECTIONS - MAINTENANCE PRACTICES	55-05-03	201	ARO ALL
EXTERNAL - DETAILED: HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-801		201	ARO ALL
EXTERNAL - DETAILED: HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-802		204	ARO ALL
EXTERNAL - DETAILED: AREA AFT OF BULKHEAD TASK 55-05-03-211-803		206	ARO ALL
EXTERNAL - DETAILED: AREA AFT OF BULKHEAD/STABILIZER TORSION BOX COMPARTMENT TASK 55-05-03-211-804		209	ARO ALL
EXTERNAL - DETAILED: STABILIZER TORSION BOX COMPARTMENT TASK 55-05-03-211-805		211	ARO ALL
EXTERNAL - GENERAL VISUAL: FUSELAGE - BS 2150-2570.3 (SECTION 48) TASK 55-05-03-210-852		214	ARO ALL
EXTERNAL - SPECIAL DETAILED: FUSELAGE - BS 2150-2570.3 (SECTION 48) TASK 55-05-03-211-806		217	ARO ALL
EXTERNAL - DETAILED: VERTICAL STABILIZER - AUXILIARY SPAR TO FRONT SPAR TASK 55-05-03-211-807		220	ARO ALL
170K 33-03-211-001			



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SUBJECT	SUBJECT CONF	PAGE	<u>EFFECT</u>
INTERNAL - DETAILED: VERTICAL STABILIZER - AUXILIARY SPAR TO FRONT SPAR TASK 55-05-03-211-808		222	ARO ALL
EXTERNAL - DETAILED: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-211-809		224	ARO ALL
INTERNAL - GENERAL VISUAL: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-210-853		226	ARO ALL
INTERNAL - GENERAL VISUAL: RUDDER TASK 55-05-03-210-855		229	ARO ALL
INTERNAL - GENERAL VISUAL: RUDDER TAB TASK 55-05-03-210-856		231	ARO ALL
INTERNAL - DETAILED: RUDDER TAB TASK 55-05-03-211-816		233	ARO ALL
INTERNAL - DETAILED: RUDDER TAB TASK 55-05-03-211-817		236	ARO ALL
INTERNAL - GENERAL VISUAL: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-210-857		238	ARO ALL
EXTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-820		240	ARO ALL
EXTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-855		243	ARO ALL
EXTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-856		246	ARO ALL
INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-822		246	ARO ALL
INTERNAL - GENERAL VISUAL: LEFT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-210-858		249	ARO ALL
INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-823		251	ARO ALL



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SUBJECT	SUBJECT CONF PAGE	<b>EFFECT</b>
INTERNAL - GENERAL VISUAL: LEFT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-210-859	253	ARO ALL
INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-211-824	256	ARO ALL
EXTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-828	260	ARO ALL
EXTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-857	263	ARO ALL
EXTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-858	266	ARO ALL
INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-830	266	ARO ALL
INTERNAL - GENERAL VISUAL: RIGHT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-210-861	269	ARO ALL
INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION TASK 55-05-03-211-831	271	ARO ALL
INTERNAL - GENERAL VISUAL: RIGHT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-210-862	273	ARO ALL
INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-211-832	276	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-211-837	280	ARO ALL
INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER TIP TASK 55-05-03-211-838	283	ARO ALL



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SUBJECT	SUBJECT CONF	PAGE	<b>EFFECT</b>
INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER TIP TASK 55-05-03-211-839		285	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-211-840		287	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR TASK 55-05-03-211-841		291	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-211-842		293	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-211-843		296	ARO ALL
INTERNAL - GENERAL VISUAL: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-210-864		298	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-211-844		298.2	ARO ALL
INTERNAL - DETAILED: RUDDER TASK 55-05-03-211-845	:	298.5	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER LEADING EDGE TASK 55-05-03-211-846		298.7	ARO ALL
INTERNAL - DETAILED: VERTICAL STABILIZER - AUXILIARY SPAR TO FRONT SPAR TASK 55-05-03-211-847		298.9	ARO ALL
INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-211-848	2	298.11	ARO ALL
INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-211-849	2	298.14	ARO ALL
INTERNAL - DETAILED: LEFT ELEVATOR TASK 55-05-03-211-850	2	298.16	ARO ALL



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SUBJECT	<b>SUBJECT</b>	CONF PAGE	<b>EFFECT</b>
INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-211-851		298.18	ARO ALL
INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE TASK 55-05-03-211-852		298.21	ARO ALL
INTERNAL - DETAILED: RIGHT ELEVATOR TASK 55-05-03-211-853		298.23	ARO ALL
HORIZONTAL STABILIZER-TO-BODY SEALS -	55-10-01	401	ARO ALL
REMOVAL/INSTALLATION			
Horizontal Stabilizer-To-Body Seal Removal TASK 55-10-01-000-801		401	ARO ALL
Horizontal Stabilizer-To-Body Seal Installation TASK 55-10-01-400-801		403	ARO ALL
HORIZONTAL STABILIZER BLADE SEALS - REMOVAL/INSTALLATION	55-10-02	401	ARO ALL
Horizontal Stabilizer Blade Seal Removal TASK 55-10-02-000-801		401	ARO ALL
Horizontal Stabilizer Blade Seal Installation TASK 55-10-02-400-801		403	ARO ALL
HORIZONTAL STABILIZER TIP FAIRING - REMOVAL/INSTALLATION	55-11-01	401	ARO ALL
Horizontal Stabilizer Tip Fairing Removal TASK 55-11-01-000-801		401	ARO ALL
Horizontal Stabilizer Tip Fairing Installation TASK 55-11-01-400-801		407	ARO ALL
HORIZONTAL STABILIZER LEADING EDGE - REMOVAL/INSTALLATION	55-15-01	401	ARO ALL
Horizontal Stabilizer Leading Edge Removal TASK 55-15-01-000-801		401	ARO ALL
Horizontal Stabilizer Leading Edge Installation TASK 55-15-01-400-801		403	ARO ALL



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SUBJECT	<b>SUBJECT</b>	CONF PAGE	<u>EFFECT</u>
HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS - REMOVAL/INSTALLATION	55-16-01	401	ARO ALL
Horizontal Stabilizer Trailing Edge Skin Panel Removal TASK 55-16-01-000-801		401	ARO ALL
Horizontal Stabilizer Trailing Edge Skin Panel Installation TASK 55-16-01-400-801		402	ARO ALL
HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS- REPAIR	55-16-01	801	ARO ALL
Repair the Trailing Edge Skin Panel Shims TASK 55-16-01-300-801		801	ARO ALL
HORIZONTAL STABILIZER FIXED TRAILING EDGE SEAL - REMOVAL/INSTALLATION	55-16-02	401	ARO ALL
Horizontal Stabilizer Fixed Trailing Edge Seal Removal TASK 55-16-02-000-801		401	ARO ALL
Horizontal Stabilizer Fixed Trailing Edge Seal Installation TASK 55-16-02-400-801		402	ARO ALL
HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY - REMOVAL/INSTALLATION	55-17-01	401	ARO ALL
Horizontal Stabilizer Pivot Pin Assembly Removal TASK 55-17-01-000-801		401	ARO ALL
Horizontal Stabilizer Pivot Pin Assembly Installation TASK 55-17-01-400-801		408	ARO ALL
Horizontal Stabilizer Pivot Fitting Bearing Removal TASK 55-17-01-000-802		415	ARO ALL
Horizontal Stabilizer Pivot Fitting Bearing Installation TASK 55-17-01-400-802		415	ARO ALL
HORIZONTAL STABILIZER PIVOT FITTING - INSPECTION/CHECK	55-17-01	601	ARO ALL
Horizontal Stabilizer Pivot Fitting Free Play Check TASK 55-17-01-220-801		601	ARO ALL



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SUBJECT	SUBJECT CC	NF PAGE	<b>EFFECT</b>
HORIZONTAL STABILIZER SKINS - CLEANING/PAINTING	55-18-01	701	ARO ALL
Horizontal Stabilizer In-Spar Skins - Cleaning/Painting TASK 55-18-01-370-801		701	ARO ALL
<b>ELEVATOR CONDUCTING STRIP - REPAIRS</b>	55-20-03	801	ARO ALL
Repair the Conducting Strip TASK 55-20-03-300-801		801	ARO ALL
ELEVATOR HINGE FITTINGS - REMOVAL/INSTALLATION	55-27-01	401	ARO ALL
Elevator Hinge Fitting Removal TASK 55-27-01-000-801		401	ARO ALL
Elevator Hinge Fitting Installation TASK 55-27-01-400-801		403	ARO ALL
VERTICAL STABILIZER ATTACH BOLTS - REMOVAL/INSTALLATION	55-30-03	401	ARO ALL
Vertical Stabilizer Attach Bolt - Removal TASK 55-30-03-000-801		401	ARO ALL
Vertical Stabilizer Attach Bolt - Installation TASK 55-30-03-400-801		403	ARO ALL
VERTICAL STABILIZER ATTACH BOLTS - INSPECTION/CHECK	55-30-03	601	ARO ALL
Vertical Stabilizer Attach Bolt Torque Check TASK 55-30-03-200-801		601	ARO ALL
VERTICAL STABILIZER TIP - REMOVAL/INSTALLATION	55-31-01	401	ARO ALL
Vertical Stabilizer Tip Removal TASK 55-31-01-000-801		401	ARO ALL
Vertical Stabilizer Tip Installation TASK 55-31-01-400-801		402	ARO ALL
VERTICAL STABILIZER LIGHTNING DIVERTER - REMOVAL/INSTALLATION	55-31-02	401	ARO ALL
Vertical Stabilizer Lightning Diverter Strip Removal TASK 55-31-02-000-801		401	ARO ALL



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SUBJECT	<b>SUBJECT</b>	CONF PAGE	<u>EFFECT</u>
Vertical Stabilizer Lightning Diverter Strip Installation TASK 55-31-02-400-801		402	ARO ALL
	55.04.00	204	
VERTICAL STABILIZER LIGHTNING DIVERTER - INSPECTION/CHECK	55-31-02	601	ARO ALL
Vertical Stabilizer Lightning Diverter Strip Inspection TASK 55-31-02-000-802		601	ARO ALL
VERTICAL STABILIZER FORWARD BOX PANELS - REMOVAL/INSTALLATION	55-34-01	401	ARO ALL
Vertical Stabilizer Forward Box Panels Removal TASK 55-34-01-000-801		401	ARO ALL
Vertical Stabilizer Forward Box Panels Installation TASK 55-34-01-400-801		402	ARO ALL
VERTICAL STABILIZER LEADING EDGE - REMOVAL/INSTALLATION	55-35-01	401	ARO ALL
Vertical Stabilizer Leading Edge Removal TASK 55-35-01-000-801		401	ARO ALL
Vertical Stabilizer Leading Edge Installation TASK 55-35-01-400-801		403	ARO ALL
VERTICAL STABILIZER HF ANTENNA LEADING EDGE PANEL - REPAIRS	55-35-01	801	ARO ALL
Inspection of HF Antenna Leading Edge Panel No. 4		801	ARO ALL
TASK 55-35-01-200-801			
Clear Edge Sealing of FE-AS Coating TASK 55-35-01-370-801		802	ARO ALL
Complete Replacement of FE-AS Anti-Static Coatings TASK 55-35-01-300-801		804	ARO ALL
Local Replacement of Coatings for Minor Damage to Coatings TASK 55-35-01-300-802		814	ARO ALL
Polyurethane Protective Tape (PPT) - Installation TASK 55-35-01-400-802		829	ARO ALL



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	SECTION		
SUBJECT	<b>SUBJECT</b>	CONF PAGE	<b>EFFECT</b>
VERTICAL STABILIZER TRAILING EDGE SEALS - REMOVAL/INSTALLATION	55-36-01	401	ARO ALL
Vertical Stabilizer Trailing Edge Seal Removal TASK 55-36-01-000-801		401	ARO ALL
Vertical Stabilizer Trailing Edge Seal Installation TASK 55-36-01-400-801		402	ARO ALL
VERTICAL STABILIZER TRAILING EDGE SKIN PANELS - REMOVAL/INSTALLATION	55-36-02	401	ARO ALL
Vertical Stabilizer Trailing Edge Skin Panel Removal TASK 55-36-02-000-801		401	ARO ALL
Vertical Stabilizer Trailing Edge Skin Panel Installation TASK 55-36-02-400-801		402	ARO ALL
RUDDER HINGE FITTINGS - REMOVAL/INSTALLATION	55-37-02	401	ARO ALL
Rudder Hinge Fitting Removal TASK 55-37-02-000-801		401	ARO ALL
Rudder Hinge Fitting Installation TASK 55-37-02-400-801		402	ARO ALL
RUDDER CONDUCTING STRIP - REPAIRS	55-38-03	801	ARO ALL
Repair the Conducting Strip TASK 55-38-03-300-801		801	ARO ALL



### STABILIZERS - CORROSION INSPECTIONS - MAINTENANCE PRACTICES

### 1. General

A. This procedure contains MSG-3 task card data.

### TASK 55-05-01-210-805

### 2. INTERNAL - GENERAL VISUAL: LEFT HORIZONTAL STABILIZER LEADING EDGE

NOTE: This procedure is a scheduled maintenance task.

_	_		_			
	_	_ 4	G	 	ces	

Reference	Title	
51-05-01-210-802	777 Basic Task Description (P/B 201)	

### B. Inspection

SUBTASK 55-05-01-210-005

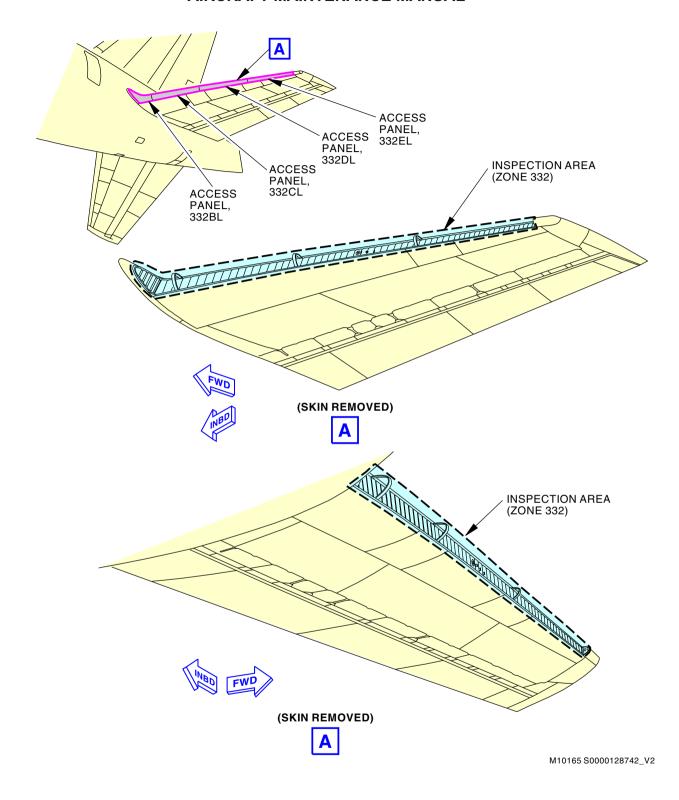
(1) Do the inspection 777 Basic Task Description, TASK 51-05-01-210-802.

——— END OF TASK ———

ARO ALL

55-05-01





Leading Edge (Left Horizontal Stabilizer) Figure 201/55-05-01-990-817

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55-05-01

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### TASK 55-05-01-210-809

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

<u>NOTE</u>: This procedure is a scheduled maintenance task.

Reference	Title
51-05-01-210-802	777 Basic Task Description (P/B 201)

### B. Inspection

SUBTASK 55-05-01-210-009

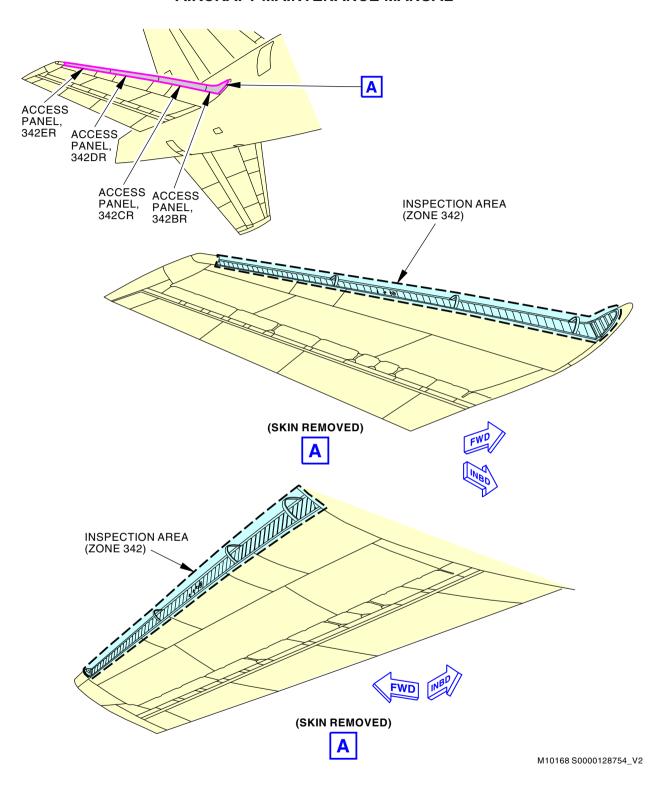
(1) Do the inspection 777 Basic Task Description, TASK 51-05-01-210-802.

——— END OF TASK ———

ARO ALL

55-05-01





Leading Edge (Right Horizontal Stabilizer) Figure 202/55-05-01-990-821

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### STABILIZERS - STRUCTURAL INSPECTIONS - MAINTENANCE PRACTICES

- 1. General
  - A. This procedure contains MSG-3 task card data.

TASK 55-05-03-211-801

2. EXTERNAL - DETAILED: HORIZONTAL STABILIZER CENTER SECTION

(Figure 201)

A. Inspection

SUBTASK 55-05-03-211-001

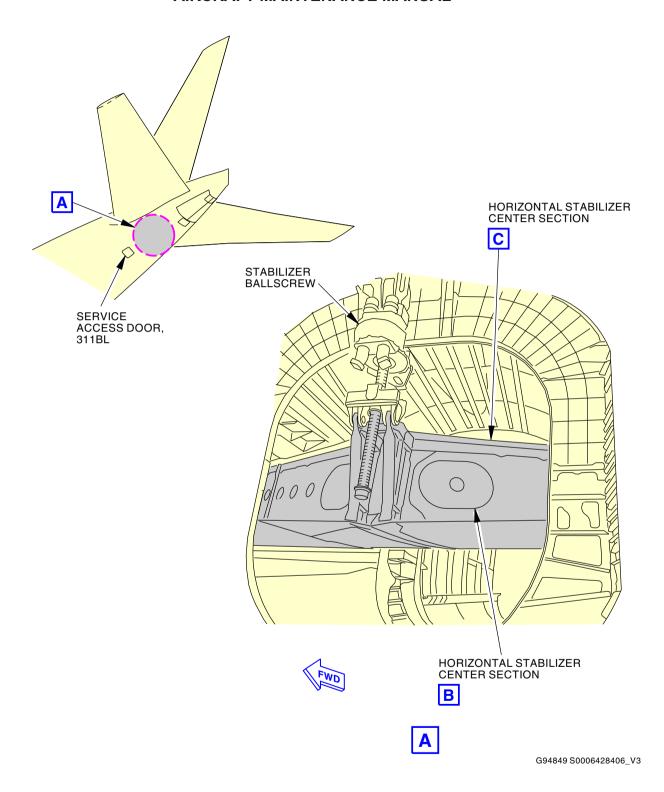
(1) Do the inspection.

----- END OF TASK -----

ARO ALL

55-05-03





External Splice Plates and Spar Splice Fittings (Horizontal Stabilizer Center Section) (External) Figure 201/55-05-03-990-801 (Sheet 1 of 2)

EFFECTIVITY

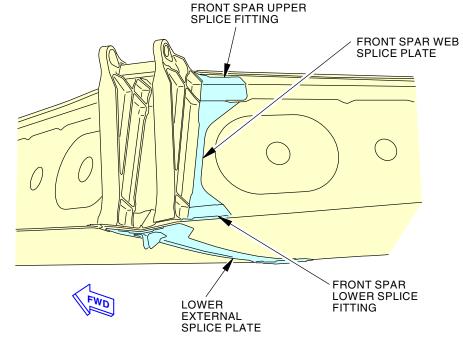
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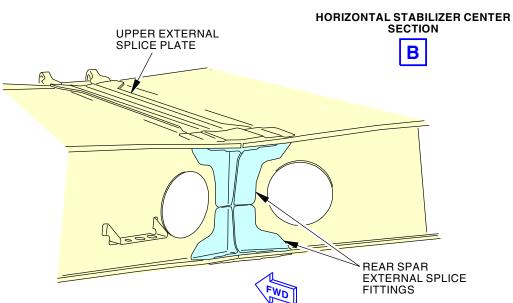
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HORIZONTAL STABILIZER CENTER SECTION



G95026 S0006428407\_V3

External Splice Plates and Spar Splice Fittings (Horizontal Stabilizer Center Section) (External) Figure 201/55-05-03-990-801 (Sheet 2 of 2)

ARO ALL
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55-05-03

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### TASK 55-05-03-211-802

3. EXTERNAL - DETAILED: HORIZONTAL STABILIZER CENTER SECTION (Figure 202)

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SUBTASK 55-05-03-211-002

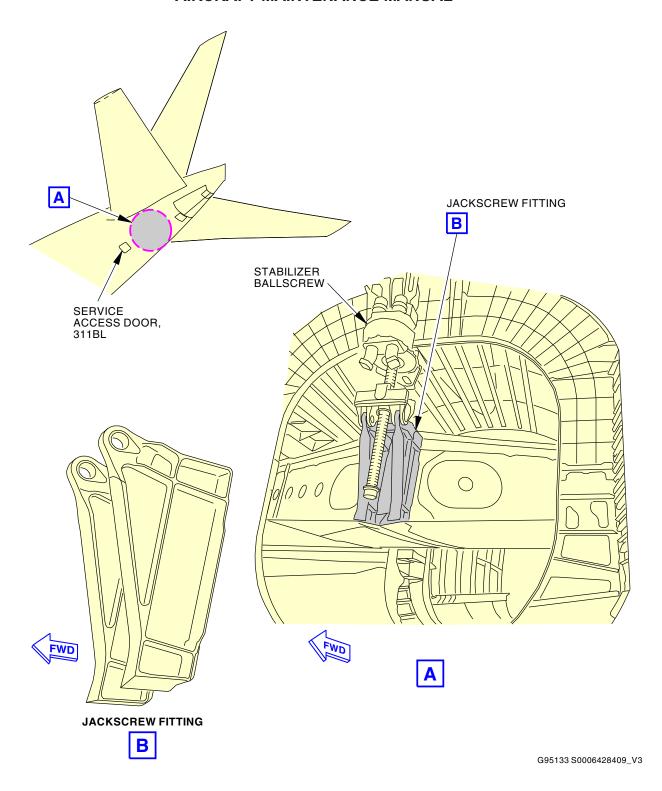
(1) Do the inspection.

----- END OF TASK -----

ARO ALL

55-05-03





Jackscrew Fitting (Horizontal Stabilizer Center Section)(External) Figure 202/55-05-03-990-802

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### TASK 55-05-03-211-803

4. EXTERNAL - DETAILED: AREA AFT OF BULKHEAD

(Figure 203)

A. Inspection

SUBTASK 55-05-03-211-003

(1) Do the inspection.

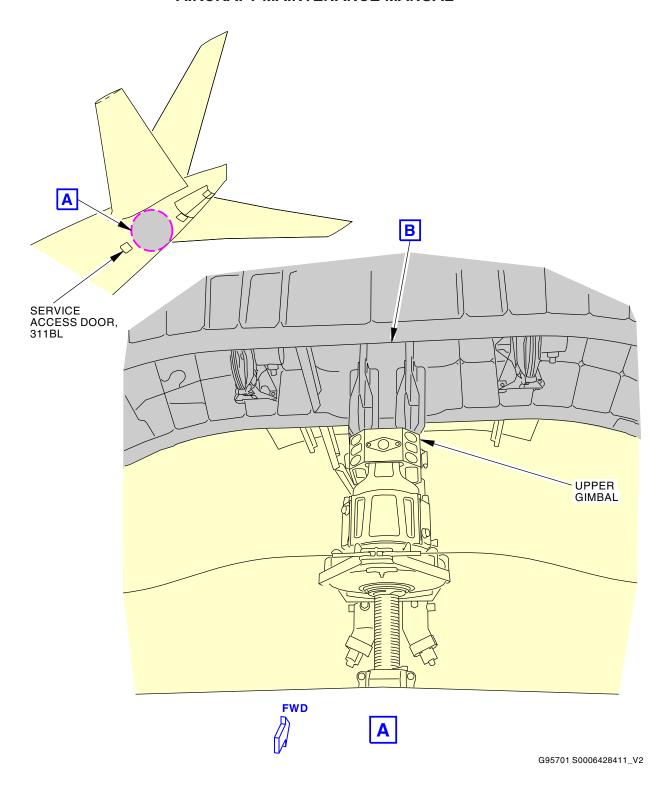
----- END OF TASK -----

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Jackscrew Fittings Aft of Bulkhead (Horizontal Stabilizer Center Section)(External) Figure 203/55-05-03-990-803 (Sheet 1 of 2)

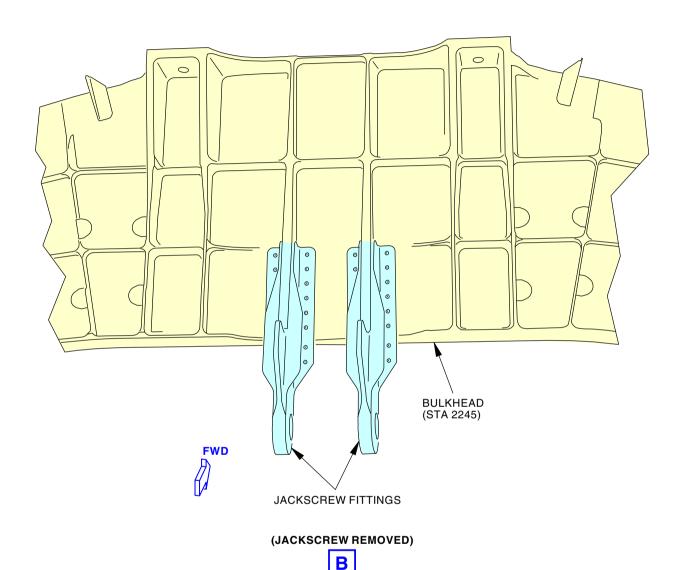
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G95736 S0006428412\_V2

Jackscrew Fittings Aft of Bulkhead (Horizontal Stabilizer Center Section)(External) Figure 203/55-05-03-990-803 (Sheet 2 of 2)

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TASK 55-05-03-211-804

5. EXTERNAL - DETAILED: AREA AFT OF BULKHEAD/STABILIZER TORSION BOX COMPARTMENT (Figure 204)

### A. Inspection

SUBTASK 55-05-03-211-004

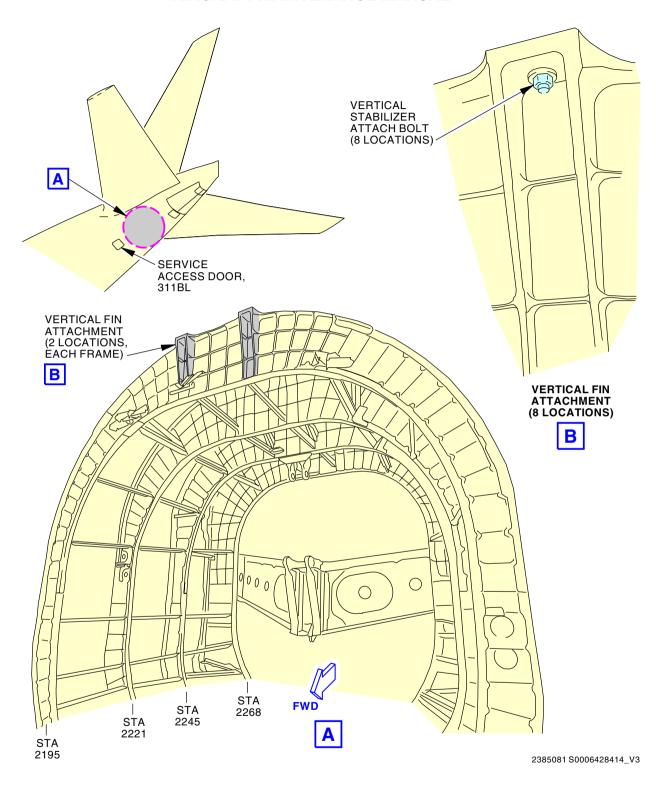
(1) Do the inspection.

----- END OF TASK -----

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55-05-03





Vertical Stabilizer Attachment Bolts (Area Aft of Bulkhead)(External) Figure 204/55-05-03-990-804

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### TASK 55-05-03-211-805

6. EXTERNAL - DETAILED: STABILIZER TORSION BOX COMPARTMENT (Figure 205)

A. Inspection

SUBTASK 55-05-03-211-005

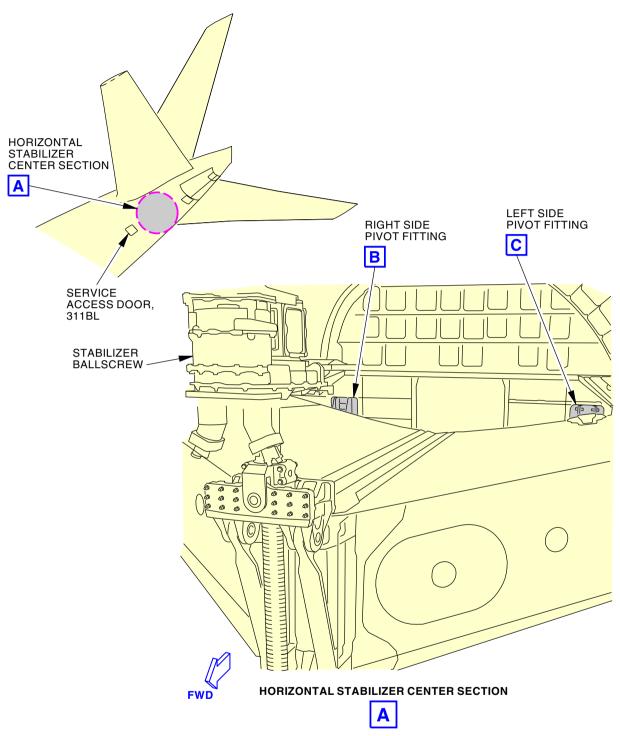
(1) Do the inspection.

----- END OF TASK -----

ARO ALL

55-05-03





G95817 S0006428416\_V2

Horizontal Stabilizer Torsion Box Compartment (External) Figure 205/55-05-03-990-805 (Sheet 1 of 2)

EFFECTIVITY

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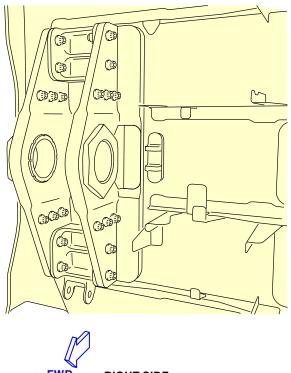
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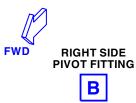
ECCN 9E991 BOEING PROPRIETARY - Copyright © Unpublished Work - See title page for details

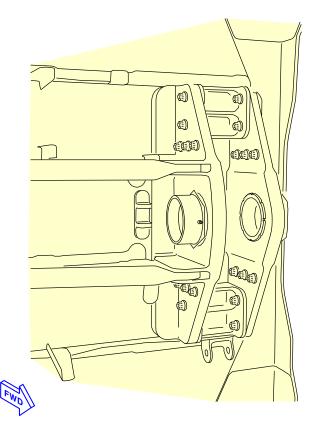
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LEFT SIDE PIVOT FITTING



G95853 S0006428417\_V2

Horizontal Stabilizer Torsion Box Compartment (External) Figure 205/55-05-03-990-805 (Sheet 2 of 2)

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### TASK 55-05-03-210-852

7. EXTERNAL - GENERAL VISUAL: FUSELAGE - BS 2150-2570.3 (SECTION 48)

(Figure 206)

NOTE: This procedure is a scheduled maintenance task.

### A. References

Reference	Title
27-41-13-020-803	Stabilizer Trim Safety Rod - Removal (P/B 401)
27-41-13-420-803	Stabilizer Trim Safety Rod - Installation (P/B 401)

B. General Visual Inspection of the Stabilizer Trim Actuator Safety Rod, Lower Gimbal, Upper Gimbal and Primary Brake Housing

### SUBTASK 55-05-03-020-001

(1) Remove the stabilizer trim safety rod. (Stabilizer Trim Safety Rod - Removal, TASK 27-41-13-020-803).

### SUBTASK 55-05-03-210-001

(2) Do the general visual Inspection of safety rod (removed), lower gimbal, upper gimbal and primary brake housing.

### SUBTASK 55-05-03-040-001

(3) Install the stabilizer trim safety rod. (Stabilizer Trim Safety Rod - Installation, TASK 27-41-13-420-803).

### SUBTASK 55-05-03-840-001

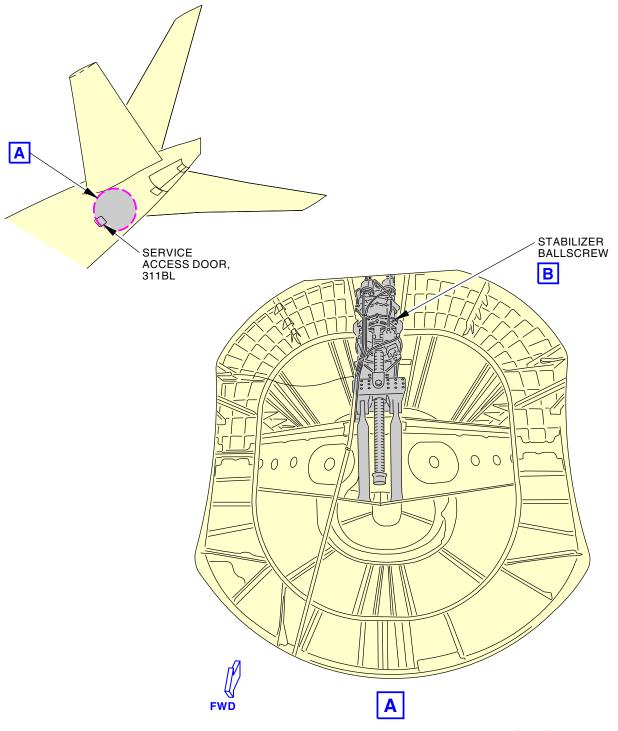
(4) Return the aircraft to normal configuration.

----- END OF TASK -----

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G96515 S0006428419\_V2

Horizontal Stabilizer Ballscrew Gimbal Assembly General Visual (External) Figure 206/55-05-03-990-806 (Sheet 1 of 2)

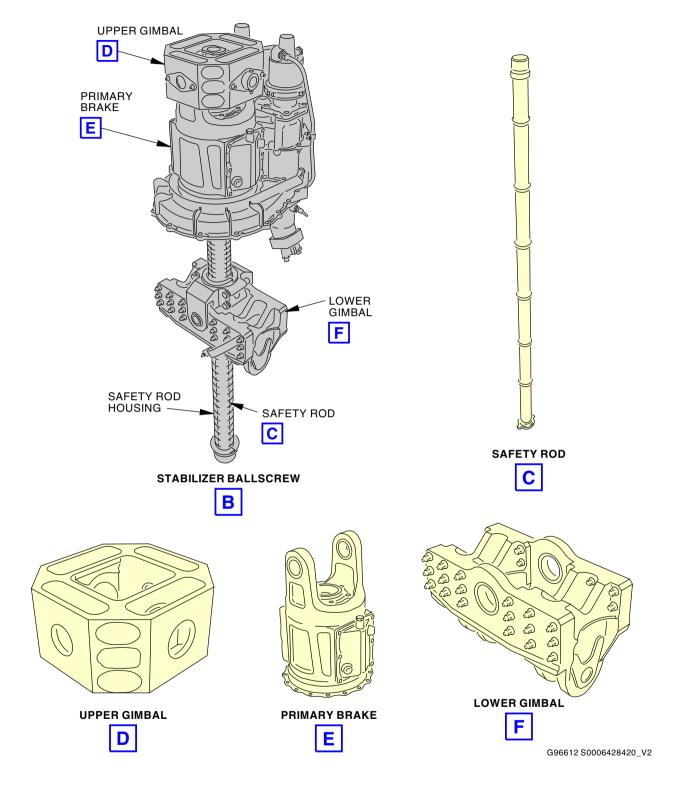
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Horizontal Stabilizer Ballscrew Gimbal Assembly General Visual (External) Figure 206/55-05-03-990-806 (Sheet 2 of 2)

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### TASK 55-05-03-211-806

8. EXTERNAL - SPECIAL DETAILED: FUSELAGE - BS 2150-2570.3 (SECTION 48)

(Figure 207)

NOTE: This procedure is a scheduled maintenance task.

### A. References

Reference	Title	
20-30-80-910-801	General Cleaning of Metal (Series 80) (P/B 201)	
27-41-13-020-803	Stabilizer Trim Safety Rod - Removal (P/B 401)	
27-41-13-420-803	Stabilizer Trim Safety Rod - Installation (P/B 401)	

### B. Consumable Materials

Reference	Description	Specification
B01000	Solvent - General Cleaning Of Metal	
C50001	Compound - Corrosion Preventive, Petroleum Hot Application (Hard Film)	MIL-C-11796 Class I

### C. Inspection

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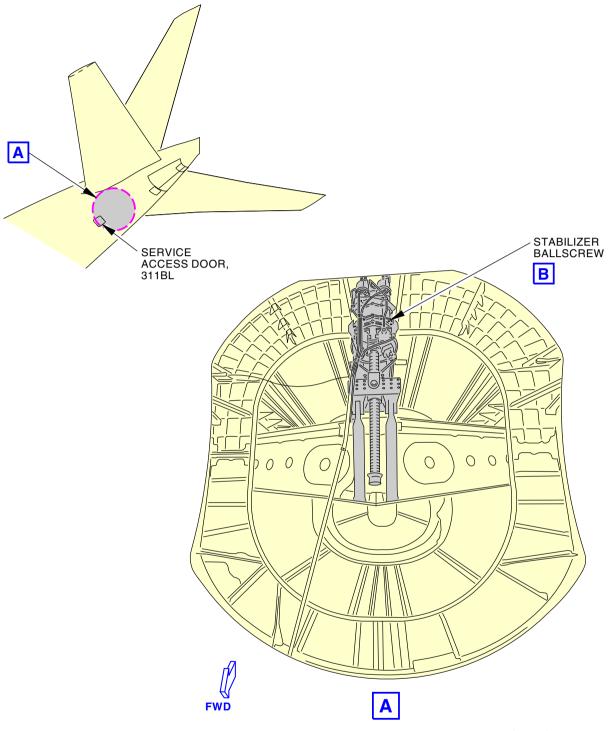
SUBTASK 55-05-03-211-006

- (1) Do the inspection:
  - (a) Do this task: Stabilizer Trim Safety Rod Removal, TASK 27-41-13-020-803.
  - (b) Remove the CIC compound from the internal portion of the safety rod with Series 80 solvent, B01000, reference General Cleaning of Metal (Series 80), TASK 20-30-80-910-801.
  - (c) Do the inspection.
  - (d) Apply compound, C50001 to the internal bore of the safety rod.
  - (e) Do this task: Stabilizer Trim Safety Rod Installation, TASK 27-41-13-420-803.

------ END OF TASK ------

55-05-03





G96673 S0006428422\_V2

Horizontal Stabilizer Ballscrew Gimbal Assembly (External) Figure 207/55-05-03-990-807 (Sheet 1 of 2)

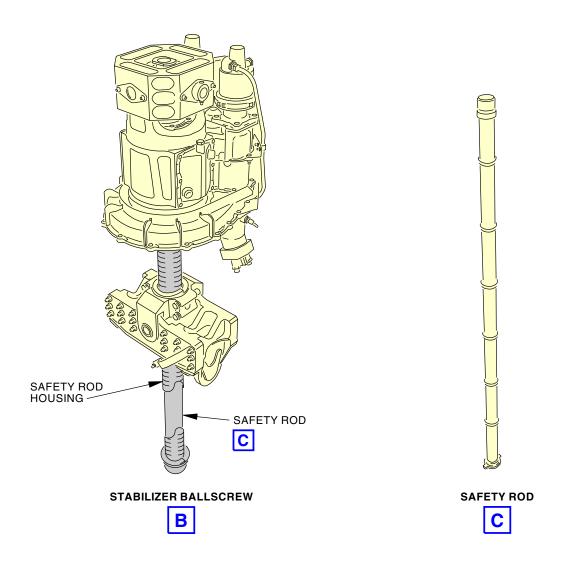
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G96672 S0006428423\_V2

# Horizontal Stabilizer Ballscrew Gimbal Assembly (External) Figure 207/55-05-03-990-807 (Sheet 2 of 2)

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#### TASK 55-05-03-211-807

9. EXTERNAL - DETAILED: VERTICAL STABILIZER - AUXILIARY SPAR TO FRONT SPAR (Figure 208)

Α.		pection	
<b>~</b> :	11131	Deciloi	

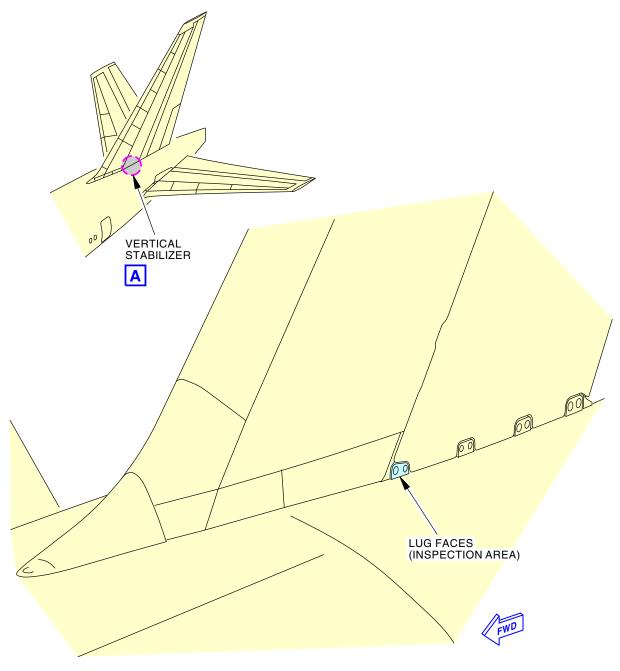
SUBTASK 55-05-03-211-007

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





VERTICAL STABILIZER - ROOT ATTACHMENT FITTING LUG FACES (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



382217 S0000134428\_V2

Auxiliary Spar to Front Spar Root Attachment Fitting Lug Faces (Vertical Stabilizer) (External) Figure 208/55-05-03-990-808

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#### TASK 55-05-03-211-808

10. INTERNAL - DETAILED: VERTICAL STABILIZER - AUXILIARY SPAR TO FRONT SPAR (Figure 209)

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Α.	Ins	ne	cti	n
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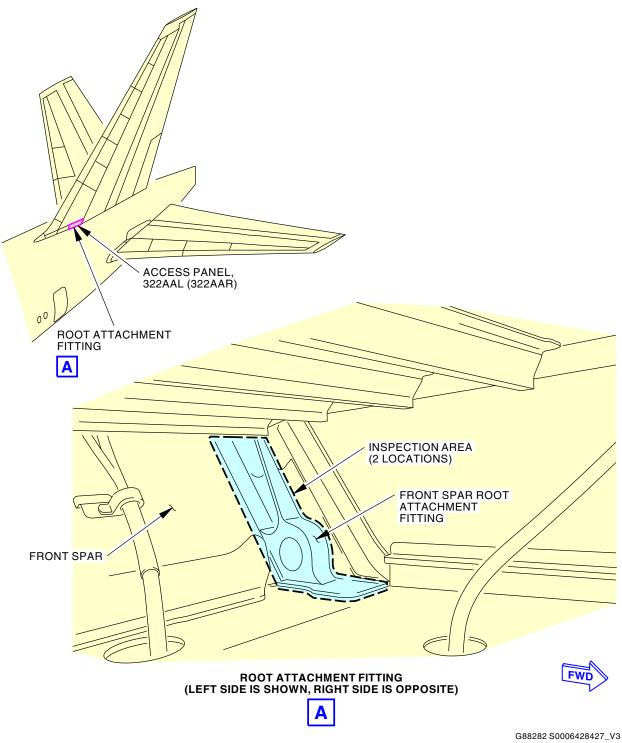
SUBTASK 55-05-03-211-008

(1) Do the inspection.

----- END OF TASK -----

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Auxiliary Spar to Front Spar Root Attachment Fittings (Vertical Stabilizer) (Internal) Figure 209/55-05-03-990-809

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#### TASK 55-05-03-211-809

- 11. EXTERNAL DETAILED: VERTICAL STABILIZER FRONT SPAR TO REAR SPAR
  - A. Inspection

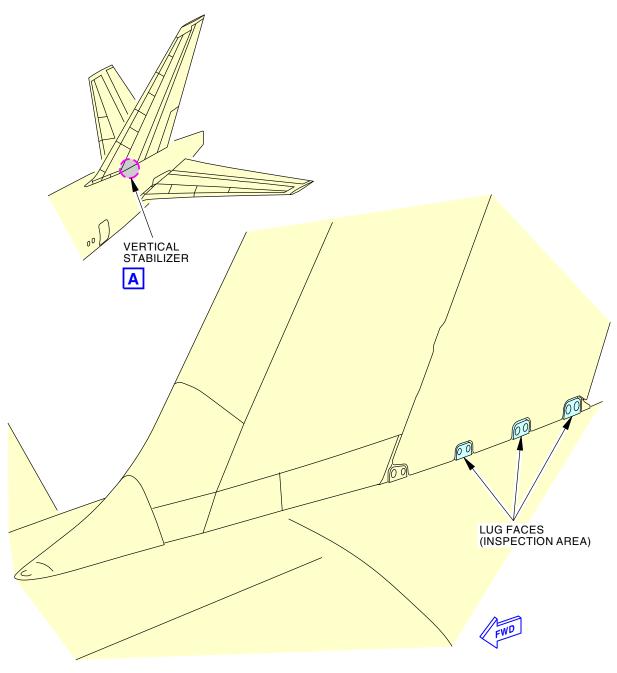
SUBTASK 55-05-03-211-009

(1) Do the inspection.

——— END OF TASK ———

ARO ALL





VERTICAL STABILIZER - ROOT ATTACHMENT FITTING LUG FACES (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



382215 S0000134435\_V3

Front Spar To Rear Spar Root Attachment Fitting Lug Faces (Vertical Stabilizer) (External) Figure 210/55-05-03-990-852

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#### TASK 55-05-03-210-853

- 12. INTERNAL GENERAL VISUAL: VERTICAL STABILIZER FRONT SPAR TO REAR SPAR
  - A. Inspection

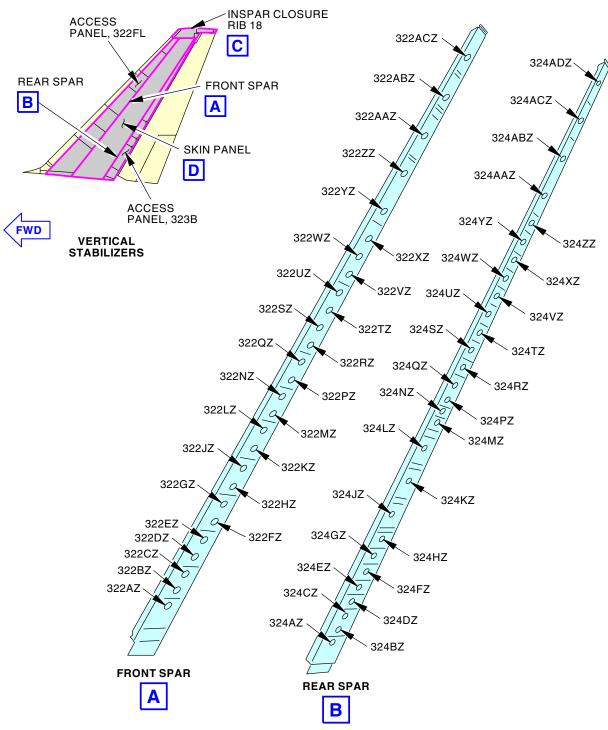
SUBTASK 55-05-03-210-002

(1) Do the inspection. (Figure 211 or Figure 212)

----- END OF TASK -----

ARO ALL





2391434 S0000549467\_V2

Front Spar to Rear Spar (Vertical Stabilizer) General Visual (Internal) Figure 211/55-05-03-990-871

FFECTIVITY

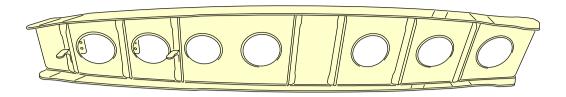
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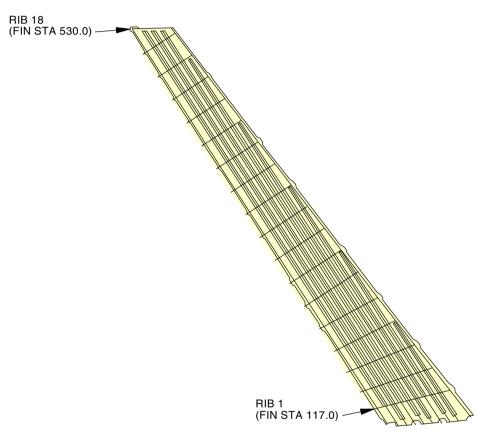
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#### INSPAR CLOSURE RIB 18





SKIN PANEL (LEFT SIDE IS SHOWN, RIGHT SIDE IS EQUIVALENT)



2391436 S0000549468\_V2

Front Spar to Rear Spar (Vertical Stabilizer) General Visual (Internal) Figure 212/55-05-03-990-872

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#### TASK 55-05-03-210-855

13. INTERNAL - GENERAL VISUAL: RUDDER

(Figure 213)

A. Inspection

SUBTASK 55-05-03-210-004

(1) Do the inspection.

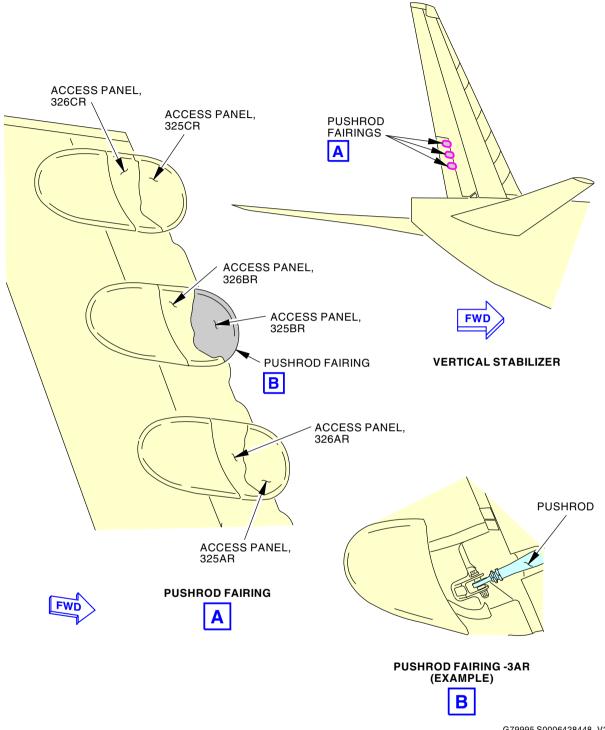
----- END OF TASK -----

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G79995 S0006428448\_V2

#### **Rudder Tab Pushrod General Visual (Internal)** Figure 213/55-05-03-990-816

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#### TASK 55-05-03-210-856

14. INTERNAL - GENERAL VISUAL: RUDDER TAB

(Figure 214)

A. Inspection

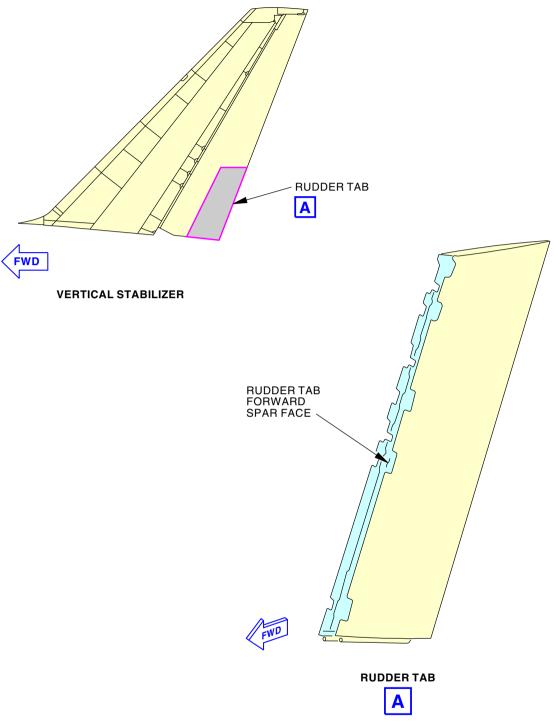
SUBTASK 55-05-03-210-005

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





G80029 S0006428452\_V2

Rudder Tab Forward Spar Face General Visual (Internal) Figure 214/55-05-03-990-818

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#### TASK 55-05-03-211-816

15. INTERNAL - DETAILED: RUDDER TAB

(Figure 215)

A. Inspection

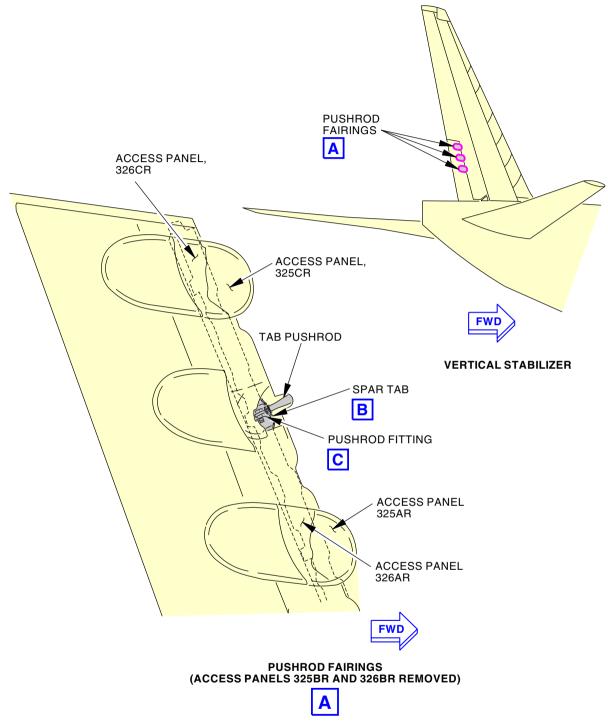
SUBTASK 55-05-03-211-016

(1) Do the inspection.

------ END OF TASK ------

ARO ALL





G81278 S0006428454\_V2

# Rudder Tab Pushrod and Fitting Figure 215/55-05-03-990-819 (Sheet 1 of 2)

EFFECTIVITY

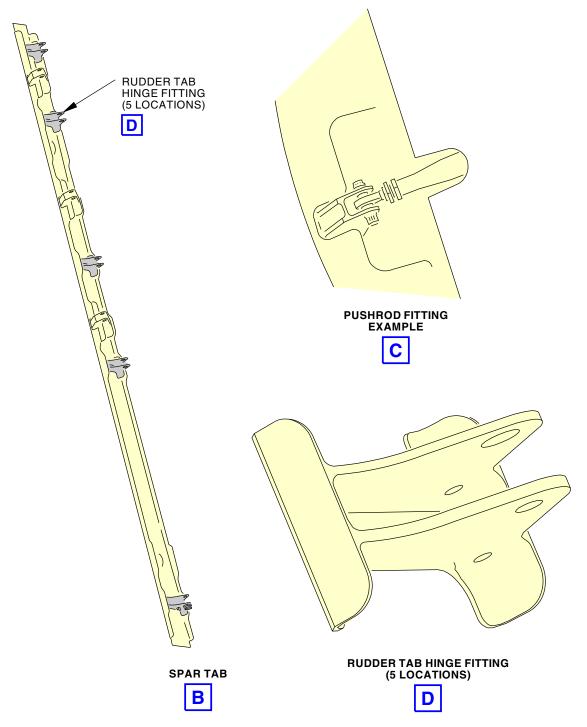
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G81310 S0006428455\_V3

Rudder Tab Pushrod and Fitting Figure 215/55-05-03-990-819 (Sheet 2 of 2)

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#### TASK 55-05-03-211-817

16. INTERNAL - DETAILED: RUDDER TAB

(Figure 216)

A. Inspection

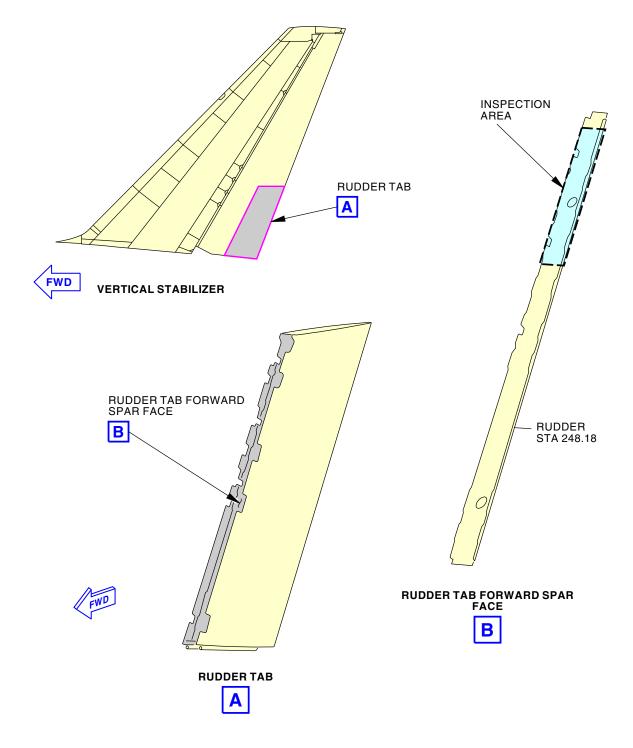
SUBTASK 55-05-03-211-017

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





G80267 S0006428457\_V3

#### Rudder Tab Forward Spar Face (Internal) Figure 216/55-05-03-990-820

EFFECTIVITY

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#### TASK 55-05-03-210-857

17. INTERNAL - GENERAL VISUAL: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR (Figure 217)

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Λ.	1113	PCCL	

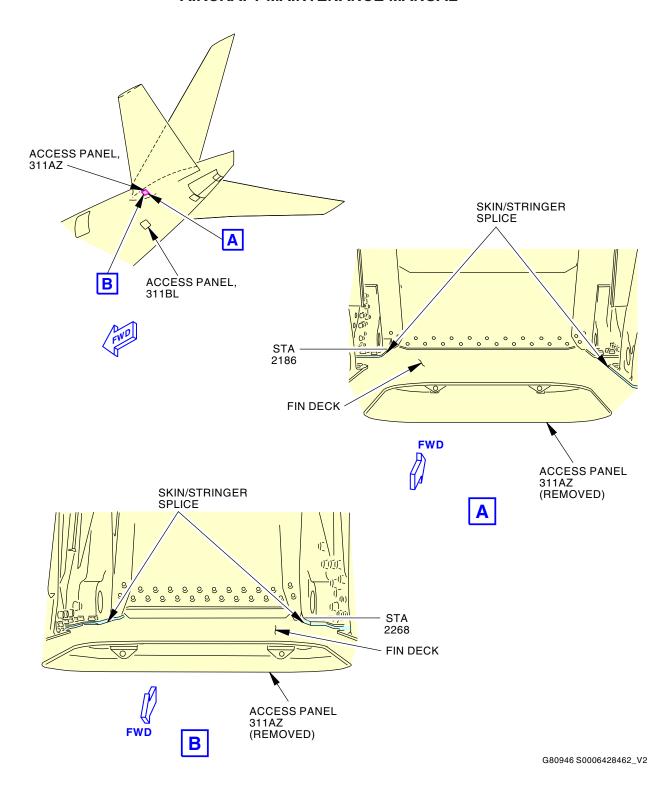
SUBTASK 55-05-03-210-006

(1) Do the inspection.

——— END OF TASK ———

ARO ALL





Fin Deck and Circumferential Skin/Stringer Splice (Vertical Stabilizer) General Visual (Internal) Figure 217/55-05-03-990-822

EFFECTIVITY

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#### TASK 55-05-03-211-820

18. EXTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION (Figure 218)

		4.0
Α.	Inspe	ection

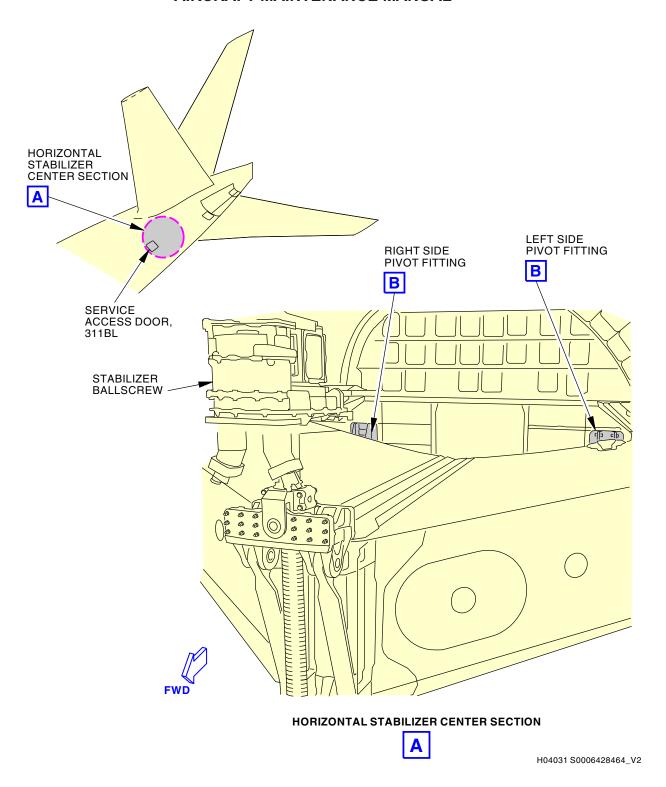
SUBTASK 55-05-03-211-020

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





Pivot Fittings, Antirotation Strap, and Pins (Horizontal Stabilizer Center Section)(External) Figure 218/55-05-03-990-823 (Sheet 1 of 2)

EFFECTIVITY

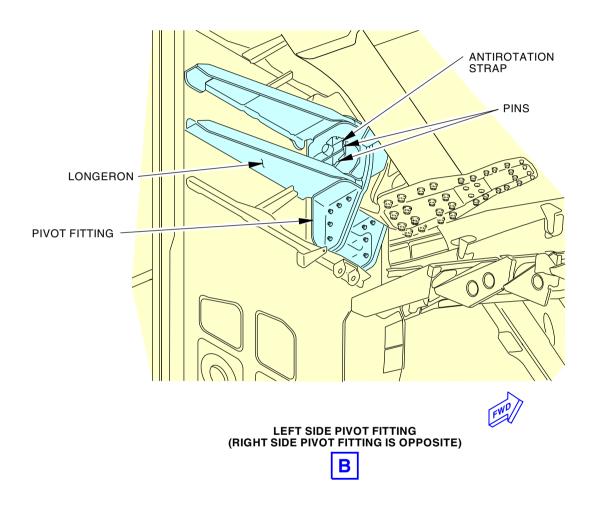
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G99669 S0006428465\_V2

Pivot Fittings, Antirotation Strap, and Pins (Horizontal Stabilizer Center Section)(External) Figure 218/55-05-03-990-823 (Sheet 2 of 2)

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#### TASK 55-05-03-211-855

#### 19. EXTERNAL - DETAILED: <u>LEFT HORIZONTAL STABILIZER CENTER SECTION</u>

(Figure 219)

NOTE: This procedure is a scheduled maintenance task.

#### A. References

Reference	Title
55-17-01 P/B 401	HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY -
	REMOVAL/INSTALLATION

#### B. Inspection

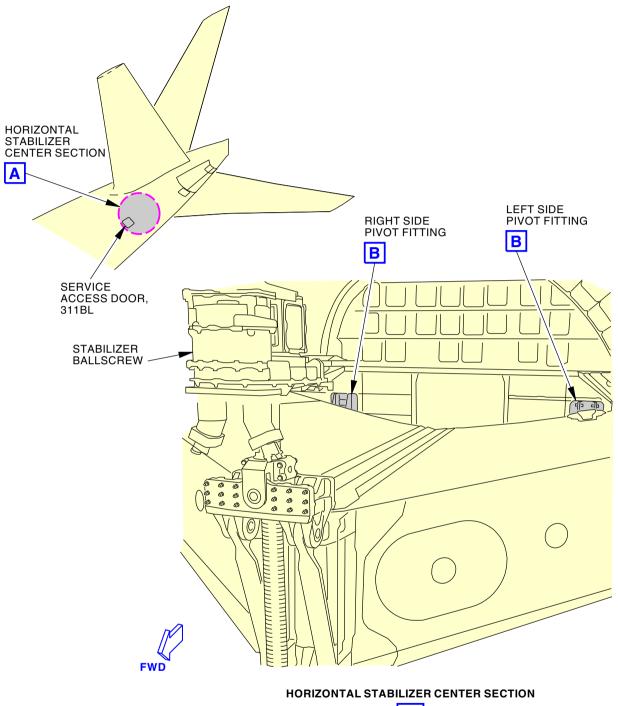
SUBTASK 55-05-03-211-055

- (1) Do the inspection.
- (2) HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY REMOVAL/INSTALLATION, PAGEBLOCK 55-17-01/401

----- END OF TASK -----

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G99128 S0006428467\_V2

Pivot Fittings, Antirotation Strap and Internal Surface of Outer Pin and Outer Surface of Inner Pin (Horizontal Stabilizer Center Section (External)

Figure 219/55-05-03-990-869 (Sheet 1 of 2)

EFFECTIVITY

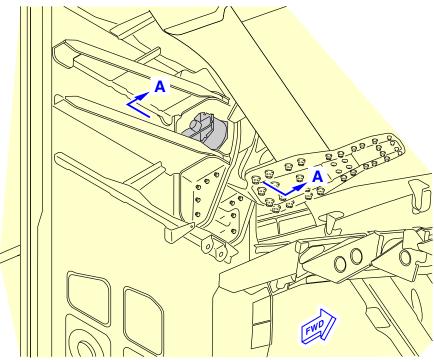
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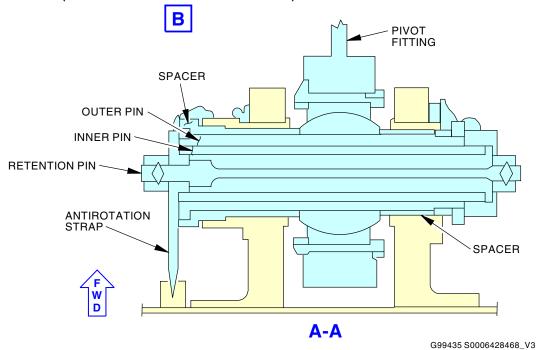
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LEFT SIDE PIVOT FITTING (RIGHT SIDE PIVOT FITTING IS OPPOSITE)



Pivot Fittings, Antirotation Strap and Internal Surface of Outer Pin and Outer Surface of Inner Pin (Horizontal Stabilizer Center Section (External) Figure 219/55-05-03-990-869 (Sheet 2 of 2)

FFFECTIVITY

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#### TASK 55-05-03-211-856

#### 20. EXTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION

NOTE: This procedure is a scheduled maintenance task.

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Reference	Title
55-17-01 P/B 401	HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY -
	REMOVAL/INSTALLATION

#### B. Inspection

SUBTASK 55-05-03-211-056

- (1) Do the inspection.
- (2) HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY REMOVAL/INSTALLATION, PAGEBLOCK 55-17-01/401

----- END OF TASK -----

#### TASK 55-05-03-211-822

#### 21. INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION

(Figure 220)

#### A. Inspection

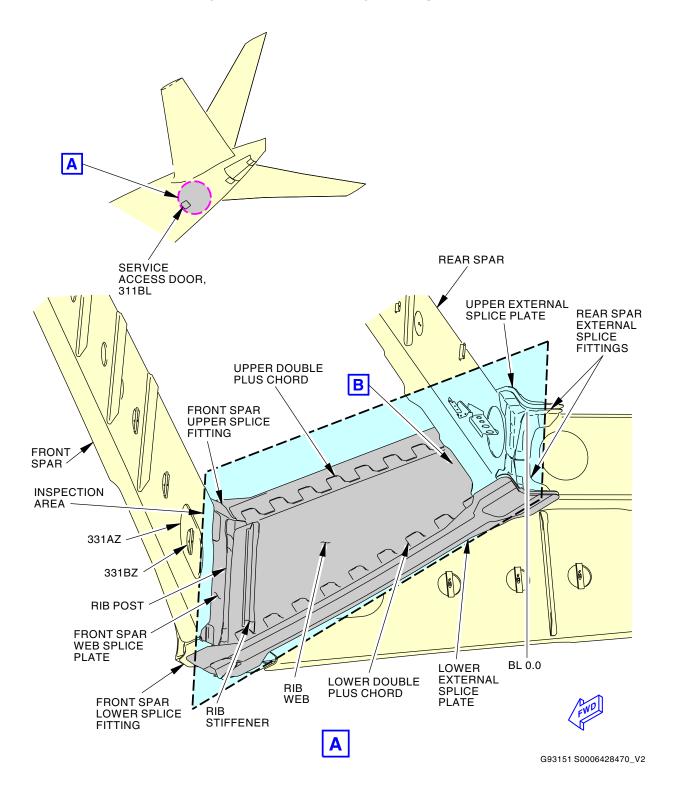
SUBTASK 55-05-03-211-022

(1) Do the inspection.

——— END OF TASK ———

ARO ALL 55-05-03





Rib Web (BL 0.0) and Attaching Hardware Interfaces (Left Horizontal Stabilizer Center Section)(Internal) Figure 220/55-03-990-825 (Sheet 1 of 2)

EFFECTIVITY

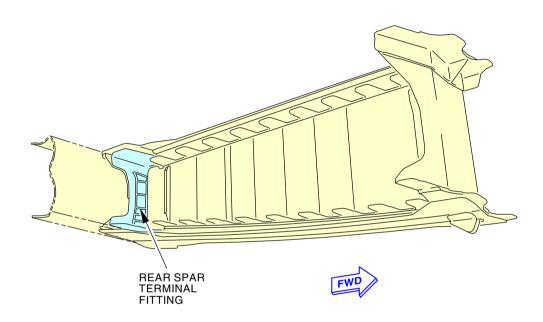
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H02158 S0006428471\_V2

Rib Web (BL 0.0) and Attaching Hardware Interfaces (Left Horizontal Stabilizer Center Section)(Internal) Figure 220/55-05-03-990-825 (Sheet 2 of 2)

ARO ALL

55-05-03

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#### TASK 55-05-03-210-858

22. INTERNAL - GENERAL VISUAL: LEFT HORIZONTAL STABILIZER CENTER SECTION (Figure 221)

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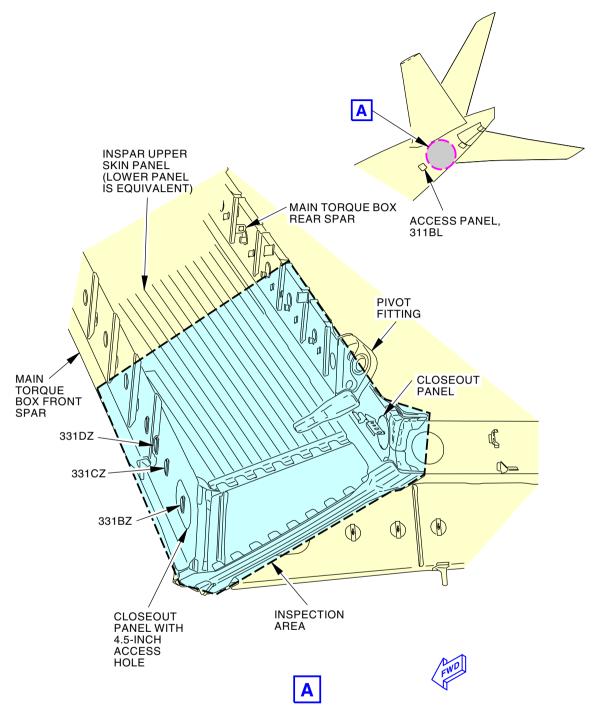
SUBTASK 55-05-03-210-007

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





G93873 S0006428473\_V2

Inspar Skin Panels and Main Torque Box Spars Interfaces (Left Horizontal Stabilizer Center Section)

General Visual (Internal)

Figure 221/55-03-990-826

EFFECTIVITY

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#### TASK 55-05-03-211-823

23. INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER CENTER SECTION (Figure 222)

#### A. Inspection

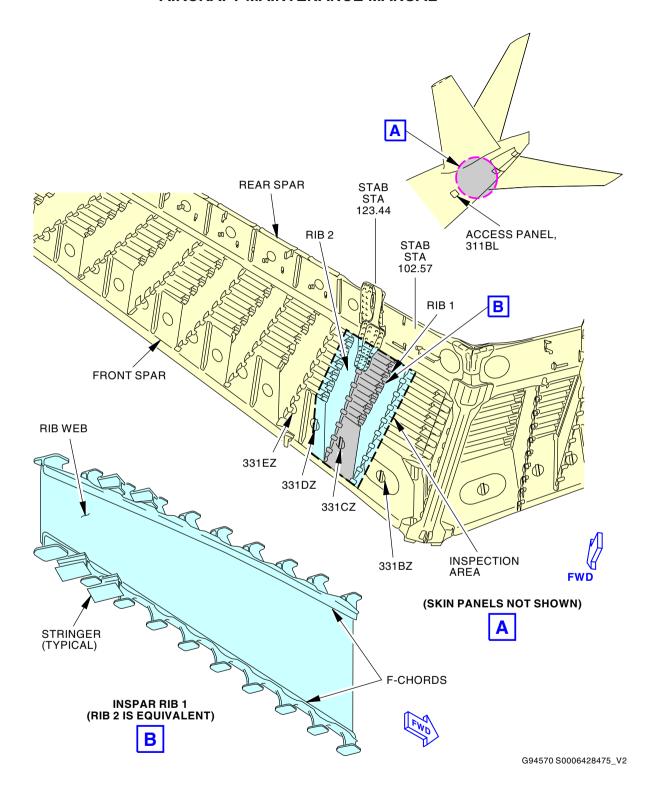
SUBTASK 55-05-03-211-023

(1) Do the inspection.

——— END OF TASK ———

ARO ALL





Inspar Ribs 1 and 2, and F-chords Interfaces (Left Horizontal Stabilizer Center Section)(Internal) Figure 222/55-03-990-827

EFFECTIVITY

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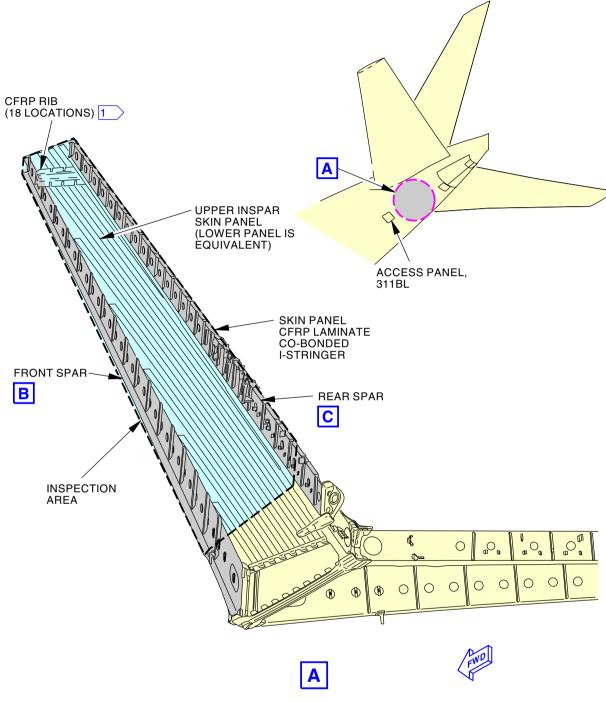
#### TASK 55-05-03-210-859

24. INTERNAL - GENERAL VISUAL: LEFT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR (Figure 223)

A. Inspection			
	SUBTASK 55-05-03-210-008		
	(1)	Do the inspection.	
			END OF TASK

ARO ALL





1 REMAINING RIBS NOT SHOWN FOR CLARITY

G94586 S0006428477\_V2

Front Spar to Rear Spar (Left Horizontal Stabilizer) General Visual (Internal) Figure 223/55-05-03-990-828 (Sheet 1 of 2)

EFFECTIVITY

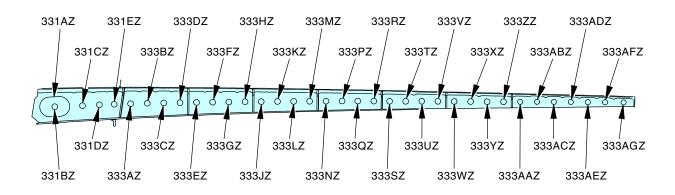
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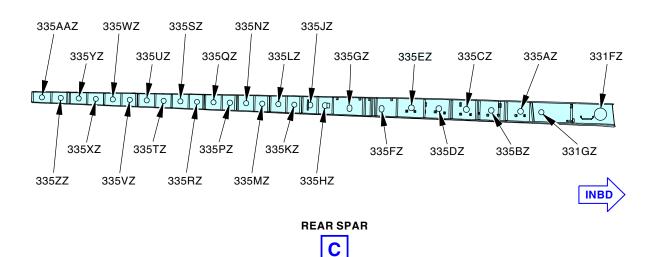












G94615 S0006428478\_V2

Front Spar to Rear Spar (Left Horizontal Stabilizer) General Visual (Internal) Figure 223/55-05-03-990-828 (Sheet 2 of 2)

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#### TASK 55-05-03-211-824

25. INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR (Figure 224)

A. In	spection
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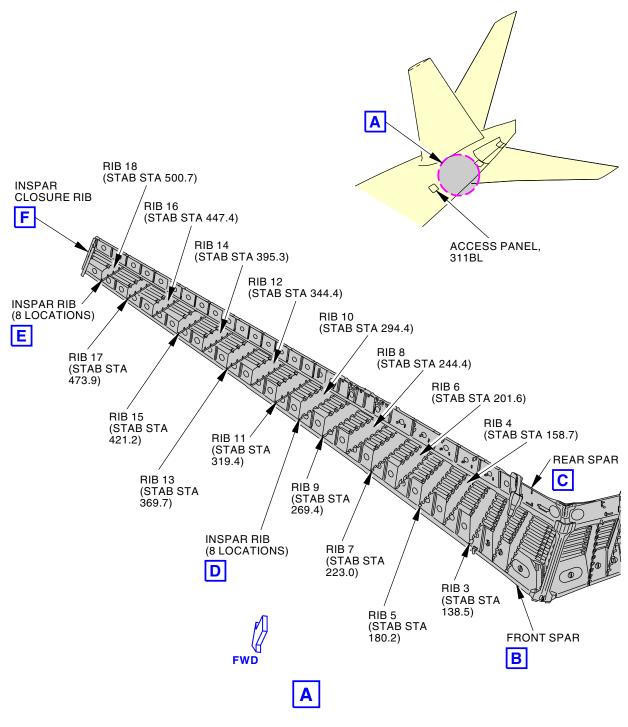
SUBTASK 55-05-03-211-024

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





G94985 S0006428480\_V2

#### Front Spar to Rear Spar (Left Horizontal Stabilizer)(Internal) Figure 224/55-05-03-990-829 (Sheet 1 of 3)

EFFECTIVITY

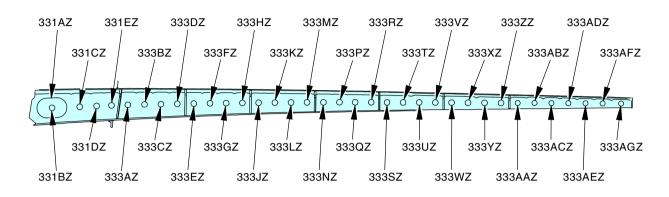
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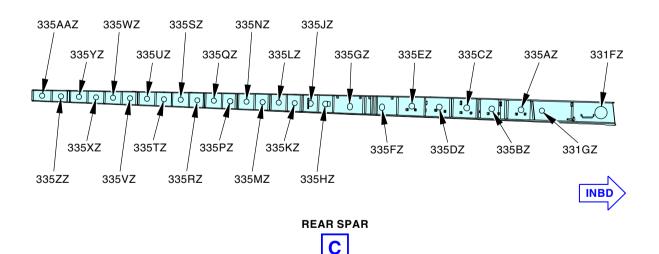












G94986 S0006428481\_V2

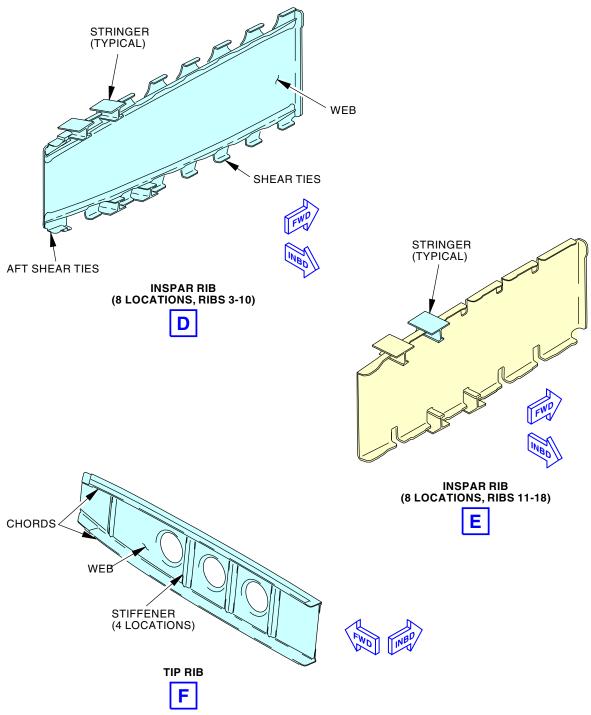
Front Spar to Rear Spar (Left Horizontal Stabilizer)(Internal) Figure 224/55-05-03-990-829 (Sheet 2 of 3)

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G95003 S0006428482\_V2

Front Spar to Rear Spar (Left Horizontal Stabilizer)(Internal) Figure 224/55-05-03-990-829 (Sheet 3 of 3)

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55-05-03

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#### TASK 55-05-03-211-828

- 26. EXTERNAL DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION
  - A. Inspection

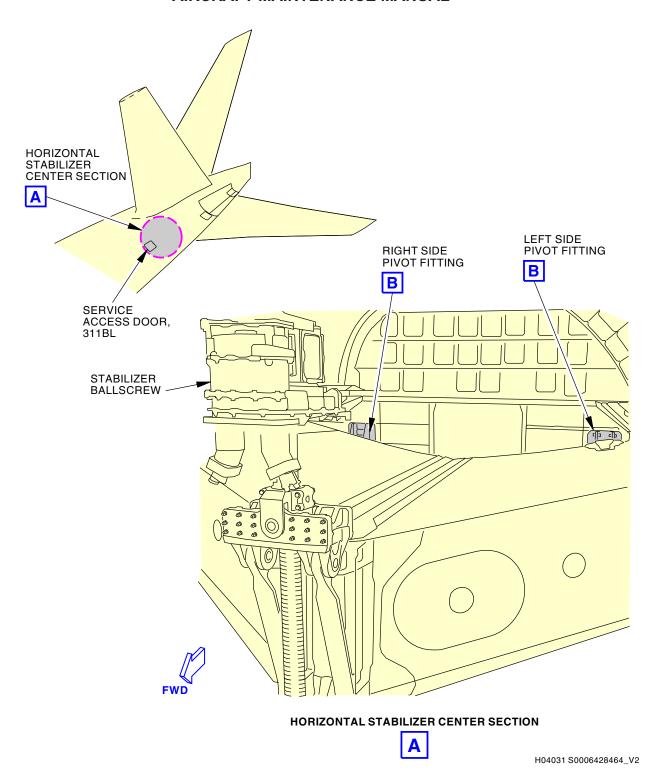
SUBTASK 55-05-03-211-028

(1) Do the inspection.

——— END OF TASK ———

ARO ALL





Pivot Fittings, Antirotation Strap, and Pins (Horizontal Stabilizer Center Section) (External) Figure 225/55-05-03-990-849 (Sheet 1 of 2)

EFFECTIVITY

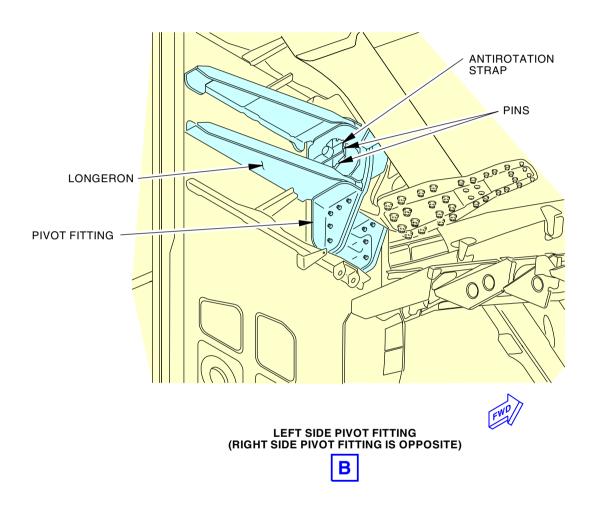
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G99669 S0006428465\_V2

Pivot Fittings, Antirotation Strap, and Pins (Horizontal Stabilizer Center Section) (External) Figure 225/55-05-03-990-849 (Sheet 2 of 2)

ARO ALL

55-05-03

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#### TASK 55-05-03-211-857

#### 27. EXTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION

Figure 226

NOTE: This procedure is a scheduled maintenance task.

#### A. References

Reference	Title
55-17-01 P/B 401	HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY -
	REMOVAL/INSTALLATION

#### B. Inspection

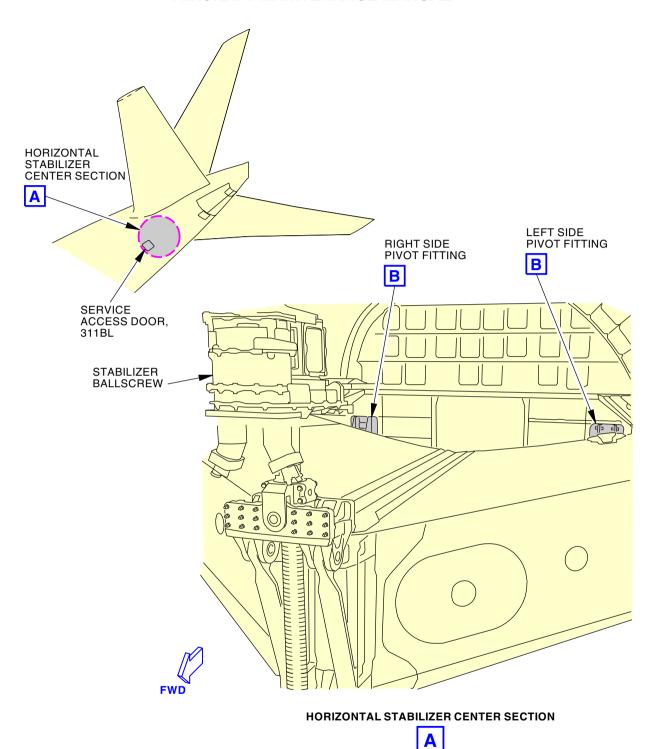
SUBTASK 55-05-03-211-057

- (1) Do the inspection.
- (2) HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY REMOVAL/INSTALLATION, PAGEBLOCK 55-17-01/401

----- END OF TASK -----

ARO ALL 55-05-03





Pivot Fittings, Antirotation Strap, and Internal Surface of Outer Pin and Outer Surface of Inner Pin (Horizontal Stabilizer Center Section)(External)

Figure 226/55-05-03-990-870 (Sheet 1 of 2)

G99128 S0006428467\_V2

EFFECTIVITY

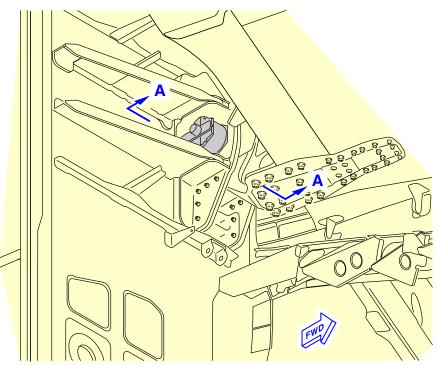
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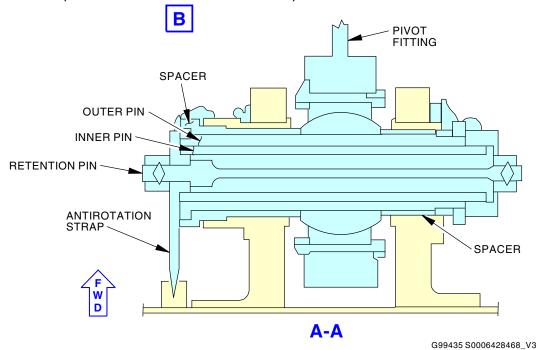
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LEFT SIDE PIVOT FITTING (RIGHT SIDE PIVOT FITTING IS OPPOSITE)



Pivot Fittings, Antirotation Strap, and Internal Surface of Outer Pin and Outer Surface of Inner Pin (Horizontal Stabilizer Center Section)(External)

Figure 226/55-05-03-990-870 (Sheet 2 of 2)

EFFECTIVITY

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#### TASK 55-05-03-211-858

#### 28. EXTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION

NOTE: This procedure is a scheduled maintenance task.

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Reference	Title
55-17-01 P/B 401	HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY -
	REMOVAL/INSTALLATION

#### B. Inspection

SUBTASK 55-05-03-211-058

- (1) Do the inspection.
- (2) HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY REMOVAL/INSTALLATION, PAGEBLOCK 55-17-01/401

----- END OF TASK -----

#### TASK 55-05-03-211-830

#### 29. INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION

(Figure 227)

#### A. Inspection

SUBTASK 55-05-03-211-030

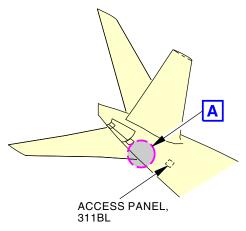
(1) Do the inspection.

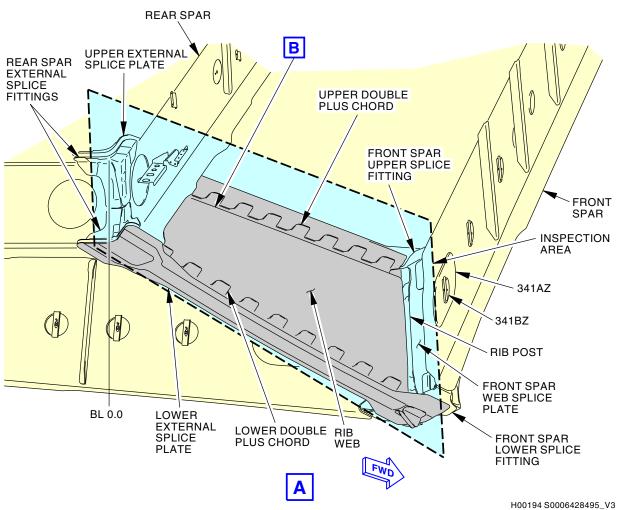
----- END OF TASK -----

ARO ALL 55-05-03

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Rib Web (BL 0.0) and Attaching Hardware Interfaces (Right Horizontal Stabilizer Center Section)(Internal)

Figure 227/55-05-03-990-834 (Sheet 1 of 2)

FFFECTIVITY

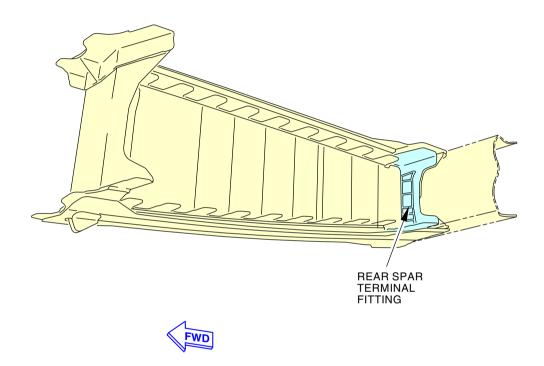
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G93444 S0006428496\_V3

Rib Web (BL 0.0) and Attaching Hardware Interfaces (Right Horizontal Stabilizer Center Section)(Internal)

Figure 227/55-05-03-990-834 (Sheet 2 of 2)

ARO ALL

55-05-03

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#### TASK 55-05-03-210-861

30. INTERNAL - GENERAL VISUAL: RIGHT HORIZONTAL STABILIZER CENTER SECTION (Figure 228)

#### A. Inspection

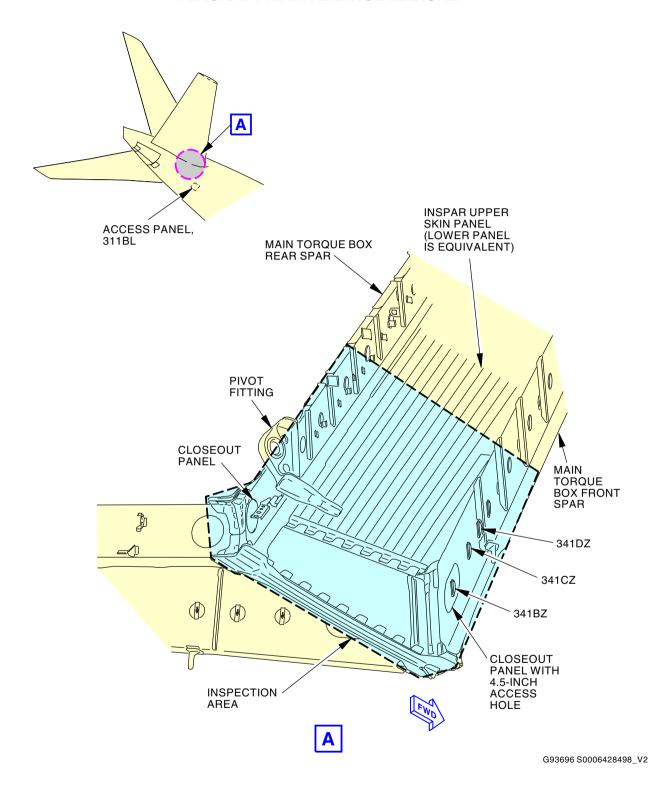
SUBTASK 55-05-03-210-010

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





Inspar Skin Panels and Main Torque Box Spar (Right Horizontal Stabilizer Center Section) General Visual (Internal)
Figure 228/55-05-03-990-835

EFFECTIVITY

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#### TASK 55-05-03-211-831

31. INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER CENTER SECTION (Figure 229)

#### A. Inspection

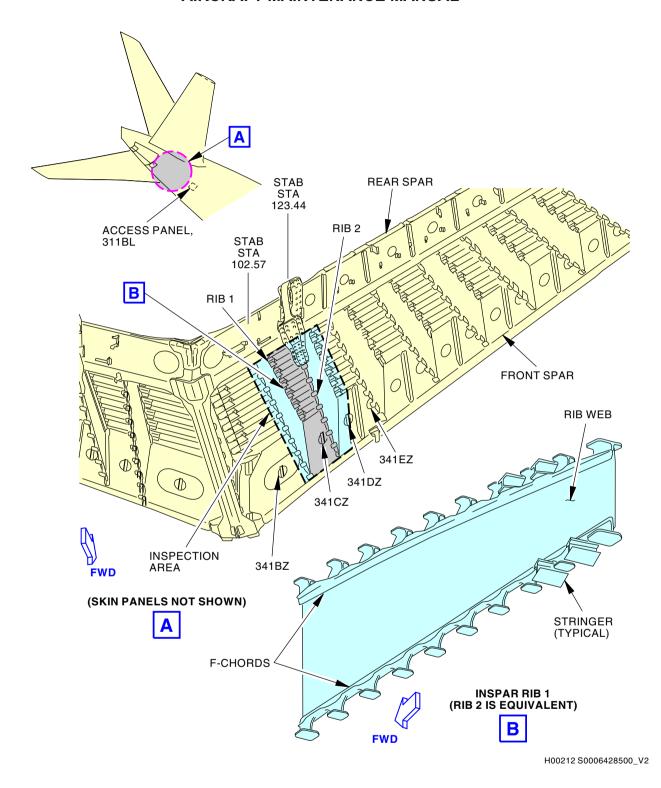
SUBTASK 55-05-03-211-031

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





Inspar Ribs 1 and 2, and F-chords Interface (Right Horizontal Stabilizer Center Section)(Internal) Figure 229/55-03-990-836

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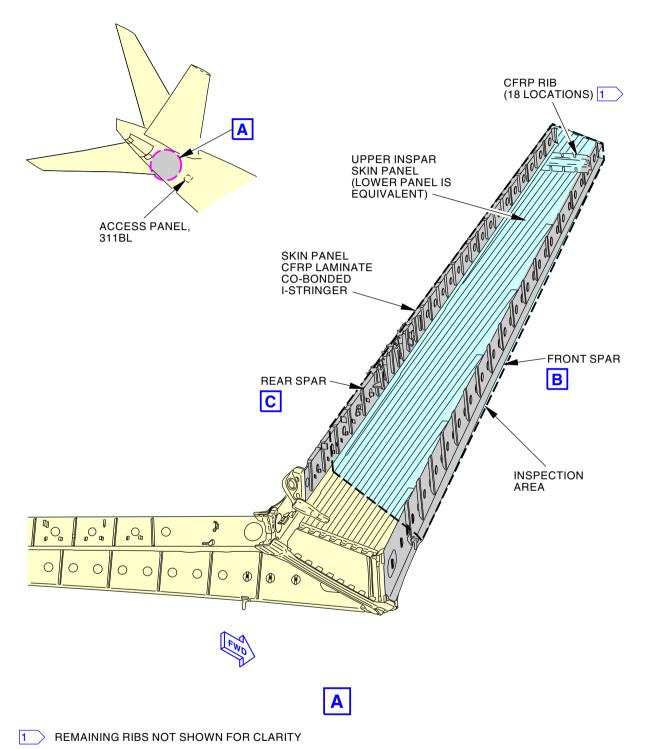
#### TASK 55-05-03-210-862

32. INTERNAL - GENERAL VISUAL: RIGHT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR (Figure 230)

A.	Inspection			
	SUBTASK 55-05-03-210-011			
	(1)	Do the inspection.		
			END OF TASK	

ARO ALL





H04315 S0006428502\_V2

Front Spar to Rear Spar (Right Horizontal Stabilizer) General Visual (Internal) Figure 230/55-05-03-990-837 (Sheet 1 of 2)

FFFECTIVITY

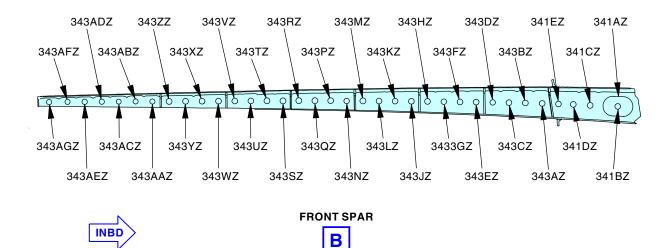
ARO ALL

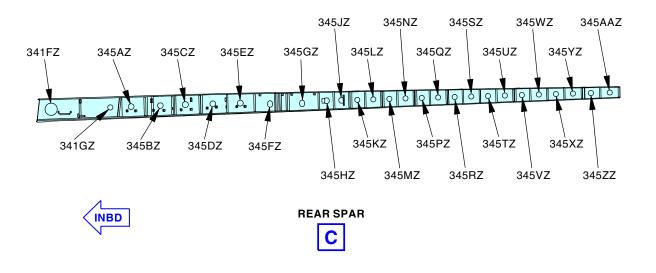
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H04319 S0006428503\_V2

Front Spar to Rear Spar (Right Horizontal Stabilizer) General Visual (Internal) Figure 230/55-05-03-990-837 (Sheet 2 of 2)

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#### TASK 55-05-03-211-832

33. INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER - FRONT SPAR TO REAR SPAR (Figure 231)

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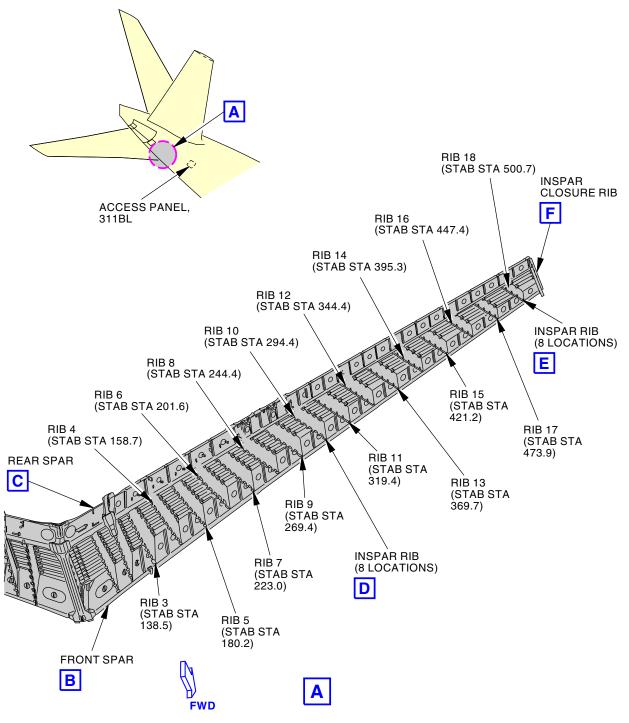
SUBTASK 55-05-03-211-032

(1) Do the inspection.

----- END OF TASK -----

ARO ALL



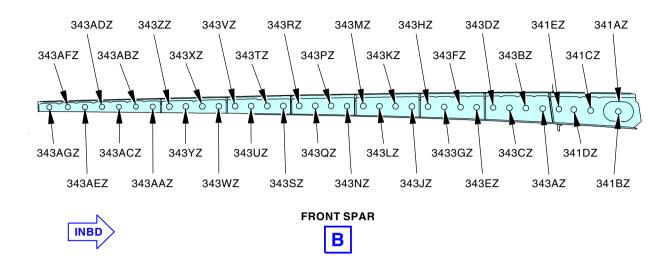


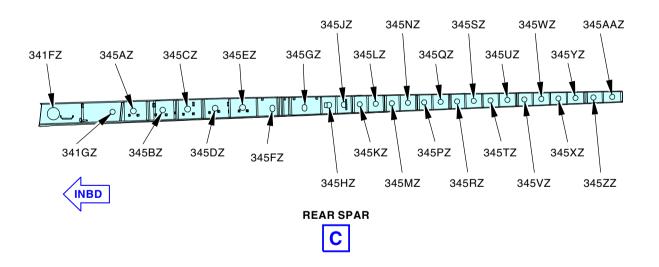
H04214 S0006428505\_V2

#### Front Spar to Rear Spar (Right Horizontal Stabilizer)(Internal) Figure 231/55-05-03-990-838 (Sheet 1 of 3)









H04229 S0006428506\_V3

Front Spar to Rear Spar (Right Horizontal Stabilizer)(Internal) Figure 231/55-05-03-990-838 (Sheet 2 of 3)

EFFECTIVITY

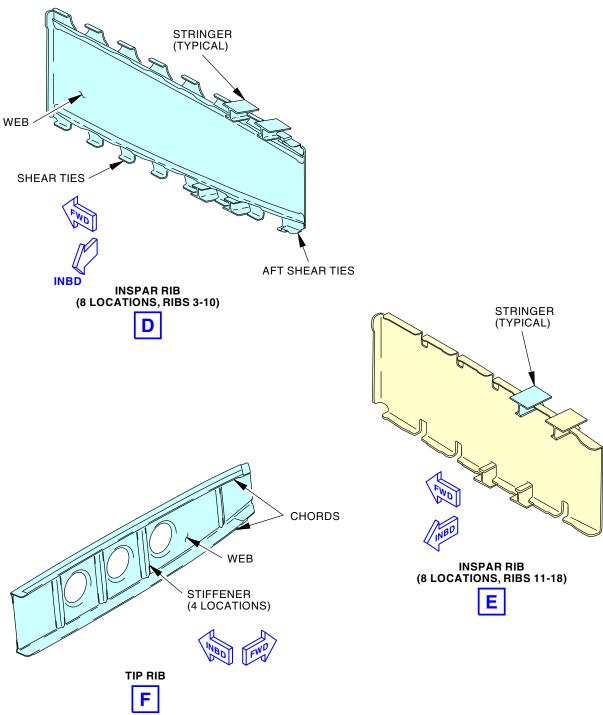
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H04231 S0006428507\_V2

Front Spar to Rear Spar (Right Horizontal Stabilizer)(Internal) Figure 231/55-05-03-990-838 (Sheet 3 of 3)

EFFECTIVITY

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#### TASK 55-05-03-211-837

- 34. INTERNAL DETAILED: VERTICAL STABILIZER FRONT SPAR TO REAR SPAR
  - A. Inspection

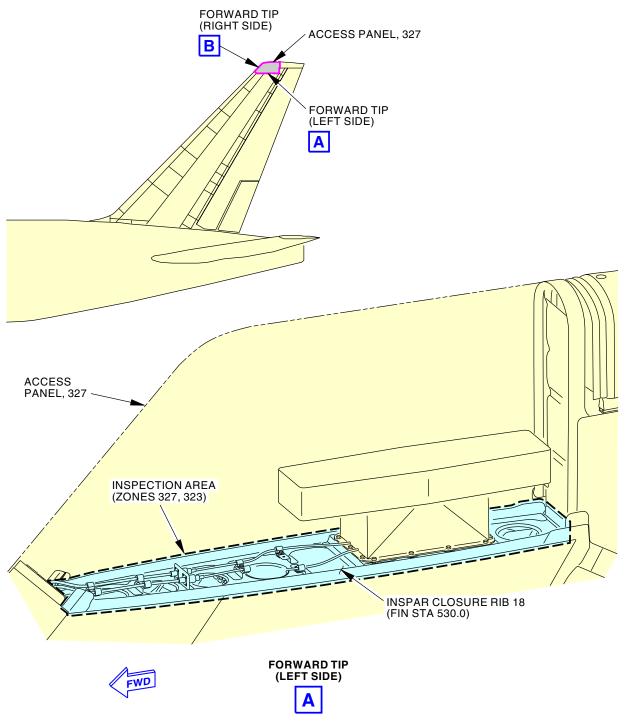
SUBTASK 55-05-03-211-037

(1) Do the inspection.

——— END OF TASK ———

ARO ALL





364453 S0000133460\_V2

Vertical Stabilizer - Front Spar To Rear Spar Figure 232/55-05-03-990-846 (Sheet 1 of 2)

EFFECTIVITY

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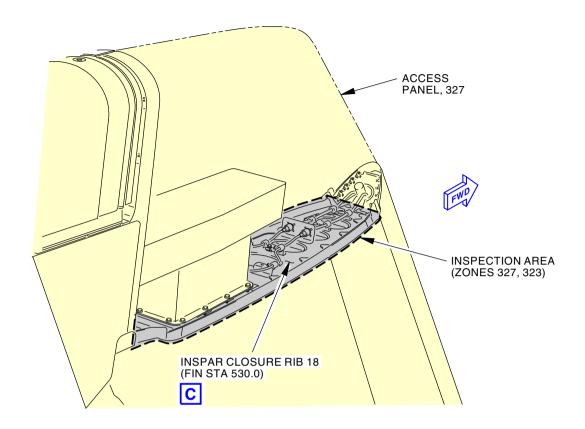
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55-05-03

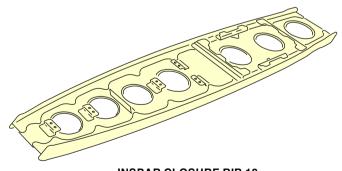
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#### FORWARD TIP (RIGHT SIDE)





INSPAR CLOSURE RIB 18 (FIN STA 530.0)



364807 S0000133461\_V2

Vertical Stabilizer - Front Spar To Rear Spar Figure 232/55-05-03-990-846 (Sheet 2 of 2)

ARO ALL

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#### TASK 55-05-03-211-838

**35.** INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER TIP Figure 233.

A. Inspection

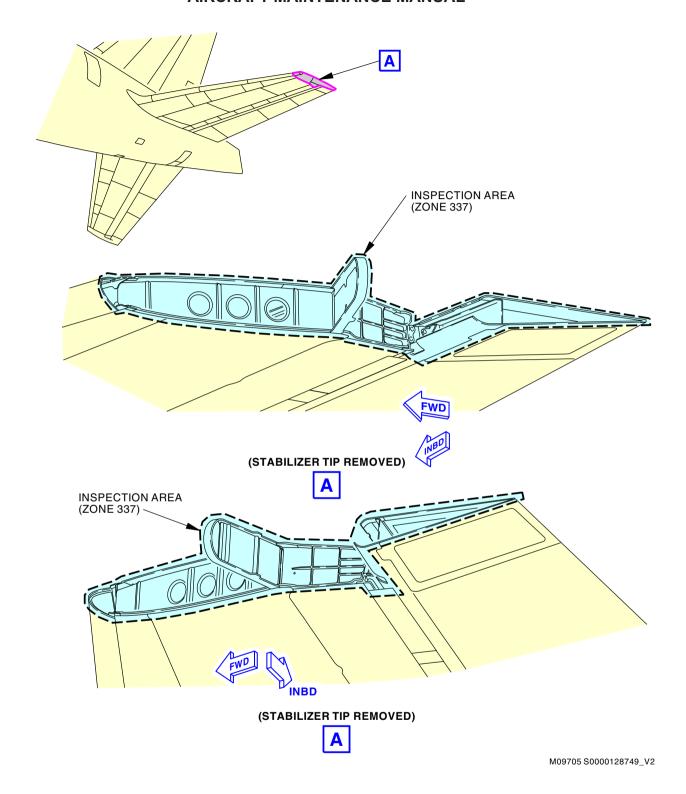
SUBTASK 55-05-03-211-038

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





Left Horizontal Stabilizer Tip General Visual (Internal) Figure 233/55-05-03-990-876

EFFECTIVITY

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#### TASK 55-05-03-211-839

**36.** INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER TIP Figure 234.

#### A. Inspection

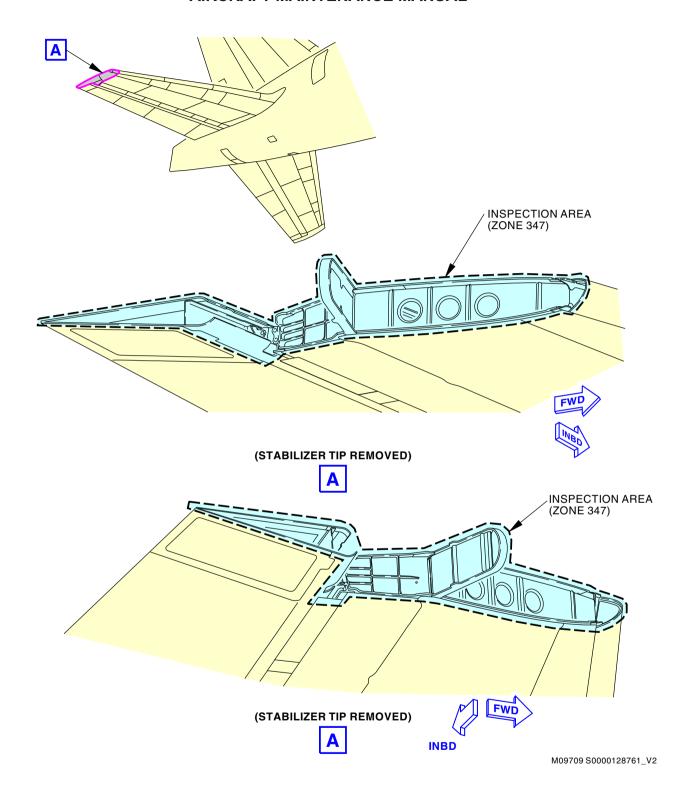
SUBTASK 55-05-03-211-039

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





Right Horizontal Stabilizer Tip General Visual (Internal) Figure 234/55-05-03-990-874

EFFECTIVITY

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#### TASK 55-05-03-211-840

37. INTERNAL - DETAILED: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR (Figure 235)

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

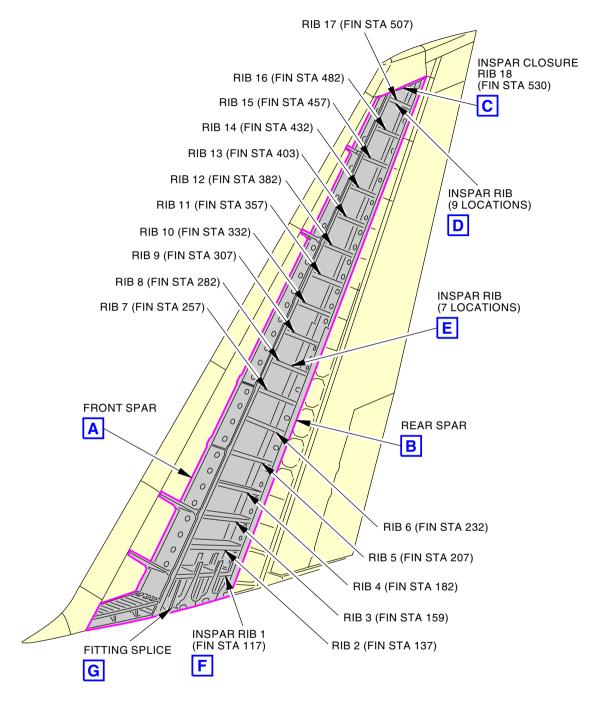
SUBTASK 55-05-03-211-040

(1) Do the inspection.

----- END OF TASK -----

ARO ALL





VERTICAL STABILIZER (CENTER SKIN PANEL REMOVED)

G92269 S0006428433\_V2

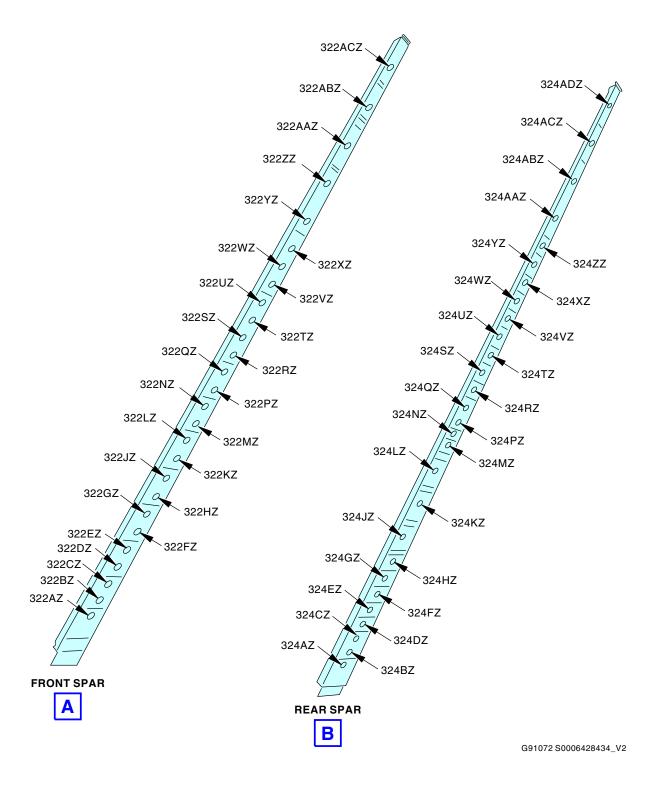
Front Spar to Rear Spar (Vertical Stabilizer) (Internal) Figure 235/55-05-03-990-853 (Sheet 1 of 3)

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Front Spar to Rear Spar (Vertical Stabilizer) (Internal) Figure 235/55-05-03-990-853 (Sheet 2 of 3)

EFFECTIVITY

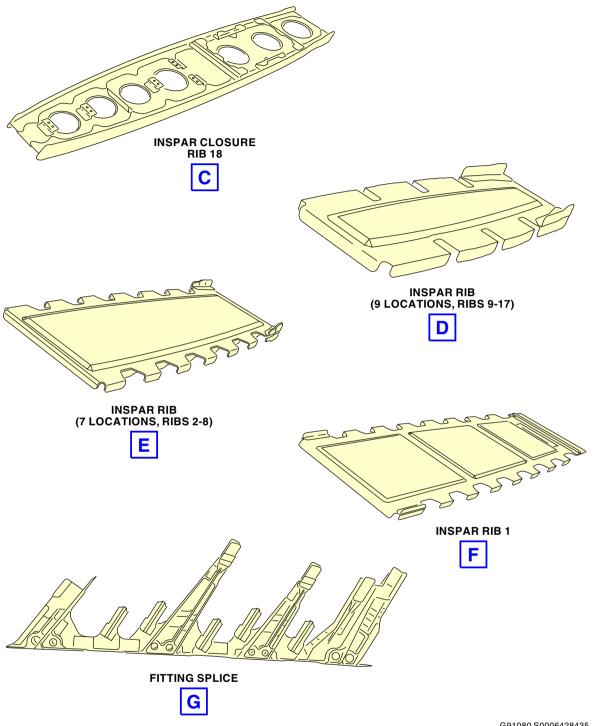
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G91080 S0006428435\_V2

Front Spar to Rear Spar (Vertical Stabilizer) (Internal) Figure 235/55-05-03-990-853 (Sheet 3 of 3)

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#### TASK 55-05-03-211-841

38. INTERNAL - DETAILED: VERTICAL STABILIZER - FRONT SPAR TO REAR SPAR

Figure 236

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 422 AND ON

A. Inspection

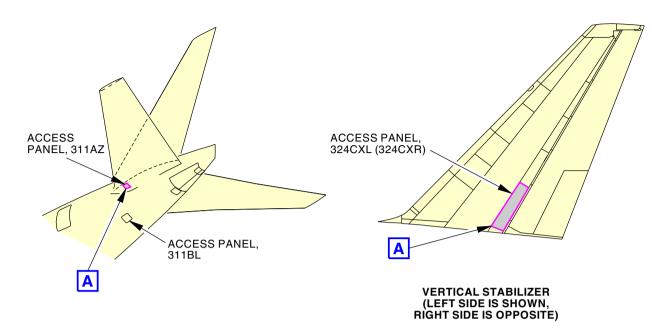
SUBTASK 55-05-03-211-041

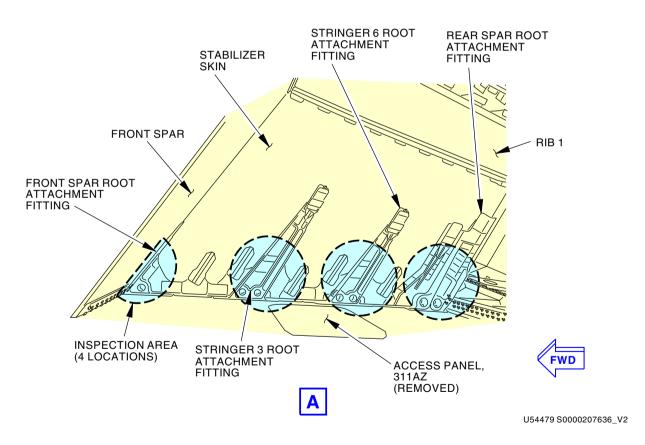
(1) Do the inspection.

----- END OF TASK -----

ARO ALL







Front Spar To Rear Spar Root Attachment Fittings (Vertical Stabilizer) (Internal) Figure 236/55-03-990-854

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#### TASK 55-05-03-211-842

39. INTERNAL - DETAILED: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE

Figure 237

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON

A. Inspection

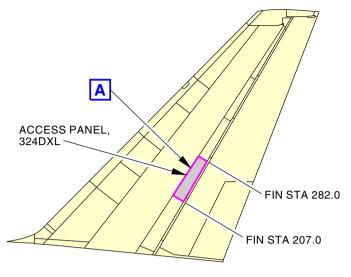
SUBTASK 55-05-03-211-042

(1) Do the inspection.

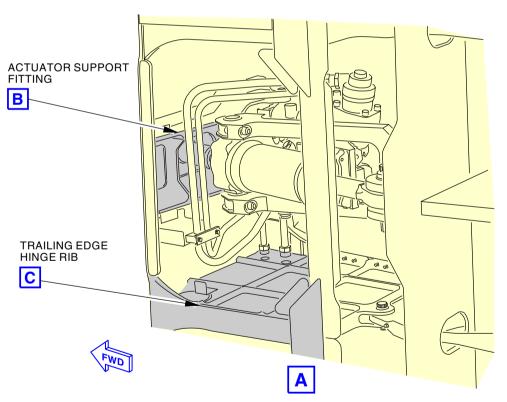
------ END OF TASK ------

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**VERTICAL STABILIZER** 



U54476 S0000207637\_V2

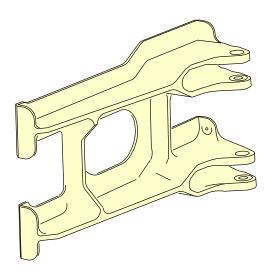
Trailing Edge Hinge Rib and Actuator Support Fitting (Vertical Stabilizer) (Internal) Figure 237/55-05-03-990-855 (Sheet 1 of 2)

ARO ALL

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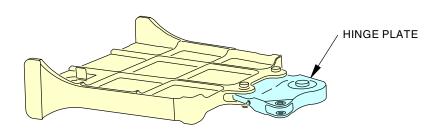
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ACTUATOR SUPPORT FITTING (EXAMPLE)





# TRAILING EDGE HINGE RIB (EXAMPLE)



G77987 S0006428439\_V2

Trailing Edge Hinge Rib and Actuator Support Fitting (Vertical Stabilizer) (Internal) Figure 237/55-05-03-990-855 (Sheet 2 of 2)

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#### TASK 55-05-03-211-843

40. INTERNAL - DETAILED: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE

Figure 238

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

SUBTASK 55-05-03-211-043

(1) Do the inspection.

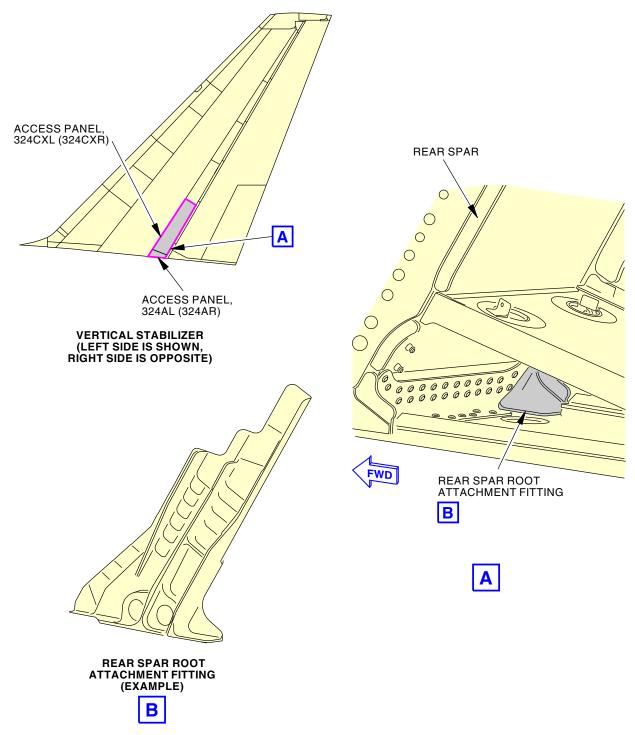
------ END OF TASK ------

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U54496 S0000207618\_V2

Rear Spar Root Attachment Fittings (Vertical Stabilizer) (Internal) Figure 238/55-05-03-990-856

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#### TASK 55-05-03-210-864

**41.** INTERNAL - GENERAL VISUAL: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE Figure 239

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

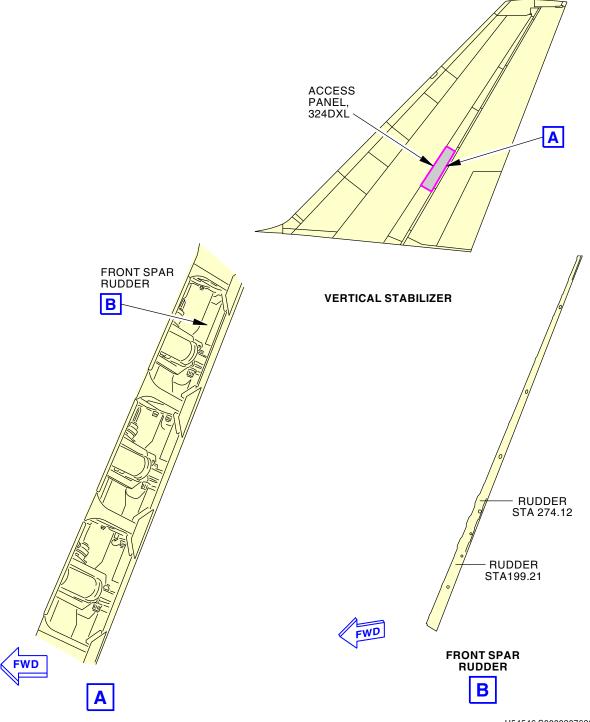
SUBTASK 55-05-03-210-013

(1) Do the inspection.

------ END OF TASK ------

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U54546 S0000207628\_V2

Front Spar Rudder (Vertical Stabilizer)General Visual (Internal) Figure 239/55-05-03-990-857

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#### TASK 55-05-03-211-844

42. INTERNAL - DETAILED: VERTICAL STABILIZER - REAR SPAR TO TRAILING EDGE

Figure 240

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON

A. Inspection

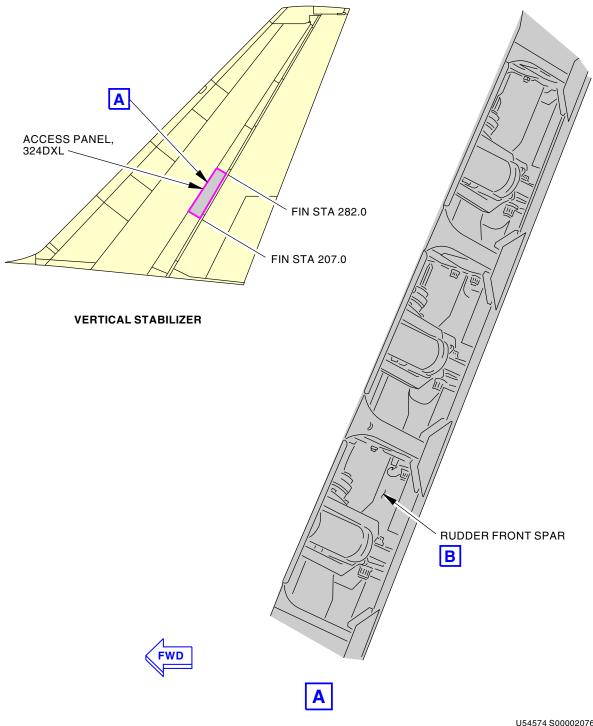
SUBTASK 55-05-03-211-044

(1) Do the inspection.

------ END OF TASK ------

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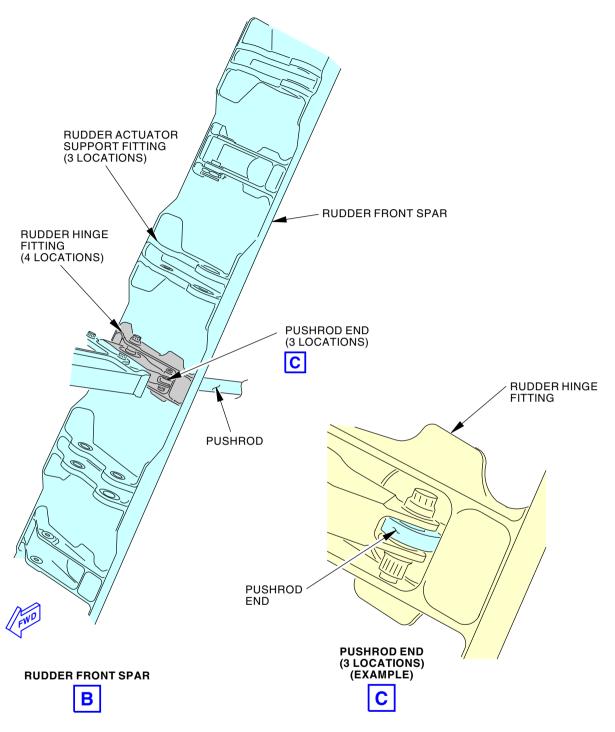
U54574 S0000207623\_V3

Rear Spar Actuator Attachment and Fittings (Vertical Stabilizer) Figure 240/55-05-03-990-858 (Sheet 1 of 2)

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G79806 S0006428446\_V3

Rear Spar Actuator Attachment and Fittings (Vertical Stabilizer) Figure 240/55-05-03-990-858 (Sheet 2 of 2)

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TASK 55-05-03-211-845

43. INTERNAL - DETAILED: RUDDER

Figure 241

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

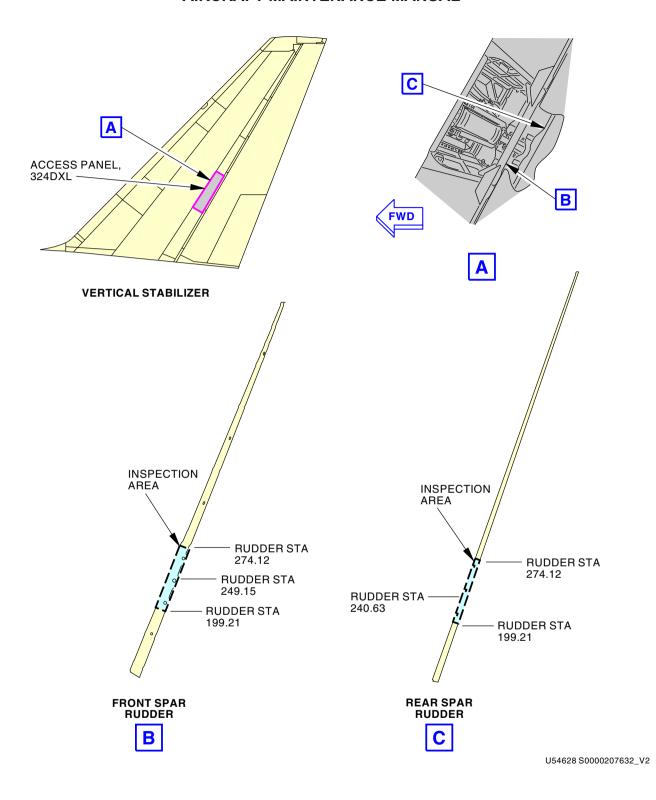
SUBTASK 55-05-03-211-045

(1) Do the inspection.

------ END OF TASK ------

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Front and Rear Spar Rudders Figure 241/55-05-03-990-859

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TASK 55-05-03-211-846

44. INTERNAL - DETAILED: VERTICAL STABILIZER LEADING EDGE

Figure 242

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

SUBTASK 55-05-03-211-046

(1) Do the inspection.

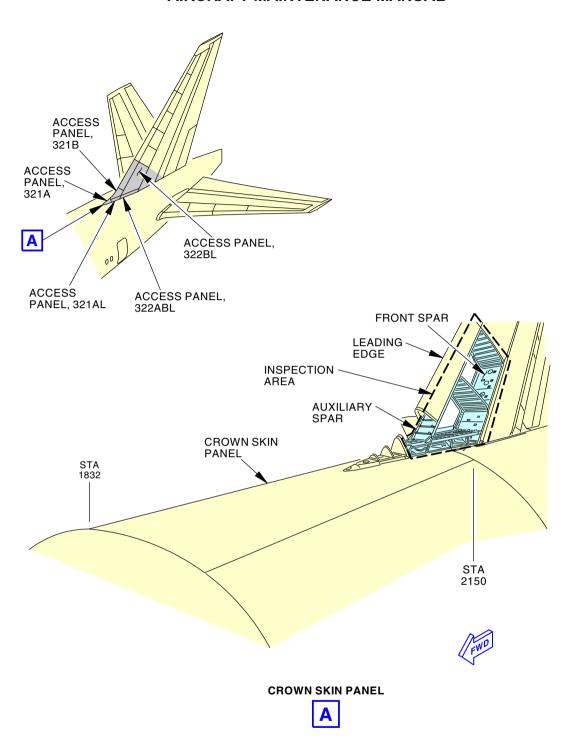
------ END OF TASK ------

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2562483 S0000612254\_V1

# Leading Edge (Vertical Stabilizer) (Internal) Figure 242/55-05-03-990-860

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TASK 55-05-03-211-847

45. INTERNAL - DETAILED: VERTICAL STABILIZER - AUXILIARY SPAR TO FRONT SPAR

Figure 243

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

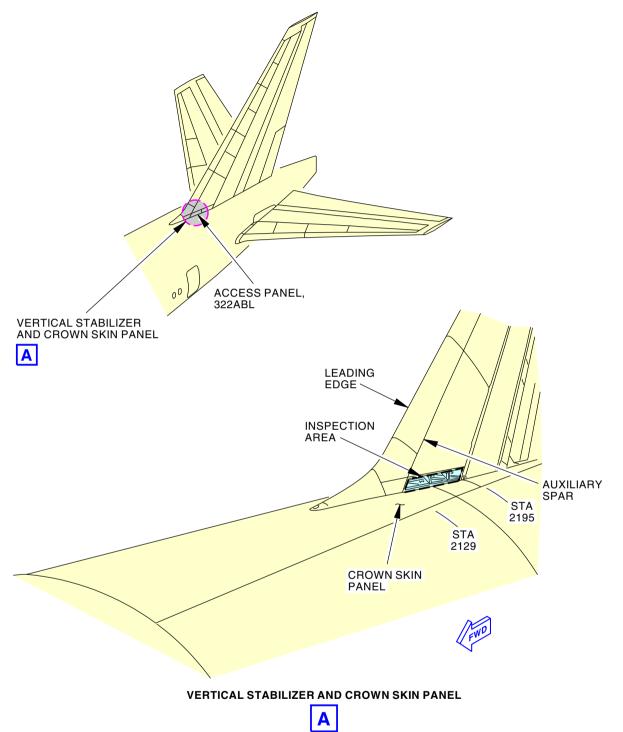
SUBTASK 55-05-03-211-047

(1) Do the inspection.

------ END OF TASK ------

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1861414 S0000329440\_V2

# Auxiliary Spar To Front Spar (Vertical Stabilizer) (Internal) Figure 243/55-05-03-990-861

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TASK 55-05-03-211-848

**46.** INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE Figure 244

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

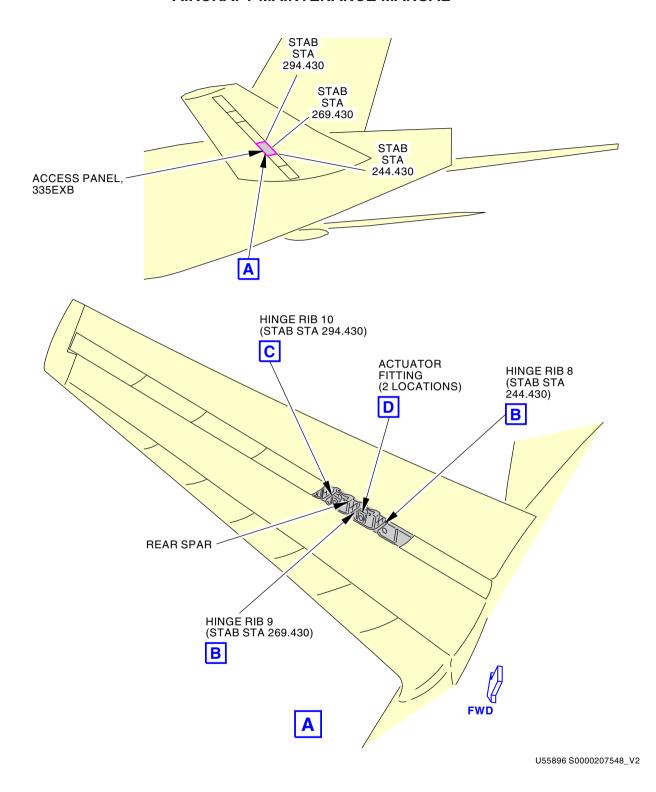
SUBTASK 55-05-03-211-048

(1) Do the inspection.

----- END OF TASK -----

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Rear Spar to Trailing Edge (Left Horizontal Stabilizer) (Internal) Figure 244/55-05-03-990-862 (Sheet 1 of 2)

EFFECTIVITY

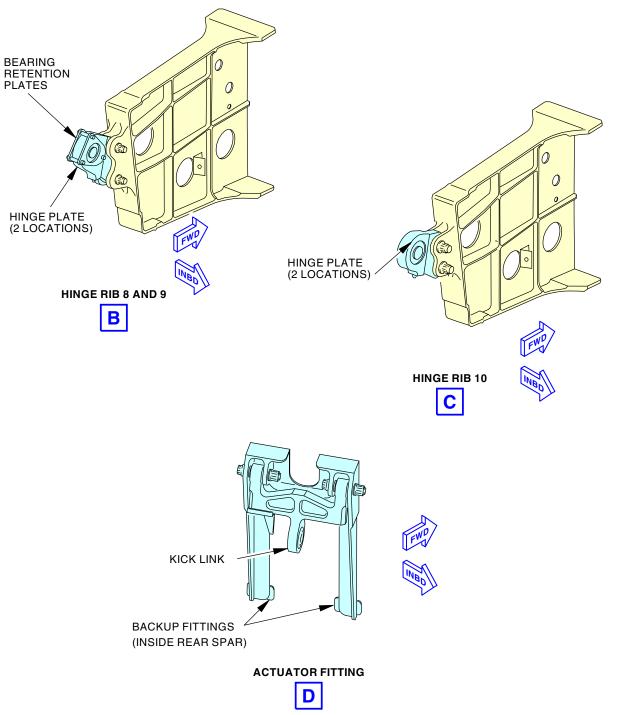
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G96305 S0006428485\_V2

Rear Spar to Trailing Edge (Left Horizontal Stabilizer) (Internal) Figure 244/55-05-03-990-862 (Sheet 2 of 2)

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TASK 55-05-03-211-849

**47.** INTERNAL - DETAILED: LEFT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE Figure 245

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

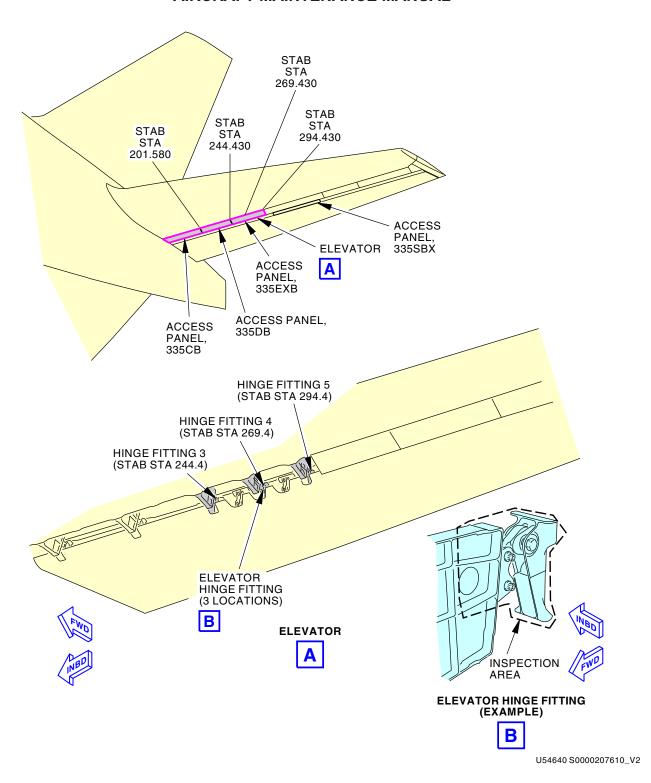
SUBTASK 55-05-03-211-049

(1) Do the inspection.

------ END OF TASK ------

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Hinge Fittings 3,4 and 5 and Actuator Fitting Interfaces (Left Horizontal Stabilizer) (Internal) Figure 245/55-05-03-990-863

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TASK 55-05-03-211-850

48. INTERNAL - DETAILED: LEFT ELEVATOR

Figure 246

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

SUBTASK 55-05-03-211-050

(1) Do the inspection.

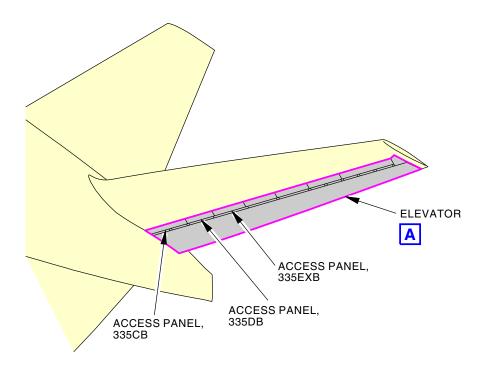
------ END OF TASK ------

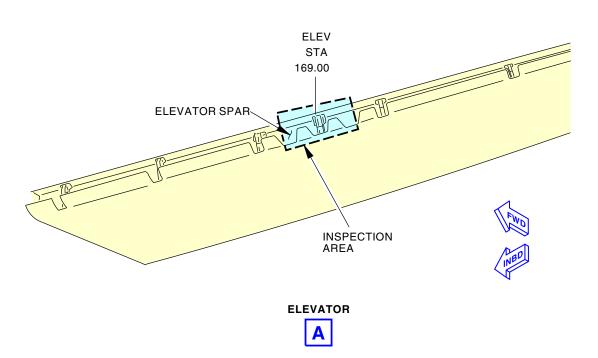
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G96486 S0006428489\_V3

#### Elevator Spar (Left Horizontal Stabilizer)(Internal) Figure 246/55-05-03-990-864

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#### TASK 55-05-03-211-851

**49.** INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE Figure 247

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

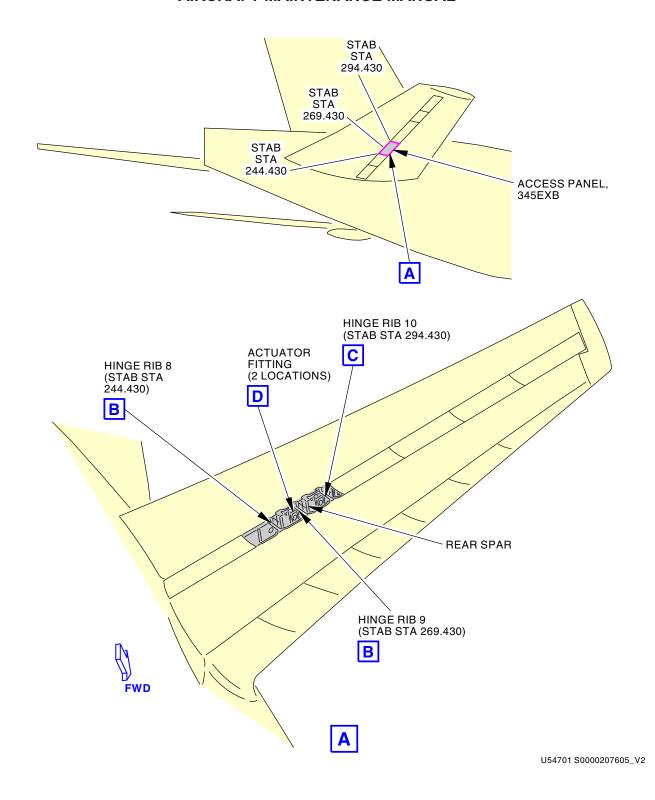
SUBTASK 55-05-03-211-051

(1) Do the inspection.

------ END OF TASK ------

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Rear Spar to Trailing Edge (Right Horizontal Stabilizer) (Internal) Figure 247/55-05-03-990-865 (Sheet 1 of 2)

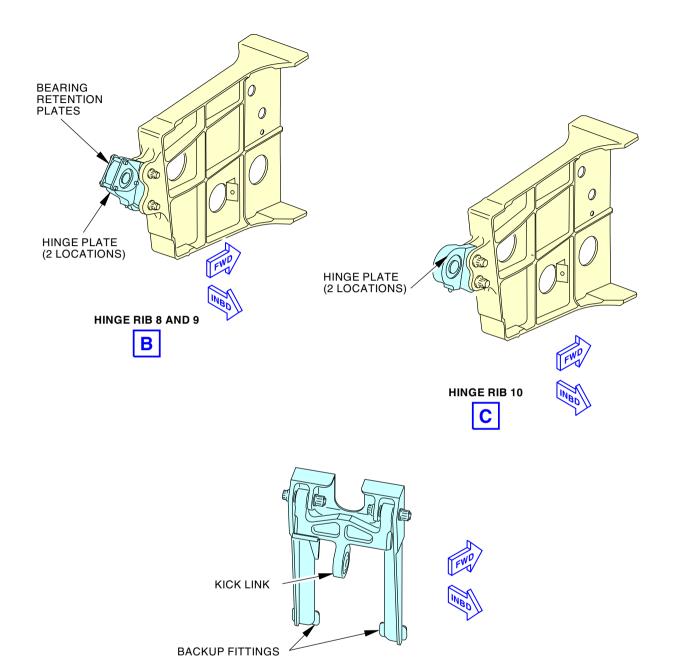
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**ACTUATOR FITTING** 



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Rear Spar to Trailing Edge (Right Horizontal Stabilizer) (Internal) Figure 247/55-05-03-990-865 (Sheet 2 of 2)

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#### TASK 55-05-03-211-852

50. INTERNAL - DETAILED: RIGHT HORIZONTAL STABILIZER - REAR SPAR TO TRAILING EDGE Figure 248

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

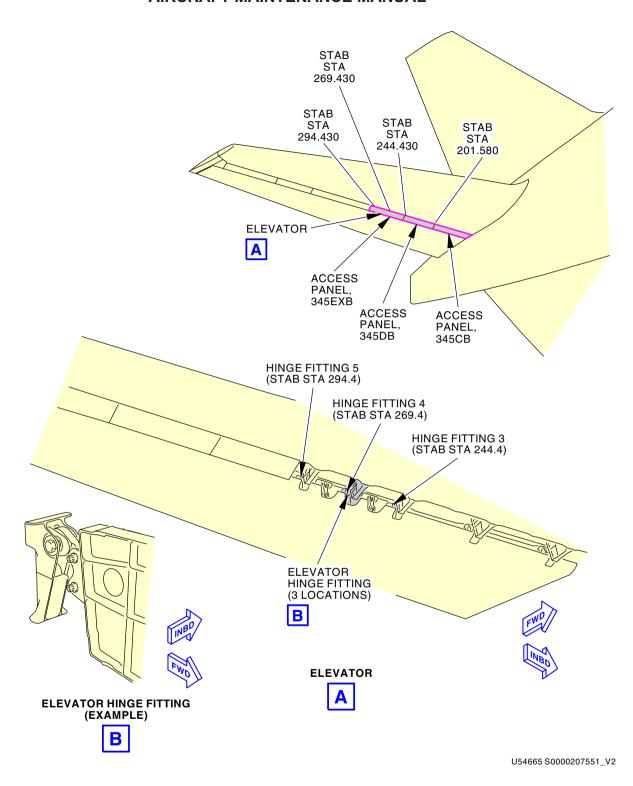
SUBTASK 55-05-03-211-052

(1) Do the inspection.

------ END OF TASK ------

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Hinges Fittings 3,4 and 5 and Actuator Fitting Interfaces (Right Horizontal Stabilizer) (Internal) Figure 248/55-05-03-990-866

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TASK 55-05-03-211-853

51. INTERNAL - DETAILED: RIGHT ELEVATOR

Figure 249

NOTE: APPLICABLE TO AIRPLANE LINE NUMBER 423 AND ON.

A. Inspection

SUBTASK 55-05-03-211-053

(1) Do the inspection.

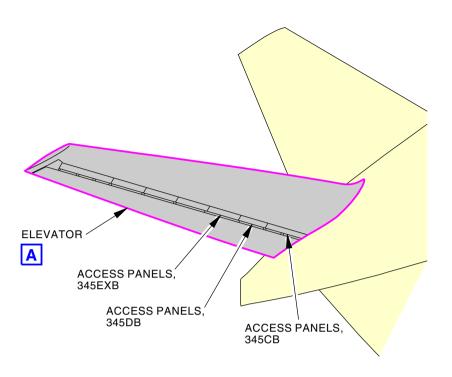
----- END OF TASK -----

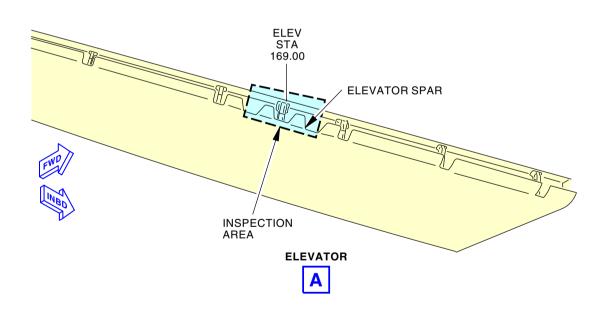
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H04194 S0006428514\_V3

#### Elevator Spar (Right Horizontal Stabilizer)(Internal) Figure 249/55-05-03-990-867

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#### HORIZONTAL STABILIZER-TO-BODY SEALS - REMOVAL/INSTALLATION

#### 1. General

- A. This procedure has these tasks for the horizontal stabilizer:
  - (1) Removal of the stabilizer-to-body seals
  - (2) Installation of the stabilizer-to-body seals.
- B. The seals close the area between the horizontal stabilizer and the fuselage.

#### TASK 55-10-01-000-801

#### 2. Horizontal Stabilizer-To-Body Seal Removal

(Figure 401 Figure 402, Figure 403, Figure 404)

#### A. General

- (1) There are five stabilizer-to-body seals on each side of the airplane, as follows:
  - (a) strakelet [1]
  - (b) top [2]
  - (c) bottom [3]
  - (d) inner [4]
  - (e) aft [5].

#### B. References

Reference	Title
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

#### C. Tools/Equipment

Reference	Description	
STD-1177	Harness - Body	

#### D. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right
331	Left Horizontal Stabilizer Center Section
332	Left Horizontal Stabilizer Leading Edge
333	Left Horizontal Stabilizer - Auxiliary Spar to Front Spar
334	Left Horizontal Stabilizer - Front Spar to Rear Spar
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge
341	Right Horizontal Stabilizer Center Section
342	Right Horizontal Stabilizer Leading Edge
343	Right Horizontal Stabilizer - Auxiliary Spar to Front Spar
344	Right Horizontal Stabilizer - Front Spar to Rear Spar
345	Right Horizontal Stabilizer - Rear Spar to Trailing Edge

#### E. Prepare for the Removal

SUBTASK 55-10-01-860-001

(1) Put the stabilizer in the correct position as follows:

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(a) Move the controls in the flight compartment to align the horizontal stabilizer with the fuselage.

NOTE: The seals must make contact with the fuselage.

#### SUBTASK 55-10-01-860-002



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN SOMEONE IS IN THE TORSION BOX COMPARTMENT AND CLOSE TO THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-10-01-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(3) Attach a body harness, STD-1177.

#### F. Removal

SUBTASK 55-10-01-020-001

- (1) Remove the strakelet seal [1] as follows (Figure 402)
  - (a) Remove the bolt [9] that attach the strakelet panel [8] to the horizontal stabilizer.

NOTE: Do not remove the bolt [9] that are next to the fuselage.

(b) Remove the strakelet panel [8] with the seal [1] attached to it.

NOTE: Remove the Aero Seal around strakelet panel before you remove the panel.

- (c) Remove the bolt [9] that hold the seal retainer [11].
- (d) Remove the seal retainer [11].
- (e) Remove the strakelet seal [1].
- (f) Install a protective cover over the strakelet area.



#### SUBTASK 55-10-01-020-002

(2) Remove the top seal [2] as follows (Figure 403)

NOTE: Remove the bottom seal [3] the same way.

- (a) Remove the fasteners [9] from the panel [7].
- (b) Remove the panel [7].

NOTE: The seal [2] will stay in the seal retainer [12].

- (c) If the strakelet seal [2] is installed, pull the forward part of the top seal [2] from the strakelet seal [1].
- (d) Move the top seal [2] forward in the seal retainer [12] until you can see the aft end.
- (e) Remove the top seal [2] from the seal retainer [12].
- (f) Install a protective cover over the panel area.

#### SUBTASK 55-10-01-020-003

- (3) Remove the inner seal [4] and aft seal [5] as follows (Figure 404)
  - (a) Remove the strakelet panel [8] and the top panel or the bottom panel [7] to get access to the inner seal.
  - (b) Remove the top or bottom panel [6] aft of the blade seals to get access to the aft seal [5].
  - (c) Remove the fasteners [14] that hold the seal assembly together.
  - (d) Remove the stiff seal [16].
  - (e) Remove the inner seal [4] or the aft seal [5].
  - (f) Install a protective cover over the areas where you removed panels for access.



#### TASK 55-10-01-400-801

#### 3. Horizontal Stabilizer-To-Body Seal Installation

(Figure 401, Figure 402, Figure 403, Figure 404)

#### A. References

Reference	Title
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

#### B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

#### C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796

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#### D. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right
331	Left Horizontal Stabilizer Center Section
332	Left Horizontal Stabilizer Leading Edge
333	Left Horizontal Stabilizer - Auxiliary Spar to Front Spar
334	Left Horizontal Stabilizer - Front Spar to Rear Spar
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge
341	Right Horizontal Stabilizer Center Section
342	Right Horizontal Stabilizer Leading Edge
343	Right Horizontal Stabilizer - Auxiliary Spar to Front Spar
344	Right Horizontal Stabilizer - Front Spar to Rear Spar
345	Right Horizontal Stabilizer - Rear Spar to Trailing Edge

#### E. Prepare for installation.

#### SUBTASK 55-10-01-860-003

(1) Make sure the horizontal stabilizer is aligned with the fuselage.

NOTE: The seals must make contact with the fuselage.

#### SUBTASK 55-10-01-860-004



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Make sure these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel are in the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights are on for each switch.



#### SUBTASK 55-10-01-940-002



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

Attach a body harness, STD-1177.

## F. Inner and Aft Seal Installation ()

(Figure 404)

NOTE: The installation for the inner seal [4] and the aft seal [5] is the same.

#### SUBTASK 55-10-01-940-003

(1) Remove the protective covers, if they are installed.

#### SUBTASK 55-10-01-420-001

- (2) Install the seal [4] as follows:
  - (a) Put the stiff seal [15], the seal [4], and the stiff seal [16] in position on the web [13].
  - (b) Paint the fastener holes with primer, C00259.
  - (c) Let the primer, C00259 dry.
  - (d) Apply corrosion preventive compound, C00308 to the fasteners [14].
  - (e) Attach the seal assembly to the web with the fasteners [14].

NOTE: Do not let the corrosion preventive compound, C00308 dry before you install the fasteners [14].

## G. Top and Bottom Seal Installation .

(Figure 403)

NOTE: The installation for the top seal and panel, and the bottom seal and panel is the same.

#### SUBTASK 55-10-01-940-006

(1) Remove the protective covers, if they are installed.

#### SUBTASK 55-10-01-420-002

- (2) Install the seal as follows:
  - (a) Put the aft end of the seal [2] in the seal retainer [12] forward of the blade seal.
  - (b) Move the seal [2] aft in the retainer [12] until the seal [2] touches the stop.
    - NOTE: The stop is below the panel that is below the blade seal.
  - (c) Put the remaining seal [2] in the seal retainer [12].
  - (d) If the strakelet seal [1] is installed, put the seal [2] around the coupling joint [10] at the end of the strakelet seal [1].

#### SUBTASK 55-10-01-420-003

- (3) Attach the top panel [7] to the stabilizer, as follows:
  - (a) Put the panel [7] in position over the seal [2].
  - (b) Paint the fastener holes with primer, C00259.
  - (c) Let the primer, C00259 dry.
  - (d) Apply corrosion preventive compound, C00308 to the bolt [9].
  - (e) Install the bolt [9] before the corrosion preventive compound, C00308 is dry.

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#### H. Strakelet Installation

#### SUBTASK 55-10-01-940-004

(1) Remove the protective covers, if they are installed.

#### SUBTASK 55-10-01-420-004

- (2) Attach the seal [1] to the strakelet panel [8], as follows:
  - (a) Put the seal [1] in position on the strakelet panel [8].
  - (b) Put the seal retainer [11] on the seal [1].
  - (c) Install the bolt [9] through the panel [8], seal [1], and the nutplates.
  - (d) If it is a new seal, cut the ends of the seal until it will not interfere with the auxiliary spar.
  - (e) If there are no coupling joints [10], install them at the ends of the seal [1] with sealant, A00247 as shown in (Figure 402).

#### SUBTASK 55-10-01-420-005

- (3) Attach the strakelet panel [8] to the stabilizer, as follows:
  - (a) Put the strakelet panel [8] in position on the horizontal stabilizer.
  - (b) If the top seal [2] and the bottom seal [3] are installed, connect the seals with the coupling joint.
  - (c) Paint the fastener holes with primer, C00259.
  - (d) Let the primer, C00259 dry.
  - (e) Apply corrosion preventive compound, C00308 to the fasteners [9].
  - (f) Install the fasteners [9] before the corrosion preventive compound, C00308 is dry.

# I. Put the Airplane Back to Its Usual Condition

#### SUBTASK 55-10-01-940-005

(1) Remove the body harness, STD-1177.

### SUBTASK 55-10-01-860-005

- (2) Make the horizontal stabilizer operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R
  - (c) Make sure the amber VALVE CLOSED lights go off.
  - (d) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

#### SUBTASK 55-10-01-710-001

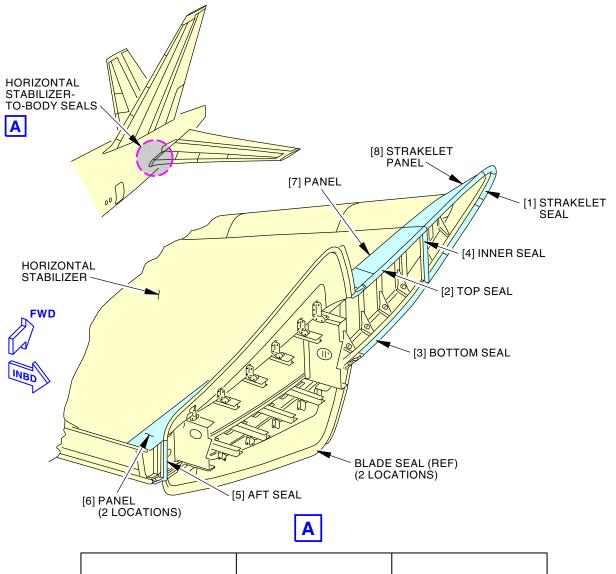
(3) Operate the stabilizer through its full range of movement.

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[]	SEAL NAME	FIGURE
[1]	STRAKELET SEAL	402
[2]	TOP SEAL	403
[3]	BOTTOM SEAL	403
[4]	INNER SEAL	404
[5]	AFT SEAL	404

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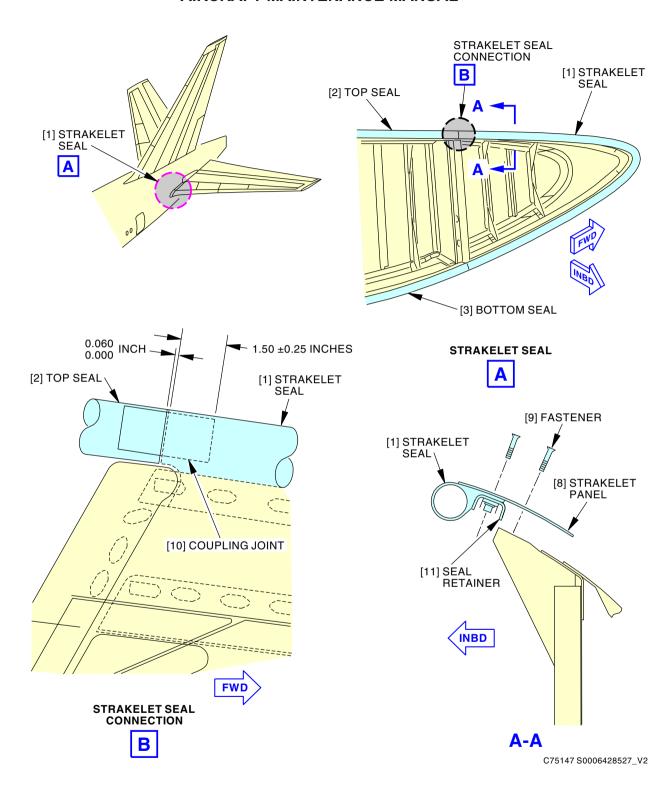
# Horizontal Stabilizer-To-Body Seals Installation Figure 401/55-10-01-990-801

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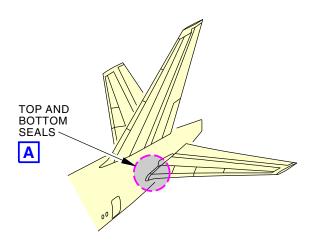
**Strakelet Seal Installation** Figure 402/55-10-01-990-802

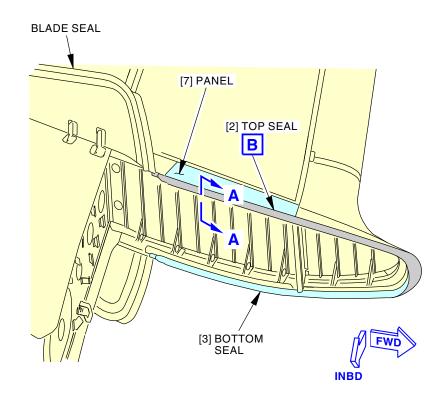
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## **TOP AND BOTTOM SEALS**



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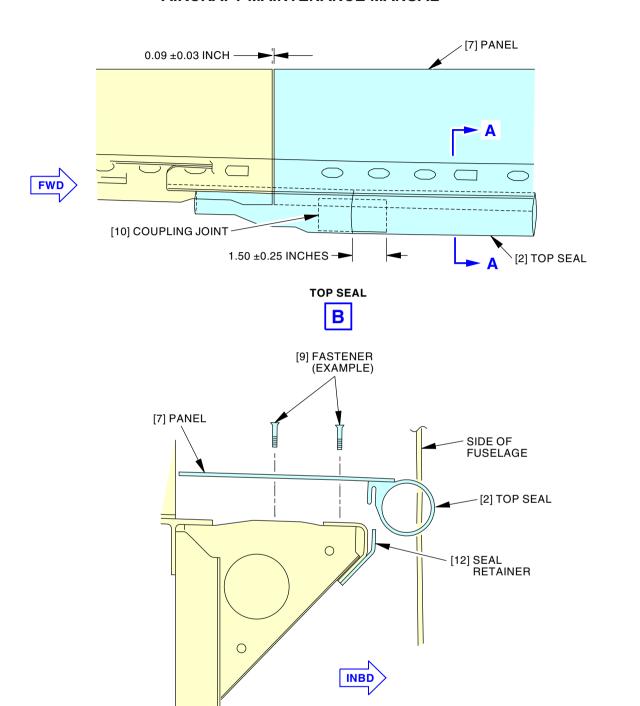
Top and Bottom Seals Installation Figure 403/55-10-01-990-803 (Sheet 1 of 2)

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Top and Bottom Seals Installation Figure 403/55-10-01-990-803 (Sheet 2 of 2)

A-A

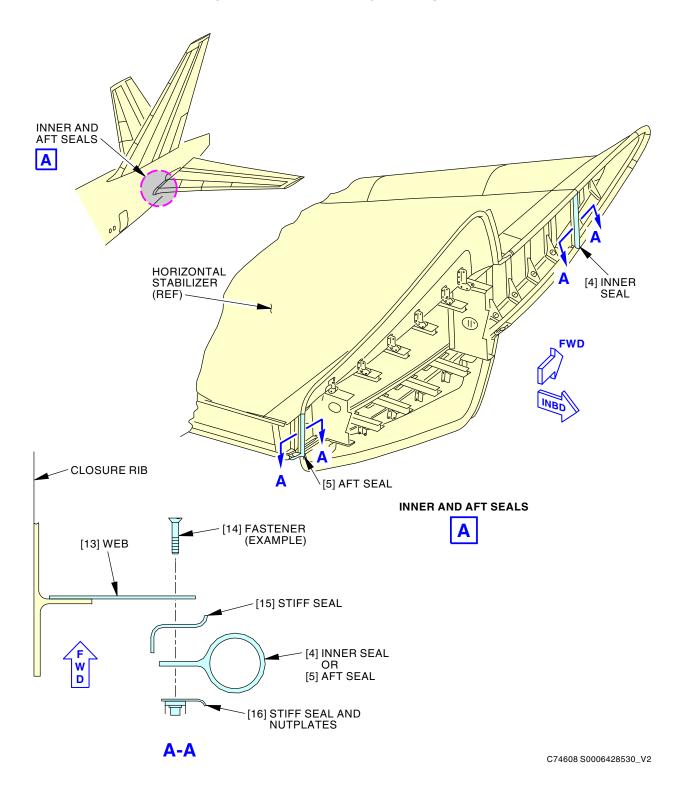


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Inner and Aft Seal Figure 404/55-10-01-990-804



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## HORIZONTAL STABILIZER BLADE SEALS - REMOVAL/INSTALLATION

## 1. General

- A. This procedure has these tasks for the horizontal stabilizer:
  - (1) Removal of the top and bottom blade seals
  - (2) Installation of the top and bottom blade seals.
- B. Remove the top and bottom blade seals the same way.

## TASK 55-10-02-000-801

## 2. Horizontal Stabilizer Blade Seal Removal

(Figure 401, Figure 402,)

## A. General

The upper and lower blade seals are removed the same way. This procedure is applicable to the upper and lower blade seals.

#### B. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

#### C. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right
331	Left Horizontal Stabilizer Center Section
332	Left Horizontal Stabilizer Leading Edge
333	Left Horizontal Stabilizer - Auxiliary Spar to Front Spar
334	Left Horizontal Stabilizer - Front Spar to Rear Spar
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge
341	Right Horizontal Stabilizer Center Section
342	Right Horizontal Stabilizer Leading Edge
343	Right Horizontal Stabilizer - Auxiliary Spar to Front Spar
344	Right Horizontal Stabilizer - Front Spar to Rear Spar
345	Right Horizontal Stabilizer - Rear Spar to Trailing Edge

## D. Prepare for the Removal

SUBTASK 55-10-02-860-001

- (1) Put the stabilizer in the correct position as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.

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MAKE SURE THE AREA AROUND THE HORIZONTAL STABILIZER IS CLEAR OF PERSONS AND EQUIPMENT BEFORE YOU MOVE THE STABILIZER. ACCIDENTAL MOVEMENT OF THE HORIZONTAL STABILIZER CAN CAUSE INJURY OR DAMAGE.

(b) Move the controls in the flight compartment to align the horizontal stabilizer with the fuselage.

NOTE: The seals must make contact with the fuselage.

#### SUBTASK 55-10-02-860-002



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

### SUBTASK 55-10-02-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(3) Do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.

#### E. Removal

SUBTASK 55-10-02-020-001

- (1) Disconnect the blade seal panel [2] as follows:
  - (a) Get access to the attach fittings from inside the airplane tail section.
  - (b) Remove the bolts [15] and washers [16] from the six fittings that hold the blade seal panel [2] to the horizontal stabilizer fittings [6].

SUBTASK 55-10-02-020-002

(2) Remove the blade seal panel [2] as follows:

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- (a) Get access to the blade seal panel [2] from outside the airplane.
- (b) Pull the blade seal panel [2] aft from under the track [31] on the fuselage [4].

#### SUBTASK 55-10-02-020-003

- (3) Disconnect the seal [9] from the panel [2] as follows:
  - (a) Put the blade seal panel [2] on a clean, soft surface with the seal [9] in the up direction.
  - (b) Remove the bolts [7] that hold the seal [9] to the panel [2].
  - (c) Remove the seal [9] in three parts.



## TASK 55-10-02-400-801

## 3. Horizontal Stabilizer Blade Seal Installation

(Figure 401, Figure 402)

## A. General

The upper and lower blade seals are installed the same way. This procedure is applicable to the upper and lower blade seals.

## B. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard (P/B 201)
24-22-00-860-805	Supply Electrical Power (P/B 201)
24-22-00-860-806	Remove Electrical Power (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

## C. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

## D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	
C00767	Coating - Anti-Static Coating	BMS10-21 Type III

## E. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right
331	Left Horizontal Stabilizer Center Section
332	Left Horizontal Stabilizer Leading Edge
333	Left Horizontal Stabilizer - Auxiliary Spar to Front Spar
334	Left Horizontal Stabilizer - Front Spar to Rear Spar
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge
341	Right Horizontal Stabilizer Center Section
342	Right Horizontal Stabilizer Leading Edge
343	Right Horizontal Stabilizer - Auxiliary Spar to Front Spar

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#### (Continued)

Zone	Area
344	Right Horizontal Stabilizer - Front Spar to Rear Spar
345	Right Horizontal Stabilizer - Rear Spar to Trailing Edge

## F. Prepare to install the blade seal.

#### SUBTASK 55-10-02-860-003

(1) Make sure the horizontal stabilizer [1] is aligned with the fuselage [4].

NOTE: The entire seal [9] must make contact with the fuselage [4] when it is installed.

#### SUBTASK 55-10-02-860-004



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN SOMEONE IS IN THE TORSION BOX COMPARTMENT AND CLOSE TO THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Make sure all hydraulic power is removed, do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Make sure these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel are in the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights are on for each switch.

#### G. Installation

### SUBTASK 55-10-02-420-001

- (1) Attach the three parts of the seal [9] to the panel [2] as follows:
  - (a) Put the three parts of the seal [9] in position on the panel [2].
  - (b) Install each bolt [7] through the panel [2], the seal [9], and the nut plate [8].
  - (c) Make sure the clearance between each part of the seal [9] is 0.06 to 0.12 inches.
  - (d) Tighten the bolts [7].

#### SUBTASK 55-10-02-980-001

- (2) If there are blade seal fittings [5] already installed at the bottom of the panel, put the blade seal panel [2] in position as follows:
  - (a) From outside the airplane, put the forward end of the panel [2] in the track [31].
  - (b) Align the blade seal fittings [5] with the stabilizer fittings [6].

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#### SUBTASK 55-10-02-420-002

- (3) If the blade seal fittings [5] have not been installed, install them as follows:
  - (a) Put the blade seal panel [2] firmly in its correct position as follows (Figure 402):
    - 1) Put the forward end of the blade seal panel [2] in the track [31].
    - 2) Align the aft edge of the seal [33] with the aft end of the hole in the fuselage [32] as shown in (Figure 402)
    - 3) Slightly compress the seal [34] on the bottom of the panel [2].
    - 4) Position the top edge of the blade seal [9] 0.09 to 0.11 inch from the fuselage [4].
    - 5) Provide support to hold the blade seal panel [2] firmly in its correct position.



THE CORRECT POSITION OF THE BLADE SEAL IS IMPORTANT. IF THE PANEL IS NOT IN THE CORRECT POSITION WHEN YOU DRILL THE HOLES FOR THE FITTINGS, YOU WILL NOT BE ABLE TO INSTALL THE BLADE SEAL CORRECTLY. THE POSITION OF THE BLADE SEAL AFTER YOU INSTALL IT IS NOT ADJUSTABLE.

- (b) Drill the bolt holes in the panel [2] as follows:
  - 1) Get access to the fittings [5] from inside the torsion box compartment.
  - 2) Put the blade seal fitting [5] in position against the panel and the stabilizer fitting [6].
  - 3) Drill the bolt holes through the panel [2].

NOTE: Use the holes in the blade seal fitting [5] as pilot holes.

- (c) Attach the fittings [5] to the panel [2] as follows:
  - 1) Apply a fay seal with sealant, A00247, between the fittings [5] and the panel [2].
  - 2) In the forward 5 fittings [5], install the bolts wet with sealant, A00247, to attach the panel [2] to the fitting [5].
  - 3) In the aft fitting [5], do these steps to get a good electrical bond:
    - a) Apply a layer of coating, C00767 to the holes in the fitting [5] and the panel [2].
    - b) Install the bolts without sealant.
  - 4) Tighten bolts on all the fittings [5] with 50 to 60 pound-inches of torque.
  - 5) Use a brush to seal the nut plate with a layer of sealant, A00247.
- (d) Drill two bolt holes in the flange of each fitting [5] as follows:
  - 1) Provide support to hold the blade seal panel [2] firmly in its correct position.
  - 2) Make sure the blade seal fittings [5] touch the stabilizer fittings [6].
  - 3) Drill the holes through blade seal fitting [5].

NOTE: Use the holes in the stabilizer fitting [6] as pilot holes.

#### SUBTASK 55-10-02-420-003

- (4) Attach the blade seal panel [2] to the stabilizer [1] as follows:
  - (a) Make sure the blade seal panel [2] is in the correct position.
  - (b) Look for a gap between the blade seal fittings [5] and the stabilizer fittings [6].
    - 1) If there are gaps between the fittings, install laminated shims [10].
    - 2) If the fittings are not parallel, remove laminations from the shim [10] as necessary to fill the gap.

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- (c) Install the bolts [15] wet with sealant, A00247, through the blade seal fittings [5], the stabilizer fittings [6], and the nut plates [12].
  - 1) Use a self-adjusting washer and nut if you installed a wedge shaped shim [10].
- (d) Tighten the bolts [15].
- (e) Make sure the blade seal panel [2] is still in the correct position.

#### SUBTASK 55-10-02-910-001

- (5) Apply sealant as follows:
  - (a) Apply a fillet bead of sealant, A00247, along the joint between the blade seal panel [2] and the horizontal stabilizer [1].

## H. Put the Airplane to Its Usual Condition

#### SUBTASK 55-10-02-940-002

(1) Remove the body harness, STD-1177 if it is not necessary, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### SUBTASK 55-10-02-860-005

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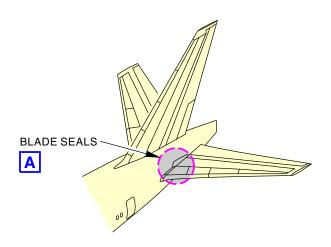
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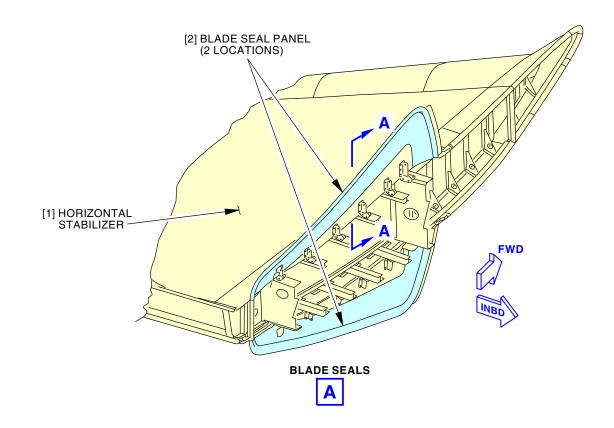
- (2) Make the horizontal stabilizer operate as follows:
  - (a) Do this task: Supply Electrical Power, TASK 24-22-00-860-805.
  - (b) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (c) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R
  - (d) Make sure the amber VALVE CLOSED lights go off.
  - (e) Operate the stabilizer through its full range of movement.
  - (f) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (g) Do this task: Remove Electrical Power, TASK 24-22-00-860-806.

——— END OF TASK ———

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Horizontal Stabilizer Blade Seals Installation Figure 401/55-10-02-990-801 (Sheet 1 of 2)

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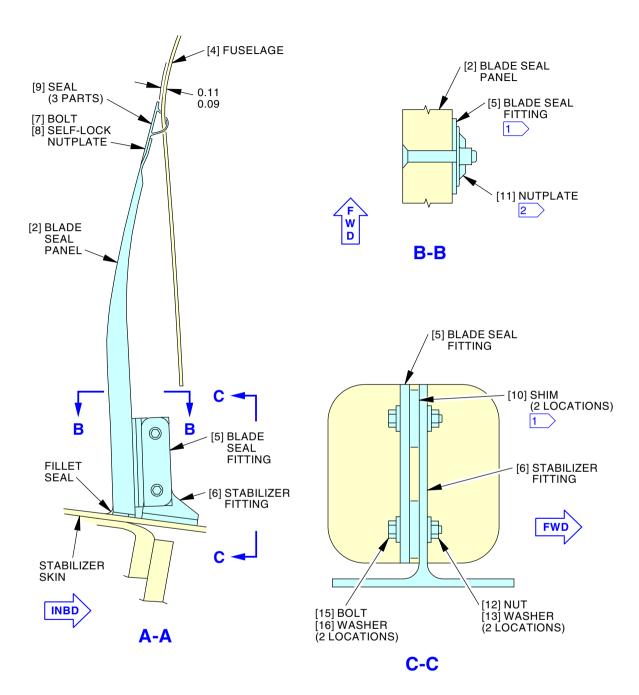
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1 FAY SEAL THE SHIM WITH BMS 5-95 SEALANT.
2 BRUSH COAT TO SEAL THE NUTPLATE.

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Horizontal Stabilizer Blade Seals Installation Figure 401/55-10-02-990-801 (Sheet 2 of 2)

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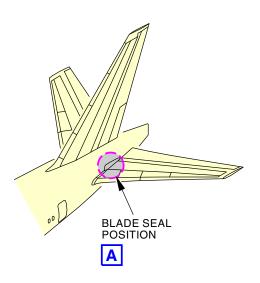
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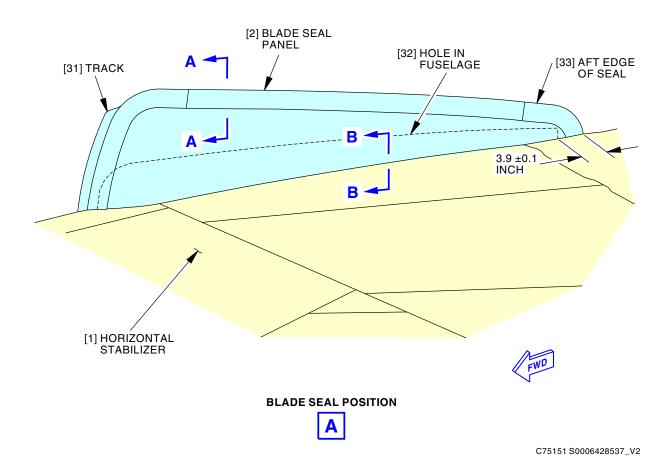
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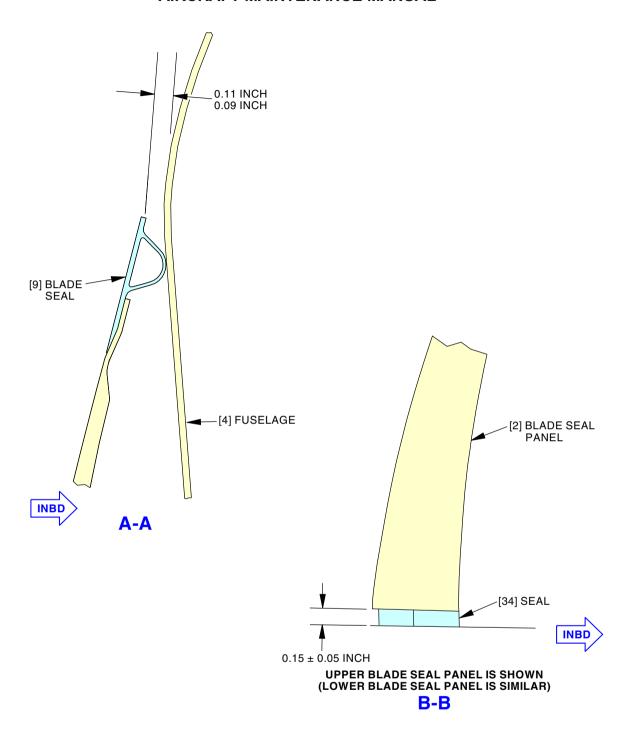


**Blade Seal Correct Position Installation** Figure 402/55-10-02-990-802 (Sheet 1 of 2)

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Blade Seal Correct Position Installation Figure 402/55-10-02-990-802 (Sheet 2 of 2)



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#### HORIZONTAL STABILIZER TIP FAIRING - REMOVAL/INSTALLATION

#### 1. General

- A. This procedure has these tasks:
  - (1) Horizontal Stabilizer Tip Fairing Removal
  - (2) Horizontal Stabilizer Tip Fairing Installation
- B. A horizontal stabilizer tip with part number 189W0001-911F or 189W0001-11 that has had SB 777-55A0010 applied to it cannot be replaced with the same part number unless SB 777-55A0010 has been applied to the replacement parts.

#### TASK 55-11-01-000-801

## 2. Horizontal Stabilizer Tip Fairing Removal

(Figure 401, Figure 402)

#### A. References

	Reference	Title
	20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard (P/B 201)
	29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
	SWPM 20-20-10	Standard Wiring Practices Manual
В.	Tools/Equipment	
	Reference	Description
	STD-1177	Harness - Body

## C. Location Zones

Zone	Area
337	Left Horizontal Stabilizer Tip
347	Right Horizontal Stabilizer Tip

## D. Prepare for the Removal

SUBTASK 55-11-01-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L

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- 2) TAIL, C
- 3) TAIL, R.
- (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-11-01-480-001

(2) Use a service platform - scissor lift, (8-20 feet), Model #159, Part # 12/0098/, Vendor Code 2S363, Vendor Name United Fabricators INC. to get access to the Horizontal Stabilizer tip assembly [1].

SUBTASK 55-11-01-840-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(3) Attach a body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.

#### E. Removal

SUBTASK 55-11-01-020-001



BE CAREFUL WHEN YOU REMOVE THE TIP FAIRING. YOU CAN EASILY CAUSE DAMAGE TO THE PAINT, SKIN, OR STRUCTURE OF THE TIP FAIRING.

Prepare to remove the tip assembly [1].

#### SUBTASK 55-11-01-940-004

(2) Install protective covers over the end of the horizontal stabilizer and the static discharges.

#### SUBTASK 55-11-01-970-001

(3) Make a note of the fastener locations for electrical bonding.

#### SUBTASK 55-11-01-010-001

(4) Remove the tip assembly [1] from the stabilizer.



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) Remove the lower Horizontal Stabilizer panel next to the tip assembly [1] with the following:
  - 1) A fastener tool.
  - 2) A removal anti cam-out ribbed (ACR) bit.

NOTE: A combination removal/installation ACR bit is not recommended.

NOTE: The bit should have a hardness of 56-58 RC.

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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.

- Apply a fastener removal compound on the driver bit if a fastener is difficult to remove.
- (b) Remove the (12) screws [6] attaching the lower seal that is aft of the lower panel.
- (c) Remove the (12) screws [6] attaching the upper seal that is aft of the upper panel.
- (d) Remove the bonding jumper [11] that is between the tip assembly [1] and the upper support tee.
  - 1) Remove the studs from the bonding jumpers, SWPM 20-20-10.
- (e) Remove the (12) screws [3] attaching the leading edge to the horizontal stabilizer.
- (f) Remove the (4) bolts [5] attaching the lower support tee and remove the support tee.
- (g) Remove the (2) bonding jumpers [9] that is between elevator front spar and upper support tee.
  - 1) Remove the studs from the bonding jumpers, SWPM 20-20-10.
- (h) Remove the (4) bolts [8] attaching the upper support tee and remove the support tee.
- (i) Remove the (10) bolts [4] attaching the tip assembly [1] to the rib post.
- (j) Remove the remaining bolt [2] that attach the tip assembly [1] to the horizontal stabilizer. NOTE: Use the above fastener removal procedure.
- (k) Remove the bonding jumper [10] that is between the tip assembly [1] and horizontal stabilizer.
  - 1) Remove the studs from the bonding jumpers, SWPM 20-20-10.
    - NOTE: If the bonding jumper is not visible, carefully move the tip assembly [1] to get a clear view.
- (I) Carefully cut the sealant between the tip fairing skin panels and the horizontal stabilizer skin panels and remove the tip assembly [1].

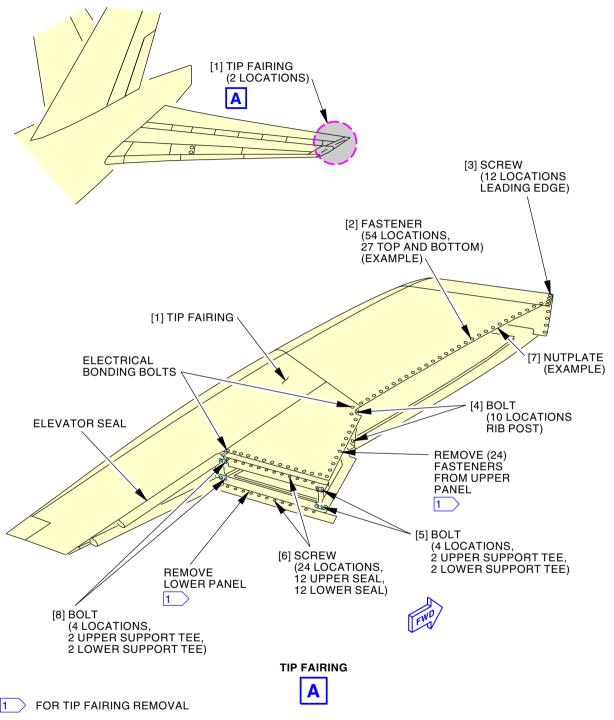


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# Horizontal Stabilizer Tip Fairing Installation Figure 401/55-11-01-990-804

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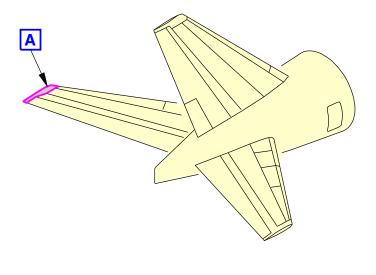
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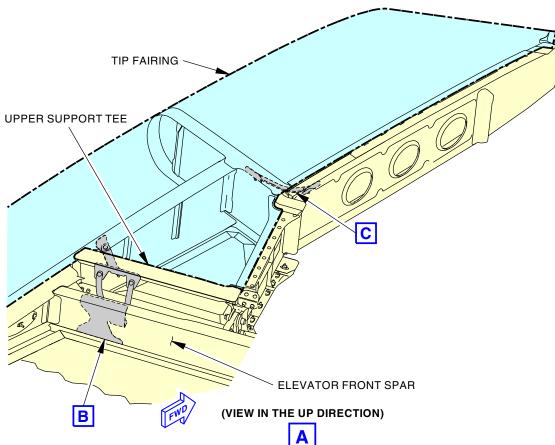
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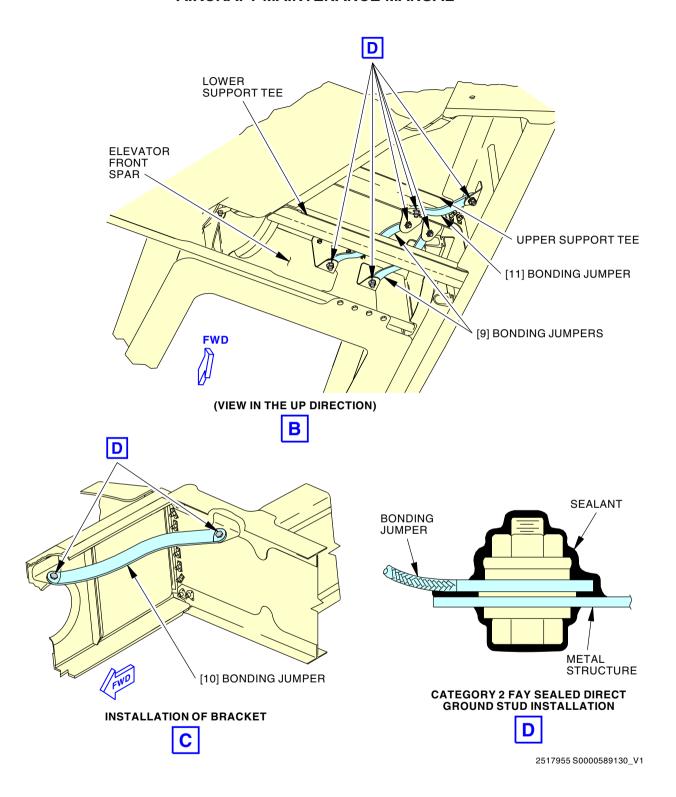
Horizontal Stabilizer Bonding Jumper Installation Figure 402/55-11-01-990-803 (Sheet 1 of 2)

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Horizontal Stabilizer Bonding Jumper Installation Figure 402/55-11-01-990-803 (Sheet 2 of 2)

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## TASK 55-11-01-400-801

## 3. Horizontal Stabilizer Tip Fairing Installation

(Figure 401, Figure 402)

#### A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
SWPM 20-20-10 Paragraph	Category 2 Fay Sealed Direct Ground Stud Installation

## B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

#### C. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796
C00767	Coating - Anti-Static Coating	BMS10-21 Type III
D50004	Compound - Antiseize	BMS3-28

## D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Tip assembly	55-11-01-01B-080	ARO ALL	
		55-11-01-01B-085	ARO ALI	

## E. Location Zones

Zone	Area	
337	Left Horizontal Stabilizer Tip	
347	Right Horizontal Stabilizer Tip	

## F. Prepare to install the tip assembly [1].

## SUBTASK 55-11-01-480-002

(1) Use a service platform - scissor lift, (8-20 feet), Model #159, Part # 12/0098/, Vendor Code 2S363, Vendor Name United Fabricators INC. to get access to the Horizontal Stabilizer tip assembly [1].

#### SUBTASK 55-11-01-940-002

(2) Remove the protective covers.

## SUBTASK 55-11-01-840-002

- (3) Prepare the nut plates [7] as follows:
  - (a) Examine the nut plates [7] on the inner side of the tip assembly [1].
  - (b) Remove all damaged nut plates [7].
  - (c) Install new nut plates [7] in areas where there are no nut plates [7].

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#### G. Installation

SUBTASK 55-11-01-210-001

(1) Make sure the area around the drain holes is clear of unwanted materials that will cause blockage.

SUBTASK 55-11-01-420-001



BE CAREFUL WHEN YOU INSTALL THE TIP FAIRING. YOU CAN EASILY CAUSE DAMAGE TO THE PAINT, SKIN, OR STRUCTURE OF THE TIP FAIRING.

- (2) Carefully put the tip assembly [1] in its correct position on the horizontal stabilizer.
  - (a) Install the bonding jumper [10] that is between the tip assembly [1] and horizontal stabilizer.
    - 1) Install studs on the bonding jumpers, SWPM 20-20-10 Paragraph 4.F.

#### SUBTASK 55-11-01-910-001

- (3) Make an electrical ground as follows:
  - (a) Locate the fastener locations for electrical grounding.
  - (b) Apply anti-static coating, C00767 to the composite part of each hole.
  - (c) Let the coating, C00767 dry.
  - (d) Install the bolt [2] without sealant.

#### SUBTASK 55-11-01-400-001

- (4) Install the remaining bolt [2] as follows:
  - (a) Apply corrosion preventive compound, C00308 to the bolt [2].

#### SUBTASK 55-11-01-400-002

(5) Install the tip assembly [1].



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) Install two to three fasteners to hold the tip assembly [1] in position with the following guidelines:
  - 1) 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.
- b) Undamaged threads and recesses.
- 2) Remove any excess paint or debris on fastener recesses.



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

3) Lubricate the threads of the fasteners with compound, D50004.



- Install fasteners with a fastener tool and an installation anti cam-out ribbed (ACR) driver bit.
  - NOTE: A combination removal/installation ACR bit is not recommended. The bit should have a hardness of 56-58 RC.
  - NOTE: Use reduced lubricated fastener torques, (MM 20-11-00).
- (b) Install the (4) bolts [8] attaching the upper tee assembly.
- (c) Install (10) bolts [4] to the inside post rib structure.
- (d) Install (2) bonding jumpers [9] that is between elevator front spar and upper support tee.
  - 1) Install studs on the bonding jumpers, SWPM 20-20-10 Paragraph 4.F.
- (e) Install the (4) bolts [5] attaching the lower tee assembly.
- (f) Install the bonding jumper [11] that is between the tip assembly [1] and upper tee assembly.
  - 1) Install studs on the bonding jumpers, SWPM 20-20-10 Paragraph 4.F.
- (g) Install the (24) fasteners in the upper panel.
  - NOTE: Use above procedure for access panel fasteners.
- (h) Install the (12) screws [6] for the upper blade seal.
- (i) Install the (12) screws [3] attaching the leading edge to the horizontal stabilizer.
- (j) Install the remaining (54) bolts [2] in upper and lower sides of the tip assembly [1].
  - NOTE: Use above procedure for access panel fasteners.
- (k) Install (24) fasteners in the lower panel.
  - NOTE: Use above procedure for access panel fasteners.
- (I) Install the (12) screws [6] for the lower blade seal.

#### SUBTASK 55-11-01-220-001

- (6) Make sure the gap between the stabilizer skin panels and the tip fairing skin panels is 0.03 in. (0.76 mm) to 0.15 in. (3.81 mm).
  - (a) Seal the gap with sealant, A02315.
- H. Put the airplane back in its usual condition.

#### SUBTASK 55-11-01-940-003

(1) Remove the body harness, STD-1177 ( (TASK 20-10-27-400-801)).

## SUBTASK 55-11-01-860-002

- (2) Make the horizontal stabilizer operable as follows:
  - (a) Do this task: do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R
  - (c) Make sure the amber VALVE CLOSED lights go off.

#### SUBTASK 55-11-01-710-001

(3) Operate the stabilizer through its full range of movement.

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SUBTASK 55-11-01-040-001

(4)	Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808
	END OF TASK

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#### HORIZONTAL STABILIZER LEADING EDGE - REMOVAL/INSTALLATION

## 1. General

- A. This procedure has these tasks:
  - (1) Removal of the horizontal stabilizer leading edge
  - (2) Installation of the horizontal stabilizer leading edge.
- B. You can remove one or all of the panels.

#### TASK 55-15-01-000-801

## 2. Horizontal Stabilizer Leading Edge Removal

(Figure 401)

## A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
31-61-21-000-802	Main Gear Taxi Camera Removal (P/B 201)

## B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

## C. Location Zones

Zone	Area
332	Left Horizontal Stabilizer Leading Edge
342	Right Horizontal Stabilizer Leading Edge

## D. Prepare for the Removal

SUBTASK 55-15-01-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C

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- 3) TAIL, R.
- (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-15-01-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

- (2) Attach a body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.
- (3) Open this circuit breaker and install safety tag:

## Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	16	C31601	TAXI CAMERAL I/F UNIT/SYS CTRL

#### E. Removal

SUBTASK 55-15-01-980-001



KEEP PERSONS AWAY FROM THE AREA BELOW THE STABILIZER. PARTS CAN ACCIDENTALLY FALL AND CAUSE AN INJURY TO PERSONS.

(1) Hold the leading edge panel assembly [1] that you will remove.

SUBTASK 55-15-01-020-001

- (2) Remove the panel assembly [1] as follows:
  - (a) Remove the bolt [2] from the panel assembly [1].

NOTE: You must remove one panel assembly [1] at a time.

The splice rib [3] can stay attached to one panel assembly [1].

- (b) On the strakelet, make a note of the fastener locations for electrical bonding.
- (c) Disconnect the connector from the main landing gear taxi camera on the MID L/E panel (Main Gear Taxi Camera Removal, TASK 31-61-21-000-802).



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

(d) Remove the panel [1].

SUBTASK 55-15-01-940-002

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

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## TASK 55-15-01-400-801

## 3. Horizontal Stabilizer Leading Edge Installation

(Figure 401)

#### A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
31-61-21-400-802	Main Gear Taxi Camera Installation (P/B 201)
51-21-04-620-801	Alodine 600, 1000, 1200, and 1200S Coating Application (P/B 701)
51-31-01-390-806	Aerodynamic Smoother Application (P/B 201)

## B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

## C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796
C00767	Coating - Anti-Static Coating	BMS10-21 Type III

## D. Location Zones

Zone	Area
332	Left Horizontal Stabilizer Leading Edge
342	Right Horizontal Stabilizer Leading Edge

## E. Procedure

SUBTASK 55-15-01-940-003

(1) Remove the cover from the auxiliary spar, if it is necessary.

SUBTASK 55-15-01-420-001

(2) Open this circuit breaker and install safety tag:

# Left Power Management Panel, P110

		Number	Name
K	16	C31601	TAXI CAMERAL I/F UNIT/SYS CTRL

(3) Connect the main gear taxi camera connector on the MID L/E panel (Main Gear Taxi Camera Installation, TASK 31-61-21-400-802).



KEEP PERSONS AWAY FROM THE AREA BELOW THE STABILIZER. PARTS CAN ACCIDENTALLY FALL AND CAUSE AN INJURY TO PERSONS.

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## (WARNING PRECEDES)



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

(4) Put the panel assembly [1] in its position on the leading edge of the horizontal stabilizer.

#### SUBTASK 55-15-01-910-001

- (5) On the strakelet, make an electrical bond as follows:
  - (a) Find the fastener locations for the electrical bonding.
  - (b) Apply anti-static coating, C00767 to the composite part of each hole.
  - (c) Let the coating, C00767 dry.
  - (d) Install the bolt [2] without sealant.

#### SUBTASK 55-15-01-910-002

- (6) Install all bolt [2] that are not electrically bonded as follows:
  - (a) Paint aluminum parts of the fastener holes with primer, C00259
  - (b) Let the primer, C00259 dry.
  - (c) Apply corrosion preventive compound, C00308 to the bolt [2].
  - (d) Install the bolt [2] before the corrosion preventive compound, C00308 is dry.

#### SUBTASK 55-15-01-210-001

- (7) Make sure the gap around the panel is 0.06 to 0.12 inch.
  - (a) Do these steps on aluminum panels to get the correct clearance:
    - 1) Remove the unwanted skin from the leading edge panel assembly [1] at the area where the clearance is less than 0.06 inch.
    - 2) Remove sharp edges from the skin.
    - 3) Apply a layer of corrosion preventive compound, C00308 on the cut skin with a brush, do this task: Alodine 600, 1000, 1200, and 1200S Coating Application, TASK 51-21-04-620-801.

#### SUBTASK 55-15-01-210-002

(8) Make sure the fastener heads are smooth with the leading edge skin.

## SUBTASK 55-15-01-910-003

- (9) Fill the clearances around the leading edge panel assembly [1] with sealant, A00247, do this task: Aerodynamic Smoother Application, TASK 51-31-01-390-806.
- F. Put the airplane back in its usual condition.

## SUBTASK 55-15-01-940-004

- (1) Remove the body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.
- (2) Do an installation check of the main landing gear taxi camera.
  - (a) Do this task: Main Gear Taxi Camera Installation, TASK 31-61-21-400-802.

## SUBTASK 55-15-01-860-002

- (3) Make the horizontal stabilizer operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.

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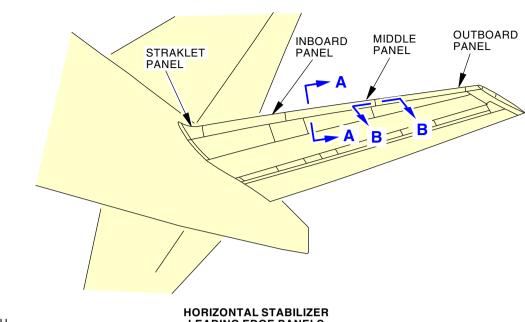
- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R
- (c) Make sure the amber VALVE CLOSED lights go off.
- (d) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

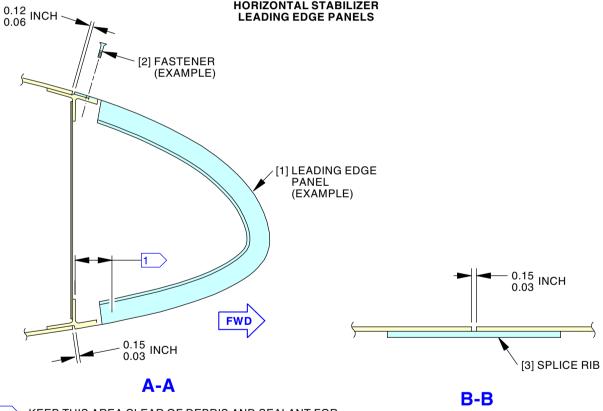
----- END OF TASK -----

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1 KEEP THIS AREA CLEAR OF DEBRIS AND SEALANT FOR CORRECT DRAINAGE ALONG ALL OF THE LEADING EDGE.

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Leading Edge Panels Installation Figure 401/55-15-01-990-801

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#### HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS - REMOVAL/INSTALLATION

#### 1. General

- A. This procedure contains these tasks:
  - (1) Removal of the skin panels on the trailing edge
  - (2) Installation of the skin panels on the trailing edge.
- B. The skin panels are on the top and bottom side of the horizontal stabilizer near the trailing edge.
- C. The trailing edge skin panel above the elevator actuator is permanently installed to strengthen the trailing edge. The following procedures do not apply to this panel.

#### TASK 55-16-01-000-801

## 2. Horizontal Stabilizer Trailing Edge Skin Panel Removal

(Figure 401)

B.

### A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
Tools/Equipment	
Reference	Description

# STD-1177 C. Location Zones

Zone	Area	
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge	

## D. Prepare for the Removal

SUBTASK 55-16-01-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(1) Prevent all possible operation of the horizontal stabilizer as follows:

Harness - Body

- (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
  - 1) TAIL, L
  - 2) TAIL, C

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- 3) TAIL, R.
- (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-16-01-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(2) Attach a body harness, STD-1177 (, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### E. Removal

SUBTASK 55-16-01-020-001

(1) Remove the panel assembly [1]:



KEEP PERSONS AWAY FROM THE AREA BELOW THE STABILIZER. PARTS COULD ACCIDENTALLY FALL AND CAUSE AN INJURY TO PERSONS.

- (a) Remove the bolt [2] from the trailing edge panel assembly [1].
- (b) Remove or dislodge the edge sealant.
- (c) Remove the panel assembly [1] from the stabilizer.

SUBTASK 55-16-01-940-002

(2) Install a protective cover on the panel area.

------ END OF TASK ------

## TASK 55-16-01-400-801

3. Horizontal Stabilizer Trailing Edge Skin Panel Installation

(Figure 401)

## A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
51-31-01-390-806	Aerodynamic Smoother Application (P/B 201)
55-16-01 P/B 801	HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS- REPAIR

## B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

## C. Consumable Materials

Reference	Description	Specification
A02315	Sealant - Low Density, Synthetic Rubber. 2	BMS5-142 Type II
	Part	

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## (Continued)

Reference	Description	Specification
C00528	Compound - Corrosion Preventive, Petroleum	MIL-C-11796 Class III
	Hot Application (Soft Film)	

## D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Panel assembly	55-16-01-01C-030	ARO ALL
		55-16-01-01D-045	ARO ALL
		55-16-01-01E-030	ARO 001-015
		55-16-01-02B-030	ARO ALL
		55-16-01-04B-030	ARO 001-015
		55-16-01-06B-020	ARO 001-015
		55-16-01-06C-035	ARO 001-015
		55-16-01-07B-020	ARO 001-015
		55-16-01-07C-015	ARO 001-015
		55-16-01-08B-015	ARO 001-015
		55-16-01-11-200	ARO ALL

### E. Location Zones

Zone	Area
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge

#### F. Prepare for the installation

SUBTASK 55-16-01-860-002



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

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#### SUBTASK 55-16-01-940-003



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(2) Attach a body harness, STD-1177 do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

### G. Installation

#### SUBTASK 55-16-01-940-004

- (1) Remove the protective cover if you installed it.
  - (a) If there are damaged shims, refer to PAGEBLOCK 55-16-01/801 to repair them.

SUBTASK 55-16-01-980-001



KEEP PERSONS AWAY FROM THE AREA BELOW THE STABILIZER. PARTS COULD ACCIDENTALLY FALL AND CAUSE AN INJURY TO PERSONS.

(2) Hold the panel assembly [1] in its position on the stabilizer.

#### SUBTASK 55-16-01-420-001

(3) Install all the bolts [2]:

NOTE: Some panels are attached with two sizes of bolts. The larger diameter bolts, 0.25 inch (6.35mm), must be installed wet with corrosion inhibiting compound. The smaller diameter bolts, 0.19 inch (4.83mm), should be installed dry

- (a) Apply compound, C00528 to the larger diameter bolts [2] and install wet.
- (b) Install the remaining smaller bolts [2] dry.

## SUBTASK 55-16-01-220-001

- (4) Make sure the clearance around the panel assembly [1] is as shown in Figure 401:
  - (a) Do these steps to get the correct clearance:
    - 1) Remove the unwanted skin from the panel assembly [1] at the area where the clearance is less than 0.03 inch.
    - 2) Remove sharp edges from the cut skin.

## SUBTASK 55-16-01-910-003

(5) Fill the clearances with the sealant, A02315 do this task: Aerodynamic Smoother Application, TASK 51-31-01-390-806

NOTE: This operation may be deferred to allow for immediate dispatch. This may lead to panel edge damage and water getting into structure. Sealing can be done next maintenance stop.

## H. Put the airplane back in its usual condition.

## SUBTASK 55-16-01-940-005

(1) Remove the body harness, STD-1177 do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### SUBTASK 55-16-01-860-003

- (2) Make the horizontal stabilizer operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.

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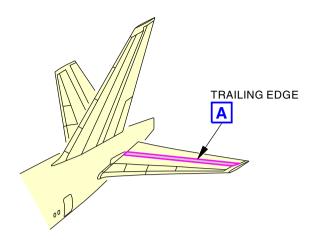
- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R
- (c) Make sure the amber VALVE CLOSED lights go off.
- (d) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808

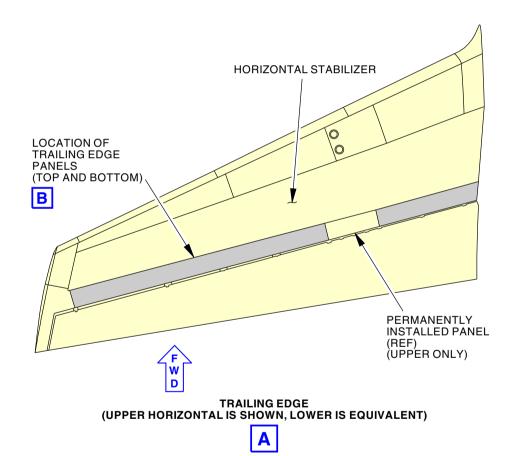
----- END OF TASK -----

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Horizontal Stabilizer Trailing Edge Skin Panels Installation Figure 401/55-16-01-990-801 (Sheet 1 of 2)

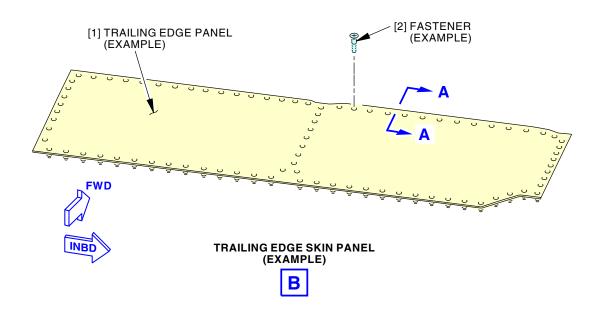
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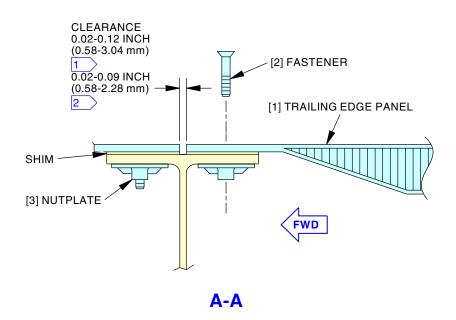
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1 FORWARD, INBOARD AND OUTBOARD EDGES
2 AFT EDGE OF THE PANEL

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# Horizontal Stabilizer Trailing Edge Skin Panels Installation Figure 401/55-16-01-990-801 (Sheet 2 of 2)



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## HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS- REPAIR

## 1. General

- A. This procedure contains one task:
  - (1) The repair of shims under the horizontal stabilizer trailing edge skin panels.
- B. There are three general types of damages of shims.
  - (1) Crack: common in Laminated shims.
  - (2) Peel: common in Rib and Attach Plate shims.
  - (3) Worn: common in Laminated shims.

#### TASK 55-16-01-300-801

## 2. Repair the Trailing Edge Skin Panel Shims

## A. References

Reference	Title
55-16-01 P/B 401	HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS -
	REMOVAL/INSTALLATION

### B. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
G50399	Resin - Fiberglass Layup, Long Worklife, Non-Brominated	BMS8-201 Type III (Supersedes BMS8-201 Type I)
G50400	Resin - Fiberglass Layup, Short Worklife, Non-Brominated	BMS8-201 Type IV (Supersedes BMS8-201 Type II)

## C. Location Zones

Zone	Area
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge

## D. Repair the Trailing Edge Skin Panel Shims

SUBTASK 55-16-01-300-001

- (1) If there are cracks on the shims, do these steps to permanently repair the shims:
  - (a) Replace the damaged portion of shims.
  - (b) Apply sealant, A00247 to the surface of shims.
- (2) Refer to PAGEBLOCK 55-16-01/401 to check the clearance around the panel.

SUBTASK 55-16-01-300-002

- (3) If there are either peeled or worn shims, do these steps to permanently repair the shims:
  - (a) Discard the damaged portion of shims.
  - (b) Apply one coat of resin, G50399 or resin, G50400 to the surface of shims.
  - (c) Smooth out the surface back to the proper dimension.
  - (d) Refer to PAGEBLOCK 55-16-01/401 to check the clearance around the panel.

——— END OF TASK ———
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### HORIZONTAL STABILIZER FIXED TRAILING EDGE SEAL - REMOVAL/INSTALLATION

## 1. General

- A. This procedure has these tasks for the horizontal stabilizer:
  - (1) Removal of the fixed trailing edge seal
  - (2) Installation of the fixed trailing edge seal.

### TASK 55-16-02-000-801

## 2. Horizontal Stabilizer Fixed Trailing Edge Seal Removal

(Figure 401)

## A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

### B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

## C. Location Zones

Zone	Area
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge

### D. General

SUBTASK 55-16-02-000-001

(1) The trailing edge seal has several sections.

SUBTASK 55-16-02-000-002

(2) You can remove one section at a time.

## E. Prepare for the removal of the seal.

SUBTASK 55-16-02-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:

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- 1) TAIL, L
- 2) TAIL, C
- 3) TAIL, R.
- (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-16-02-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(2) Attach a body harness, STD-1177 do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.

## F. Removal

SUBTASK 55-16-02-010-001

- (1) Remove the fixed trailing edge seal [2] as follows:
  - (a) Remove the bolt [1] from a section of the trailing edge seals [2].
  - (b) Make a note of the fastener locations for electrical bonding.
  - (c) Remove theseal [2].

----- END OF TASK -----

## TASK 55-16-02-400-801

3. Horizontal Stabilizer Fixed Trailing Edge Seal Installation

(Figure 401)

### A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

## B. Tools/Equipment

Reference	Description	
STD-1177	Harness - Body	

### C. Consumable Materials

Reference	Description	Specification
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796
C00767	Coating - Anti-Static Coating	BMS10-21 Type III

## D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
2	Seal	55-16-02-03-020	ARO 001-015	
		55-16-02-03-025	ARO 001-015	

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(Continued)

(Continued)			
AMM Item	Description	AIPC Reference	AIPC Effectivity
2 (cont.)		55-16-02-03-030	ARO 001-015
		55-16-02-03-035	ARO 001-015
		55-16-02-03-040	ARO 001-015
		55-16-02-03-045	ARO 001-015
		55-16-02-03-050	ARO 001-015
		55-16-02-03-055	ARO 001-015
		55-16-02-03-060	ARO 001-015
		55-16-02-03-065	ARO 001-015
		55-16-02-03-070	ARO 001-015
		55-16-02-03-075	ARO 001-015
		55-16-02-03-080	ARO 001-015
		55-16-02-03-085	ARO 001-015
		55-16-02-03-320	ARO 001-015
		55-16-02-03-325	ARO 001-015
		55-16-02-03-330	ARO 001-015
		55-16-02-03-335	ARO 001-015
		55-16-02-03-340	ARO 001-015
		55-16-02-03-345	ARO 001-015
		55-16-02-03-350	ARO 001-015
		55-16-02-03-355	ARO 001-015
		55-16-02-03-360	ARO 001-015
		55-16-02-03-365	ARO 001-015
Location Zo	nes		

## E. Location Zones

Zone	Area

335 Left Horizontal Stabilizer - Rear Spar to Trailing Edge

## F. Prepare for the Installation

SUBTASK 55-16-02-860-002



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808

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- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R.
- (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-16-02-940-002



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(2) Attach a body harness, STD-1177 do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### G. Installation

SUBTASK 55-16-02-420-001

(1) Put the seal [2] in its correct position on the trailing edge.

#### SUBTASK 55-16-02-910-001

- (2) Make an electrical bond as follows:
  - (a) Find the fastener locations for the electrical bonding.
  - (b) Apply coating, C00767 to the composite part of each hole.
  - (c) Let the coating, C00767 dry.
  - (d) Install the bolt [1] in these holes without sealant.

## SUBTASK 55-16-02-910-002

- (3) Install the remaining fasteners as follows:
  - (a) Paint the aluminum parts of the holes with primer, C00259.
  - (b) Let the primer, C00259 dry.
  - (c) Apply corrosion preventive compound, C00308 to the bolts [1].
  - (d) Install the fasteners [1] before the corrosion preventive compound, C00308 is dry.

## SUBTASK 55-16-02-910-003

- (4) Do these checks of the flushness and clearance:
  - (a) Make sure the clearance between each adjacent seal [2] is 0.00 to 0.06 inch.
  - (b) Make sure the clearance between the seals [2] and the stabilizer skin is 0.03 to 0.09 inch.
  - (c) Make sure the bolts [1] has a flushness +0.005 inch above to -0.01 inch below seal surface.
- H. Put the airplane back in its usual condition.

#### SUBTASK 55-16-02-940-003

(1) Remove the body harness, STD-1177 do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

## SUBTASK 55-16-02-860-003

- (2) Make the horizontal stabilizer operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801

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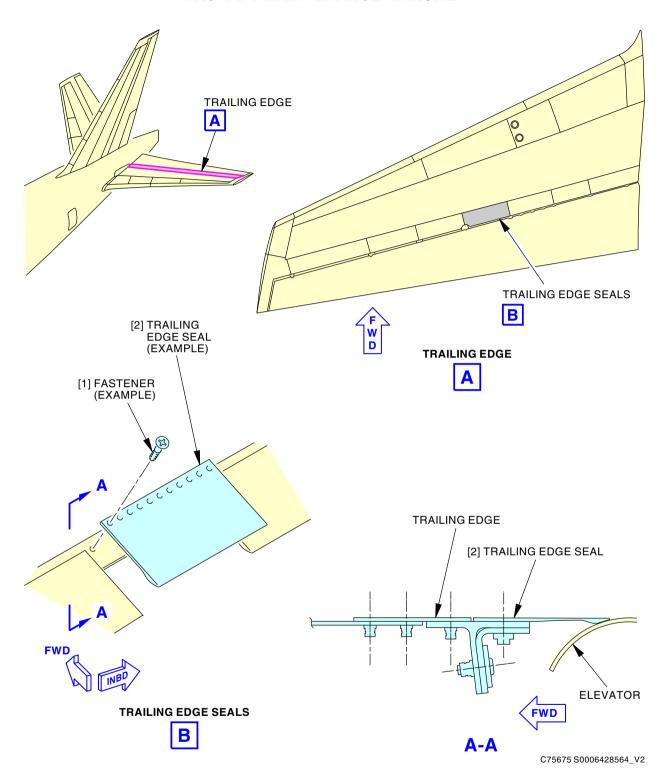
- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R
- (c) Make sure the amber VALVE CLOSED lights go off.
- (d) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808

----- END OF TASK -----

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# Horizontal Stabilizer Trailing Edge Seal Installation Figure 401/55-16-02-990-801

EFFECTIVITY

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### HORIZONTAL STABILIZER PIVOT FITTING ASSEMBLY - REMOVAL/INSTALLATION

## 1. General

A. This procedure has these tasks for the horizontal stabilizer:

NOTE: Installation of hinge bushing anti-rotation bracket is required by AD 97-17-02.

- (1) Removal of the pivot pin assembly
- (2) Installation of the pivot pin assembly.
- (3) Removal of the pivot fitting bearing.
- (4) Installation of the pivot fitting bearing.
- B. Remove the pivot pins or bearings from one side at a time.
- C. The pivot fitting assemblies on the left and right sides are not the same.
  - (1) The pivot fitting assembly on the left side is held with the inboard bushing nut [6] and a threaded spacer [7].
  - (2) The pivot fitting assembly on the right side can move and does not have an inboard bushing nut [6] and the spacer [30] does not have threads.

NOTE: The right side fitting must move laterally because of the difference in thermal expansion between the composite horizontal stabilizer and the metal fuselage structure.

### TASK 55-17-01-000-801

## 2. Horizontal Stabilizer Pivot Pin Assembly Removal

(Figure 401)

NOTE: Figure 402

#### A. References

Reference	Title
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
55-10-02-000-801	Horizontal Stabilizer Blade Seal Removal (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
SPL-2028	Equipment, Horizontal Stabilizer Hinge Pin Removal/Installation
	Part #: J55003-9 Supplier: 81205 Opt Part #: J55003-1 Supplier: 81205
SPL-2037	Jacking Eqpt - Horizontal Stabilizer
	Part #: J55004**ECD JUL2018** Supplier: 81205 Part #: J55004-35 Supplier: 81205
STD-1238	Indicator - Dial

## C. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right

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### D. Access Panels

Number Name/Location

313AL Controls Bay Access Door

## E. Prepare for the Removal

SUBTASK 55-17-01-860-003



KEEP PERSONNEL AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, DRIVE MECHANISMS AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU OPERATE THEM WITH ELECTRICAL OR HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Move the horizontal stabilizer to the neutral position.
  - (a) Move the stabilizer until the two stabilizer trim position indicators show 4 units of trim.

NOTE: You can move the stabilizer with the CAPTAIN'S or the FIRST OFFICER'S control wheel PITCH TRIM switches or the ALTN PITCH trim levers on the P10 control stand.

1) Make sure that the middle value of the three stabilizer position indication readings on the flight controls maintenance page 2 shows 75 to 65.

#### SUBTASK 55-17-01-860-004



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, IT CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: (Main Hydraulic System Power Removal, TASK 29-11-00-860-808).
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position and attach DO-NOT-OPERATE tags:
    - 1) TAIL. L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure that the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-17-01-940-002

(3) Get access to the torsion box compartment through this access panel:

<u>Number</u>	Name/Location
313AL	Controls Bay Access Door

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#### SUBTASK 55-17-01-000-005

(4) Do the task (Horizontal Stabilizer Blade Seal Removal, TASK 55-10-02-000-801) to get access to the outboard part of the pivot pin assembly [1].

#### SUBTASK 55-17-01-000-006

#### (Figure 401)

- (5) Remove the lower fairing gusset.
  - (a) Remove the 16 attachment screws from the lower fairing gusset.
  - (b) Remove the lower fairing gusset assembly from the horizontal stabilizer.

#### SUBTASK 55-17-01-080-001

(6) Install the horizontal stabilizer jacking equipment, SPL-2037.

#### SUBTASK 55-17-01-080-002

- (7) Install the dial indicator, STD-1238 as follows:
  - (a) Attach the bracket of the dial indicator, STD-1238 to a flange on an intercostal bracket that is above and behind the torque box.
  - (b) Use a clamp to get a rigid installation of the dial indicator, STD-1238 to the end of the bracket.
    - 1) Make sure that the dial indicator, STD-1238 does not move.
  - (c) Put the actuator of the dial indicator, STD-1238 on top of the torque box.

#### SUBTASK 55-17-01-980-001

(8) Remove the load from the pivot pin assembly [1] as follows:

NOTE: The pivot pin may be preloaded on both the vertical and horizontal axis.

- (a) Install the dial indicator, STD-1238 to a position where it can read up and down movement.
- (b) Turn the nut on the horizontal stabilizer jacking equipment, SPL-2037 to jack the pin upwards until the dial indicator, STD-1238 starts to move.
  - <u>NOTE</u>: The pin is moving through its tolerances when the dial indicator begins to move.
- (c) Continue to jack the pin upwards until the dial indicator, STD-1238 stops moving.
- (d) Note the reading on the dial indicator, STD-1238.
- (e) Turn the nut on the horizontal stabilizer jacking equipment, SPL-2037 to jack the pin downwards until the dial indicator, STD-1238 starts to move.
- (f) Continue to jack the pin downwards until the dial indicator, STD-1238 stops moving.
- (g) Note the reading on the dial indicator, STD-1238.
- (h) Turn the nut on the horizontal stabilizer jacking equipment, SPL-2037 to jack the pin upwards until the dial indicator, STD-1238 is at the middle point between the two readings.
- (i) Move the dial indicator, STD-1238 to a position where it can read fore and aft movement.
- (j) Turn the nut on the horizontal stabilizer jacking equipment, SPL-2037 to jack the pin forward until the dial indicator, STD-1238 starts to move.
  - NOTE: The pin is moving through its tolerances when the dial indicator begins to move.
- (k) Continue to jack the pin forward until the dial indicator, STD-1238 stops moving.
- (I) Note the reading on the dial indicator, STD-1238.
- (m) Turn the nut on the horizontal stabilizer jacking equipment, SPL-2037 to jack the pin aft until the dial indicator, STD-1238 starts to move.

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- (n) Continue to jack the pin aft until the dial indicator, STD-1238 stops moving.
- (o) Note the reading on the dial indicator, STD-1238.
- (p) Turn the nut on the horizontal stabilizer jacking equipment, SPL-2037 to jack the pin forward until the dial indicator, STD-1238 is at the middle point between the two readings.
- (q) Make sure that the pin is unloaded and at the middle point in the vertical and horizontal locations.

NOTE: Only a small movement is necessary to remove the load from the pivot pin assembly [1].

### F. Removal

#### SUBTASK 55-17-01-020-001

- (1) Remove the retention pin [22] from the airplane as follows:
  - (a) Remove the cotter pin [14].
  - (b) Remove the nut [13], washer [12], bolt [10], and washer [11] from the retention pin [22].
  - (c) Remove the nut [15], washer [16], lockwire [4], and anti-rotation plate [2].
     NOTE: The right pivot pin assembly does not have the lockwire [4] at the anti-rotation plate [2].
  - (d) Remove the cotter pin [27].
  - (e) Remove the nut [26], washer [25], bolt [23] and washer [24] from the retention pin [22].
  - (f) Remove the lockwire [29] from the trap fitting [21] and the outer pin nut [20].
  - (g) Remove the trap fitting [21].
  - (h) Remove the retention pin [22].

#### SUBTASK 55-17-01-020-003

(2) Remove the inner pin [9] from the outer pin [8].

#### SUBTASK 55-17-01-020-004

- (3) Remove the outer pin [8].
  - (a) Remove the outer pin nut [20].
  - (b) Remove the lockring [28].
  - (c) Use the hinge pin equipment, SPL-2028 to remove the outer pin [8].

NOTE: BE CAREFUL WHEN YOU REMOVE THE OUTER PIN [8]. THE THREADS ON THE OUTER PIN [8] CAN EASILY CAUSE DAMAGE TO THE PIVOT FITTING BEARING.

- 1) Make sure that the two washers [42] do not fall when you remove the outer pin [8].
- 2) Remove the two washers [42].
- 3) If necessary, on the left pivot fitting assembly, remove the threaded spacer [7].
  NOTE: Do not remove the hi-lock fastener [5] or the inboard bushing nut [6] (on the left pivot pin assembly only).
- 4) If necessary, on the right side pivot fitting assembly, remove the spacer [30].
- 5) If necessary, from the external side of the airplane remove the spacer [19].

### SUBTASK 55-17-01-020-005

- (4) If necessary to remove the nut retainer [39] from the pivot fitting, do these steps: (Figure 402).
  - (a) Remove the self-locking nut [37], the bolt [33], the washer [34], and the washer [36].

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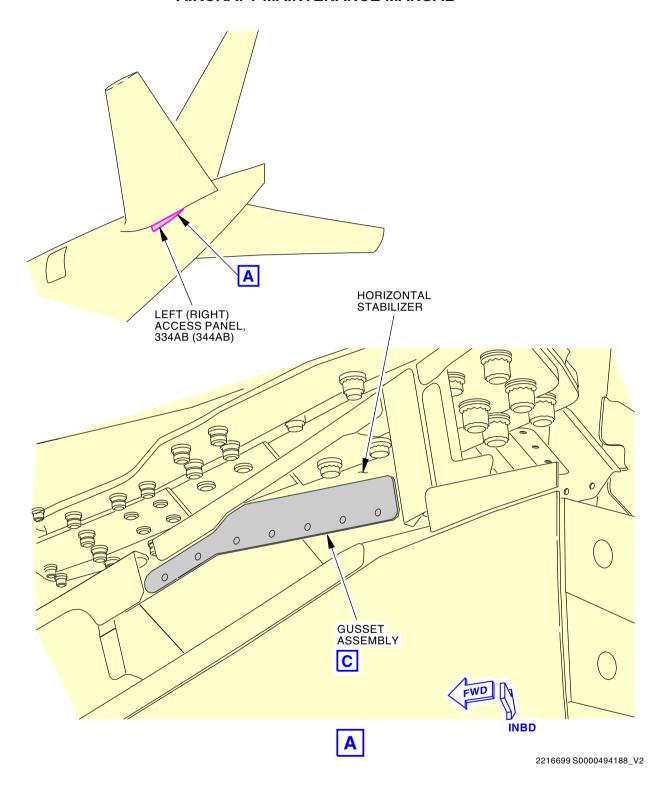


—— END OF TASK ———

` '	If necessary, remove the collar [38], the bolt [41], the retainer bracket [40], an retainer [39].	id the nut
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Lower Fairing Assembly - Gusset Figure 401/55-17-01-990-806 (Sheet 1 of 2)

EFFECTIVITY

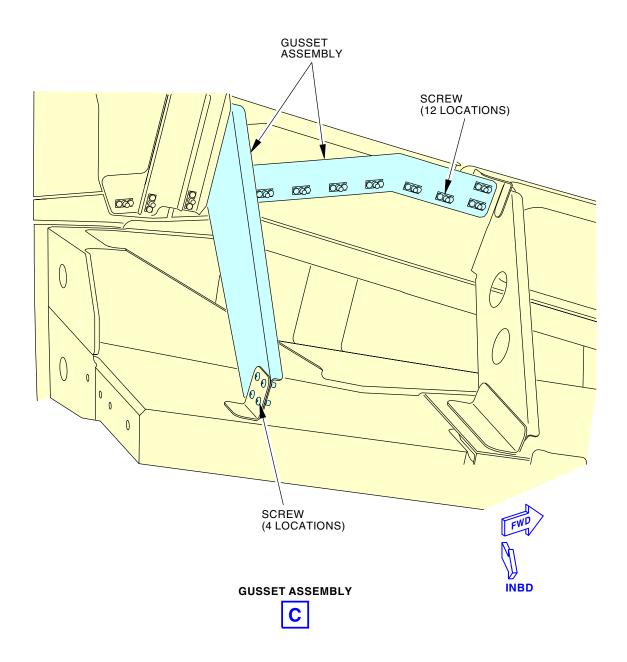
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# Lower Fairing Assembly - Gusset Figure 401/55-17-01-990-806 (Sheet 2 of 2)

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#### TASK 55-17-01-400-801

## 3. Horizontal Stabilizer Pivot Pin Assembly Installation

NOTE: Figure 402

## A. References

Reference	Title
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
55-10-02-400-801	Horizontal Stabilizer Blade Seal 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
SPL-2028	Equipment, Horizontal Stabilizer Hinge Pin Removal/Installation
	Part #: J55003-9 Supplier: 81205 Opt Part #: J55003-1 Supplier: 81205
SPL-2037	Jacking Eqpt - Horizontal Stabilizer
	Part #: J55004**ECD JUL2018** Supplier: 81205 Part #: J55004-35 Supplier: 81205

## C. Consumable Materials

Reference	Description	Specification
A01076	Adhesive - Synthetic Rubber	BAC5010 Type 93 (BMS5-95 Class B)
D00633	Grease - Aircraft General Purpose	BMS3-33

## D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	Pin	55-10-00-01-160	ARO ALL
9	Pin	55-10-00-01-165	ARO ALL

## E. Access Panels

Number	Name/Location
313AL	Controls Bay Access Door

## F. Installation

SUBTASK 55-17-01-400-001

- (1) If removed, install the nut retainer [39] for the bearing nut, as follows:
  - (a) Make sure that the lockwire [44] is removed from the bearing nut on the pivot fitting retainer. (Figure 402).
  - (b) Put the nut retainer [39] into the notches of the bearing nut (Figure 402).

NOTE: If necessary, use a temporary spacer (vendor supplied) between the nut retainer and the airplane until the part is attached to the pivot fitting.

- (c) Torque the bearing nut to 2700 in-lb (305 N·m) to 3000 in-lb (339 N·m).
  - 1) If necessary, use a wrench with a socket extension for clearance.
- (d) Install the retainer bracket [40] to the nut retainer [39] with the two bolts [41] and the two collars [38].

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- (e) Make a 0.59 in. (14.99 mm) to a 0.60 in. (15.24 mm) diameter hole to the shim [35] (Figure 402).
- (f) Adjust shim thickness to make the nut retainer [39] flush with the bearing nut or bearing retainer within 0.015 in. (0.381 mm).

NOTE: Add or remove shims to adjust the shim thickness.

NOTE: More than one shim can be necessary. The maximum satisfactory thickness of the shims is 0.095 in. (2.413 mm).

- (g) Install the shim [35] with adhesive, A01076.
- (h) Install the bolt [33], the self-locking nut [37], the washer [34], and the washer [36].

NOTE: The bolt will go through the retainer bracket, shim, washers, and pivot fitting.

NOTE: Loosen the bearing nut, if necessary, to align the bolt hole.

(i) Install the lockwire [44] in the two positions.

#### SUBTASK 55-17-01-420-002

- (2) Install the outer pin [8].
  - (a) Apply a layer of grease, D00633 on the two washers [42], and the outer pin [8].



BE CAREFUL WHEN YOU INSTALL THE OUTER PIN [8]. THE THREADS ON THE OUTER PIN [8] CAN EASILY CAUSE DAMAGE TO THE PIVOT FITTING BEARING.

- (b) Apply grease, D00633 to the spacer [19].
- (c) Install the threaded spacer [7] in the left hinge assembly.
- (d) On the left pivot fitting assembly, turn the threaded spacer [7] until it fully engages with the inboard bushing nut [6].

NOTE: Make sure that the hi-lock fastener [5] is on the inboard bushing nut (the left side only).

- (e) On the right pivot fitting assembly, install the spacer [30].
- (f) Install the spacer [19] with the notches in the outboard direction.
- (g) Install the nut [43].
  - 1) Tighten the nut [43] to 60  $\pm$ 10 in-lb (7  $\pm$ 1 N·m).
- (h) Carefully install the outer pin [8].
  - 1) Put the washers [42] into their positions.
  - 2) Use the hinge pin equipment, SPL-2028.
- (i) Install the lockring [28] with the square pointed in the inboard direction.
  - 1) Apply a layer of grease, D00633 on the threads of the outer pin nut [20].
  - 2) Tighten the outer pin nut [20] to 25 in-lb (2.82  $N \cdot m$ ) to 30 in-lb (3.39  $N \cdot m$ ).
  - 3) Loosen the outer pin nut [20].
  - 4) Tighten the outer pin nut [20] again with 25 in-lb (2.82 N·m) to 30 in-lb (3.39 N·m) of torque.

#### SUBTASK 55-17-01-420-003

- (3) Install the inner pin [9].
  - (a) Apply grease, D00633 to the inner pin [9].

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- (b) From in the airplane, do these steps:
  - 1) Install the inner pin [9].

#### SUBTASK 55-17-01-420-004

- (4) Install the retention pin [22] as follows:
  - (a) If you removed the anti-rotation plate [2] from the retention pin [22], install it on the retention pin [22] as follows:
    - 1) Install the anti-rotation plate [2] on the retention pin [22].
    - 2) Install the washer [16].
    - 3) Install the nut [15].

NOTE: The nut [15] will be tightened in a different step.

- a) Turn the inner pin [9], outer pin [8], and the spacer [19] to align the slots with the retention pin [22].
- b) Make sure that the end of the anti-rotation plate [2] engages the anti-rotation clip [3] Figure 402.
- 4) Install the bolt [10], washer [11], washer [12], and the nut [13].
- (b) Put the retention pin [22] through the inner pivot pin [9].
  - 1) Engage the plate [2] into the slots in the heads of the inner and outer pins and the anti-rotation clip [3].
- (c) Install the trap fitting [21] to the inner pin [9].
- (d) Tighten the trap fitting [21] on the inner pin [9] with a torque of 375 in-lb (42 N·m) to 525 in-lb (59 N·m).
  - 1) Align the trap fitting [21] hole with the hole on the retention pin [22].
- (e) Install the bolt [23], washer [24], washer [25], nut [26] and cotter pin [27] on the outboard end of the retention pin [22].
- (f) Torque the nut [15] to 150 in-lb (17 N·m).
- (g) Set the torque wrench to 300 in-lb (34 N·m).
- (h) Turn the nut [15] until the hole on the nut aligns with the hole on the retention pin [22].
  - 1) Do not tighten the nut [15] to more than 300 in-lb (34 N·m) of torque.
- (i) Install the bolt [10], washer [11], washer [12], nut [13], and cotter pin [14] on the inboard end of the retention pin [22].
- (j) Install lockwire [29] between the trap fitting [21] and the outer pin nut [20].
  - NOTE: Make sure that the lockwire is installed to prevent a loose outer pin nut.
- (k) On the left pivot fitting assembly, install the lockwire [4] between the anti-rotation plate [2] and the inboard bushing nut [6].

NOTE: The right pivot pin assembly does not have the lockwire at the anti-rotation plate [2].

G. Put the Airplane back in its Usual Condition.

SUBTASK 55-17-01-080-003

Remove the horizontal stabilizer jacking equipment, SPL-2037.

SUBTASK 55-17-01-080-004

(2) Remove the dial indicator.

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### SUBTASK 55-17-01-410-001

- (3) Install the lower fairing gusset assembly.
  - (a) Put the lower fairing gusset assembly in its position.
  - (b) Install the 16 mounting screws in the lower fairing gusset assembly.

### SUBTASK 55-17-01-410-002

(4) Do the task, (Horizontal Stabilizer Blade Seal Installation, TASK 55-10-02-400-801).

#### SUBTASK 55-17-01-860-005

- (5) Make the horizontal stabilizer operate as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Remove the DO-NOT-OPERATE tags.
  - (c) Put these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (d) Make sure that the amber VALVE CLOSED lights go off.
  - (e) Operate the horizontal stabilizer.
  - (f) Make sure that the stabilizer pivot fittings move freely.
  - (g) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

#### SUBTASK 55-17-01-080-005

(6) Close this access panel:

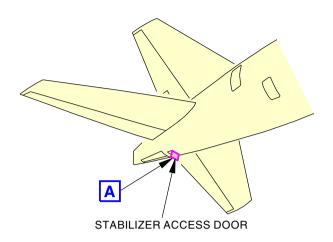
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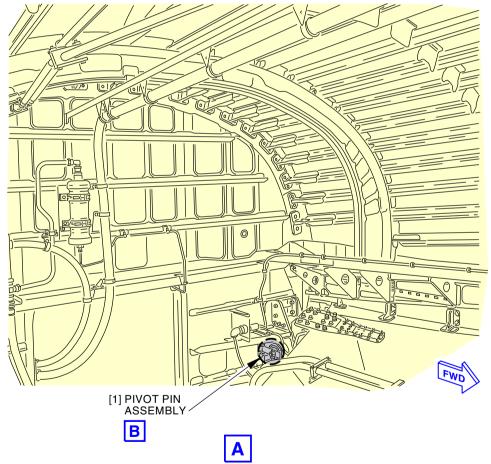
<u>Number</u>	Name/Location
313AL	Controls Bay Access Door
	——— FND OF TASK ———

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Horizontal Stabilizer Pivot Pin Assembly Installation Figure 402/55-17-01-990-802 (Sheet 1 of 3)

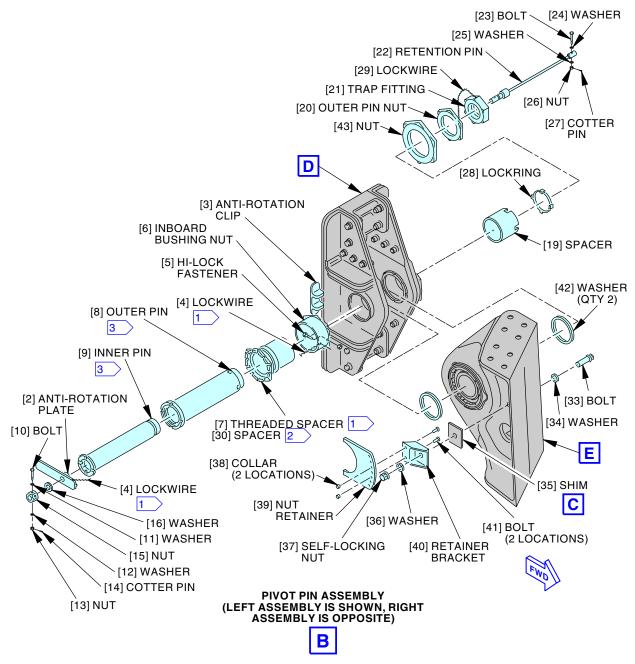
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## NOTE:

1 LEFT HORIZONTAL STABILIZER PIVOT PIN ASSEMBLY

2 RIGHT HORIZONTAL STABILIZER PIVOT PIN ASSEMBLY

3 APPLY GREASE BMS3-33

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# Horizontal Stabilizer Pivot Pin Assembly Installation Figure 402/55-17-01-990-802 (Sheet 2 of 3)

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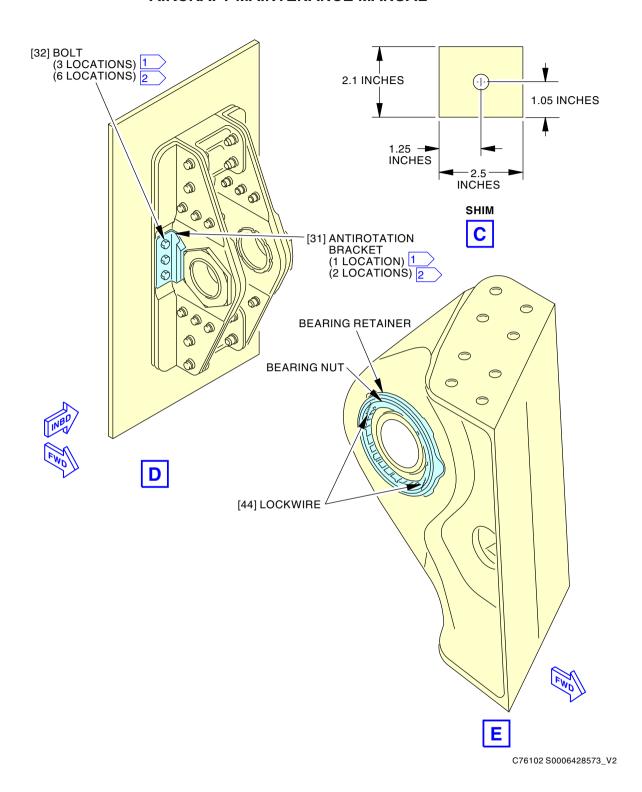
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Horizontal Stabilizer Pivot Pin Assembly Installation Figure 402/55-17-01-990-802 (Sheet 3 of 3)

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## TASK 55-17-01-000-802

## 4. Horizontal Stabilizer Pivot Fitting Bearing Removal

(Figure 403)

## 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-4923	Bearing Equipment, Horizontal Stabilizer		
	Part #: J55001-16 Supplier: 81205		
	Opt Part #: J55001-13 Supplier: 81205		

#### B. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right

### C. Removal

SUBTASK 55-17-01-400-002

(1) Do this task: Horizontal Stabilizer Pivot Pin Assembly Removal, TASK 55-17-01-000-801.

SUBTASK 55-17-01-000-002

- (2) If the nut retainer [7] is present, do this task to remove it: SUBTASK 55-17-01-020-005
- (3) Remove the fitting.

SUBTASK 55-17-01-000-003

(4) Remove the bearing nut [2] and washer [3] using the wrench from bearing equipment, SPL-4923.

SUBTASK 55-17-01-000-004

(5) Use the bearing equipment, SPL-4923 to remove the pivot bearing [4].



## TASK 55-17-01-400-802

## 5. Horizontal Stabilizer Pivot Fitting Bearing Installation

(Figure 403)

## A. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	

## B. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right

## C. Installation

SUBTASK 55-17-01-370-001

(1) Apply sealant, A00247 to the outer diameter surface of outer race and the side face of the pivot bearing [4] which come in contact with bearing retainer [5].

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### SUBTASK 55-17-01-400-003

(2) Install the pivot bearing [4].

## SUBTASK 55-17-01-400-004

- (3) Install the washers [3] and bearing nuts [2].
  - (a) Torque the bearing nuts [2] to 2700-3000 inch-pounds (305–339 Nm).

## SUBTASK 55-17-01-400-006

- (4) Do this task to install the nut retainer [7]: SUBTASK 55-17-01-400-001.
- (5) Install the inner fitting.

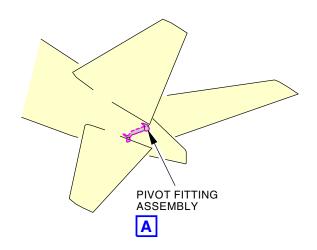
#### SUBTASK 55-17-01-400-007

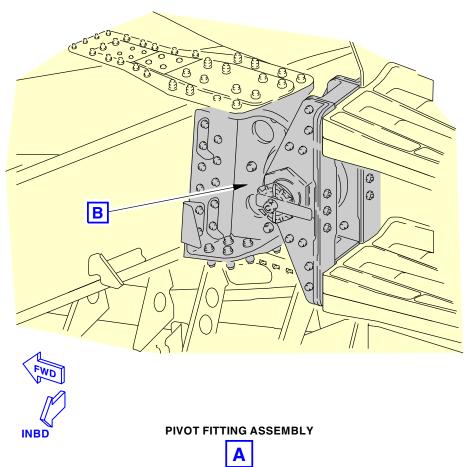
(6) Do this task: Horizontal Stabilizer Pivot Pin Assembly Installation, TASK 55-17-01-400-801

——— END OF TASK ———

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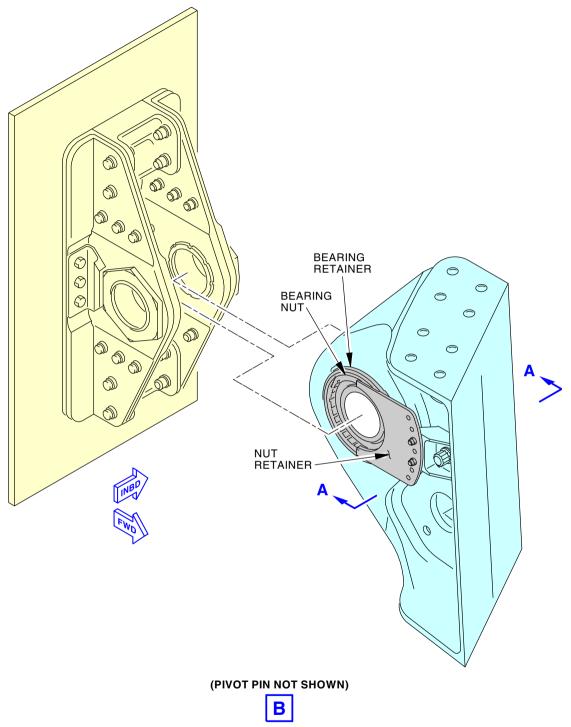
Horizontal Stabilizer Pivot Fitting Bearing Installation Figure 403/55-17-01-990-805 (Sheet 1 of 3)

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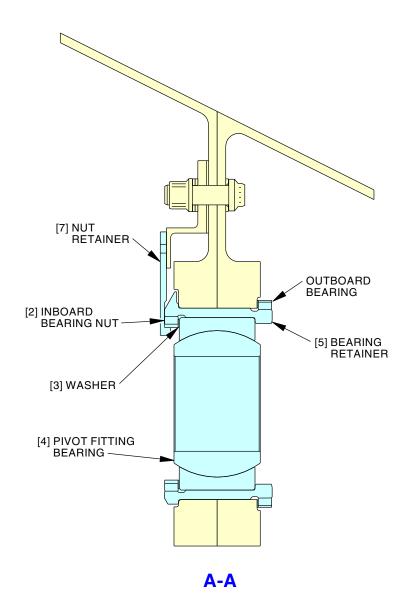
Horizontal Stabilizer Pivot Fitting Bearing Installation Figure 403/55-17-01-990-805 (Sheet 2 of 3)

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# Horizontal Stabilizer Pivot Fitting Bearing Installation Figure 403/55-17-01-990-805 (Sheet 3 of 3)



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### HORIZONTAL STABILIZER PIVOT FITTING - INSPECTION/CHECK

## 1. General

A. This procedure has one task:

NOTE: Installation of hinge bushing anti-rotation bracket is required by AD 97-17-02.

(1) Horizontal Stabilizer Pivot Fitting Free Play Check

### TASK 55-17-01-220-801

## 2. Horizontal Stabilizer Pivot Fitting Free Play Check

(Figure 601)

## A. General

(1) Do this check in an area that does not have wind.

### B. References

Reference	Title
27-41-13-220-801	Horizontal Stabilizer Flutter Freeplay Test (P/B 601)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
55-10-02-000-801	Horizontal Stabilizer Blade Seal Removal (P/B 401)
55-17-01-000-801	Horizontal Stabilizer Pivot Pin Assembly Removal (P/B 401)
55-17-01-400-801	Horizontal Stabilizer Pivot Pin Assembly Installation (P/B 401)

## C. 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-2037 Jacking Eqpt - Horizontal Stabilizer				
	Part #: J55004**ECD JUL2018** Supplier: 81205 Part #: J55004-35 Supplier: 81205			
STD-1238	Indicator - Dial			

## D. Location Zones

Zone	Area		
313	Stabilizer Torsion Box Compartment, Left		
314	Stabilizer Torsion Box Compartment, Right		

## E. Prepare for the Procedure

SUBTASK 55-17-01-860-001



KEEP PERSONNEL AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, DRIVE MECHANISMS AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU OPERATE THEM WITH ELECTRICAL OR HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(1) Move the horizontal stabilizer to the neutral position.

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- (a) Move the stabilizer until the two stabilizer trim position indicators show 4 units of trim.
  - NOTE: You can move the stabilizer with the CAPTAIN'S or the FIRST OFFICER'S control wheel PITCH TRIM switches or the ALTN PITCH trim levers on the P10 control stand.
  - 1) Make sure that the middle value of the three stabilizer position indication readings on the flight controls maintenance page 2 shows 75 to 65.

#### SUBTASK 55-17-01-860-002



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, IT CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) Prevent all possible operation of the horizontal stabilizer as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-17-01-940-001

(3) Get access to the torsion box compartment through the service access door.

#### SUBTASK 55-17-01-480-001

(4) Install the horizontal stabilizer jacking equipment, SPL-2037.

## SUBTASK 55-17-01-480-002

- (5) Install the dial indicator, STD-1238 as follows:
  - (a) Attach the bracket of the dial indicator, STD-1238 to a flange on an intercostal bracket that is above and behind the torque box.
  - (b) Use a clamp to get a rigid installation of the dial indicator, STD-1238 to the end of the bracket.
    - 1) Make sure that the dial indicator, STD-1238 unit does not move.
  - (c) Put the needle of the dial indicator, STD-1238 on top of the torque box to record vertical movement of the torque box.

## SUBTASK 55-17-01-010-001

(6) To remove the bottom blade seal to get access to the outboard part of the pivot fitting; do this task: Horizontal Stabilizer Blade Seal Removal, TASK 55-10-02-000-801

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#### F. Procedure

#### SUBTASK 55-17-01-220-001

- (1) Measure the free play as follows (Figure 601)
  - (a) Slowly turn the jack screw nut on the horizontal stabilizer jacking equipment, SPL-2037 until the dial indicator, STD-1238 stops.
  - (b) Make a record of the quantity shown on the dial indicator, STD-1238.
    - NOTE: This quantity is the free play.
  - (c) Slowly turn the jack screw nut in the opposite direction until the dial indicator, STD-1238 shows a value of zero.
    - 1) If the value is not zero, measure the free play again.

#### SUBTASK 55-17-01-910-001

(2) If the free play is less than or equal to 0.034 inch, the pivot pin assembly is still serviceable.

#### SUBTASK 55-17-01-900-001

- (3) If the free play is more than 0.034 inch, perform the following tasks:
  - (a) Do this task: Horizontal Stabilizer Flutter Freeplay Test, TASK 27-41-13-220-801.
  - (b) Do this task: Horizontal Stabilizer Pivot Pin Assembly Removal, TASK 55-17-01-000-801.
  - (c) Use (Figure 601) to do a check of the wear limits of each component as follows:
    - 1) Make sure each part has not reached its allowed wear dimension.
    - Make sure the clearance between each pair of parts is not more than the maximum diameter clearance.

## G. Put the Airplane back in its Usual Condition.

#### SUBTASK 55-17-01-420-001

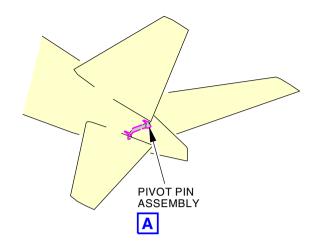
(1) If you removed the pivot pins, do this task: Horizontal Stabilizer Pivot Pin Assembly Installation, TASK 55-17-01-400-801.

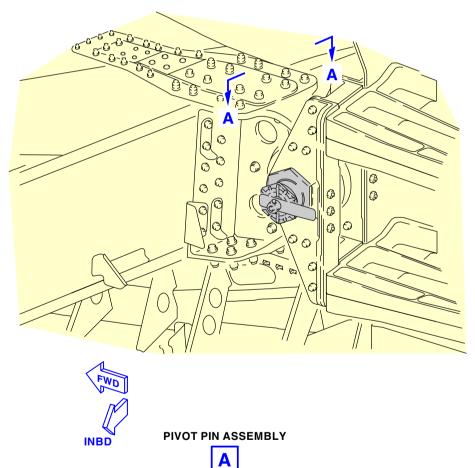
## SUBTASK 55-17-01-840-001

- (2) If you did not remove the pivot pin, do these steps:
  - (a) Remove the horizontal stabilizer jacking equipment.
  - (b) Remove the dial indicator.
  - (c) Make the horizontal stabilizer operable as follows:
    - 1) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
    - 2) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
      - a) TAIL, L
      - b) TAIL, C
      - c) TAIL, R
    - 3) Make sure the amber VALVE CLOSED lights go off.
    - 4) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

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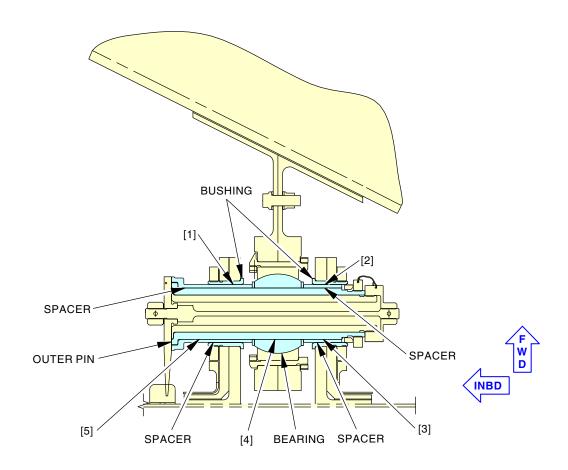
Horizontal Stabilizer Pivot Fittings Wear Limits Figure 601/55-17-01-990-801 (Sheet 1 of 4)

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# RIGHT SIDE PIVOT PIN ASSEMBLY A-A

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# Horizontal Stabilizer Pivot Fittings Wear Limits Figure 601/55-17-01-990-801 (Sheet 2 of 4)

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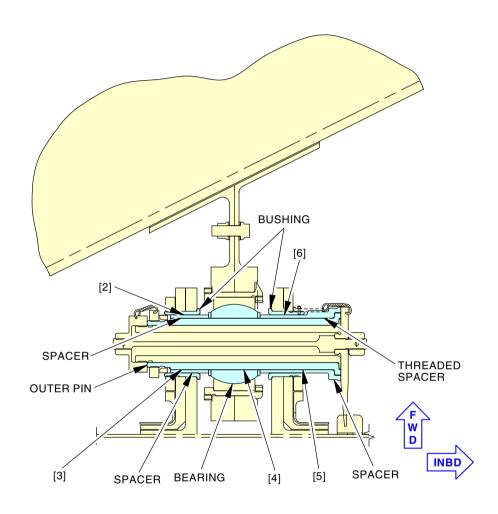
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# LEFT SIDE PIVOT PIN ASSEMBLY A-A

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Horizontal Stabilizer Pivot Fittings Wear Limits Figure 601/55-17-01-990-801 (Sheet 3 of 4)

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	PART NAME		DESIGN LIMITS		WEAR LIMITS		
INDEX NO.			DIAMET	DIAMETER 2 PER-	MAX DIA	REPAIR	
		DIM.	MIN	MAX	MITTED WEAR DIM.	CLEAR- ANCE	KEFAIK
F4.7	BUSHING	ID	3.1085	3.1100	3.1115	0.0075	4
[1]	SPACER	OD	3.1060	3.1075	3.1025	0.0075	4
503	BUSHING	ID	3.1085	3.1100	3.1115	0.0075	4
[2]	SPACER	OD	3.1060	3.1075	3.1025	0.0075	4
F77	SPACER	ID	2.7480	2.7485	2.7500	0.0063	4
[3]	OUTER PIN	OD	2.7455	2.7470	2.7422	0.0003	4
F/3	BEARING	ID	2.7480	2.7500	2.7515	0.0078	4
[4]	OUTER PIN	OD	2.7455	2.7470	2.7422	0.0078	4
553	SPACER	ID	2.7480	2.7485	2.7500	0.0063	4
[5]	OUTER PIN	OD	2.7455	2.7470	2.7422	0.0003	4
[6]	BUSHING	ID	3.1725	3.1730	3.1750	0.0076	4
	THREADED SPACER	OD	3.1690	3.1710	3.1654	0.0010	4

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Horizontal Stabilizer Pivot Fittings Wear Limits Figure 601/55-17-01-990-801 (Sheet 4 of 4)

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THE TOTAL FREEPLAY OF ALL THE COMPONENTS OF THE HORIZONTAL STABILIZER PIVOT JOINT MUST NOT BE MORE THAN 0.034 INCHES.

<sup>4</sup> REPLACE THE PARTS THAT ARE NOT IN TOLERANCE.



## HORIZONTAL STABILIZER SKINS - CLEANING/PAINTING

## 1. General

A. This procedure has one task. This task is to apply the protective finishes to the horizontal stabilizer in-spar upper and lower skins.

#### TASK 55-18-01-370-801

# 2. Horizontal Stabilizer In-Spar Skins - Cleaning/Painting

#### Δ General

- (1) This task gives instructions to apply protective finishes to the horizontal stabilizer in-spar upper and lower skins.
- (2) The Boeing recommended protective finish for the horizontal stabilizer in-spar area is BMS10-79 Type III and BMS10-60 Type II.

#### B. References

Reference	Title
51-24-10-370-801	BMS10-79 Primer Application (P/B 701)
51-24-11-370-801	BMS10-60, Type II, Polyurethane Topcoat Application (P/B 701)

## C. Consumable Materials

Reference	Description	Specification
C00175	Primer - Urethane Compatible, Corrosion	BMS10-79 Type III
	Resistant (Less Than 1% Aromatic Amines)	
C50075	Coating - Protective Enamel (BAC 707 Gray Color)	BMS10-60 Type II

## D. Location Zones

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

## E. Prepare for the Cleaning/Painting

SUBTASK 55-18-01-040-001

- (1) Move the FLT CONTROL HYD POWER switches, on the pilot's overhead panel, that follow to SHUT OFF.
  - (a) TAIL, L
  - (b) TAIL, C
  - (c) TAIL, R
  - (d) Make sure that the amber VALVE CLOSED light illuminates for each switch.

# F. LRU Cleaning/Painting

SUBTASK 55-18-01-370-001

(1) Apply the BMS10-79 Type III primer, C00175 (BMS10-79 Primer Application, TASK 51-24-10-370-801).

SUBTASK 55-18-01-370-002

(2) Apply the BMS10-60 Type II coating, C50075 (BMS10-60, Type II, Polyurethane Topcoat Application, TASK 51-24-11-370-801).

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G. Put the Airplane Back to Its Usual Condition

SUBTASK 55-18-01-440-001

- (1) Make the horizontal stabilizers operable, do the steps that follow.
  - (a) Move the FLT CONTROL HYD VALVE POWER switches, on the pilot's overhead panel, that follow to NORM.
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R

----- END OF TASK -----

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## **ELEVATOR CONDUCTING STRIP - REPAIRS**

# 1. General

- A. This section contains one task:
  - (1) The repair of a static discharger conducting strip at the elevator.
- B. The repair of the conducting strip is as follows:
  - (1) Remove the static dischargers,
  - (2) Replacement or splice repair of the conductive strip,
  - (3) Trim damaged segments,
  - (4) Clean the new conducting strip,
  - (5) Bond the new conducting to the elevator,
  - (6) Install the static dischargers,
  - (7) Apply a smooth finish to the conducting strip.
- C. This procedure gives instructions to repair the items as follows:
  - (1) The aluminum conducting strip found on the elevator trailing edge below the static dischargers.
    - (a) You must replace or splice repair the conducting strip if more than 25% of the crossectional area of the strip is missing.
  - (2) The static discharger attaches to the elevator.
    - (a) Static dischargers also attach to the conducting strip. The conducting strip is bonded with adhesive to the elevator surface. Then the conducting strip is electrically bonded to the elevator grounding strap.
    - (b) If the electrical bond of the ground strap to the conducting strip becomes weak, these conditions will follow:
      - 1) The static dischargers to the elevator can become electrically isolated.
      - 2) The lightning protection of the elevator structure will be diminished.
      - 3) The static dischargers will not operate.
    - (c) If you find these conditions, you must repair the electrical bond of the ground strap.

# TASK 55-20-03-300-801

# 2. Repair the Conducting Strip

Figure 801

### A. References

Reference	Title	
20-41-00-760-801	Electrical Bonding (P/B 201)	
23-61-01-400-801	Static Discharger Installation (P/B 201)	
SRM 51-70-04	Structural Repair Manual	
SRM 51-70-10-2	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.

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Reference	Description
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550).
	Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17

## C. Consumable Materials

Reference	Description	Specification
A01076	Adhesive - Synthetic Rubber	BAC5010 Type 93 (BMS5-95 Class B)
B00102	Abrasive - Aluminum Oxide Coated Cloth	
B01000	Solvent - General Cleaning Of Metal	
C00033	Coating - 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
C50220	Coating - Sol-Gel (Solution Gelation) Coating for Structural Metal Bonding	BMS5-162
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

### D. Location Zones

Zone	Area
336	Left Elevator
346	Right Elevator

# E. Remove the conducting strip

SUBTASK 55-20-03-020-001

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

SUBTASK 55-20-03-010-001

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

SUBTASK 55-20-03-350-001

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



DO NOT APPLY PRESSURE TO THE SURFACE OF THE ELEVATOR. THIS CAN CAUSE DAMAGE TO THE COMPOSITE MATERIAL.

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

# F. Install the Conducting Strip

SUBTASK 55-20-03-350-002

- (1) Make a new conducting strip from 6061-T4 bare sheet aluminum.
  - (a) Use the remaining conducting strip found above the static dischargers locations as a template.

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- (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 attach holes in the remaining strips.

#### SUBTASK 55-20-03-110-001

(2) Before installation, prepare the new conducting strip:



DO NOT GET THE SOLVENT IN YOUR MOUTH, EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM IT. PUT ON GOGGLES, AND GLOVES WHEN YOU USE IT. KEEP IT AWAY FROM SPARKS, FLAMES, AND HEAT. IT IS POISONOUS AND FLAMMABLE. THE SOLVENT CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (a) Use a Series 80 solvent, B01000 to clean the conducting strip.
- (b) Dip the conducting strip in coating, C00851.
- (c) Flush the conducting strip with clean water.
- (d) Dry the strip with a cotton wiper, G00034.
- (e) Apply primer, C00175.
- (f) For the side that you bond, rub smooth with aluminum oxide abrasive cloth, B00102 (240 grit or finer) on that side.
- (g) Use a cotton wiper, G00034 to wipe that side clean.

#### SUBTASK 55-20-03-420-001

(3) Install the conducting strip:



DO NOT GET THE SOLVENT IN YOUR MOUTH, EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM IT. PUT ON GOGGLES, AND GLOVES WHEN YOU USE IT. KEEP IT AWAY FROM SPARKS, FLAMES, AND HEAT. IT IS POISONOUS AND FLAMMABLE. THE SOLVENT CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (a) Apply Series 80 solvent, B01000 to the area where you removed the conducting strip.
- (b) Also clean the areas of the remaining conducting 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 one of the procedures that follow to prepare the conductive strip and the repair area for bonding (SRM 51-70-10-2):
  - 1) Phosphoric Acid Containment System (PACS) procedure.
  - 2) BMS5-162, sol-gel coating, C50220 surface treatment procedure for structural metal bonding.
- (e) Apply a thin layer of adhesive, A01076 to the trailing edge of the elevator and to the conducting 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.

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(g) Remove the unwanted adhesive with a cotton wiper, G00034 lightly moist with a Series 80 solvent, B01000.

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 55-20-03-400-001

- (4) To complete the static discharger installation, you must obey Static Discharger Installation, TASK 23-61-01-400-801 and the instructions that follow:
  - (a) Apply sealant if it is necessary to fill the space where the new conducting strip makes an overlap with the remaining strip.
  - (b) Use the intrinsically safe approved bonding meter, COM-1550 to make sure that the resistance between the discharger base and the conducting strip is 0.1 ohm, Electrical Bonding, TASK 20-41-00-760-801.
  - (c) Measure the resistance between the tip and the base of the static dischargers, do this task: Static Discharger Installation, TASK 23-61-01-400-801.

# G. Conducting Strip Finish

SUBTASK 55-20-03-370-001

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

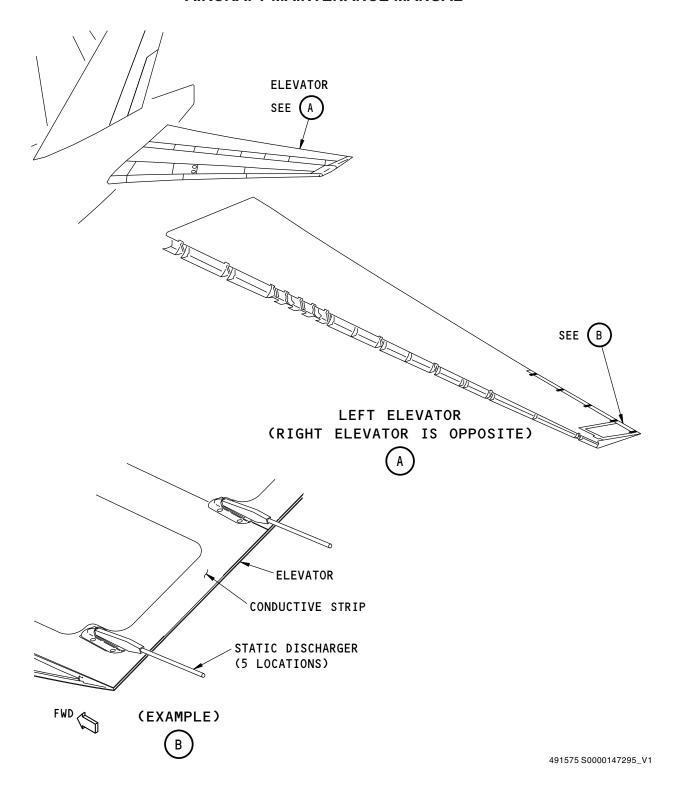
SUBTASK 55-20-03-370-002

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

----- END OF TASK -----

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Elevator Conducting Strip Repair Figure 801/55-20-03-990-801

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## **ELEVATOR HINGE FITTINGS - REMOVAL/INSTALLATION**

# 1. General

- A. This procedure has these tasks:
  - (1) Removal of the elevator hinge fittings
  - (2) Installation of the elevator hinge fittings.

### TASK 55-27-01-000-801

# 2. Elevator Hinge Fitting Removal

(Figure 401)

## A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard (P/B 201)
27-31-10-000-801	Elevator - Removal (P/B 401)
29-11-00-860-807	Main Hydraulic System and the Reservoir Depressurization (P/B 201)
55-16-02-000-801	Horizontal Stabilizer Fixed Trailing Edge Seal Removal (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
SPL-11197	Lock, Elevator Power Control Unit
	Part #: J27028-20 Supplier: 81205
STD-1177	Harness - Body

## C. Location Zones

Zone	Area
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge
345	Right Horizontal Stabilizer - Rear Spar to Trailing Edge

## D. Prepare for the Removal

SUBTASK 55-27-01-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO OBEY CAN CAUSE INJURY OR DAMAGE.

(1) Attach a safety body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### SUBTASK 55-27-01-010-001

(2) If you will remove all of the elevator hinge fittings [4], do this task to remove the elevator assembly [2] do this task: Elevator - Removal, TASK 27-31-10-000-801.

NOTE: It is not necessary to remove the elevator hinge fittings to remove the elevator assembly.

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#### SUBTASK 55-27-01-860-001

(3) If you will not remove the elevator assembly [2], do these steps:



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (a) Prevent all possible operation of the horizontal stabilizer [3] and the elevator assembly [2] as follows:
  - 1) Make sure the PRIMARY FLIGHT COMPUTER switch (on the overhead panel, P5) is in the AUTO position.
  - 2) Move and hold the Captain's or the First Officer's control column full aft to put the elevators in the up position.
  - 3) Open these circuit breakers and install safety tags:

# Left Power Management Panel, P110

Row	<u>Col</u>	Number	<u>Name</u>
K	27	C27609	ELEV PCU RIB(BLK)/ROB(BYP)

## Power Supply Assembly Center, M24301

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	7	CBA7-C	ELEV PCU

# Power Supply Assembly Left, M24101

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	7	CBA7-L	<b>ELEV PCU</b>

# Power Supply Assembly Right, M24201

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	7	CBA7-R	<b>ELEV PCU</b>

- 4) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
  - a) TAIL, L
  - b) TAIL, C
  - c) TAIL, R
- Depressurize the hydraulic system and reservoir. To depressurize them, do this task: Main Hydraulic System and the Reservoir Depressurization, TASK 29-11-00-860-807.

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- 6) Operate the control column several times to remove the remaining hydraulic pressure.
- 7) Release the control column.
- 8) Make sure that there is no elevator movement.
- 9) Install elevator power control unit lock, SPL-11197 on the elevator actuators to prevent all elevator movement.
- (b) Remove the trailing edge seal that is above the applicable elevator hinge fitting [4], do this task: Horizontal Stabilizer Fixed Trailing Edge Seal Removal, TASK 55-16-02-000-801.

#### E. Removal

#### SUBTASK 55-27-01-020-001

- (1) If you did not remove the elevator assembly [2], do these steps to remove the elevator hinge fitting [4]:
  - (a) Remove the sealant from the washer [7] and washer [8].
  - (b) Do the applicable steps in, do this task: Elevator Removal, TASK 27-31-10-000-801 to remove the elevator hinge bolt [6] from the applicable hinge fitting [4].
  - (c) Remove the nut [9], washer [8], bolt [6], and washer [7], from the elevator hinge fitting [4].
  - (d) Remove the bolts [11], nuts [12], washer [10] and washer [13] from the hinge rib [5].
  - (e) Remove the elevator hinge fitting [4].

#### SUBTASK 55-27-01-020-002

- (2) If you removed the elevator assembly [2], do these steps to remove the elevator hinge fitting [4]:
  - (a) Remove the bolts [11], nuts [12], washer [10], and washer [13] from the hinge rib [5].
  - (b) Remove the elevator hinge fitting [4].

	<b>END</b>	OF TA	ASK —	
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### TASK 55-27-01-400-801

## 3. Elevator Hinge Fitting Installation

(Figure 401)

### A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard (P/B 201)
27-31-00-700-801	Elevator Power Control Unit Test (P/B 501)
27-31-10-400-801	Elevator - Installation (P/B 401)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-807	Main Hydraulic System and the Reservoir Depressurization (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.

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Reference	Description	
SPL-11197	Lock, Elevator Power Control Unit	
	Part #: J27028-20 Supplier: 81205	
STD-1177	Harness - Body	

## C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	
C00032	Coating - Protective Enamel, General Use	BMS10-60 Type I
C00175	Primer - Urethane Compatible, Corrosion	BMS10-79 Type III
	Resistant (Less Than 1% Aromatic Amines)	

# D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Elevator assembly	27-31-10-02-315	ARO ALL
		27-31-10-02-320	ARO ALL

## E. Location Zones

Zone	Area
335	Left Horizontal Stabilizer - Rear Spar to Trailing Edge
345	Right Horizontal Stabilizer - Rear Spar to Trailing Edge

## F. Installation

#### SUBTASK 55-27-01-420-001

- (1) Install the elevator hinge fitting [4] that you removed, as follows:
  - (a) Put the elevator hinge fitting [4] in its correct position at the end of the hinge rib [5].
  - (b) For hinges Number 8 and 9, install bolts [11], nuts [12], washer [13], and 2 washers [10] at the hinge rib [5].
  - (c) For hinges Number 6, 10, 12, 14, 16, and 19, install bolts [11], nuts [12], washer [13] and washer [10] at the hinge rib [5].
  - (d) Make sure the clearance between the hinge fitting [4] and the hinge rib [5] inboard bushing is 0.005 in. (0.127 mm) minimum.
  - (e) Do the applicable steps in, do this task: Elevator Installation, TASK 27-31-10-400-801 to install the elevator hinge bolt [6] in the applicable hinge fitting [4].
  - (f) Install the washer [7], bolt [6], washer [8], and nut [9] to attach the elevator hinge fitting [4] to the elevator assembly [2].
  - (g) Tighten the bolts [6] to the torque values specified in Elevator Installation, TASK 27-31-10-400-801.

### SUBTASK 55-27-01-910-001

- (2) Apply a sealant, A00247 to the assembly, as follows:
  - (a) Apply a fillet seal to washer [7] and washer [8].
  - (b) Paint the fillet seals with primer, C00175 and allow it to dry.
  - (c) Paint the fillet seals with enamel coating, C00032.

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G. Put the airplane back in its usual condition.

SUBTASK 55-27-01-410-001

(1) If you removed the elevator assembly [2], do this task to install the elevator assembly [2], do this task: Elevator - Installation, TASK 27-31-10-400-801.

#### SUBTASK 55-27-01-420-002

- (2) If you did not remove the elevator assembly [2], do these steps:
  - (a) Make sure that these circuit breakers are open and have safety tags:

# Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	27	C27609	ELEV PCU RIB(BLK)/ROB(BYP)

# Power Supply Assembly Center, M24301

Row	Col	Number	<u>Name</u>
Α	7	CBA7-C	<b>ELEV PCU</b>

# Power Supply Assembly Left, M24101

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	7	CBA7-L	<b>ELEV PCU</b>

# Power Supply Assembly Right, M24201

Row	Col	Number	<u>Name</u>
Α	7	CBA7-R	ELEV PCU

- (b) Make sure the hydraulic pressure is removed. To remove it, do this task: Main Hydraulic System and the Reservoir Depressurization, TASK 29-11-00-860-807.
- (c) Remove the elevator power control unit lock, SPL-11197 from the elevator actuators.

NOTE: If the safety locks are caught because the elevator has moved down, move the elevator back up to let you remove the elevator power control unit lock, SPL-11197.

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

# Left Power Management Panel, P110

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	27	C27609	ELEV PCU RIB(BLK)/ROB(BYP)

# Power Supply Assembly Center, M24301

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	7	CBA7-C	<b>ELEV PCU</b>

# Power Supply Assembly Left, M24101

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	7	CBA7-L	<b>ELEV PCU</b>

## Power Supply Assembly Right, M24201

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
Α	7	CBA7-R	<b>ELEV PCU</b>

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- (e) Do this task to apply hydraulic power, do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
- (f) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R.
- (g) Do this task: Elevator Power Control Unit Test, TASK 27-31-00-700-801.

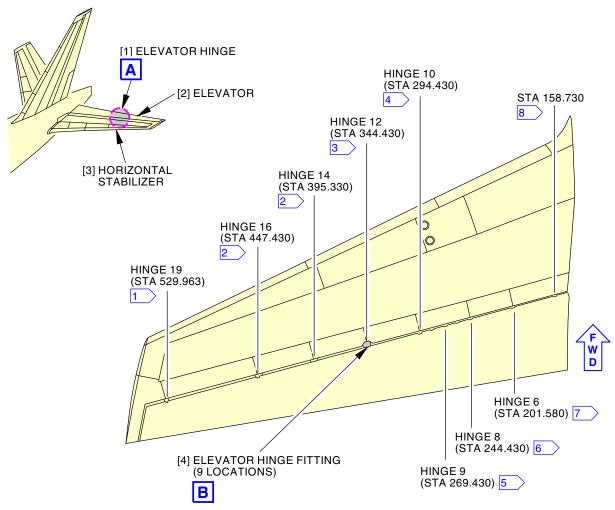
#### SUBTASK 55-27-01-940-002

(3) Remove the safety body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.



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# LEFT ELEVATOR HINGES (RIGHT ELEVATOR HINGES ARE OPPOSITE)



- TORQUE NUTS TO 200-225 INCH-POUNDS (22.6-25.4 Nm)
- TORQUE NUTS TO 315-350 INCH-POUNDS (35.6-39.5 Nm)
- TORQUE NUTS TO 205-225 INCH-POUNDS (23.2-25.4 Nm)
- TORQUE NUTS TO 385-425 INCH-POUNDS (43.5-48.0 Nm)
- 5 TORQUE NUTS TO 655-725 INCH-POUNDS (74.0-81.9 Nm)
- 6 TORQUE NUTS TO 690-725 INCH-POUNDS (77.9-81.9 Nm)
- 7 TORQUE NUTS TO 385-425 INCH-POUNDS (43.5-48.0 Nm)
- TORQUE NUTS TO 405-425 INCH-POUNDS(45.8-48.0 Nm)

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Horizontal Stabilizer Elevator Installation Figure 401/55-27-01-990-801 (Sheet 1 of 3)

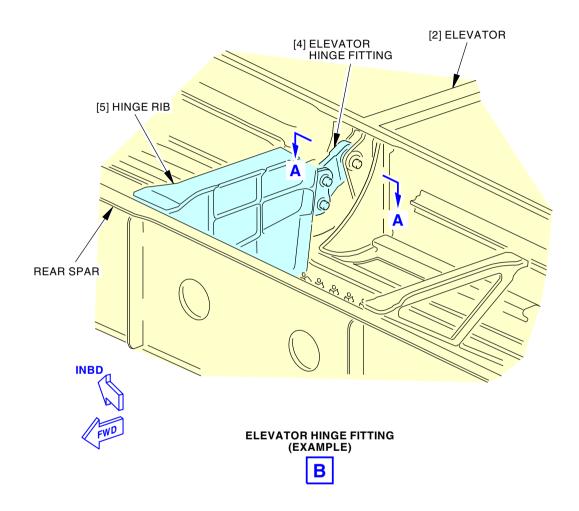
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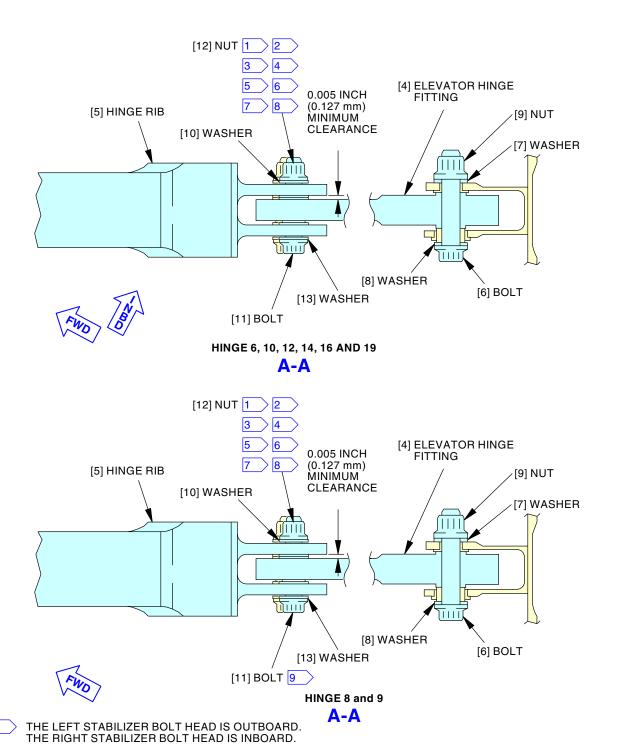
Horizontal Stabilizer Elevator Installation Figure 401/55-27-01-990-801 (Sheet 2 of 3)

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Horizontal Stabilizer Elevator Installation Figure 401/55-27-01-990-801 (Sheet 3 of 3)

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## **VERTICAL STABILIZER ATTACH BOLTS - REMOVAL/INSTALLATION**

# 1. General

- A. This procedure has two tasks:.
  - (1) Removal of the vertical attach bolt.
  - (2) Installation of the vertical attach bolt.

#### TASK 55-30-03-000-801

## 2. Vertical Stabilizer Attach Bolt - Removal

(Figure 401)

## A. General

(1) This task includes the steps to remove the vertical stabilizer attach bolts.

#### B. References

Reference	Title
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

## C. 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-2011	Ladder Equipment - Vertical Fin and Empennage Access
	Part #: J53001-1 Supplier: 81205
SPL-13904	Torque Equipment - Vertical Fin Bolts
	Part #: J55006-114 Supplier: 81205
STD-1177	Harness - Body

## D. Location Zones

Zone	Area
311	Area Aft of Bulkhead, Left
312	Area Aft of Bulkhead, Right
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right
322	Vertical Stabilizer - Auxiliary Spar to Front Spar
323	Vertical Stabilizer - Front Spar to Rear Spar
324	Vertical Stabilizer - Rear Spar to Trailing Edge

## E. Prepare for the Removal

SUBTASK 55-30-03-940-005



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.

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# (WARNING PRECEDES)



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.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WITHOUT HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. THE MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the horizontal stabilizer and rudder as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO OBEY CAN CAUSE INJURY OR DAMAGE.

(2) Attach a body harness, STD-1177.

SUBTASK 55-30-03-940-006

(3) If necessary, install a maintenance stand and/or ladder equipment, SPL-2011.

SUBTASK 55-30-03-940-007



MAKE SURE THAT YOU PUT PROTECTION ON THE PRESSURE BULKHEAD AND HORIZONTAL STABILIZER AREA WHILE YOU DO MAINTENANCE WORK. IF YOU DO NOT USE PROTECTION, DAMAGE TO THE AIRCRAFT CAN OCCUR.

(4) Install a protective cover or equivalent in the maintenance area.

# F. Vertical Stabilizer Attach Bolt Removal

SUBTASK 55-30-03-000-002

- (1) Use the vertical fin bolt torque equipment, SPL-13904 to remove the bolt [1] and barrel nut [3].
  - (a) Remove the washer [2], barrel nut [3], and bolt [1].

NOTE: Two adjacent bolts should not be removed at the same time. Additionally, no more than four bolts from either side of the fin should be removed at the same time.

----- END OF TASK -----

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## TASK 55-30-03-400-801

# 3. Vertical Stabilizer Attach Bolt - Installation

(Figure 401)

#### A. General

(1) This task includes the steps to install the vertical stabilizer attach bolts.

## B. References

Reference	Title
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)

# C. 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-2011	Ladder Equipment - Vertical Fin and Empennage Access
	Part #: J53001-1 Supplier: 81205
SPL-13904	Torque Equipment - Vertical Fin Bolts
	Part #: J55006-114 Supplier: 81205
STD-1013	Wrench - Torque, 0 to 1200 in-lbs (0 to 135.6 N·m)
STD-1177	Harness - Body

## D. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II

# E. Location Zones

Zone	Area
311	Area Aft of Bulkhead, Left
312	Area Aft of Bulkhead, Right
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right
322	Vertical Stabilizer - Auxiliary Spar to Front Spar
323	Vertical Stabilizer - Front Spar to Rear Spar
324	Vertical Stabilizer - Rear Spar to Trailing Edge

# F. Access Panels

Number	Name/Location
311AZ	Vertical Stabilizer Access Door
311BL	Service Access Door

# G. Vertical Stabilizer Attach Bolt Installation

SUBTASK 55-30-03-400-003

(1) Install the bolt [1] and barrel nut [3] as shown in the Figure 401:

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# Table 401/55-30-03-993-807 Run-On Torque and Torque Installation Limits

Point	Bolt Identification	Run-On Torque in-lbs (N-m)	Torque Installation in-lbs (N-m)
7, 8	BACB30US16	90 in-lb (10 N·m) - 800 in-lb (90 N·m)	9300 ±500 in-lb (1051 ±57 N·m)
5, 6, 13, 14, 15, 16	BACB30US18	117 in-lb (13 N·m) - 900 in-lb (102 N·m)	12,200 ±500 in-lb (1378 ±57 N·m)
3, 4, 11, 12	BACB30US20	143 in-lb (16 N·m) - 1000 in-lb (113 N·m)	15,500 ±500 in-lb (1751 ±57 N·m)
1, 2, 9, 10	BACB30US22	165 in-lb (19 N·m) - 1100 in-lb (124 N·m)	21,500 ±500 in-lb (2429 ±57 N·m)

- (a) Apply the sealant, A00247 to the barrel nut [3] hole, threads, shank, washer, and under the bolt head.
- (b) Install the barrel nut [3].
- (c) Install the washer [2] on the bolt [1].
- (d) If necessary for grip length adjustment, install another washer.
- (e) Install the applicable bolt [1] in the correct bolt location as follows:
  - 1) Make sure to identify the bolt type and location as shown in Figure 401.
  - 2) Make sure that the run-on torque values are met during installation of the bolt [1] in the barrel nut [3] using the procedure that follow:
    - NOTE: Run-on torque measurement ensures the correct function of the nut self-locking feature. For the run-on torque, the torque values must be from the run-on torque column of the Table 401.
    - a) Turn the bolt [1] until the bolt chamfer fully exits the top end of the barrel nut [3].
    - b) Monitor the torque required to turn the bolt [1] while the head is unseated.
    - c) If the torque required to turn the bolt [1] is not within the run-on torque limits, replace the applicable barrel nut [3].
    - d) If you replace the barrel nut [3], do a check of the self-locking torque again.
  - Apply the final installation torque value for the bolt type identification as shown in Table 401 with the vertical fin bolt torque equipment, SPL-13904 and torque wrench, STD-1013 or equivalent.
    - <u>NOTE</u>: For the installation torque, the torque values must be from the torque installation column of the table.
    - a) Do a check of the final torque on the bolt [1].
      - NOTE: A check of the final torque on all 16 bolts is required. It is recommended that you keep a record of the final torque values.
- (f) Apply the sealant, A02315 in the barrel nut holes and fill the entire hole.
- (g) Apply finish as necessary to the bare aluminum to match adjacent structure.

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# H. Put the Airplane Back to Its Usual Condition

#### SUBTASK 55-30-03-400-004

(1) Make sure that all attach bolts are installed.

#### SUBTASK 55-30-03-860-005

(2) Make sure that these access panels are closed:

<u>Number</u>	Name/Location		
311AZ	Vertical Stabilizer Access Door		
311BL	Service Access Door		

#### SUBTASK 55-30-03-860-006

- (3) Remove the body harness, STD-1177.
- (4) Remove any protective covers or equivalent from the maintenance area.
- (5) If installed, remove the maintenance stand and/or ladder equipment, SPL-2011.

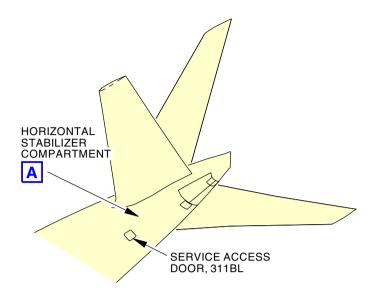
#### SUBTASK 55-30-03-860-007

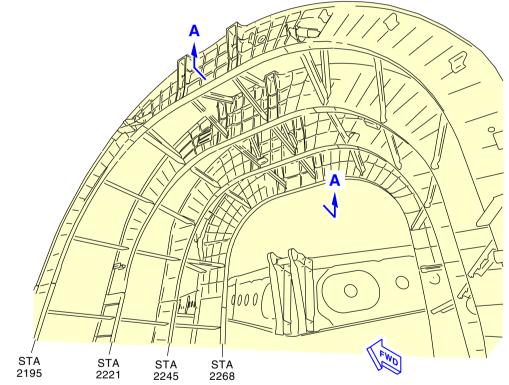
- (6) Make the horizontal stabilizer and rudder operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure that the amber VALVE CLOSED lights go off for each switch.

------ END OF TASK ------

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HORIZONTAL STABILIZER COMPARTMENT



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Vertical Stabilizer Attach Bolt Installation Figure 401/55-30-03-990-802 (Sheet 1 of 2)

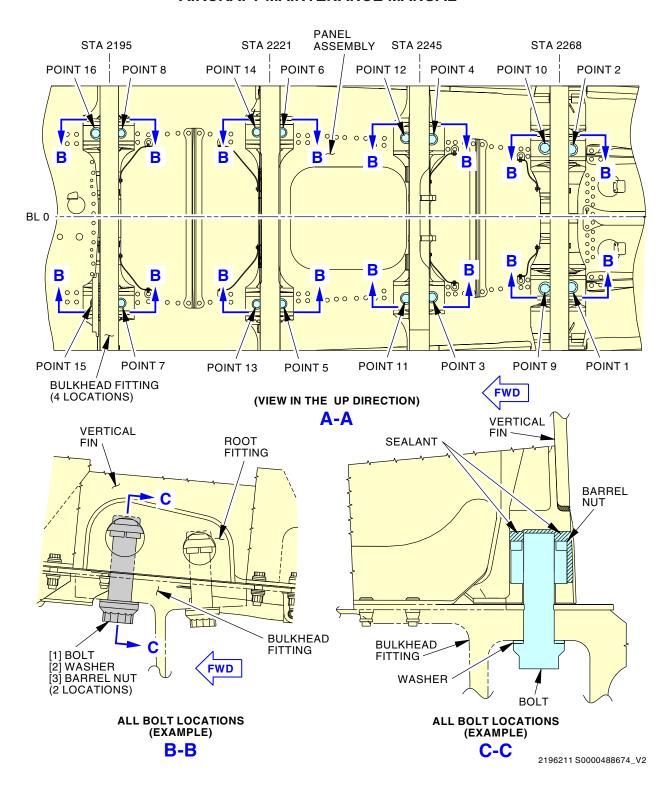
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Vertical Stabilizer Attach Bolt Installation Figure 401/55-30-03-990-802 (Sheet 2 of 2)

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# **VERTICAL STABILIZER ATTACH BOLTS - INSPECTION/CHECK**

# 1. General

A. The torque check of the vertical stabilizer attach bolts.

## TASK 55-30-03-200-801

# 2. Vertical Stabilizer Attach Bolt Torque Check

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

# A. General

(1) This task provides instructions to perform a torque check of the vertical stabilizer attach bolts.

# B. References

Reference	Title
20-20-04-200-801	Penetrant Inspection (P/B 601)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
55-30-03 P/B 401	VERTICAL STABILIZER ATTACH BOLTS -
	REMOVAL/INSTALLATION
55-30-03-000-801	Vertical Stabilizer Attach Bolt - Removal (P/B 401)
55-30-03-400-801	Vertical Stabilizer Attach Bolt - Installation (P/B 401)

# C. 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-2011	Ladder Equipment - Vertical Fin and Empennage Access
	Part #: J53001-1 Supplier: 81205
SPL-13904	Torque Equipment - Vertical Fin Bolts
	Part #: J55006-114 Supplier: 81205
SPL-15514	Maintenance Platform Equipment, Pressure Bulkhead Access
	Part #: J53003-236 Supplier: 81205
STD-1013	Wrench - Torque, 0 to 1200 in-lbs (0 to 135.6 N·m)
STD-1177	Harness - Body

## D. Location Zones

Zone	Area
311	Area Aft of Bulkhead, Left
312	Area Aft of Bulkhead, Right
313	Stabilizer Torsion Box Compartment, Left
314	Stabilizer Torsion Box Compartment, Right
322	Vertical Stabilizer - Auxiliary Spar to Front Spar
323	Vertical Stabilizer - Front Spar to Rear Spar
324	Vertical Stabilizer - Rear Spar to Trailing Edge

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### E. Access Panels

Number	Name/Location
311AZ	Vertical Stabilizer Access Door
311BL	Service Access Door

# F. Prepare for the Torque Check

SUBTASK 55-30-03-940-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE HORIZONTAL STABILIZER WHEN YOU WORK ON OR NEAR IT. THE HORIZONTAL STABILIZER MOVES QUICKLY AND WITH FORCE. IF THE STABILIZER MOVES WHEN PERSONS ARE IN THE TORSION BOX COMPARTMENT OR NEAR THE STABILIZER, YOU CAN CAUSE INJURY TO THEM.



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.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the horizontal stabilizer and rudder as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO OBEY CAN CAUSE INJURY OR DAMAGE.

(2) Attach a body harness, STD-1177.

SUBTASK 55-30-03-940-008

(3) Install the pressure bulkhead platform, SPL-15514, and/or ladder equipment, SPL-2011.

SUBTASK 55-30-03-940-003



MAKE SURE THAT YOU PUT PROTECTION ON THE PRESSURE BULKHEAD AND HORIZONTAL STABILIZER AREA WHILE YOU DO MAINTENANCE WORK. IF YOU DO NOT USE PROTECTION, DAMAGE TO THE AIRCRAFT CAN OCCUR.

(4) Install a protective cover or equivalent in the maintenance area.

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#### SUBTASK 55-30-03-211-001

- (5) Do an internal and external detailed visual inspection of the vertical fin attachment bolt and barrel nut location as shown in Figure 601.
  - (a) Get external access to the base of the vertical fin and internal access by removing access doors:

Open these access panels:

<u>Number</u>	Name/Location
311AZ	Vertical Stabilizer Access Door
311BL	Service Access Door

- (b) Visually inspect the sealant at the external surface (barrel nut bore hole) and internal surface (around the bolt head) for cracked or damaged sealant (examples: bulging, cracks, powder residue), signs of corrosion, or cracked/broken barrel nuts.
  - 1) At the barrel nut [3] locations where cracked or damaged sealant is not found, do the Attach Bolt Torque Check below.
  - At barrel nut [3] locations where cracked or damaged sealant is found, do the Bolt and Barrel Nut Inspection procedure below.
    - a) If necessary, replace the bolt [1] and barrel nut [3], do these tasks: VERTICAL STABILIZER ATTACH BOLTS - REMOVAL/INSTALLATION, PAGEBLOCK 55-30-03/401.

# G. Attach Bolt Torque Check

SUBTASK 55-30-03-200-001

(1) Do a torque check on each affected vertical fin attachment bolt as shown in Figure 601.

## Table 601/55-30-03-993-803

POINT	BOLT TYPE	Torque Check in-lbs (N-m)	
7, 8	BACB30US16	3700 ±500 in-lb (418 ±57 N⋅m)	
5, 6, 13, 14, 15, 16	BACB30US18	4900 ±500 in-lb (554 ±57 N·m)	
3, 4, 11, 12	BACB30US20	6200 ±500 in-lb (701 ±57 N·m)	
1, 2, 9, 10	BACB30US22	8600 ±500 in-lb (972 ±57 N·m)	

- (a) Apply the torque to the affected bolt [1] as follows:
  - 1) Make sure to identify the bolt type and torque check value for the specific location on the vertical attach fitting as shown in Figure 601 and Table 601
  - 2) Apply the applicable torque to the affected bolt [1] with a vertical fin bolt torque equipment, SPL-13904 and a torque wrench, STD-1013 or equivalent.
  - When you apply the torque to the bolt [1], examine if the bolt [1] turns or not.
  - 4) If you find that the bolt turns, then you must consider the bolt [1] and/or barrel nut [3] damaged.

NOTE: It is only recommended that you tell Boeing about the results if the bolt fails the torque check. Boeing recommends that you keep a record of the torque values and results that you get from the torque check. However, it is acceptable to continue the removal, inspection, and installation of the bolt and barrel nut in order to return the aircraft to service.

a) Remove and inspect the bolt [1] and barrel nut [3], do the Bolt and Barrel Nut Inspection.

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- b) If necessary, replace the bolt [1] and/or barrel nut [3], do this task: Vertical Stabilizer Attach Bolt Installation, TASK 55-30-03-400-801.
- 5) If you find that the bolt [1] does not turn and the sealant is not damaged, no additional action is necessary.

# H. Bolt and Barrel Nut Inspection

#### SUBTASK 55-30-03-000-001

(1) Remove the bolt [1] and barrel nut [3], do this task: Vertical Stabilizer Attach Bolt - Removal, TASK 55-30-03-000-801

NOTE: Removal of a bolt is required when the initial inspection or torque check finds cracked or damaged sealant (examples: bulging, cracks, powder residue), signs of corrosion, damaged bolts, bolts that turn, or cracked/broken barrel nuts.

#### SUBTASK 55-30-03-160-001

(2) Make sure that the bolt [1] and barrel nut [3] are clean, dry, and free of grease, oil, grinding compounds, rust, and any other materials.

#### SUBTASK 55-30-03-280-001

- (3) Do a detailed visual and penetrant inspection as follows:
  - (a) Do a detailed visual inspection of the bolt [1] and barrel nut [3] for damage.
  - (b) Do a penetrant inspection of the bolt [1] and barrel nut [3] for cracks. Do this procedure: Penetrant Inspection, TASK 20-20-04-200-801.
  - (c) If you find a damaged, cracked, or broken bolt [1] and/or barrel nut [3], do the following steps:

NOTE: It is recommended that you notify Boeing with the results from this inspection.

However, it is acceptable to continue the removal, inspection, and installation of the bolt and barrel nut in order to return the aircraft to service.

- 1) Replace the bolt [1] and/or barrel nut [3], do this task: Vertical Stabilizer Attach Bolt Installation, TASK 55-30-03-400-801.
- 2) If a crack is found, make sure to remove and inspect the adjacent bolt and barrel nut, do the Bolt and Barrel Nut Inspection.

NOTE: Two adjacent bolts should not be removed at the same time. If a crack is found, it is necessary to do the Bolt and Barrel Nut Inspection for the adjacent bolt and barrel nut.

### I. Put the Airplane Back to Its Usual Condition

#### SUBTASK 55-30-03-400-002

(1) Make sure that all attach bolts are installed.

### SUBTASK 55-30-03-860-004

(2) Make sure that these access panels are closed:

<u>Number</u>	Name/Location		
311AZ	Vertical Stabilizer Access Door		
311BL	Service Access Door		

### SUBTASK 55-30-03-860-001

- (3) Remove the body harness, STD-1177.
- (4) Remove any protective covers or equivalent from the maintenance area.
- (5) Remove the pressure bulkhead platform, SPL-15514, and/or ladder equipment, SPL-2011.

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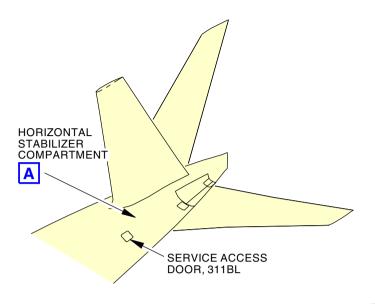
#### SUBTASK 55-30-03-860-002

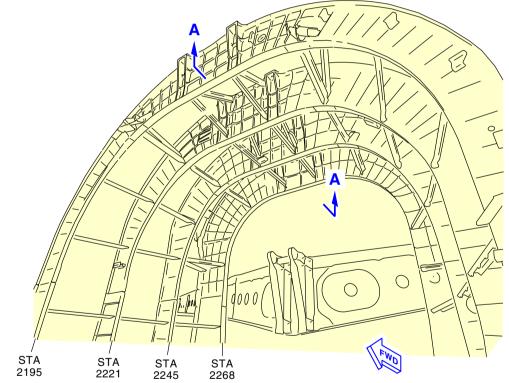
- (6) Make the horizontal stabilizer and rudder operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure that the amber VALVE CLOSED lights go off for each switch.

 <b>END</b>	OF T	ASK .	
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## HORIZONTAL STABILIZER COMPARTMENT



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Vertical Stabilizer Attach Bolt Torque Check Figure 601/55-30-03-990-801 (Sheet 1 of 2)

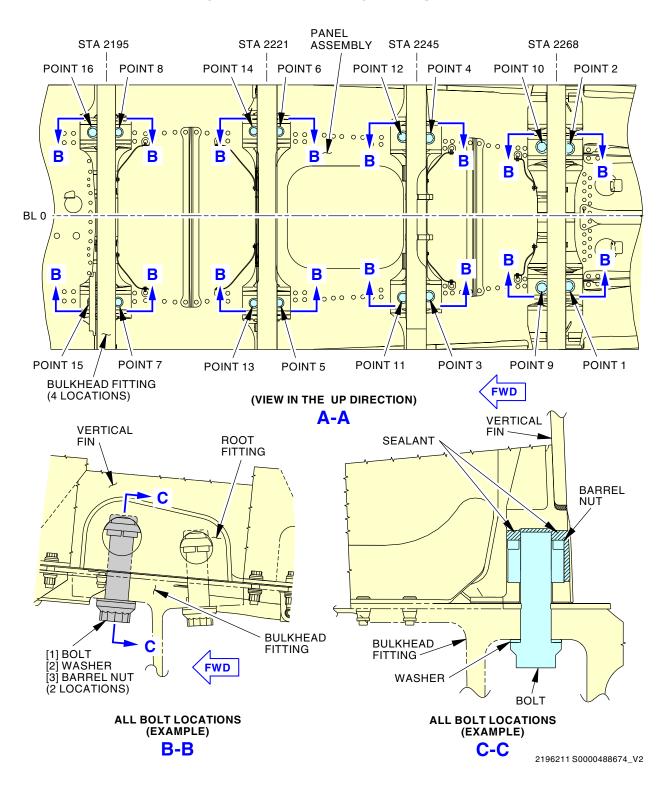
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Vertical Stabilizer Attach Bolt Torque Check Figure 601/55-30-03-990-801 (Sheet 2 of 2)

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# **VERTICAL STABILIZER TIP - REMOVAL/INSTALLATION**

## 1. General

- A. This procedure has two tasks:
  - (1) Removal of the vertical stabilizer tip
  - (2) Installation of the vertical stabilizer tip.

#### TASK 55-31-01-000-801

# 2. Vertical Stabilizer Tip Removal

(Figure 401)

## A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

## B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

## C. Location Zones

Zone	Area	
327	Vertical Stabilizer Forward Tip	

# D. Prepare for the Removal

SUBTASK 55-31-01-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE RUDDER WHEN YOU WORK ON OR NEAR IT. THE RUDDER MOVES QUICKLY AND WITH FORCE. IF THE RUDDER MOVES WHEN PERSONS ARE NEAR IT, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the rudder as follows:
  - (a) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

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SUBTASK 55-31-01-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE HORIZONTAL STABILIZER. FAILURE TO DO THIS CAN CAUSE INJURY OR DAMAGE.

(2) Attach a body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### E. Procedure

SUBTASK 55-31-01-020-001

(1) Remove the tip assembly [1] as follows:



KEEP PERSONS AWAY FROM THE AREA BELOW THE VERTICAL STABILIZER. PARTS COULD ACCIDENTALLY FALL AND CAUSE INJURY TO PERSONS.



WHEN YOU REMOVE THE TIP FAIRING [1], DO NOT RUB THE VERTICAL STABILIZER STRUCTURE OR THE ANTENNA. YOU CAN EASILY CAUSE DAMAGE TO THE STRUCTURE AND THE ANTENNA.

- (a) Remove the bolt [2] from the tip assembly [1].
- (b) Make a note of the fastener locations for electrical grounding.
  - NOTE: See Figure 401 for the bonding fastener locations.
- (c) Remove the tip assembly [1] from the vertical stabilizer.

SUBTASK 55-31-01-940-002

(2) Put a protective cover on the top of the vertical stabilizer.

----- END OF TASK -----

## TASK 55-31-01-400-801

# 3. Vertical Stabilizer Tip Installation

(Figure 401)

#### A. References

Reference	Title	
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel	
	Equipment Shock Absorbing Lanyard (P/B 201)	
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)	
51-24-02-370-801	Apply The BMS 10–21 Type III Conductive Coating to Specified External Surfaces (P/B 701)	

# B. Tools/Equipment

Reference	Description	
STD-1177	Harness - Body	

## C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	

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# (Continued)

Reference	Description	Specification
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00308	Compound - Corrosion Preventive, Petrolatum	MIL-C-11796
	Hot Application	

# D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Tip assembly	55-31-01-02-225	ARO ALL	

## E. Location Zones

Zone	Area
327	Vertical Stabilizer Forward Tip

#### F. Installation

SUBTASK 55-31-01-940-003



KEEP PERSONS AWAY FROM THE AREA BELOW THE VERTICAL STABILIZER. PARTS COULD ACCIDENTALLY FALL AND CAUSE AN INJURY TO PERSONS.

(1) Remove the cover from the top of the vertical stabilizer.

#### SUBTASK 55-31-01-420-001

- (2) Install the tip assembly [1] with the sealant, A00247 as follows:
  - (a) Apply sealant, A00247 to the area on the vertical fin shown in (Figure 401).



WHEN YOU INSTALL THE TIP FAIRING [1], DO NOT RUB THE VERTICAL STABILIZER STRUCTURE OR THE ANTENNA. YOU CAN EASILY CAUSE DAMAGE TO THE STRUCTURE OR THE ANTENNA.

- (b) Put the tip assembly [1] in its correct position on the end of the vertical stabilizer.
- (c) Install two bolt [2] on each side of the tip assembly [1] with sealant, A00247.
- (d) Use a brush to seal the threaded end of the bolt [2] and all mating surfaces in the stackup.

## SUBTASK 55-31-01-910-002

- (3) Install all the bolts [2] that are not electrically bonded as follows:
  - (a) Paint the aluminum parts of the holes with primer, C00259.
  - (b) Let the primer, C00259 dry.
  - (c) Apply corrosion preventive compound, C00308 to the bolts [2].
  - (d) Install the bolts [2] before the corrosion preventive compound, C00308 is dry.

## SUBTASK 55-31-01-910-003

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(4) Install two bolts [2] that are electrically bonded as follows:

NOTE: See Figure 401 for the bonding fastener locations.

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(a) If the countersink hole for a bonding fastener does not have a complete layer of anti-static coating in it, do this task: Apply The BMS 10–21 Type III Conductive Coating to Specified External Surfaces, TASK 51-24-02-370-801.

NOTE: The resistivity of the conductive coating after it is cured must be no more than 300,000 ohms/square.

(b) Install the bolts [2] that are electrically bonded without sealant.

#### SUBTASK 55-31-01-220-001

(5) Make sure the clearance between the tip assembly [1] and the vertical stabilizer is 0.03 to 0.15 inch.

## G. Put the airplane back in its usual condition

#### SUBTASK 55-31-01-940-004

(1) Remove the body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### SUBTASK 55-31-01-860-002

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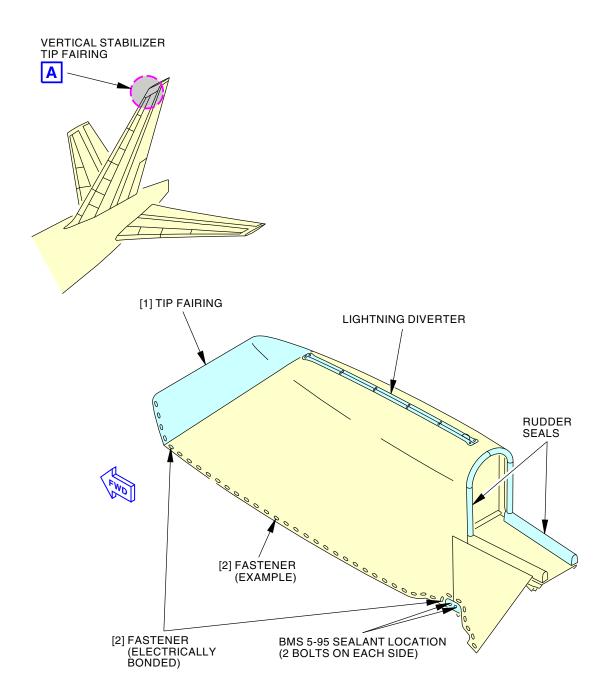
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- (2) Make the rudder operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights go off for each switch.

——— END OF TASK ———

55-31-01





## **VERTICAL STABILIZER TIP FAIRING**



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Vertical Stabilizer Tip Fairing Installation Figure 401/55-31-01-990-801

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#### **VERTICAL STABILIZER LIGHTNING DIVERTER - REMOVAL/INSTALLATION**

## 1. General

- A. This procedure has these tasks for the vertical stabilizer tip:
  - (1) Removal of the lightning diverter
  - (2) Installation of the lightning diverter.

#### TASK 55-31-02-000-801

# 2. Vertical Stabilizer Lightning Diverter Strip Removal

(Figure 401)

## A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

## B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

#### C. Location Zones

Zone	Area
327	Vertical Stabilizer Forward Tip

# D. Prepare for the Removal

SUBTASK 55-31-02-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE RUDDER WHEN YOU WORK ON OR NEAR IT. THE RUDDER MOVES QUICKLY AND WITH FORCE. IF THE RUDDER MOVES WHEN PERSONS ARE NEAR THE RUDDER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the rudder as follows:
  - (a) Do this task to remove hydraulic power: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

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SUBTASK 55-31-02-940-001



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE VERTICAL STABILIZER. FAILURE TO OBEY CAN CAUSE INJURY OR DAMAGE.

(2) Attach a safety body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

# E. Removal

SUBTASK 55-31-02-020-001



BE CAREFUL WHEN YOU REMOVE THE LIGHTNING DIVERTER. YOU CAN EASILY CAUSE DAMAGE TO THE SURFACE FINISH.

(1) Remove the bolt [3], and bolt [4] that hold the lightning diverter assembly [2] to the tip assembly [1].

SUBTASK 55-31-02-020-002

(2) Remove the lightning diverter assembly [2].

----- END OF TASK -----

## TASK 55-31-02-400-801

3. Vertical Stabilizer Lightning Diverter Strip Installation

(Figure 401)

#### A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel
	Equipment Shock Absorbing Lanyard (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
55-31-02-000-802	Vertical Stabilizer Lightning Diverter Strip Inspection (P/B 601)

## B. Tools/Equipment

Reference	Description
STD-1177	Harness - Body

## C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796

# D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Diverter assembly	55-31-01-02-330	ARO ALL

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## E. Location Zones

Zone	Area
327	Vertical Stabilizer Forward Tip

## F. Procedure

#### SUBTASK 55-31-02-160-001

- (1) Prepare the area where the lightning diverter assembly [2] and the vertical stabilizer will touch as follows:
  - (a) Remove all unwanted sealant from the area.
  - (b) Clean the area with an applicable solvent.

#### SUBTASK 55-31-02-420-001

(2) Attach the lightning diverter assembly [2] as follows:



BE CAREFUL WHEN YOU INSTALL THE LIGHTNING DIVERTER [2]. DO NOT RUB THE VERTICAL STABILIZER STRUCTURE OR ANTENNA. CORROSION OR AN ANTENNA DEFECT CAN OCCUR IF YOU ARE NOT CAREFUL.

- (a) Put the lightning diverter assembly [2] in position on the tip assembly [1].
- (b) Install the aft two bolt [4] in the aluminum structure as follows:
  - 1) Paint the aluminum part of each hole with primer, C00259.
  - 2) Let the primer, C00259 dry.
  - 3) Apply corrosion preventive corrosion preventive compound, C00308 to the bolt [4].
  - 4) Install the bolt [4] before the corrosive preventive corrosion preventive compound, C00308 is dry.
- (c) Install the remaining bolt [3] without primer or sealant.

#### SUBTASK 55-31-02-760-001

(3) Do this task: Vertical Stabilizer Lightning Diverter Strip Inspection, TASK 55-31-02-000-802.

## SUBTASK 55-31-02-910-001

(4) Apply finish to all bare areas.

#### SUBTASK 55-31-02-910-002

(5) Make a fillet seal around the lightning diverter assembly [2] with sealant, A00247.

# G. Put the airplane back in its usual condition:

# SUBTASK 55-31-02-940-002

(1) Remove the safety body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801

#### SUBTASK 55-31-02-860-002

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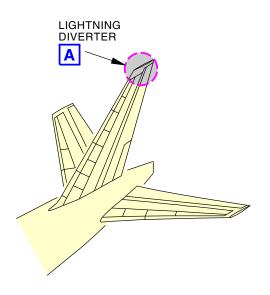
- (2) Make the rudder operable as follows:
  - (a) Do this task to apply hydraulic power, do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - TAIL, R.

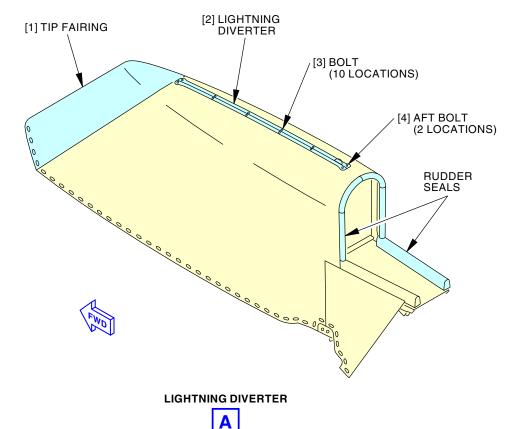


(c)	Make sure the amber VALVE CLOSED lights go off for each switch.
	END OF TASK

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Lightning Diverter Installation Figure 401/55-31-02-990-801

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#### VERTICAL STABILIZER LIGHTNING DIVERTER - INSPECTION/CHECK

### 1. General

A. This procedure has a task for inspecting the lightning diverters on the vertical stabilizer tip:

#### TASK 55-31-02-000-802

# 2. Vertical Stabilizer Lightning Diverter Strip Inspection

## A. References

Reference	Title	
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel	
	Equipment Shock Absorbing Lanyard (P/B 201)	
29-11-00-860-808	Main Hydraulic System 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
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550).
STD-1177	Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17 Harness - Body

## C. Location Zones

Zone	Area
327	Vertical Stabilizer Forward Tip

## D. Prepare for the Inspection

SUBTASK 55-31-02-860-003



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE RUDDER WHEN YOU WORK ON OR NEAR IT. THE RUDDER MOVES QUICKLY AND WITH FORCE. IF THE RUDDER MOVES WHEN PERSONS ARE NEAR THE RUDDER, YOU CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the rudder as follows:
  - (a) Do this task to remove hydraulic power: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

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- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R.
- (c) Make sure that the amber VALVE CLOSED lights come on for each switch.

#### SUBTASK 55-31-02-940-003



ATTACH A SAFETY HARNESS WHEN YOU DO WORK ON TOP OF THE VERTICAL STABILIZER. FAILURE TO OBEY CAN CAUSE INJURY OR DAMAGE.

(2) Do this task to attach a safety body harness, STD-1177: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.

## E. Procedure

SUBTASK 55-31-02-210-001

(1) Examine the lightning diverter strips for deterioration.

NOTE: Deterioration can cause radio noise interference.

SUBTASK 55-31-02-350-001

(2) Repair the lightning diverter strips if it is possible.

SUBTASK 55-31-02-960-001

(3) Replace the lightning diverter strips if it is necessary.

SUBTASK 55-31-02-760-002

- (4) With an intrinsically safe approved bonding meter, COM-1550, make sure that the resistance between the lightning diverter assembly and the tip assembly is 0.005 ohms or less.
  - (a) If the resistance is more than 0.005 ohms, do these steps:
    - 1) Remove the lightning diverter assembly.
    - 2) Remove all sealant from the mating surfaces.
    - 3) Clean the surfaces with solvent.
    - 4) Install the lightning diverter assembly again.

——— END OF TASK ——

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## **VERTICAL STABILIZER FORWARD BOX PANELS - REMOVAL/INSTALLATION**

## 1. General

- A. This procedure has these tasks:
  - (1) Removal of the forward box panels.
  - (2) Installation of the forward box panels.
- B. This procedure includes information for the removal and installation of the forward box panels on the left hand side of the vertical stabilizer.

# TASK 55-34-01-000-801

# 2. Vertical Stabilizer Forward Box Panels Removal

#### A. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	

#### B. Location Zones

Zone	Area
322	Vertical Stabilizer - Auxiliary Spar to Front Spar

#### C. Access Panels

Number	Name/Location	
322BL	Vertical Stabilizer Forward Box Panel	
322CL	Vertical Stabilizer Forward Box Panel	
322DL	Vertical Stabilizer Forward Box Panel	
322EL	Vertical Stabilizer Forward Box Panel	
322FL	Vertical Stabilizer Forward Box Panel	
322HXL	Vertical Stabilizer Forward Box Panel	

## D. Prepare for the removal.

SUBTASK 55-34-01-860-001



REMOVE THE ELECTRICAL POWER FROM EACH HF COMMUNICATION SYSTEM, BEFORE YOU REMOVE THE FORWARD BOX PANELS. HF SIGNALS CAN CAUSE ELECTRICAL SHOCKS AND INJURY TO PERSONS.

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

## Overhead Circuit Breaker Panel, P11

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	2	C23301	L HF COMM
G	15	C23300	R HF COMM

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#### E. Removal

SUBTASK 55-34-01-980-001



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

(1) Hold the forward box panel that you will remove, (Figure 401).

SUBTASK 55-34-01-980-002

(2) Remove the sealant, A00247 that seals the panel to the vertical stabilizer structure.

SUBTASK 55-34-01-020-002

(3) Remove the bolts from the forward box panel:

SUBTASK 55-34-01-020-001

(4)

Remove the applicable forward box panels:

<u>Number</u>	Name/Location
322BL	Vertical Stabilizer Forward Box Panel
322CL	Vertical Stabilizer Forward Box Panel
322DL	Vertical Stabilizer Forward Box Panel
322EL	Vertical Stabilizer Forward Box Panel
322FL	Vertical Stabilizer Forward Box Panel
322HXL	Vertical Stabilizer Forward Box Panel

SUBTASK 55-34-01-940-001

(5) Put a protective cover on the applicable forward box panel area.

------ END OF TASK ------

#### TASK 55-34-01-400-801

3. Vertical Stabilizer Forward Box Panels Installation

(Figure 401)

#### A. References

Reference	Title
51-31-01-390-806	Aerodynamic Smoother Application (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	
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550).	
	Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17	

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# C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796 Class III
C00862	Coating - Chemical Conversion - Bonderite M-CR 600 Aero (Formerly Alodine 600)	

#### D. Location Zones

Zone	Area
322	Vertical Stabilizer - Auxiliary Spar to Front Spar

#### E. Access Panels

Name/Location
Vertical Stabilizer Forward Box Panel

## F. Procedure

SUBTASK 55-34-01-940-002

(1) Remove the protective cover from the forward box panel if it is necessary.

SUBTASK 55-34-01-410-001



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

- (2) Install the forward box panels.
  - (a) Put the applicable forward box panels in its position:

<u>Number</u>	Name/Location
322BL	Vertical Stabilizer Forward Box Panel
322CL	Vertical Stabilizer Forward Box Panel
322DL	Vertical Stabilizer Forward Box Panel
322EL	Vertical Stabilizer Forward Box Panel
322FL	Vertical Stabilizer Forward Box Panel
322HXL	Vertical Stabilizer Forward Box Panel

- (b) Install the bolts:
  - 1) Apply corrosion preventive Bonderite M-CR 600 Aero coating, C00862 to aluminum foil in each of the panel fastener countersunk holes.
  - 2) Apply compound, C00528 to the larger diameter bolts and install them wet.

NOTE: Some panels are attached with two different dimensions of bolts. Install the larger diameter bolts, 0.25 inch (6.35mm), wet with corrosion inhibiting compound. Install the smaller diameter bolts, 0.19 inch (4.83mm) dry.

3) Install the remaining smaller bolts dry.

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#### SUBTASK 55-34-01-280-001

- (3) Do a resistance check of the panel assembly with an intrinsically safe approved bonding meter, COM-1550:
  - (a) Remove a smaller diameter bolt, 0.19 in. (4.83 mm), from the panel forward edge at each of the ribs.
  - (b) Measure the resistance between the aluminum foil in the open panel countersunk hole and adjacent structure.
  - (c) Make sure that the resistance is less than 0.003 ohms.
  - (d) Install the bolts.

#### SUBTASK 55-34-01-220-002

(4) Make sure that the clearance around the forward box panel is 0.090 ±0.060 in. (2.29 ±1.53 mm).

NOTE: This clearance is correct for all forward box panels.

#### SUBTASK 55-34-01-220-003

- (5) Make sure that the misfairs are as follows:
  - (a) Streamwise 0.000 +0.000 / -0.020 in. (0.00 +0.00 / -0.51 mm).
  - (b) Spanwise 0.000 +0.000 / -0.020 in. (0.00 +0.00 / -0.51 mm).
    - For spanwise or streamwise misfairs between -0.020 in. (-0.51 mm)and -0.030 in. (-0.76 mm), make sure that the average of all dimensions is not more than -0.015 in. (-0.38 mm).

NOTE: Measure across the panel edges from corner to corner of each panel at each third fastener location (minimum), but you must include each corner. For short panels without three fasteners between each corner, a minimum of three locations are necessary to get an average.

### SUBTASK 55-34-01-210-001

- (6) Make sure that the fasteners are in the smoothness limit:
  - (a) Make sure that the bolt heads are smooth with the skin of the forward box panels 0.000 + 0.002 / -0.010 in. (0.000 + 0.051 / -0.254 mm).
  - (b) Make sure that the grommets are smooth with the skin of the forward box panels 0.000 + 0.002 / -0.010 in. (0.000 + 0.051 / -0.254 mm).

## SUBTASK 55-34-01-910-001

(7) Do this task to fill the clearances around the forward box panels with sealant, A00247: Aerodynamic Smoother Application, TASK 51-31-01-390-806

#### SUBTASK 55-34-01-440-001

(8) Close these circuit breakers:

## **Overhead Circuit Breaker Panel, P11**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	2	C23301	L HF COMM
G	15	C23300	R HF COMM

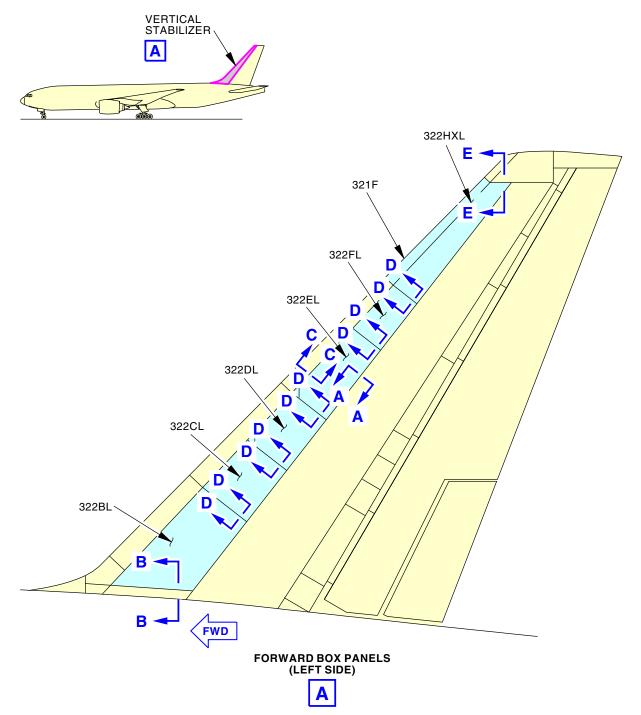
——— END OF TASK ———

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# Vertical Stabilizer Forward Box Panels Installation Figure 401/55-34-01-990-801 (Sheet 1 of 3)

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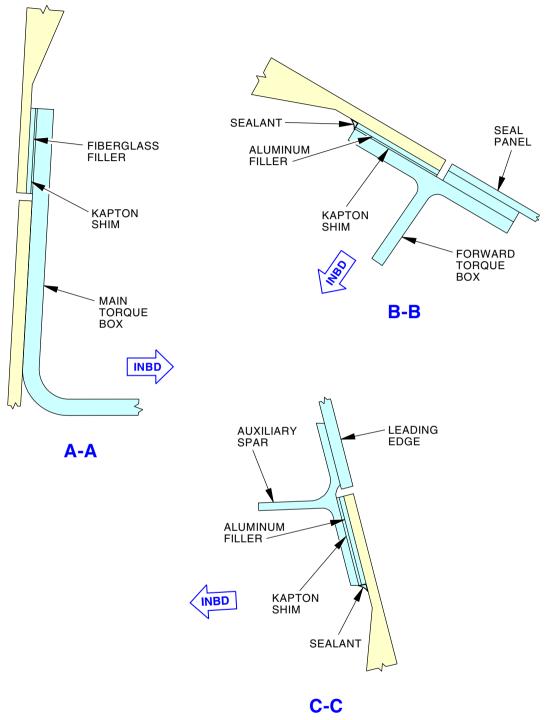
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# Vertical Stabilizer Forward Box Panels Installation Figure 401/55-34-01-990-801 (Sheet 2 of 3)

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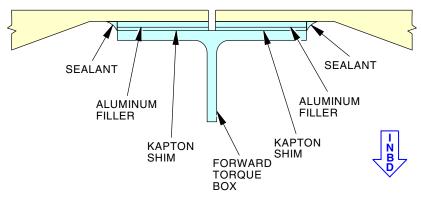
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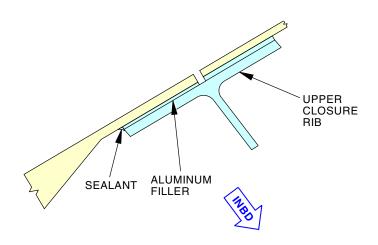
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Vertical Stabilizer Forward Box Panels Installation Figure 401/55-34-01-990-801 (Sheet 3 of 3)

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# **VERTICAL STABILIZER LEADING EDGE - REMOVAL/INSTALLATION**

## 1. General

- A. This procedure has two tasks for the vertical stabilizer:
  - (1) Removal of the leading edge panels
  - (2) Installation of the leading edge panels.
- B. You can remove or install the leading edge one section at a time.

#### TASK 55-35-01-000-801

## 2. Vertical Stabilizer Leading Edge Removal

(Figure 401)

# 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
	Part #: B20004-42 Supplier: 81205
	Opt Part #: B20004-21 Supplier: 81205

#### B. Location Zones

Zone	Area
321	Vertical Stabilizer Leading Edge

## C. Prepare for the removal.

SUBTASK 55-35-01-860-001



REMOVE THE ELECTRICAL POWER FROM EACH HF COMMUNICATION SYSTEM, BEFORE YOU REMOVE THE LEADING EDGE SECTIONS. HF SIGNALS CAN CAUSE ELECTRICAL SHOCKS AND INJURY TO PERSONS.



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

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

# Overhead Circuit Breaker Panel, P11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	2	C23301	L HF COMM
G	15	C23300	R HF COMM

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### D. Removal

SUBTASK 55-35-01-980-001



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

(1) Hold the leading edge panel assembly [1] that you will remove.

#### SUBTASK 55-35-01-020-001

(2) Remove the bolt [2] from the panel.

NOTE: You must remove one panel at a time.

The splice strap [4] can stay attached to any panel.



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 bolts:
  - 1) A leverage access panel adapter, SPL-1558,
  - 2) A removal Anti Cam-out Ribbed (ACR) bit,

NOTE: The bit should have a hardness of 56-58 RC.

NOTE: A combination removal/installation ACR bit is not recommended.



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.

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

SUBTASK 55-35-01-020-002



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

(3) Remove the leading edge panel assembly [1].

SUBTASK 55-35-01-940-001

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

----- END OF TASK -----

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## TASK 55-35-01-400-801

# 3. Vertical Stabilizer Leading Edge Installation

(Figure 401)

#### A. References

Reference	Title
51-31-01-390-806	Aerodynamic Smoother Application (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-1558 Adapter - Access Panel, Leverage		
	Part #: 3008-550 Supplier: 55856	
	Part #: B20004-42 Supplier: 81205	
	Opt Part # B20004-21 Supplier 81205	

## C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS5-95
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796 Class III

## D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity	
1	Panel assembly	55-35-01-02-180	ARO ALL	
		55-35-01-02-335	ARO ALL	
		55-35-01-02-365	ARO ALL	
		55-35-01-02-395	ARO ALL	
		55-35-01-02-525	ARO ALL	

# E. Location Zones

Zone	Area
321	Vertical Stabilizer Leading Edge

## F. Procedure

SUBTASK 55-35-01-940-002

(1) Remove the protective cover if it is necessary.

SUBTASK 55-35-01-940-003



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

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## (WARNING PRECEDES)



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

(2) Put the leading edge panel assembly [1] in its position.

#### SUBTASK 55-35-01-910-001

(3) Install the bolt [2] as follows:



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 bolts:
  - 1) Use a leverage access panel adapter, SPL-1558 to install the bolts.
  - 2) 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.
- Remove any excess paint or debris on fastener recesses.



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

- 4) Lubricate the threads of the fasteners with compound, C00528.
- Install fasteners with a fastener tool and an installation anti cam-out (ACR) driver bit.

<u>NOTE</u>: Use decreased lubricated fastener torques, (AMM 20-11-00).

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

- (b) Paint aluminum parts of the fastener holes with primer, C00259.
- (c) Let the primer, C00259 dry.
- (d) Apply corrosion preventive compound, C00308 to the bolt [2].
- (e) Install the bolt [2] before the corrosion preventive compound, C00308 is dry.

#### SUBTASK 55-35-01-440-001

(4) Close these circuit breakers:

## **Overhead Circuit Breaker Panel, P11**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	2	C23301	L HF COMM
G	15	C23300	R HF COMM

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55-35-01

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#### SUBTASK 55-35-01-220-001

(5) Make sure the gap around the panel assembly [1] is 0.05 to 0.13 inch.

#### SUBTASK 55-35-01-210-001

(6) Make sure the heads of the bolt [2] are smooth with the skin of the leading edge panel assembly [1] -0.001 to -0.007.

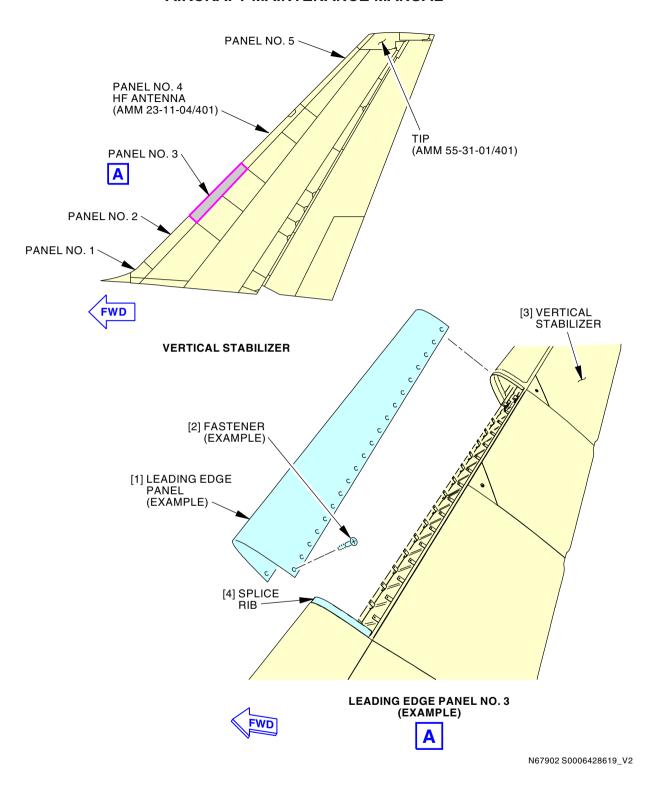
## SUBTASK 55-35-01-910-002

(7) Fill the clearances around the leading edge panel assembly [1] with sealant, A00247, do this task: Aerodynamic Smoother Application, TASK 51-31-01-390-806
 ).

------ END OF TASK ------

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Vertical Stabilizer Leading Edge Panels Installation Figure 401/55-35-01-990-801

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#### **VERTICAL STABILIZER HF ANTENNA LEADING EDGE PANEL - REPAIRS**

## 1. General

- A. This procedure contains these tasks:
  - (1) Repair if no erosion of the Fluoroelastomeric Anti-Static (FE-AS) coating on the HF antenna leading edge panel number 4, rework the finish by applying a clear coat edge seal.
  - (2) Repair if there is erosion of the FE-AS coating, but no damage to the fiberglass, repair the FE-AS coating and then finish by applying a clear coat edge seal.
  - (3) If there is damage within the allowable damage limits or a repair can be done to the fiberglass with the Structural Repair Manual (SRM) (55-30-01), replace the coatings and apply the clear coat edge seal.
  - (4) Exterior surface resistance check after repair is completed.
  - (5) Install polyurethane protective tape (PPT) to the HF antenna for erosion protection.

#### TASK 55-35-01-200-801

# 2. Inspection of HF Antenna Leading Edge Panel No. 4

#### A. References

Reference	Title
51-24-02-990-803	Figure: Measuring Resistance of Conductive Finish by the
	Ohms Per Square Procedure (P/B 701)
SRM 55-30-01	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
COM-6457	Meter - Insulation (Range: 1-1,000 VDC or equivalent, select meter per test requirements)
	Part #: 1863-9700 Supplier: 62015 Part #: 1864-9700 Supplier: 62015 Part #: 1865PLUS Supplier: 62015 Part #: 1865PLUSCE Supplier: 62015 Opt Part #: 1865-00-CE Supplier: 62015

# C. Visually inspect the HF antenna leading edge panel number 4 for erosion of the FE-AS coating.

(Figure 801)

SUBTASK 55-35-01-210-002

- (1) Look for the deterioration of the FE-AS layer.
  - (a) There must be no indication of bare fiberglass.

SUBTASK 55-35-01-210-003

(2) If there is no deterioration of the FE-AS layer, apply the clear layer edge seal.

SUBTASK 55-35-01-210-004

(3) If there is deterioration of the FE-AS layer, repair the layer and apply the clear layer edge seal.

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#### SUBTASK 55-35-01-210-005

- (4) Do a surface resistance check with the ohms per square method with a insulation meter, COM-6457 using a 500 V setting, (Figure 51-24-02-990-803)
  - (a) Measure each of the top, middle, and lower sections of the fiberglass part of the panel on the left side and right side.
  - (b) The satisfactory resistance range is 0.5 to 500 Megohms per square method.
  - (c) If surface resistance is more than the 500 Megohm limit, remove the layer fully and replace.

#### SUBTASK 55-35-01-340-001

(5) If there is damage to the fiberglass, see the SRM 55-30-01 to find if there is a repair for the panel. If the panel repair is possible, add the layers and apply the clear layer edge seal.



## TASK 55-35-01-370-801

# 3. Clear Edge Sealing of FE-AS Coating

## A. General

(1) These tasks are for edge sealing the FE-AS coating if no erosion of the coating is evident.

# B. Consumable Materials

Reference	Description	Specification
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
B00130	Alcohol - Isopropyl	TT-I-735
C00012	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-2 Base with X-310A Catalyst (Akzo Nobel Aerospace Coatings)	
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)
C50238	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-20 Base with X-310A Catalyst (Akzo Nobel Aerospace Coatings)	
C50262	Coating - Protective Enamel (BAC 900 Clear Color)	BMS10-60 Type II
C50263	Coating - Exterior Decorative Paint System (BAC 900 Clear Color)	BMS10-72 Type VIII
G00251	Abrasive - Mat, Non-Woven, Non-Metallic	A-A-58054
l 4: <b>7</b>		

# C. Location Zones

Zone	Area
321	Vertical Stabilizer Leading Edge

EFFECTIVITY 55-35-01



## D. Procedure to edge seal the FE-AS Coating.

SUBTASK 55-35-01-110-001



MAKE SURE PERSONNEL STAY A MINIMUM OF 6 FT (2 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF COMMUNICATION ANTENNA CAN CAUSE INJURIES TO PERSONNEL.



DO NOT GET SOLVENTS IN YOUR MOUTH, OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE HAZARDOUS MATERIALS. SOLVENTS MAY BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING PROCEDURES.

(1) Solvent clean an approximately 1 in. (25.40 mm) wide or wider strip of aluminum (Al) at the Al/FE-AS topcoat interface using alcohol, B00130 or solvent, B00083.

#### SUBTASK 55-35-01-120-001

- (2) Lightly abrade an approximately 0.50 in. (12.70 mm) wide strip of aluminum (AI) at the AI/FE-AS interface.
  - (a) Use abrasive mat, G00251 Type A, or aluminum oxide abrasive paper 240 grit or finer.
  - (b) At the same time, very lightly abrade an approximately 0.50 in. (12.70 mm) wide strip of the FE-AS topcoat adjacent to the aluminum area being abraded.

NOTE: The FE-AS topcoat does not require abrasion if the FE-AS topcoat has cured less than 16 hours at room temperature since application. The abrasion is to promote adhesion of the clear coat edge sealer to the FE-AS coating.

#### SUBTASK 55-35-01-110-002

(3) Solvent clean abraded areas (aluminum and FE-AS, if it was abraded) with isopropyl alcohol or aliphatic naphtha to remove abrasion residue.

NOTE: Do not allow contact of the solvent with the FE-AS coatings any longer than necessary to remove sanding residue.

#### SUBTASK 55-35-01-350-001

(4) Apply coating, C00064 to the aluminum abraded surface.

NOTE: Alkaline cleaning prior to application of alodine is not required. Instead use steps 1 through 3 above.

#### SUBTASK 55-35-01-160-001

(5) Thoroughly dry surfaces, alodined aluminum and FE-AS coating prior to application of the clear coat per step 6 below.

#### SUBTASK 55-35-01-370-001

- (6) Apply an approximately coating, C50262 1.00 in. (25.40 mm) wide strip of coating, C50262.
  - (a) Alternative clear coat materials are:
    - 1) coating, C50263
    - 2) Akzo Nobel 683-3-2 coating, C00012
    - 3) Akzo Nobel 683-3-20 coating, C50238

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(b) The clear coat is being applied as an edge sealer, and is to be approximately centered over the leading edge of FE-AS coating, with approximately 0.50 in. (12.70 mm) wide clear coat over the FE-AS coating, and approximately 0.50 in. (12.70 mm) wide clear coat extending over the abraded aluminum.

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#### TASK 55-35-01-300-801

# 4. Complete Replacement of FE-AS Anti-Static Coatings

#### A. General

- (1) This task gives steps for the full replacement of the fluoro-elastomeric, anti-static (FE-AS) coating layers.
- (2) There is now two types of FE-AS coating systems. The steps for each system are given. You do the steps for the material you are using. Do not substitute material from one type of kit to the other.

NOTE: Know and follow the correct steps for the material you use. Some parameters and measurements have changed for the reformulated paint kits.

- (a) The original product is Caapcoat FE-AS (fluoro-elastomeric anti-static) antenna coating system, and has three layers.
  - Rain erosion coating (FP-200)
  - · FE-AS tiecoat
  - · FE-AS topcoat.

To fully replace the leading edge coating, and apply the legacy FE-AS coating materials, refer to the steps that follow after the words: Application of FE-AS Coatings (Original System).

- (b) The new, reformulated coating system is the Caapcoat FE-AS-20 system, with three layers:
  - Rain erosion coating (FP-200)
  - · FE-AS-20 tiecoat
  - · FE-AS-20 topcoat.

To fully replace the leading edge coating, and apply the re-formulated FE-AS-20 coating materials, refer to the steps that follow after the words: Application of FE-AS-20 Coatings (Reformulated System).

- (3) After either FE-AS system is applied, you then prepare for and apply the edge seal coat.
- (4) The two paint systems are considered equal in performance when applied in accordance with the applicable instructions.
- (5) Failure to obey the time, temperature and humidity limits can cause the resistivity test results to be unserviceable.

# B. References

Reference	Title
51-21-02 P/B 701	PREPAINT CLEANING AND TREATMENT -
	CLEANING/PAINTING
51-24-02-370-801	Apply The BMS 10–21 Type III Conductive Coating to Specified External Surfaces (P/B 701)

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# (Continued)

Reference	Title
51-24-02-990-803 Figure: Measuring Resistance of Conductive Finish b	
	Ohms Per Square Procedure (P/B 701)

# C. 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-6457	Meter - Insulation (Range: 1-1,000 VDC or equivalent, select meter per test requirements)	
	Part #: 1863-9700 Supplier: 62015 Part #: 1864-9700 Supplier: 62015 Part #: 1865PLUS Supplier: 62015 Part #: 1865PLUSCE Supplier: 62015 Opt Part #: 1865-00-CE Supplier: 62015	
STD-765	Scraper - Plastic	

# D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
B00148	Solvent - Methyl Ethyl Ketone (MEK)	ASTM D740
B00316	Solvent - Aliphatic Naphtha (For Organic Coatings)	TT-N-95 Type I, ASTM D-3735 Type I
B50073	Alcohol - Isopropyl	ASTM D 770
B50078	Solvent - Aliphatic Naphtha (For Organic Coatings)	TT-N-95 Type I (Supersedes BMS3-2 Type I)
C00012	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-2 Base with X-310A Catalyst (Akzo Nobel Aerospace Coatings)	
C00058	Compound - Magna Static Conditioner Filler 28C1 (Formerly Dexter 28-C-1)	BAC5837
C00766	Primer - Nonchromated Primer For Composites	BMS10-103 Type I
C50006	Coating - Gloss Polyurethane - Caapcoat FP-200	BAC5880 TYPE I CLASS 5
C50007	Coating - Fluoroelastomer, 2 Part - Caapcoat FE-AS Tiecoat	
C50008	Coating - Anti-Static Fluoroelastomer, 2 Part - Caapcoat FE-AS Topcoat	
C50015	Coating - Chemical Conversion - Alodine 1000	
C50075	Coating - Protective Enamel (BAC 707 Gray Color)	BMS10-60 Type II
C50152	Coating - Chemical Conversion - Bonderite M-CR 1500 Aero (Formerly Alodine 1500)	MIL-DTL-81706
C50153	Coating - Chemical Conversion - Bonderite M-CR 1001 Aero (Formerly Alodine 1001)	MIL-DTL-81706

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# (Continued)

Reference	Description	Specification
C50238	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-20 Base with X-310A Cat (Akzo Nobel Aerospace Coatings)	
C50262	Coating - Protective Enamel (BAC 900 C Color)	lear BMS10-60 Type II
C50263	Coating - Exterior Decorative Paint Syste (BAC 900 Clear Color)	em BMS10-72 Type VIII
C50347	Tiecoat Kit - Caapcoat FE-AS-20	
C50348	Antistatic Coating Kit - Caapcoat FE-AS-	20
G00034	Cotton Wiper - Process Cleaning Absorbe Wiper (Cheesecloth, Gauze)	ent BMS15-5 Class A
G50077	Abrasive - Aluminum Oxide Paper, 240 g finer	rit or
G50492	Pad - 3M Scotch Brite 7448 Ultra Fine Pa	ad MIL-A-9962A Type III Grade AAA
G50729	Pad - Abrasive, Scotch-Brite Light Duty, Cleansing Pad, 7445	
Location Zon	es	
Zone A	Area	

## E.

Zone	Area
321	Vertical Stabilizer Leading Edge

F. Remove the coatings down to the fiberglass.

SUBTASK 55-35-01-120-002



MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 6 FT (2 M) AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF COMMUNICATION ANTENNA CAN CAUSE INJURIES TO PERSONNEL.



USE PRECAUTION NOT TO DO DAMAGE TO THE FIBERGLASS.

(1) Remove the layer with a high-speed disk sander with 240 grit or finer abrasive paper, G50077. SUBTASK 55-35-01-110-003



DO NOT GET SOLVENTS IN YOUR MOUTH, OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE HAZARDOUS MATERIALS. SOLVENTS CAN BE FLAMMABLE OR DANGEROUS TO THE ENVIRONMENT. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND THE LOCAL REGULATOR FOR CORRECT HAZARDOUS MATERIALS PROCEDURES.



DO NOT LET THE SOLVENTS STAY ON THE SURFACE FOR MORE THAN 12 TO 24 HOURS. IF SOLVENTS ARE ON THE SURFACE FOR MORE THAN 24 HOURS. THE FIBERGLASS SURFACE WILL INCREASE IN DIMENSION AND BE DAMAGED.

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# (CAUTION PRECEDES)



THIS PROCEDURE IS FOR A FULL LAYER REMOVAL. IF YOU DO NOT USE NEW LAYERS, DO NOT USE MEK.

- (2) Make the layers soft with Methyl Ethyl Ketone (MEK) solvent, B00148.
  - (a) Remove the loosened layers with abrasive pads and water.
  - (b) Clean the area with MEK until the wiper collects no signs of the remaining layer.
  - (c) Put a solvent moist wiper on the repair area.
  - (d) Put a plastic cover above the moist wiper.
    - NOTE: The plastic cover will help keep the solvent in the part and will not let the solvent dry too quickly.
  - (e) Keep the plastic cover on the leading edge for 12 to 24 hours. Examine the layers to find if they are soft, add solvent if necessary.
  - (f) Use a plastic scraper, STD-765 and 240 grit or finer abrasive paper, G50077 to remove the remaining soft layers.
  - (g) Clean off all the particles with a cotton wiper, G00034 moist with solvent.

# G. Application of FE-AS Coatings (Original System)

SUBTASK 55-35-01-370-002

- (1) The mixture instructions for Caapcoat FE-AS Fluoro-elastomeric, Anti-static and Rain Erosion Resistant layers:
  - (a) Mix the Caapcoat FP-200 coating, C50006:
    - 1) Fully mix or shake the Caapcoat FP-200 layer base to make sure that all the color pigment is fully applied.
    - 2) Add the curing agent and accelerator to the FP-200 base at a ratio of 3 to 4 to 64 by volume, and mix.
    - 3) Make sure that the viscosity is 22–28 seconds on a Zahn number 2 cup at 70–80F.
    - 4) Do not apply the layer if the humidity is less than 30%.
    - 5) Apply the spray to each layer between 20 minutes minimum and 2 hours maximum between layers.
  - (b) Mix the Caapcoat FE-AS Tiecoat coating, C50007:
    - 1) Fully mix 1/2 gallon of Caapcoat FE-AS Tiecoat coating, C50007 color number white to mix the pigments.
    - 2) Mix one ounce of the curing agent into the tiecoat.
    - 3) Viscosity is as mixed. Do not thin the tiecoat.
    - 4) The pot life is 4 hours at or below 75°F (24°C) and 2 hours for more than 75°F (24°C).
    - 5) Mix the smaller quantities with 0.6 grams of the curing agent for each 100 grams of tiecoat.
  - (c) Mix the Caapcoat FE-AS Topcoat coating, C50008:
    - 1) Fully mix the can "A" (FE-AS anti-static fluoroelastomer, color BAC707 Gray).
    - 2) If it is necessary, thin the FE-AS anti-static fluoroelastomer:

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a) Thin the contents of can "A" with MEK or Caapcoat Fluoroelastomer thinner to get a viscosity of 22-24 seconds on a Zahn number 2 cup.

NOTE: To much MEK will cause "cobwebbing". Caapcoat Fluoroelastomer thinner will decrease "cobwebbing", although a larger quantity of time is necessary between layers.

- 3) Use a filter to put the contents of can "A" into can "B".
  - a) Can "B" contains the graphite fibers.
- 4) Add the curing agent (1/4 ounce per quart of "A/B" mixture).
- 5) Mix on a shaker for 5 to 10 minutes.
  - NOTE: Mix the fibers into the Fluoroelastomer correctly or an unsatisfactory dispersion of the fibers can occur during a spray.
- 6) The pot life is 4 hours at or below 75°F (24°C) and 2 hours for a temperature more than 75°F (24°C).
- 7) Mix smaller quantities with 0.6 grams of the curing agent for each 100 grams of mixed FE-AS anti-static fluoroelastomer (can "A" and can "B" mixed together).

#### SUBTASK 55-35-01-370-003

- (2) With the cover panel number 4 removed, finish the external fiberglass surfaces, the recess below the cover panel, and the adjacent aluminum surfaces as follows:
  - (a) Solvent clean about a 1.00 in. (25.40 mm) wide strip of aluminum at the aluminum/fiberglass interface where the fiberglass is a leading edge. Use alcohol, B00130 or aliphatic naphtha, B50078.
    - NOTE: This step is to prepare for edge sealing the FE-AS fluoroelastomer layer.
  - (b) Use Scotch-Brite 7448 pad, G50492 or 240 grit or finer abrasive paper, G50077 to lightly roughen about a 0.50 in. (12.70 mm) wide strip of aluminum at the aluminum/fiberglass interface.
    - NOTE: The function of the rough surface is to help bond the clear layer edge seal to the aluminum.
  - (c) Use solvent to clean the aluminum area.
  - (d) Do the steps to the external fiberglass surface as follows:
    - Prepare the fiberglass surface with PREPAINT CLEANING AND TREATMENT -CLEANING/PAINTING, PAGEBLOCK 51-21-02/701, except that no surfacers or putties can be used. But, use Magna 28C1 conditioner filler, C00058 to fill pin holes.
    - 2) Prepare the surface to apply one layer of primer, C00766 to the fiberglass.
      - a) Let the surface air dry a minimum of 30 minutes, but not more than 48 hours at room temperature.
    - Apply a Caapcoat FP-200 coating, C50006, Rain Erosion Resistant Coating (RERC), color BAC707 Gray of 8 mils (0.203 mm) to 12 mils (0.305 mm) total dry layer thickness.
    - 4) Let the FP-200 air dry a minimum of 30 minutes, but not more than 60 minutes.
    - 5) Apply 1 to 2 layers of Caapcoat FE-AS Tiecoat coating, C50007, 0.7 mil (0.018 mm) to 1.5 mils (0.038 mm) total dry layer thickness on the FP-200. Let only 5 to 10 minutes between layers.
      - a) Let dry at room temperature for a minimum of 45 minutes, but not more than 90 minutes, before you apply the anti-static topcoat.

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- 6) Apply 1 to 2 layers of the Caapcoat FE-AS Topcoat coating, C50008, 0.7 mil (0.018 mm) to 3 mils (0.076 mm) total dry layer thickness, on the FE-AS tiecoat. Let 5 to 10 minutes between layers.
  - NOTE: Shake the Caapcoat FE-AS Topcoat coating, C50008 frequently
- 7) In less than 16 hours after the Caapcoat FE-AS Topcoat coating, C50008, apply coating, C50075 to all areas that had coating, C50075. See flagnote 1 (Figure 801) for the areas that do not get this layer.
- 8) Make sure that the finish is smooth, continuous, and has no particles in it.
- 9) Make sure that the dry layer thickness aligns with the limits and the layers agree to the part.
- 10) Seal the edge of the FE-AS anti-static layer as follows:
  - Clean the aluminum with isopropyl alcohol or aliphatic naphtha. If there is an obvious contamination, a light abrasion can be done before the last solvent cleaning.
    - NOTE: Keep the solvent off the adjacent coatings.
  - b) Apply Bonderite M-CR 1001 Aero coating, C50153, Alodine 1000 coating, C50015, or Bonderite M-CR 1500 Aero coating, C50152 to the aluminum surface.
    - NOTE: Alkaline cleaning before you apply alodine is not necessary.
  - c) Fully dry the surfaces before you apply the clear layer in the subsequent step.
  - d) Apply a coating, C50262 about a 1.00 in. (25.40 mm) wide strip of coating, C50262.
    - NOTE: If application of clear coat is more than 16 hours after application of the FE-AS anti-static topcoat, then lightly abrade the FE-AS topcoat, solvent wipe with isopropyl alcohol or aliphatic naphtha to remove the abrasion residue, and thoroughly dry, prior to application of clear coat. This light abrasion will promote adhesion of the clear coat to the cured/partially cured FE-AS anti-static topcoat.
    - <1> Alternative clear layer materials are:
      - <a> coating, C50263
      - <br/>
        <br/>
        Akzo Nobel 683-3-2 coating, C00012
      - <c> Akzo Nobel 683-3-20 coating, C50238.
    - The clear layer is being applied as an edge sealer, and is to be approximately centered over the leading edge of FE-AS layer, with about 0.50 in. (12.70 mm) wide clear layer over the FE-AS layer, and about 0.50 in. (12.70 mm) wide clear layer extending over the abraded aluminum.
- 11) Full cure of the FE-AS anti-static layer is 7 days at room temperature. Elevated temperature cures may not be used until 12 hours after application of the FE-AS anti-static topcoat. Optional cures are:
  - a) 12 hours at room temperature plus 3 hours at 140°F (60°C) to 160°F (71°C) or.
  - b) 12 hours at room temperature plus 12 hours at 120°F (49°C) to 140°F (60°C).

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- 12) After the FE-AS topcoat has cured, measure the resistance of the anti-static layer with a insulation meter, COM-6457 per the following:
  - NOTE: The measured value multiplied by 10 gives the value of resistivity in ohms per square.
  - a) Perform exterior surface resistance check using the ohms per square method (Figure 51-24-02-990-803). Acceptable readings must be measured in each of the upper, middle, and lower thirds of the fiberglass part of the panel, on both the left and right sides. The acceptable resistivity range is 0.5 to 100 Megaohms per square.
- 13) If the surface measurement exceeds the 100 Megaohms limit, the coating must be replaced.

## H. Application of FE-AS-20 Coatings (Reformulated System)

#### SUBTASK 55-35-01-340-003

(1) Make sure the cover panel number 4 is removed.

#### SUBTASK 55-35-01-340-005

- (2) Prepare the fiberglass surface (PAGEBLOCK 51-21-02/701), except that no surfacers or putties can be used. But, use Magna 28C1 conditioner filler, C00058 to fill pin holes.
  - NOTE: Do not apply putty or surfacer products to the fiberglass. The use of pinhole filler can be acceptable.

#### SUBTASK 55-35-01-370-030

- (3) Prepare the surface, and apply one layer of primer, C00766 to the fiberglass.
  - (a) Let the surface air dry a minimum of 30 minutes, but not more than 48 hours at room temperature.

# SUBTASK 55-35-01-370-015

- (4) Mix the Caapcoat FP-200 coating, C50006:
  - (a) Make sure the humidity is 30% or more.
  - (b) Do not apply the wash primer.
  - (c) Fully mix or shake the Caapcoat FP-200 layer base to make sure that all the color pigment is fully applied.
  - (d) Add the curing agent and accelerator to the FP-200 base and mix.
    - 1) The mix ratio is 3 (curing agent) to 4 (accelerator) to 64 (vehicle) by volume.
    - 2) Make a record of the time when you added the curing agent: \_\_\_\_\_
    - Make sure that the viscosity is 22–28 seconds on a Zahn number 2 cup at 70°F (21°C) to 80°F (27°C).
      - a) Thin only using CAAPCOAT PUT-10 polyurethane thinner.
      - b) The maximum ratio of thinner to mixed coating is 1 part thinner to 4 parts coating.
  - (e) Apply the spray to each layer between 20 minutes minimum and 2 hours maximum between layers.

#### SUBTASK 55-35-01-370-016

- 5) Apply a Caapcoat FP-200 coating, C50006, Rain Erosion Resistant Coating (RERC), color BAC707 Gray of 8 mils (0.203 mm) to 12 mils (0.305 mm) total dry layer thickness.
  - (a) Let the FP-200 air dry a minimum of 30 minutes, but not more than 60 minutes.

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#### SUBTASK 55-35-01-370-017

(6) Mix the Caapcoat FE-AS-20 Tiecoat kit, C50347 as follows:

NOTE: DO NOT ADD THINNER TO THE TIECOAT.

- (a) Using a paint shaker, fully mix the complete contents of base component FE-AS-20 fluoroelastomer tiecoat, color number white to mix the pigments.
- (b) Add the complete contents of curing agent container into the tiecoat, and fully mix.
  - Make a record of the time when you added the curing agent: \_\_\_\_\_
  - 2) Wait a minimum of 90 minutes before application of the activated FE-AS-20 tiecoat.
  - 3) Viscosity is as-mixed. Do not thin the tiecoat.
  - 4) Obey the maximum pot life as follows:
    - a) 2 hours when above 75°F (24°C).
    - b) 4 hours when at or below 75°F (24°C).
- (c) You can make a smaller amount of tiecoat using the ratio of 0.8 grams of curing agent for each 100 grams of tiecoat.

#### SUBTASK 55-35-01-370-018

- (7) Mix the Caapcoat FE-AS-20 Antistatic Coating Kit, C50348 as follows:
  - NOTE: It is recommended to prepare the topcoat before application of the tiecoat because of time limits and pot life. The topcoat must activate for 90 minutes before application, but can be applied only 45 minutes to 90 minutes after application of the tiecoat.
  - (a) Using a paint shaker, fully mix the can "A" (FE-AS-20 anti-static fluoroelastomer, color BAC707 Gray) to disperse pigments.
  - (b) If necessary, you can thin the FE-AS-20 antistatic topcoat as follows:
    - 1) You can add thinner to the contents of can "A" only, and only before you mix with the fibers from can "B".
    - 2) Thin the contents of can "A" with solvent, B00148, or Caapcoat FET-20 fluoroelastomer thinner, to get a viscosity of 18 to 22 seconds on a Zahn number 2 cup.
      - NOTE: Too much MEK (B00148) will cause a "cob-web" appearance. Caapcoat Fluoroelastomer thinner can reduce the "cob-web" appearance. When thinned, you must increase the cure time between layer applications.
  - (c) If necessary, you can make a smaller batch of AS topcoat using the ratio of 0.8 grams of curing agent for each 100 grams of "A/B" mixture.
  - (d) Using a paint filter, put the contents of can "A" into can "B."
    - 1) Can "B" contains the graphite fibers.
  - (e) Add the complete contents of the curing agent container into the "A/B" mixture, then fully mix.
    - Make a record of the time when you added the curing agent: \_\_\_\_\_\_
    - 2) To make a batch that is less than a full kit, you can use the ratio 0.8 grams of curing agent for each 100 grams "A/B" mixture.
  - (f) Using a paint shaker, mix for 5 to 10 minutes.
    - 1) Make sure the fibers are well-dispersed in the mixture.
    - Wait a minimum of 90 minutes before application of the activated FE-AS-20 tiecoat.

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- 3) Before the spray application, it is recommended to again shake or stir the mixture for 5 to 10 minutes.
- 4) Obey the maximum pot life as follows:
  - a) 2 hours when above 75°F (24°C).
  - b) 4 hours when at or below 75°F (24°C).

#### SUBTASK 55-35-01-370-019

- (8) Apply 1 to 2 cross-coat layers of FE-AS-20 tiecoat, 0.7 mil (0.018 mm) to 1.5 mils (0.038 mm) total dry layer thickness on the FP-200.
  - (a) Make sure ambient temperature is between 65°F (18°C) to 95°F (35°C).
  - (b) The recommended ambient temperature is 70°F (21°C) to 80°F (27°C).
  - (c) The recommended relative humidity is 30 to 60 percent.
  - (d) Allow only 5 to 10 minutes between layers.
  - (e) Make a record of the time when the tiecoat application is complete: \_\_\_\_\_
  - (f) Let dry at room temperature for a minimum of 45 minutes, but not more than 90 minutes, before you apply the anti-static topcoat.
    - 1) Elevated temperature cure is not allowed on this step.

#### SUBTASK 55-35-01-370-020

(9) Apply 1 to 2 layers of FE-AS-20 topcoat, 2 mils (0.051 mm) to 3 mils (0.076 mm) total dry layer thickness, onto the FE-AS-20 tiecoat.

NOTE: Shake the paint frequently.

- (a) The recommended ambient temperature is 65°F (18°C) to 95°F (35°C).
- (b) The recommended relative humidity is 30 to 60 percent.
- (c) Allow only 5 to 10 minutes between layers.
- (d) Make a record of the time when the topcoat application is complete:
- (e) Let the topcoat cure, and then continue.

NOTE: You must test resistivity then apply the next coating within 16 hours of FE-AS-20 topcoat application.

1) Elevated-temperature cure is allowed after 12 hours has passed since the FE-AS-20 topcoat application.

#### SUBTASK 55-35-01-720-001

- (10) Do the exterior surface resistance check using the ohms-per-square method. Refer to (TASK 51-24-02-370-801, Figure 51-24-02-990-803).
  - (a) Measure the resistance of the anti-static layer with a insulation meter, COM-6457.
  - (b) You must get acceptable measurements in each of the upper, middle, and lower thirds of the fiberglass part of the panel, on both the left and right sides.
  - (c) The acceptable resistivity range is 0.5 to 100 Megaohms per square.

NOTE: The measured value multiplied by 10 gives the value of resistivity in ohms per square.

- 1) If the surface resistivity measurement is greater than 100 Megaohms, at one or more locations, the coating is unserviceable and must be replaced.
- If the surface resistivity measurement is less than 100 Megaohms, at all test locations, the coating is serviceable.

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#### SUBTASK 55-35-01-370-021

- (11) Prepare for and apply coating, C50075, to all areas that had coating, C50075 prior to rework, except as follows.
  - (a) Do not apply coating, C50075, in the areas shown in flagnote 1 (TASK 55-35-01-300-802, Figure 801).
  - (b) You have less than 16 hours to complete the coating, C50075, application after FE-AS-20 topcoat application.
  - (c) Make a record of the time when the coating application is complete: \_\_\_\_\_\_
  - (d) Make sure that the finish is smooth, continuous, and has no particles in it.
  - (e) Make sure that the dry layer thickness is within the limits, and the layers agree to the part.

#### SUBTASK 55-35-01-370-022

(12) Using alcohol, B50073 or solvent, B00316, solvent clean a 1.00 in. (25.40 mm) strip of aluminum at the aluminum and FE-AS-20 interface.

NOTE: Keep the solvent off the adjacent coatings.

(a) Keep to a minimum all solvent contact with the anti-static coating.

#### SUBTASK 55-35-01-370-023

- (13) Lightly abrade the aluminum surface and FE-AS-20 coating as follows.
  - NOTE: Do not damage the base material. The intent of this step is to roughen the surface to improve paint adhesion.
  - (a) Lightly abrade the aluminum surface, a 0.5 in. (1.3 cm) wide strip, along where the FE-AS-20 coating and aluminum meet
  - (b) Very lightly abrade the AS-FE-20 coating, a 0.5 in. (1.3 cm) wide strip, along where the aluminum and anti-static coating.
  - (c) Use 240 grit or finer abrasive paper, G50077, or Scotch-Brite 7445 pad, G50729.

#### SUBTASK 55-35-01-370-024

(14) Using alcohol, B50073 or solvent, B00316, solvent clean a one-inch wide (or more) strip of aluminum at the aluminum/FE-AS-20 interface.

NOTE: Keep the solvent off the adjacent coatings.

(a) Keep to a minimum all solvent contact with the anti-static coating.

#### SUBTASK 55-35-01-370-025

(15) Apply Bonderite M-CR 1001 Aero coating, C50153, Alodine 1000 coating, C50015, or Bonderite M-CR 1500 Aero coating, C50152 to the aluminum surface.

NOTE: Alkaline cleaning before you apply alodine is not necessary.

(a) Make sure the surfaces are dry before you continue.

#### SUBTASK 55-35-01-370-026

- (16) Apply the edge seal coating, 1.00 in. (25.40 mm) wide strip, using coating, C50262.
  - (a) Make sure ambient temperature is between 65°F (18°C) to 95°F (35°C).
  - (b) The recommended ambient temperature is 70°F (21°C) to 80°F (27°C).
  - (c) The recommended relative humidity is less than 70 percent.
    - If above 70 percent, do the optional elevated temperature cure in the step that follows.

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- (d) Center the clearcoat application over the leading edge of FE-AS-20 layer, with about 0.50 in. (12.70 mm) wide clear layer over the FE-AS-20 layer, and about 0.50 in. (12.70 mm) wide clear layer extending over the abraded aluminum.
- (e) Make a record of the time when the coating application is complete: \_\_\_\_\_\_
- (f) The 3 paint products that follow are approved substitute materials for coating, C50262, when applied correctly.
  - 1) coating, C50263
  - 2) Akzo Nobel 683-3-2 coating, C00012
  - 3) Akzo Nobel 683-3-20 coating, C50238.

## SUBTASK 55-35-01-370-027

- (17) Full cure of the FE-AS-20 anti-static layer is 7 days at room temperature. Do not use elevated-temperature cure until a minimum 12 hours after application of the FE-AS-20 anti-static topcoat. Optional cures are:
  - (a) 12 hours at room temperature plus 3 hours at 140°F (60°C) to 160°F (71°C) or,
  - (b) 12 hours at room temperature plus 12 hours at 120°F (49°C) to 140°F (60°C).
  - (c) Do not exceed 180°F (82°C) or damage can occur.



#### TASK 55-35-01-300-802

## 5. Local Replacement of Coatings for Minor Damage to Coatings

## A. General

- (1) If local damage to the coatings is confined to the anti-static coating layer including the FE-AS topcoat layer, or to the FE-AS topcoat and FE-AS tiecoat layers and damage does not extend into the FP-200 rain erosion coating, it is minor damage and can be repaired.
- (2) If local damage to the coatings extends into the FP-200 rain erosion resistant coating (RERC), but not down to the gray BMS10-103 primer or the fiberglass, it is minor damage and can be repaired.
- (3) If local damage to the coatings extends to the fiberglass and the damage is in repairable limits with SRM 55-30-01 it is minor damage and can be repaired.
- (4) Leading edge parts can be coated with one of two fluoro-elastomeric coating systems.
  - (a) The two paint system are equal in performance when applied in accordance with the applicable instructions.
  - (b) The CAAPCOAT FE-AS kits are the original coating system.
    - 1) Caapcoat FP-200 coating, C50006, rain erosion-resistant coat
    - 2) Caapcoat FE-AS Tiecoat coating, C50007,
    - 3) Caapcoat FE-AS Topcoat coating, C50008.
  - (c) The CAAPCOAT FE-AS-20 kits are a reformulated system.
    - 1) Caapcoat FP-200 coating, C50006, rain erosion-resistant coating
    - 2) Caapcoat FE-AS-20 Tiecoat kit, C50347 tiecoat
    - 3) Caapcoat FE-AS-20 Antistatic Coating Kit, C50348 topcoat.
  - (d) Know that the application specifications between the two products can have different values and measurements.
  - (e) Do not mix some of the products from one type of paint kit, with the other type of paint kit.

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## B. References

Reference	Title
51-21-02 P/B 701	PREPAINT CLEANING AND TREATMENT - CLEANING/PAINTING
51-24-02-370-801	Apply The BMS 10–21 Type III Conductive Coating to Specified External Surfaces (P/B 701)
51-24-02-990-803	Figure: Measuring Resistance of Conductive Finish by the Ohms Per Square Procedure (P/B 701)
SRM 55-30-01	Structural Repair Manual

# C. 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-6457	Meter - Insulation (Range: 1-1,000 VDC or equivalent, select meter per test requirements)	
	Part #: 1863-9700 Supplier: 62015 Part #: 1864-9700 Supplier: 62015 Part #: 1865PLUS Supplier: 62015 Part #: 1865PLUSCE Supplier: 62015 Opt Part #: 1865-00-CE Supplier: 62015	

## D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
B00148	Solvent - Methyl Ethyl Ketone (MEK)	ASTM D740
B00316	Solvent - Aliphatic Naphtha (For Organic Coatings)	TT-N-95 Type I, ASTM D-3735 Type I
B50073	Alcohol - Isopropyl	ASTM D 770
B50078	Solvent - Aliphatic Naphtha (For Organic Coatings)	TT-N-95 Type I (Supersedes BMS3-2 Type I)
C00012	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-2 Base with X-310A Catalyst (Akzo Nobel Aerospace Coatings)	
C00058	Compound - Magna Static Conditioner Filler 28C1 (Formerly Dexter 28-C-1)	BAC5837
C00766	Primer - Nonchromated Primer For Composites	BMS10-103 Type I
C50006	Coating - Gloss Polyurethane - Caapcoat FP-200	BAC5880 TYPE I CLASS 5
C50007	Coating - Fluoroelastomer, 2 Part - Caapcoat FE-AS Tiecoat	
C50008	Coating - Anti-Static Fluoroelastomer, 2 Part - Caapcoat FE-AS Topcoat	
C50075	Coating - Protective Enamel (BAC 707 Gray Color)	BMS10-60 Type II

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## (Continued)

Reference	Description	Specification
C50238	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-20 Base with X-310A Catalyst (Akzo Nobel Aerospace Coatings)	
C50262	Coating - Protective Enamel (BAC 900 Clear Color)	BMS10-60 Type II
C50263	Coating - Exterior Decorative Paint System (BAC 900 Clear Color)	BMS10-72 Type VIII
C50347	Tiecoat Kit - Caapcoat FE-AS-20	
C50348	Antistatic Coating Kit - Caapcoat FE-AS-20	
G50077	Abrasive - Aluminum Oxide Paper, 240 grit or finer	
G50078	Abrasive - Aluminum Oxide Paper, 320 grit or finer	

E. Procedure (Damage does not extend to the erosion coating).



MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 6 FEET AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

#### SUBTASK 55-35-01-120-003

- (1) If damage to the coatings is confined to the anti-static coating layer (FE-AS topcoat layer, which is medium gray in color with dark fibers in it), or to the FE-AS topcoat and FE-AS tiecoat layers (the tiecoat layer is a whitish primer-like layer), and damage does not extend into the FP-200 (lighter) gray rain erosion coating, then repair as follows:
- (2) Cut or sand to remove the anti-static coating (FE-AS anti-static topcoat or FE-AS tiecoat) that does not bond.

## SUBTASK 55-35-01-110-004



DO NOT GET SOLVENTS IN YOUR MOUTH, OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE HAZARDOUS MATERIALS. SOLVENTS CAN BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR CORRECT HANDLING PROCEDURES.

(3) Solvent clean with alcohol, B00130 or solvent, B00316 the area where the coatings have eroded away and overlap, 1.00 in. (25.40 mm) to 2.00 in. (50.80 mm), on the part of the remaining anti-static topcoat.

NOTE: If you do not remove the coatings, only use MEK as the step that follows. Methyl Ethyl Ketone (MEK) can make the coatings soft.

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EFFECTIVITY



#### SUBTASK 55-35-01-120-004



DO NOT GET SOLVENTS IN YOUR MOUTH, OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE HAZARDOUS MATERIALS. SOLVENTS CAN BE FLAMMABLE OR HARMFUL TO THE ENVIRONMENT. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR CORRECT HANDLING PROCEDURES.



DO NOT USE MEK ON THE COATINGS THAT WILL NOT BE REMOVED, WITH THE EXCEPTION OF SMALL QUANTITIES OF MEK TO REMOVE WHITE TIECOAT THAT REMAINS IN AREAS WHERE ANTI-STATIC COATING HAS ERODED. MINIMIZE CONTACT OF MEK WITH THE ANTI-STATIC COATING.

(4) Abrade the surface with 240 grit or finer abrasive paper, G50077 where the anti-static coating has eroded away. Make sure that all of the white tiecoat is removed. Use solvent, B00148 in small quantities to remove the white tiecoat that stays in areas where anti-static coating has eroded. Minimize contact of MEK with anti-static coating. Feather the edges of the anti-static coating with 320 grit or finer abrasive paper, G50078. Abrade an area of the anti-static coating approximately 1 in. (3 cm) wide around the repair area.

NOTE: The anti-static coating repair area will have an overlap of the existing coating area in order to supply electrical continuity between the repair area and the existing anti-static coating.

#### SUBTASK 55-35-01-160-002

(5) Fully remove the sanding dust with a vacuum.

#### SUBTASK 55-35-01-110-005

(6) Immediately before you apply the coatings, clean the sanded areas with alcohol, B00130, aliphatic naphtha, B50078, or Caapcoat Polyurethane Thinner PUT10.

NOTE: Do not use MEK which can cause damage to the adjacent coatings.

- (a) Do the solvent clean again with a clean wiper until you see no particles or discoloration.
- (b) Blot dry with a clean, dry cloth.

# SUBTASK 55-35-01-370-004

(7) If using the original formula FE-AS tiecoat and FE-AS topcoat kits, you can use a brush apply, or spray these coatings to the necessary thicknesses.

NOTE: Prevent the overlap of these coatings on the unsanded area of the coating.

- (a) Apply 1 to 2 cross coats of Caapcoat FE-AS Tiecoat coating, C50007, 0.7 mil (0.018 mm) to 1.5 mils (0.038 mm) total dry layer thickness, on the FP-200. Allow 5 to 10 minutes between coats. Allow a minimum of 45 minutes, but not more than 90 minutes, at room temperature, between the application of this tiecoat and the application of the anti-static topcoat.
  - NOTE: Make sure that all of the white FE-AS tiecoat is removed. Apply the tiecoat only to the abraded FP-200 rain erosion coating. Do not apply the tiecoat to the abraded FE-AS topcoat, or you will not get electrical continuity between repaired and non-repaired areas of the coatings.
- (b) Apply 1 to 2 cross coats of Caapcoat FE-AS Topcoat coating, C50008, 0.7 mil (0.018 mm) to 3.0 mils (0.1 mm) total dry layer thickness, on the FE-AS tiecoat. Make sure that you have 5 to 10 minutes between coats.
  - 1) Shake the paint supply frequently.

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(c) Continue and complete the next coating step [that is, coating, C50075] within 16 hours after application of the anti-static coating.

#### SUBTASK 55-35-01-370-028

(8) If using Caapcoat FE-AS-20 Tiecoat kit, C50347 and Caapcoat FE-AS-20 Antistatic Coating Kit, C50348, you can brush-apply or spray these coatings to the necessary thicknesses. These are the steps:

NOTE: Prevent the application of FE-AS-20 coatings on unsanded areas of the FP-200 rain anti-erosion coating.

- (a) Prepare and apply the Caapcoat FE-AS-20 Tiecoat kit, C50347 is as follows:
  - You can mix quantities smaller than a complete kit using the mix ratio of 0.8 grams curing agent (can "A") for each 100 grams of tiecoat (can "B"). Do not add thinner.
     NOTE: The addition of thinner to the tiecoat is not allowed.
  - 2) Apply 1 to 2 cross-coats of FE-AS-20 tiecoat, 0.7 mil (0.018 mm) to 1.5 mils (0.038 mm) total dry layer thickness, onto the FP-200 layer. Allow 5 to 10 minutes between coats. Allow a minimum of 45 minutes, but not more than 90 minutes, at room temperature, between the application of this tiecoat and the application of the anti-static topcoat.

NOTE: Make sure that all of the white FE-AS tiecoat is removed. Apply the tiecoat only to the abraded FP-200 rain erosion coating. Do not apply the tiecoat to the abraded FE-AS topcoat, or you will not get electrical continuity between repaired and non-repaired areas of the coatings.

- (b) Prepare and apply the Caapcoat FE-AS-20 Antistatic Coating Kit, C50348 as follows.
  - 1) Using a paint shaker, shake can "A" (pigments) and can "B" (fibers) for at least 5 minutes.
  - 2) You can mix a quantity of FE-AS-20 topcoat smaller than a complete kit using the ratio of 0.8 grams curing agent for each 100 grams of FE-AS-20 topcoat A/B mix.
  - 3) Before mixing parts A and B, you can only thin the product from can "A" with solvent, B00148, or Caapcoat FET-20 fluoroelastomer thinner. Do not use MEK. Do not thin after you mixed can "A" with can "B".
  - 4) Add the curing agent using the ratio of 0.25 fl-oz (7.39 cc) for each 1 qt (0.95 l) of "A/B" mixture.
  - 5) Shake the FE-AS-20 anti-static topcoat frequently. Apply 1 to 2 cross-coats of the FE-AS-20 anti-static topcoat, 0.7 mil (0.018 mm) to 3.0 mils (0.1 mm) total dry layer thickness, on the FE-AS-20 tiecoat. Make sure that you have 5 to 10 minutes between coats.
- (c) Continue and complete the next coating step within 16 hours after application of the anti-static coating.

#### SUBTASK 55-35-01-370-029

- (9) In less than 16 hours after you apply the FE-AS (or FE-AS-20) anti-static topcoat, apply coating, C50075 to the areas, which had this coating. See flagnote 1 (Figure 801) for areas that do not get the BMS10-60, Type II coating.
- (10) Make sure that the last finish is smooth, continuous, and has no particles in it.
- (11) Make sure that the dry layer thicknesses are in the limits and the coatings follow the contour of the part.

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- (12) If the leading edges of the FE-AS (or, FE-AS-20) coating have not been edge sealed, do the edge seal with the above procedure. For the areas of the FE-AS (or FE-AS-20) coatings that dried less than 16 hours, it is not necessary to abrade the coatings.
- (13) The full cure of the coating is 7 days at room temperature. Optional cures are:
  - (a) 12 hours at room temperature plus 3 hours at 140°F (60°C) to 160°F (71°C).
  - (b) 12 hours at room temperature plus 12 hours at 120°F (49°C) to 140°F (60°C).
- (14) After the FE-AS (or FE-AS-20) topcoat cured, measure the resistivity of the anti-static coating with a insulation meter, COM-6457 as given here.

NOTE: The measured value multiplied by 10 gives the value of resistivity in ohms-per-square.

- (a) Do an external surface resistance check with the ohms-per-square method (Figure 51-24-02-990-803). Measure the top, middle, and lower thirds of the fiberglass part of the panel, on the left side and right side. The satisfactory resistance range is 0.5 to 100 Megaohms-per-square.
- (15) If the surface resistance is more than the 100 Megaohms limit, replace the coating.
- F. Procedure (Coating damage extends to the rain erosion resistant coating)

SUBTASK 55-35-01-120-005



MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 6 FEET AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

- (1) If damage to the coatings extends into the Caapcoat FP-200 coating, C50006, but not the gray primer, C00766 or fiberglass, repair as follows:
- (2) Cut or sand to remove loose coatings.

SUBTASK 55-35-01-110-007



DO NOT USE MEK ON THE COATINGS THAT WILL NOT BE REMOVED. MEK CAN SOFTEN AND DAMAGE THESE COATINGS.

(3) Clean with alcohol, B00130 or aliphatic naphtha, B50078 the area where the coatings eroded away and overlap, 1 in. (3 cm) to 2 in. (5 cm), on the remaining anti-static coating.

SUBTASK 55-35-01-120-006

(4) Make the area smooth and feather the edges by sanding. Use 240 grit or finer abrasive paper, G50077. You can use a high-speed disk sander. Feather the edges of the existing anti-static coating, with 320 grit or finer abrasive paper, G50078. Abrade an area of the anti-static coating approximately 1 in. (3 cm) wide around the repair area.

NOTE: The anti-static coating repair area will have to do an overlap of the adjacent coating area to supply electrical continuity between the repair and the anti-static coating.

SUBTASK 55-35-01-160-003

**EFFECTIVITY** 

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(5) Fully remove the sanding dust with a vacuum.

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SUBTASK 55-35-01-110-008



#### DO NOT USE MEK. MEK WILL SOFTEN OR STRIP ADJACENT COATINGS.

(6) Immediately before you apply coatings, clean the sanded areas with alcohol, B00130, aliphatic naphtha, B50078, or Caapcoat Polyurethane Thinner PUT10. Use a clean wiper to clean the surface until there is no particles or discoloration on the wiper. Do not use MEK.

## SUBTASK 55-35-01-110-009

(7) Blot dry with a clean dry cloth.

#### SUBTASK 55-35-01-370-031

(8) Apply the applicable coatings with a brush to the necessary thicknesses as follows.

NOTE: Prevent the overlap of these coatings on the unsanded area of the coatings.

- (a) Use one of these two coating systems:
  - Caapcoat FP-200 coating, C50006, Caapcoat FE-AS Tiecoat coating, C50007, and Caapcoat FE-AS Topcoat coating, C50008.
  - 2) Caapcoat FP-200 coating, C50006, Caapcoat FE-AS-20 Tiecoat kit, C50347, and Caapcoat FE-AS-20 Antistatic Coating Kit, C50348.
  - 3) Do not mix or substitute a component from an FE-AS kit, or FE-AS-20 kit with the other type of kit.
- (b) Prepare the surface with BAC5880 (do not apply wash primer). Apply Caapcoat FP-200 coating, C50006 color BAC707 Gray 8 mils (0.203 mm) to 12 mils (0.305 mm) total dry layer thickness.
- (c) Let the FP-200 dry a minimum of 30 minutes, but not more than 60 minutes.

#### SUBTASK 55-35-01-370-032

- (9) Apply 1 to 2 cross coats of Caapcoat FE-AS Tiecoat coating, C50007, 0.7 mil (0.018 mm) to 1.5 mils (0.038 mm) total dry layer thickness, on the FP-200. Make sure that you have 5 to 10 minutes between coats. Let a minimum of 45 minutes, but not more than 90 minutes, at room temperature, from when you apply the tiecoat to when you apply the anti-static topcoat.
  - NOTE: Make sure that all of the white tiecoat is removed. Apply tiecoat only to the abraded area or where the FP-200 rain erosion coating is applied. Do not apply tiecoat to the abraded FE-AS topcoat, or there will be no electrical continuity between the repaired and the non-repaired area of the coatings.

#### SUBTASK 55-35-01-370-033

- (10) Shake the FE-AS anti-static topcoat frequently. Apply 1 to 2 cross coats of the FE-AS anti-static topcoat, 0.7 mil (0.018 mm) to 3 mils (0.076 mm) total dry layer thickness, on the FE-AS tiecoat. Make sure that you have 5 to 10 minutes between coats.
  - (a) Do no use an elevated temperature cure until at least 12 hours after application of the FE-AS (or FE-AS-20) anti-static topcoat.

## SUBTASK 55-35-01-370-034

- (11) In less than 16 hours after you apply the FE-AS (or, FE-AS-20) anti-static topcoat, apply coating, C50075 to the areas which had this coating. See Flagnote 1 (Figure 801) for areas that do not get this coating.
- (12) Make sure that the last finish is smooth, continuous, and has no particles in it.

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(13) Make sure that the dry layer thicknesses are in the limits and the coatings follow the contour of the part.

#### SUBTASK 55-35-01-370-035

- (14) If the leading edges of the FE-AS (or FE-AS-20) top coating have not been edge sealed, do the edge seal with the procedure. For the areas of the FE-AS coatings that dried less than 16 hours, it is not necessary to abrade the coatings.
- (15) The full cure of the coating is 7 days at room temperature. Optional cures are:
  - (a) Do no use an elevated temperature cure until at least 12 hours after application of the FE-AS (or FE-AS-20) anti-static topcoat.
  - (b) 12 hours at room temperature plus 3 hours at 140°F (60°C) to 160°F (71°C).
  - (c) 12 hours at room temperature plus 12 hours at 120°F (49°C) to 140°F (60°C).

#### SUBTASK 55-35-01-720-002

- (16) Do the exterior surface resistance check using the ohms-per-square method. Refer to (TASK 51-24-02-370-801, Figure 51-24-02-990-803).
  - (a) Measure the resistance of the anti-static layer with a insulation meter, COM-6457.
  - (b) You must get acceptable measurements in each of the upper, middle, and lower thirds of the fiberglass part of the panel, on both the left and right sides.
  - (c) The acceptable resistivity range is 0.5 to 100 Megaohms per square.
    - <u>NOTE</u>: The measured value multiplied by 10 gives the value of resistivity in ohms per square.
    - 1) If the surface resistivity measurement is greater than 100 Megaohms, at one or more locations, the coating is unserviceable and must be replaced.
    - 2) If the surface resistivity measurement is less than 100 Megaohms, at all test locations, the coating is serviceable.
- G. Procedure (Coating damage extends to the fiberglass)



MAKE SURE THAT PERSONNEL STAY A MINIMUM OF 6 FEET AWAY FROM THE VERTICAL STABILIZER WHEN THE HF SYSTEM TRANSMITS. RF ENERGY FROM THE HF ANTENNA CAN CAUSE INJURIES TO PERSONNEL.

#### SUBTASK 55-35-01-120-007

- (1) Determine if damage to the coatings includes damage to the fiberglass. Refer to: (SRM 55-30-01).
  - (a) Find if the damage is within repair limits.
  - (b) If the panel can be repaired, continue with the replacement of the coatings as follows.
  - (c) Cut or sand to remove all loose coatings.

#### SUBTASK 55-35-01-110-010

(2) Clean with alcohol, B00130, or aliphatic naphtha, B50078 in the area where the coatings eroded away with an overlap of 1 in. (3 cm) to 2 in. (5 cm) on the remaining anti-static coating.

SUBTASK 55-35-01-110-011



DO NOT USE MEK ON THE COATINGS THAT WILL NOT BE REMOVED. MEK CAN SOFTEN AND DAMAGE THESE COATINGS.

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## (CAUTION PRECEDES)



MEK CAN BE USED IN SMALL QUANTITIES TO REMOVE WHITE TIECOAT THAT STAYS IN AREAS WHERE ANTI-STATIC COATING HAS ERODED. KEEP THE CONTACT OF MEK WITH THE ANTI-STATIC COATING TO A MINIMUM.

(3) Abrade the surface with 240 grit or finer abrasive paper, G50077 where the anti-static coating has eroded away. Make sure that all of the white tiecoat is removed. Use solvent, B00148 in small quantities to remove the white tiecoat that stays in areas where anti-static coating has eroded. Minimize contact of solvent, B00148 with anti-static coating. Feather the edges of the anti-static coating with 320 grit or finer abrasive paper, G50078. Abrade an area of the anti-static coating approximately 1 in. (3 cm) wide around the area to be repaired.

NOTE: The anti-static coating repair area will have an overlap of the existing coating area in order to supply electrical continuity between the repair area and the existing anti-static coating.

#### SUBTASK 55-35-01-160-004

(4) Fully remove the sanding dust with a vacuum.

SUBTASK 55-35-01-110-012



DO NOT USE MEK. MEK CAN SOFTEN OR REMOVE THE ADJACENT COATINGS.

- (5) Immediately before you apply the coatings, clean the sanded areas with alcohol, B50073, solvent, B00316, or Caapcoat Polyurethane Thinner PUT10. Do not use MEK. Do the solvent clean again with a clean wiper until you see no particles or discoloration.
  - (a) Blot-dry with a clean, dry cloth.

#### SUBTASK 55-35-01-340-002

(6) Prepare the fiberglass surface with PREPAINT CLEANING AND TREATMENT -CLEANING/PAINTING, PAGEBLOCK 51-21-02/701, except as follows.

NOTE: Do not apply putty or surfacer products to the fiberglass. The use of pinhole filler can be acceptable.

- (a) Do not use a surfacer or putty.
- (b) Fill pinholes using Magna 28C1 conditioner filler, C00058.

## SUBTASK 55-35-01-370-006

(7) Prepare the surface with one coat of primer, C00766. Apply this primer only to the fiberglass. Do not have an overlap on the abraded FP-200 or other coatings.

#### SUBTASK 55-35-01-370-007

- (8) Apply Caapcoat FP-200 coating, C50006, color BAC707 Gray to 8 mils (0.203 mm) to 12 mils (0.305 mm) total dry layer thickness.
  - (a) Let the Caapcoat FP-200 coating, C50006 dry a minimum of 30 minutes, but not more than 60 minutes.

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#### SUBTASK 55-35-01-370-009

- (9) Prepare and apply the fluoro-elastomer anti-static tiecoat, onto the on the FP-200 rain anti-erosion coating, using one of these two paint materials:
  - NOTE: Apply tiecoat only to abraded or applied FP-200 rain erosion coating. Do not apply tiecoat to abraded FE-AS topcoat, or you will not get electrical continuity between repaired and non-repaired areas of the coatings.
  - (a) Using a paint shaker, fully mix the complete contents of base component fluoroelastomer tiecoat, color number white to mix the pigments.
  - (b) Add the contents of curing agent container into the tiecoat, and fully mix.
    - 1) If using Caapcoat FE-AS Tiecoat coating, C50007, to make a batch that is less than a full paint kit, use the ratio of 0.6 grams curing agent for each 100 grams of tiecoat. Do not thin.
    - 2) If using Caapcoat FE-AS-20 Tiecoat kit, C50347, to make a batch that is less than a full paint kit, use the ratio of 0.8 grams curing agent for each 100 grams of tiecoat. Do not thin.
    - 3) Make a record of the time when you added the curing agent:
    - 4) Wait a minimum of 90 minutes before application of the activated FE-AS (or, FE-AS-20) tiecoat.
    - 5) Viscosity is as-mixed. Do not thin the tiecoat.
    - 6) Obey the maximum pot life as follows:
      - a) 2 hours when above 75°F (24°C).
      - b) 4 hours when at or below 75°F (24°C).
  - (c) Apply 1 to 2 cross coats, 0.7 mil (0.018 mm) to 1.5 mils (0.038 mm) total dry layer thickness.
  - (d) Let a minimum of 45 minutes, but not more than 90 minutes, then continue.

#### SUBTASK 55-35-01-370-010

- (10) If using Caapcoat FE-AS Topcoat coating, C50008 (original formula kit), mix and apply the Caapcoat FE-AS Topcoat coating, C50008 using these steps that follow:
  - (a) Mix the topcoat as follows:
    - 1) Using a paint shaker, fully mix the can "A" (FE-AS anti-static fluoroelastomer, color BAC707 Gray) to disperse pigments.
    - 2) If necessary, you can thin the FE-AS antistatic topcoat as follows:
      - a) You can add thinner to the contents of can "A" only, and only before you mix with the fibers from can "B".
      - b) Thin the contents of can "A" with solvent, B00148, or Caapcoat FET-20 fluoroelastomer thinner, to get a viscosity of 22 to 24 seconds on a Zahn number 2 cup.

NOTE: Too much MEK (B00148) will cause a "cob-web" appearance.

Caapcoat Fluoroelastomer thinner can reduce the "cob-web" appearance. When thinned, you must increase the cure time between layer applications.

- 3) If necessary, you can make a smaller batch of AS topcoat using the ratio of 0.6 grams of curing agent for each 100 grams of "A/B" mixture.
- 4) Using a paint filter, put the contents of can "A" into can "B."

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- a) Can "B" contains the graphite fibers.
- 5) Add the complete contents of the curing agent container into the "A/B" mixture, then fully mix.
  - a) Make a record of the time when you added the curing agent: \_\_\_\_\_
  - b) To make a batch that is less than a full kit, you can use the ratio 0.8 grams of curing agent for each 100 grams "A/B" mixture.
- 6) Using a paint shaker, mix for 5 to 10 minutes.
  - a) Make sure the fibers are well-dispersed in the mixture.
  - b) Wait a minimum of 90 minutes before application of the activated FE-AS tiecoat.
  - Before the spray application, it is recommended to again shake or stir the mixture for 5 to 10 minutes.
  - d) Obey the maximum pot life as follows:
    - <1> 2 hours when above 75°F (24°C).
    - 4 hours when at or below 75°F (24°C).
- (b) Apply 1 to 2 layers of FE-AS topcoat,0.7 mil (0.018 mm) to 3 mils (0.076 mm) total dry layer thickness, onto the FE-AS tiecoat.

NOTE: Shake the paint frequently.

- 1) The recommended ambient temperature is 65°F (18°C) to 95°F (35°C).
- 2) The recommended relative humidity is 30 to 60 percent.
- 3) Allow only 5 to 10 minutes between layers.
- 4) Make a record of the time when the topcoat application is complete: . .
- 5) Let the topcoat cure, and then continue.
  - NOTE: You must test resistivity then apply the next coating within 16 hours of FE-AS topcoat application.
  - a) Elevated-temperature cure is allowed after 12 hours has passed since the FE-AS topcoat application.

#### SUBTASK 55-35-01-370-036

- (11) If using the Caapcoat FE-AS-20 Antistatic Coating Kit, C50348, mix and apply the topcoat using these steps that follow.
  - (a) Using a paint shaker, fully mix the can "A" (FE-AS-20 anti-static fluoroelastomer, color BAC707 Gray) to disperse pigments.
  - (b) If necessary, you can thin the FE-AS-20 antistatic topcoat as follows:
    - 1) You can add thinner to the contents of can "A" only, and only before you mix with the fibers from can "B".
    - 2) Thin the contents of can "A" with solvent, B00148, or Caapcoat FET-20 fluoroelastomer thinner, to get a viscosity of 18 to 22 seconds on a Zahn number 2 cup.
      - NOTE: Too much MEK (B00148) will cause a "cob-web" appearance. Caapcoat Fluoroelastomer thinner can reduce the "cob-web" appearance. When thinned, you must increase the cure time between layer applications.
  - (c) If necessary, you can make a smaller batch of AS topcoat using the ratio of 0.8 grams of curing agent for each 100 grams of "A/B" mixture.

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- (d) Using a paint filter, put the contents of can "A" into can "B."
  - 1) Can "B" contains the graphite fibers.
- (e) Add the complete contents of the curing agent container into the "A/B" mixture, then fully mix.
  - Make a record of the time when you added the curing agent: \_\_\_\_\_
  - 2) To make a batch that is less than a full kit, you can use the ratio 0.8 grams of curing agent for each 100 grams "A/B" mixture.
- (f) Using a paint shaker, mix for 5 to 10 minutes.
  - 1) Make sure the fibers are well-dispersed in the mixture.
  - 2) Wait a minimum of 90 minutes before application of the activated FE-AS-20 tiecoat.
  - 3) Before the spray application, it is recommended to again shake or stir the mixture for 5 to 10 minutes.
  - Obey the maximum pot life as follows:
    - a) 2 hours when above 75°F (24°C).
    - b) 4 hours when at or below 75°F (24°C).
- (g) Apply 1 to 2 layers of FE-AS-20 topcoat, 2 mils (0.051 mm) to 3 mils (0.076 mm) total dry layer thickness, onto the FE-AS-20 tiecoat.

NOTE: Shake the paint frequently.

- 1) The recommended ambient temperature is 65°F (18°C) to 95°F (35°C).
- 2) The recommended relative humidity is 30 to 60 percent.
- 3) Allow only 5 to 10 minutes between layers.
- 4) Make a record of the time when the topcoat application is complete: . .
- Let the topcoat cure, and then continue.
  - NOTE: You must test resistivity then apply the next coating within 16 hours of FE-AS-20 topcoat application.
  - a) Elevated-temperature cure is allowed after 12 hours has passed since the FE-AS-20 topcoat application.

#### SUBTASK 55-35-01-760-001

- (12) Do the exterior surface resistance check using the ohms-per-square method. Refer to (TASK 51-24-02-370-801, Figure 51-24-02-990-803).
  - (a) Measure the resistance of the anti-static layer with a insulation meter, COM-6457.
  - (b) You must get acceptable measurements in each of the upper, middle, and lower thirds of the fiberglass part of the panel, on both the left and right sides.
  - (c) The acceptable resistivity range is 0.5 to 100 Megaohms per square.

NOTE: The measured value multiplied by 10 gives the value of resistivity in ohms per square.

- 1) If the surface resistivity measurement is greater than 100 Megaohms, at one or more locations, the coating is unserviceable and must be replaced.
- 2) If the surface resistivity measurement is less than 100 Megaohms, at all test locations, the coating is serviceable.

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#### SUBTASK 55-35-01-370-011

(13) In less than 16 hours after you apply the FE-AS (or FE-AS-20) anti-static topcoat, apply coating, C50075 to the areas which had this coating. See Flagnote 1 (Leading Edge Panel No. 4, HF Antenna/Figure 801) for areas that do not get this coating.

#### SUBTASK 55-35-01-210-006

(14) Make sure that the finish is smooth, continuous, and has no particles in it.

#### SUBTASK 55-35-01-370-012

(15) Make sure that the dry layer thicknesses are in the limits and the coatings follow the contour of the part.

#### SUBTASK 55-35-01-370-013

- (16) If the leading edges of the FE-AS coating have not been edge sealed, do the edge seal with the procedure. For areas of the FE-AS topcoat that have dried less than 16 hours, it is not necessary to abrade the coatings.
  - (a) Apply the edge seal coating, 1.00 in. (25.40 mm) wide strip, using coating, C50262.
    - 1) Make sure ambient temperature is between 65°F (18°C) to 95°F (35°C).
    - 2) The recommended ambient temperature is 70°F (21°C) to 80°F (27°C).
    - 3) The recommended relative humidity is less than 70 percent.
      - a) If above 70 percent, do the optional elevated temperature cure in the step that follows.
    - 4) Center the clearcoat application over the leading edge of FE-AS-20 layer, with about 0.50 in. (12.70 mm) wide clear layer over the FE-AS-20 layer, and about 0.50 in. (12.70 mm) wide clear layer extending over the abraded aluminum.
    - 5) Make a record of the time when the coating application is complete:
    - The 3 paint products that follow are approved substitute materials for coating, C50262, when applied correctly.
      - a) coating, C50263
      - b) Akzo Nobel 683-3-2 coating, C00012
      - c) Akzo Nobel 683-3-20 coating, C50238.

#### SUBTASK 55-35-01-370-014

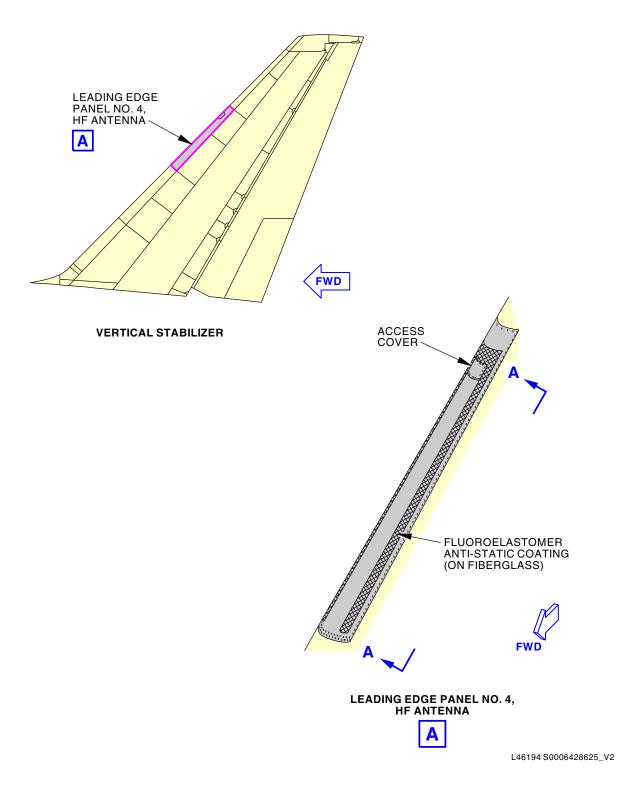
- (17) Full cure of the FE-AS (or FE-AS-20) anti-static layer is 7 days at room temperature. Do not use elevated-temperature cure until a minimum 12 hours after application of the FE-AS-20 anti-static topcoat. Optional cures are:
  - (a) 12 hours at room temperature plus 3 hours at 140°F (60°C) to 160°F (71°C) or,
  - (b) 12 hours at room temperature plus 12 hours at 120°F (49°C) to 140°F (60°C).
  - (c) Do not exceed 180°F (82°C) or damage can occur.

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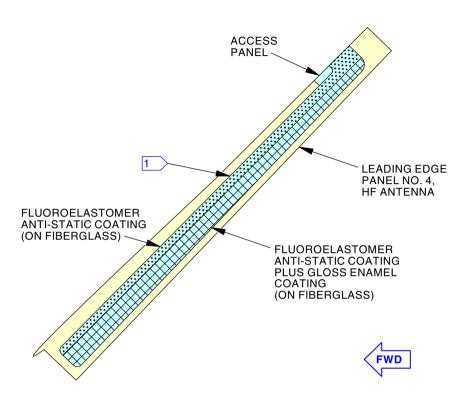
Leading Edge Panel No. 4, HF Antenna Figure 801/55-35-01-990-802 (Sheet 1 of 2)

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LEADING EDGE PANEL NO. 4, HF ANTENNA (LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)

A-A

1 NO BMS 10-60 TYPE II IS ALLOWED IN THIS AREA

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Leading Edge Panel No. 4, HF Antenna Figure 801/55-35-01-990-802 (Sheet 2 of 2)

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## TASK 55-35-01-400-802

# 6. Polyurethane Protective Tape (PPT) - Installation

## A. General

(1) This task includes the steps to install the polyurethane protective tape (PPT) to the HF antenna for erosion protection.

## B. Tools/Equipment

Reference	Description
STD-821	Squeegee - Plastic

## C. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
C00012	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-2 Base with X-310A Catalyst (Akzo Nobel Aerospace Coatings)	
C50006	Coating - Gloss Polyurethane - Caapcoat FP-200	BAC5880 TYPE I CLASS 5
C50238	Coating - Akzo Nobel Clear Polyurethane Topcoat, 683-3-20 Base with X-310A Catalyst (Akzo Nobel Aerospace Coatings)	
G50078	Abrasive - Aluminum Oxide Paper, 320 grit or finer	
G50632	Towel - Paper, Wypall X80 (Packaged in Brag-Box, 1\4 Fold, Pop-Up Box and Jumbo Rolls)	
G51114	Tape - 3M 8673 Polyurethane Protective Tape	

# D. Location Zones

Zone	Area
321	Vertical Stabilizer Leading Edge

# E. Prepare to Install the Polyurethane Protective Tape (PPT)

SUBTASK 55-35-01-860-002



REMOVE ELECTRICAL POWER FOR THE HF COMMUNICATION SYSTEM BEFORE YOU PERFORM VERTICAL-STABILIZER HF-ANTENNA LEADING-EDGE-PANEL REPAIRS. HF SIGNALS CAN CAUSE ELECTRICAL SHOCKS AND INJURIES TO PERSONS.

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

## **Overhead Circuit Breaker Panel, P11**

Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	2	C23301	L HF COMM
G	15	C23300	R HF COMM

## SUBTASK 55-35-01-010-001

(2) If you are installing the 3M 8673 tape, G51114 (or equivalent) as a temporary repair, do the steps that follow.

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- (a) If the existing Caapcoat FP-200 coating, C50006 is damaged, remove as much of the Caapcoat FP-200 coating, C50006 as possible without damaging the fiberglass window of the HF antenna.
  - The preferred method of removal is to peel off the Caapcoat FP-200 coating, C50006.
  - 2) If you cannot peel off the Caapcoat FP-200 coating, C50006, trim any loose material.
    - a) Make sure you do not damage the fiberglass window.
    - b) Carefully sand the surface of the HF antenna with 320 grit or finer abrasive paper, G50078 until it is smooth.
    - c) Clean the surface of the HF antenna with a Wypall X80 Paper Towel, G50632 (or equivalent) saturated with alcohol, B00130.

## F. Install the Polyurethane Protective Tape (PPT)

(Figure 802)

#### SUBTASK 55-35-01-800-001

- (1) Cut the 3M 8673 tape, G51114 (or equivalent) to a size that overlaps the surface adjacent to the undamaged surface.
  - (a) The overlap should be 2 in. (51 mm).
  - (b) If you are applying the 3M 8673 tape, G51114 (or equivalent) over the entire fiberglass HF leading edge, the overlap can extend to a maximum of 2 in. (51 mm) onto the metal leading edge.

#### SUBTASK 55-35-01-400-001

(2) Remove the plastic liner from the 3M 8673 tape, G51114 (or equivalent).

#### SUBTASK 55-35-01-400-002

- (3) Install the 3M 8673 tape, G51114 (or equivalent) to the area to cover.
  - (a) Install the 3M 8673 tape, G51114 (or equivalent) dry.
  - (b) Put one end of the 3M 8673 tape, G51114 (or equivalent) onto the surface and use a plastic squeegee, STD-821 to make sure there is no air between the tape and the HF leading edge as you apply the tape.

#### SUBTASK 55-35-01-400-003

- (4) Apply Akzo Nobel 683-3-2 coating, C00012 or Akzo Nobel 683-3-20 coating, C50238 to edge seal the edges of the 3M 8673 tape, G51114 (or equivalent).
  - NOTE: This is to increase durability and longevity of the 3M 8673 tape, G51114 (or equivalent). It is optional to edge seal the tape.
  - (a) Refer to manufacturers instructions for cure times and temperatures for the edge seal coatings.

## SUBTASK 55-35-01-230-001

- (5) Make sure that the edge seal is cured.
  - (a) Rub your fingernail perpendicular to the edge seal.
    - 1) Start at the adjacent substrate and continue onto the marker.

# SUBTASK 55-35-01-800-002

(6) If you do not edge seal the 3M 8673 tape, G51114 (or equivalent), wait 2 hours at 70°F (21°C) for the patch to be cured.

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## SUBTASK 55-35-01-860-003

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

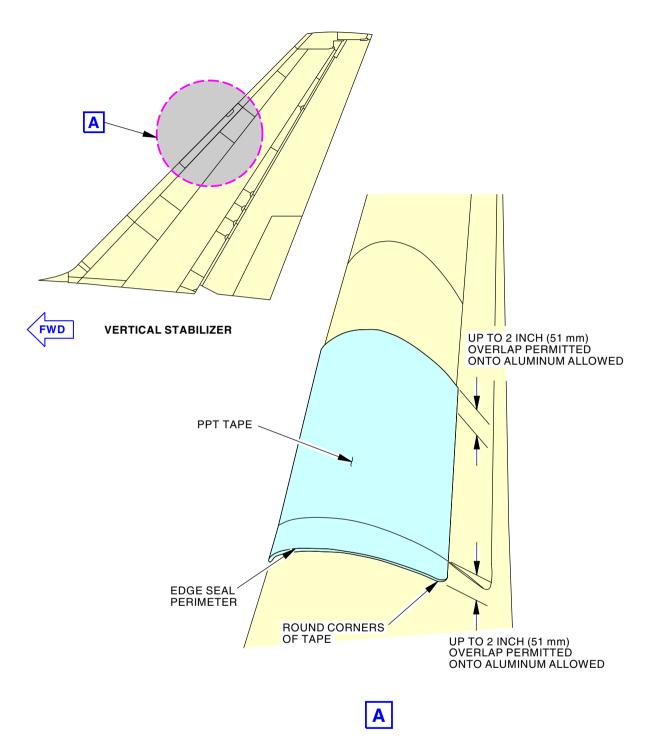
Overhead	Circuit	<b>Breaker</b>	Panel,	P11
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Row	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	2	C23301	L HF COMM
G	15	C23300	R HF COMM

——— END OF TASK ———

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# Polyurethane Protective Tape (PPT) - Installation Figure 802/55-35-01-990-803

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#### VERTICAL STABILIZER TRAILING EDGE SEALS - REMOVAL/INSTALLATION

## 1. General

- A. This procedure has these tasks for the vertical stabilizer:
  - (1) Removal of the trailing edge seals
  - (2) Installation of the trailing edge seals.

#### TASK 55-36-01-000-801

# 2. Vertical Stabilizer Trailing Edge Seal Removal

(Figure 401)

## A. References

Reference	Title
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

# B. Location Zones

Zone	Area
324	Vertical Stabilizer - Rear Spar to Trailing Edge

# C. Prepare for the Removal

SUBTASK 55-36-01-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE RUDDER WHEN YOU WORK ON OR NEAR IT. THE RUDDER MOVES QUICKLY AND WITH FORCE. IF THE RUDDER MOVES WHEN PERSONS ARE NEAR IT, IT CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the rudder as follows:
  - (a) Do this task to remove hydraulic power: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

#### D. Removal

SUBTASK 55-36-01-020-001

- (1) Remove the trailing edge seal [2] as follows:
  - (a) Remove the bolts [1] from the trailing edge seal [2].
  - (b) Remove the grounding fasteners [4] from the trailing edge seal [2].

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- Make a note of the location of each electrical grounding fastener [4] on the seal.
   NOTE: This is to make sure the fasteners are installed in the same locations.
- (c) Remove the seal [2].

----- END OF TASK -----

#### TASK 55-36-01-400-801

# 3. Vertical Stabilizer Trailing Edge Seal Installation

(Figure 401)

# A. References

Reference	Title
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System 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
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements)
	Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 260 Supplier: 55026 Opt Part #: 27 Supplier: 89536
	Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536
	Opt Part #: FLUKE 27 Supplier: 89536
	Opt Part #: MODEL 27 Supplier: 89536

### C. Consumable Materials

Reference	Description	Specification
C00259	Coating - Chemical And Solvent Resistant Finish, Corrosion Inhibiting Primer	BMS10-11 Type I
C00308	Compound - Corrosion Preventive, Petrolatum Hot Application	MIL-C-11796
C00767	Coating - Anti-Static Coating	BMS10-21 Type III

## D. Location Zones

Zone	Area
324	Vertical Stabilizer - Rear Spar to Trailing Edge

# E. Installation

SUBTASK 55-36-01-420-001

(1) Put the seal in its correct position on the trailing edge.

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#### SUBTASK 55-36-01-910-001

- (2) Install the grounding fasteners [4] as follows:
  - (a) Find the grounding fastener [4] locations for electrical grounding.
  - (b) Apply anti-static coating, C00767 to the composite part of each hole.
  - (c) Let the anti-static coating, C00767 dry.
  - (d) Install the grounding fasteners [4] in these holes without sealant.
  - (e) Do a resistance check between the grounding fasteners [4] and the anti-static coating, C00767 using an digital/analog multimeter, COM-1793.
    - 1) Make sure the resistance is 300,000 ohms or less.

#### SUBTASK 55-36-01-910-002

- (3) Install all the remaining bolts [1] as follows:
  - (a) Paint the aluminum parts of the holes with primer, C00259.
  - (b) Let the primer, C00259 dry.
  - (c) Apply corrosion preventive corrosion preventive compound, C00308 to the bolts [1].
  - (d) Install the bolts [1] before the corrosive preventive corrosion preventive compound, C00308 is dry.

#### SUBTASK 55-36-01-220-001

- (4) Do these checks of the flushness and clearance:
  - (a) Make sure the clearance between the seals is 0.00 to 0.06 inch.
  - (b) Make sure the clearance between the seal [2] and the stabilizer skin is 0.03 to 0.09 inch.
  - (c) Make sure the fasteners have a flushness +0.005 inch above to -0.01 inch below seal surface.
- F. Put the airplane back in its usual condition.

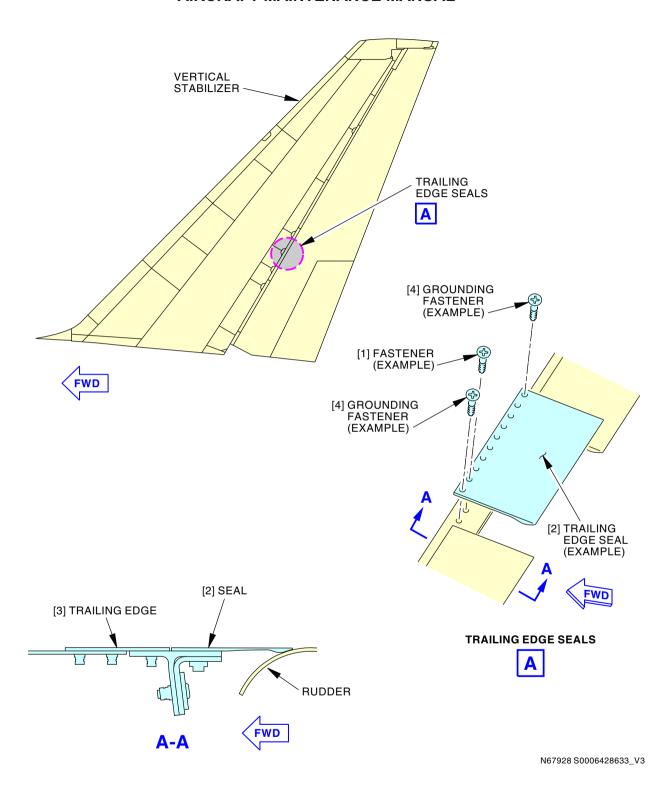
# SUBTASK 55-36-01-860-002

- (1) Make the rudder operable as follows:
  - (a) Do this task to apply hydraulic power, do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R
  - (c) Make sure the amber VALVE CLOSED lights go off.
  - (d) Do this task to remove hydraulic power, do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808

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Vertical Stabilizer Trailing Edge Seal Figure 401/55-36-01-990-801

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### VERTICAL STABILIZER TRAILING EDGE SKIN PANELS - REMOVAL/INSTALLATION

## 1. General

- A. This procedure has these tasks for the vertical stabilizer:
  - (1) Removal of the trailing edge skin panels
  - (2) Installation of the trailing edge skin panels.

#### TASK 55-36-02-000-801

# 2. Vertical Stabilizer Trailing Edge Skin Panel Removal

(Figure 401)

## A. References

Reference	Title
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

# B. Location Zones

Zone	Area
324	Vertical Stabilizer - Rear Spar to Trailing Edge

# C. Prepare for the installation

SUBTASK 55-36-02-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE RUDDER WHEN YOU WORK ON OR NEAR IT. THE RUDDER MOVES QUICKLY AND WITH FORCE. IF THE RUDDER MOVES WHEN PERSONS ARE NEAR IT, IT CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the rudder as follows:
  - (a) Do this task to remove hydraulic power: Main Hydraulic System Power Removal, TASK 29-11-00-860-808
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R.
  - (c) Make sure the amber VALVE CLOSED lights come on for each switch.

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### D. Removal

SUBTASK 55-36-02-020-001



DO NOT REMOVE MORE THAN TWO ADJACENT PANELS ON THE VERTICAL STABILIZER. IF YOU REMOVE MORE THAN TWO ADJACENT PANELS, THIS MAY CAUSE THE HINGE RIBS TO DEFLECT. DEFLECTION OF THE HINGE RIBS MAY CAUSE MISALIGNMENT OF THE RIB DURING FASTENER INSTALLATION OR DIFFICULTY WHEN REINSTALLING ACCESS PANELS.

- (1) Remove the trailing edge skin panel assembly [1] as follows:
  - (a) Remove the bolt [2] from the trailing edge panel assembly [1].
  - (b) Remove the panel assembly [1]



## TASK 55-36-02-400-801

3. Vertical Stabilizer Trailing Edge Skin Panel Installation

(Figure 401)

### A. References

Reference	Title
27-21-11-400-801	Rudder Power Control Units (PCU) Installation (P/B 401)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)

#### B. Consumable Materials

Reference	Description	Specification
A00723	Sealant - Corrosion Inhibitive, 2-Part - PR-1405-G	
A02315	Sealant - Low Density, Synthetic Rubber. 2 Part	BMS5-142 Type II
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796 Class III

# C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Panel assembly	55-36-02-03A-025	ARO ALL
		55-36-02-03A-475	ARO ALL
		55-36-02-04A-030	ARO ALL
		55-36-02-04A-035	ARO ALL
		55-36-02-05A-020	ARO ALL
		55-36-02-05A-025	ARO ALL

#### D. Location Zones

Zone	Area
324	Vertical Stabilizer - Rear Spar to Trailing Edge

## E. Installation

SUBTASK 55-36-02-420-001

(1) Put the panel assembly [1] in its correct position on the trailing edge.

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#### SUBTASK 55-36-02-910-004

(2) Install the bolt [2]:

NOTE: Some panels are attached with two sizes of bolts. The larger diameter bolts, 0.25 inch (6.35mm), must be installed wet with corrosion inhibiting compound. The smaller diameter bolts, 0.19 inch (4.83mm), should be installed dry.

- (a) Apply compound, C00528 to the larger bolt [2] and install wet.
- (b) Install the remaining smaller bolt [2] dry.

#### SUBTASK 55-36-02-220-001

- (3) Do these checks of the flushness and clearance:
  - (a) Make sure the gap at the top, forward, and bottom edges of the is within the limits shown in Figure 401 (Sheet 1).
  - (b) Make sure the gap between the trailing edge of the panel assembly [1]] and the trailing edge seal [3] is within the limits shown in Figure 401 (Sheet 1).
  - (c) Make sure the bolt [2] have a flushness +0.005 inch above to -0.01 inch below panel surface.

#### SUBTASK 55-36-02-910-003

(4) Fill the clearances with the sealant, A02315 except, do not fill gaps adjacent to the vertical fin left side trailing edge panels between rudder stations 199.209 and 274.120.

NOTE: This operation may be deferred to allow for immediate dispatch. This may lead to panel edge damage and water getting into the structure. Sealing can be done next maintenance stop.

#### SUBTASK 55-36-02-910-005

(5) Put a bead of the PR-1405-G sealant, A00723 around the edge of the vertical fin left side trailing edge panels between rudder stations 199.209 and 274.120 (TASK 27-21-11-400-801).

### F. Put the Airplane Back in Its Usual Condition

## SUBTASK 55-36-02-860-002

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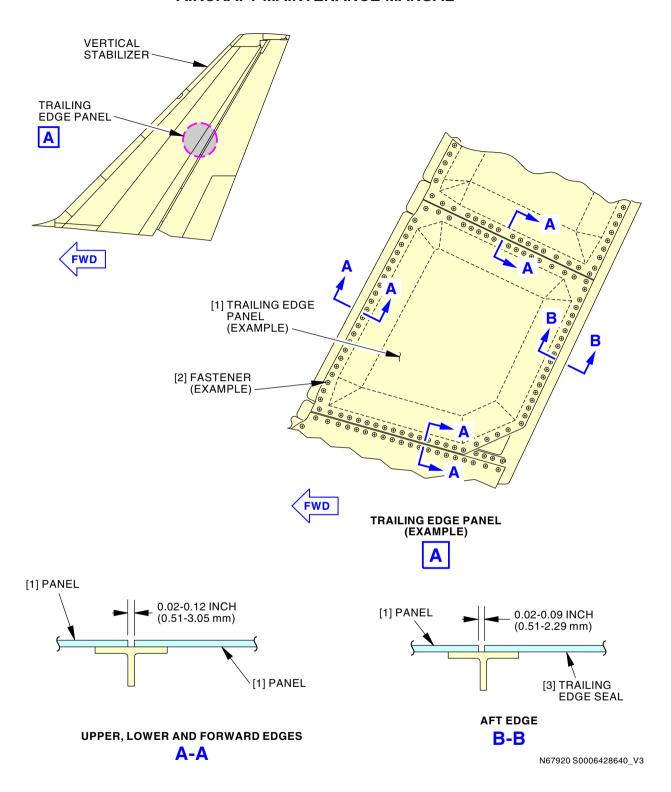
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- (1) Make the rudder operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L
    - 2) TAIL, C
    - 3) TAIL, R
  - (c) Make sure the amber VALVE CLOSED lights go off.
  - (d) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808

END	$\bigcirc$ E	TAC	V	

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Vertical Stabilizer Trailing Edge Panels Installation Figure 401/55-36-02-990-801

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### **RUDDER HINGE FITTINGS - REMOVAL/INSTALLATION**

## 1. General

- A. This procedure has these tasks for the vertical stabilizer:
  - (1) Removal of one or more of the rudder hinge fittings
  - (2) Installation of the rudder hinge fittings.

#### TASK 55-37-02-000-801

# 2. Rudder Hinge Fitting Removal

(Figure 401)

## A. References

Reference	Title
27-21-12-000-801	Rudder Removal (P/B 401)
29-11-00-860-808	Main Hydraulic System 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-1712	Lock, Rudder Power Control Unit
	Part #: J27028-21 Supplier: 81205

#### C. Location Zones

Zone	Area
324	Vertical Stabilizer - Rear Spar to Trailing Edge

## D. Prepare for the Removal

SUBTASK 55-37-02-010-001

(1) If you will remove all of the rudder hinge plate assemblies, do this task: Rudder Removal, TASK 27-21-12-000-801.

SUBTASK 55-37-02-860-001



YOU MUST PREVENT ALL POSSIBLE OPERATION OF THE RUDDER WHEN YOU WORK ON OR NEAR IT. THE RUDDER MOVES QUICKLY AND WITH FORCE. IF THE RUDDER MOVES WHEN PERSONS ARE NEAR THE RUDDER, IT CAN CAUSE INJURY TO THEM.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WHEN YOU REMOVE HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. ACCIDENTAL MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (2) If you will not remove all of the rudder hinge plate assemblies, prevent all possible operation of the rudder as follows:
  - (a) Push and hold the right rudder pedal to move the rudder fully to the right.
  - (b) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

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- (c) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R
- (d) Make sure the amber VALVE CLOSED lights come on.
- (e) Release the rudder pedal.
- (f) Install the rudder power control unit lock, SPL-1712 on the three rudder actuators to prevent all rudder movement.

#### E. Removal Procedure

SUBTASK 55-37-02-020-001

- (1) Disconnect the rudder at the applicable hinge plate assembly. To disconnect it, do this task: Rudder Removal, TASK 27-21-12-000-801.
  - (a) If the hinge plate assembly is located at STA 199.209, 224.179, or 249.150, disconnect the rudder hinge plate assembly with a rudder push/pull control rod:
    - 1) Remove the nut, washer, and bolt to disconnect the rudder push/pull control rod.

SUBTASK 55-37-02-020-003

- (2) Remove the hinge plate assembly as follows:
  - (a) Remove the sealant from the 2 washers.
  - (b) Remove the nut, washer, bolt, and washer, from the two locations on the rudder hinge.
  - (c) Remove the rudder hinge plate assembly.



## TASK 55-37-02-400-801

## 3. Rudder Hinge Fitting Installation

(Figure 401)

#### A. References

Reference	Title
27-21-12-400-801	Rudder Installation (P/B 401)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System 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-1712	Lock, Rudder Power Control Unit
	Part #: J27028-21 Supplier: 81205

## C. Consumable Materials

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental -	BMS5-95
	Chromate Type	

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## (Continued)

Reference	Description	Specification
C00033	Coating - Protective Enamel, Flexibility Use	BMS10-60 Type II
C00175	Primer - Urethane Compatible, Corrosion Resistant (Less Than 1% Aromatic Amines)	BMS10-79 Type III

#### D. Location Zones

Zone	Area
324	Vertical Stabilizer - Rear Spar to Trailing Edge

#### E. Installation Procedure

#### SUBTASK 55-37-02-420-001

- (1) Install the rudder hinge plate assembly that you removed, as follows:
  - (a) Put the rudder hinge in the correct position at the end of the hinge rib.
  - (b) Install the washer, bolt, washer, and nut in the two locations to attach the rudder hinge to the hinge rib.



YOU MUST IDENTIFY THE CORRECT TORQUE VALUE FOR EACH SPECIFIC HINGE PLATE LOCATION. OVER TORQUING OR UNDER TORQUING THE NUTS CAN DAMAGE THE STRUCTURE.

(c) Tighten the nut with the torque value given in (Figure 401). The torque value will depend upon the station number and location of the hinge plate.

#### SUBTASK 55-37-02-910-001

- (2) Apply sealant, A00247 to the rudder hinge plate assembly, as follows:
  - (a) Apply a fillet of sealant, A00247 to the two washers.
  - (b) Paint the fillet seals with primer, C00175 and allow it to dry.
  - (c) Paint the fillet seals with enamel coating, C00033.

#### SUBTASK 55-37-02-420-002

(3) If you removed the rudder, do this task: Rudder Installation, TASK 27-21-12-400-801.

## SUBTASK 55-37-02-420-003

- (4) If you did not remove the rudder, do these steps to connect the rudder to the rudder hinge plate assembly:
  - (a) Connect the rudder to the applicable hinge plate assembly. To connect it, do this task: Rudder Installation, TASK 27-21-12-400-801
    - 1) For rudder hinge plate assemblies with a push/pull control rod, install the nut, washer, and bolt to attach the rudder push/pull control rod.
  - (b) Remove the rudder power control unit lock, SPL-1712 from the three rudder actuators.

## F. Put the Airplane Back to Its Usual Condition

#### SUBTASK 55-37-02-860-002

- (1) Make the rudder operable as follows:
  - (a) Do this task: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.
  - (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
    - 1) TAIL, L

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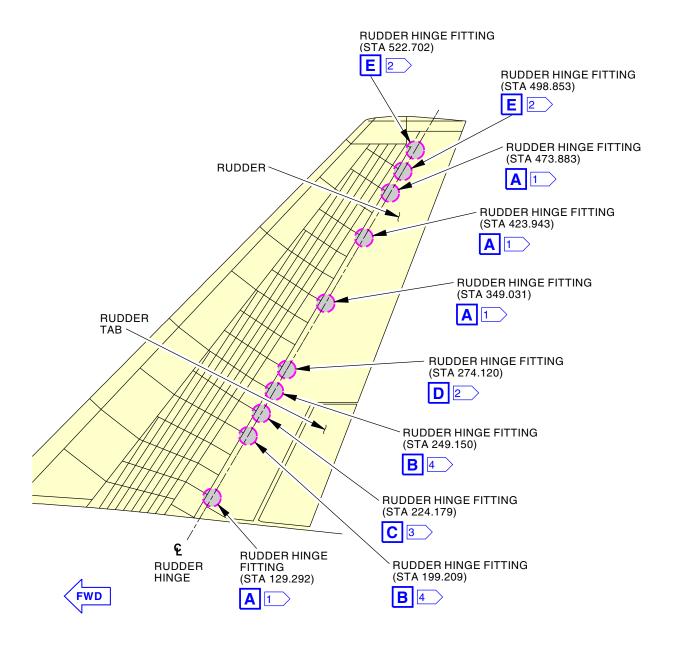


- 2) TAIL, C
- 3) TAIL, R
- (c) Make sure the amber VALVE CLOSED lights go off.
- (d) Do this task: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

——— END OF TASK ———

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## **VERTICAL STABILIZER (FIN)**

TORQUE NUTS TO 150-200 INCH-POUNDS

2 TORQUE NUTS TO 240-300 INCH-POUNDS

3 TORQUE NUTS TO 290-350 INCH-POUNDS

> TORQUE NUTS TO 1400-1900 INCH-POUNDS

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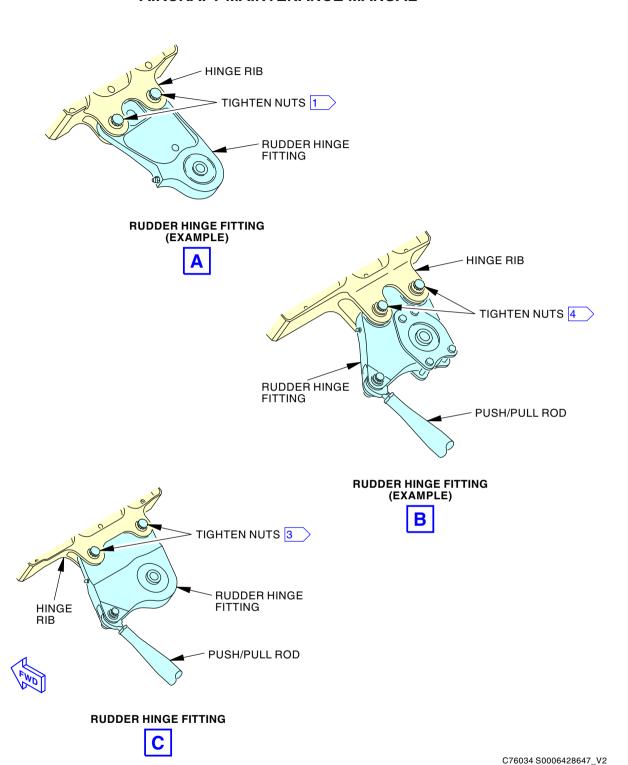
# Rudder Hinge Fitting Torque Figure 401/55-37-02-990-801 (Sheet 1 of 3)

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Rudder Hinge Fitting Torque Figure 401/55-37-02-990-801 (Sheet 2 of 3)

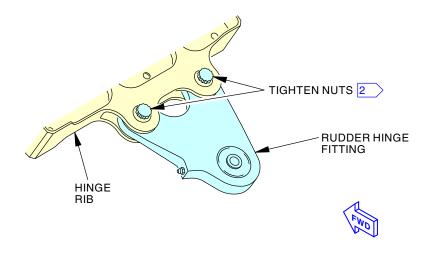
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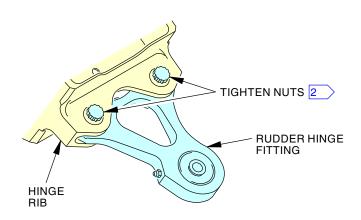
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# **RUDDER HINGE FITTING**





# RUDDER HINGE FITTING (EXAMPLE)



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Rudder Hinge Fitting Torque Figure 401/55-37-02-990-801 (Sheet 3 of 3)

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### **RUDDER CONDUCTING STRIP - REPAIRS**

#### 1. General

- A. This section contains one task:
  - (1) The repair of a conducting strip of the static discharger.
- B. The repair of the conducting strip is as follows:
  - (1) Remove the static dischargers.
  - (2) Remove the damaged conducting strip.
  - (3) Clean the new conducting strip.
  - (4) Bond the new conducting strip to the rudder.
  - (5) Install the static dischargers.
  - (6) Apply a smooth finish to the conducting strip.
- C. This procedure gives instructions to repair the items as follows:
  - (1) The aluminum conducting strip found on the rudder inboard of the static dischargers.
    - (a) You must replace the conducting strip if more than half the width of the strip is damaged.
  - (2) The static discharger attaches to the rudder.
    - (a) Static dischargers also attach to the conducting strip. Bond the conducting strip with adhesive to the rudder surface. Then the conducting strip is electrically bonded to the rudder grounding strap.
    - (b) If the electrical bond of the ground strap to the conducting strip becomes weak, these conditions will follow:
      - 1) The static dischargers to the rudder can become electrically isolated.
      - 2) The static dischargers will not operate.
    - (c) If you find these conditions, you must repair the electrical bond of the ground strap.

#### TASK 55-38-03-300-801

## 2. Repair the Conducting Strip

## A. References

Reference	Title
20-10-27-400-801	Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard (P/B 201)
20-41-00-760-801	Electrical Bonding (P/B 201)
23-61-01-400-801	Static Discharger Installation (P/B 201)
29-11-00-860-801	Main Hydraulic System Pressurization (P/B 201)
29-11-00-860-808	Main Hydraulic System Power Removal (P/B 201)
SRM 51-70-04	Structural Repair Manual
SRM 51-70-09	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.

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Reference	Description	
COM-1550	Bonding Meters - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550).	
	Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: T477W Supplier: 01014 Opt Part #: M1B Supplier: 3AD17	
STD-765	Scraper - Plastic	
STD-1177	Harness - Body	

#### C. Consumable Materials

Reference	Description	Specification
A01076	Adhesive - Synthetic Rubber	BAC5010 Type 93 (BMS5-95 Class B)
A50103	Sealant - Pressure And Environmental-Chromate, Type II, Class B-2	BMS 5-95, Type II Class B-2
B01000	Solvent - General Cleaning Of Metal	
C00033	Coating - 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
C00862	Coating - Chemical Conversion - Bonderite M-CR 600 Aero (Formerly Alodine 600)	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A
G50077	Abrasive - Aluminum Oxide Paper, 240 grit or finer	

## D. Location Zones

Zone	Area
325	Rudder

# E. Prepare for the Removal

SUBTASK 55-38-03-860-001



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.



MAKE SURE THAT PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ELEVATOR SURFACES BEFORE YOU REMOVE HYDRAULIC PRESSURE TO THE PCUS. WITHOUT HYDRAULIC PRESSURE, THE SURFACE WILL LOWER SLOWLY. THE MOVEMENT OF ELEVATOR SURFACES CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Prevent all possible operation of the rudder as follows:
  - a) Do this task to remove hydraulic power: Main Hydraulic System Power Removal, TASK 29-11-00-860-808.

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- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the SHUT OFF position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R.
- (c) Make sure the amber VALVE CLOSED lights come on for each switch.
- (2) Attach a safety body harness, STD-1177, do this task: Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, Attach Flight Control and Nacelle Surfaces Personnel Equipment Shock Absorbing Lanyard, TASK 20-10-27-400-801.

# F. Remove the conducting strip

SUBTASK 55-38-03-020-001

(1) Trim the conducting strip at the ends of the damaged area, or near the base of each static discharger found at the ends of the damaged area.

NOTE: It is acceptable to trim the conducting strip at the ends of the damage area if the damage area exceeds 50% of the conducting strip in width.

#### SUBTASK 55-38-03-010-001

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

SUBTASK 55-38-03-020-002

- (3) Remove the damaged parts of the conducting strip.
  - (a) Remove the strip with plastic scraper, STD-765 from the rudder where it is possible.
  - (b) As a last step, remove the remaining strip with 240 grit or finer abrasive paper, G50077 or finer.

## G. Prepare to Install the Conducting Strip

SUBTASK 55-38-03-350-001

- (1) Make a new conducting strip from 6061-T4 bare sheet aluminum that is the same size and width of the removed strip.
  - (a) Use the remaining conducting strip found above the static dischargers locations as a template if it is necessary.
    - 1) Use this template to cut the new strip to make a correct fit.
  - (b) For splicing repairs, do the following:
    - 1) Trim the new conducting strip ends, leaving a 0.25 inch (6.35 mm) at each end of the splice strip.

#### SUBTASK 55-38-03-350-002

- (2) Drill holes in the new strip to align with the attach holes in the remaining strips if it is necessary. SUBTASK 55-38-03-110-001
- (3) Before installation, prepare the new conducting strip:



DO NOT GET THE SOLVENT IN YOUR MOUTH, EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM IT. PUT ON GOGGLES, AND GLOVES WHEN YOU USE IT. KEEP IT AWAY FROM SPARKS, FLAMES, AND HEAT. IT IS POISONOUS AND FLAMMABLE. THE SOLVENT CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(a) Use a Series 80 solvent, B01000 to clean the conducting strip.

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- (b) Dip the conducting strip in coating, C00851.
- (c) Flush the conducting strip with clean water.
- (d) Dry the strip with a cotton wiper, G00034.
- (e) Apply primer, C00175.
- (f) For the side that you bond, rub smooth with 240 grit or finer abrasive paper, G50077 or finer.
- (g) Use a cotton wiper, G00034 to wipe that side clean.

#### SUBTASK 55-38-03-420-001

- (4) Install the conducting strip:
  - (a) Apply Series 80 solvent, B01000 to the area where you removed the conducting strip.
  - (b) 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.
  - (c) Use the Phosphoric Acid Containment System (PACS) Procedure to prepare the conductive strip and the repair area for bonding SRM 51-70-09.
  - (d) Apply a thin layer of adhesive, A01076 to the rudder and to the conducting strip.
  - (e) 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.
  - (f) Remove the unwanted adhesive with a cotton wiper, G00034 lightly moist with a Series 80 solvent. B01000.
    - NOTE: Do not permit the solvent to get in the area that you bond.
  - (g) Apply pressure and dry the bond, SRM 51-70-04.

## SUBTASK 55-38-03-400-001

- (5) To complete the static discharger installation, you must obey Static Discharger Installation, TASK 23-61-01-400-801 and the instructions that follow:
  - (a) Apply sealant, A50103 if it is necessary to fill the space where the new conducting strip makes an overlap with the remaining strip.
  - (b) Use the intrinsically safe approved bonding meter, COM-1550 to make sure that the resistance between the discharger base and the conducting strip is 0.1 ohm, Electrical Bonding, TASK 20-41-00-760-801.

## H. Conducting Strip Finish

SUBTASK 55-38-03-370-001

- (1) Apply Bonderite M-CR 600 Aero coating, C00862 to bare metal surface of conducting strip.
- (2) Apply primer, C00175 to any exposed surfaces.
- (3) Apply coating, C00033 to cover the primer.

### I. Put the airplane back in its usual condition:

SUBTASK 55-38-03-860-002

- (1) Make the rudder operable as follows:
  - (a) Do this task to apply hydraulic power: Main Hydraulic System Pressurization, TASK 29-11-00-860-801.

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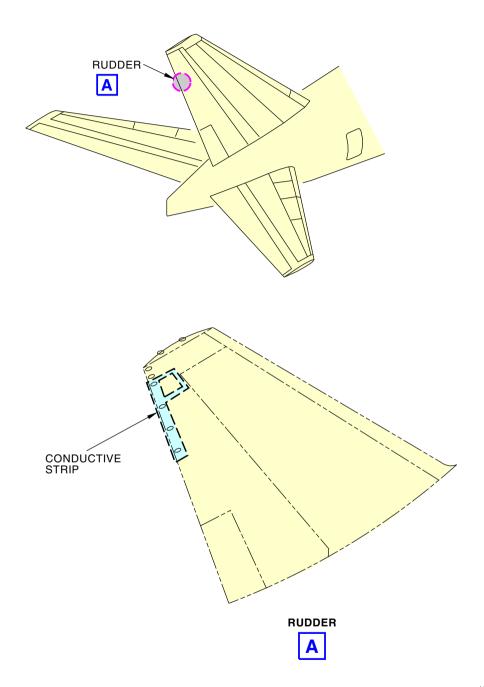


- (b) Move these FLT CONTROL HYD VALVE POWER switches on the pilot's overhead panel to the NORM position:
  - 1) TAIL, L
  - 2) TAIL, C
  - 3) TAIL, R
- (c) Make sure the amber VALVE CLOSED lights go off for each switch.

----- END OF TASK -----

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Rudder Conducting Strip Repair Figure 801/55-38-03-990-801

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