CHAPTER

49

AUXILIARY POWER UNIT

CHAPTER 49
AUXILIARY POWER UNIT

Subject/Page	Date	COC
49-EFFECTIVE PAGES		
1	JUN 15/2016	
2	BLANK	
49-010-00-01	SYS	
1	Jun 15/2015	
2	Feb 15/2015	
3	Feb 15/2015	
4	Oct 15/2015	
5	Oct 15/2015	
49-020-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Feb 15/2015	
4	Feb 15/2015	
5	Oct 15/2015	
6	Oct 15/2015	
49-030-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Oct 15/2015	
4	Oct 15/2015	
49-040-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Feb 15/2015	
4	Feb 15/2015	
5	Oct 15/2014	
49-052-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Feb 15/2015	
49-062-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Feb 15/2015	
49-072-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Feb 15/2015	
49-082-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Feb 15/2015	
49-102-00-01	SYS	
1	Jun 15/2015	
2	Feb 15/2015	
3	Feb 15/2015	
4	Feb 15/2015	
5	Feb 15/2015	
6	Feb 15/2015	
7	Feb 15/2015	
49-140-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Feb 15/2015	
4	Oct 15/2015	
49-172-00-01	SYS	
1	Jun 15/2015	
2	Oct 15/2015	
3	Oct 15/2015	
4	Feb 15/2015	
5	Oct 15/2015	
49-212-00-01	SYS	
1	Jun 15/2015	
2	Feb 15/2015	
3	Feb 15/2015	
4	Oct 15/2015	
49-220-00-01	SYS	
1	Jun 15/2015	
2	Feb 15/2015	
3	Feb 15/2015	
4	Feb 15/2015	
49-220-00-01	SYS (cont)	
5	Oct 15/2015	
6	Oct 15/2015	
49-240-00-01	SYS	
1	Oct 15/2015	
2	Feb 15/2015	
3	Oct 15/2014	
4	Oct 15/2015	

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

49-EFFECTIVE PAGES

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		APU MOUNTS			49-010-00-01
DATE	TASK				RELATED CARD
	INSPECTION - GEN VISUAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	1.1	5 YR	5 YR	AIRPLANE: ALL / ENGINE: ALL
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A			315 316

Perform a general visual inspection of the APU mounts for general condition and security of installation.

A. References

Reference	Title
AMM 49-13-11-200-801	APU Mounts Inspection (APU Removed) (P/B 601)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-010-00-01

MECH | INSP

TASK 49-13-11-200-803

1. APU Mounts Inspection (APU Installed)

(Figure 1)

A. Prepare for the Inspection

SUBTASK 49-13-11-860-002

(1) Make sure the APU master switch on the P5 forward overhead panel is OFF and install a DO-NOT-OPERATE tag.

SUBTASK 49-13-11-860-003

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-13-11-010-005

(3) To open the access panel, do these steps:

Number	Name/Location
315A	APU Cowl Door

(a) Support the APU panel (cowl door) under the center latch.

(b) Open the three latches.

NOTE: Use this sequence: forward latch, aft latch, middle latch.

(c) Open the APU Cowl Door, 315A.

(d) Remove the retainer pin from the rod end of the forward hold-open rod on the APU Cowl Door, 315A

(e) Remove the retainer pin from the spring clip on the aft hold-open rod.

(f) Disconnect the two hold-open rods from the two spring clips.

(g) Connect the two rod ends of the two hold-open rods to the two brackets in the APU compartment.

(h) Install the two retainer pins in the two rod ends.

B. Procedure

SUBTASK 49-13-11-210-002

(1) Do these steps to inspect the APU mounts (Figure 1):

(a) Make sure all connections for the APU mounts are tight.

(b) Visually examine these parts of the APU mounts that you can get access for corrosion, cracks and damage:

1) Strut assemblies (APU mounts)

2) Vibration isolators

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-010-00-01

MECH	INSP

3) Cone bolts and nuts for the vibration isolator.

(c) If you find corrosion, cracks or damage to these parts, then you must inspect the APU mounts with the APU removed. To inspect them, do this task: APU Mounts Inspection (APU Removed), AMM TASK 49-13-11-200-801.

C. Put the Airplane Back to Its Usual Condition

SUBTASK 49-13-11-410-003

(1) To close the access panel, do these steps

Number	Name/Location
315A	APU Cowl Door

(a) Remove the two retainer pins from the two hold-open rods in the APU compartment.

(b) Disconnect the two hold-open rods from the two brackets.

(c) Put the two hold-open rods in the two spring clips on the APU Cowl Door, 315A.

(d) Install the retainer pin in the rod end of the forward hold-open rod.

(e) Install the retainer pin to the spring clip on the aft hold-open rod.

(f) Close the APU Cowl Door, 315A.

(g) Close the three latches.

NOTE: Use this sequence: middle latch, aft latch, forward latch

SUBTASK 49-13-11-860-004

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

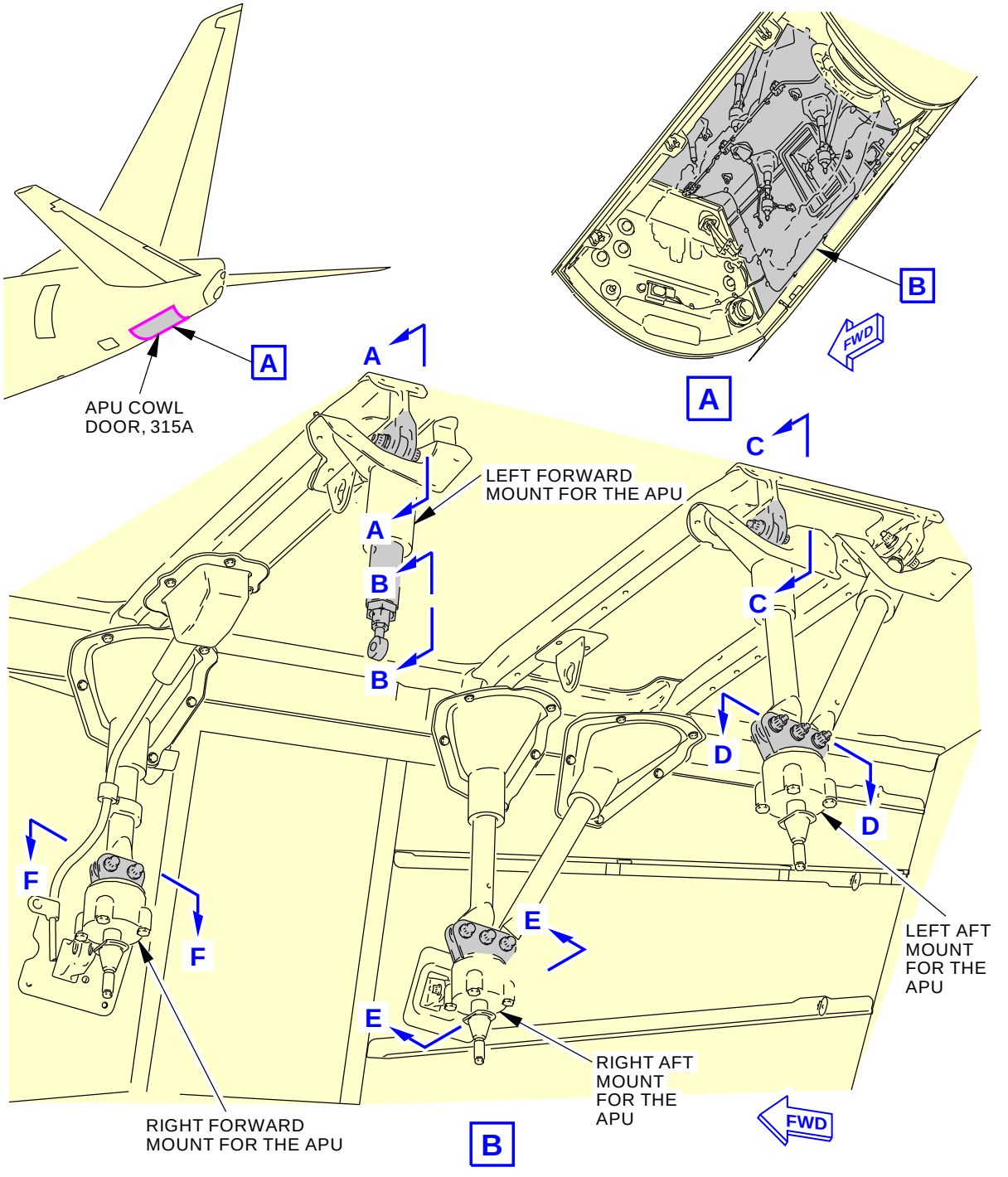
Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-13-11-860-005

(3) Remove the DO-NOT-OPERATE tag from the APU master switch on the P5 forward overhead panel.

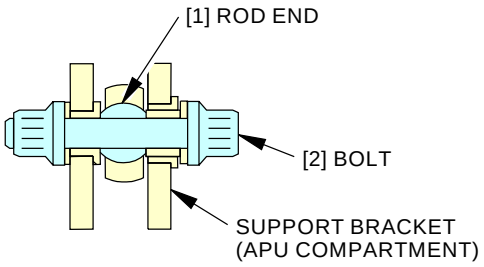
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-010-00-01



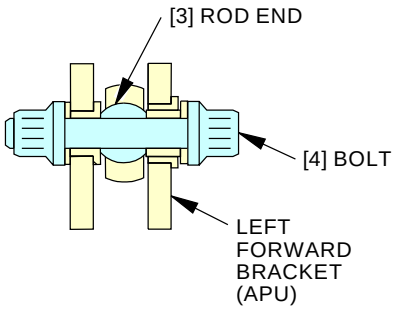
APU Mounts Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-010-00-01

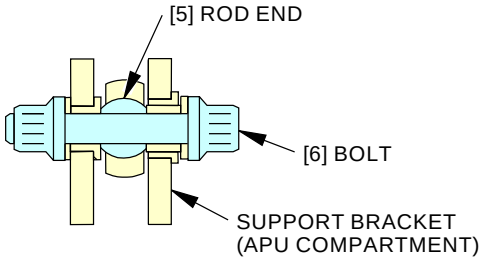


(2 LOCATIONS ON THE TWO FORWARD MOUNTS)

A-A

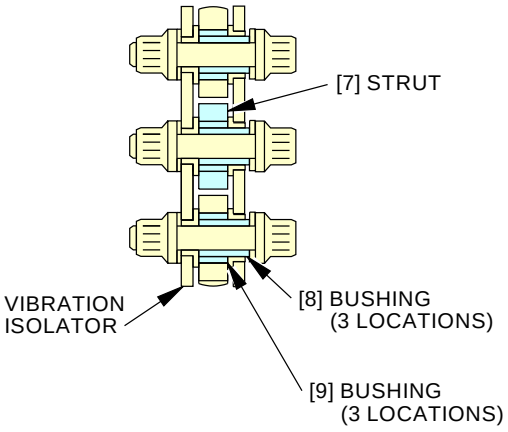


B-B



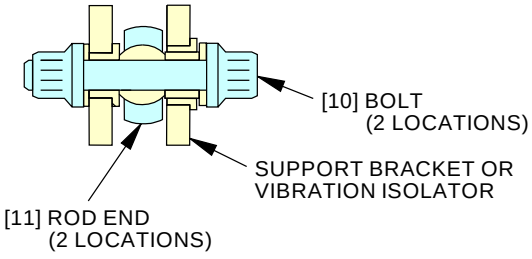
(4 LOCATIONS ON THE TWO AFT MOUNTS)

C-C

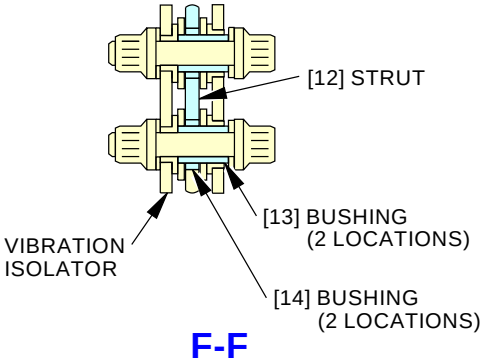


(2 LOCATIONS ON THE TWO AFT MOUNTS)

D-D



E-E



F-F

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APU Mounts Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		APU MOUNTS			**49-020-00-01**
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	**1.1**	**8 YR**	**8 YR**	AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A			**315 316**

Perform a detailed inspection of the APU mounts.

A. References

Reference	Title
AMM 49-11-00-000-801	APU Power Plant Removal (P/B 401)
AMM 49-11-00-400-801	APU Power Plant Installation (P/B 401)
AMM 49-13-11-000-802	APU Mounts Removal (P/B 401)
AMM 49-13-11-400-802	APU Mounts Installation (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-020-00-01

MECH | INSP

TASK 49-13-11-200-801

1. APU Mounts Inspection (APU Removed)

(Figure 1)

A. Procedure

SUBTASK 49-13-11-210-001

(1) Do these steps to inspect the APU mounts:

(a) Remove the APU (AMM TASK 49-11-00-000-801).

(b) Do the steps to remove the firewall cover and flameshield from the mount, as necessary to view the mount (AMM TASK 49-13-11-000-802).

(c) Visually examine these parts for corrosion, cracks and damage:

1) Strut assemblies (APU mounts)

2) Vibration isolators

3) Cone bolts and nuts for the vibration isolator.

(d) If you find corrosion, cracks or damage, then do these steps:

1) Remove the parts for the APU mounts that you find with corrosion, cracks or damage (AMM TASK 49-13-11-000-802).

2) Visually examine the bolts and bushings for corrosion, wear and damage.

a) Replace the bolts and bushings that you find with corrosion or damage.

b) Replace all the parts that are more than the permitted wear limits shown in (Table 1).

Table 1 APU Mount Inspection

		DIMENSION	DESIGN LIMITS		WEAR LIMITS		
ITEM NUMBER	PART	INNER DIAMETER (ID) / OUTER DIAMETER (OD)	DIAMETER		PERMITTED WEAR	MAXIMUM CLEARANCE	REPAIR
			MINIMUM	MAXIMUM			
			INCH (MM)	INCH (MM)	INCH (MM)	INCH (MM)	
1	ROD END	ID	0.3120 (7.92)	0.3125 (7.94)	0.3175 (8.06)	0.0100 (0.25)	*[1]
2	BOLT	OD	0.3115 (7.91)	0.3120 (7.92)	0.3060 (7.77)	0.0100 (0.25)	*[1]
3	ROD END	ID	0.2495 (6.34)	0.2500 (6.35)	0.2550 (6.48)	0.0100 (0.25)	*[1]
4	BOLT	OD	0.2490 (6.32)	0.2495 (6.34)	0.2435 (6.18)	0.0100 (0.25)	*[1]
5	ROD END	ID	0.3120 (7.92)	0.3125 (7.94)	0.3175 (8.06)	0.0100 (0.25)	*[1]

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-020-00-01

MECH | INSP

Table 1 APU Mount Inspection (Continued)

ITEM NUMBER	PART	DIMENSION	DESIGN LIMITS		WEAR LIMITS		REPAIR
		INNER DIAMETER (ID) / OUTER DIAMETER (OD)	DIAMETER		PERMITTED WEAR	MAXIMUM CLEARANCE	
			MINIMUM	MAXIMUM			
			INCH (MM)	INCH (MM)	INCH (MM)	INCH (MM)	
6	BOLT	OD	0.3115 (7.91)	0.3120 (7.92)	0.3060 (7.77)	0.0100 (0.25)	*[1]
7	STRUT	ID	0.5625 (14.29)	0.5631 (14.30)	-----	-----	*[2]
8	BUSHING	OD	0.4365 (11.09)	0.4370 (11.10)	0.4315 (10.96)	0.0100 (0.25)	*[1]
9	BUSHING	OD	0.5631 (14.30)	0.5638 (14.32)	-----	-----	*[3]
		ID	0.4400 (11.18)	0.4415 (11.21)	0.4465 (11.34)	0.0100 (0.25)	*[1]
10	BOLT	OD	0.2490 (6.32)	0.2495 (6.34)	0.2435 (6.18)	0.0100 (0.25)	*[1]
11	ROD END	ID	0.2497 (6.34)	0.2502 (6.36)	0.2552 (6.48)	0.0100 (0.25)	*[1]
12	STRUT	ID	0.5625 (14.29)	0.5631 (14.30)	-----	-----	*[2]
13	BUSHING	OD	0.4365 (11.09)	0.4370 (11.10)	0.4315 (10.96)	0.0100 (0.25)	*[1]
14	BUSHING	OD	0.5631 (14.30)	0.5638 (14.32)	-----	-----	*[3]
		ID	0.4400 (11.18)	0.4415 (11.21)	0.4465 (11.34)	0.0100 (0.25)	*[1]

*[1] REPLACE WHEN WORN

*[2] OVERSIZE STRUT HOLE MUST NOT BE MORE THAN 0.625 INCH (15.88 MM) IN DIAMETER

*[3] REPLACE WITH OVERSIZE BUSHING

3) Examine the four bolts and four lockwashers that attach each housing assembly to each vibration isolator for tightness and missing part(s).

   a) If it is necessary, tighten the bolts or replace the missing part(s).

4) Visually examine the surface of each vibration isolator for scratches, nicks, burrs, corrosion, galling, fretting and wear.

   a) If the individual damaged area is more than 0.500 in. (12.7 mm) diameter by 0.020 in. (0.51 mm) depth or 1.000 in. (25 mm) length by 0.100 in. (2.5 mm) width by 0.020 in. (0.51 mm) depth, replace the vibration isolator.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-020-00-01

MECH	INSP

b) If the total damaged area is more than 15% of the total surface area for the vibration isolator, replace the vibration isolator.

5) Visually examine the threads of the cone bolts and nuts on the vibration isolator for galling, wear and damage.

a) Replace the vibration isolator and nuts that you find with galling, wear or damage.

6) Install the new or serviceable part(s) for the APU mounts (AMM TASK 49-13-11-400-802).

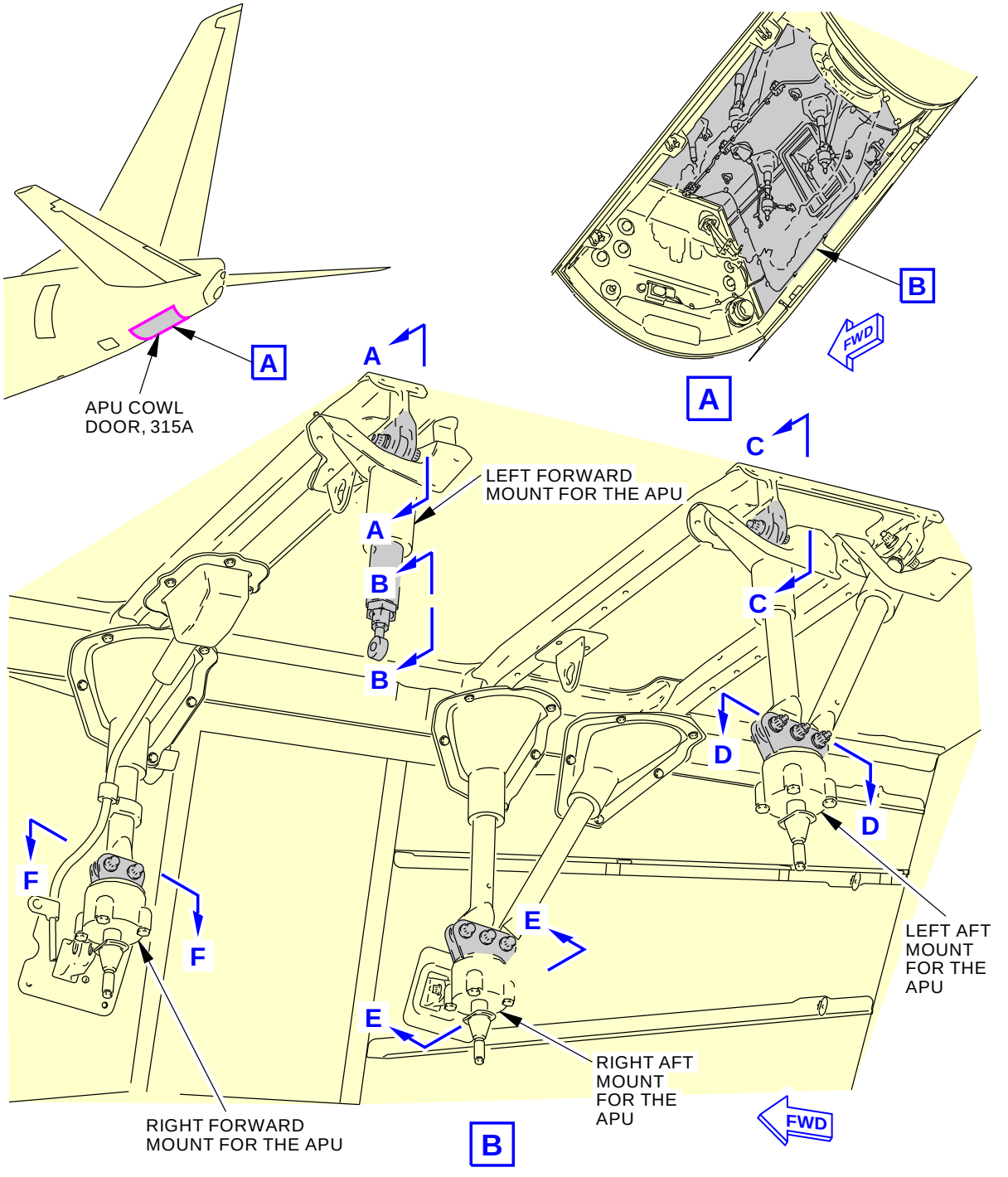
(e) Make sure all connections for the APU mounts and support brackets are tight.

(f) Do the steps to examine and install the firewall cover and flameshield, as necessary (AMM TASK 49-13-11-400-802).

(g) Install the APU (AMM TASK 49-11-00-400-801).

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-020-00-01



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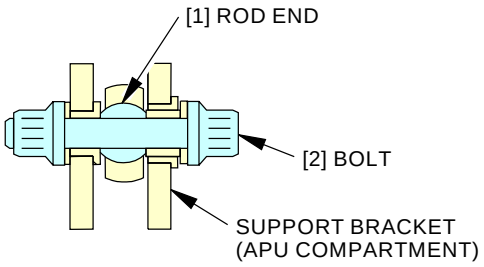
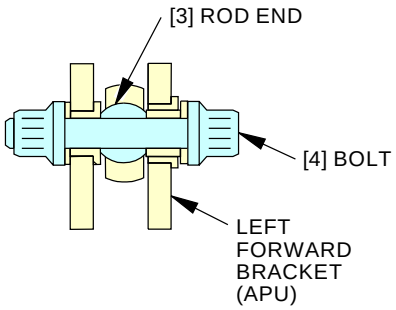
APU Mounts Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-020-00-01

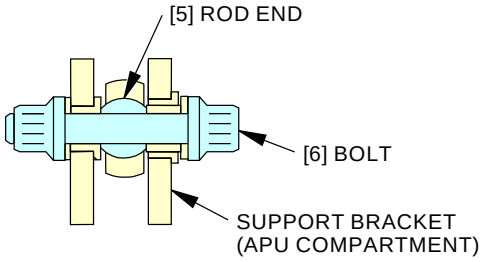


(2 LOCATIONS ON THE TWO FORWARD MOUNTS)

A-A

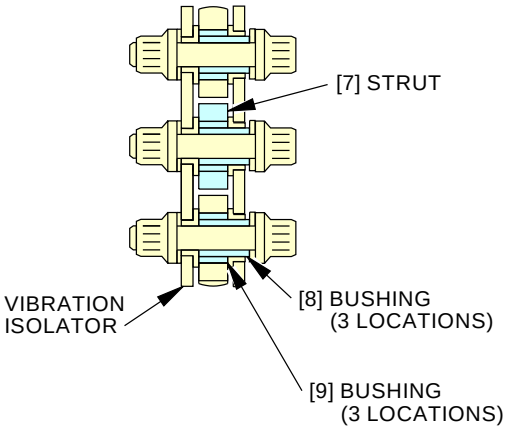


B-B



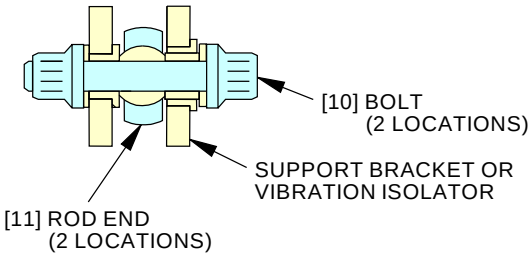
(4 LOCATIONS ON THE TWO AFT MOUNTS)

C-C

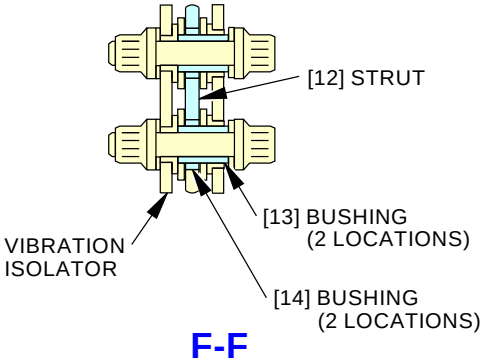


(2 LOCATIONS ON THE TWO AFT MOUNTS)

D-D



E-E



F-F

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APU Mounts Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		SIGMA SEAL			49-030-00-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	1.1	APU CNG		AIRPLANE: ALL / ENGINE: ALL
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A			316

Perform a detailed inspection of the sigma seal (after APU removal).

A. References

Reference	Title
AMM 49-11-00-000-801	APU Power Plant Removal (P/B 401)
AMM 49-11-00-400-801	APU Power Plant Installation (P/B 401)
AMM 49-15-11-000-801	Air Inlet Seal Removal (P/B 401)
AMM 49-15-11-400-801	Air Inlet Seal Installation (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-030-00-01

MECH | INSP

TASK 49-15-11-200-801

1. Air Inlet Seal Inspection

(Figure 1)

A. Prepare for the Removal

SUBTASK 49-15-11-010-001

(1) Remove the APU. To remove it, do this task: APU Power Plant Removal, AMM TASK 49-11-00-000-801.

B. Procedure

SUBTASK 49-15-11-210-001

(1) Do these steps to inspect the air inlet seal [1]:

(a) Examine the air inlet seal [1] for any signs of folding, tears or deformation.

(b) Measure the height of the air inlet seal [1].

NOTE: The height from the bottom to the top of the air inlet seal [1] must be 1.375-1.625 inches (34.9-41.3 mm).

(c) Make sure the retainer plate and stiffener plate are attached to (have not disbonded from) the air inlet seal [1].

NOTE: You can find the retainer plate between the 32 screws and the air inlet seal [1]. You can find the stiffener plate on the bottom of the air inlet seal.

(d) Examine the mating surfaces of the air inlet seal [1] for wrinkles, bubbles, unwanted materials or wear damage through the top rubber layer of fiberglass.

(e) Examine the seven rubber layers of fiberglass for any separations, missing materials, cracks and tears.

(f) If you find any of the above damage or the height of the air inlet seal [1] is not in the limits, replace the air inlet seal. These are the tasks:

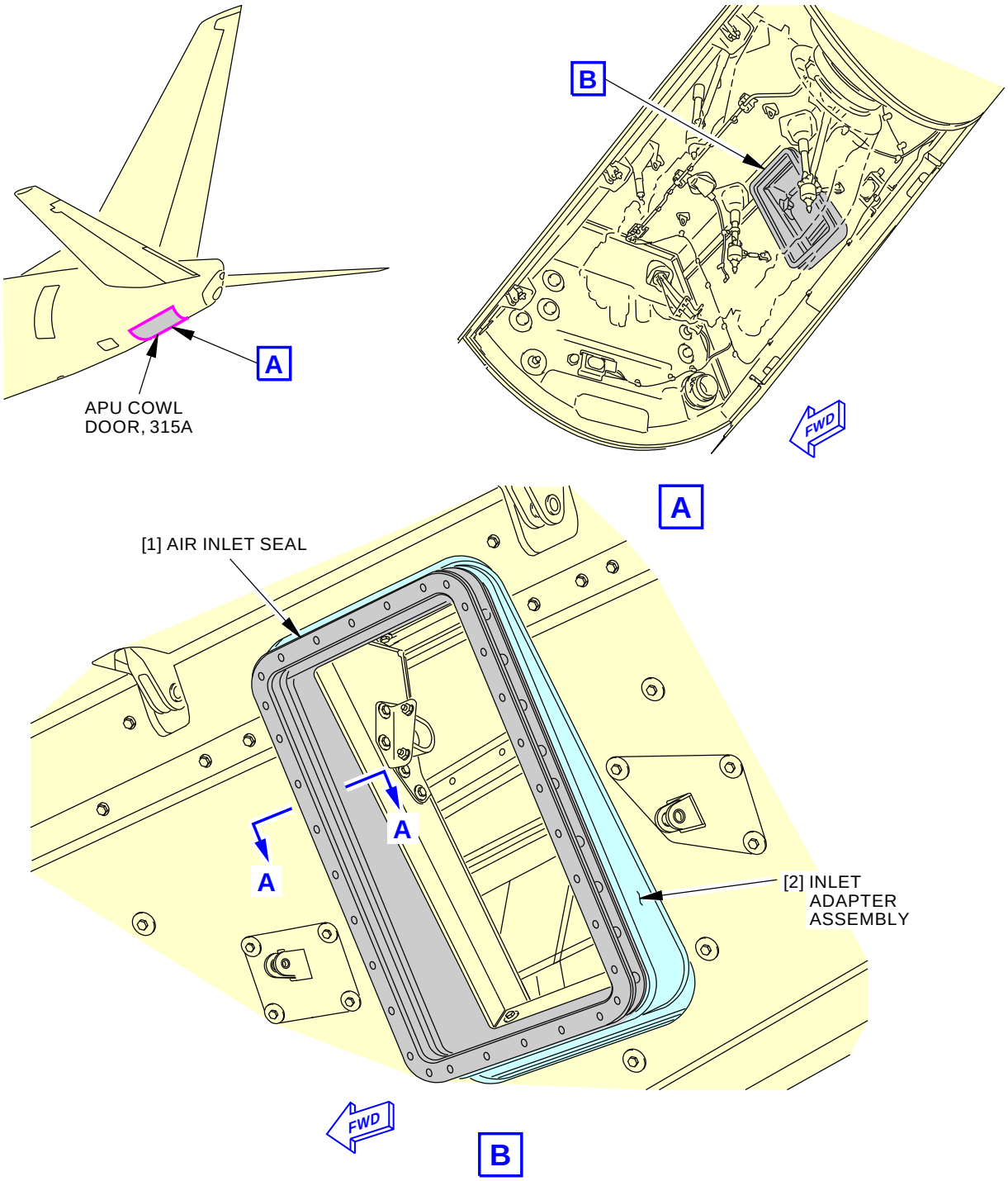
- Air Inlet Seal Removal, AMM TASK 49-15-11-000-801
- Air Inlet Seal Installation, AMM TASK 49-15-11-400-801

SUBTASK 49-15-11-410-001

(2) Install the APU. To install it, do this task: APU Power Plant Installation, AMM TASK 49-11-00-400-801.

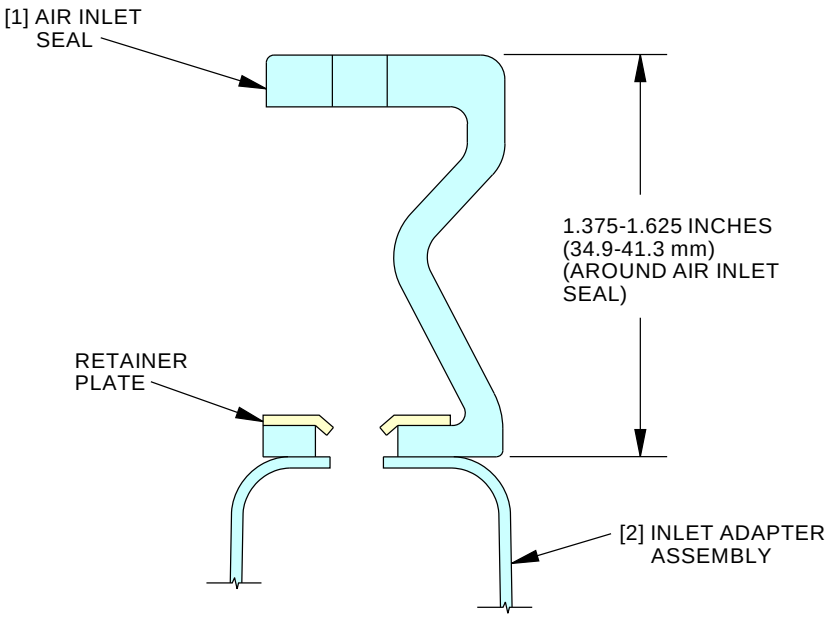
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-030-00-01



Air Inlet Seal Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-030-00-01



A-A

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Air Inlet Seal Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		APU INSULATION PANELS			**49-040-00-01**
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	**1.1**	**APU CNG**		AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A			**315 316**

Perform a detailed inspection of the APU insulation panels. (After APU removal).

A. References

Reference	Title
AMM 49-11-00-000-801	APU Power Plant Removal (P/B 401)
AMM 49-11-00-400-801	APU Power Plant Installation (P/B 401)
AMM 49-17-11-000-801	Insulation Panel Removal (P/B 401)
AMM 49-17-11-300-801	Repair of the APU Insulation Panel (P/B 801)
AMM 49-17-11-400-801	Insulation Panel Installation (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-040-00-01

MECH | INSP

TASK 49-17-11-200-801

1. Insulation Panel Inspection

A. Prepare for the Inspection

SUBTASK 49-17-11-860-001

(1) Make sure the APU master switch on the P5 forward overhead panel is OFF and install a DO-NOT-OPERATE tag.

SUBTASK 49-17-11-860-002

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-17-11-010-006

(3) To open the access panel, do these steps:

Number	Name/Location
315A	APU Cowl Door

(a) Support the APU panel (cowl door) under the center latch.

(b) Open the three latches.

NOTE: Use this sequence: forward latch, aft latch, middle latch.

(c) Open the APU Cowl Door, 315A.

(d) Remove the retainer pin from the rod end of the forward hold-open rod on the APU Cowl Door, 315A

(e) Remove the retainer pin from the spring clip on the aft hold-open rod.

(f) Disconnect the two hold-open rods from the two spring clips.

(g) Connect the two rod ends of the two hold-open rods to the two brackets in the APU compartment.

(h) Install the two retainer pins in the two rod ends.

SUBTASK 49-17-11-010-001

(4) If you will do a full inspection of the seven insulation panels, do this task: APU Power Plant Removal, AMM TASK 49-11-00-000-801.

NOTE: It is necessary to remove the APU to inspect all the surfaces of the top insulation panel.

NOTE: It is not necessary to remove the APU if you do a general visual inspection of the seven insulation panels.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-040-00-01

MECH | INSP

B. Procedure

SUBTASK 49-17-11-210-003

(1) Do these steps to inspect the insulation panels for fluid contamination and structural damage:

(a) Examine the insulation panels for signs of fluid contamination to the core insulation material.

(b) Examine the surface of the insulation panels for missing weld stitches, missing metal sheets, ruptured seams or structural metal deterioration.

(c) Examine the insulation panels for holes that have gone through the inner and outer metal sheets.

(d) If you find any of the above damage, replace the insulation panel(s). These are the tasks:

- Insulation Panel Removal, AMM TASK 49-17-11-000-801
- Insulation Panel Installation, AMM TASK 49-17-11-400-801

1) After the insulation panel(s) are removed, do these steps:

a) Examine the structure behind the insulation panel(s) for contamination and damage.

b) Examine the air inlet scoop for blockage of unwanted materials and damage that can cause a decrease in air flow.

NOTE: You can find the air inlet scoop behind the forward insulation panel.

c) If you find blockage of unwanted materials, remove the blockage.

d) If you find contamination or damage, clean and repair the problems that you find.

SUBTASK 49-17-11-210-004

(2) Do these steps to inspect the insulation panels for other structural damage limits:

(a) Examine the outer metal sheet on the insulation panel for holes and tears.

1) Holes less than 0.25 inch (6.4 mm) in diameter are permitted.

2) Tears less than 2 in. (51 mm) in length and less than 0.05 in. (1.27 mm) in width are permitted.

(b) Examine the damaged areas of the insulation panels.

1) If you find more than 0.5 inch (13 mm) of the outer metal sheet around the damaged area(s), you can repair the insulation panel.

NOTE: This limit includes the distance from the damaged area to a grommet, sharp bend, edge of the metal sheet or attaching parts.

(c) If you find the above damage and the damage is in the limits, do this task: Repair of the APU Insulation Panel, AMM TASK 49-17-11-300-801.

NOTE: CMM 49-17-00 can be used to repair damage less than 6 inches.

(d) If you find the above damage and the damage is more than the limits, replace the insulation panel(s). These are the tasks:

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-040-00-01

MECH | INSP

- Insulation Panel Removal, AMM TASK 49-17-11-000-801
- Insulation Panel Installation, AMM TASK 49-17-11-400-801

1) After the insulation panel(s) are removed, do these steps:

a) Examine the structure behind the insulation panel(s) for contamination and damage.

b) Examine the air inlet scoop for blockage of unwanted materials and damage that can cause a decrease in air flow.

NOTE: You can find the air inlet scoop behind the forward insulation panel.

c) If you find blockage of unwanted materials, remove the blockage.

d) If you find contamination or damage, clean and repair the problems that you find.

SUBTASK 49-17-11-410-001

(3) If the APU was removed during the inspection of the insulation panel(s), do this task: APU Power Plant Installation, AMM TASK 49-11-00-400-801.

C. Put the Airplane Back to Its Usual Condition

SUBTASK 49-17-11-860-003

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-17-11-860-004

(2) Remove the DO-NOT-OPERATE tag from the APU master switch on the P5 forward overhead panel.

SUBTASK 49-17-11-410-005

(3) To close the access panel, do these steps

Number	Name/Location
315A	APU Cowl Door

(a) Remove the two retainer pins from the two hold-open rods in the APU compartment.

(b) Disconnect the two hold-open rods from the two brackets.

(c) Put the two hold-open rods in the two spring clips on the APU Cowl Door, 315A.

(d) Install the retainer pin in the rod end of the forward hold-open rod.

(e) Install the retainer pin to the spring clip on the aft hold-open rod.

(f) Close the APU Cowl Door, 315A.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-040-00-01

MECH	INSP

(g) Close the three latches.

NOTE: Use this sequence: middle latch, aft latch, forward latch

SUBTASK 49-17-11-410-007

(4) If the APU was removed, do this task: AMM TASK 49-11-00-400-801

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		ENGINE COMPRESSOR IMPELLER			**49-052-00-01**
DATE	TASK **REPLACE**				RELATED CARD **W-49-062-00-01** **W-49-072-00-01** **W-49-082-00-01**
TAIL NUMBER	WORK AREA **APU COMPARTMENT**	VERSION **1.1**	THRESHOLD **LIF LIM**	REPEAT	APPLICABILITY
STATION	SKILL **ENGIN**	**NOTE**			AIRPLANE **ALL** ENGINE **ALL**
		ACCESS **315A**			ZONE **315 316**

Discard the engine compressor impeller.

INTERVAL NOTE: Refer to APU shop manual for life limits.

A. References

Reference	Title
AMM 49-11-00-000-802	APU Power Plant Removal (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-000-803	APU Power Plant Removal (Hydraulic Jack Procedure) (P/B 401)
AMM 49-11-00-400-802	APU Power Plant Installation (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-400-803	APU Power Plant Installation (Hydraulic Jack Procedure) (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-052-00-01

MECH	INSP

TASK 49-11-00-000-801

1. APU Power Plant Removal

A. APU Power Plant Removal

SUBTASK 49-11-00-020-001

(1) Do one of these tasks to remove the APU:

(a) Do this task: APU Power Plant Removal (Fishpole Hoist Procedure), AMM TASK 49-11-00-000-802.

(b) Do this task: APU Power Plant Removal (Hydraulic Jack Procedure), AMM TASK 49-11-00-000-803.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-052-00-01

MECH | INSP

TASK 49-11-00-400-801

2. APU Power Plant Installation

A. APU Power Plant Installation

SUBTASK 49-11-00-420-001

(1) Do one of these tasks to install the APU:

(a) Do this task: APU Power Plant Installation (Fishpole Hoist Procedure), AMM TASK 49-11-00-400-802.

(b) Do this task: APU Power Plant Installation (Hydraulic Jack Procedure), AMM TASK 49-11-00-400-803.

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		FIRST STAGE TURBINE DISK			**49-062-00-01**
DATE	TASK				RELATED CARD
	REPLACE				**W-49-052-00-01** **W-49-072-00-01** **W-49-082-00-01**
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	**1.1**	**LIF LIM**		AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL	**NOTE**			
	ENGIN				
		ACCESS			ZONE
		315A			**315 316**

Discard the first stage turbine disk.

INTERVAL NOTE: Refer to APU shop manual for life limits.

A. References

Reference	Title
AMM 49-11-00-000-802	APU Power Plant Removal (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-000-803	APU Power Plant Removal (Hydraulic Jack Procedure) (P/B 401)
AMM 49-11-00-400-802	APU Power Plant Installation (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-400-803	APU Power Plant Installation (Hydraulic Jack Procedure) (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-062-00-01

MECH	INSP

TASK 49-11-00-000-801

1. APU Power Plant Removal

A. APU Power Plant Removal

SUBTASK 49-11-00-020-001

(1) Do one of these tasks to remove the APU:

(a) Do this task: APU Power Plant Removal (Fishpole Hoist Procedure), AMM TASK 49-11-00-000-802.

(b) Do this task: APU Power Plant Removal (Hydraulic Jack Procedure), AMM TASK 49-11-00-000-803.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-062-00-01

MECH	INSP

TASK 49-11-00-400-801

2. APU Power Plant Installation

A. APU Power Plant Installation

SUBTASK 49-11-00-420-001

(1) Do one of these tasks to install the APU:

(a) Do this task: APU Power Plant Installation (Fishpole Hoist Procedure), AMM TASK 49-11-00-400-802.

(b) Do this task: APU Power Plant Installation (Hydraulic Jack Procedure), AMM TASK 49-11-00-400-803.

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		SECOND STAGE TURBINE ROTOR			**49-072-00-01**
DATE	TASK				RELATED CARD
	REPLACE				**W-49-052-00-01** **W-49-062-00-01** **W-49-082-00-01**
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	**1.1**	**LIF LIM**		AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL	**NOTE**			
	ENGIN				
		ACCESS			ZONE
		315A			**315 316**

Discard the second stage turbine rotor.

INTERVAL NOTE: Refer to APU shop manual for life limits.

A. References

Reference	Title
AMM 49-11-00-000-802	APU Power Plant Removal (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-000-803	APU Power Plant Removal (Hydraulic Jack Procedure) (P/B 401)
AMM 49-11-00-400-802	APU Power Plant Installation (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-400-803	APU Power Plant Installation (Hydraulic Jack Procedure) (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-072-00-01

MECH	INSP

TASK 49-11-00-000-801

1. APU Power Plant Removal

A. APU Power Plant Removal

SUBTASK 49-11-00-020-001

(1) Do one of these tasks to remove the APU:

(a) Do this task: APU Power Plant Removal (Fishpole Hoist Procedure), AMM TASK 49-11-00-000-802.

(b) Do this task: APU Power Plant Removal (Hydraulic Jack Procedure), AMM TASK 49-11-00-000-803.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-072-00-01

MECH	INSP

TASK 49-11-00-400-801

2. APU Power Plant Installation

A. APU Power Plant Installation

SUBTASK 49-11-00-420-001

(1) Do one of these tasks to install the APU:

(a) Do this task: APU Power Plant Installation (Fishpole Hoist Procedure), AMM TASK 49-11-00-400-802.

(b) Do this task: APU Power Plant Installation (Hydraulic Jack Procedure), AMM TASK 49-11-00-400-803.

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		TURBINE SHAFT			**49-082-00-01**
DATE	TASK				RELATED CARD
	REPLACE				**W-49-052-00-01** **W-49-062-00-01** **W-49-072-00-01**
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	**1.1**	**LIF LIM**		AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL	**NOTE**			
	ENGIN				
		ACCESS			ZONE
		315A			**315 316**

Discard the turbine shaft.

INTERVAL NOTE: Refer to APU shop manual for life limits.

A. References

Reference	Title
AMM 49-11-00-000-802	APU Power Plant Removal (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-000-803	APU Power Plant Removal (Hydraulic Jack Procedure) (P/B 401)
AMM 49-11-00-400-802	APU Power Plant Installation (Fishpole Hoist Procedure) (P/B 401)
AMM 49-11-00-400-803	APU Power Plant Installation (Hydraulic Jack Procedure) (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-082-00-01

MECH	INSP

TASK 49-11-00-000-801

1. APU Power Plant Removal

A. APU Power Plant Removal

SUBTASK 49-11-00-020-001

(1) Do one of these tasks to remove the APU:

(a) Do this task: APU Power Plant Removal (Fishpole Hoist Procedure), AMM TASK 49-11-00-000-802.

(b) Do this task: APU Power Plant Removal (Hydraulic Jack Procedure), AMM TASK 49-11-00-000-803.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-082-00-01

MECH | INSP

TASK 49-11-00-400-801

2. APU Power Plant Installation

A. APU Power Plant Installation

SUBTASK 49-11-00-420-001

(1) Do one of these tasks to install the APU:

(a) Do this task: APU Power Plant Installation (Fishpole Hoist Procedure), AMM TASK 49-11-00-400-802.

(b) Do this task: APU Power Plant Installation (Hydraulic Jack Procedure), AMM TASK 49-11-00-400-803.

——— END OF TASK ———

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		FUEL INLET FILTER ELEMENT			**49-102-00-01**
DATE	TASK				RELATED CARD
	REPLACE				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	**1.1**	**4000 AH**	**4000 AH**	AIRPLANE **ALL** / ENGINE **ALL**
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A			**315 316**

Discard the fuel inlet filter element on the fuel control unit (FCU).

A. References

Reference	Title
AMM 49-11-00-860-801	APU Starting and Operation - Activation (P/B 201)
AMM 49-11-00-860-802	APU Usual Shutdown (P/B 201)

B. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
D00341	Lubricant - Polyphenyl Ether, Vacuum Pump - Santovac 5	
D00504	Grease - Petrolatum	VV-P-236
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

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
STD-1057	Air Source - Regulated, Dry Filtered, Compressed 60-105 PSIG (414-723.9 KPa)(22 SCFM)
STD-4049	Container - Fuel Resistant, 1 Gallon (4 Liters)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-102-00-01

MECH | INSP

TASK 49-31-21-000-801

1. Inlet Fuel Filter Element Removal

(Figure 1)

A. Prepare for the Removal

SUBTASK 49-31-21-860-001

(1) Make sure the APU master switch on the P5 forward overhead panel is OFF and install a DO-NOT-OPERATE tag.

SUBTASK 49-31-21-860-002

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-31-21-010-002

(3) To open the access panel, do these steps:

Number	Name/Location
315A	APU Cowl Door

(a) Support the APU panel (cowl door) under the center latch.

(b) Open the three latches.

NOTE: Use this sequence: forward latch, aft latch, middle latch.

(c) Open the APU Cowl Door, 315A.

(d) Remove the retainer pin from the rod end of the forward hold-open rod on the APU Cowl Door, 315A

(e) Remove the retainer pin from the spring clip on the aft hold-open rod.

(f) Disconnect the two hold-open rods from the two spring clips.

(g) Connect the two rod ends of the two hold-open rods to the two brackets in the APU compartment.

(h) Install the two retainer pins in the two rod ends.

B. Inlet Fuel Filter Element Removal

SUBTASK 49-31-21-020-001

(1) Do these steps to remove the fuel filter element [3]:

(a) Put the 1 gallon (4 l) fuel resistant container, STD-4049 below the fuel filter housing [1].

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-102-00-01

MECH	INSP

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

(b) Loosen the two nuts [4] that attach the fuel filter housing [1] to the fuel control unit.

(c) Turn the fuel filter housing [1] counterclockwise until the flange disengages from the two studs.

(d) Remove the fuel filter housing [1].

(e) Remove the packing [2] from the fuel filter housing [1].

1) Discard the packing [2].

(f) Remove the packing [5] from between the fuel control unit and the fuel filter element [3].

1) Discard the packing [5].

(g) Remove the fuel filter element [3].

1) Discard the fuel filter element [3].

(h) Make sure you install all necessary protection covers.

(i) Remove the 1 gallon (4 l) fuel resistant container, STD-4049.

——— **END OF TASK** ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-102-00-01

MECH | INSP

TASK 49-31-21-400-801

2. Inlet Fuel Filter Element Installation

(Figure 1)

A. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Packing	49-31-11-02-060	AKS ALL
3	Fuel filter element	49-31-11-02-065	AKS ALL
5	Packing	49-31-11-02-055	AKS ALL

B. Procedure

SUBTASK 49-31-21-110-001

(1) Do these steps to clean the fuel filter housing [1]:

(a) Clean the fuel filter housing [1] with alcohol, B00130 and a cotton wiper, G00034.

(b) Use the compressed 60-105 PSIG dry filtered regulated air source, STD-1057 to dry the fuel filter housing [1].

NOTE: It is recommended that you use a pressure of 60-90 psig (414-620 kPa) of air or nitrogen to dry the fuel filter housing [1].

SUBTASK 49-31-21-420-001

CAUTION: REMOVE THE PROTECTION COVERS FROM THE OPENINGS AS NECESSARY. IF YOU DO NOT REMOVE THE PROTECTION COVERS, DAMAGE TO THE APU CAN OCCUR.

(2) Do these steps to install the fuel filter element [3]:

(a) Lubricate the new packing [2] with a light coat of Santovac 5 lubricant, D00341 or grease, D00504.

(b) Install the packing [2] on the fuel filter housing [1].

(c) Lubricate the new packing [5] with a light coat of Santovac 5 lubricant, D00341 or grease, D00504.

(d) Install the new packing [5] on the fuel filter element [3].

(e) Install the fuel filter element [3] in the fuel control unit.

(f) Install the fuel filter housing [1] on the fuel control unit.

(g) Turn the fuel filter housing [1] clockwise until the flange fully engages the two studs.

(h) Tighten the two nuts [4] to 40 pound-inches (4.5 newton-meters).

C. Inlet Fuel Filter Element Installation Test

SUBTASK 49-31-21-860-003

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-31-21-860-004

(2) Remove the DO-NOT-OPERATE tag from the APU master switch on the P5 forward overhead panel.

SUBTASK 49-31-21-790-001

(3) Do the installation test for the fuel filter element:

(a) Do this task: APU Starting and Operation - Activation, AMM TASK 49-11-00-860-801.

NOTE: It may be necessary to start the APU more than three times after you replace the fuel filter element. If you start the APU again, make sure you obey the start duty cycle of three times during a 15 minute interval.

NOTE: Air in the airplane fuel system and/or fuel filter housing can cause an APU BITE maintenance message 49-31171 to show on the control display unit (CDU) display.

(b) Operate the APU for a minimum of five minutes.

(c) During the APU operation, examine the fuel filter housing for signs of fuel leakage.

(d) If you find fuel leakage, do these steps to repair the leakage:

1) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-802.

2) Install a DO-NOT-OPERATE tag to the APU master switch on the P5 forward overhead panel.

3) Repair the cause of the fuel leakage.

4) Remove the DO-NOT-OPERATE tag from the APU master switch on the P5 forward overhead panel.

5) Do this task: APU Starting and Operation - Activation, AMM TASK 49-11-00-860-801.

6) During the APU operation, examine the fuel filter housing for signs of fuel leakage.

7) If you find fuel leakage, do the leakage repair again.

(e) If it is not necessary to do other tasks, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-802.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 49-31-21-410-002

(1) To close the access panel, do these steps

Number	Name/Location
315A	APU Cowl Door

(a) Remove the two retainer pins from the two hold-open rods in the APU compartment.

(b) Disconnect the two hold-open rods from the two brackets.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-102-00-01

MECH	INSP

(c) Put the two hold-open rods in the two spring clips on the APU Cowl Door, 315A.

(d) Install the retainer pin in the rod end of the forward hold-open rod.

(e) Install the retainer pin to the spring clip on the aft hold-open rod.

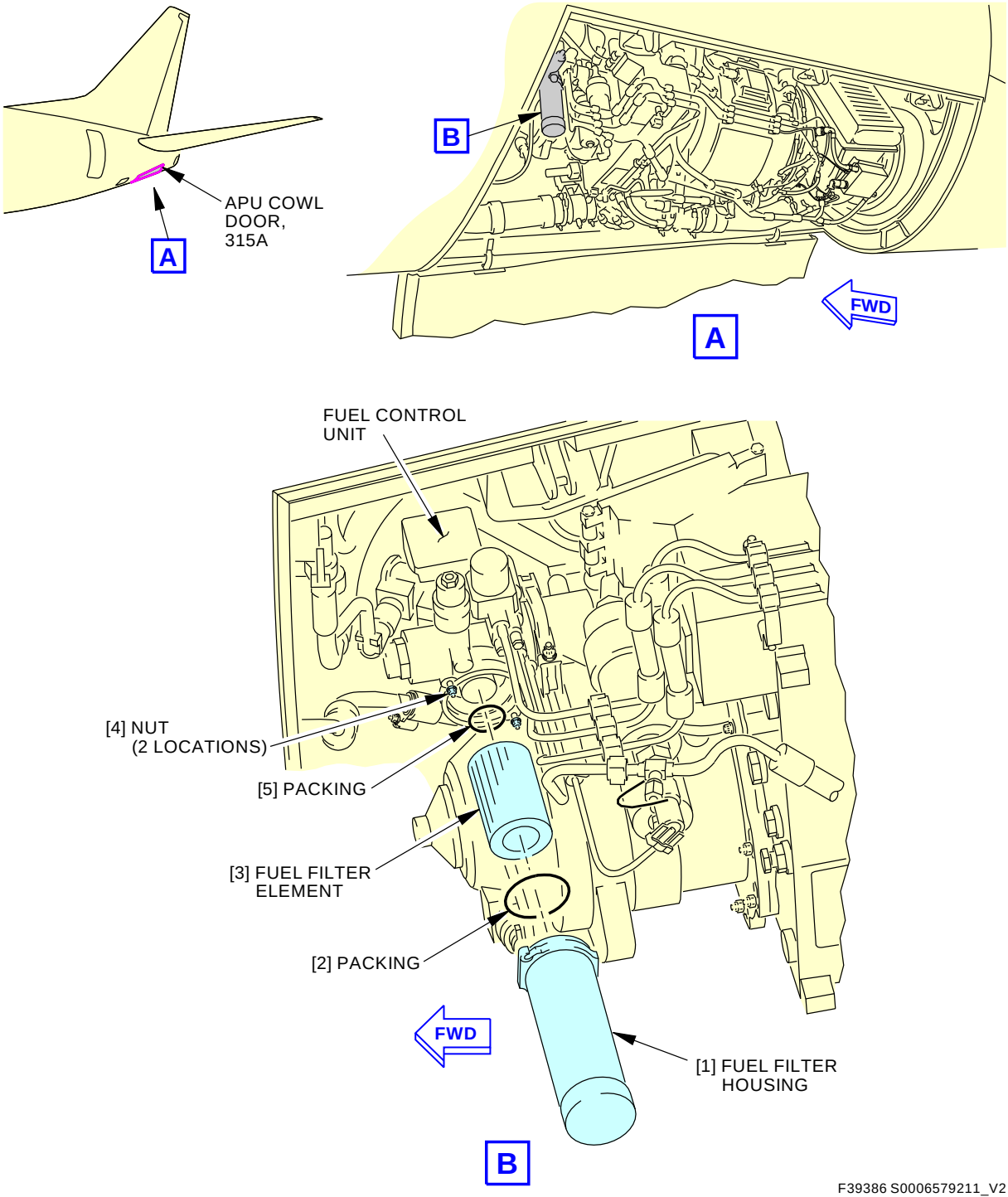
(f) Close the APU Cowl Door, 315A.

(g) Close the three latches.

NOTE: Use this sequence: middle latch, aft latch, forward latch

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-102-00-01



Inlet Fuel Filter Element Installation
Figure 1

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		CDU'S APU MAINTENANCE PAGES			**49-140-00-01**
DATE	TASK				RELATED CARD
	OPERATIONAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	CREW CABIN	**1.1**	**1600 AH**	**1600 AH**	AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE **211**

Perform an operational check of the following by interrogating the CDU's APU maintenance pages.

-APU data memory module (DMM)

-Electronics control unit (ECU)

-Speed Sensor

-EGT rake

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-140-00-01

MECH | INSP

TASK 49-61-00-710-801

1. APU Controls Operational Check

(Figure 1)

A. Procedure

SUBTASK 49-61-00-740-006

(1) Do an APU controls operational check from the MAIN MENU page for the APU BITE TEST:

(a) If you get access to the CDU for the first time or were in an airplane system other than the APU, push the INIT REF function key until the PERF INT page shows on the CDU display.

NOTE: The PERF INT page or IDENT page can show on the CDU display.

(b) If you see the PERF INT or IDENT page, push the line select key adjacent to <INDEX.

NOTE: The INIT/REF INDEX page shows on the CDU display.

(c) If you see the INIT/REF INDEX page, push the line select key adjacent to MAINT>.

NOTE: The MAINT BITE INDEX page shows on the CDU display.

(d) If you see the MAINT BITE INDEX page, push the line select key adjacent to APU>.

NOTE: If the last APU shutdown or cycle was an APU protective shutdown and/or the FAULT light is on, the FAULT HISTORY page for the APU BITE TEST shows on the CDU display. The related problem(s) that caused the APU protective shutdown with the date, Greenwich mean time (GMT) and APU cycle will show on this page.

NOTE: If the MAINT light is on, the CURRENT STATUS page for the APU BITE TEST shows on the CDU display. The related problem(s) that caused the MAINT light to come on will show on this page.

NOTE: If the FAULT and MAINT lights are off and there are no APU protective shutdowns, the MAIN MENU page for the APU BITE TEST shows on the CDU display. You can find the FAULT and MAINT lights on the P5 forward overhead panel.

(e) If you see the FAULT HISTORY page for the APU BITE TEST, push the line select key adjacent to <INDEX to go back to the MAIN MENU page for the APU BITE TEST.

NOTE: The MAIN MENU page shows on the CDU display.

(f) If you see the CURRENT STATUS page for the APU BITE TEST, push the line select key adjacent to <INDEX to go back to the MAIN MENU page for the APU BITE TEST.

NOTE: The MAIN MENU page shows on the CDU display.

(g) When the MAIN MENU page for the APU BITE TEST shows on the CDU display, push the line select key adjacent to <IDENT/CONFIG.

NOTE: The IDENT/CONFIG page shows the first page of two pages of APU and ECU identification/configuration data.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-140-00-01

MECH	INSP

1) The first page shows these APU data:
   a) APU serial number (APU S/N)
   b) Hours of APU operation (APU HOURS)
   c) APU cycles (APU CYCLES)
   d) Hours since installation on the airplane.
2) Make sure there is identification and configuration data for the APU.
3) Push the next page key (NEXT PAGE) to go to the second page which shows these ECU data:
   a) Part number for the ECU hardware (ECU HW P/N)
   b) ECU serial number (ECU S/N)
   c) Part number for the ECU software (ECU OPERATIONAL SW P/N).
4) Make sure there is configuration data for the ECU.

(h) Push the line select key adjacent to <INDEX to go back to the MAIN MENU page for the APU BITE TEST.

NOTE: The MAIN MENU page shows on the CDU display.

(i) Push the line select key adjacent to <INPUT MONITORING.

NOTE: The INPUT MONITORING page shows the first page of four pages of APU engine data.

1) The first page shows these APU engine data:
   a) APU speed (SPEED) (%)
   b) Exhaust gas temperature, T5 (EGT) (°C).
2) If there is an APU operation, make sure there is operational data for the speed sensor and two EGT thermocouples.

(j) Push the line select key adjacent to <INDEX to go back to the MAIN MENU page for the APU BITE TEST.

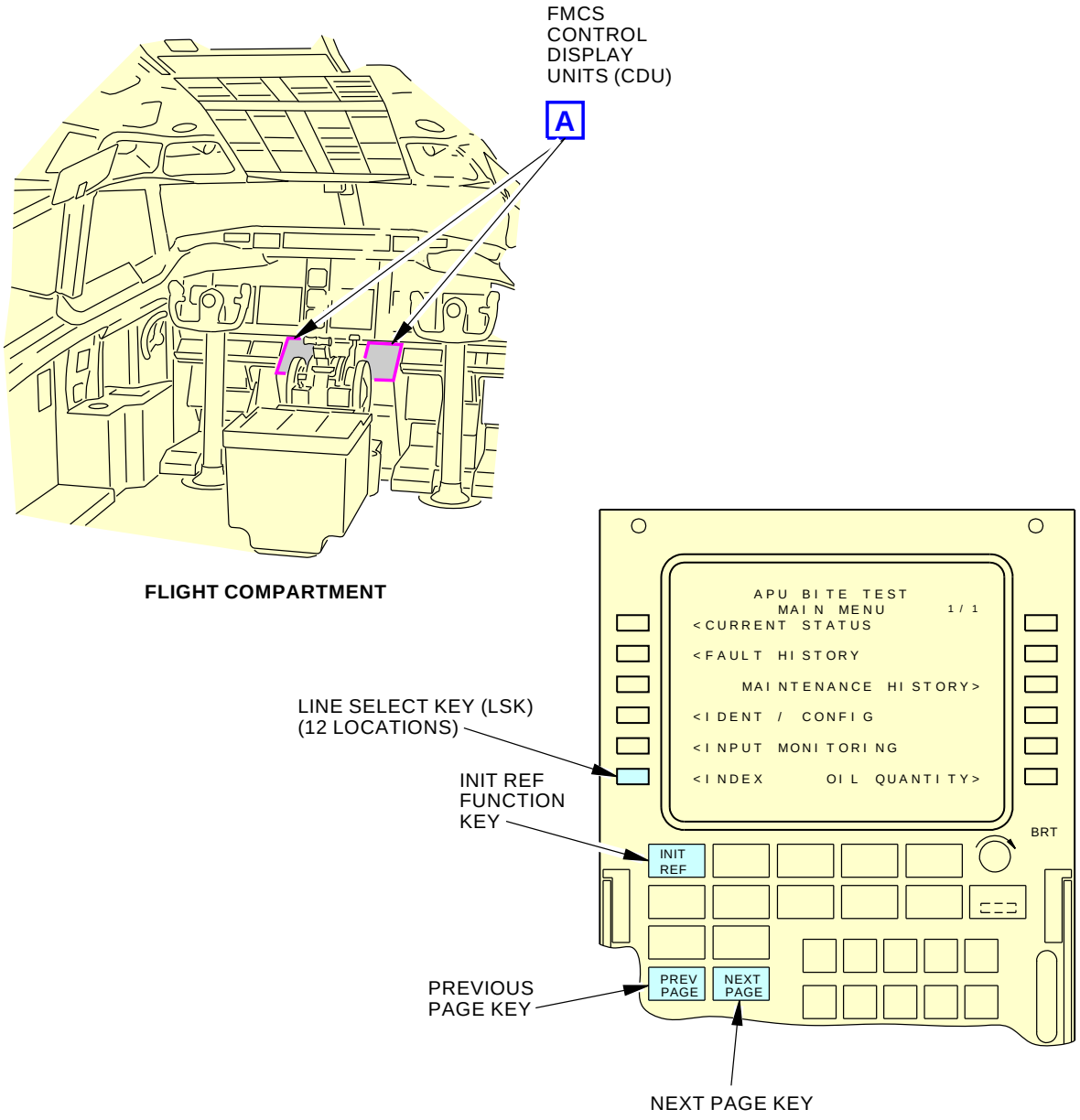
NOTE: The MAIN MENU page shows on the CDU display.

(k) If it is necessary to see other airplane MAINT BITE systems, push the line select key adjacent to <INDEX on the MAIN MENU page for the APU BITE TEST.

NOTE: The MAINT BITE INDEX page for the other airplane systems shows on the CDU display.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-140-00-01



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APU BITE Procedure
Figure 1

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		APU EXHAUST SEAL			49-172-00-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	TAIL CONE	1.1	19000 AH	19000 AH	AIRPLANE: ALL / ENGINE: ALL
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A 318BR			317 318

Inspect (detailed) the APU exhaust seal.

A. References

Reference	Title
AMM 49-16-11-100-801	Clean the APU Drains (P/B 701)
AMM 49-81-11 P/B 401	EXHAUST DUCT MUFFLER - REMOVAL/INSTALLATION
AMM 49-81-11-000-801	Exhaust Duct Muffler Removal (P/B 401)
AMM 49-81-11-200-803	Exhaust Duct Muffler Seal Inspection (P/B 601)
AMM 49-81-11-400-801	Exhaust Duct Muffler Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63
G00440	Lockwire - MS20995C41, Corrosion Resistant Steel - 0.041 Inch (1.0414 mm) Diameter	NASM20995

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-172-00-01

MECH | INSP

TASK 49-81-11-200-801

1. Exhaust Duct Muffler Inspection

(Figure 1)

A. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Exhaust duct muffler	49-81-00-01A-075	AKS ALL
2	Hi-lok	49-81-11-01A-040	AKS ALL
3	Collar	49-81-11-01A-045	AKS ALL
4	Upper insulation blanket	49-81-11-01A-025	AKS ALL
8	Lower insulation blanket	49-81-11-01A-030	AKS ALL

B. Procedure

SUBTASK 49-81-11-020-003

(1) Remove the exhaust duct muffler [1] (AMM TASK 49-81-11-000-801).

SUBTASK 49-81-11-020-004

(2) Do these steps to remove the upper insulation blanket [4] and lower insulation blanket [8] from the exhaust duct muffler [1]:

NOTE: The rear insulation blanket [7] on the aft end cap is installed permanently with rivets.

CAUTION: BE CAREFUL WITH THE INSULATION BLANKETS. THE BLANKETS CAN BE EASILY DAMAGED. DO NOT LET THE BLANKETS TOUCH SHARP EDGES. DAMAGE TO THE BLANKETS CAN OCCUR.

(a) Remove the 34 lacings [13] from the upper insulation blanket [4] and lower insulation blanket [8].

(b) Remove the upper insulation blanket [4] and lower insulation blanket [8] from the exhaust duct muffler [1].

SUBTASK 49-81-11-210-001

(3) Do these steps to inspect the exhaust duct muffler [1]:

(a) Visually examine the upper insulation blanket [4], rear insulation blanket [7] and lower insulation blanket [8] for burns, holes and tears.

1) If you find burns, holes or tears, replace the insulation blanket(s).

(b) Visually examine the external surfaces of the exhaust duct muffler [1] for cracks and missing parts.

1) Cracks are not permitted on these components:

a) Bellows assembly [11]

b) Forward end cap [10]

c) Outer liner of the exhaust duct muffler [1]

d) Aft liner extension [6]

e) Aft end cap [5].

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-172-00-01

MECH	INSP

2) Make sure the 20 hi-loks [2] and 20 collars [3] are installed on the bellows assembly [11].

NOTE: The 20 hi-loks [2] and 20 collars [3] attach the bellows assembly [11], forward end cap [10] and acoustic liner [15] together.

3) One or two missing rivets are permitted on the aft liner extension [6].

(c) Visually examine the internal surfaces of the exhaust duct muffler [1] for cracks, tears, punctures and missing parts.

1) If it is necessary to examine the seven baffles [16] and acoustic liner [15], do these steps to get access to the seven baffles:

a) Remove the 20 hi-loks [2] and 20 collars [3] that attach the bellows assembly [11] and acoustic liner [15] to the exhaust duct muffler [1].

b) Discard the 20 hi-loks [2] and 20 collars [3].

c) Remove the bellows assembly [11] and acoustic liner [15].

d) Cracks, tears and punctures are permitted on the seven baffles [16] and the acoustic liner [15].

e) Missing pieces of the baffle and liner are not permitted, replace the exhaust duct muffler (AMM PAGEBLOCK 49-81-11/401).

f) Put the acoustic liner [15] and bellows assembly [11] in the forward end cap [10] and exhaust duct muffler [1] and align the 20 holes.

g) Apply a thin coat of sealant, A00160, to the threads of the 20 new hi-loks [2].

h) Install the 20 hi-loks [2] to the inner surface of the exhaust duct muffler [1] and 20 new collars [3] to the outer surface.

2) If the acoustic liner [15] was not removed, make sure the 20 new hi-loks [2] are installed on the acoustic liner.

(d) Do this task: Exhaust Duct Muffler Seal Inspection, AMM TASK 49-81-11-200-803.

(e) Visually examine the drain tube [9] for blockage of unwanted materials.

1) If you find blockage of unwanted materials, remove or clean the drain tube [9]. To clean it, do this task: Clean the APU Drains, AMM TASK 49-16-11-100-801.

(4) If the exhaust duct muffler has damage that is more than the permitted limits, you must replace the exhaust duct muffler (AMM TASK 49-81-11-400-801).

SUBTASK 49-81-11-420-003

(5) Do these steps to install the upper insulation blanket [4] and lower insulation blanket [8] on the exhaust duct muffler [1]:

NOTE: The rear insulation blanket [7] on the aft end cap [5] is installed permanently with rivets.

(a) Put the upper insulation blanket [4] and lower insulation blanket [8] on the exhaust duct muffler [1].

(b) Make sure you align the 68 lacing studs [14] along the exhaust duct muffler [1].

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-172-00-01

MECH	INSP

CAUTION: DO NOT USE THE LACINGS TO MOVE THE ENDS OF THE INSULATION BLANKETS TOGETHER. DO NOT TIGHTEN THE LACINGS TOO MUCH. DAMAGE TO THE INSULATION BLANKETS AND THE LACING STUDS CAN OCCUR.

(c) While one person holds the upper insulation blanket [4] and lower insulation blanket [8] together, install the 34 lacings [13] with MS20995C41 lockwire, G00440.

NOTE: You can use 0.032 inch inconel or 0.040 inch inconel lockwire.

NOTE: You install each lacing by a minimum of one full turn around each lacing stud. Make three to six twists at the end of the lockwire and bend the twists back or under the lockwire to hold the lacing in position.

(d) Make sure the distance between the upper insulation blanket [4] and lower insulation blanket [8] is less than 0.15 in. (3.8 mm).

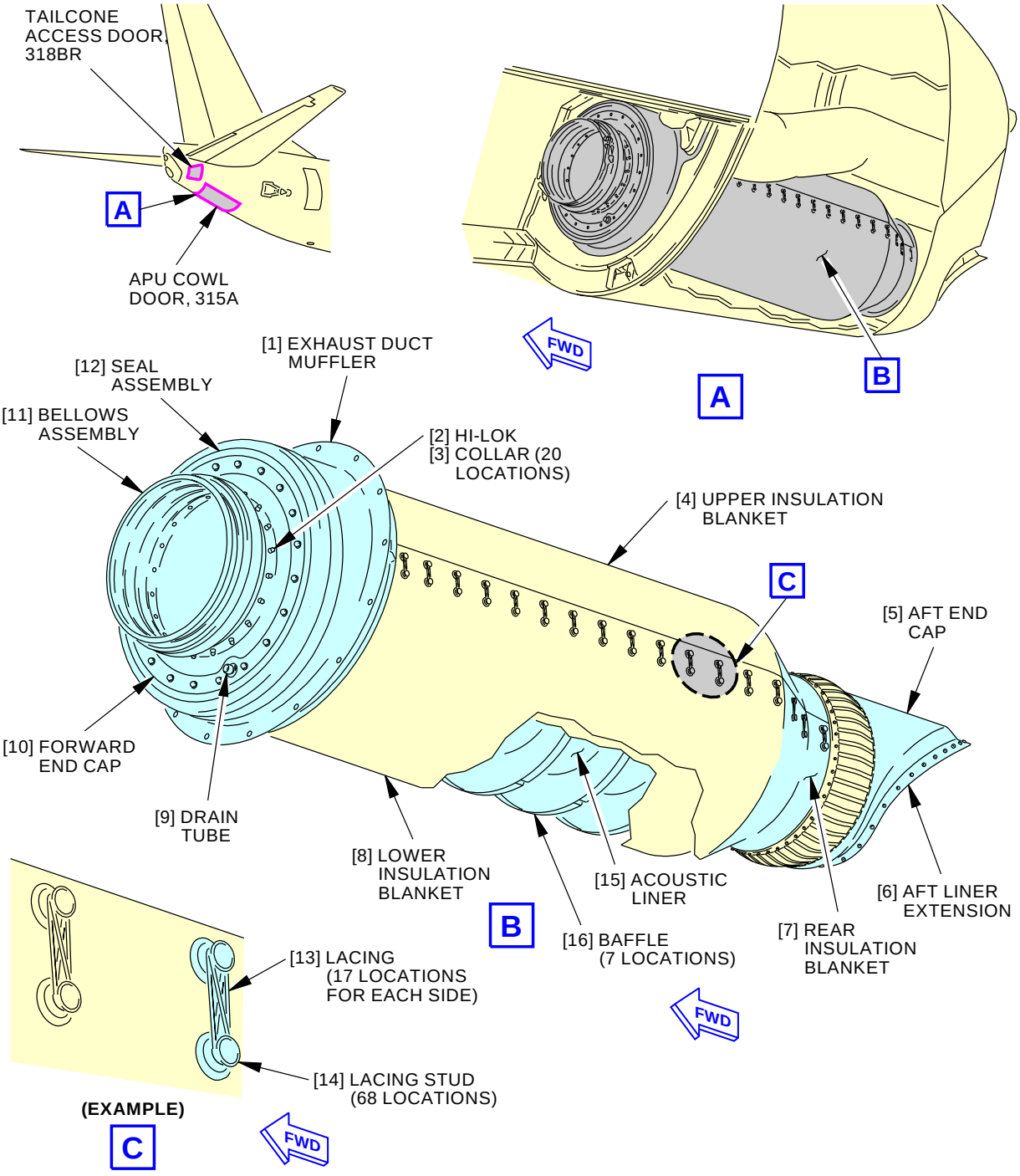
(e) Make sure the 34 lacings [13] are not broken.

SUBTASK 49-81-11-420-004

(6) Install the exhaust duct muffler [1] (AMM TASK 49-81-11-400-801).

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-172-00-01



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Exhaust Duct Muffler Inspection
Figure 1

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		APU EDUCTOR			**49-212-00-01**
DATE	TASK				RELATED CARD
	INSPECTION - GEN VISUAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	APU COMPARTMENT	**1.1**	**10000 AH**	**10000 AH**	AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A			**315 316**

Perform a general visual inspection of the eductor (on the APU) for general condition.

A. References

Reference	Title
AMM 49-11-00 P/B 401	APU POWER PLANT - REMOVAL/INSTALLATION

B. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

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
STD-1057	Air Source - Regulated, Dry Filtered, Compressed 60-105 PSIG (414-723.9 KPa)(22 SCFM)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-212-00-01

MECH | INSP

TASK 49-81-41-200-801

1. Eductor Housing Inspection

(Figure 1)

A. Prepare for the Inspection

SUBTASK 49-81-41-010-002

(1) To open the access panel, do these steps:

Number	Name/Location
315A	APU Cowl Door

(a) Support the APU panel (cowl door) under the center latch.

(b) Open the three latches.

NOTE: Use this sequence: forward latch, aft latch, middle latch.

(c) Open the APU Cowl Door, 315A.

(d) Remove the retainer pin from the rod end of the forward hold-open rod on the APU Cowl Door, 315A

(e) Remove the retainer pin from the spring clip on the aft hold-open rod.

(f) Disconnect the two hold-open rods from the two spring clips.

(g) Connect the two rod ends of the two hold-open rods to the two brackets in the APU compartment.

(h) Install the two retainer pins in the two rod ends.

B. Procedure

SUBTASK 49-81-41-210-001

(1) Do these steps to inspect the eductor housing [1] (Figure 1):

(a) Visually examine the eductor housing [1] for missing and damaged bolts and nuts.

NOTE: You examine all of the sides of the eductor housing [1] that you can get access from the APU compartment.

1) If you find missing or damaged bolts and nuts, install the missing parts or replace the damaged parts.

(b) Visually examine the eductor housing [1] for cracks and surface contamination.

1) No cracks are permitted. Replace the eductor housing [1] if you find cracks on the eductor housing.

NOTE: You replace the eductor housing with the APU removed from the airplane. Reference Honeywell Engine Manual 49-22-00 and Honeywell IPC 49-26-93.

2) If you find external surface contamination, clean the eductor housing:

a) Clean the surfaces of the eductor housing with alcohol, B00130 and a cotton wiper, G00034.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-212-00-01

MECH	INSP

b) Use the compressed 60-105 PSIG dry filtered regulated air source, STD-1057 to dry the surfaces of the eductor housing.

NOTE: It is recommended that you use a pressure of 60-90 psig (414-620 kPa) of air or nitrogen to dry the surfaces of the eductor housing.

SUBTASK 49-81-41-210-002

(2) Do these steps to inspect the APU exciter support bracket on the eductor housing Figure 1:

(a) Visually examine the exciter support bracket (including the weld joint).

1) Cracks less than 67% (2/3) of the bracket are permitted

NOTE: Repair the crack the next time the eductor housing is removed from the APU during a shop visit. Cracks cannot be repaired with the APU on the airplane.

2) If you see a crack that is more than 67% (2/3) of the bracket or more than 67% (2/3) of the weld joint, you must remove the APU (AMM PAGEBLOCK 49-11-00/401).

3) If the crack (any length) extends into the plenum, you must remove the APU (AMM PAGEBLOCK 49-11-00/401).

C. Put the Airplane Back to Its Usual Condition

SUBTASK 49-81-41-410-002

(1) To close the access panel, do these steps

Number	Name/Location
315A	APU Cowl Door

(a) Remove the two retainer pins from the two hold-open rods in the APU compartment.

(b) Disconnect the two hold-open rods from the two brackets.

(c) Put the two hold-open rods in the two spring clips on the APU Cowl Door, 315A.

(d) Install the retainer pin in the rod end of the forward hold-open rod.

(e) Install the retainer pin to the spring clip on the aft hold-open rod.

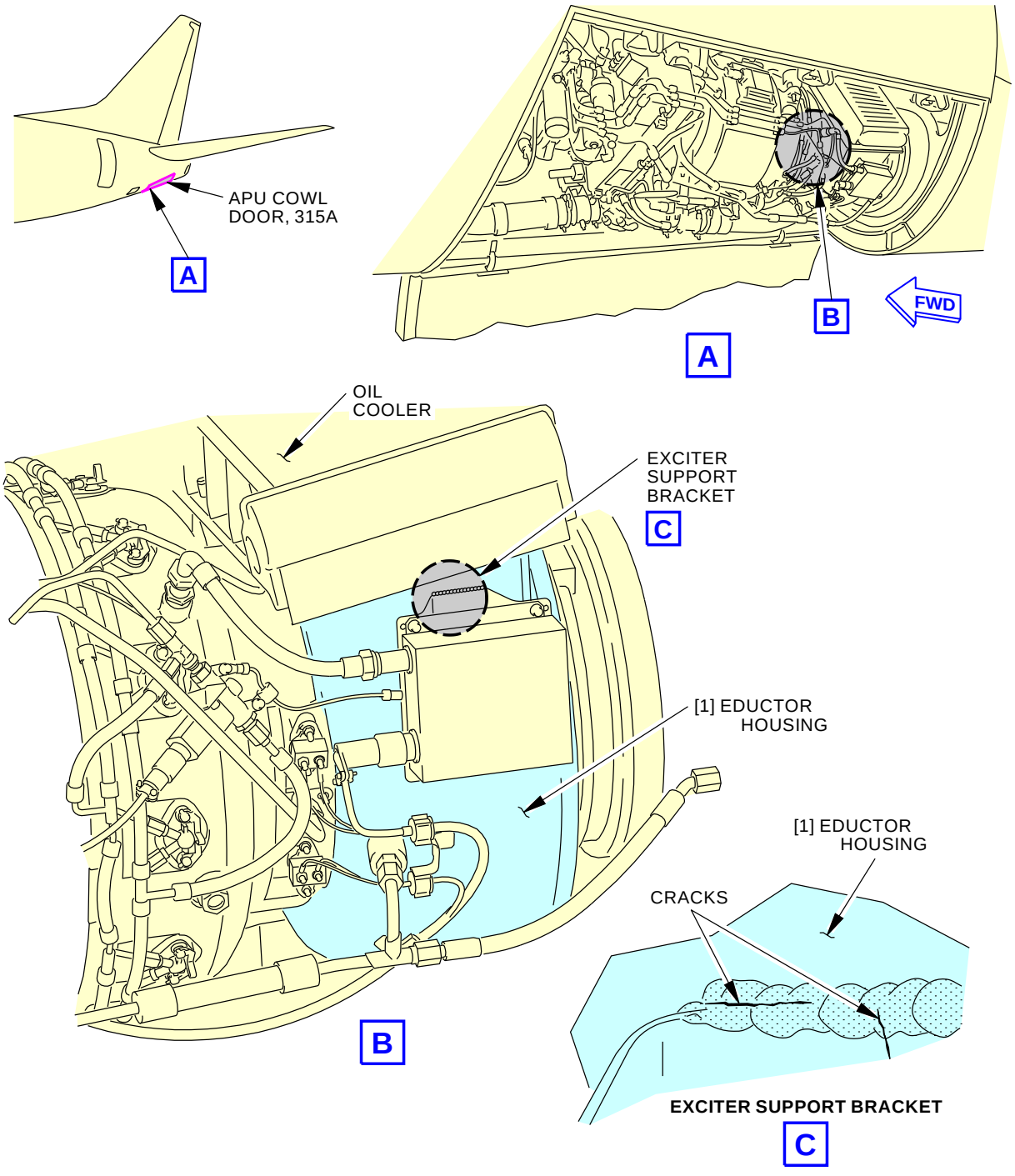
(f) Close the APU Cowl Door, 315A.

(g) Close the three latches.

NOTE: Use this sequence: middle latch, aft latch, forward latch

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-212-00-01



Eductor Housing Inspection
Figure 1

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		APU EDUCTOR INLET DUCT			49-220-00-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	TAIL CONE	1.1	25000 FH	25000 FH	AIRPLANE: ALL / ENGINE: ALL
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
		315A 318BR			317 318

Inspect (detailed) the eductor inlet duct (interior and exterior).

A. References

Reference	Title
AMM 49-91-71-000-801	Eductor Inlet Duct Removal (P/B 401)
AMM 49-91-71-400-801	Eductor Inlet Duct Installation (P/B 401)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-220-00-01

MECH | INSP

TASK 49-91-71-200-801

1. Eductor Inlet Duct Inspection

A. Prepare for the Inspection

SUBTASK 49-91-71-860-001

(1) Make sure the APU master switch on the P5 forward overhead panel is OFF and install a DO-NOT-OPERATE tag.

SUBTASK 49-91-71-860-002

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-91-71-010-006

(3) To open the access panel, do these steps:

Number	Name/Location
315A	APU Cowl Door

(a) Support the APU panel (cowl door) under the center latch.

(b) Open the three latches.

NOTE: Use this sequence: forward latch, aft latch, middle latch.

(c) Open the APU Cowl Door, 315A.

(d) Remove the retainer pin from the rod end of the forward hold-open rod on the APU Cowl Door, 315A

(e) Remove the retainer pin from the spring clip on the aft hold-open rod.

(f) Disconnect the two hold-open rods from the two spring clips.

(g) Connect the two rod ends of the two hold-open rods to the two brackets in the APU compartment.

(h) Install the two retainer pins in the two rod ends.

SUBTASK 49-91-71-010-002

(4) Open this access door:

Number	Name/Location
318BR	Tailcone Access Door

B. Procedure

SUBTASK 49-91-71-210-001

(1) Do these steps to inspect the eductor inlet duct from the APU compartment and tail cone compartment (Figure 1):

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-220-00-01

MECH	INSP

(a) Visually examine the forward end and inner surfaces of the eductor inlet duct that you can get access for blockage and contamination.

1) If you find blockage or contamination, remove the blockage or contamination from the eductor inlet duct.

(b) Visually examine the inner and outer surfaces of the eductor inlet duct for holes and cracks.

1) If you can see holes or cracks, replace the eductor inlet duct. These are the tasks:

- Eductor Inlet Duct Removal, AMM TASK 49-91-71-000-801,
- Eductor Inlet Duct Installation, AMM TASK 49-91-71-400-801.

(c) Visually examine the inner and outer surfaces of the eductor inlet duct for separations of the fiberglass material.

1) Separations of one or two plies of fiberglass material are permitted.

2) If you see separations of more than two plies of fiberglass material, replace the eductor inlet duct. These are the tasks:

- Eductor Inlet Duct Removal, AMM TASK 49-91-71-000-801,
- Eductor Inlet Duct Installation, AMM TASK 49-91-71-400-801.

SUBTASK 49-91-71-210-002

(2) Do these steps to inspect the eductor inlet duct from the upper fairing assembly on the tail cone (Figure 1):

(a) Visually examine the aft end and inner surfaces of the eductor inlet duct that you can get access for blockage and contamination.

1) If you find blockage or contamination, remove the blockage or contamination from the eductor inlet duct.

(b) Visually examine the inner surfaces of the eductor inlet duct for holes and cracks.

1) If you can see holes or cracks, replace the eductor inlet duct. These are the tasks

- Eductor Inlet Duct Removal, AMM TASK 49-91-71-000-801,
- Eductor Inlet Duct Installation, AMM TASK 49-91-71-400-801.

(c) Visually examine the inner surfaces of the eductor inlet duct for separations of the fiberglass material.

1) Separations of one or two plies of fiberglass material are permitted.

2) If you see separations of more than two plies of fiberglass material, replace the eductor inlet duct. These are the tasks:

- Eductor Inlet Duct Removal, AMM TASK 49-91-71-000-801,
- Eductor Inlet Duct Installation, AMM TASK 49-91-71-400-801.

(d) Visually examine the inner surfaces of the eductor inlet duct for damaged painted surfaces which include signs of paint peeling and missing paint from the APU compartment and upper fairing assembly on the tail cone.

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-220-00-01

MECH | INSP

1) Signs of paint peeling and/or missing paint are permitted on the inner surfaces of the eductor inlet duct. The APU can continue in service with no further maintenance action.

C. Put the Airplane Back to Its Usual Condition

SUBTASK 49-91-71-410-007

(1) Close this access panel:

Number	Name/Location
318BR	Tailcone Access Door

SUBTASK 49-91-71-410-008

(2) To close the access panel, do these steps

Number	Name/Location
315A	APU Cowl Door

(a) Remove the two retainer pins from the two hold-open rods in the APU compartment.

(b) Disconnect the two hold-open rods from the two brackets.

(c) Put the two hold-open rods in the two spring clips on the APU Cowl Door, 315A.

(d) Install the retainer pin in the rod end of the forward hold-open rod.

(e) Install the retainer pin to the spring clip on the aft hold-open rod.

(f) Close the APU Cowl Door, 315A.

(g) Close the three latches.

NOTE: Use this sequence: middle latch, aft latch, forward latch

SUBTASK 49-91-71-860-003

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

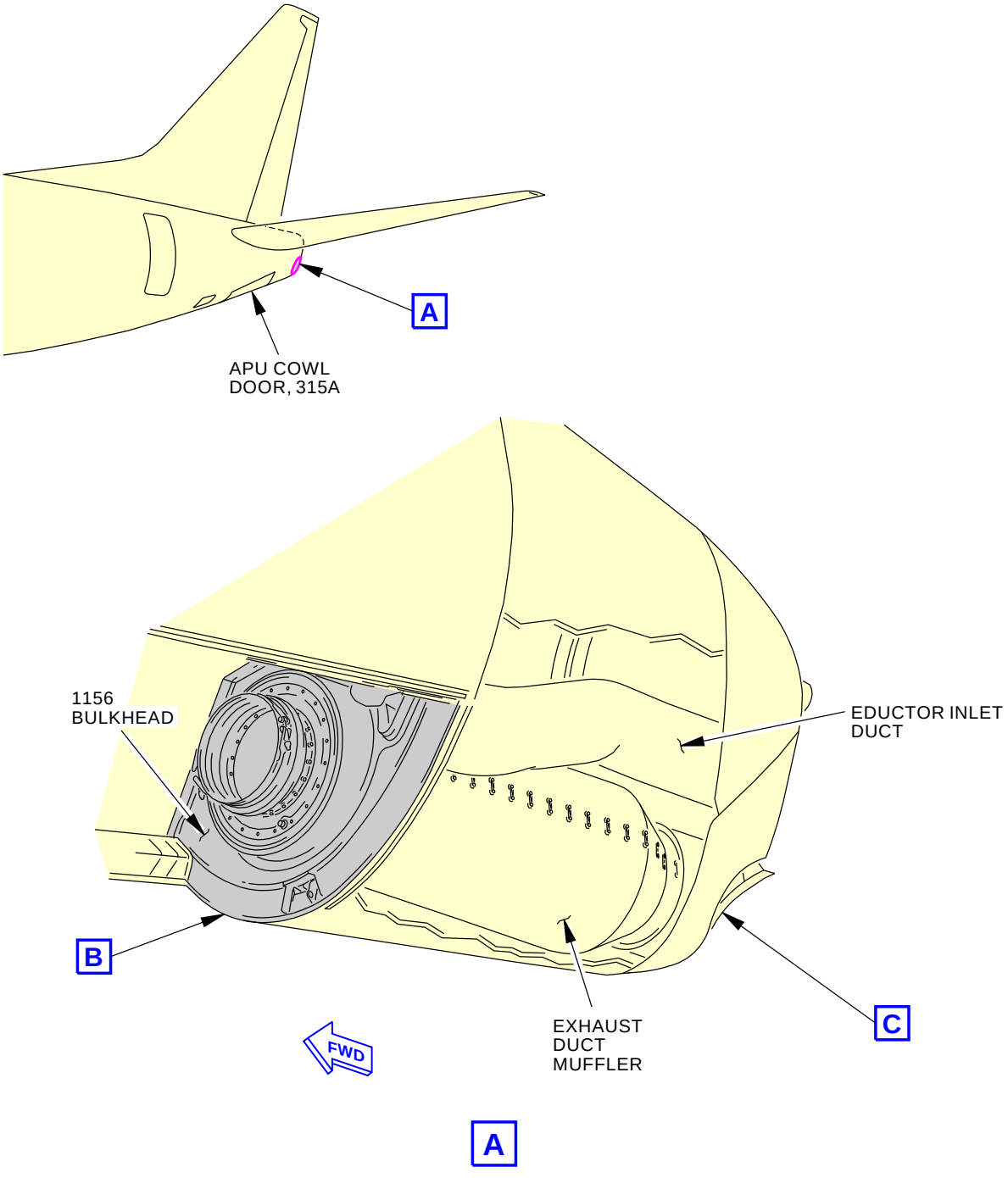
Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-91-71-860-004

(4) Remove the DO-NOT-OPERATE tag from the APU master switch on the P5 forward overhead panel.

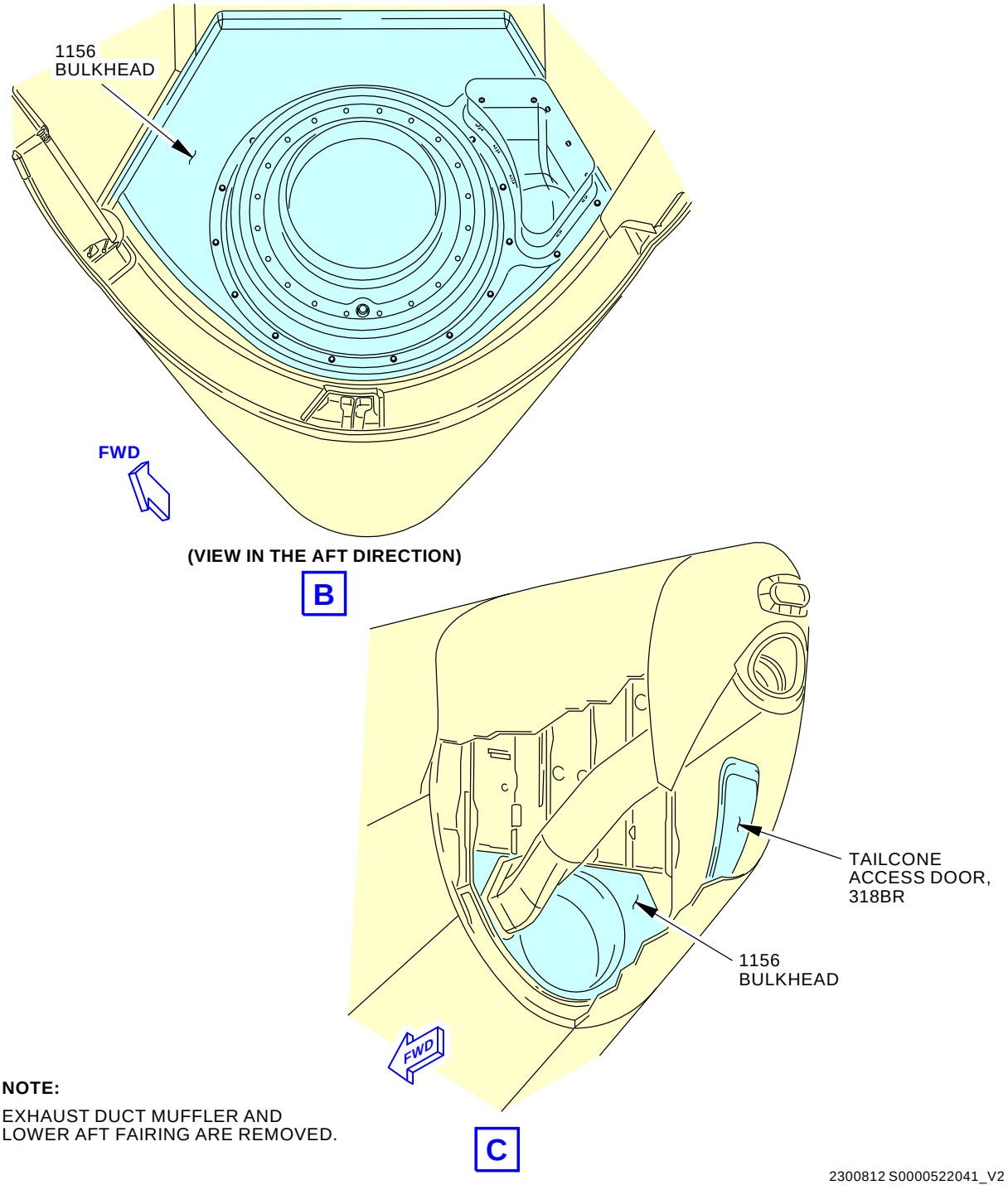
——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-220-00-01



Eductor Inlet Duct Inspection
Figure 1 (Sheet 1 of 2)

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-220-00-01



NOTE:

EXHAUST DUCT MUFFLER AND
LOWER AFT FAIRING ARE REMOVED.

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Eductor Inlet Duct Inspection
Figure 1 (Sheet 2 of 2)

AIRLINE CARD NO		TITLE			BOEING CARD NO.
		APU VORTEX GENERATOR HINGE PIN			49-240-00-01
DATE	TASK				RELATED CARD
	LUBRICATE				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	TAIL CONE	1.1	16000 FH	16000 FH	AIRPLANE: ALL / ENGINE: ALL
STATION	SKILL				
	ENGIN				
		ACCESS			ZONE
					300

Lubricate the vortex generator hinge pin.

A. Consumable Materials

Reference	Description	Specification
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS3-33)
D00633	Grease - Aircraft General Purpose	BMS3-33

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-240-00-01

MECH | INSP

TASK 49-15-22-600-801

1. Vortex Generator Lubrication

(Figure 1)

A. Prepare for the Lubrication

SUBTASK 49-15-22-860-005

(1) Make sure the APU master switch on the P5 forward overhead panel is OFF and install a DO-NOT-OPERATE tag.

SUBTASK 49-15-22-860-006

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

B. Procedure

SUBTASK 49-15-22-640-003

(1) Do these steps to lubricate the parts on the vortex generator:

(a) Remove the nut [9], washer [8], two bushings [5], two washers [7], washer [4] and bolt [3] that attaches the vortex generator flap [6] to the vortex generator.

1) If there is wear damage on the two bushings [5], replace the two bushings [5].

(b) Fully lubricate the surfaces of the bolt [3] with a light coat of grease, D00015 or grease, D00633.

(c) Lubricate the inner diameter of the vortex generator flap [6] with a light coat of grease, D00015 or grease, D00633.

(d) Lubricate the inner and outer diameter of the two bushings [5] with a light coat of grease, D00015 or grease, D00633.

(e) Align the vortex generator flap [6] to the vortex generator and install the bushing [5], washer [4], bolt [3], two washers [7], bushing [5], washer [8] and nut [9].

1) Tighten the nut [9] to 15-20 inch-pounds (1.7-2.3 newton-meters).

C. Put the Airplane Back to Its Usual Condition

SUBTASK 49-15-22-860-007

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 49-240-00-01

MECH	INSP

F/O Electrical System Panel, P6-4

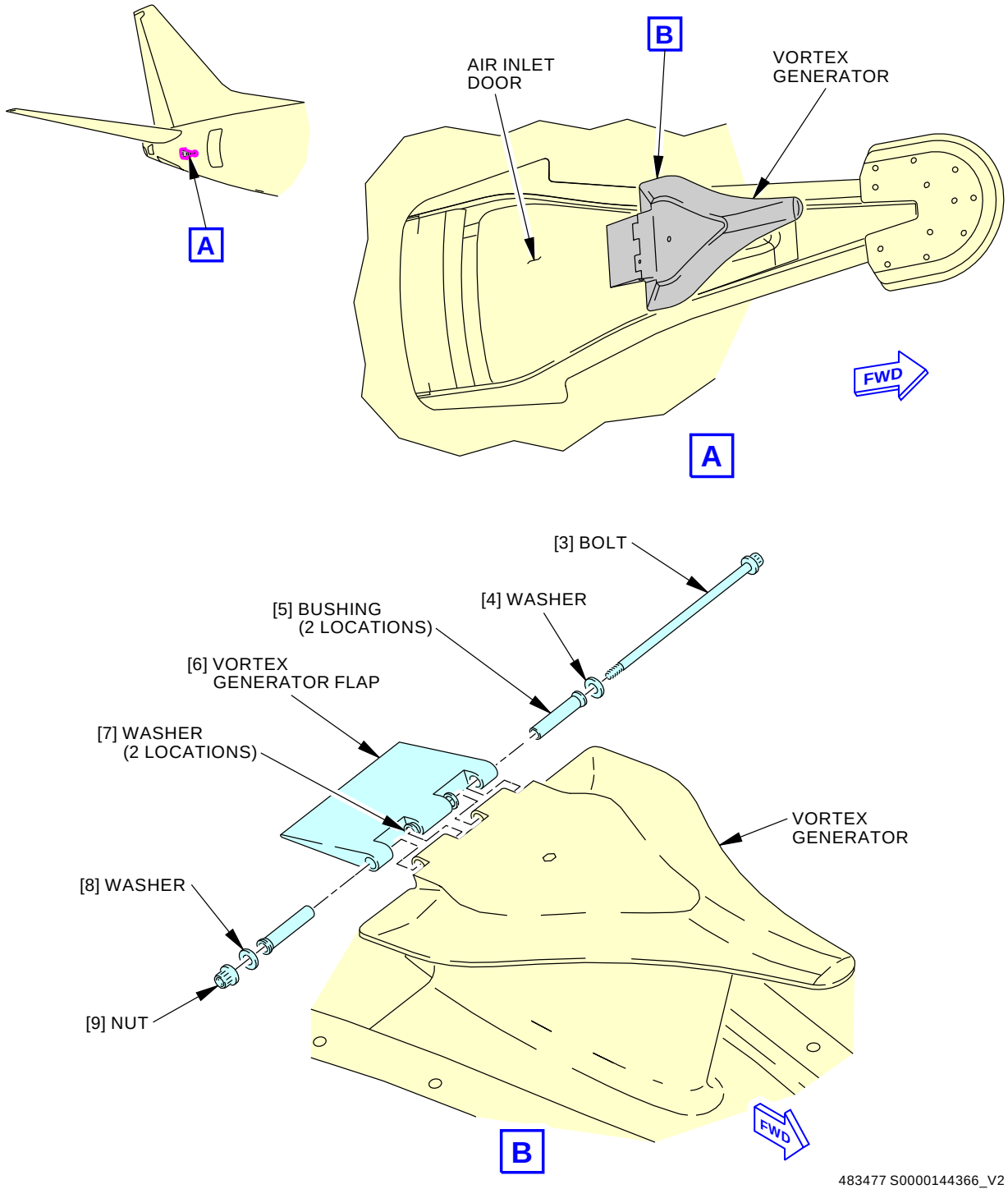
Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 49-15-22-860-008

(2) Remove the DO-NOT-OPERATE tag from the APU master switch on the P5 forward overhead panel.

——— END OF TASK ———

DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				49-240-00-01



Air Inlet Door Servicing
Figure 1