

## APU - REMOVAL/INSTALLATION

*EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C11*

### 1. General

- A. This section gives the procedures for removal/installation and deactivation/reactivation of the Auxiliary Power Unit (APU).
- B. The procedures in this section are given in the sequence below. The tasks identified with (◆) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
49-10-01-000-801-A	AUXILIARY POWER UNIT (APU) - REMOVAL	AIRCRAFT WITH APU T-62T-40C11
49-10-01-400-801-A	AUXILIARY POWER UNIT (APU) - INSTALLATION	AIRCRAFT WITH APU T-62T-40C11
49-10-01-040-801-A	AUXILIARY POWER UNIT (APU) - DEACTIVATION	AIRCRAFT WITH APU T-62T-40C11
49-10-01-440-801-A	AUXILIARY POWER UNIT (APU) - REACTIVATION	AIRCRAFT WITH APU T-62T-40C11

TASK 49-10-01-000-801-A

EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C11

## 2. AUXILIARY POWER UNIT (APU) - REMOVAL

### A. General

(1) This task gives the necessary instructions to remove the Auxiliary Power Unit (APU).

### B. References

REFERENCE	DESIGNATION
<a href="#">AMM MPP 49-00-00/200</a>	- MAINTENANCE PRACTICES
<a href="#">AMM TASK 49-11-00-000-801-A/400</a>	APU COWLING - REMOVAL

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
313		APU cowling

### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
<a href="#">GSE 138</a>	APU Removal/Installation Arm	To remove/install the APU	
<a href="#">GSE 139</a>	APU Maintenance Dolly	For APU maintenance	
<a href="#">GSE 180</a>	Hydraulic Crane	To remove/install the APU	

### E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the APU work area	1

### F. Consumable Materials

Not Applicable

### G. Expandable Parts

Not Applicable

### H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	APU work area

### I. Preparation

SUBTASK 841-002-A

**WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN [AMM MPP 49-00-00/200](#) TO PREVENT INJURY TO PERSONS AND DAMAGE TO THE MATERIAL.**

**CAUTION:** DO NOT REMOVE THE APU WITH THE AIRCRAFT ON JACKS.

- (1) On the circuit breaker panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them:
  - APU FUEL SOV.
  - APU BLEED.
  - APU FIRE EXTG.
  - APU FIRE DET.
- (2) On the left power control and distribution box, open the APU GEN START circuit breaker and attach DO-NOT-CLOSE tag to it.
- (3) Remove the APU cowling ( [AMM TASK 49-11-00-000-801-A/400](#)).

J. Removal ([Figure 401](#))

*SUBTASK 020-002-A*

- (1) Disconnect the fuel feed hose (44) and install a cap to its connections.
- (2) Disconnect the electrical connector (4).
- (3) Remove the screws (11) which attach the terminal cover (8).
- (4) Remove the self-locking nuts (7) and Belleville washers (6) which attach the electrical cables (5) to the APU starter/generator.
- (5) Disconnect the electrical cables (5) from the APU starter/generator.
- (6) Remove the self-locking nuts (14) and Belleville washers (15) which attach the electrical wires (16) to the APU starter/generator.
- (7) Disconnect the electrical wires (16) from the APU starter/generator.
- (8) Disconnect the two electrical connectors from the firewall.
- (9) Loosen the clamp (1) and V-band clamp (2) to disconnect the bleed-air shutoff valve.
- (10) Loosen the clamp (10) and remove the air duct (9) from the vent air inlet of the starter/generator.
- (11) Remove the screws (13) and washers (12), and disconnect the vent outlet duct (42) with the vent flexible duct (43) from the starter/generator mounting pad.
- (12) Remove the screws (39), washers (40), and nuts (41), and disconnect the drain collector tube (38).

**CAUTION:** MAKE SURE THAT THE ELECTRICAL WIRING INSTALLED ADJACENT TO THE APU SUPPORTING POINT IS NOT DAMAGED WHEN THE HOISTING SLING IS CONNECTED.

- (13) Engage the APU Removal/Installation Arm to the hydraulic crane. Install the APU Removal/Installation Arm to the APU lifting point and adjust the height correctly.

- (14) Remove the safety covers (17) from the APU center bracket bolt.
- (15) Remove the cotter pin (18).
- (16) Remove the nut (19), washers (21), bonding wire (20), and bolt (22).
- (17) Remove the cotter pin (25) from the lateral mount brackets.
- (18) Remove the nut (26), spacer (27), and internal bolt (37) from each lateral mount bracket.
- (19) Remove the nut (28), washers (29), support washer (30), and elastomeric mount (31) from each lateral mount bracket.

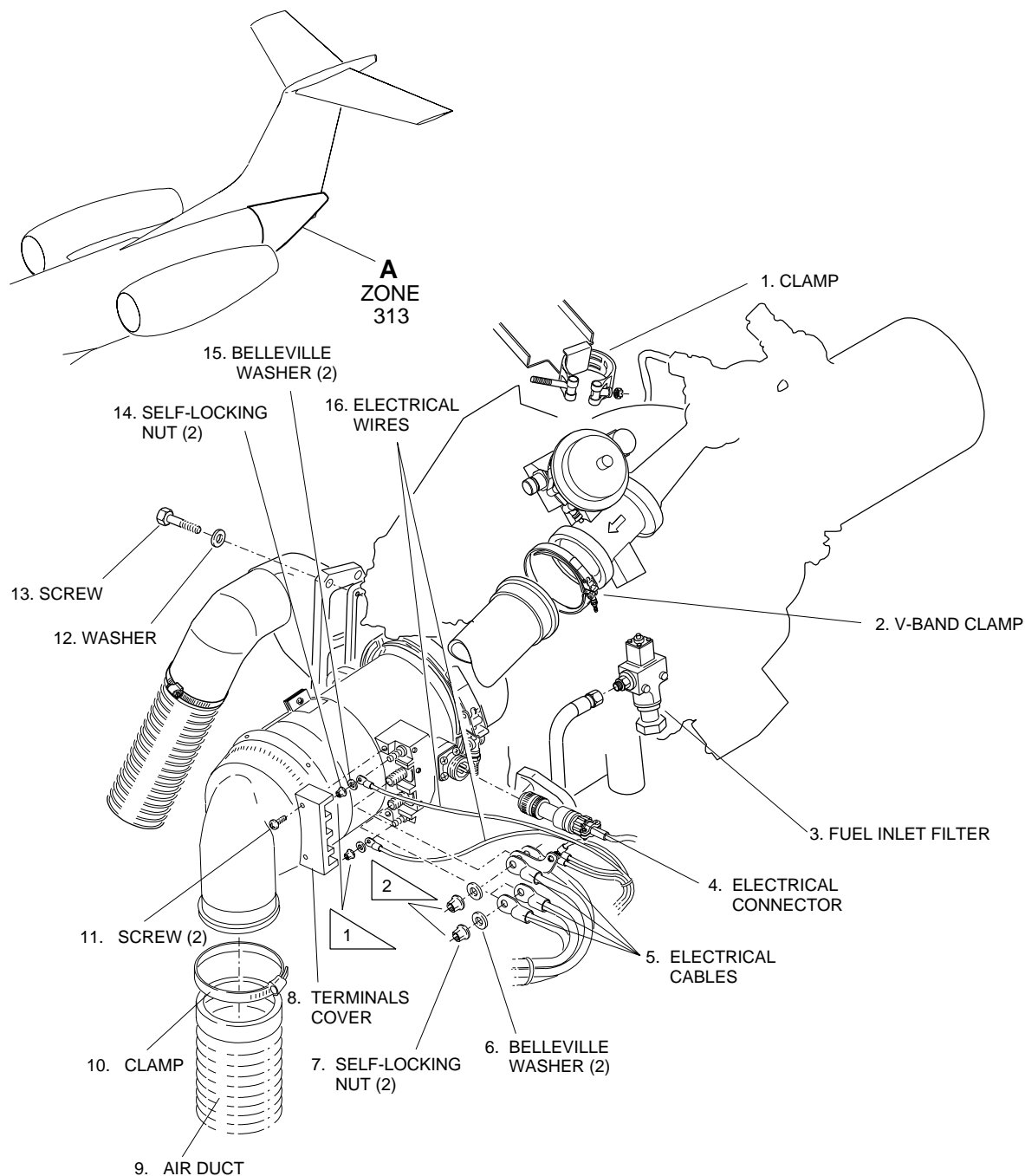
**CAUTION:** MAKE SURE THAT THE APU CONNECTIONS (WIRES, HOSES, CABLES, AND DUCTS) WILL NOT PREVENT THE APU MOVEMENT.

- (20) Move the APU from its installed location to the APU maintenance dolly.
- (21) Remove the hydraulic crane and the APU Removal/Installation Arm from the APU.
- (22) Remove the internal elastomeric mount (33) and supporting washer (34).
- (23) Put protection caps and plugs on the disconnected parts.

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APU - Removal/Installation

Figure 401 - Sheet 1



1 TORQUE OF (A AND D) 2.3-2.8 Nm (20-25 lb.in)

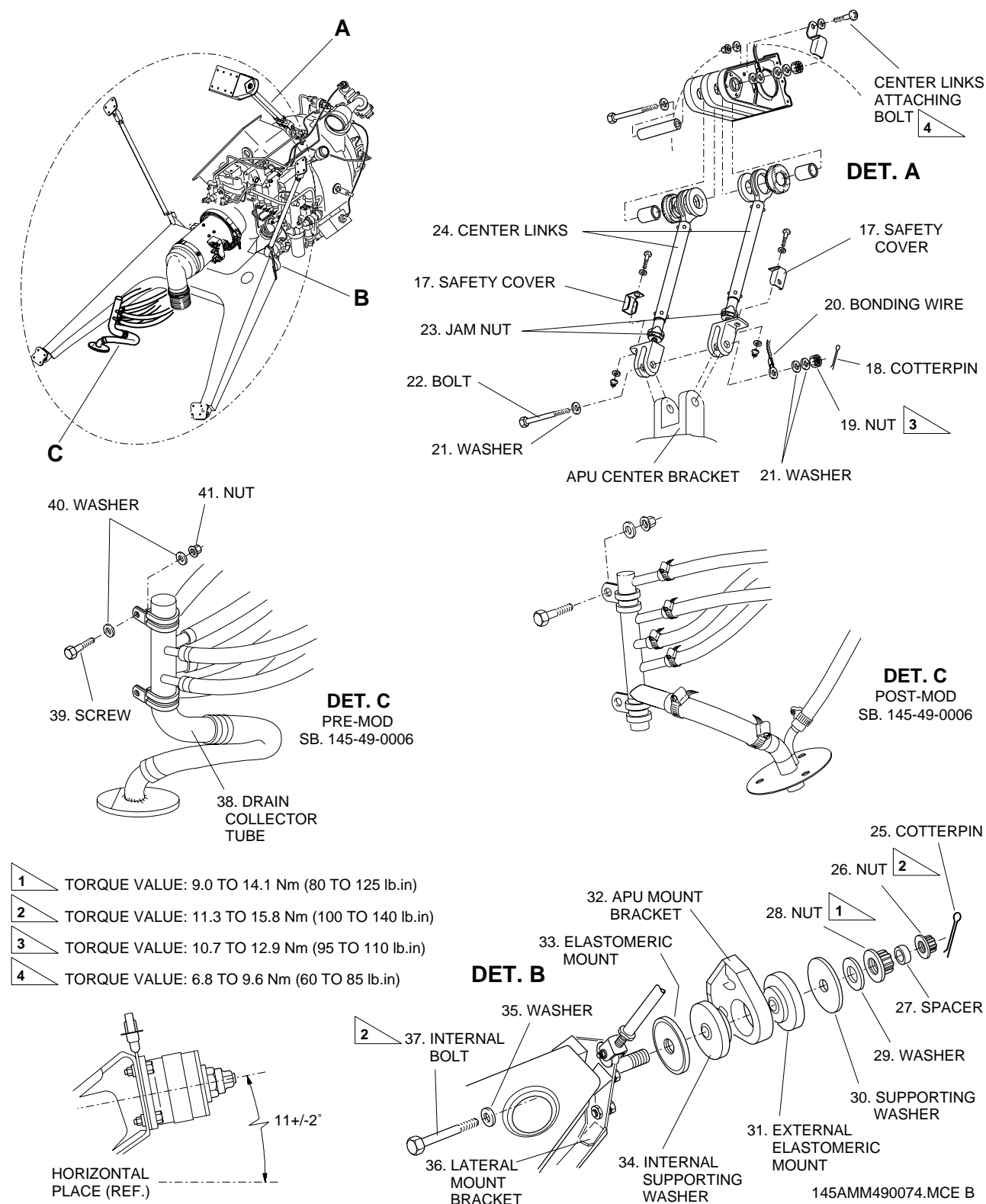
2 TORQUE OF (E AND B) 25-26.5 Nm (220-235 lb.in)

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EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C11

APU - Removal/Installation

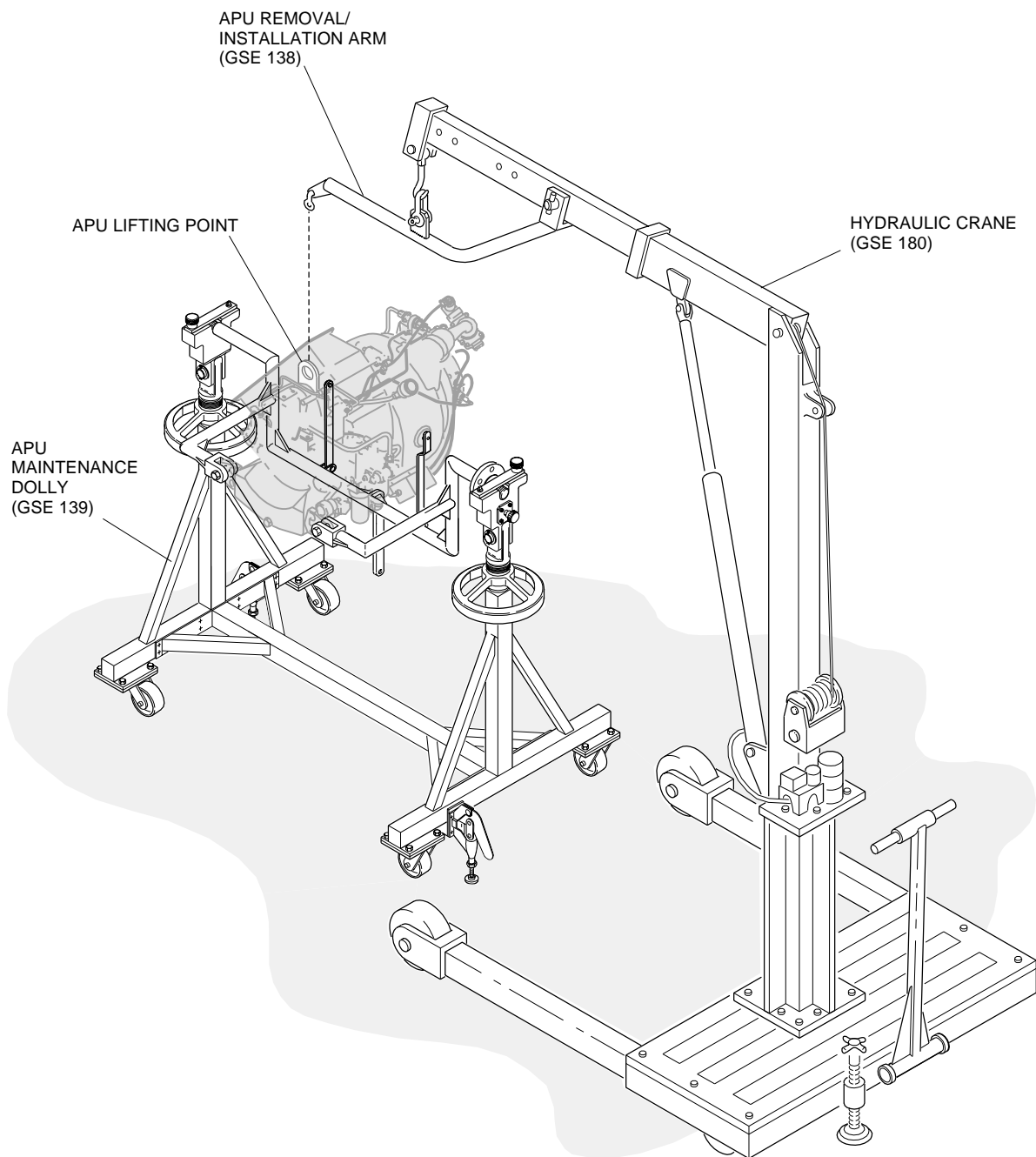
Figure 401 - Sheet 2



EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C11

APU - Removal/Installation

Figure 401 - Sheet 3



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TASK 49-10-01-400-801-A

*EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C11*

### 3. AUXILIARY POWER UNIT (APU) - INSTALLATION

#### A. General

(1) This task gives the necessary instructions to install the Auxiliary Power Unit (APU).

#### B. References

REFERENCE	DESIGNATION
<a href="#">AMM TASK 49-10-00-910-802-A/200</a>	APU - START
<a href="#">AMM TASK 49-11-00-400-801-A/400</a>	APU COWLING - INSTALLATION
<a href="#">AMM TASK 49-17-00-100-801-A/700</a>	APU DRAIN LINES - CLEANING

#### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
313		APU cowling

#### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
<a href="#">GSE 138</a>	APU Removal/Installation Arm	To remove/install the APU	
<a href="#">GSE 139</a>	APU Maintenance Dolly	For APU maintenance	
<a href="#">GSE 180</a>	Hydraulic Crane	To remove/install the APU	
Commercially available	Torque Wrench	To tighten the attaching screws and nuts	

#### E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the APU work area	1

#### F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C32	Lockwire	AR

#### G. Expandable Parts

Not Applicable

#### H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	APU work area



I. Installation (Figure 401)

*SUBTASK 420-002-A*

**CAUTION:** DO NOT INSTALL THE APU WITH THE AIRCRAFT ON JACKS.

- (1) Clean the APU drain lines ( [AMM TASK 49-17-00-100-801-A/700](#)).
- (2) Install the internal supporting washers (34) and elastomeric mounts (33) in the lateral mount brackets (36).
- (3) Install the APU Removal/Installation Arm and the hydraulic crane to the APU lifting point.
- (4) Remove the APU from the APU Maintenance Dolly and install the APU on the lateral mount brackets (36).
- (5) Install the external elastomeric mounts (31), supporting washer (30), washer (29), and nut (28) on each mount bracket, and tighten the nuts. Refer to (Figure 401) for the torque values.
- (6) Install the internal bolt (37), washer (35), spacer (27), and nut (26) on each mount bracket, and tighten the nuts. Refer to (Figure 401) for the torque values.
- (7) Install the cotter pin (25).
- (8) Install the center bracket bolt (22), washers (21), bonding wire (20), and nut (19). Tighten the nuts. Refer to (Figure 401) for the torque values.
- (9) Install the cotter pin (18).
- (10) Install the safety covers (17) to the center bracket.
- (11) Disengage the arm with the hydraulic crane from the APU lifting point.
- (12) Remove the protection caps and plugs from the APU ducts and connectors and make sure that the ducts are clean and not clogged.
- (13) With the screws (13) and washers (12), install the vent outlet duct (42) to the starter/generator mounting pad.
- (14) Install the air duct (9) to the starter/generator vent air inlet, and tighten the attaching clamp (10).
- (15) Install the drain collector tube (38) with the screws (39), washers (40), and nuts (41).
- (16) Install the clamp (1) and V-band clamp (2) to attach the bleed-air shutoff valve.
- (17) Install the two electrical connectors to the firewall.
- (18) Connect the electrical connector (4) and electrical wires (16) to the APU starter/generator.

**CAUTION:** SEE THEIR IDENTIFICATION TO MAKE SURE THAT THE ELECTRICAL CABLES ARE INSTALLED CORRECTLY. INCORRECT INSTALLATION OF THE CABLES WILL CAUSE SERIOUS PROBLEMS TO THE AIRCRAFT ELECTRICAL EQUIPMENT.

- (19) Connect the electrical cables (5) to the APU starter/generator.
- (20) Tighten the self-locking nuts (14) and Belleville washers (15) which attach the electrical cables (5) to the APU starter/generator. Refer to (Figure 401) for the torque values.
- (21) Put the terminal cover (8) in its installation position and tighten the screws (11).
- (22) Install the fuel feed hose (44). Refer to (Figure 401) for the torque values.

J. Follow-on

*SUBTASK 842-002-A*

- (1) On the circuit breaker panel, remove the DO-NOT-CLOSE tags and close these circuit breakers:
  - APU FUEL SOV.
  - APU BLEED.
  - APU FIRE EXTG.
  - APU FIRE DET.
- (2) On the left power control and distribution box, remove the DO-NOT-CLOSE tag and close the APU GEN START circuit breaker.
- (3) Operate the APU ( [AMM TASK 49-10-00-910-802-A/200](#)) and examine the fuel lines and connections for leaks and general conditions. If applicable, repair as necessary.
- (4) Do a visual inspection of the fire detectors for dents, chaffing, loose brackets or damages.
- (5) Install the APU cowling ( [AMM TASK 49-11-00-400-801-A/400](#)).

TASK 49-10-01-040-801-A

EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C11

4. AUXILIARY POWER UNIT (APU) - DEACTIVATION

A. General

- (1) This procedure refers to item 49-00-00 - AUXILIARY POWER UNIT (APU) of the DDPM.
- (2) It is permitted to operate the aircraft with the APU inoperative if it is deactivated and the APU will not be necessary during operation.

B. Zones and Accesses

Not Applicable

C. Tools and Equipment

Not Applicable

D. Auxiliary Items

Not Applicable

E. Consumable Materials

Not Applicable

F. Expandable Parts

Not Applicable

G. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Cockpit

H. Deactivation

*SUBTASK 040-002-A*

- (1) Open and safety the APU circuit breakers:
  - APU CONTROL (on Circuit Breaker Panel)
  - APU CONTROL (On Left Distribution Box at Left Aft Console)
- (2) Install an "INOP" placard on the APU Control Panel.

TASK 49-10-01-440-801-A

*EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C11*

5. AUXILIARY POWER UNIT (APU) - REACTIVATION

A. General

(1) This procedure refers to item 49-00-00 - AUXILIARY POWER UNIT (APU) of the DDPM.

B. Zones and Accesses

Not Applicable

C. Tools and Equipment

Not Applicable

D. Auxiliary Items

Not Applicable

E. Consumable Materials

Not Applicable

F. Expandable Parts

Not Applicable

G. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	Cockpit and APU

H. Reactivation

*SUBTASK 440-002-A*

(1) Close the APU circuit breakers:

- APU CONTROL (on Circuit Breaker Panel)
- APU CONTROL (On Left Distribution Box at Left Aft Console)

(2) Do the APU troubleshooting.

(3) Remove the "INOP" placard from the APU Control Panel.