



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

**APU COWLING - REMOVAL/INSTALLATION**

*EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C14*

1. General

- A. This section gives the procedures to remove and install the APU cowling.
- B. The APU cowling is attached to the tail cone, under the aircraft empennage.
- C. 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
49-15-00-000-801-A	APU COWLING - REMOVAL	AIRCRAFT WITH APU T-62T-40C14
49-15-00-400-801-A	APU COWLING - INSTALLATION	AIRCRAFT WITH APU T-62T-40C14



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

TASK 49-15-00-000-801-A

EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C14

2. APU COWLING - REMOVAL

A. General

(1) This task gives the necessary instructions to remove the APU cowling.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-42-00/100	-
AMM MPP 49-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 49-16-03-000-801-A/400	APU AIR-INLET COVER ASSEMBLY - REMOVAL
AMM TASK 53-32-00-000-801-A/400	TAIL CONE - REMOVAL
SRM 51-20-01	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
313	313CL	APU cowling
313	313AL	APU cowling
313	313BL	APU cowling
313	313DR	APU cowling
313	313GR	APU cowling

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

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

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
PR 1776M B2	Sealant	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	Aircraft tail cone

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 THE PERSONS AND DAMAGE TO THE MATERIAL.**

- (1) On the circuit breaker panel, open the APU FUEL SOV circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (2) On the left power control and distribution box, open the APU GEN START circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (3) Put the workstand below the aircraft tail cone.
- (4) Open APU-cowling access panel 313CL (AMM MPP 06-42-00/100).
- (5) Remove the bolts (1) and detach the APU drain attaching plate (2) from the cowling.
- (6) (FOR AIRCRAFT WITH APU DRAIN SCAVENGE PUMP) Loosen the clamp (3) and disconnect the combustor drain hose from the APU drain scavenge pump (4).
- (7) Put protection caps on the disconnected parts.
- (8) (FOR AIRCRAFT WITH APU COWLING 145-54858 SERIES) Remove the air inlet cover assembly ([AMM TASK 49-16-03-000-801-A/400](#)).
- (9) Remove the tail cone ([AMM TASK 53-32-00-000-801-A/400](#)).

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

SUBTASK 020-002-A

NOTE: For this procedure, the rudder must be out of its neutral position.

- (1) At the starter/generator air intake, cut the lockwire and loosen the clamp which attaches the flexible duct.
- (2) At the Air/Oil Cooler air intake, cut the lockwire and loosen the clamp which attaches the flexible duct.
- (3) Remove the external screws that attach the starter-generator cooling-air outlet.
- (4) Remove access panels 313AL, 313BL, 313DR, and 313GR (AMM MPP 06-42-00/100).
- (5) Remove the locking clips from the four screws which attach the cowling.
- (6) Manually hold the cowling and remove its four screws.
- (7) Remove the APU cowling. If applicable, verify that the interface sealant is not damaged. If necessary, apply sealant again (SRM 51-20-01).

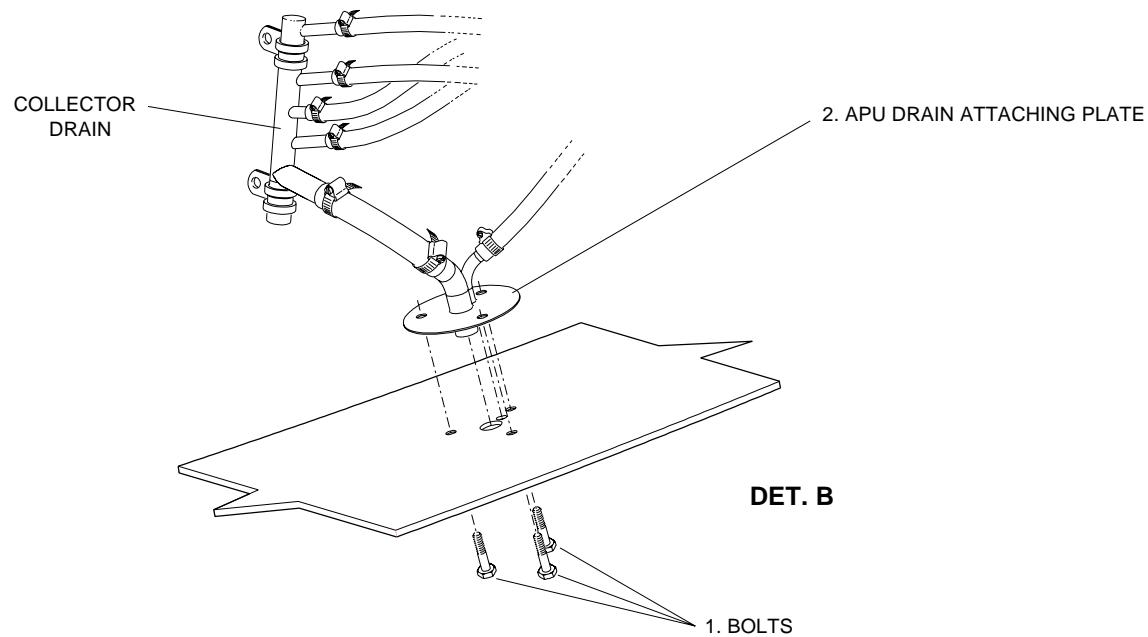
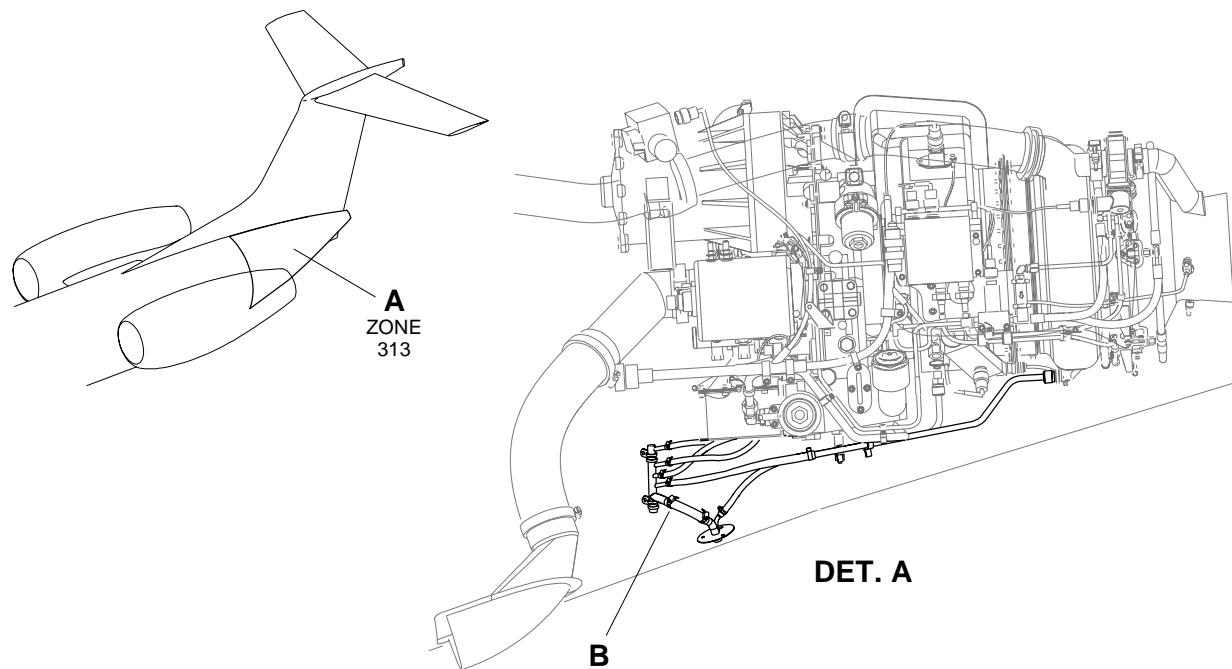
NOTE: [Figure 402](#) shows the interface sealant.

- (8) Put caps on the starter-generator air intake, Air/Oil Cooler intake, outlet ducts, power-plant air intake, and exhaust gas duct.

**EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C14**

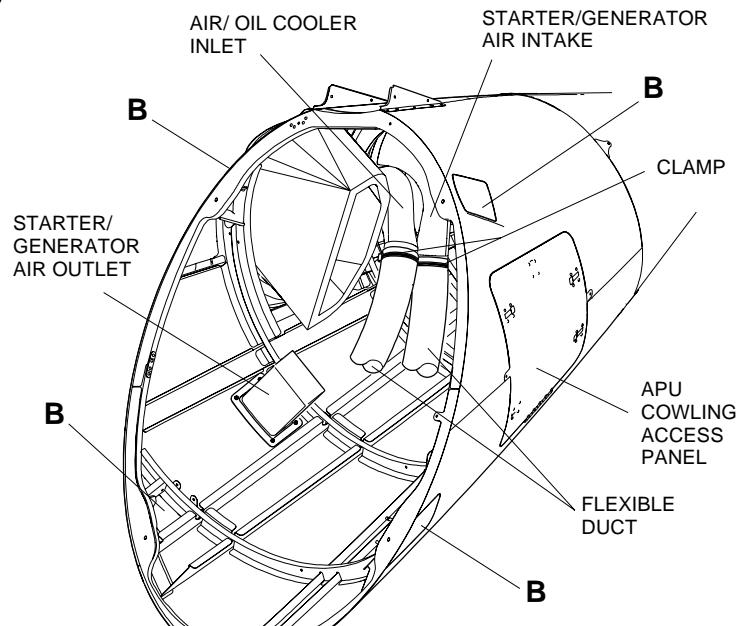
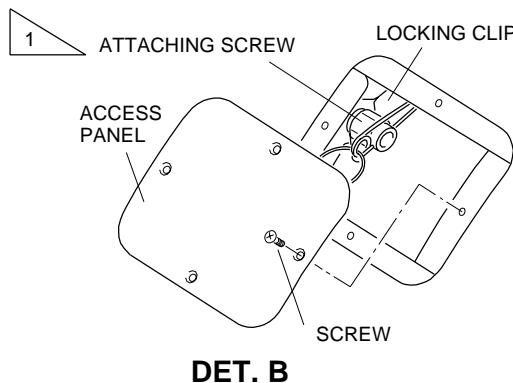
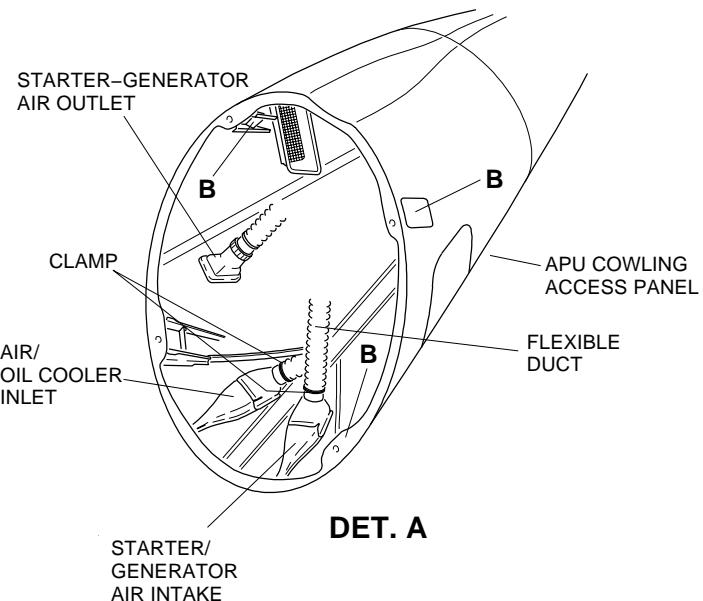
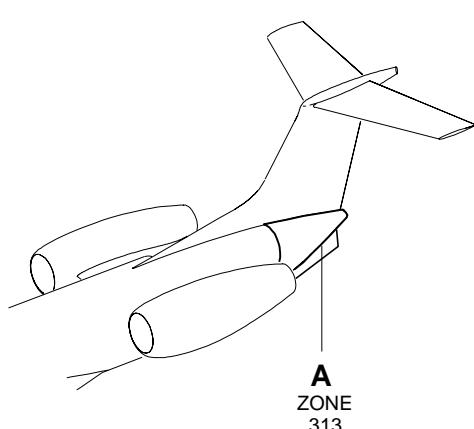
APU Cowling - Removal/Installation

Figure 401 - Sheet 1



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**EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C14**  
**APU Cowling - Removal/Installation**  
**Figure 401 - Sheet 2**

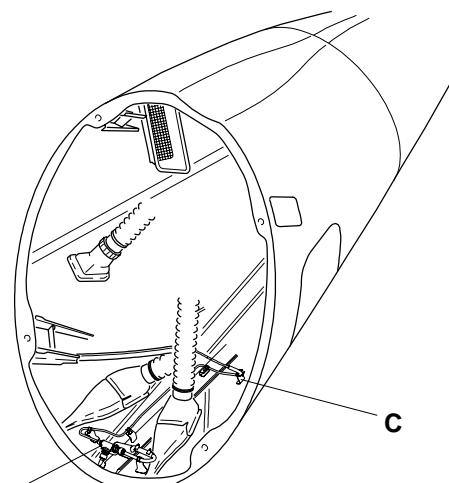
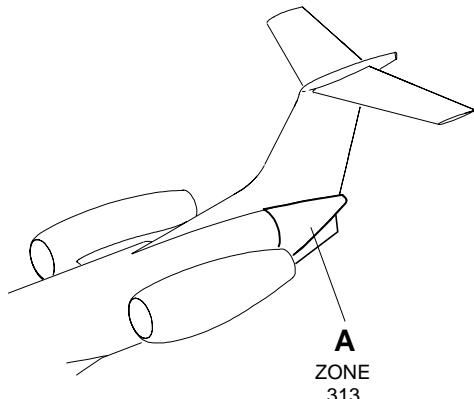


**1** TORQUE: 11.3 TO 15.8 N.m (100 TO 140 lb.in)

**2** VALID FOR AIRCRAFT WITH APU COWLING 145-54858 SERIES

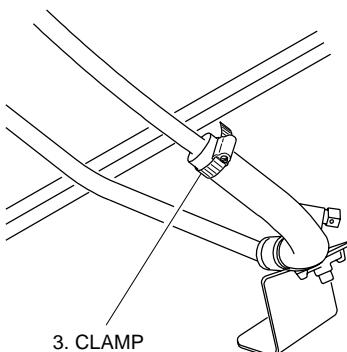
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**EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C14**  
**APU Cowling - Removal/Installation**  
**Figure 401 - Sheet 3**

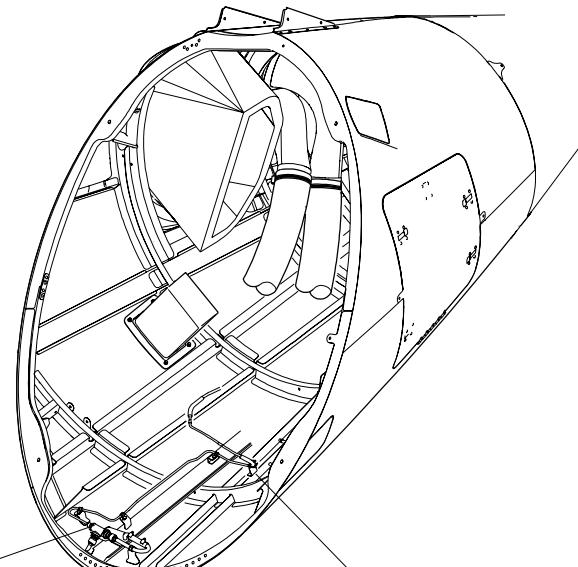


3 △ 4. APU DRAIN SCAVENGE PUMP

**DET. A**



3 △ **DET. C**



3 △ 4. APU DRAIN SCAVENGE PUMP

**2 △ DET. A**

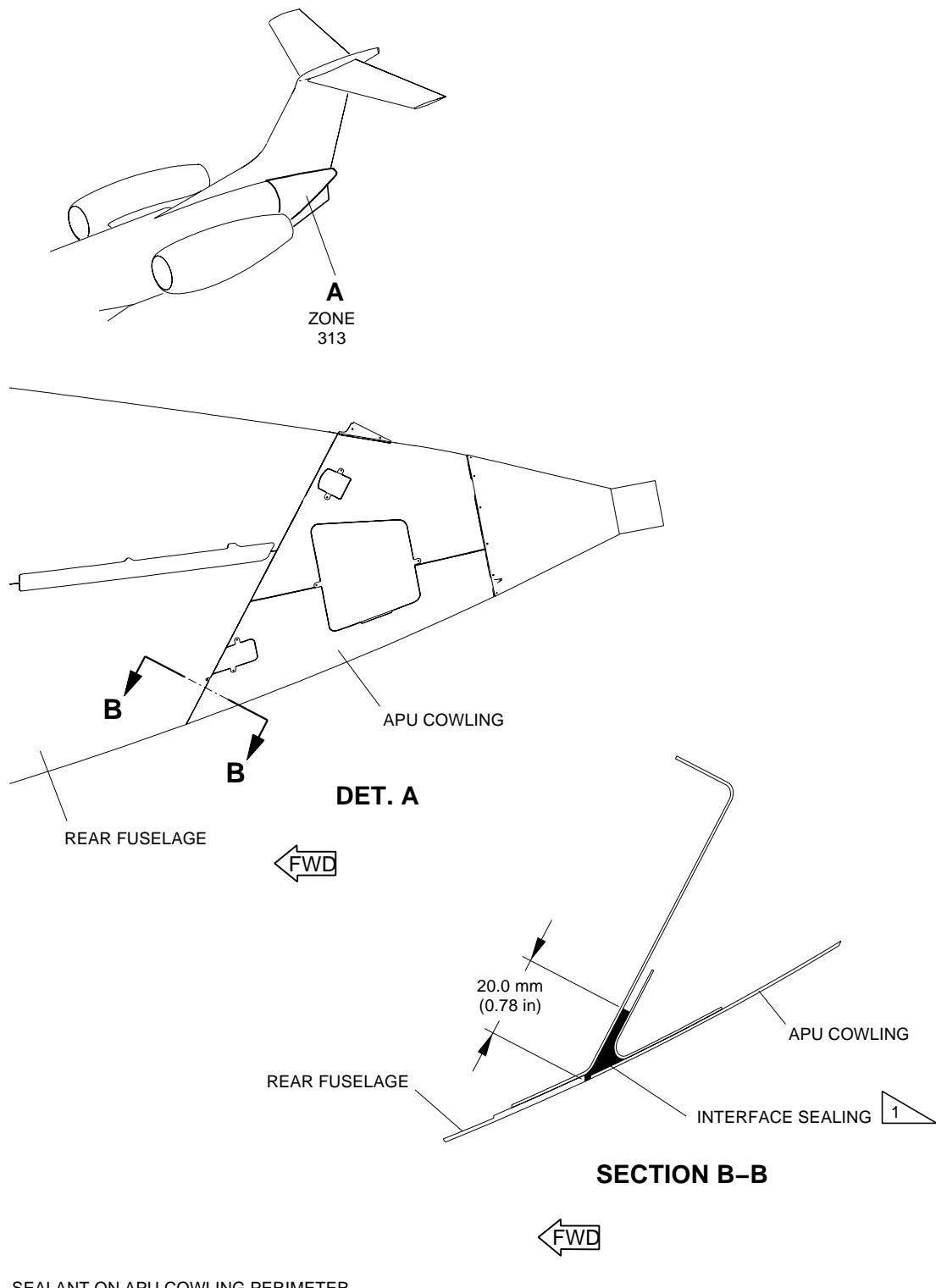
3 △ VALID FOR AIRCRAFT WITH APU DRAIN SCAVENGE PUMP

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**EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C14**

APU Cowling - Interface Sealant (For Aircraft with Interface Sealant)

Figure 402



1 SEALANT ON APU COWLING PERIMETER.

EM145AMM490330A.DGN



EMB145 - EMB135

AIRCRAFT  
MAINTENANCE MANUAL

TASK 49-15-00-400-801-A

EFFECTIVITY: AIRCRAFT WITH APU T-62T-40C14

3. APU COWLING - INSTALLATION

A. General

(1) This task gives the necessary instructions to install the APU cowling.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-42-00/100	-
AMM TASK 49-16-02-200-802-A/600	AIR-INLET SEAL/AIR-INLET DUCT INTERFACE CLEARANCE/MISALIGNMENT- INSPECTION
AMM TASK 49-16-03-400-801-A/400	APU AIR-INLET COVER ASSEMBLY - INSTALLATION
AMM TASK 49-19-00-100-801-A/700	APU DRAIN LINES - CLEANING
AMM TASK 53-32-00-400-801-A/400	TAIL CONE - INSTALLATION

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
313	313CL	APU cowling
313	313AL	APU cowling
313	313BL	APU cowling
313	313DR	APU cowling
313	313GR	APU cowling

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque Wrench	To tighten the attaching screws	

E. Auxiliary Items

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

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
A-A-59173	Molykote DC-33 Light grease	AR

G. Expandable Parts

Not Applicable

**H. Persons Recommended**

QTY	FUNCTION	PLACE
2	Do the task	Aircraft tail cone

**I. Installation (Figure 401)**
**SUBTASK 420-002-A**

- (1) Clean the APU drain lines ([AMM TASK 49-19-00-100-801-A/700](#)).
- (2) Remove the caps from the ducts and make sure that the ducts are clean and not clogged.
- (3) Apply a coat of Molykote DC-33 light grease to the APU cowling bolt circle (interface between APU cowling and Rear fuselage II).

**CAUTION: MOVE THE APU COWLING CAREFULLY DURING ITS INSTALLATION TO PREVENT DAMAGE TO THE APU BLEED VALVE.**

- (4) **NOTE:** The aft fuselage has four dowels, which partially hold the cowling during its installation.  
Put the APU cowling on the tail cone and manually hold the cowling.
- (5) Install the four screws which attach the cowling. Torque the screws to the values given in (Figure 401).
- (6) Install locking clips to the screws.
- (7) Do a visual inspection on the air-inlet seal/air-inlet duct interface for clearance [AMM TASK 49-16-02-200-802-A/600](#).

**CAUTION: IF THESE TOLERANCES ARE NOT OBEYED, THE APU CAN HAVE A SHUTDOWN CAUSED BY HIGH OIL TEMPERATURE.**

- (8) **NOTE:** The tolerances below are not applicable to sealed cowlings.

Make sure that:

- (a) The gap between the cowling skin and the fuselage skin is  $1.5 \pm 1.0$  mm in 80% of the cowling perimeter and up to 3.0 mm in the remaining 20%.
- (b) The step between the cowling skin and the fuselage skin is  $\pm 1.0$  mm in 80% of the cowling perimeter and  $\pm 1.5$  mm in the remaining 20%.
- (9) Install access panels 313AL, 313BL, 313DR, and 313GR (AMM MPP 06-42-00/100).
- (10) Put the starter/generator air intake duct in position and install the attaching clamp. Lockwire the clamp.
- (11) Put the flexible air-inlet duct in position and install the attaching clamp on the air/oil cooler intake. Lockwire the clamp.
- (12) Put the starter-generator air outlet in position and install the attaching screws.



EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

J. Follow-on

SUBTASK 842-002-A

- (1) (FOR AIRCRAFT WITH APU COWLING 145-54858 SERIES) Install the air inlet cover assembly ([AMM TASK 49-16-03-400-801-A/400](#)).
- (2) Install the APU tail cone ([AMM TASK 53-32-00-400-801-A/400](#)).
- (3) Remove the protection caps from the disconnected parts and make sure that the ducts are clean and not clogged.
- (4) (FOR AIRCRAFT WITH APU DRAIN SCAVENGE PUMP) Connect the combustor drain hose to the APU drain scavenge pump (4) and install the clamp (3).
- (5) Attach the APU drain attaching plate (2) to the cowling and install the the bolts (1).
- (6) Install APU-cowling access panel 313CL (AMM MPP 06-42-00/100).
- (7) Remove the workstand.
- (8) On the circuit breaker panel, remove the DO-NOT-CLOSE tag and close the APU FUEL SOV circuit breaker.
- (9) On the left power control and distribution box, remove the DO-NOT-CLOSE tag and close the APU GEN START circuit breaker.