



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

FLAP POWER DRIVE UNIT - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the Flap Power Drive Unit (FPDU).
- 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
27-53-04-000-801-A	FLAP POWER DRIVE UNIT (FPDU) - RE- MOVAL	ALL
27-53-04-400-801-A	FLAP POWER DRIVE UNIT (FPDU) - IN- STALLATION	ALL



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TASK 27-53-04-000-801-A

EFFECTIVITY: ALL

2. FLAP POWER DRIVE UNIT (FPDU) - REMOVAL

A. General

- (1) This task gives the procedures to remove the Flap Power Drive Unit (FPDU).

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193AL	Wing stub

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 299	Soft Jaw Pliers	To disconnect and connect electrical connectors	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing stub

I. Preparation

SUBTASK 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Energize the aircraft with the External DC Power Supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Set the flaps to the 0-degree position.



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- (4) On the Circuit Breaker Panel, open the FLAP 1 and FLAP 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.

- (5) Remove access door 193AL (AMM MPP 06-41-01/100).

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

SUBTASK 020-002-A

CAUTION: THE FPDU SHALL BE REMOVED AND INSTALLED WITH THE FLAPS AT 0-DEGREE POSITION.

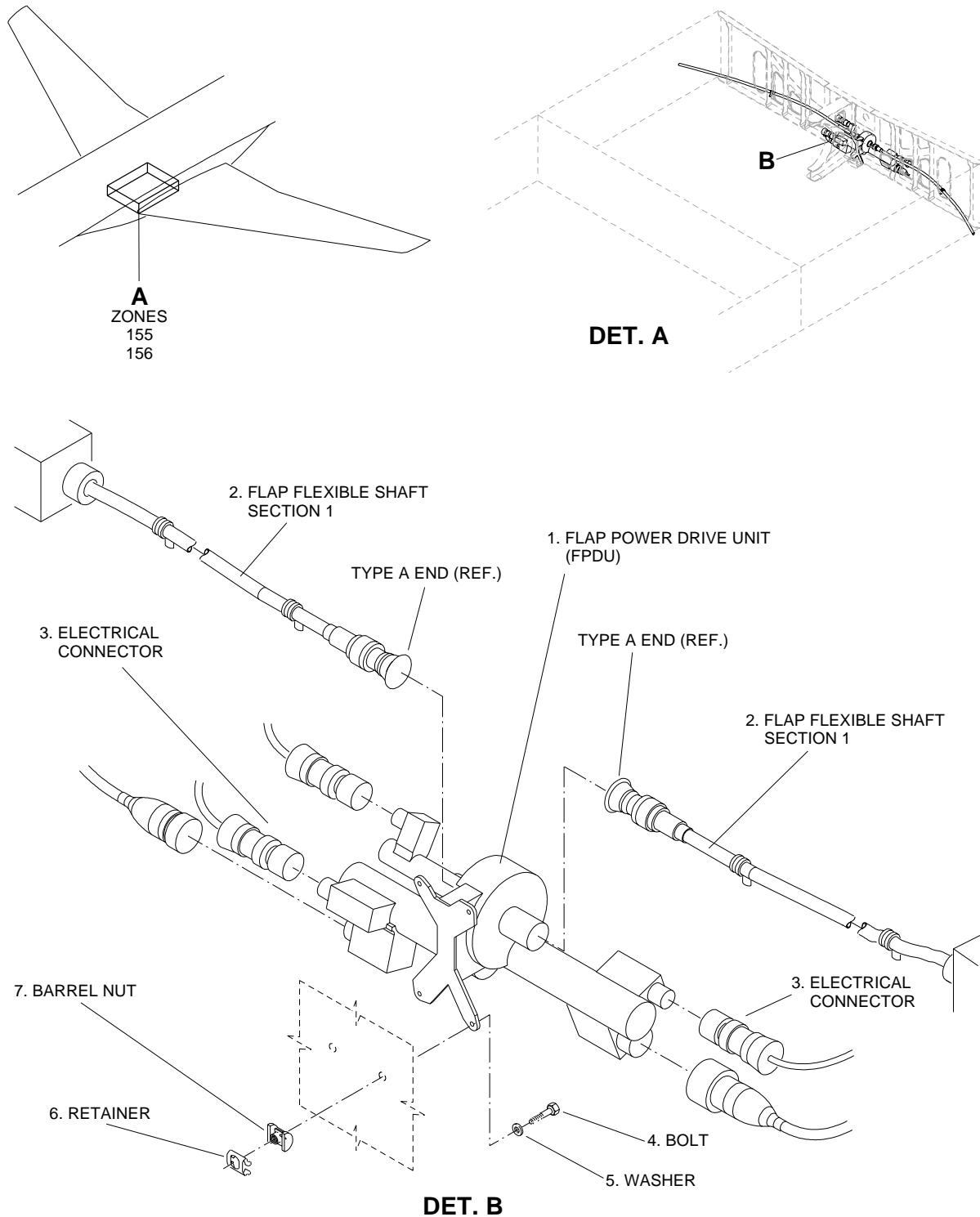
- (1) Cut the lockwire and disconnect the left and right Flap Flexible Shaft (FFS) section 1 (2) from the FPDU (1).

- (2) Disconnect the electrical connectors (3) from the FPDU (1).

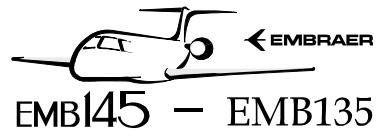
NOTE: If necessary, use soft jaw pliers (GSE 299) to disconnect the electrical connector.

- (3) Remove the bolts (4) and washers (5) to loosen the FPDU.

- (4) Remove the FPDU (1).

EFFECTIVITY: ALL
Flap Power Drive Unit (FPDU) - Removal/Installation
Figure 401


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TASK 27-53-04-400-801-A

EFFECTIVITY: ALL

3. FLAP POWER DRIVE UNIT (FPDU) - INSTALLATION

A. General

(1) This task gives the procedures to install the Flap Power Drive Unit (FPDU).

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 27-53-00-700-802-A/500	-
AMM TASK 28-41-00-200-801-A/600	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193AL	Wing stub

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 299	Soft Jaw Pliers	To disconnect and connect electrical connectors	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C32	Lockwire	As necessary

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing stub

I. Installation (Figure 401)

SUBTASK 420-002-A

(1) Install the FPDU (1) on the wing stub structure. Use the bolts (4) and washers (5).

CAUTION: TO GET A GOOD MATING AND ELECTRICAL CONNECTION BETWEEN THEIR PLUGS AND RECEPTACLES, MAKE SURE THAT:

- FOR CONNECTORS WHOSE RECEPTACLE HAS THE RED BAND, THE PLUG MUST FULLY COVER THE RED BAND;
- FOR CONNECTORS WHOSE PLUG HAS THE LOCKING INDICATOR, THE LOCKING INDICATOR MUST BE ALIGNED WITH OR PAST THE PLUG ORANGE LINE;
- FOR CONNECTORS THAT DO NOT HAVE THE INDICATIONS ABOVE, USE SOFT JAW PLIERS (GSE 299) TO ENSURE THAT THE CONNECTOR IS PROPERLY CONNECTED.

CAUTION: DO NOT OVERTIGHTEN THE FPTU CONNECTOR DURING THE CONNECTION PROCEDURE BECAUSE YOU MAY DAMAGE IT.

- (2) Connect the electrical connectors (3) to the FPDU (5).

NOTE: It is recommended that soft jaw pliers (GSE 299) be used to ensure that the connectors are properly connected.

- (3) On the Circuit Breaker Panel, close the FLAP 2 circuit breaker and remove the DO-NOT-CLOSE tag from it.

- (4) Connect the Flap Flexible Shaft section 1 (2) to the FPDU (1) and safety it.

J. Follow-on

SUBTASK 842-002-A

- (1) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

NOTE: The inspection of fuel quantity indication harness is part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations of the Aircraft Maintenance Program.

- (2) Install access door 193AL (AMM MPP 06-41-01/100).

- (3) On the Circuit Breaker Panel, close the FLAP 1 circuit breaker and remove the DO-NOT-CLOSE tag from it.

- (4) Do the operational check of the flap control system (AMM TASK 27-53-00-700-802-A/500).