



AIRCRAFT  
MAINTENANCE MANUAL

**FLAP FLEXIBLE SHAFT SECTION 4 - REMOVAL/INSTALLATION**

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install section 4 of the flap flexible shaft.
- B. Section 4 of the flap flexible shaft (FFS) extends from the actuator installed at the root of the outboard flap to the flap transmission brake.
- 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
27-51-07-000-801-A	FLAP FLEXIBLE SHAFT SECTION 4 - RE- MOVAL	ALL
27-51-07-400-801-A	FLAP FLEXIBLE-SHAFT SECTION 4 - IN- STALLATION	ALL



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TASK 27-51-07-000-801-A

EFFECTIVITY: ALL

2. FLAP FLEXIBLE SHAFT SECTION 4 - REMOVAL

A. General

- (1) This task gives the procedures to remove section 4 of the flap flexible shaft.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 57-56-01-000-801-A/400	INBOARD AND OUTBOARD FLAP LOWER SHROUDS - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
5712		Wing trailing edge
6712		Wing trailing edge

D. Tools and Equipment

Not Applicable

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 trailing edge

I. Preparation

SUBTASK 841-002-A

**WARNING: MAKE SURE THAT THERE ARE NO PERSONS OR EQUIPMENT IN THE FLAP TRAVEL AREA.**

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Energize the aircraft with an external DC-power supply ( [AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Set the flaps to the 45-degree position.

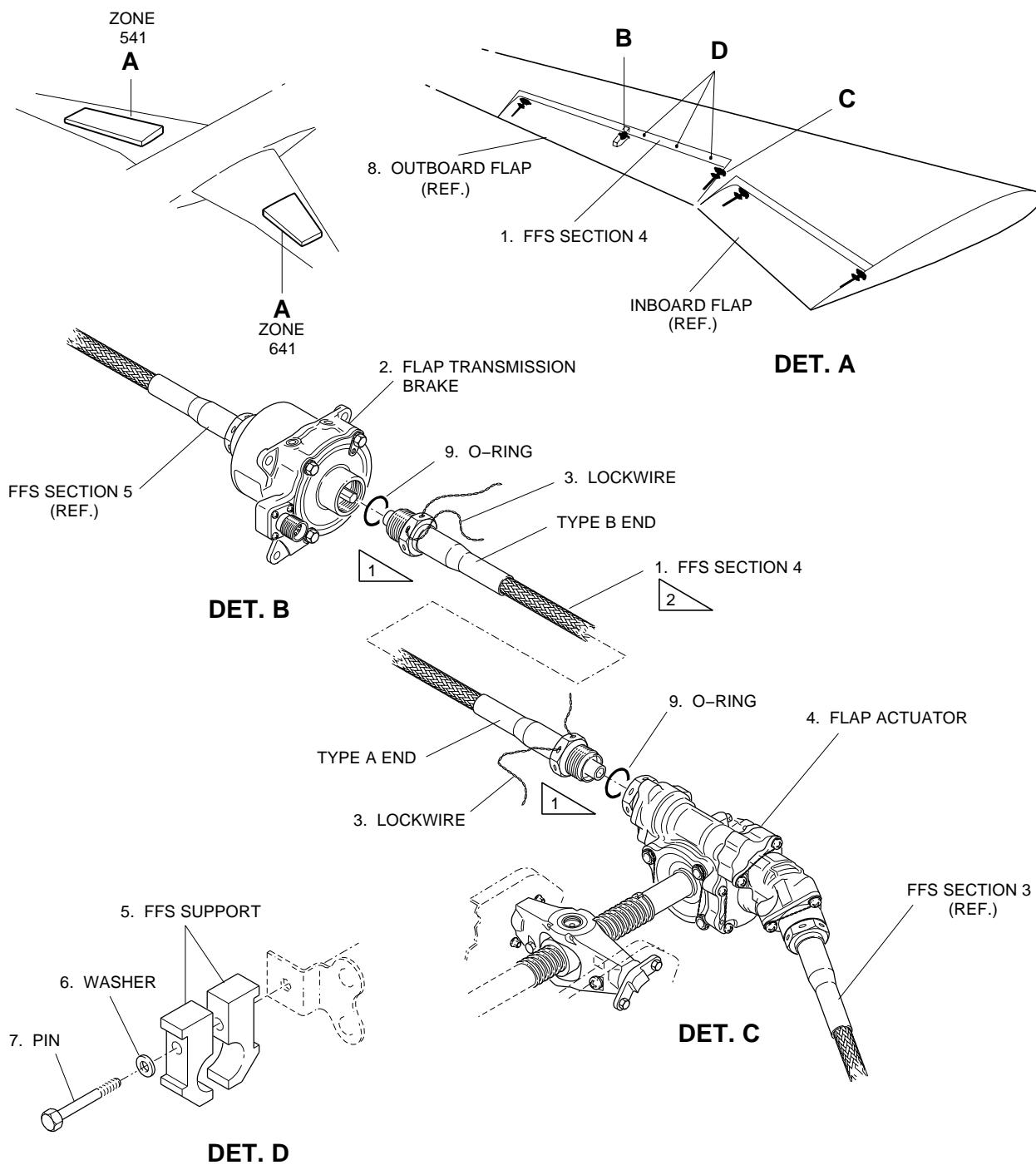


- (4) On the circuit breaker panel, open the FLAP 1 and FLAP 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.
- (5) Open the lower shroud of the outboard flap ([AMM TASK 57-56-01-000-801-A/400](#)).

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

SUBTASK 020-002-A

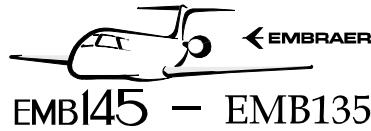
- (1) Cut the lockwire (3) that safeties FFS section 4 (1) in the actuator (4) installed at the root of the outboard flap (8).
- (2) Cut the lockwire (3) that safeties FFS section 4 (1) in the flap transmission brake (2).
- (3) Loosen FFS section 4 (1) from the actuator installed at the root of the outboard flap (8).
- (4) Loosen FFS section 4 (1) from the flap transmission brake (2).
- (5) Loosen the FFS supports (5) to remove FFS section 4 (1) from spar II.
- (6) Remove FFS section 4 (1).

**EFFECTIVITY: ALL**
**Flap Flexible-Shaft Section 4 - Removal/Installation**
**Figure 401**


 **TORQUE: 19,2 – 25 Nm (170 – 220 Lb. In)**

 **THE FFS ENDS CAN BE INSTALLED IN TWO DIRECTIONS. IF YOU OBEY THE DIRECTIONS RECOMMENDED, THE REMOVAL OF THE FFS INNER CORE FOR INSPECTION AND LUBRICATION WILL BE EASIER.**

**EM145AMM270165C.DGN**



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TASK 27-51-07-400-801-A

EFFECTIVITY: ALL

3. FLAP FLEXIBLE-SHAFT SECTION 4 - INSTALLATION

A. General

(1) This task gives the procedures to install the section 4 of the flap Flexible Shaft.

B. References

REFERENCE	DESIGNATION
AMM TASK 27-51-00-700-801-A/500	FLAP CONTROL SYSTEM - OPERATIONAL CHECK
AMM TASK 27-53-04-700-801-A/500	FLAP ZERO-DEGREE RIGGING
AMM TASK 57-56-01-400-801-A/400	INBOARD AND OUTBOARD FLAP LOWER SHROUDS - INSTALLATION
IPC 27-51-00-10-37	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
5712		Wing trailing edge
6712		Wing trailing edge

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

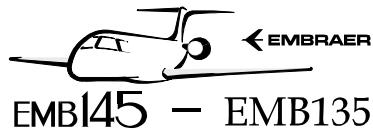
SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C32	Lockwire	As necessary
Commercially available	Parker Super-O-Lube Lubricant	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
O-ring	IPC 27-51-00-10-37	2

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing trailing edge



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I. Installation (Figure 401)

SUBTASK 420-002-A

- NOTE:
- The FFS ends can be installed in the two directions.
  - If you obey the directions given below, the removal of the FFS inner core for inspection and lubrication will be easier.

- (1) Before you install FFS section 4, replace the O-ring (9). Refer to (Figure 401).
  - (2) Coat the new O-ring (9) with a thin film of Parker Super-O-Lube lubricant before the assembly.
  - (3) Install the type-A end of FFS section 4 (1) to the actuator (4) installed at the root of the outboard flap (8) and safety it. Refer to (Figure 401).
  - (4) Install the type-B end of FFS section 4 (1) to the flap transmission brake (2) and safety it. Refer to (Figure 401).
- NOTE: Make sure that the shaft is inserted fully, before you lockwire the nut.
- (5) Put FFS section 4 (1) in the supports (5) at spar II.
  - (6) Tighten the supports (5). Use the pin (7) and washer (6).

J. Follow-on

SUBTASK 842-002-A

- (1) Close the lower shroud of the outboard flap ([AMM TASK 57-56-01-400-801-A/400](#)).
- (2) On the circuit breaker panel, close the FLAP 1 and FLAP 2 circuit breakers and remove the DO-NOT-CLOSE tag from them.
- (3) Do the operational check of the flap control system ([AMM TASK 27-51-00-700-801-A/500](#)).
- (4) If the FFS replacement is because of shaft rupture or twist, do the flap zero-degree rigging ([AMM TASK 27-53-04-700-801-A/500](#)).