

HORIZONTAL-STABILIZER ACTUATOR - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the horizontal stabilizer actuator.
- 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
27-40-02-000-801-A	HORIZONTAL STABILIZER ACTUATOR - REMOVAL	ALL
27-40-02-400-801-A	HORIZONTAL STABILIZER ACTUATOR - INSTALLATION	ALL

TASK 27-40-02-000-801-A

EFFECTIVITY: ALL

2. HORIZONTAL STABILIZER ACTUATOR - REMOVAL

A. General

(1) This task gives the procedures to remove the horizontal stabilizer actuator.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM MPP 06-42-00/100	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
321		Vertical stabilizer
324	324EL	Vertical stabilizer
324	324FR	Vertical stabilizer

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 036	Hydraulic platform	To get access to the horizontal stabilizer	

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	Horizontal stabilizer
1	Helps the other technician	Horizontal stabilizer

I. Preparation

SUBTASK 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) On the circuit breaker panel, open the PITCH TRIM 1 and PITCH TRIM 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.
 - PITCH TRIM 1 (Location Tip: DC BUS 1/FLIGHT CONTROLS/PITCH TRIM 1).

- PITCH TRIM 2 (Location Tip: DC BUS 2/ESSENTIAL DC BUS 2/PITCH TRIM 2).
- (3) On the left power control/distribution box, open the PITCH TRIM 1 and attach a DO-NOT-CLOSE tag to it.
- (4) On the right power control/distribution box, open the PITCH TRIM 2 and attach a DO-NOT-CLOSE tag to it.
- (5) Remove the upper and rear front fairings from the vertical stabilizer to get access to the horizontal stabilizer actuator (AMM MPP 06-30-00/100).
- (6) Remove access panels 324EL and 324FR (AMM MPP 06-42-00/100).

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

SUBTASK 020-002-A

- (1) Disconnect the electrical connectors (17) from the horizontal stabilizer actuator (1).
- (2) Loosen the nuts (16), washers (10), (11), (13), and bolt (12) to remove the jumpers (14) and (15).
- (3) Remove and discard the four cotter pins (7).

WARNING: MAKE SURE THAT THERE ARE NO PERSONS AND EQUIPMENT IN THE HORIZONTAL STABILIZER AREA.

- (4) Do the procedure below to remove the bolts that attach the actuator (1) from the horizontal stabilizer (3).
 - (a) Carefully hold the Horizontal Stabilizer before you do the step below.

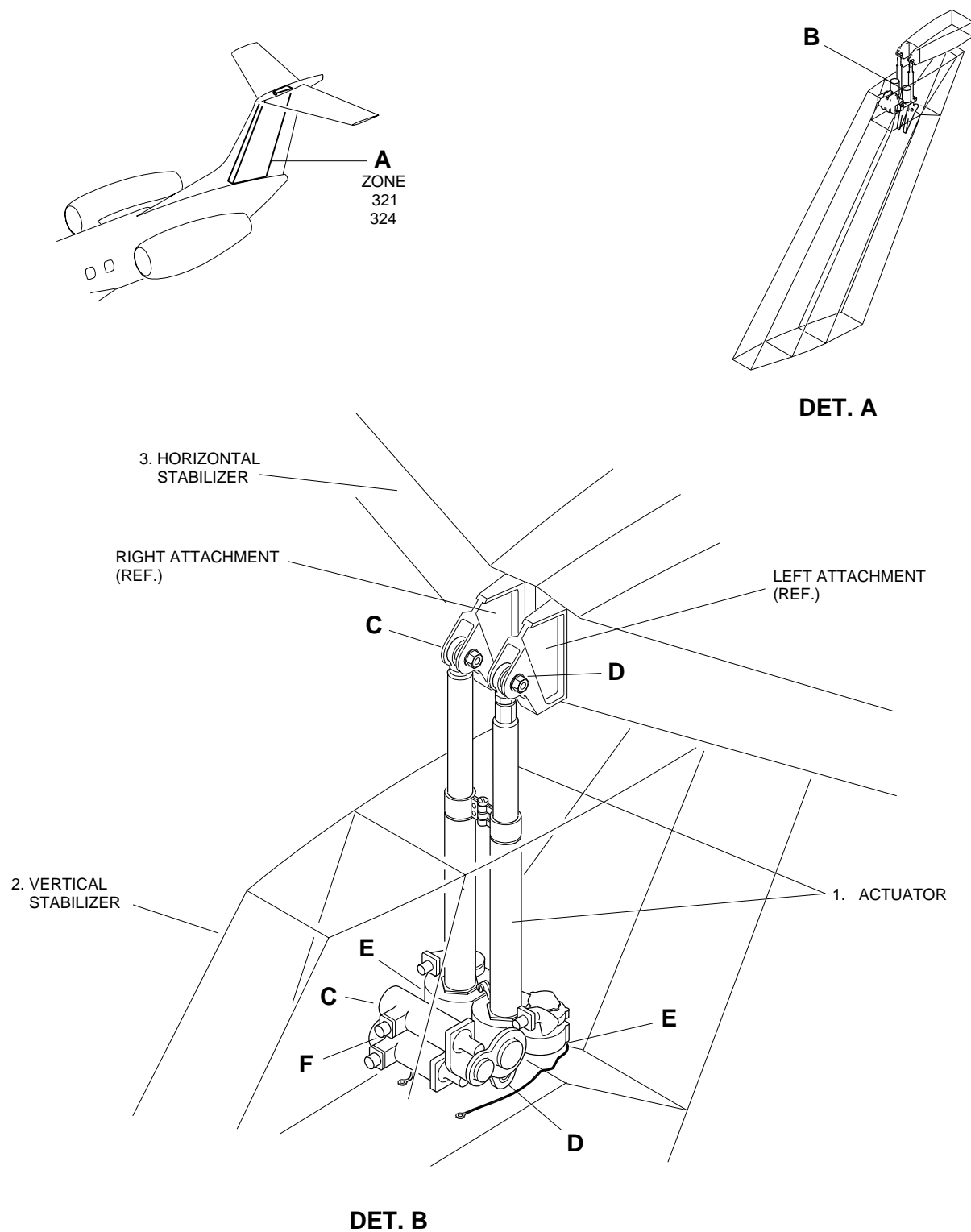
CAUTION: FORCE THE HORIZONTAL STABILIZER LEADING EDGE (APPROXIMATELY 60 KG) DOWN WHEN YOU RELEASE THE ACTUATOR FROM THE HORIZONTAL STABILIZER TO PREVENT INJURIES TO PERSONS AND AIRCRAFT. THE HORIZONTAL STABILIZER WILL TEND TO MOVE ITS LEADING EDGE UP WHEN YOU RELEASE THE ACTUATOR.

- (b) Remove the nuts (6), bushings (8), washers (5), and bolts (4) to remove the actuator (1) from the horizontal stabilizer (3).
 - (c) Carefully move the horizontal stabilizer (3) down.
- (5) Remove the nuts (6), bushings (8), washers (5), and bolts (4) to remove the actuator (1) from the vertical stabilizer (2).
- (6) Remove the horizontal stabilizer actuator (1).

EFFECTIVITY: ALL

Horizontal Stabilizer Actuator - Removal/Installation

Figure 401 - Sheet 1

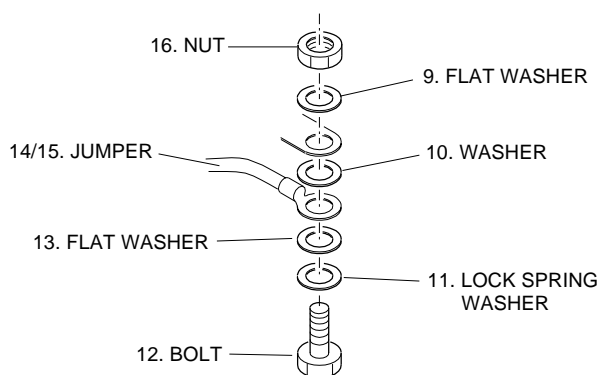
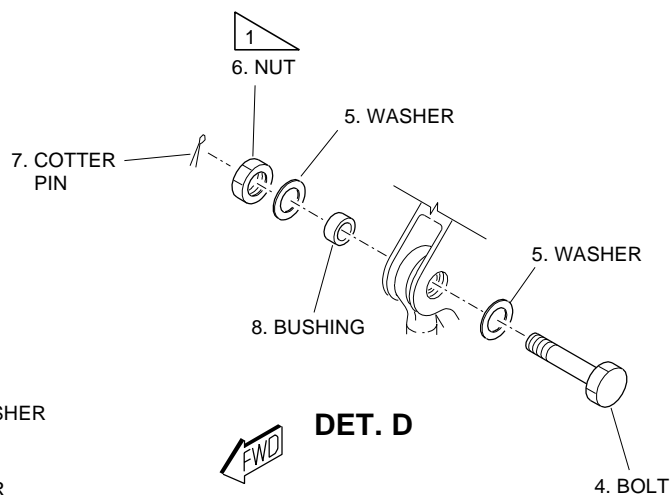
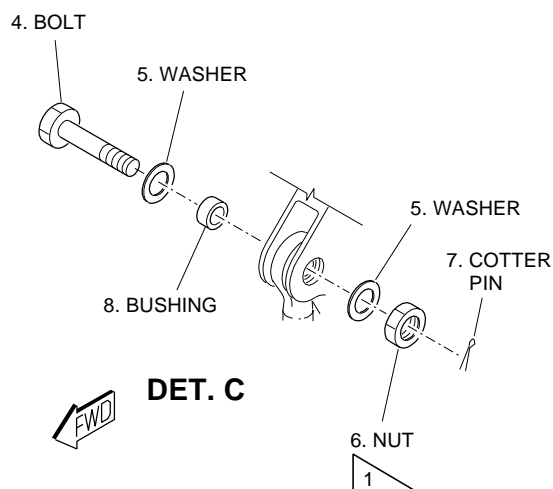
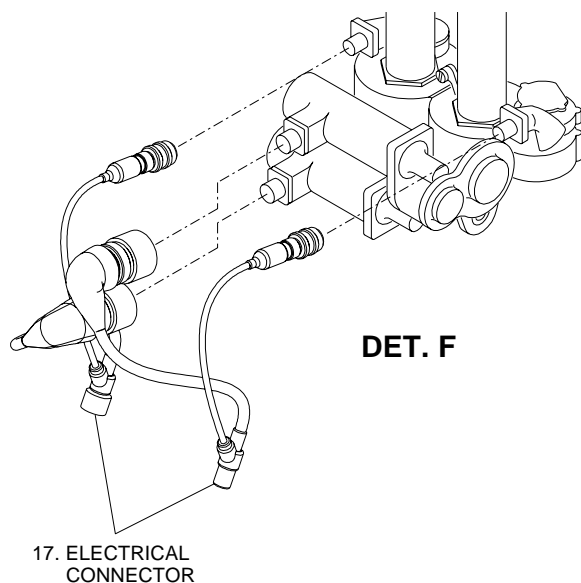


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EFFECTIVITY: ALL

Horizontal Stabilizer Actuator - Removal/Installation

Figure 401 - Sheet 2



1
DRAG TORQUE: 2.03–16.95 N.m (18–150 lbf.in)
TIGHTENING TORQUE: 20.3–27.1 N.m (180–240 lbf.in)

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TASK 27-40-02-400-801-A

EFFECTIVITY: ALL

3. HORIZONTAL STABILIZER ACTUATOR - INSTALLATION

A. General

(1) This task gives the procedures to install the horizontal stabilizer actuator.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM MPP 06-42-00/100	-
AMM TASK 27-40-02-700-801-A/500	ADJUSTMENT OF THE ELECTRICAL ZERO POSITION OF THE HORIZONTAL STABILIZER ACTUATOR
AMM TASK 55-11-01-200-801-A/600	HORIZONTAL-TO-VERTICAL-STABILIZER BONDING JUMPERS - VISUAL INSPECTION
IPC 27-43-00	HORIZONTAL STABILIZER HARNESS
S.B.145-55-0028	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
321		Vertical stabilizer
324	324EL	Vertical stabilizer
324	324FR	Vertical stabilizer

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 036	Hydraulic Platform	To get access to the horizontal stabilizer	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MEP 09-060	Corrosion-inhibiting compound	AR
MS20995C32	Lockwire	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	IPC 27-43-00	4/LRU

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Horizontal stabilizer
1	Helps the other technician	Horizontal Stabilizer

I. Installation (Figure 401)

SUBTASK 420-002-A

WARNING: CA-1000 CORROSION-INHIBITING COMPOUND IS TOXIC TO SKIN, EYES AND RESPIRATORY TRACT. USE PVC GLOVES AND EYE PROTECTION. USE ONLY IN WELL VENTILATED AREAS. OBEY THE MANUFACTURERS HEALTH AND SAFETY INSTRUCTIONS.

- (1) Remove the old corrosion-inhibiting compound from the bolts (4). Apply new corrosion-inhibiting compound on the bolts.
- (2) Install the actuator (1) to the vertical stabilizer (2) attachments. Use the bolts (4), washers (5), bushings (8), and nuts (6). Torque as given in (Figure 401).
- (3) Do the procedure below to install the actuator (1) to the horizontal stabilizer (3).
 - (a) Force the horizontal stabilizer leading edge (approximately 60 kg) to down and hold it when you install the actuator to the horizontal stabilizer.
 - (b) Install the rod without nut adjustment in the horizontal stabilizer right attachment (flight direction reference). Use the bolts (4), washers (5), bushings (8), and nuts (6). Torque as given in (Figure 401).

CAUTION: WHEN YOU CONNECT THE ACTUATOR TO THE LEFT SIDE OF THE HORIZONTAL STABILIZER, DO NOT COMPRESS THE SHAFT OF THE ACTUATOR TO PREVENT FORCED INSTALLATION. THE BOLT (4) MUST GO INTO THE HOLE FREELY. IF NECESSARY, ADJUST THE LEFT ROD OF THE ACTUATOR AND SAFETY IT.

- (c) Install the actuator (1) in the left attachment of the horizontal stabilizer (3). Use the bolts (4), washers (5), bushings (8), and nuts (6). Torque as given in (Figure 401).
 - (d) If you adjusted or not the left rod, bend up three flanges of the lock washer. Bend down the other flanges.
- (4) Install the jumpers (14) and (15) to the actuator (1). Use bolt (12), washers (10), (11), (13), and nuts (16).
- (5) Connect the electrical connectors (17).

J. Follow-on

SUBTASK 842-002-A

- (1) For aircraft PRE-MOD. [S.B.145-55-0028](#), do the visual inspection on the horizontal to vertical bonding jumpers ([AMM TASK 55-11-01-200-801-A/600](#)).

- (2) On the left power control/distribution box, close the PITCH TRIM 1 and remove the DO-NOT-CLOSE tag from it.
- (3) On the right power control/distribution box, close the PITCH TRIM 2 and remove the DO-NOT-CLOSE tag from it.
- (4) Do a check of the electrical zero position of the actuator and the EICAS indication. Refer to [AMM TASK 27-40-02-700-801-A/500](#).
 - (a) If necessary, adjust the actuator ([AMM TASK 27-40-02-700-801-A/500](#)).
- (5) On the Circuit Breaker Panel, close the PITCH TRIM 1 and PITCH TRIM 2 circuit breakers and remove the DO-NOT-CLOSE tag from them.
 - PITCH TRIM 1 (Location Tip: DC BUS 1/FLIGHT CONTROLS/PITCH TRIM 1).
 - PITCH TRIM 2 (Location Tip: DC BUS 2/ESSENTIAL DC BUS 2/PITCH TRIM 2).
- (6) Install the upper and rear front fairings of the vertical stabilizer (AMM MPP 06-30-00/100).
- (7) Install access panels 324EL and 324FR (AMM MPP 06-42-00/100).