



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

SPRING-CARTRIDGE POSITION MECHANISM - REMOVAL/INSTALLATION

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

1. General

- A. This section gives the procedures to remove and install the electromechanical gust-lock spring-cartridge position mechanism.
- B. The spring-cartridge position mechanism is a component of the electromechanical gust lock system. It is installed in the tail boom, inside the horizontal stabilizer torque box.
- 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
27-71-14-000-801-A	SPRING-CARTRIDGE POSITION MECHANISM - REMOVAL	AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK
27-71-14-400-801-A	SPRING-CARTRIDGE POSITION MECHANISM - INSTALLATION	AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK



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TASK 27-71-14-000-801-A

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

2. SPRING-CARTRIDGE POSITION MECHANISM - REMOVAL

A. General

- (1) This task gives the procedure to remove the gust-lock spring-cartridge position mechanism.

B. References

REFERENCE	DESIGNATION
AMM TASK 27-71-01-000-801-A/400	ELECTROMECHANICAL ACTUATOR - REMOVAL
AMM TASK 55-36-00-000-801-A/400	TAIL BOOM - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
321	321	Tail boom

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Gloves, Phosphate Ester-Base, Fluid-Resistant	Protection for the hands	1
Commercially available	Rubber Goggles, Phosphate Ester-Base, Fluid-Resistant	Protection for the eyes	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Horizontal stabilizer

I. Preparation

SUBTASK 841-002-A

- (1) Set the gust lock system to the unlocked position.
- (2) Remove rear fairings 321 of the horizontal stabilizer. Refer to AMM TASK 55-36-00-000-801-A/400.
- (3) Remove the electromechanical gust lock actuator. Refer to AMM TASK 27-71-01-000-801-A/400.



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

SUBTASK 020-002-A

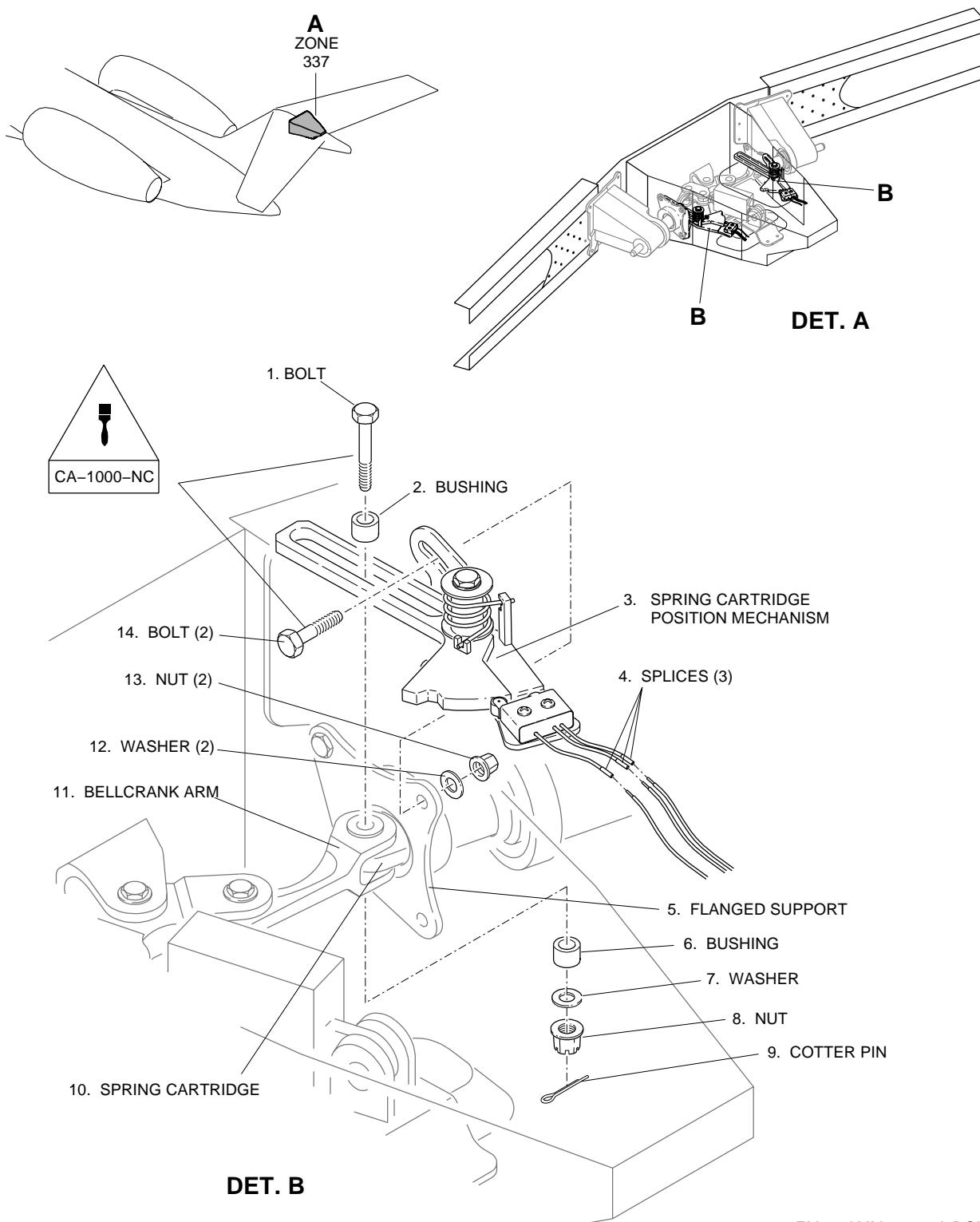
- WARNING:** • MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.
- CA-1000 CORROSION-INHIBITING COMPOUND IS TOXIC TO SKIN, EYES, AND RESPIRATORY TRACT. USE PVC GLOVES AND EYE PROTECTION. USE ONLY IN WELL VENTILATED AREAS. OBEY THE MANUFACTURERS' HEALTH AND SAFETY INSTRUCTIONS.

- (1) Disconnect the splice (4).
- (2) Remove and discard the cotter pin (9).
- (3) Remove the bolt (1), bushings (2) and (6), washer (7), and nut (8) to release the spring-cartridge position mechanism (3) from the bellcrank arm (11).
- (4) Remove the bolts (14), washers (12), and nuts (13) to remove the spring-cartridge position mechanism assembly (3) from the flanged support (5).
- (5) Move the bellcrank arm (11) to remove the spring-cartridge position mechanism (3) from the horizontal stabilizer torque box.

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

Spring-Cartridge Position Mechanism - Removal/Installation

Figure 401



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TASK 27-71-14-400-801-A
EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK
3. SPRING-CARTRIDGE POSITION MECHANISM - INSTALLATION
A. General

(1) This task gives the procedure to install the gust-lock spring-cartridge position mechanism.

B. References

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM TASK 27-71-01-400-801-A/400	ELECTROMECHANICAL ACTUATOR - INSTALLATION
AMM TASK 27-71-01-700-801-A/500	ELECTROMECHANICAL ACTUATOR - FUNCTIONAL CHECK
AMM TASK 27-71-14-700-801-A/500	SPRING-CARTRIDGE POSITION MECHANISM - ADJUSTMENT
AMM TASK 55-36-00-400-801-A/400	TAIL BOOM - INSTALLATION
FIM TASK 27-70-00-810-808-A	-
IPC 27-71-00	GUST LOCK ELECTROMECHANICAL

C. Zones and Accesses

<i>ZONE</i>	<i>PANEL/DOOR</i>	<i>LOCATION</i>
321	321	Tail boom

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

<i>ITEM</i>	<i>DESCRIPTION</i>	<i>PURPOSE</i>	<i>QTY</i>
Commercially available	Rubber Gloves, Phosphate Ester-Base, Fluid-Resistant	Protection for the hands	1
Commercially available	Rubber Goggles, Phosphate Ester-Base, Fluid-Resistant	Protection for the eyes	1
Commercially available	Retaining ring pliers	To install the retaining ring	1

F. Consumable Materials

<i>SPECIFICATION (BRAND)</i>	<i>DESCRIPTION</i>	<i>QTY</i>
MEP 09-060	Corrosion-Inhibiting Compound	As necessary



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G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	IPC 27-71-00	1

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Horizontal stabilizer

I. Installation (Figure 401)

SUBTASK 420-002-A

- WARNING:** • **MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.**
- **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) Apply corrosion-inhibiting compound as shown in (Figure 401). For this, use gloves and goggles.
- (2) Use the bolts (14), washers (12), and nuts (13) to install the spring-cartridge position mechanism assembly (3) to the flanged support (5) in the horizontal stabilizer torque box.
- (3) Move the mechanism to align the bellcrank arm (11), the spring cartridges (10), and the spring-cartridge position mechanism (3).
- (4) Use the bolt (1), bushing (2) and (6), washer (7), nut (8), and cotter pin (9) to install the bellcrank arm (11), the spring cartridges (10), and the spring-cartridge position mechanism (3).
- (5) Make sure that the bolts (1) that attach the spring cartridges to the bellcranks are tightly connected.

J. Follow-on

SUBTASK 842-002-A

- (1) Install the electromechanical gust lock actuator. Refer to [AMM TASK 27-71-01-400-801-A/400](#).
- (2) Adjust the spring-cartridge position switch. Refer to [AMM TASK 27-71-14-700-801-A/500](#).
- (3) Do the operational check of the electromechanical actuator. Refer to [AMM TASK 27-71-01-700-801-A/500](#)



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If the check of the actuator is not OK, check the components of the electromechanical gust lock mechanism for excessive internal friction forces. Refer to FIM TASK 27-70-00-810-808-A.

- (4) Install rear fairings 321 of the horizontal stabilizer [AMM TASK 55-36-00-400-801-A/400](#).

