



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

ELECTROMECHANICAL ACTUATOR - REMOVAL/INSTALLATION

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

1. General

- A. This section gives the procedures to remove and install the electromechanical gust lock actuator.
- B. The actuator is a component of the electromechanical gust lock system. It is installed in the tail boom, inside of 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 |
|--------------------|------------------------------------------------|----------------------------------------------|
| 27-71-01-000-801-A | ELECTROMECHANICAL ACTUATOR - RE- MOVAL | AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK |
| 27-71-01-400-801-A | ELECTROMECHANICAL ACTUATOR - IN- STALLATION | AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK |



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TASK 27-71-01-000-801-A

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

2. ELECTROMECHANICAL ACTUATOR - REMOVAL

A. General

- (1) This task gives the procedure to remove the electromechanical gust lock actuator.

B. References

| REFERENCE | DESIGNATION |
|---------------------------------|---------------------|
| 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 ([AMM TASK 55-36-00-000-801-A/400](#)).



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

SUBTASK 020-002-A

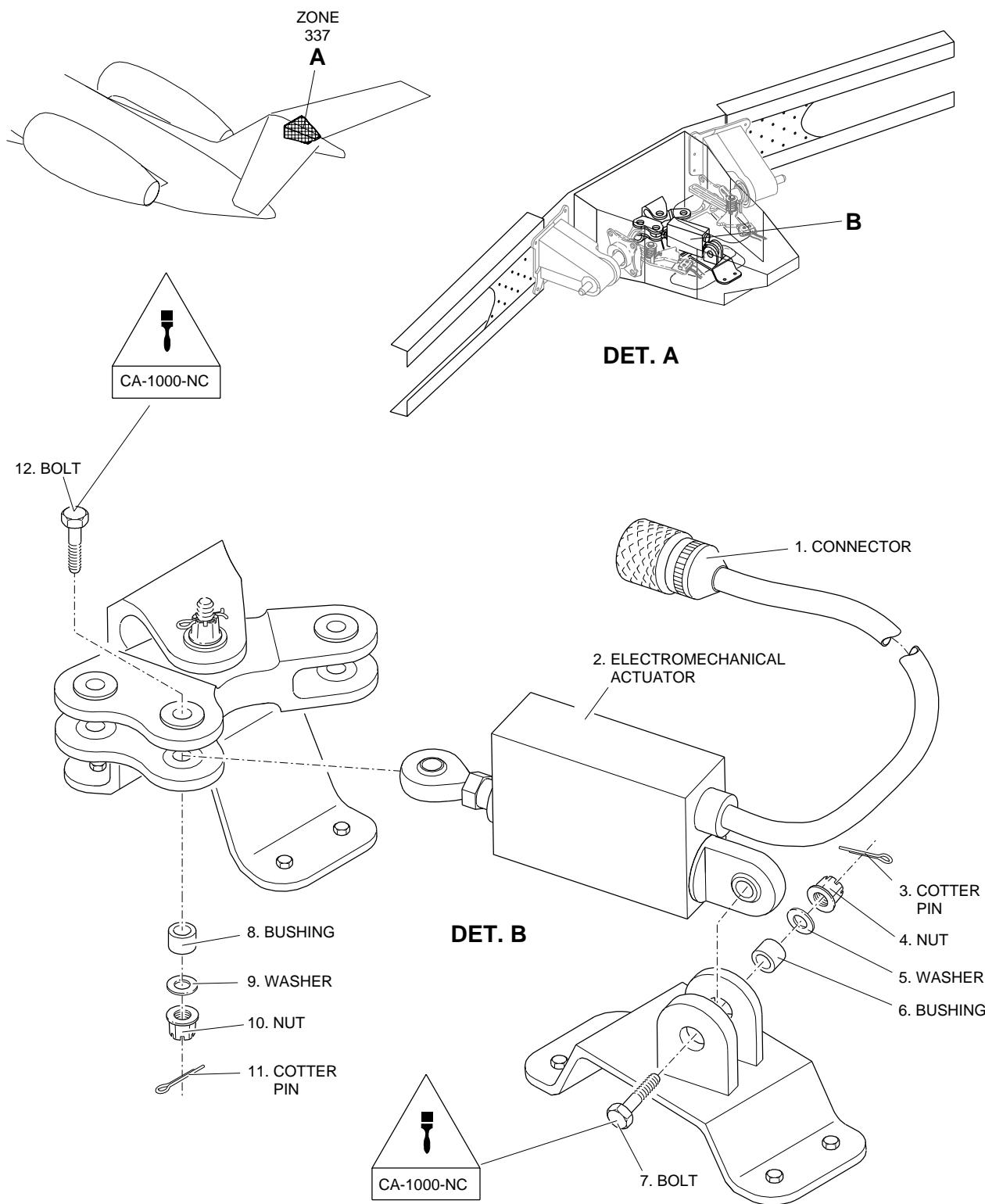
- WARNING:** • MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.
- CA-1000 CORROSION-INHIBITING COMPOUND IS TOXIC TO SKIN, EYES, AND RESPIRATORY TRACT. USE PVC GLOVES AND EYE PROTECTION. USE ONLY IN WELL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

- (1) Disconnect the electrical connector (1).
- (2) Remove and discard the cotter pin (11).
- (3) Remove the bolt (12), bushing (8), washer (9), and nut (10) to remove the electromechanical actuator from the bellcrank mechanism.
- (4) Remove and discard the cotter pin (3).
- (5) Remove the bolt (7), bushing (6), washer (5), and nut (4) to remove the electromechanical actuator (2) from the support.
- (6) Remove the electromechanical actuator (2) from the horizontal stabilizer torque box.

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

Electromechanical Actuator - Removal/Installation

Figure 401



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TASK 27-71-01-400-801-A

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

3. ELECTROMECHANICAL ACTUATOR - INSTALLATION

A. General

(1) This task gives the procedure to install the electromechanical gust lock actuator.

B. References

| REFERENCE | DESIGNATION |
|---------------------------------|-------------------------------------------------|
| AMM TASK 27-71-00-700-801-A/500 | ELECTROMECHANICAL GUST LOCK - OPERATIONAL CHECK |
| AMM TASK 27-71-01-700-801-A/500 | ELECTROMECHANICAL ACTUATOR - FUNCTIONAL CHECK |
| 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

| 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

| SPECIFICATION (BRAND) | DESCRIPTION | QTY |
|-----------------------|-------------------------------|-----|
| MEP 09-060 | Corrosion-Inhibiting Compound | AR |

G. Expendable Parts

| ITEM | IPC REFERENCE (VENDOR REFERENCE) | QTY |
|------------|----------------------------------|-----|
| Cotter pin | IPC 27-71-00 | 2 |



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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 bolt (7), bushing (6), washer (5), nut (4), and cotter pin (3) to install the electromechanical actuator (2) to the support.
- (3) Use the bolt (12), bushing (8), washer (9), nut (10), and cotter pin (11) to install the electromechanical actuator (2) to the bellcrank mechanism.
- (4) Connect the electrical connector (1).

J. Follow-on

SUBTASK 842-002-A

- (1) Do the operational check of the electromechanical gust lock system. Refer to ([AMM TASK 27-71-00-700-801-A/500](#)).
- (2) Do the functional check of the electromechanical actuator. Refer to [AMM TASK 27-71-01-700-801-A/500](#).
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.
- (3) Install rear fairings 321 of the horizontal stabilizer ([AMM TASK 55-36-00-400-801-A/400](#)).
- (4) Set the gust lock system to the locked position.