



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

BELLCRANK ASSEMBLY - REMOVAL/INSTALLATION

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

1. General

- A. This section gives the procedures to remove and install the electromechanical gust-lock bellcrank assembly.
- B. The bellcrank assembly 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
27-71-02-000-801-A	BELLCRANK ASSEMBLY - REMOVAL	AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK
27-71-02-400-801-A	BELLCRANK ASSEMBLY - INSTALLATION	AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 27-71-02-000-801-A

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

2. BELLCRANK ASSEMBLY - REMOVAL

A. General

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

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

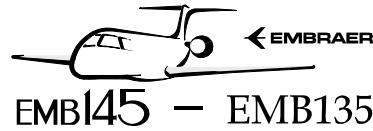
H. Persons Recommended

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.



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

- (3) Remove the electromechanical gust lock actuator. Refer to [AMM TASK 27-71-01-000-801-A/400](#).

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.

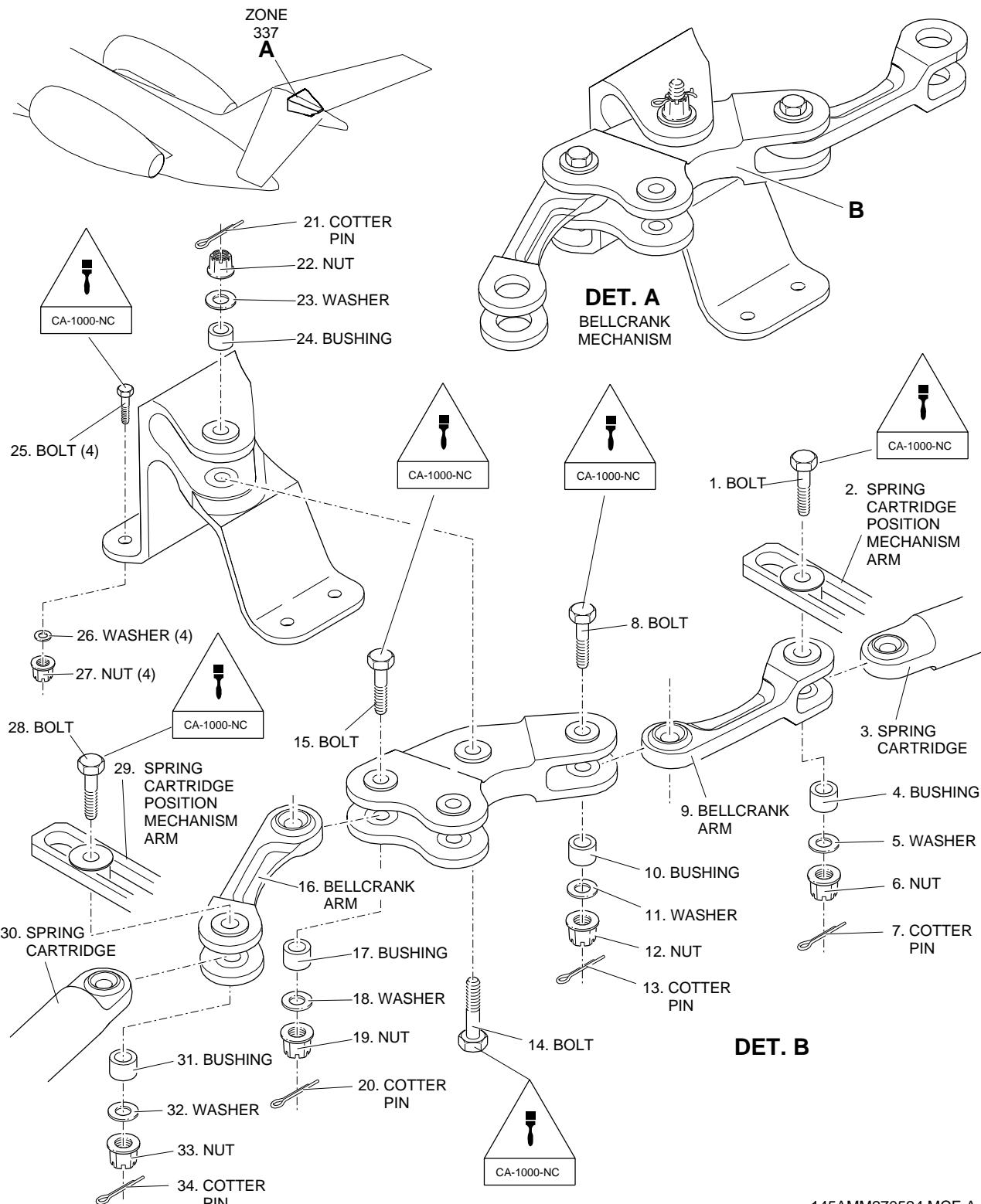
• CA-1000 CORROSION-INHIBITING COMPOUND IS TOXIC TO SKIN, EYES, AND RESPIRATORY TRACT. USE PVC GLOVES AND EYE PROTECTION. USE ONLY IN WELL VENTILATED AREAS. OBEY THE MANUFACTURERS' HEALTH AND SAFETY INSTRUCTIONS.

- (1) Remove and discard the cotter pins (7) and (34).
- (2) Remove the bolts (1) and (28), bushings (4) and (31), washers (5) and (32), and nuts (6) and (33) to remove the bellcrank assembly from the spring cartridges (3) and (30) and spring-cartridge position mechanism arms (2) and (29).
- (3) Remove the bolts (25), washers (26), and nuts (27) to remove the bellcrank assembly from the horizontal stabilizer torque box.
- (4) Remove and discard the cotter pins (13) and (20).
- (5) Remove the bolts (15) and (8), bushings (10) and (17), washers (11) and (18), and nuts (12) and (19) to remove bellcrank arms (9) and (16).
- (6) Remove and discard the cotter pin (21).
- (7) Remove the bolt (14), bushing (24), washer (23), and nut (22) to remove the bellcrank from the support.

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

Bellcrank Assembly - Removal/Installation

Figure 401



145AMM270524.MCE A



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 27-71-02-400-801-A

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

3. BELLCRANK ASSEMBLY - INSTALLATION

A. General

(1) This task gives the procedure to install the gust-lock bellcrank assembly.

B. References

REFERENCE	DESIGNATION
AMM TASK 27-71-00-700-801-A/500	ELECTROMECHANICAL GUST LOCK - OPERATIONAL CHECK
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 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	5



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

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 (14), bushing (24), washer (23), nut (22), and cotter pin (21) to install the bellcrank in the support.
- (3) Use the bolts (15) and (8), bushings (10) and (17), washers (11) and (18), nuts (12) and (19), and cotter pins (13) and (20) to install the bellcrank arms (9) and (16).
- (4) Use the bolts (25), washers (26), and nuts (27) to install the bellcrank assembly in the horizontal stabilizer torque box.
- (5) Use the bolts (1) and (28), bushings (4) and (31), washers (5) and (32), nuts (6) and (33), and cotter pins (7) and (34) to install the bellcrank assembly to the spring cartridges (3) and (30) and spring-cartridge position mechanism arms (2) and (29).
- (6) Make sure that the bolts (1) and (28), 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) Do the operational check of the electromechanical gust lock system. Refer to [AMM TASK 27-71-00-700-801-A/500](#).
- (3) Do the operational 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.

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



AIRCRAFT
MAINTENANCE MANUAL

-
- (5) Set the gust lock system to the locked position.

