



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

ELECTROMECHANICAL GUST LOCK SYSTEM - ADJUSTMENT/TEST

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

1. General

- A. This section gives the procedures to do:
- The operational check of the electromechanical gust lock system.
 - The operational check of the solenoid.
 - The operational check of the air/ground protection logic.
- 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
27-71-00-700-801-A	ELECTROMECHANICAL GUST LOCK - OPERATIONAL CHECK	AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK
27-71-00-700-802-A	ELECTROMECHANICAL GUST LOCK SOLENOID - OPERATIONAL CHECK	AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK
27-71-00-700-803-A ♦	ELECTROMECHANICAL GUST LOCK SYSTEM - OPERATIONAL CHECK	AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

TASK 27-71-00-700-801-A
EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK
2. ELECTROMECHANICAL GUST LOCK - OPERATIONAL CHECK
A. General

- (1) This task gives the procedures to do the operational check of the electromechanical gust lock system.

B. References

<i>REFERENCE</i>	<i>DESIGNATION</i>
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 32-63-00-860-801-A/200	"FLIGHT"/"GROUND" CONDITION SIMULATION IN AIR/GROUND SYSTEM
S.B.145-27-0101	-
S.B.145-27-0125	-
S.B.145-27-0126	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	Cockpit and nose landing gear

I. Preparation
SUBTASK 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Do not do other tasks in the horizontal stabilizer, elevators, and rudder at this time.
- (3) Make sure that there are no objects or persons in the elevator travel area.
- (4) Make sure that the electromechanical gust lock system is in the locked position.

- (5) Energize the aircraft with the External DC Power Supply **AMM TASK 20-40-01-860-801-A/200**.
- (6) Push the gust-lock light indicator, on the glareshield panel, and make sure that the indicator light comes on (lamp test). Refer to Figure 501.
- J. Operationally Check Electromechanical Gust Lock Figure 501
- SUBTASK 710-002-A**
- WARNING: MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.**
- (1) Do the operational check of the spring cartridges actuation and gust lock light indication as follows:
- Lift the handle and command the gust lock lever to the unlocked position until the intermediate backstop is reached.
 - The gust lock lever travel is limited to the intermediate position (approximately 12 degrees forward of the locked position).
 - (FOR AIRCRAFT PRE-MOD. **S.B.145-27-0125**) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light goes off and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - (FOR AIRCRAFT POST-MOD. **S.B.145-27-0125**) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light starts to blink and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.
 - Lift the handle and command the gust lock lever to the unlocked position.
 - (FOR AIRCRAFT POST-MOD. **S.B.145-27-0125**) After the gust lock lever gets to the unlocked position, the gust lock light stops to blink and the light goes off.
- (2) Do the operational check of the locking of the gust lock solenoid with WOW air condition as follows:
- With the gust lock lever at the unlocked position, simulate the flight condition on the nose landing gear proximity switch (WOW). Refer to step J.(4) of **AMM TASK 32-63-00-860-801-A/200**.
 - Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.
- NOTE:** Make sure that the gust lock lever cannot be moved from the unlocked position.

- (c) Put the nose landing gear proximity switch (WOW) back to the ground condition.
 - (d) Lift the handle and command the gust lock lever to the locked position.
- (3) Do the operational check of the AIR/GND D circuit breaker as follows:
- (a) Lift the handle and command the gust lock lever to the unlocked position.
 - (b) Move the control column to the neutral position.
 - (c) On the circuit breaker panel, open the AIR/GND D circuit breaker to simulate flight condition indication.
 - (d) Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.
 - (e) Lift the handle and command the gust lock lever to the locked position.
 - 1 Make sure that the control column can be moved fully rearward (nose up) and fully forward (nose down).
 - (f) On the circuit breaker panel, close the AIR/GND D circuit breaker to have ground condition indication.
 - (g) Push the control columns fully forward and make sure of the following conditions:
 - The two control columns are locked, but small deflections are possible because of the cable system flexibility.

NOTE: The elevator deflections are limited to the dimensional tolerance between the locking mechanism (spring cartridge) and the elevator lateral fitting holes.

 - The engine power control levers cannot move beyond the ground maneuver setting.
- (4) (FOR AIRCRAFT POST-MOD. [S.B.145-27-0101](#)) Do the operational check of the engine 1 and engine 2 thrust lever switches (automatic unlock system) as follows:
- (a) Make sure that the gust lock lever is at the locked position.
 - (b) Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
 - (c) (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0126](#)) On the gust lock lever, remove the screws (1) and (3) and the gust lock cross bar (2). Refer to Figure 502.
 - (d) (FOR AIRCRAFT POST-MOD. [S.B.145-27-0126](#)) On the gust lock lever, remove the screws (1) and (3) and the gust lock cross bar (2). Refer to Figure 503.
 - (e) Set engine 1 thrust lever to a position more than 59°.
 - 1 The gust lock indication light comes on.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.

- (f) Set engine 1 thrust lever back to zero degree position.
 - 1 The gust lock indication light goes off.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
 - (g) Set engine 2 thrust lever to a position more than 59°.
 - 1 The gust lock indication light does not come on.
 - 2 Move the control column to the full nose up position and back to the full nose down position. The control columns must be free to move.
 - (h) Set engine 2 thrust lever back to zero degree position.
 - 1 The gust lock indication light does not come on.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
 - (i) Set both thrust levers to a position more than 59°.
 - 1 The gust lock indication light comes on and stays on for approximately eight seconds after the thrust levers are set to the position more than 59°, during the unlocking cycle.
 - 2 Move the control column to the full nose up position and back to the full nose down position. The control columns must be free to move.
 - (j) Set both thrust levers back to zero degree position.
 - 1 The gust lock indication light stays off.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
 - (k) (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0126](#)) Put the cross bar (2) in its installation position and tighten the screws (1) and (3). Refer to Figure 502.
 - (l) (FOR AIRCRAFT POST-MOD. [S.B.145-27-0126](#)) Put the cross bar (2) in its installation position and tighten the screws (1) and (3). Refer to Figure 503.
- (5) (AIRCRAFT POST-MOD. [S.B.145-27-0101](#)) Do the operational check of the AIR Ground relay K1168 as follows:
- (a) Lift the gust lock handle and move the gust lock lever to the intermediate position.
 - 1 (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light goes off and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.

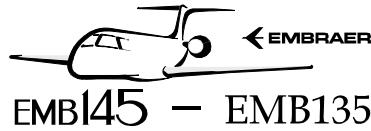
2 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light starts to blink and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.

- (b) Move the control column to the full nose up position and back to the full nose down position.
 - 1** The control column must be free to move.
- (c) Attach a metallic (steel) target in front of air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to simulate the flight condition on the relay K1168.
- (d) Lift the gust lock handle and move the gust lock lever to the locked position.
- (e) Move the control column to the full nose up position and back to the full nose down position.
 - 1** The control column must be free to move.
- (f) Remove the metallic (steel) target from air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to get the ground condition back on the relay K1168.
- (g) Move the control column to the full nose down position.
 - 1** The control column must be locked to move
- (h) Attach a metallic (steel) target in front of air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to simulate the flight condition on the relay K1168.
- (i) Move the control column to the full nose up position and back to the full nose down position.
 - 1** The control column must be free to move.
- (j) Remove the metallic (steel) target from air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to get the ground condition back on the relay K1168.
- (k) Move the control column to the full nose down position.
 - 1** The control column are locked, but small deflections are possible because of the system flexibility.

K. Follow-on

SUBTASK 842-002-A

- (1) Deenergize the aircraft [AMM TASK 20-40-01-860-801-A/200](#).



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 27-71-00-700-802-A

EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

3. ELECTROMECHANICAL GUST LOCK SOLENOID - OPERATIONAL CHECK

WARNING: MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.

A. General

- (1) This task gives the procedures for the operational check of the electromechanical gust lock solenoid.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 27-71-06-700-801-A/500	SOLENOID - ADJUSTMENT
S.B.145-27-0125	-

C. Zones and Accesses

Not Applicable

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	Cockpit

I. Preparation

SUBTASK 841-007-A

- (1) Make sure that the aircraft is safe for maintenance...
- (2) Do not do other tasks in the horizontal stabilizer, elevators, and rudder at this time.
- (3) Make sure that there are no objects or persons in the elevator travel area.
- (4) Make sure that the electromechanical gust lock system is in the locked position.

- (5) Energize the aircraft with the External DC Power Supply **AMM TASK 20-40-01-860-801-A/200.**

J. Operationally Check Electromechanical Gust Lock Solenoid Function (Figure 501)

SUBTASK 710-007-A

WARNING: MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.

- (1) Do the subsequent test to functionally check the gust lock solenoid as follows:

NOTE: If any of the steps (b), (d), (e), or (g) do not have the expected result, do the adjustment of the solenoid (**AMM TASK 27-71-06-700-801-A/500**).

- (a) Push the control columns forward, to the full nose down position.
 - 1 The two control columns are locked, in the full nose down position, but small deflections are possible because of the cable system flexibility.
 - 2 The elevator deflections are limited to the dimensional tolerance between the locking mechanism (spring cartridge) and the elevator lateral fitting holes.
 - 3 The engine power control levers cannot move beyond the ground maneuver setting.
- (b) Lift the handle and command the gust lock lever to the unlocked position until the intermediate backstop is reached.
The gust lock lever travel is limited to the intermediate position (approximately 12 degrees forward of the locked position).
 - 1 (FOR AIRCRAFT PRE-MOD. **S.B.145-27-0125**) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light goes off and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - 2 (FOR AIRCRAFT POST-MOD. **S.B.145-27-0125**) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light starts to blink and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
- (c) Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.
- (d) Lift the handle and command the gust lock lever to the unlocked position.
 - 1 (FOR AIRCRAFT POST-MOD. **S.B.145-27-0125**) After the gust lock lever get to the unlocked position, the gust lock light stops to blink and the light goes off.
- (e) With the gust lock lever in the unlocked position, move the control columns forward (nose down) and try to move the gust lock lever to locked position.



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

1 The gust lock lever can not be moved from unlocked position to locked position.

(f) Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.

(g) Lift the handle and command the gust lock lever to the locked position.

1 The gust lock lever can be moved from unlocked position to locked position.

(h) Push the control columns forward, back to the full nose down position

1 The two control columns are locked, in the full nose down position, but small deflections are possible because of the cable system flexibility.

2 The engine power control levers cannot move beyond the ground maneuver setting.

K. Follow-on

SUBTASK 842-007-A

(1) Deenergize the aircraft [AMM TASK 20-40-01-860-801-A/200](#).

TASK 27-71-00-700-803-A
EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK
4. ELECTROMECHANICAL GUST LOCK SYSTEM - OPERATIONAL CHECK

WARNING: MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.

A. General

- (1) This task gives the procedures to do the operational check of the air/ground protection logic.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 27-71-06-700-801-A/500	SOLENOID - ADJUSTMENT
AMM TASK 32-63-00-860-801-A/200	"FLIGHT"/"GROUND" CONDITION SIMULATION IN AIR/GROUND SYSTEM
S.B.145-27-0101	-
S.B.145-27-0125	-

C. Zones and Accesses

Not Applicable

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	Cockpit

I. Preparation
SUBTASK 841-004-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Do not do other tasks in the horizontal stabilizer, elevators, and rudder at this time.
- (3) Make sure that there are no objects or persons in the elevator travel area.

- (4) Make sure that the electromechanical gust lock system is in the locked position.
 - (5) Energize the aircraft with the External DC Power Supply [AMM TASK 20-40-01-860-801-A/200](#).
- J. Operationally Check Electromechanical Gust Lock System ([Figure 501](#))
SUBTASK 710-004-A
- WARNING: MAKE SURE THAT THE RUDDER, HORIZONTAL STABILIZER, AND ELEVATOR CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION CAN CAUSE INJURY TO PERSONS.**
- (1) Do the subsequent test to functionally check the gust lock solenoid as follows:
NOTE: If any of the subsequent steps do not have the expected result, do the adjustment of the solenoid ([AMM TASK 27-71-06-700-801-A/500](#)).
 - (a) Push the control columns forward, to the full nose down position.
 - 1 The two control columns are locked, in the full nose down position, but small deflections are possible because of the cable system flexibility.
 - 2 The elevator deflections are limited to the dimensional tolerance between the locking mechanism (spring cartridge) and the elevator lateral fitting holes.
 - 3 The engine power control levers cannot move beyond the ground maneuver setting.
 - (b) Lift the handle and command the gust lock lever to the unlocked position until the intermediate backstop is reached.
 - 1 (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light goes off and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - 2 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light starts to blink and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - (c) Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.
 - (d) Lift the handle and command the gust lock lever to the unlocked position.
 - 1 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) After the gust lock lever get to the unlocked position, the gust lock light stops to blink and the light goes off.
 - (e) With the gust lock lever in the unlocked position, move the control columns forward (nose down) and try to move the gust lock lever to locked position.

- 1 The gust lock lever can not be moved from unlocked position to locked position.
 - (f) Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.
 - (g) Lift the handle and command the gust lock lever to the locked position.
 - 1 The gust lock lever can be moved from unlocked position to locked position.
 - (h) Push the control columns forward, back to the full nose down position.
 - 1 The two control columns are locked, in the full nose down position, but small deflections are possible because of the cable system flexibility.
 - 2 The engine power control levers cannot move beyond the ground maneuver setting.
- (2) Do the operational check of the locking of the gust lock solenoid with WOW air condition as follows:
 - (a) With the gust lock lever at the unlocked position, simulate the flight condition on the nose landing gear proximity switch (WOW). Refer to step J.(4) of [AMM TASK 32-63-00-860-801-A/200](#).
 - (b) Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.

NOTE: Make sure that the gust lock lever cannot be moved from the unlocked position.

 - (c) Put the nose landing gear proximity switch (WOW) back to the ground condition.
 - (d) Lift the handle and command the gust lock lever to the locked position.
- (3) Do the operational check of the AIR/GND D circuit breaker as follows:
 - (a) Lift the handle and command the gust lock lever to the unlocked position.
 - (b) Move the control column to the neutral position.
 - (c) On the circuit breaker panel, open the AIR/GND D circuit breaker to simulate flight condition indication.
 - (d) Move the control column to the rearward position (nose up), beyond the neutral point, and keep it thus.
 - (e) Lift the handle and command the gust lock lever to the locked position.

NOTE: Make sure that the control column can be moved fully rearward (nose up) and fully forward (nose down).

 - (f) On the circuit breaker panel, close the AIR/GND D circuit breaker to have ground condition indication.
 - (g) Push the control columns fully forward and make sure of the following conditions:

- The two control columns are locked, but small deflections are possible because of the cable system flexibility.

NOTE: The elevator deflections are limited to the dimensional tolerance between the locking mechanism (spring cartridge) and the elevator lateral fitting holes.

- The engine power control levers cannot move beyond the ground maneuver setting.

(4) (FOR AIRCRAFT POST-MOD. [S.B.145-27-0101](#)) Do the operational Check Electromechanical Gust Lock Air/Ground Interlock Logic as follows:

(a) Make sure of the following conditions:

- 1 The two control columns are locked, but small deflections are possible because of the system flexibility.
- 2 The elevator deflections are limited to the dimensional tolerance between the locking mechanism (spring cartridge) and the elevator lateral fitting holes.
- 3 The engine power control levers cannot move beyond the ground maneuver setting.

(b) Lift the handle and command the gust lock lever to the intermediate position.

- 1 (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light goes off and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
- 2 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light starts to blink and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.

(c) Move the control column to the rearward position (nose up) and then to the forward position (nose down) and keep it thus.

(d) Lift the handle and command the gust lock lever to the locked position.

NOTE: Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.

(e) On the circuit breaker panel, open the AIR/GND D circuit breaker to simulate flight condition.

(f) Move the control column to the rearward position (nose up) and then to the forward position (nose down) and keep it thus.

(g) On the circuit breaker panel, close the AIR/GND D circuit breaker to simulate ground condition.

- (h) Lift the handle and command the gust lock lever to the intermediate position.
- 1 (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light goes off and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - 2 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light starts to blink and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
- (i) Move the control column to the rearward position (nose up) and keep it thus.
- (j) Lift the handle and command the gust lock lever to the unlocked position.
- 1 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) After the gust lock lever get to the unlocked position, the gust lock light stops to blink and the light goes off.
- (k) On the circuit breaker panel, open the AIR/GND D circuit breaker to simulate flight condition.
- (l) Move the control column to the rearward position (nose up), beyond the neural point, and keep it thus.
- (m) Lift the handle and command the gust lock lever to the locked position.
- NOTE: Make sure that the control column can be moved fully rearward (nose up) and fully forward (nose down).
- (n) On the circuit breaker panel, close the AIR/GND D circuit breaker to simulate ground condition.
- (o) Push the control columns fully forward and make sure of the following conditions:
- NOTE:
- The two control columns are locked, but small deflections are possible because of the system flexibility.
 - The elevator deflections are limited to the dimensional tolerance between the locking mechanism (spring cartridge) and the elevator lateral fitting holes.
 - The engine power control levers cannot move beyond the ground maneuver setting.
- (5) (FOR AIRCRAFT POST-MOD. [S.B.145-27-0101](#)) Do the operational check of the indication relay K1013 as follows:
- (a) Make sure that the gust lock lever is at the locked position.
 - (b) Lift the gust lock handle and move the gust lock lever to the intermediate position.

- 1 (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0125](#)) The gust lock indication light comes on and stays on for approximately eight seconds after the gust lock lever is set to the intermediate position, during the unlocking cycle.
 - 2 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) The gust lock indication light comes on and stays on for approximately eight seconds after the gust lock lever is set to the intermediate position, during the unlocking cycle. After the unlocking cycle, the gust lock light starts to blink.
- (6) (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) Do the operational check of the indication relays K1706 and K1707 as follows:
- (a) Make sure that the gust lock lever is at the intermediate position.
 - 1 The gust lock light stays blinking.
 - (b) Push the control columns forward, to the full nose down position.
 - (c) Lift the handle and command the gust lock lever to the unlocked position.
 - 1 After the gust lock lever get to the unlocked position, the gust lock light stops to blink and the light goes off.
- (7) (FOR AIRCRAFT POST-MOD. [S.B.145-27-0101](#)) Do the operational check of the engine 1 and engine 2 thrust lever switches (automatic unlock system) as follows:
- (a) Make sure that the gust lock lever is at the locked position.
 - (b) Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
 - (c) On the gust lock lever, remove the screws (1) and (3) and the gust lock cross bar (2), as applicable. Refer to [Figure 502](#) or [Figure 503](#).
 - (d) Set engine 1 thrust lever to a position more than 59°.
 - 1 The gust lock indication light comes on.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
 - (e) Set engine 1 thrust lever back to zero degree position.
 - 1 The gust lock indication light goes off.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
 - (f) Set engine 2 thrust lever to a position more than 59°.
 - 1 The gust lock indication light does not come on.
 - 2 Move the control column to the full nose up position and back to the full nose down position. The control columns must be free to move.
 - (g) Set engine 2 thrust lever back to zero degree position.

- 1 The gust lock indication light does not come on.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
- (h) Set both thrust levers to a position more than 59°.
- 1 The gust lock indication light comes on and stays on for approximately eight seconds after the thrust levers are set to the position more than 59°, during the unlocking cycle.
 - 2 Move the control column to the full nose up position and back to the full nose down position. The control columns must be free to move.
- (i) Set both thrust levers back to zero degree position.
- 1 The gust lock indication light stays off.
 - 2 Make sure that the control columns are locked, but small deflections are possible because of the system flexibility.
- (j) Put the cross bar (2) in its installation position and tighten the screws (1) and (3), as applicable. Refer to [Figure 502](#) or [Figure 503](#).
- (8) (AIRCRAFT POST-MOD. [S.B.145-27-0101](#)) Do the operational check of the AIR Ground relay K1168 as follows:
- (a) Lift the gust lock handle and move the gust lock lever to the intermediate position.
 - 1 (FOR AIRCRAFT PRE-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light goes off and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - 2 (FOR AIRCRAFT POST-MOD. [S.B.145-27-0125](#)) The gust lock light comes on for approximately 8 seconds after the gust lock lever is at the intermediate position. After this time, the gust lock light starts to blink and the elevators are free, but the gust lock lever cannot be moved from the intermediate to the unlocked position.
 - (b) Move the control column to the full nose up position and back to the full nose down position.
 - 1 The control column must be free to move.
 - (c) Attach a metallic (steel) target in front of air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to simulate the flight condition on the relay K1168.
 - (d) Lift the gust lock handle and move the gust lock lever to the locked position.
 - (e) Move the control column to the full nose up position and back to the full nose down position.

- 1 The control column must be free to move.
- (f) Remove the metallic (steel) target from air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to get the ground condition back on the relay K1168.
- (g) Move the control column to the full nose down position.
1 The control column must be locked to move
- (h) Attach a metallic (steel) target in front of air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to simulate the flight condition on the relay K1168.
- (i) Move the control column to the full nose up position and back to the full nose down position.
1 The control column must be free to move.
- (j) Remove the metallic (steel) target from air/ground (WOW - weight on wheel) proximity switch of the nose landing gear to get the ground condition back on the relay K1168.
- (k) Move the control column to the full nose down position.
1 The control column are locked, but small deflections are possible because of the system flexibility.

K. Follow-on

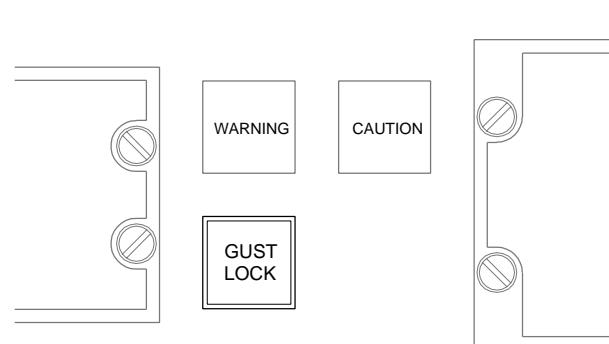
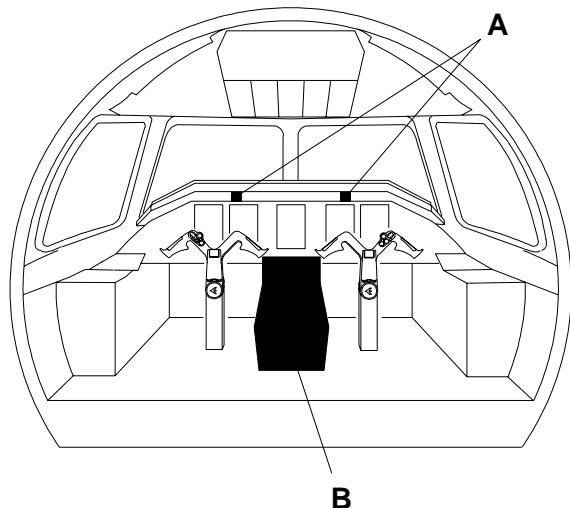
SUBTASK 842-004-A

- (1) Deenergize the aircraft [AMM TASK 20-40-01-860-801-A/200](#).

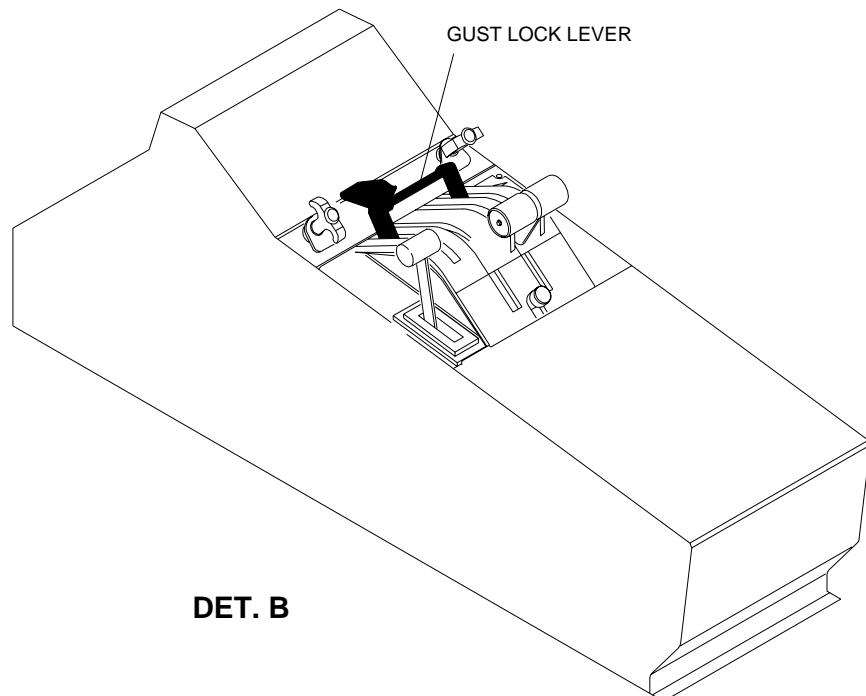
EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

Electromechanical Gust Lock Mechanism - Location

Figure 501



DET. A



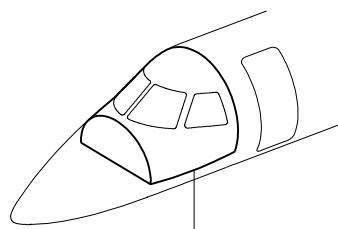
DET. B

145AMM270177.MCE C

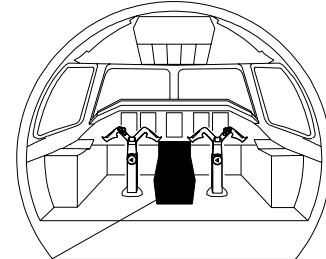
EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

Electromechanical Gust Lock Lever - Cross Bar Removal/Installation

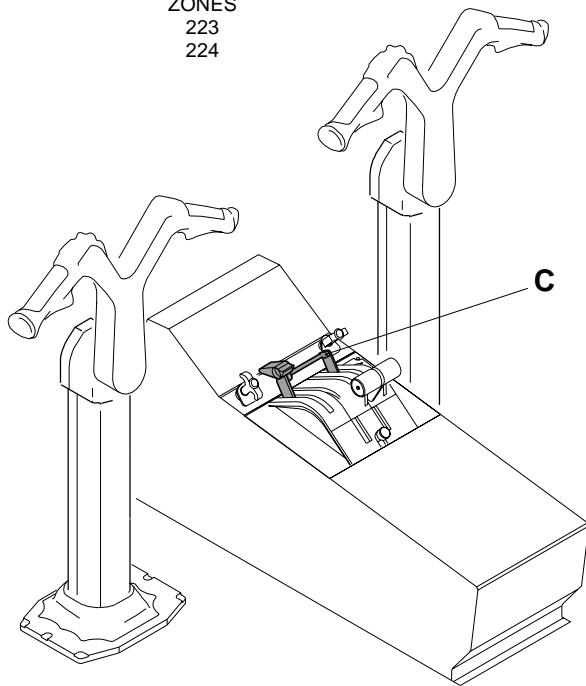
Figure 502



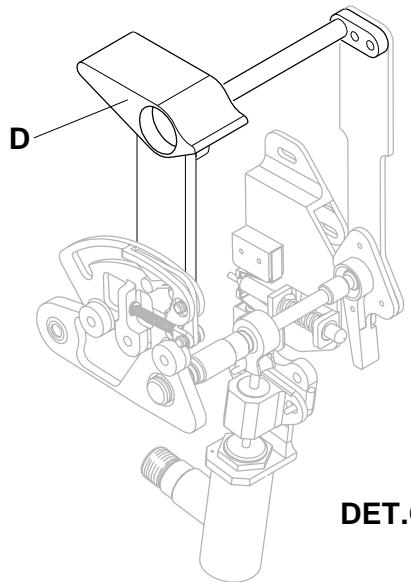
A
ZONES
223
224



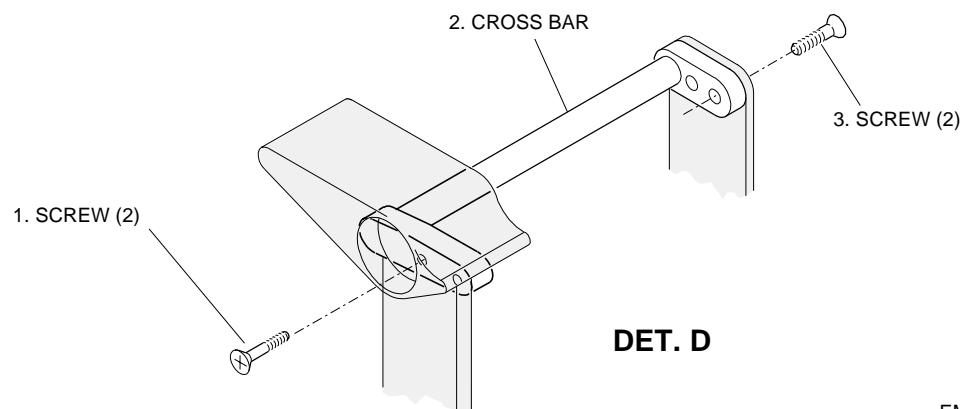
B **DET. A**



DET. B



DET.C



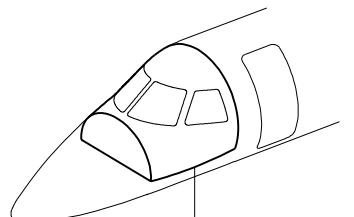
DET. D

EM145AMM270718A.DGN

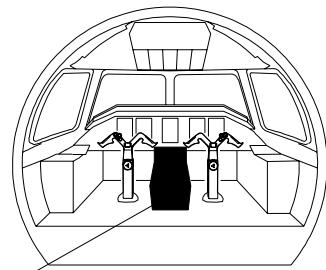
EFFECTIVITY: AIRCRAFT WITH ELECTROMECHANICAL GUST LOCK

Electromechanical Gust Lock Lever - Cross Bar Removal/Installation

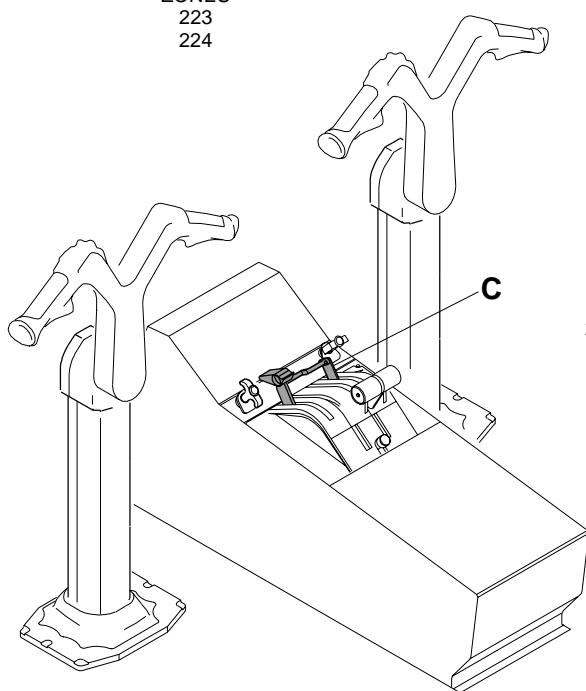
Figure 503



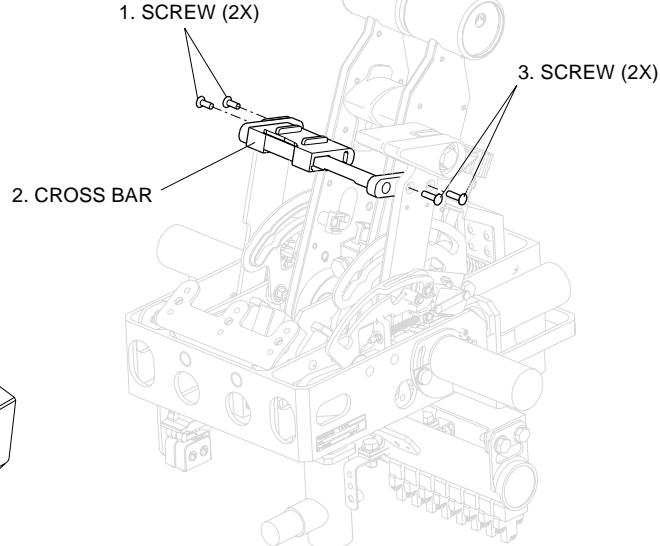
A
ZONES
223
224



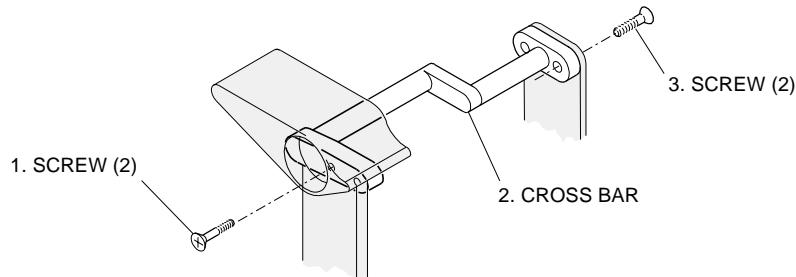
B **DET. A**



DET. B



DET.C 1



DET.C 1

1 AS APPLICABLE TO AIRCRAFT CONFIGURATION

EM145AMM271001B.DGN