



AIRCRAFT
MAINTENANCE MANUAL

STICK PUSHER ACTUATOR - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to adjust the stick pusher.
- 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).

<i>TASK NUMBER</i>	<i>DESCRIPTION</i>	<i>EFFECTIVITY</i>
27-36-04-700-801-A	STICK PUSHER - ADJUSTMENT	ALL



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 27-36-04-700-801-A

EFFECTIVITY: ALL

2. STICK PUSHER - ADJUSTMENT

A. General

- (1) This task gives the procedures to adjust the stick pusher.
- (2) [Figure 501](#) shows the location of the rig pins.
- (3) [Figure 502](#) shows the location of the stick shaker connectors.
- (4) [Figure 503](#) show the location of the stall protection panel.
- (5) [Figure 504](#) shows the location of the stick pusher actuator.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 27-31-01-700-801-A/500	TENSION OF THE ELEVATOR CONTROL CABLES - FUNCTIONAL CHECK

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 036	Hydraulic Platform	To get access to the elevator surface	
GSE 044	Head Set	For communications	
GSE 058	Rig Pins Kit	To lock the elevator in the neutral position	
GSE 070	Digital Protractor	To measure the deflections of the elevator	

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
1	Does the task	Elevator

I. Preparation ([Figure 501](#))

SUBTASK 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Make sure that the horizontal stabilizer are in 0 degree position.
- (3) Get access to the vertical stabilizer.
- (4) Install the rig pins on the elevator rear sector and elevator torque tube ([Figure 501](#)).
- (5) Put the digital protractor on the elevator surface. Use the double face adhesive tape.
- (6) Set the digital protractor to 0 degree.
- (7) Remove the rig pins from the elevator rear sector.
 - The deflection of the elevator surface must be 0 ± 0.5 degrees.
 - The maximum asymmetry between the elevator surfaces must be 0.5 degrees.
- (8) If you meet these two conditions, remove the rig pin from the elevator torque tube.
 - Check the tension of the elevator control cables ([AMM TASK 27-31-01-700-801-A/500](#)).
- (9) On the Circuit Breaker Panel, make sure that the AIR/GND A, B, C, and D circuit breakers are closed.

J. Adjust of the Stick Pusher ([Figure 502](#)) ([Figure 503](#)) ([Figure 504](#))

SUBTASK 720-002-A

- (1) Disconnect the stick shaker connector on the pilot and copilot control columns ([Figure 502](#)).
- (2) Energize the aircraft with the External DC Power Supply ([AMM TASK 20-40-01-860-801-A/200](#)).

NOTE: The SPS Test function is available 30 seconds after you energize the aircraft.

- (3) Move the pilot control column fully backward.

CAUTION: IF THE CONTROL COLUMN IS KEPT FREE DURING THE OPERATION OF THE STICK PUSHER ACTUATOR, THE COLUMN MAY CONTINUE TO MOVE UP TO THE FULL NOSE DOWN POSITION, BECAUSE OF THE ELEVATOR SURFACE MOMENTUM FORCE, EVEN AFTER THE OPERATION OF THE STICK PUSHER ACTUATOR STOPS. WHILE THE STICK PUSHER ACTUATOR MOVES THE CONTROL COLUMN FORWARD, APPLY A BACKWARD FORCE TO THE CONTROL COLUMN TO MAKE SURE THAT IT WILL STOP ITS MOVEMENT AT THE EXACT MOMENT WHEN THE ACTUATOR STOPS.

- (4) Operation of the stick pusher actuator:

- (a) Push the SPS TEST button on the Stall Protection Panel to operate the stick pusher actuator.
Result:
 - 1 The control columns will move forward.
- (5) After the operation of the stick pusher actuator is completed, hold and keep the control column in the exact position where it stopped, while you measure the elevator deflection.
 - (a) Measure the elevator deflection.

NOTE: Make sure that the control column is held in this position until the measurement of the elevator deflection is completed.

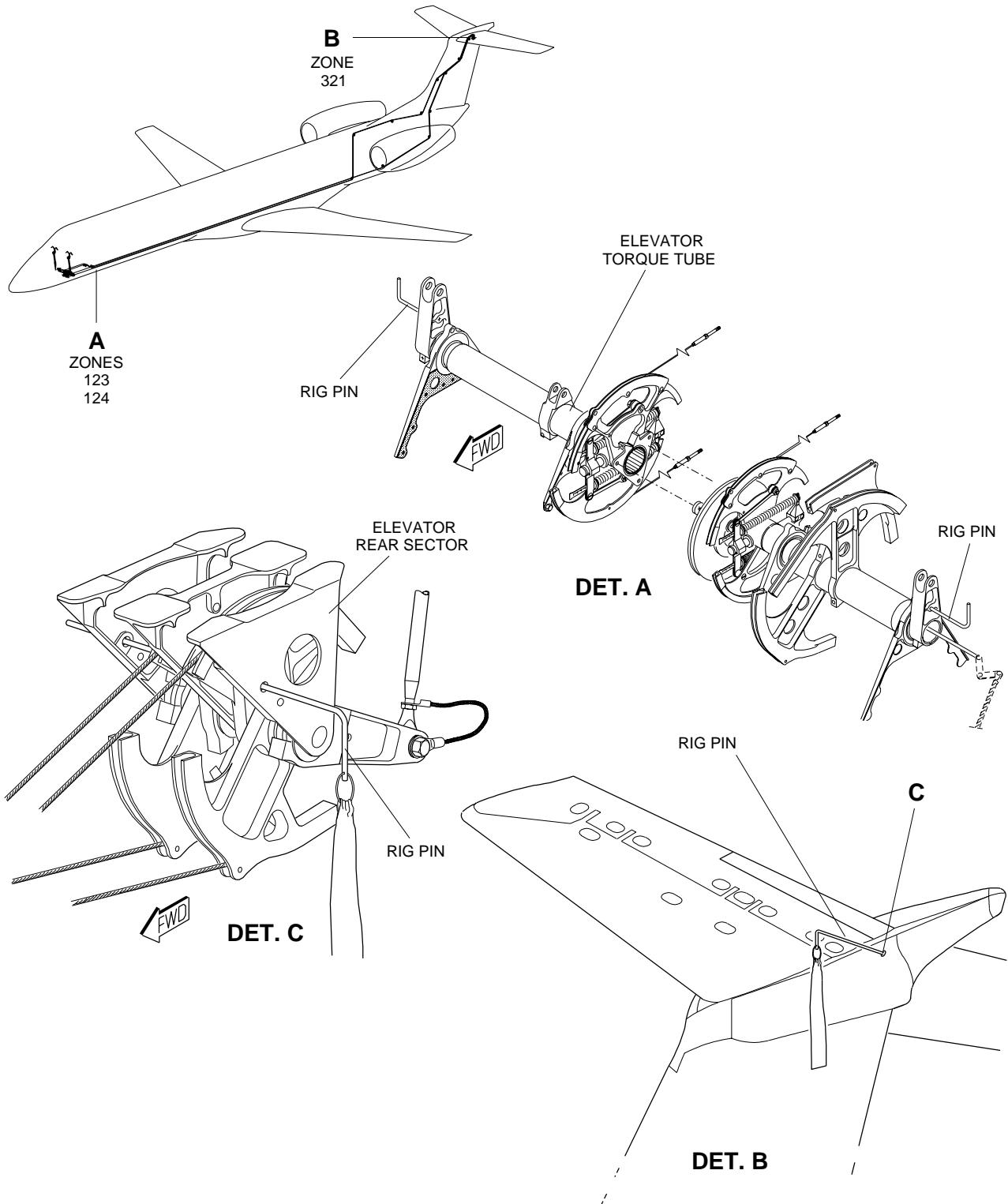
Result:
 - 1 The deflection on the elevator must be -3 ± 1 degrees (climb down).
- (6) If the deflection of the elevator is not -3 ± 1 degrees (climb down):
 - Adjust the nut of the cable of the stick pusher ([Figure 504](#)).
 - Do the steps 3 thru 6 again.

K. Follow-on

SUBTASK 842-002-A

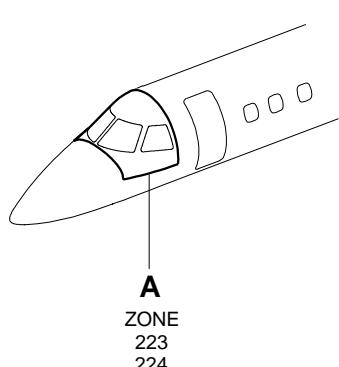
- (1) Connect the stick pusher connectors in the pilot and copilot control column.
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (3) Remove the digital protractor from the elevator surface.
- (4) Remove the platform.

EFFECTIVITY: ALL
Rig Pins - Location
Figure 501

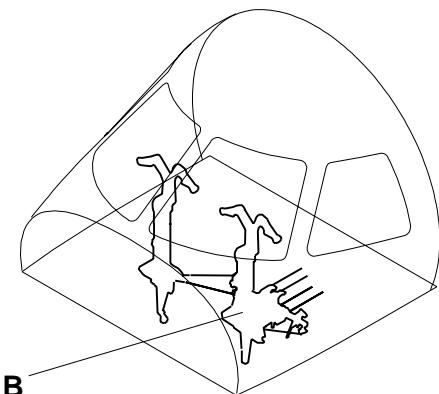


145AMM270391.MCE

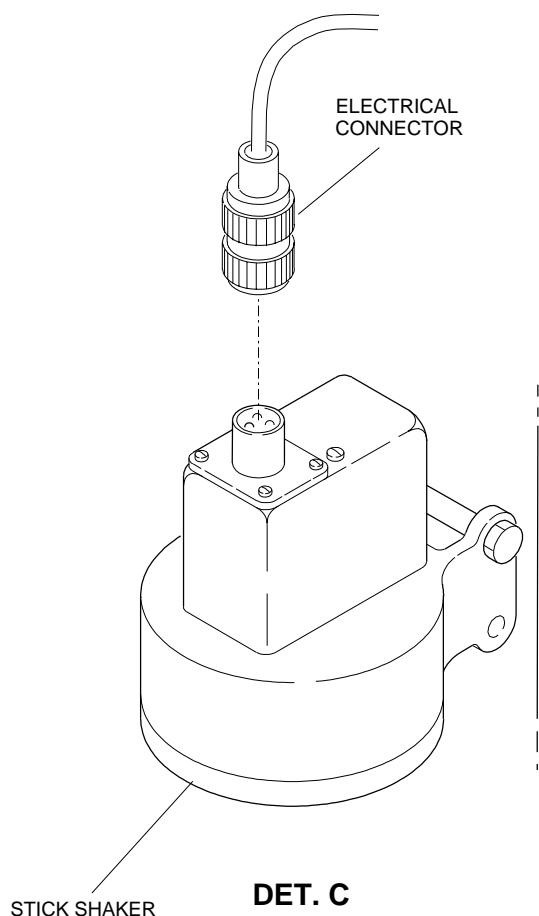
EFFECTIVITY: ALL
Stick Shaker - Location
Figure 502



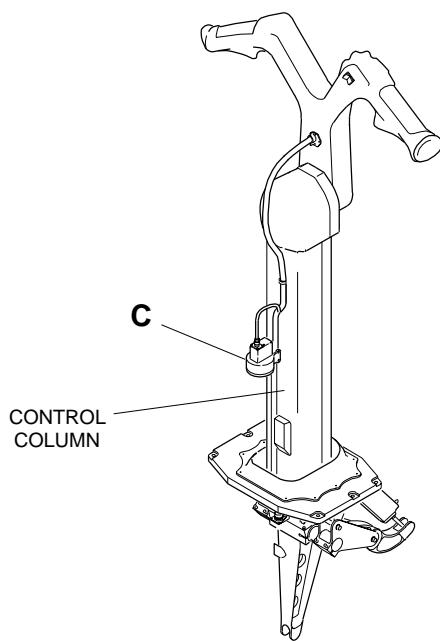
A
ZONE
223
224



DET. A



DET. C

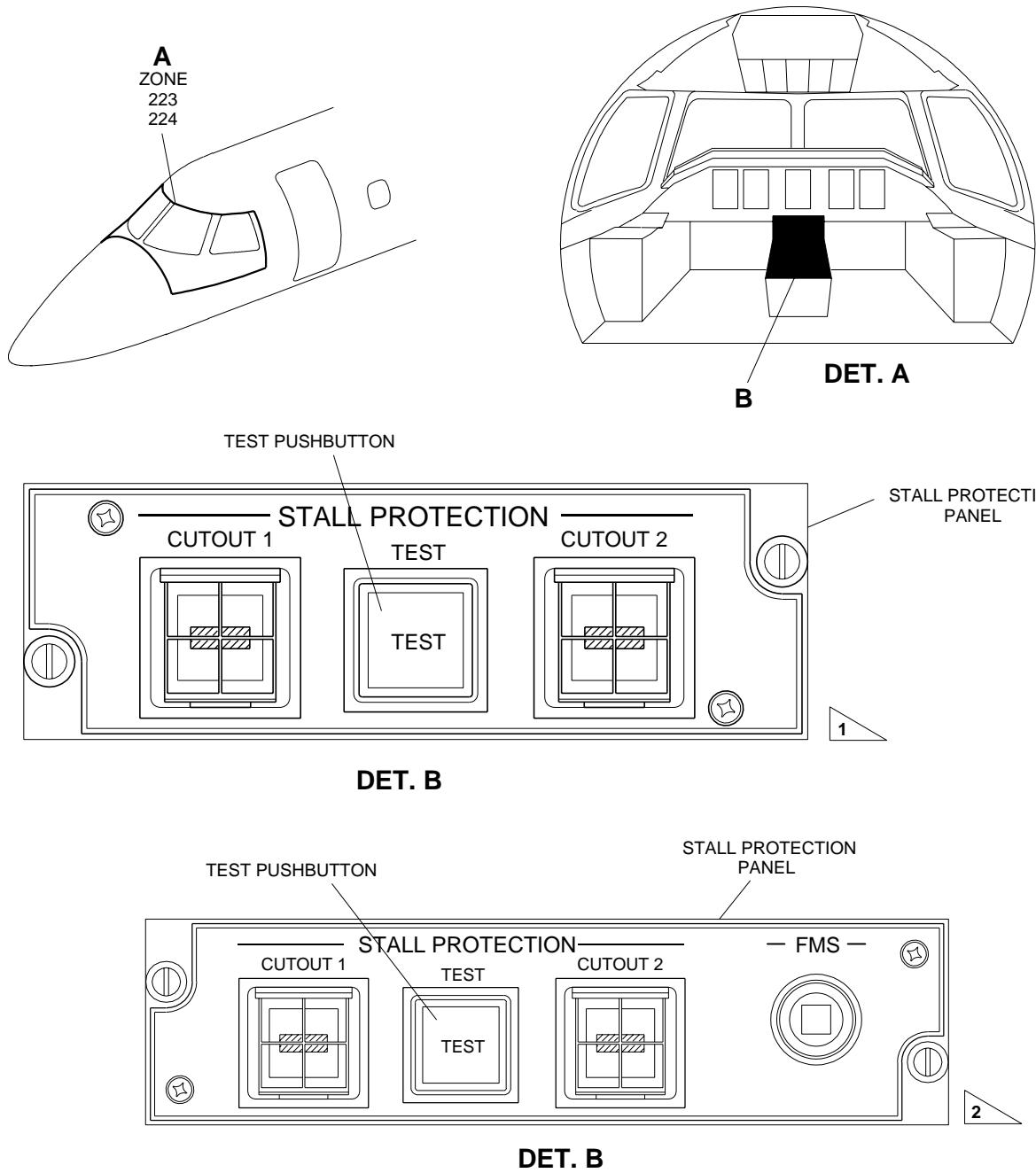


DET. B

EFFECTIVITY: ALL

Stall Protection Panel - Location

Figure 503



1 APPLICABLE TO AIRCRAFT WITH SINGLE FMS INSTALLED.

2 APPLICABLE TO AIRCRAFT WITH DUAL FMS INSTALLED.

145AMM270060.MCE C

EFFECTIVITY: ALL
Stick Pusher Actuator - Location
Figure 504
