



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

ROLL TRIM - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do the functional test of the roll trim.
- 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
27-14-00-700-801-A ♦	ROLL TRIM - FUNCTIONAL CHECK	ALL



AIRCRAFT MAINTENANCE MANUAL

TASK 27-14-00-700-801-A

EFFECTIVITY: ALL

2. ROLL TRIM - FUNCTIONAL CHECK

A. General

- (1) This task gives the procedures to do the functional test of the roll trim.
- (2) [Figure 501](#) and [Figure 502](#) show the roll trim panel and the location of the Aileron Shutoff pushbuttons.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 27-11-06-400-801-A/400	ARTIFICIAL FEEL UNIT - INSTALLATION
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Stopwatch	To measure the time	
GSE 070	Digital Protractor	To measure the aileron deflections	
GSE 076	Yaw and Roll Trim Actuator Rigging	To give the neutral position of the Roll Trim Actuator	

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 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.

- (2) Make sure that there are no persons or equipment in the aileron travel area.
- (3) Energize the aircraft with the external power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (4) Pressurize the hydraulic system ([AMM TASK 29-10-00-860-801-A/200](#)).
- (5) Make sure that the AILERON SHUTOFF SYS 1 and AILERON SHUTOFF SYS 2 pushbutton lights are off.
- (6) Install the digital protractor (GSE 070) on the aileron ([Figure 503](#)). Use double-face adhesive tape for it.

J. Functionally Check Roll Trim ([Figure 501](#)) ([Figure 502](#))

SUBTASK 720-002-A

- (1) Do a check of the roll trim timer.
 - (a) Push the roll trim switch to the LWD position for approximately 3 seconds and measure the time from the command until the system is automatically turned off.
Result:
1 The roll trim system is automatically turned off in 3 ± 0.3 seconds.
 - (b) Push the roll trim switch to the RWD position for approximately 3 seconds and measure the time from the command until the system is automatically turned off.
Result:
1 The roll trim system is automatically turned off in 3 ± 0.3 seconds.
- (2) Do a check of the roll trim indication.
 - (a) Install rigging device GSE 076 on the Roll Trim Actuator.
Result:
1 On the EICAS, the arrow of the roll trim indication must be at the neutral position.
 - (b) Remove rigging device GSE 076 from the Roll Trim Actuator.
- (3) Do a check of the roll trim authority.
 - (a) Put the aileron surface in the neutral position and set the dial protractor to zero.
NOTE: The aileron surface is in the neutral position when the aileron and the wing trailing edge are aligned.
 - (b) Push the roll trim switch to the RWD position for approximately 3 seconds, many times, until the actuator touches its stop.
 - 1 Measure the right and left aileron surface deflection.
NOTE: The left aileron deflection is (LA) and the right aileron deflection is (RA).
 - 2 Add the values LA and RA.
NOTE: The result of this addition is (TD): TD = LA + RA. Use absolute values.

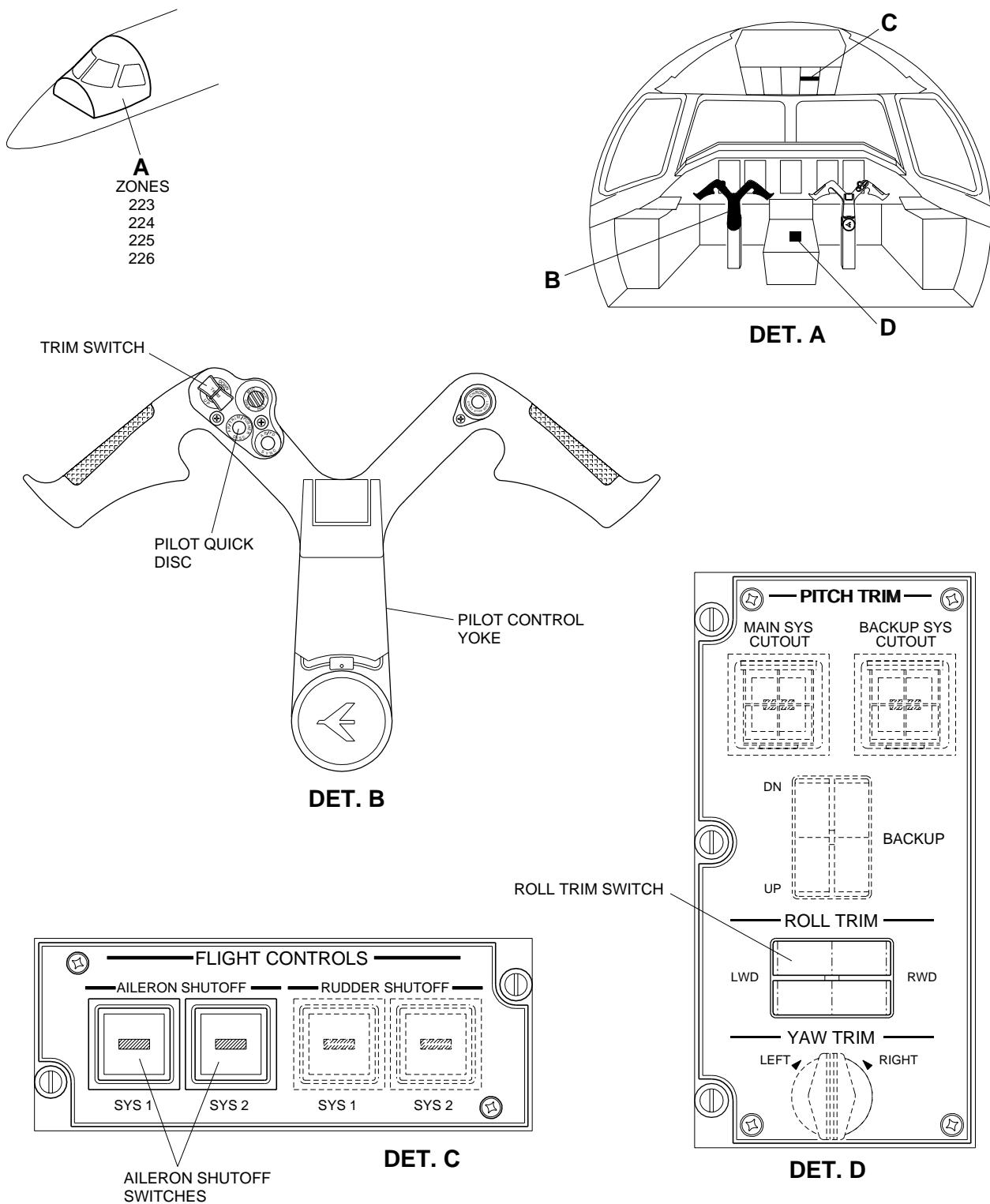
- 3 The addition of these values must be 25 degrees.
- (c) If you find values < 25 degrees in two directions, cut the lockwire of the rod end of the AFU (Artificial Feel Unit) to adjust it. After you adjust the rod end of the AFU, safety it ([AMM TASK 27-11-06-400-801-A/400](#)).
- (d) Do steps (a) and (b) for the LWD position.
- (4) Do a check of the pilot Quick-Disconnect switch.
- (a) Operate the roll trim switch at the control pedestal.
- (b) While the system operates, push the pilot Quick-Disconnect switch, on the pilot control yoke, and keep it pushed.
Result:
1 The system stops.
- (5) Do a check of the copilot Quick-Disconnect switch.
- (a) Operate the roll trim switch at the control pedestal.
- (b) While the system operates, push the copilot Quick-Disconnect switch, on the copilot control yoke, and keep it pushed.
Result:
1 The system stops.

K. Follow-on

SUBTASK 842-002-A

- (1) Remove the digital protractor (GSE 070) and the double-face adhesive tape from the aileron.
- (2) Release the roll trim switch and push it again. Make sure that the aileron starts to move again.
- (3) Move the aileron to the neutral position with the Roll Trim Switch.
- (4) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).
- (5) Release the pressure of the hydraulic system ([AMM TASK 29-10-00-860-801-A/200](#)).

EFFECTIVITY: AIRCRAFT WITH SINGLE FMS
 Aileron Shutoff Pushbuttons and Roll Trim Panel Locations
 Figure 501

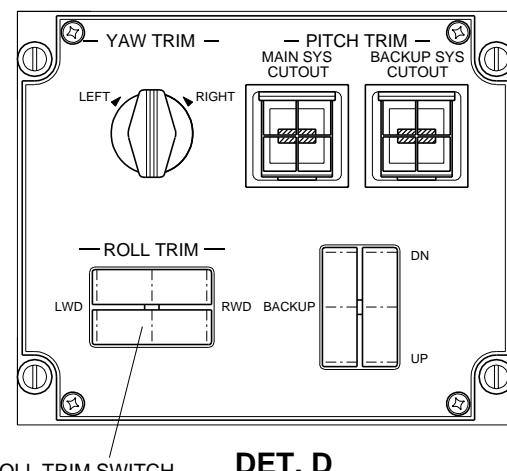
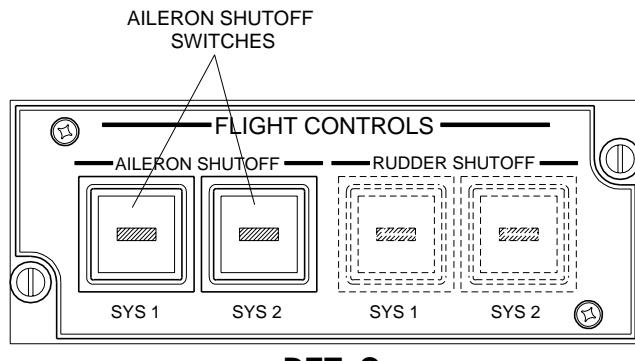
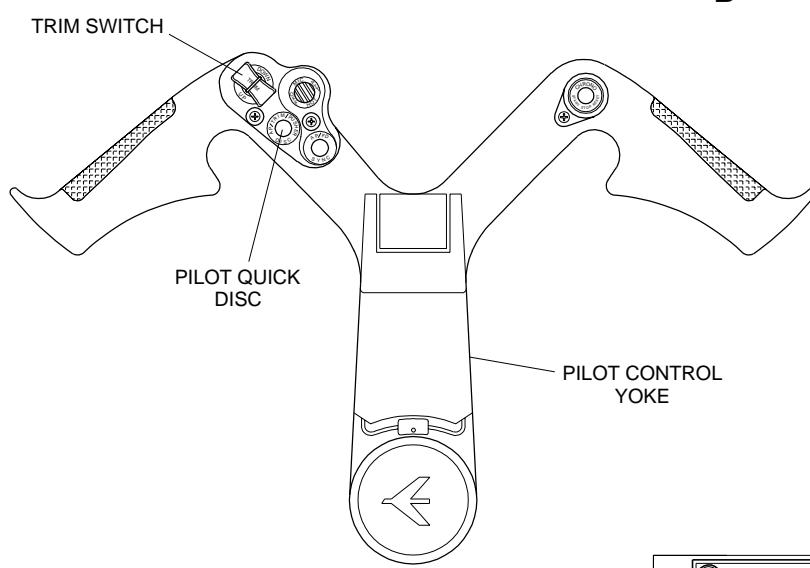
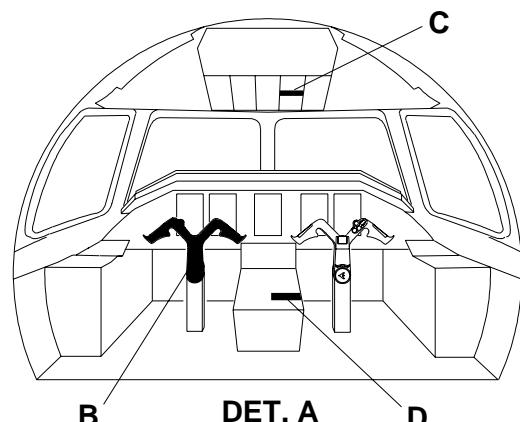
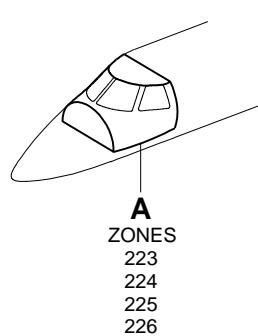


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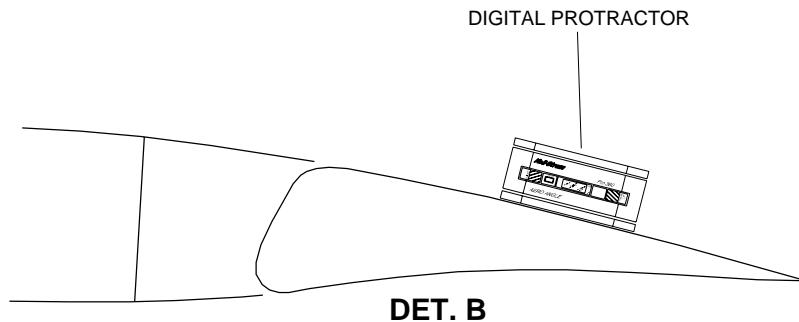
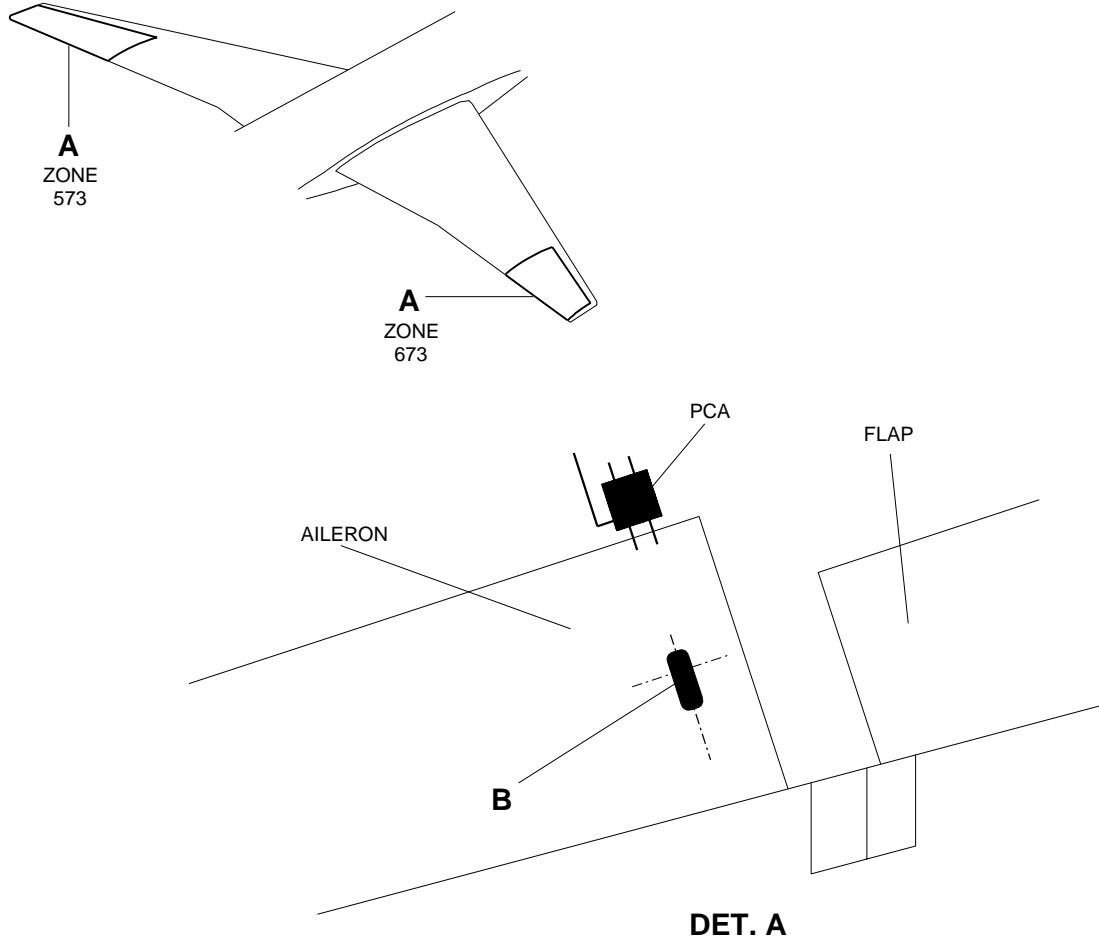
EFFECTIVITY: AIRCRAFT WITH DUAL FMS

Aileron Shutoff Pushbuttons and Roll Trim Panel Locations

Figure 502



EFFECTIVITY: ALL
GSE Location
Figure 503



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