



AIRCRAFT MAINTENANCE MANUAL

RADIO ALTIMETER - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do the operational test of the radio altimeter system and its adjustment.
- 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
34-31-00-700-801-A	RADIO ALTIMETER SYSTEM - OPERATIONAL TEST	ALL
34-31-00-820-801-A	RADIO ALTIMETER - ADJUSTMENT	ALL



EMB145 - EMB135

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TASK 34-31-00-700-801-A

EFFECTIVITY: ALL

2. RADIO ALTIMETER SYSTEM - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do the operational test of the radio altimeter system. To do this test it is necessary to simulate a flight condition.

B. References

REFERENCE	DESIGNATION
AMM SDS 34-22-00/1	
AMM SDS 34-31-00/1	
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 34-31-00-820-801-A/500	RADIO ALTIMETER - ADJUSTMENT

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 841-002-A

- (1) Energize the aircraft with the external DC power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (2) On the electrical control panel, set the BATT 1 and BATT 2 rotary switches to OFF position.
- (3) Put the aircraft in the flight configuration (AIR) as follows:
 - (a) Aircraft on the ground.
 - (b) On the circuit breaker panel, open the AIR/GND A, B, C, and D circuit breakers.

Result:

- 1 Make sure that the AIR/GND FAIL caution message is shown on the EICAS.

- (4) Make sure that the systems below are operational and on:

- Radio Altimeter System ([AMM SDS 34-31-00/1](#)).
- EFIS ([AMM SDS 34-22-00/1](#)).

J. Test Procedures ([Figure 501](#)) ([Figure 502](#))

SUBTASK 710-002-A

- (1) Do the check of the radio altimeter 1 as follows:

- (a) On the PFD 1, make sure that the radio altimeter indication is 0 ± 5 feet. If the radio altimeter indication is out of 0 ± 5 feet, adjust the radio altimeter ([AMM TASK 34-31-00-820-801-A/500](#)).

NOTE: If the radio altimeter is defective or if the indication is not valid, the radio altimeter digits are replaced by (amber) RA with dash on the PFD.

- (b) Push and hold the RA/TEST button on the DC-550 1.

Result:

- 1 On the PFD 1, the radio altitude field indicates 100 ± 10 feet.

- 2 (For aircraft with one radio altimeter connected to egpws) On the EICAS display, the GPWS INOP and WINDSHEAR INOP caution messages come into view.

(For aircraft with two radio altimeters connected to egpws) These messages do not come into view on the EICAS.

- 3 On the PFD 1, the TEST (pink) message is shown. (This TEST message appears because the IC-600 starts the test mode, too).

- (c) Release the radio altimeter test button on the DC-550 1.

- (2) (For aircraft equipped with radio altimeter 2) Do the check of radio altimeter 2 as follows:

- (a) On the PFD 2, make sure that the radio altimeter indication is 0 ± 5 feet. If the radio altimeter indication is out of 0 ± 5 feet, adjust the radio altimeter ([AMM TASK 34-31-00-820-801-A/500](#)).

NOTE: If the radio altimeter is defective or if the indication is not valid, the radio altimeter digits are replaced by (amber) RA with dash on the PFD.

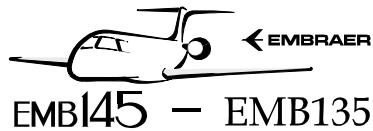
- (b) Push and hold the RA/TEST button on the DC-550 2.

Result:

- 1 On the PFD 2, the radio altitude field indicates 100 ± 10 feet.

- 2 On the PFD 2, the TEST (pink) message is shown. (This TEST message appears because the IC-600 starts the test mode, too).

- (c) Release the radio altimeter test button on the DC-550 2.



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K. Follow-on

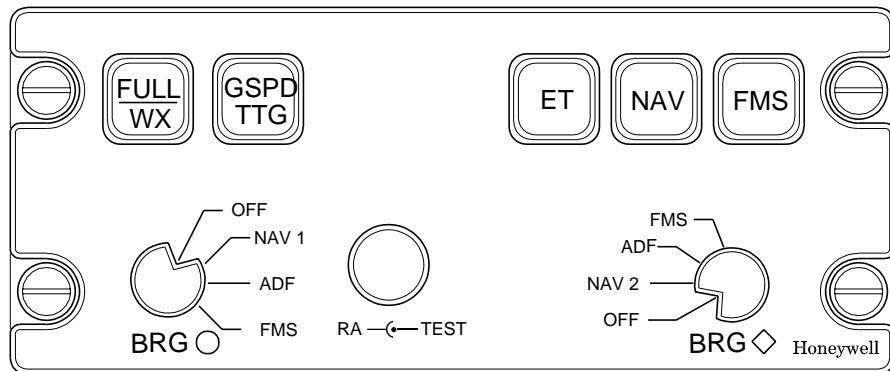
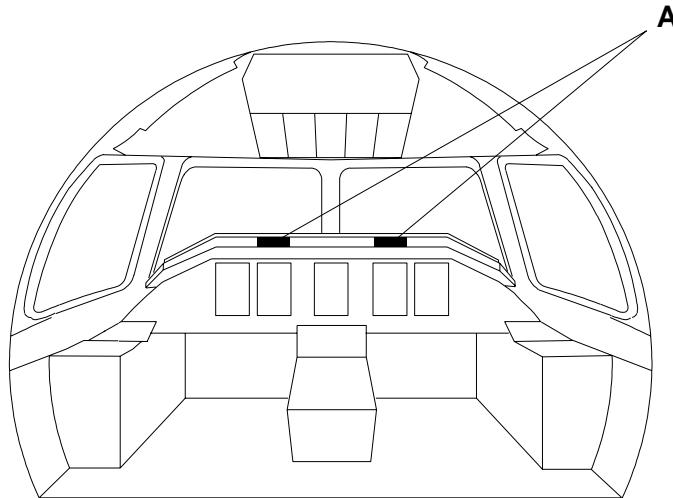
SUBTASK 842-002-A

- (1) To put the aircraft in the ground configuration again, do as follows:
 - (a) On the circuit breaker panel, close the AIR/GND A, B, C, and D circuit breakers for 10 seconds maximum.
Result:
 - 1 Make sure that the AIR/GND FAIL caution message is not shown on the EICAS.
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

EFFECTIVITY: ALL

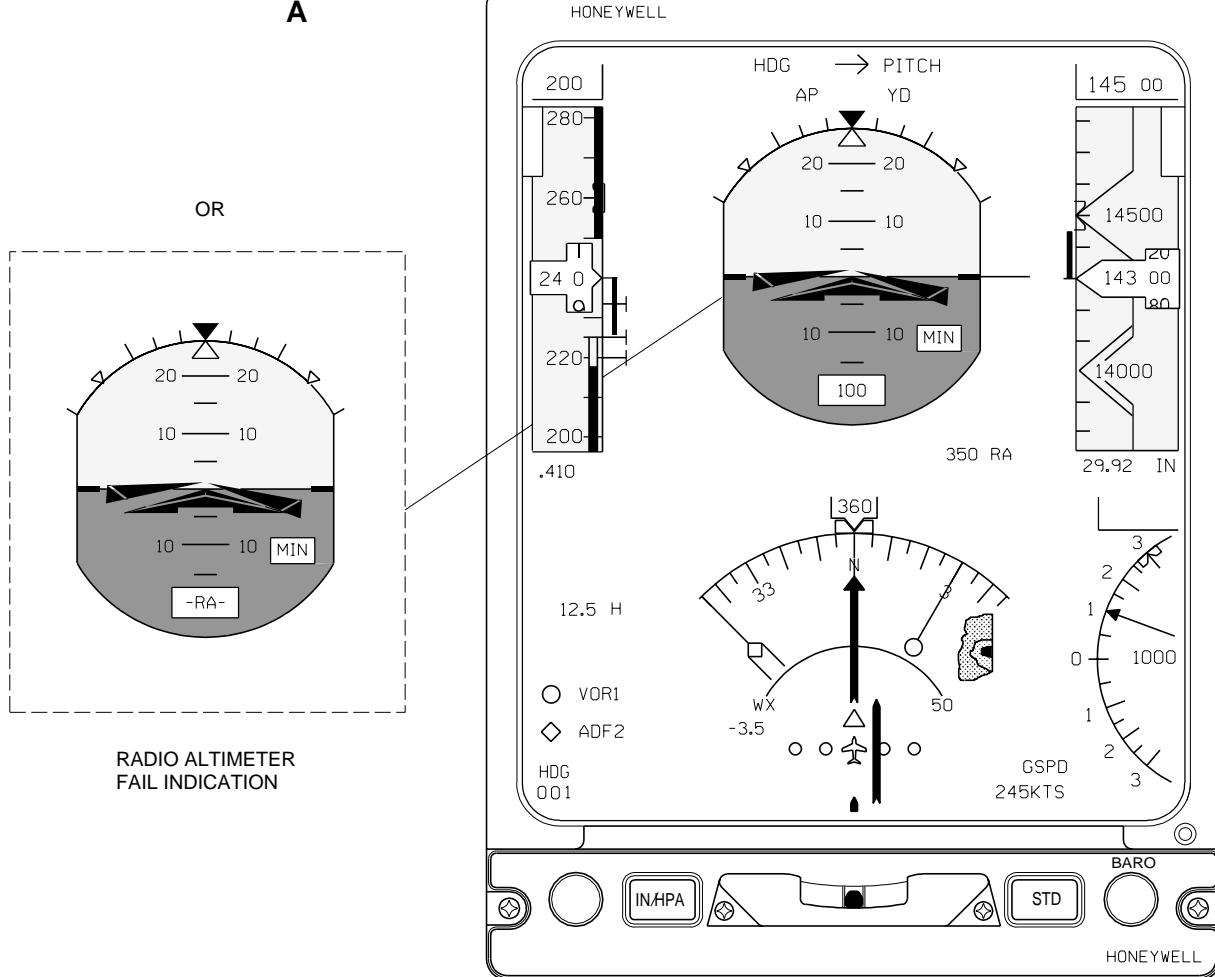
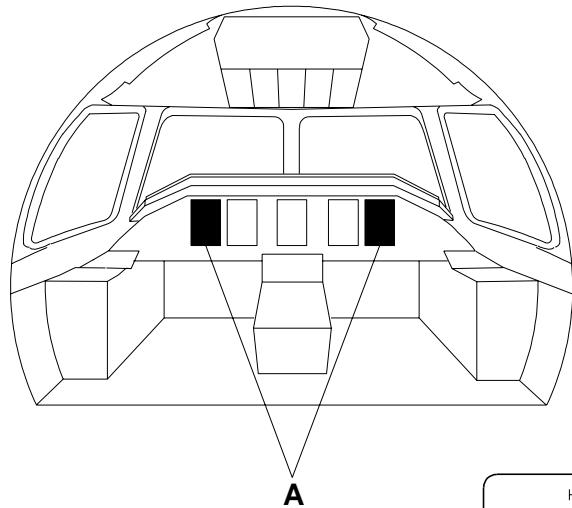
DC-550 - Radio Altimeter - Test Controller

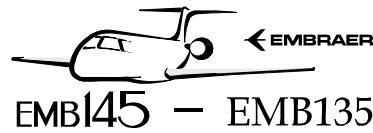
Figure 501


DET. A

145AMM340021.MCE A

EFFECTIVITY: ALL
PFDs Indication
Figure 502





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TASK 34-31-00-820-801-A

EFFECTIVITY: ALL

3. RADIO ALTIMETER - ADJUSTMENT

A. General

(1) This task gives the procedures to adjust the radio altimeter.

B. References

REFERENCE	DESIGNATION
AMM SDS 23-31-00/1	
AMM SDS 23-51-00/1	
AMM SDS 23-81-00/1	
AMM SDS 31-41-00/1	
AMM SDS 31-42-00/1	
AMM SDS 34-22-00/1	
AMM SDS 34-23-00/1	
AMM SDS 34-31-00/1	
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 34-31-00-700-801-A/500	RADIO ALTIMETER SYSTEM - OPERATIONAL TEST
S.B.145-34-0024	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193LL	Rear wing-to-fuselage fairing (PRE-MOD S.B.145-34-0024)
191	191EL	FWD wing-to-fuselage fairing for RA1 (POST-MOD S.B.145-34-0024)
272	272DR	Rear electronic compartment for RA2 (POST-MOD S.B.145-34-0024)

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
1	Does the task	Rear wing-to-fuselage fairing (PRE-MOD S.B.145-34-0024) or FWD wing-to-fuselage fairing for RA1 and rear electronic compartment for RA2 (POST-MOD S.B. 145-34-0024)

I. Preparation
SUBTASK 841-003-A

- (1) Energize the aircraft with the external DC power supply ([AMM TASK 20-40-01-860-801-A/200](#)).
- (2) Make sure that the systems below are operational and on:
 - Passenger Address & Cabin Interphone System ([AMM SDS 23-31-00/1](#)).
 - Airborne Audio System ([AMM SDS 23-51-00/1](#)).
 - Radio Management System ([AMM SDS 23-81-00/1](#)).
 - EICAS ([AMM SDS 31-41-00/1](#)).
 - Integrated Computer System ([AMM SDS 31-42-00/1](#)).
 - EFIS ([AMM SDS 34-22-00/1](#)).
 - Radio Altimeter System ([AMM SDS 34-31-00/1](#)).
 - (Aircraft equipped with HGS) Head-Up Guidance System ([AMM SDS 34-23-00/1](#)).
- (3) On the electrical control panel, set the BATT 1 and BATT 2 rotary switches to OFF position.
- (4) Put the aircraft in the flight configuration (AIR) as follows:
 - (a) Aircraft on the ground.
 - (b) On the circuit breaker panel, open the AIR/GND A, B, C, and D circuit breakers.
Result:
1 Make sure that the AIR/GND FAIL caution message is shown on the EICAS.
- (5) If the aircraft is equipped with HGS, proceed as follows:
 - (a) On the Head-up Control Panel (HCP), push the TEST key.
Result:
1 The Combiner display will be blanked and the fault annunciator on the HCP will illuminate until all tests are completed (approximately 2 seconds if no fault is detected).
 - 2 The TEST information is shown on the HCP display.

3 The HGS Test Menu is shown on the Combiner display.

- (b) On the HGS Test Menu, select SENSOR DATA option. To do this, use the BRT+ or DIM- keys, on the Head-up Control Panel, to put the cursor in the associated line and then push the ENTER key.

NOTE: The BRT+ key is used to scroll up the cursor on the HGS Test Menu and the DIM- key is used to scroll down the cursor on the HGS Test Menu.

- (c) On the Sensor Menu, choose the RA option.

J. Adjustment Procedures ([Figure 503](#)) ([Figure 504](#))

SUBTASK 820-002-A

- (1) Get access to the Radio Altimeter 1 and adjust it as follows:

- (a) (Aircraft not equipped with HGS) Adjust Radio Altimeter #1 to 0 (zero) altitude with the screw installed in front of the Radio Altimeter unit.

Result:

- 1 PFD 1 shows 0 (zero) altitude.

- (b) (Aircraft equipped with HGS) Adjust Radio Altimeter #1 to -1 altitude with the screw installed in front of the Radio Altimeter unit.

Result:

- 1 HGS Combiner Display shows -1 altitude.

- (2) Do the operational test of radio altimeter 1 ([AMM TASK 34-31-00-700-801-A/500](#)).

- (3) (Aircraft with radio altimeter 2) Get access to the Radio Altimeter 2 and adjust it as follows:

- (a) (Aircraft not equipped with HGS) Adjust Radio Altimeter #2 to 0 (zero) altitude with the screw installed in front of the Radio Altimeter unit.

Result:

- 1 PFD 1 shows 0 (zero) altitude.

- (b) (Aircraft equipped with HGS) Adjust Radio Altimeter #2 to 0 (zero) altitude with the screw installed in front of the Radio Altimeter unit.

Result:

- 1 HGS Combiner Display shows 0 (zero) altitude.

K. Follow-on

SUBTASK 842-003-A

- (1) Close the access to the radio altimeter unit.

- (2) To put the aircraft in the ground configuration again, do as follows:

- (a) On the circuit breaker panel, close the AIR/GND A, B, C, and D circuit breakers for 10 seconds maximum.

Result:

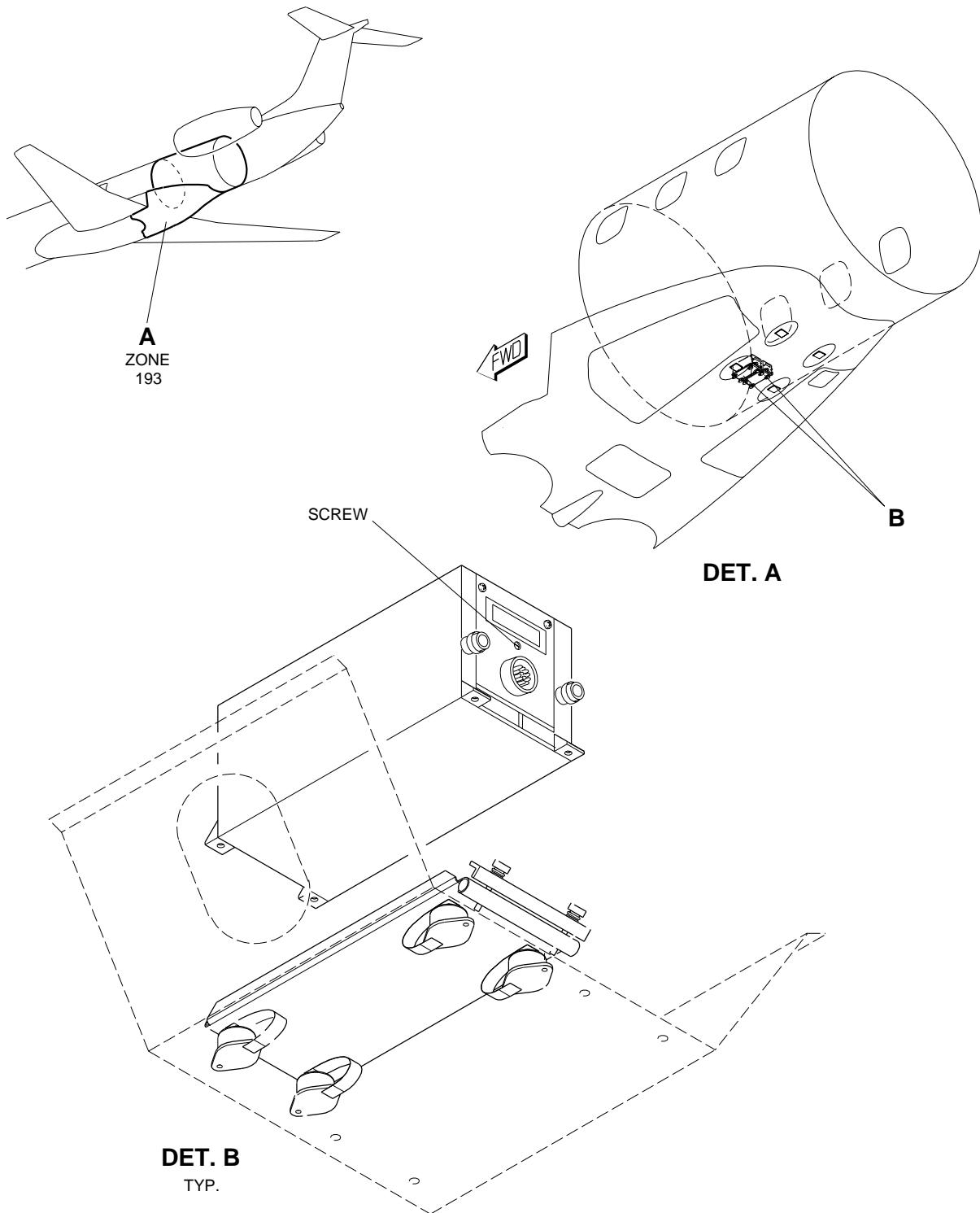
- 1 Make sure that the AIR/GND FAIL caution message is not shown on the EICAS.

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

EFFECTIVITY: PRE-MOD S.B. 145-34-0024

Radio Altimeter Unit - Adjustment

Figure 503

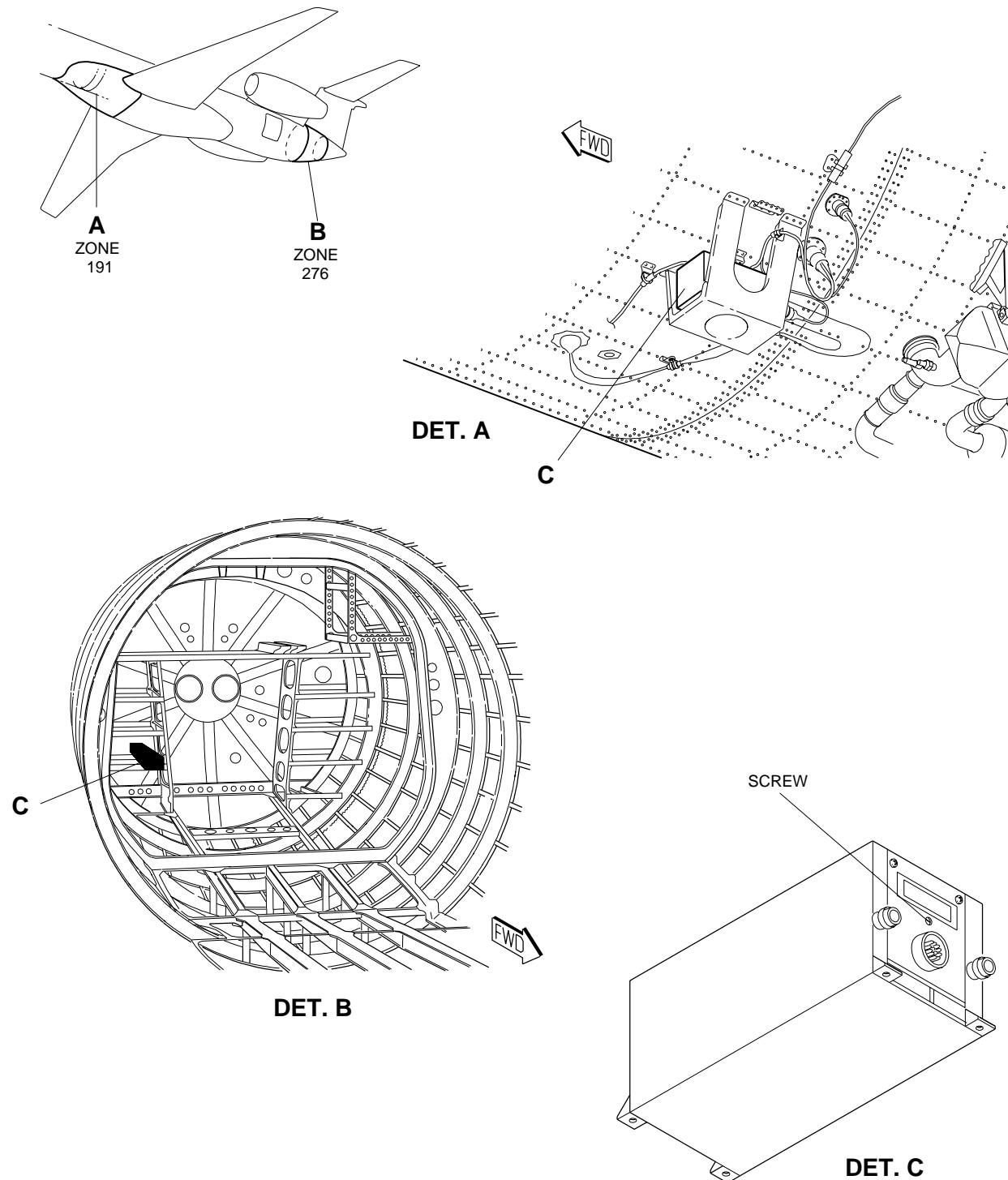


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EFFECTIVITY: POST-MOD S.B. 145-34-0024

Radio Altimeter Unit - Adjustment

Figure 504



145AMM340327.MCE

