



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

SELCAL - ADJUSTMENT/TEST

EFFECTIVITY: AIRCRAFT WITH SELCAL SYSTEM

1. General

- A. This section gives the procedures to do the test of the SELCAL system.
- B. The selective calling (SELCAL) system permits a ground station to call an aircraft or group of aircraft by the radio communication system without the need for the flight crew to continuously monitor the station frequency.
- 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
23-21-00-700-801-A	SELCAL SYSTEM - OPERATIONAL TEST	AIRCRAFT WITH SEL-CAL SYSTEM



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TASK 23-21-00-700-801-A

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2. SELCAL SYSTEM - OPERATIONAL TEST

A. General

- (1) This task gives the procedures to do the test of the SELCAL system, with HF and VHF transceivers.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-03/100	- COMPONENT LOCATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
226		Cockpit right side

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 094	SELCAL encoder	To send coded signals	

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).

J. Test Procedure (Figure 501) (Figure 502) (Figure 503)

SUBTASK 820-002-A

- (1) Do the check of the SELCAL System Self-Test as follows:

- (a) Open maintenance panel door 223LZ ([AMM MPP 06-41-03/100](#)).
 - (b) On the maintenance panel, in the cockpit, set the SELCAL test switch to TEST.
Result:
 - 1 On the SELCAL annunciator panel, on the instrument panel, the VHF 2 and/or HF light flashes.
 - 2 In the aural warning system, SELCAL is heard one time.
 - (c) On the control wheel, set the PTT/HOT Mic switch to PTT.
Result:
 - 1 Make sure that the VHF 2 and/or HF light goes off.
 - (d) On the maintenance panel, in the cockpit, set the SELCAL test switch to TEST.
Result:
 - 1 On the SELCAL annunciator panel, on the instrument panel, the VHF 2 and/or HF light flashes.
 - 2 In the aural warning system, SELCAL is heard one time.
 - (e) On the SELCAL annunciator panel, on the instrument panel, push the VHF 2 or HF pushbutton.
Result:
 - 1 Make sure that the VHF 2 and/or HF light goes off.
- (2) (This step is applicable only to the VHF SELCAL system) Do the operational test of the SELCAL system with the VHF 2 transceiver as follows:
- NOTE:** Make sure that the VHF transmitter and the VHF receiver are set at the same frequency.
- (a) On the SELCAL decoder computer, use the code selection thumb wheel switches to set the aircraft code.

NOTE: The SELCAL selection of codes is made by four knobs mounted on the front of the decoder. Above each knob there is a letter indicating the selected frequency.
 - (b) On the SELCAL encoder (GSE 094), send a code that is different from the aircraft code that you set in item (2) (a).

NOTE: The signal of the SELCAL encoder (GSE 094) is transmitted through the VHF ground station.

Result:
 - 1 On the SELCAL annunciator panel, on the instrument panel, the VHF 2 light does not flash.
 - (c) On the SELCAL encoder (GSE 094), send the same code as you sent in item (2) (a).

 Result:
 - 1 On the SELCAL annunciator panel, on the instrument panel, the VHF 2 light flashes.
 - 2 In the aural warning system, SELCAL is heard one time.
 - (d) On the control wheel, set the PTT/HOT Mic switch to PTT.

Result:

- 1 Make sure that the VHF 2 light goes off.

- (e) Get a new transmission.

Result:

- 1 On the SELCAL annunciator panel, on the instrument panel, the VHF 2 light flashes.

- 2 In the aural warning system, SELCAL is heard one time.

- (f) On the SELCAL annunciator panel, on the instrument panel, push the VHF 2 pushbutton.

Result:

- 1 Make sure that the VHF 2 light goes off.

- (3) (This step is applicable only to the HF SELCAL system) Do the operational test of the SELCAL system with the HF transceiver as follows:

NOTE: Make sure that the HF transmitter and the HF receiver are set to the AM mode and at the same frequency.

- (a) On the SELCAL decoder computer, use the code selection thumb wheel switches to set the aircraft code.

NOTE: The SELCAL selection of codes is made by four knobs mounted on the front of the decoder. Above each knob there is a letter indicating the selected frequency.

- (b) On the SELCAL encoder (GSE 094), send a code that is different from the aircraft code that you set in item (2) (a).

NOTE: The signal of the SELCAL encoder (GSE 094) is transmitted through the HF ground station.

Result:

- 1 On the SELCAL annunciator panel, on the instrument panel, the HF light does not flash.

- (c) On the SELCAL encoder (GSE 094), send the same code as you sent in item (2) (a).

Result:

- 1 On the SELCAL annunciator panel, on the instrument panel, the HF light flashes.

- 2 In the aural warning system, SELCAL is heard one time.

- (d) On the control wheel, set the PTT/HOT Mic switch to PTT.

Result:

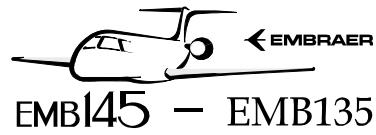
- 1 Make sure that the HF light goes off.

- (e) Get a new transmission.

Result:

- 1 On the SELCAL annunciator panel, on the instrument panel, the HF light flashes.

- 2 In the aural warning system, SELCAL is heard one time.



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- (f) On the SELCAL annunciator panel, on the instrument panel, push the HF pushbutton.

Result:

- 1 Make sure that the HF light goes off.

K. Follow-on

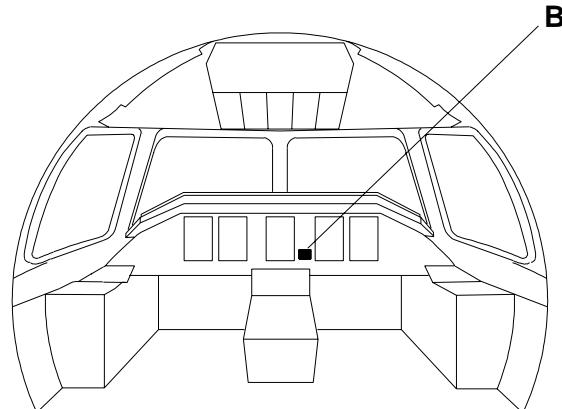
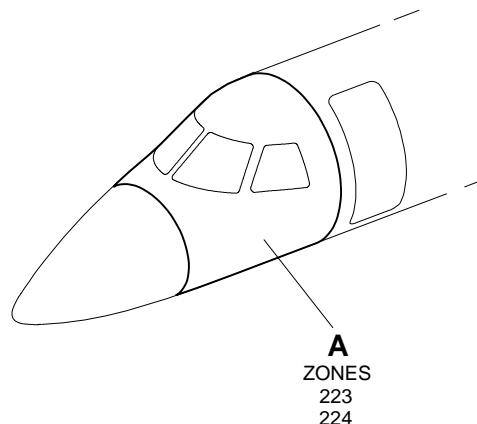
SUBTASK 842-002-A

- (1) Close maintenance panel door 223LZ ([AMM MPP 06-41-03/100](#)).
- (2) Deenergize the aircraft ([AMM TASK 20-40-01-860-801-A/200](#)).

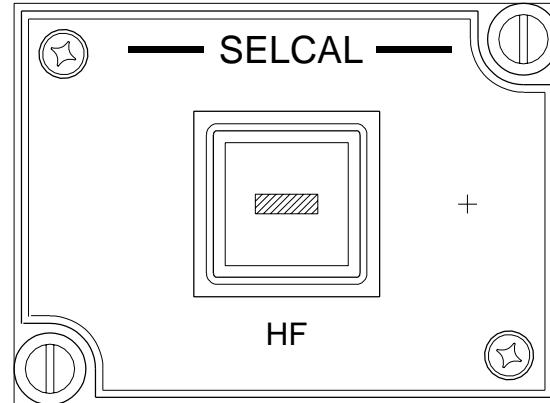
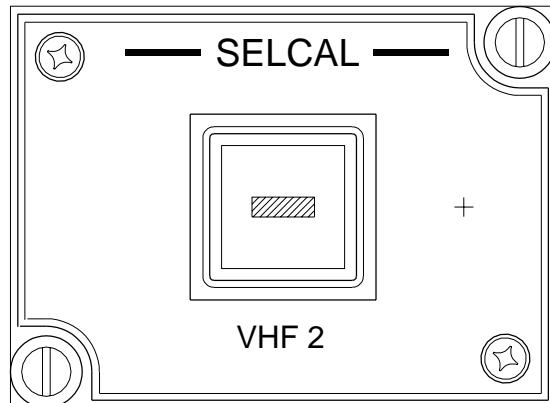
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SELCAL Annunciator Panel - Test

Figure 501

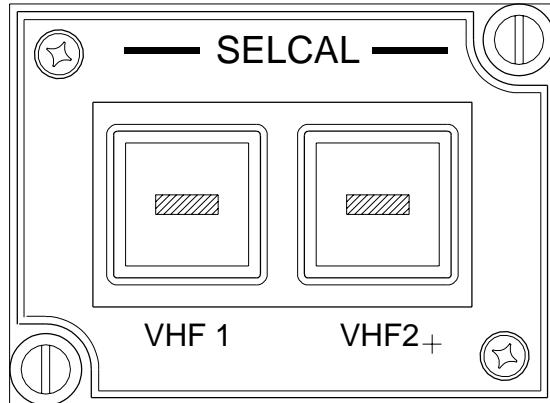
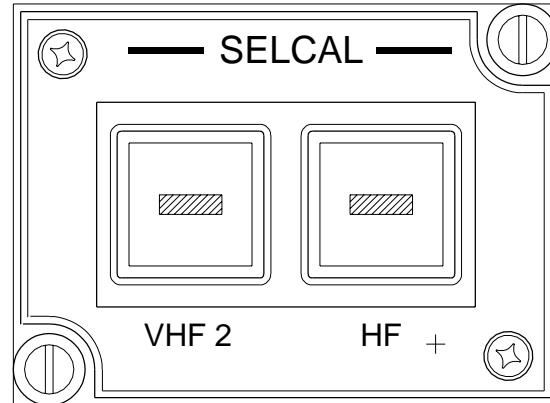


DET. A



DET. B

DET. B



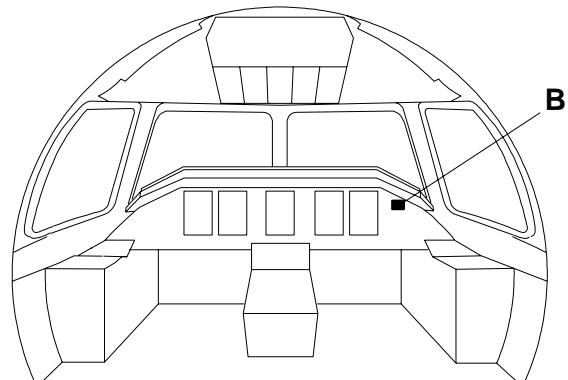
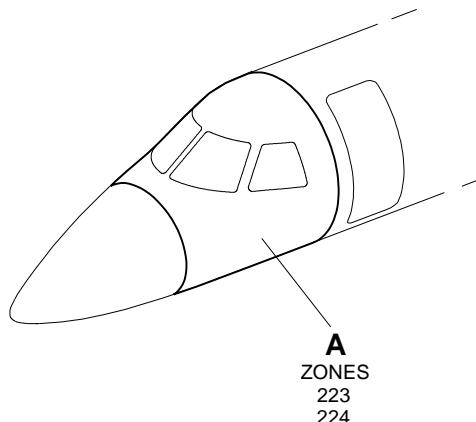
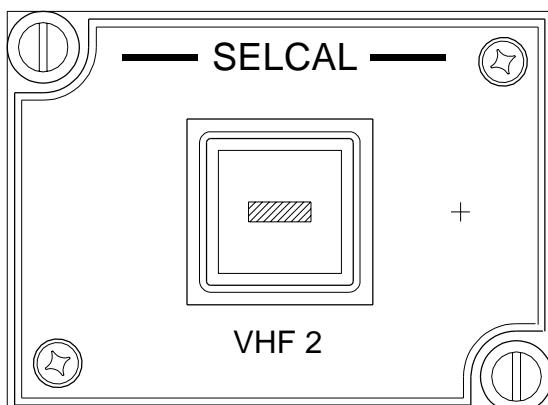
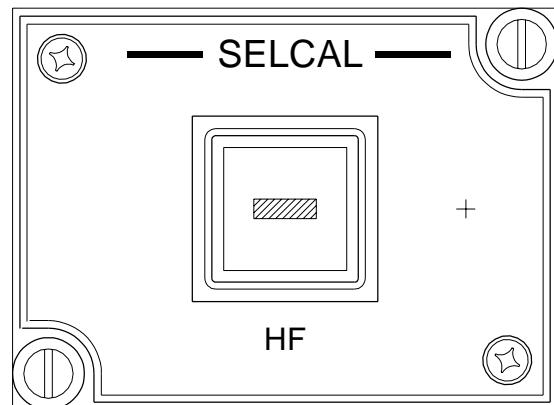
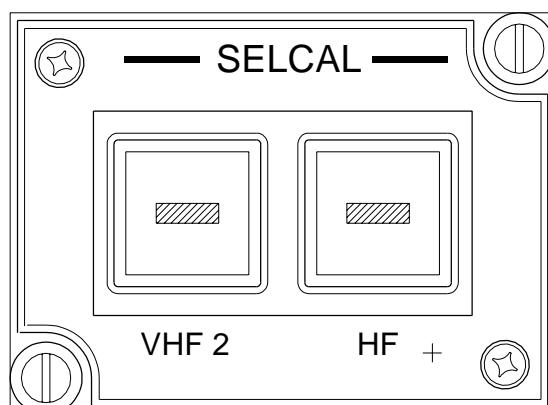
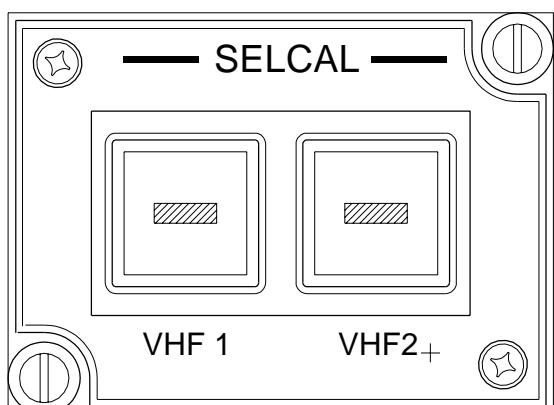
DET. B

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EFFECTIVITY: AIRCRAFT WITH SELCAL SYSTEM

SELCAL Annunciator Panel (Aircraft with RMUs on Main Panel) - Test

Figure 502

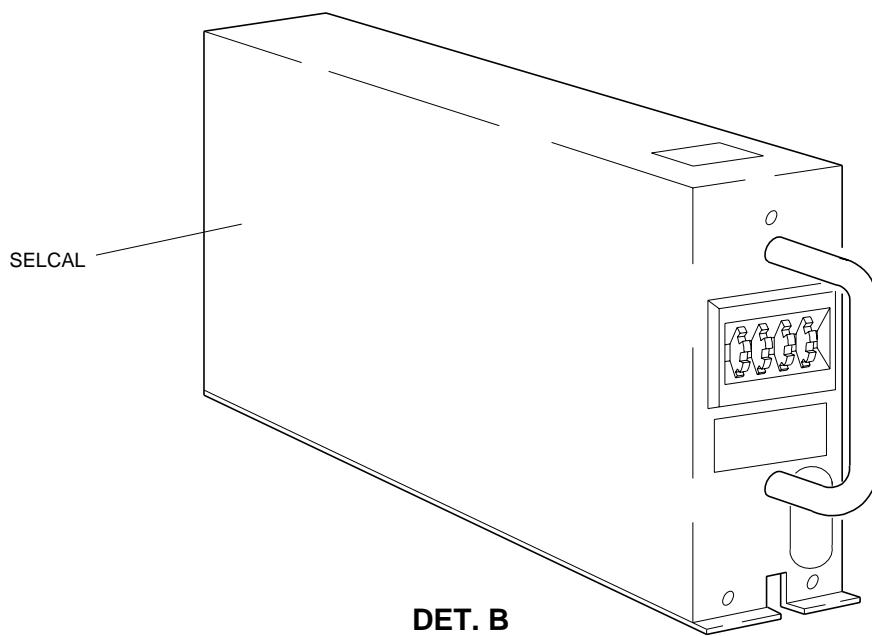
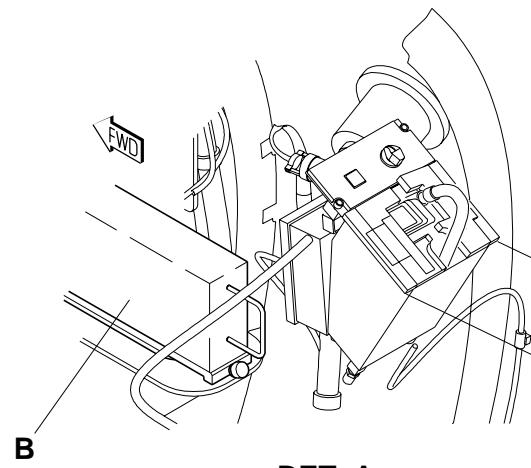
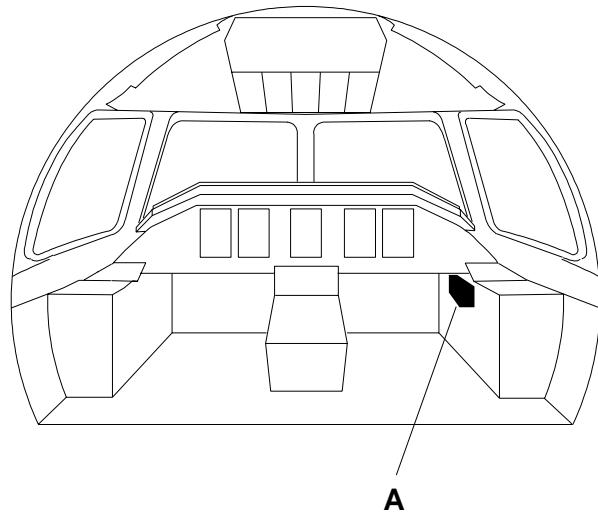

DET. A

DET. B

DET. B

DET. B


EM145AMM230251B.DGN

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SELCAL - Test

Figure 503



145AMM230146.MCE B