THRUST RATING MODULE SWITCH BOX - ADJUSTMENT/TEST

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to do the Thrust Rating Module Switch Box operational check through the ARINC 429 bus reader or, alternatively, through the CMC with the Personal Computer.

   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*
76-12-02-700-801-A	THRUST RATING MODULE SWITCH BOX - OPERATIONAL CHECK	ALL

TASK 76-12-02-700-801-A
EFFECTIVITY: ALL

2. THRUST RATING MODULE SWITCH BOX - OPERATIONAL CHECK

A. General

(1) This task gives the procedures to do the Thrust Rating Module Switch Box operational check through the ARINC 429 bus reader or through the CMC with the Personal Computer.

(2) This task was prepared to permit you to read the labels and bits related to the Thrust Rating Module Switches.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-41-02/100	-
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 28-41-00-200-801-A/600	-
AMM TASK 45-45-00-970-802-A/200	CMC DOWNLOADING WITH THE PERSONAL COMPUTER
AMM TASK 45-45-01-000-801-A/400	CENTRAL MAINTENANCE COMPUTER (CMC) - REMOVAL
AMM TASK 45-45-01-400-801-A/400	CENTRAL MAINTENANCE COMPUTER (CMC) - INSTALLATION
AMM TASK 53-01-01-000-801-A/400	COCKPIT FLOOR PANELS - REMOVAL
AMM TASK 53-01-01-400-801-A/400	COCKPIT FLOOR PANELS - INSTALLATION

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
221	221GF	Floor panel
223	223LZ	Maintenance panel

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
GSE 175	Adapter Box	Downloading	
GSE 163	ARINC 429 Bus Data Reader	Downloading	

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 (For Operational Check with ARINC 429 Bus Reader)

SUBTASK 841-002-A

(1) Remove cockpit floor 221GF (AMM MPP 06-41-02/100) and (AMM TASK 53-01-01-000-801-A/400).

(2) On the circuit breaker panel, open the CMC circuit breaker.

(3) Remove the CMC (AMM TASK 45-45-01-000-801-A/400).

(4) Install the adapter box (GSE 175) in the location of the CMC.

(5) Connect the ARINC 429 Bus Reader (GSE 163) to the adapter box.

(6) On the circuit breaker panel, close the CMC circuit breaker.

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

(8) Set the ARINC 429 Bus Reader (GSE 163) as follows:

NOTE: To initialize and operate the ARINC 429 Bus Reader, refer to the CMM of the Reader.

(a) Energize the ARINC 429 Bus Reader.

(b) Set the receiver speed to LO (Low speed).

(c) Set the bus type to ARINC 429.

(d) Set the mode to Receiver (RCV).

(e) Select the BIT signal to the binary mode.

(f) Select labels 264 and 351.

J. Operational Check With the ARINC 429 Bus Reader (Figure 501)

SUBTASK 710-002-A

(1) Do the Thrust Rating Module Switch Box operational check as follows:

(a) On the adapter box (GSE 175), select FADEC 1A.

(b) Use table 501 to identify the BIT number for each Thrust Rating Module Switch fault.

(2) Find the bit status for each Thrust Rating Module Switch fault as follows:

NOTE: • The bit status is shown in binary code.

- Table 502 must be photocopied and filled out after each FADEC check.

(a) On the ARINC 429 Bus Reader (GSE 163), read the bit status for each Thrust Rating Module Switch fault and write them in table 502.

Result:

1 The BIT values found must be equal to 0 (zero).

(3) Do steps (1) and (2) again for the other FADECs.

(4) This step shows the table which identifies the bit number (BIT No) for each Thrust Rating Module Switch fault reading on the ARINC 429 Bus Reader, for each FADEC.

Table 501 - THRUST RATING MODULE SWITCH LABEL/BIT IDENTIFICATION

FAULT DESCRIPTION	DISCRETE LABEL No	BIT No
Maximum T/O mode switch difference fault	264	16
Climb mode switch difference fault	264	26
Cruise mode switch difference fault	264	27
Maximum-continuous mode switch difference fault	264	28
Maximum T/O mode switch difference fault	351	16
Climb mode switch difference fault	351	26
Cruise mode switch difference fault	351	27
Maximum-continuous mode switch difference fault	351	28

(5) This step shows the table which identifies the bit numbers (BIT No) for each label on the ARINC 429 Bus Reader, for each FADEC.

Table 502 - RELATIONSHIP BETWEEN LABEL NO X BIT NO

FADEC IDENTIFICATION:					(__)1A			(__)1B			(__)2A			(__)2B					
LABEL No	BIT No[1]																		
	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11
264	X				X	X	X	X	X	X	X	X	X		X	X	X	X	X
351	X				X	X	X	X	X	X	X	X	X		X	X	X	X	X

[1] The cells which are blank must be filled out with the value (0 or 1) read on the ARINC 429 Bus Reader.

K. Follow-on (For Operational Check with ARINC 429 Bus Reader)

SUBTASK 842-002-A

(1) Deenergize the ARINC 429 Bus Reader.

(2) Deenergize the aircraft (AMM TASK 20-40-01-860-801-A/200).

(3) Disconnect the ARINC 429 Bus Reader (GSE 175) from the adapter box.

(4) Remove the adapter box (GSE 175) from the location of the CMC.

(5) Install the CMC (AMM TASK 45-45-01-400-801-A/400).

(6) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

NOTE: The inspection of fuel quantity indication harness is part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations of the Aircraft Maintenance Program.

(7) Install cockpit floor 221GF (AMM MPP 06-41-02/100) and (AMM TASK 53-01-01-400-801-A/400).

L. Preparation (For Operational Check with the Personal Computer)

SUBTASK 841-003-A

(1) Install the personal computer to read the FADEC data (AMM TASK 45-45-00-970-802-A/200).

M. Operational Check with the Personal Computer (Figure 501)

SUBTASK 710-003-A

(1) This step shows the table which identifies the bit number (BIT No) for each Thrust Rating Module Switch fault reading on the personal computer, for each FADEC.

Table 503 - THRUST RATING MODULE SWITCH LABEL/BIT IDENTIFICATION

FAULT DESCRIPTION	DISCRETE LABEL No	BIT No
Maximum T/O mode switch difference fault	264	16
Climb mode switch difference fault	264	26
Cruise mode switch difference fault	264	27
Maximum-continuous mode switch difference fault	264	28
Maximum T/O mode switch difference fault	351	16
Climb mode switch difference fault	351	26
Cruise mode switch difference fault	351	27
Maximum-continuous mode switch difference fault	351	28

(2) Select FADEC 1A to do the downloading with the personal computer.

(3) Operationally check the thrust-rating-module switch box as follows:

(a) On the Personal Computer, read the bit status for each Thrust Rating Module Switch fault.

Result:

1 The BIT values found must be equal to 0 (zero).

(4) Do steps (2) and (3) again for the other FADECs.

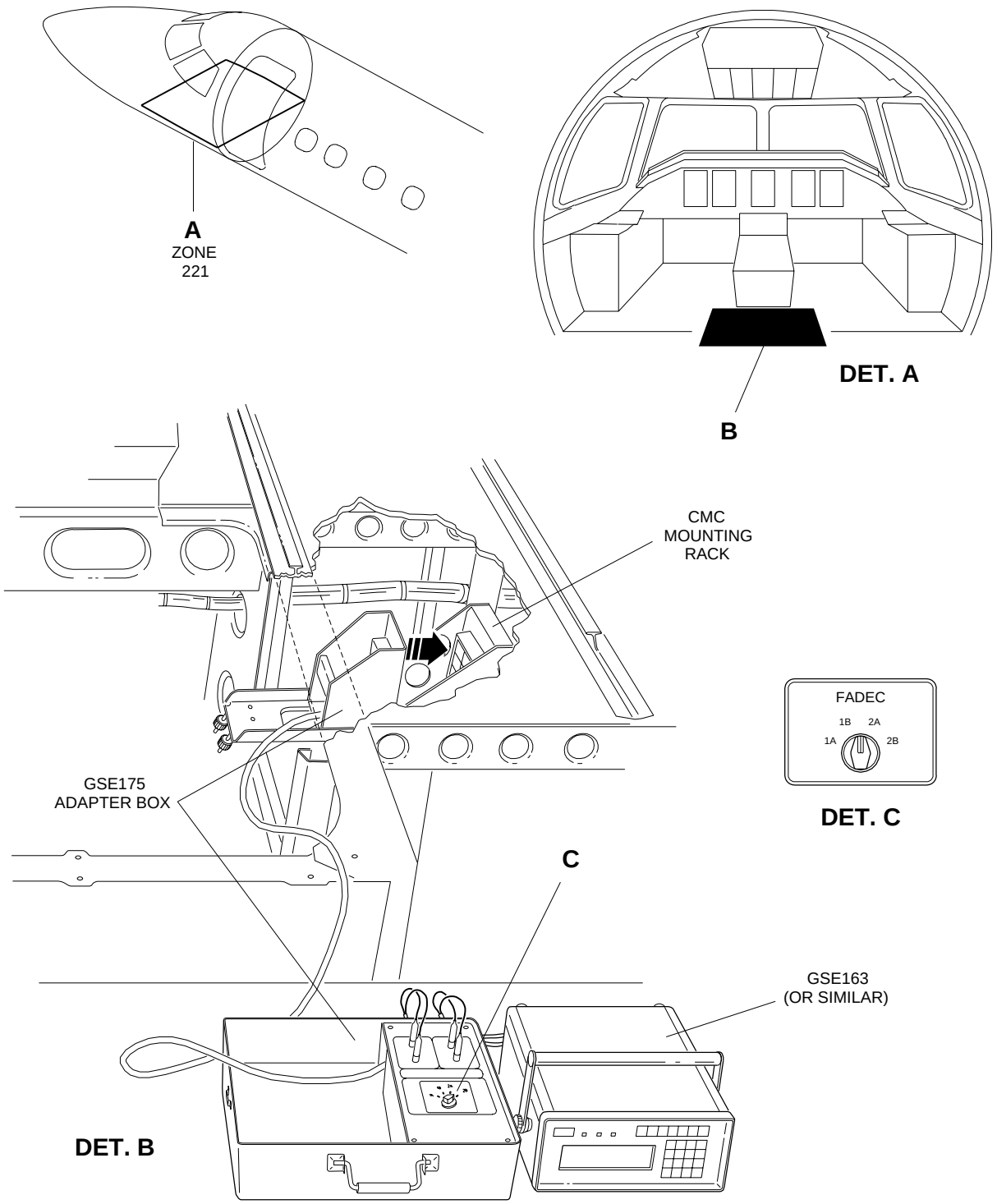
N. Follow-on (For Operational Check with the Personal Computer)

SUBTASK 842-003-A

(1) Remove the personal computer to read the FADEC data (AMM TASK 45-45-00-970-802-A/200).

EFFECTIVITY: ALL

Thrust Rating Module Switch Box - Adjustment/Test
Figure 501 - Sheet 1



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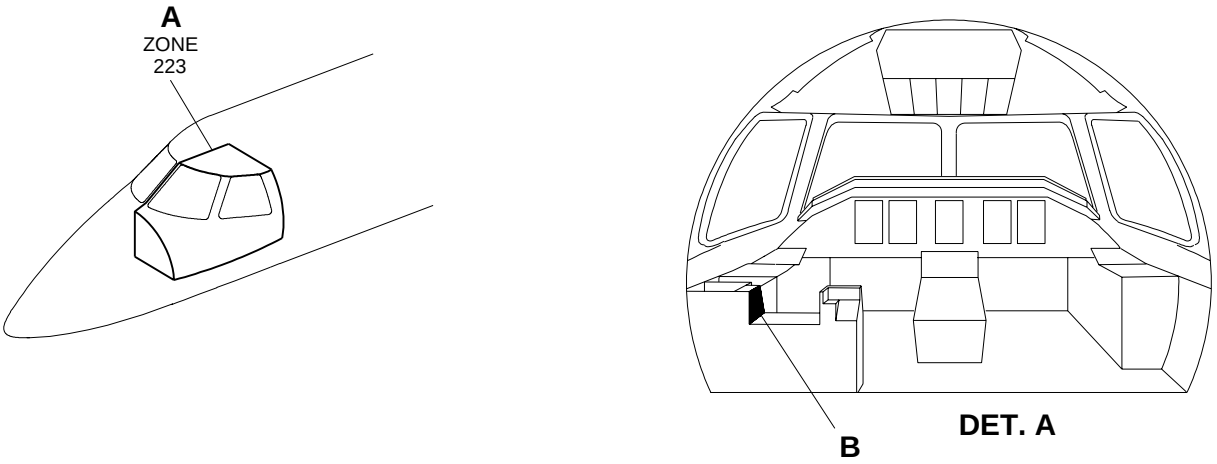
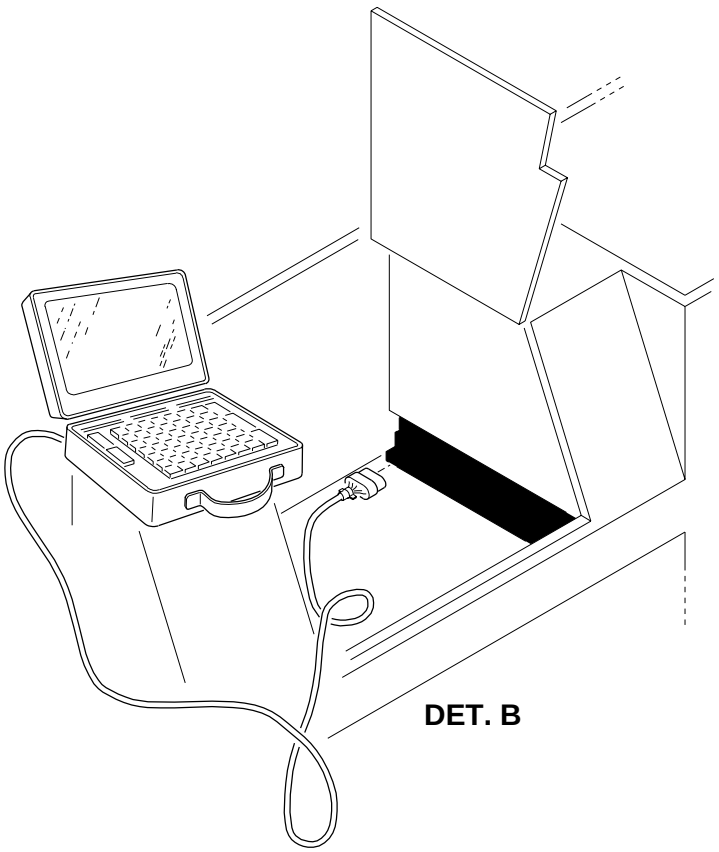
EFFECTIVITY: ALL

Thrust Rating Module Switch Box - Adjustment/Test
Figure 501 - Sheet 2





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