SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
ENGIN	MAIN EE CTR				007	AUG 22/00

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	ENGINE SPEED CARD		ALL	4000

ZONES	ACCESS PANELS
120	119AL

MECH | INSP | MPD ITEM NUMBER

REPLACE THE ENGINE SPEED CARD. N77-12-01-4A

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

1. General

   A. This procedure has two tasks. The first task removes the engine speed card. The second task installs the engine speed card.

   B. The engine speed card is found on the P50 panel in the main equipment center aft of the nose wheel.

2. Remove the Engine Speed Card

   A. References

      (1) AMM 06-41-00/201, Fuselage Access Doors and Panels

      (2) AMM 20-10-01/401, E/E Rack Mounted Components

      (3) AMM 20-41-01/201, Electrostatic Discharge Sensitive Devices

   B. Access

   C. Prepare to Remove the Engine Speed Card (Fig. 401).

      (1) For the left engine, open these circuit breakers on the overhead panel, P11, and attach the DO-NOT-CLOSE tags:

         (a) 11D15, ENGINE SPEED SENSE L2

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

(b) 11D23, ENGINE SPEED SENSE L1

(2) For the right engine, open these circuit breakers on the overhead panel, P11, and attach the DO-NOT-CLOSE tags:

(a) 11D16, ENGINE SPEED SENSE R2

(b) 11D24, ENGINE SPEED SENSE R1

D. Remove the Engine Speed Card (Fig. 401).

(1) Go into the main equipment center through the access panel, 119AL (AMM 06-41-00/201).

CAUTION: DO NOT TOUCH THE ENGINE SPEED CARD BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE (AMM 20-41-01). ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ENGINE SPEED CARD.

(2) Do the procedure for devices that are sensitive to electrostatic discharge (AMM 20-41-01/201).

(3) Remove the engine speed card (AMM 20-10-01/401).

3. Install the Engine Speed Card

A. References

(1) AMM 06-41-00/201, Fuselage Access Doors and Panels

(2) AMM 20-10-01/401, E/E Rack Mounted Components

(3) AMM 20-41-01/201, Electrostatic Discharge Sensitive Devices

(4) AMM 24-22-00/201, Electrical Power

B. Access

C. Install the Engine Speed Card (Fig. 401).

(1) Go into the main equipment center through the access panel, 119AL (AMM 06-41-00/201).

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

CAUTION: DO NOT TOUCH THE ENGINE SPEED CARD BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE (AMM 20-41-01). ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ENGINE SPEED CARD.

(2) Do the procedure for devices that are sensitive to electrostatic discharge (AMM 20-41-01/201).

(3) Install the engine speed card (AMM 20-10-01/401).

(4) For the left engine, remove the DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel, P11:

(a) 11D15, ENGINE SPEED SENSE L2

(b) 11D23, ENGINE SPEED SENSE L1

(5) For the right engine, remove the DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel, P11.

(a) 11D16, ENGINE SPEED SENSE R2

(b) 11D24, ENGINE SPEED SENSE R1

(6) Supply electrical power (AMM 24-22-00/201).

(7) Erase the EICAS maintenance page and make sure the applicable EICAS message, L(R) ENG SPEED CARD, does not show.

(8) Put the channel 1 switch on the N2 speed card to the TEST position.

(9) Make sure the applicable EICAS message, L(R) ENG SPEED CARD, shows after 5 to 15 seconds.

(10) Put the channel 1 switch back to the NORMAL position.

(11) Erase the EICAS maintenance page and make sure the applicable EICAS message, L(R) ENG SPEED CARD, does not show.

CAUTION: DO NOT OPERATE THE CHANNEL 2 TEST SWITCH MORE THAN 30 SECONDS IN EACH 5 MINUTES. IF YOU OPERATE IT FOR MORE THAN 30 SECONDS, DAMAGE TO THE PROBE HEATER FOR THE ENGINE INLET CAN OCCUR.

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

(12) Put the channel 2 switch on the N2 speed card to the TEST position.

NOTE: The channel 2 switch is a momentary switch. You must hold it in the TEST position.

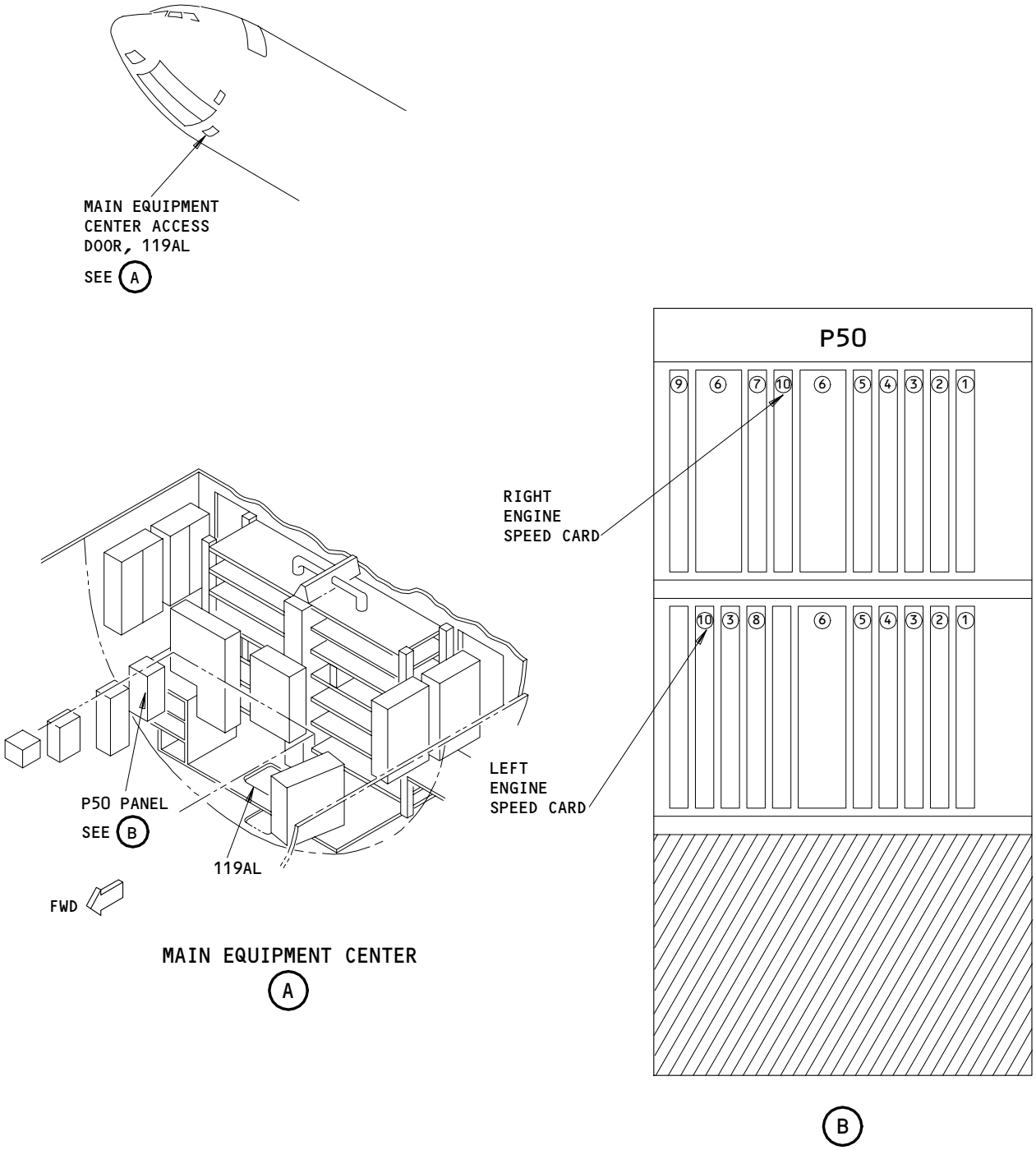
(13) Make sure the EICAS message, L(R) ENG SPEED CARD, shows after you hold the switch for 5 to 15 seconds.

(14) Release the channel 2 switch and make sure it goes back to the NORMAL position.

(15) Erase the EICAS maintenance page and make sure the applicable EICAS message, L(R) ENG SPEED CARD, does not show.

(16) Remove the electrical power (AMM 24-22-00/201).

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.



Engine Speed Card Removal/Installation
Figure 401

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	77-405-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AVION	MAIN EE CTR		00500 HRS	10101	012	DEC 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	ENGINE
OPERATIONAL	PIMU FAULT MESSAGES		ALL	4000

ZONES	ACCESS PANELS
119 120	119AL

MECH	INSP	MPD ITEM NUMBER

PERFORM A READOUT OF ALL ENGINE 1 AND ENGINE 2 PIMU FAULT MESSAGES BY PRESSING THE BIT SWITCH ON THE PIMU. N77-35-00-2A

1. <u>The Propulsion Interface and Monitor Unit (PIMU) Fault Recall</u>

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

B. Access

(1) Location Zones
119 Main Equipment Center (LH)
120 Main Equipment Center (RH)

(2) Access Panels
119AL Main Equipment Center

C. Procedure

(1) Supply electrical power (AMM 24-22-00/201).

(2) Push and hold the MONITOR VERIFY switch on the front of the PIMU.

(a) Make sure all segments of the display come on.

(3) Release the MONITOR VERIFY switch.

<u>NOTE</u>: This will start the PIMU self-test procedure.

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

(a) If the self-test continues for more than three seconds, the PIMU will show this:

TEST IN
PROGRESS

(b) When the PIMU completes the self-test without failure, the PIMU will show this for ten seconds:

READY

(4) Push the BIT switch on the front of the PIMU.

NOTE: This will cause the first PIMU message to show.

(a) Write the failure message shown.

NOTE: All channel A failures show before all channel B failures.

Example: EEC CH-A
FAULT
CAT 2

(b) Push the BIT switch on the front of the PIMU and write the failure message.

Example: EEC CH-A
AOC TR-
CK FAIL

(c) Push the BIT switch on the front of the PIMU and write the failure message.

Example: EEC CH-B
SVA FD-
BK FAIL

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

(d) Push the BIT switch on the front of the PIMU and write the failure message.

Example: EEC CH-B
FMU T/M
W/A FAIL

(5) Push the BIT switch and this will show for ten seconds if all PIMU messages showed:

END

NOTE: If you push the BIT switch again, the procedure will start again. The same PIMU messages will show again one at a time until you get to END a second time.

(6) Push the RESET switch on the front of the PIMU and erase the PIMUs RAM and nonvolatile memory.

(7) Remove electrical power (AMM 24-22-00/201).

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	77-406-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AVION	MAIN EE CTR		01000 HRS (#)	10202	011	DEC 22/00

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	ENGINE
OPERATIONAL	EEC CATEGORY 2 FAULTS		ALL	4000

ZONES	ACCESS PANELS
119 120	119AL

MECH	INSP	MPD ITEM NUMBER

VERIFY THAT THERE ARE NO ENGINE 1 OR ENGINE 2 EEC CATEGORY 2 FAULTS (EEC CH-A/B FAULT CAT 2). N77-35-00-2B

(#) CMR FREQUENCY IS 1000 HOURS.

1. <u>The Propulsion Interface and Monitor Unit (PIMU) Fault Recall</u>

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

B. Access

(1) Location Zones
119 Main Equipment Center (LH)
120 Main Equipment Center (RH)

(2) Access Panels
119AL Main Equipment Center

C. Procedure

(1) Supply electrical power (AMM 24-22-00/201).

(2) Push and hold the MONITOR VERIFY switch on the front of the PIMU.

(a) Make sure all segments of the display come on.

(3) Release the MONITOR VERIFY switch.

<u>NOTE</u>: This will start the PIMU self-test procedure.

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

(a) If the self-test continues for more than three seconds, the PIMU will show this:

TEST IN
PROGRESS

(b) When the PIMU completes the self-test without failure, the PIMU will show this for ten seconds:

READY

(4) Push the BIT switch on the front of the PIMU.

NOTE: This will cause the first PIMU message to show.

(a) Write the failure message shown.

NOTE: All channel A failures show before all channel B failures.

Example: EEC CH-A
FAULT
CAT 2

(b) Push the BIT switch on the front of the PIMU and write the failure message.

Example: EEC CH-A
AOC TR-
CK FAIL

(c) Push the BIT switch on the front of the PIMU and write the failure message.

Example: EEC CH-B
SVA FD-
BK FAIL

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

(d) Push the BIT switch on the front of the PIMU and write the failure message.

Example: EEC CH-B
FMU T/M
W/A FAIL

(5) Push the BIT switch and this will show for ten seconds if all PIMU messages showed:

END

NOTE: If you push the BIT switch again, the procedure will start again. The same PIMU messages will show again one at a time until you get to END a second time.

(6) Push the RESET switch on the front of the PIMU and erase the PIMUs RAM and nonvolatile memory.

(7) Remove electrical power (AMM 24-22-00/201).

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	77-407-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
ENGIN	CREW CABIN		00400 HRS (#)	003SC	007	APR 22/05

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
OPERATIONAL	STANDBY ENGINE INDICATOR		NOTE	4000

ZONES	ACCESS PANELS
212	

MECH	INSP	MPD ITEM NUMBER

CHECK THE OPERATION OF THE STANDBY ENGINE INDICATOR (SEI) BY ACTUATING THE TEST SWITCH. N77-41-01-4A
(#) CMR AND MSG-3 DEVELOPED FREQUENCY IS 400 HOURS.

AIRPLANE NOTE: THIS TASK APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

1. Do the Operational Test of the Standby Engine Indicator (SEI)

   A. General

      (1) The standby engine indicator (SEI) is found on the captain's main instrument panel, P1-3.

      (2) The standby engine indicator is referred to as the SEI in this procedure.

   B. References

      (1) AMM 24-22-00/201, Electrical Power - Control

   C. Do the Operational Test of the Standby Engine Indicator (SEI) (Fig. 401).

      (1) Supply electrical power (AMM 24-22-00/201).

      (2) Put the control switch for the SEI display to ON.

      (3) Turn the BITE screw to the index mark with a small screwdriver and hold it in that position.

      (4) Make sure these indications show on the SEI in three seconds or less:

         (a) 2.88 for EPR

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

MECH	INSP

(b) 188.8 for N1

(c) 1888 for EGT

(d) 188 for N2

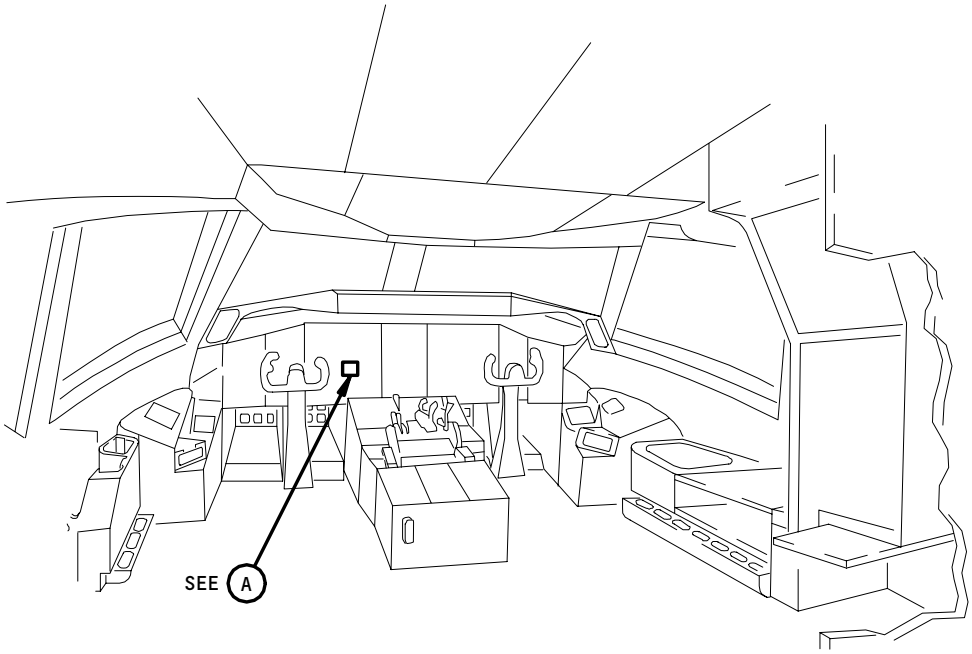
D. Put the airplane back to its usual condition.

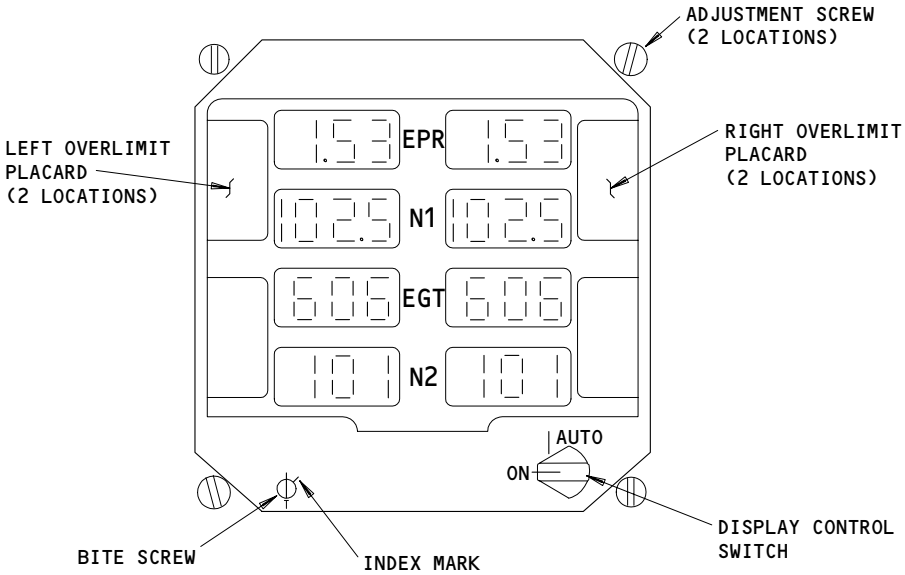
(1) Turn the BITE screw on the SEI back to its initial position.

(2) Put the control switch for the SEI display to AUTO.

(3) Remove the electrical power if it is not necessary (AMM 24-22-00/201).

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.





A

NOTE: THE NUMBERS SHOWN ON THE STANDBY ENGINE INDICATOR ARE GIVEN AS AN EXAMPLE ONLY.

Standby Engine Indicator Installation
Figure 401

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.