CHAPTER

34

NAVIGATION

BOEING

737-600/700/800/900
TASK CARDS

CHAPTER 34
NAVIGATION

Subject/Page	Date	COC
34-EFFECTIVE PAGES		
1 thru 2	JUN 15/2016	
34-010-00-01	SYS	
1	Jun 15/2015	
R 2	Jun 15/2016	
3	Feb 15/2015	
4	Feb 15/2015	
5	Feb 15/2015	
6	Oct 15/2015	
7	Oct 15/2015	
34-020-00-01	SYS	
1	Jun 15/2015	
R 2	Jun 15/2016	
3	Feb 15/2015	
4	Feb 15/2015	
5	Feb 15/2015	
6	Oct 15/2015	
7	Oct 15/2015	
34-030-00-01	SYS	
1	Jun 15/2015	
R 2	Jun 15/2016	
3	Feb 15/2015	
4	Feb 15/2015	
5	Feb 15/2015	
6	Oct 15/2015	
7	Oct 15/2015	
34-040-00-01	SYS	
1	Feb 15/2015	
R 2	Jun 15/2016	
3	Feb 15/2015	
4	Oct 15/2014	
5	Oct 15/2014	
6	Oct 15/2014	
7	Oct 15/2014	
8	Oct 15/2015	
9	Oct 15/2015	
34-050-00-01	SYS	
1	Feb 15/2016	
R 2	Jun 15/2016	
3	Feb 15/2016	
4	Feb 15/2016	
5	Feb 15/2016	
6	Feb 15/2016	
7	Feb 15/2016	
8	Feb 15/2016	
9	Feb 15/2016	
34-060-00-01	SYS	
1	Feb 15/2016	
R 2	Jun 15/2016	
3	Feb 15/2015	
4	Oct 15/2014	
5	Oct 15/2014	
6	Feb 15/2016	
7	Oct 15/2015	
8	Oct 15/2015	
34-060-10-01	SYS	
R 1	Jun 15/2016	
R 2	Jun 15/2016	
R 3	Jun 15/2016	
R 4	Jun 15/2016	
R 5	Jun 15/2016	
R 6	Jun 15/2016	
R 7	Jun 15/2016	
R 8	Jun 15/2016	
R 9	Jun 15/2016	
R 10	Jun 15/2016	
R 11	Jun 15/2016	
R 12	Jun 15/2016	
A 13	Jun 15/2016	
A 14	Jun 15/2016	
A 15	Jun 15/2016	
A 16	Jun 15/2016	
A 17	Jun 15/2016	
34-060-10-01	SYS (cont)	
A 18	Jun 15/2016	
A 19	Jun 15/2016	
A 20	Jun 15/2016	
A 21	Jun 15/2016	
A 22	Jun 15/2016	
A 23	Jun 15/2016	
A 24	Jun 15/2016	
A 25	Jun 15/2016	
A 26	Jun 15/2016	
A 27	Jun 15/2016	
A 28	Jun 15/2016	
A 29	Jun 15/2016	
34-070-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Jun 15/2015	
4	Jun 15/2015	
34-080-00-01	SYS	
1	Oct 15/2014	
2	Feb 15/2015	
3	Oct 15/2015	
4	Oct 15/2015	
5	Oct 15/2015	
6	Oct 15/2015	
34-090-00-01	SYS	
1	Jun 15/2015	
2	Feb 15/2015	
R 3	Jun 15/2016	
34-100-00-01	SYS	
1	Jun 15/2015	
2	Feb 15/2015	
3	Oct 15/2015	
34-110-00-01	SYS	
1	Jun 15/2015	
2	Jun 15/2015	
3	Jun 15/2015	

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34-EFFECTIVE PAGES

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CHAPTER 34
NAVIGATION

Subject/Page	Date	COC
34-110-00-01	SYS (cont)	
4	Feb 15/2015	
5	Feb 15/2015	
6	Jun 15/2015	
34-110-00-02	SYS	
1	Jun 15/2015	
2	Feb 15/2015	
R 3	Jun 15/2016	
R 4	Jun 15/2016	
R 5	Jun 15/2016	
O 6	Jun 15/2016	
R 7	Jun 15/2016	
O 8	Jun 15/2016	
R 9	Jun 15/2016	
O 10	Jun 15/2016	
R 11	Jun 15/2016	
O 12	Jun 15/2016	
R 13	Jun 15/2016	
O 14	Jun 15/2016	
O 15	Jun 15/2016	
R 16	Jun 15/2016	
R 17	Jun 15/2016	
O 18	Jun 15/2016	
O 19	Jun 15/2016	
R 20	Jun 15/2016	
O 21	Jun 15/2016	
R 22	Jun 15/2016	
O 23	Jun 15/2016	
R 24	Jun 15/2016	
R 25	Jun 15/2016	
R 26	Jun 15/2016	
O 27	Jun 15/2016	
O 28	Jun 15/2016	
R 29	Jun 15/2016	
O 30	Jun 15/2016	
O 31	Jun 15/2016	
R 32	Jun 15/2016	

Subject/Page	Date	COC
34-110-00-02	SYS (cont)	
A 33	Jun 15/2016	
34-130-00-01	SYS	
1	Jun 15/2015	
2	Jun 15/2015	
3	Feb 15/2016	
4	Feb 15/2016	
5	Jun 15/2015	
6	Feb 15/2016	
7	Oct 15/2015	
8	Oct 15/2015	
34-140-00-01	SYS	
1	Jun 15/2015	
2	Jun 15/2015	

Subject/Page	Date	COC

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34-EFFECTIVE PAGES

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT STATIC SYSTEM LEAK CHECK			**34-010-00-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AVION**				
		ACCESS			ZONE **113 114 121 122 211 212 221 222**

Functional leak check of captain's pitot system.

A. References

Reference	Title
AMM 24-22-00-860-813	Supply External Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-010-00-01

(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADTS405F Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43 Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit, PN ADA737-678) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701M2-3 Supplier: 38002

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-010-00-01

MECH | INSP

TASK 34-11-00-790-810

1. Left Pitot System Leak Test

(Figure 1)

A. Prepare for the Leak Test

SUBTASK 34-11-00-860-123

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE FALSE TCAS TARGETS. THESE TCAS TARGETS CAN CAUSE AIR TRAFFIC IN THE VICINITY TO EXECUTE UNNECESSARY EVASIVE MANEUVERS.

(1) Make sure that the ATC transponders are in standby mode.

SUBTASK 34-11-00-860-124

(2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-125

(3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-195

(4) Make sure that AOA vanes are set to zero degrees.

SUBTASK 34-11-00-860-126

(5) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-860-127

(6) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

NOTE: You must use external power to do this test. APU generator power will not work for this test. The APU uses data supplied by the ADIRU to adjust its performance.

SUBTASK 34-11-00-860-128

(7) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-010-00-01

MECH | INSP

B. Installation of Pitot Probe Adapter

SUBTASK 34-11-00-170-076

(1) Prepare the pitot test adapter, COM-1916, before you install it on the pitot probe:

CAUTION: MAKE SURE THAT YOU FLUSH THE PITOT SYSTEM TEST ADAPTER WITH WATER BEFORE YOU ATTACH THE ADAPTER TO THE PROBE. DAMAGE TO THE PROBE OR THE ADAPTER CAN OCCUR.

(a) Flush the adapter with water.

NOTE: Use equal parts of water and ethylene glycol when the temperature is between 32°F and -40°F (-40°C to 0°C).

(b) Blow dry filtered air through the adapter.

SUBTASK 34-11-00-160-002

WARNING: MAKE SURE THAT THE PITOT PROBE HEAT IS OFF. A HOT PROBE CAN CAUSE INJURIES TO PERSONNEL.

(2) Wipe the pitot probe with a damp cotton wiper, G00034.

SUBTASK 34-11-00-480-130

CAUTION: MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE PROBE CAN BEND OR TWIST OUT OF TOLERANCE.

(3) Install the pitot test adapter, COM-1916 on the pitot probe on the left side of the forward fuselage.

SUBTASK 34-11-00-480-131

(4) Connect the air data model test set, COM-1914 or the Air Data Test Set (non RVSM), COM-13545 to the pitot test adapter, COM-1916.

C. Left Pitot System Leak Test

SUBTASK 34-11-00-790-084

CAUTION: MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

(1) Operate the air data test set to apply pressure of 4.53 ±0.16 inches Hg (gauge), (2.22 ±0.08 psig) (153.4 ±5.4 mB), or 300 ±5 knots.

SUBTASK 34-11-00-790-085

(2) When the test pressure is reached, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-086

(3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-087

(4) Make sure the pressure does not decrease more than 0.16 inches Hg (5.4 mB) (approximately 5 knots) in one minute.

SUBTASK 34-11-00-860-129

(5) Put the system back to ambient pressure.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-010-00-01

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D. Removal of Pitot Probe Adapter

SUBTASK 34-11-00-080-069

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

(1) Disconnect the air data test set from the pitot test adapter, COM-1916.

SUBTASK 34-11-00-080-070

(2) Remove the pitot test adapter, COM-1916 from the pitot probe.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-131

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

——— END OF TASK ———

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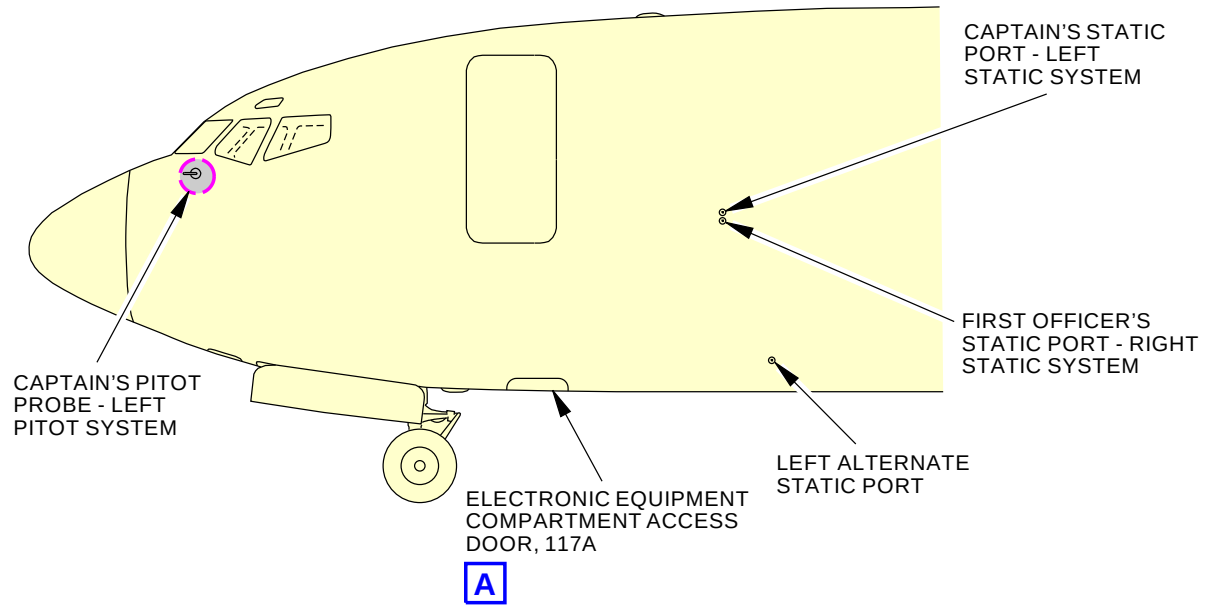
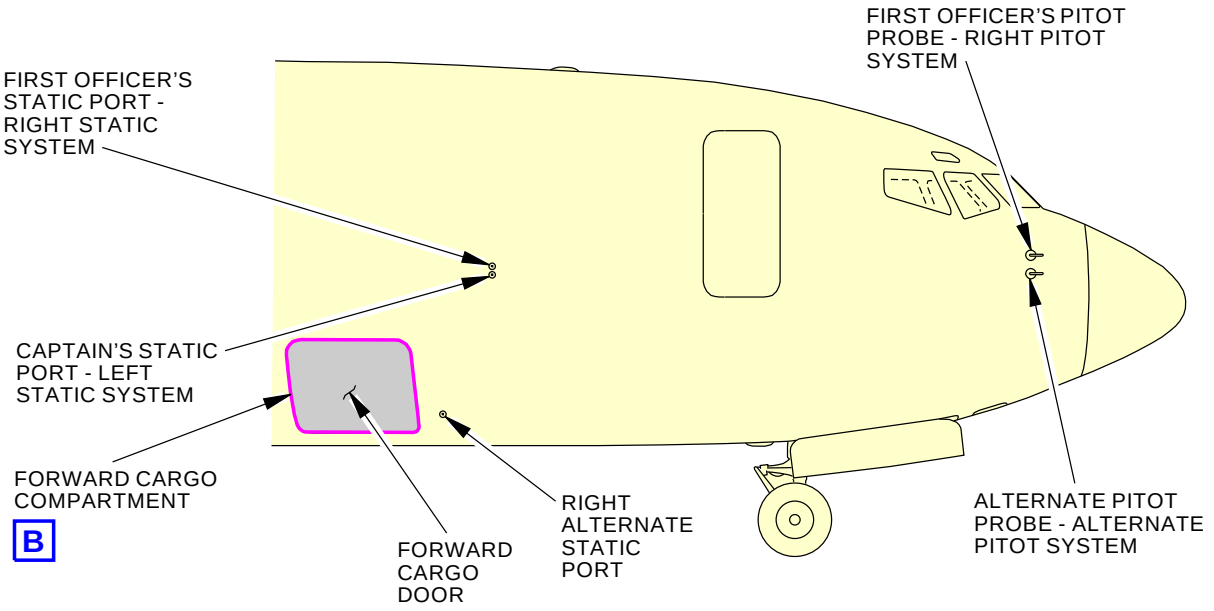
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-010-00-01





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Pitot Static Leakage Test
Figure 1 (Sheet 1 of 2)

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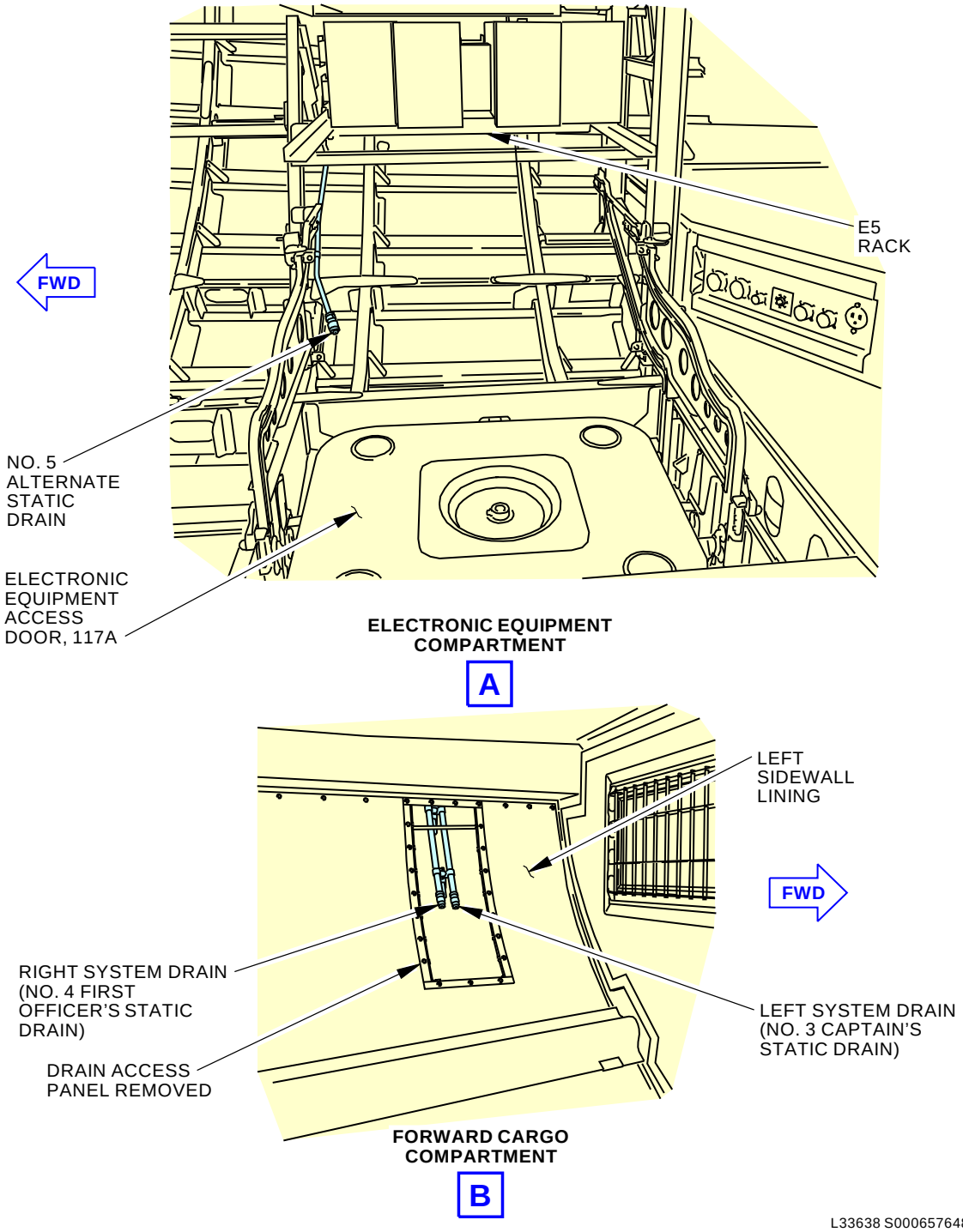
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-010-00-01



Pitot Static Leakage Test
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT STATIC SYSTEM LEAK CHECK			**34-020-00-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL **AVION**				
		ACCESS			ZONE **113 114 121 122 211 212 221 222**

Functional leak check of first officer's pitot system.

A. References

Reference	Title
AMM 24-22-00-860-813	Supply External Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-020-00-01

(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADTS405F Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43 Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit, PN ADA737-678) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701M2-3 Supplier: 38002

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-020-00-01

MECH | INSP

TASK 34-11-00-790-811

1. Right Pitot System Leak Test

(Figure 1)

A. Prepare for the Leak Test

SUBTASK 34-11-00-860-133

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE FALSE TCAS TARGETS. THESE TCAS TARGETS CAN CAUSE AIR TRAFFIC IN THE VICINITY TO EXECUTE UNNECESSARY EVASIVE MANEUVERS.

(1) Make sure that the ATC transponders are in standby mode.

SUBTASK 34-11-00-860-134

(2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-135

(3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-196

(4) Make sure the AOA vanes are set to zero degrees.

SUBTASK 34-11-00-860-136

(5) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

SUBTASK 34-11-00-860-137

(6) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

NOTE: You must use external power to do this test. APU generator power will not work for this test.

B. Installation of Pitot Probe Adapter

SUBTASK 34-11-00-170-077

(1) Prepare the pitot test adapter, COM-1916 before you install the adapter on the pitot probe:

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-020-00-01

MECH	INSP

CAUTION: MAKE SURE THAT YOU FLUSH THE PITOT SYSTEM TEST ADAPTER WITH WATER BEFORE YOU ATTACH THE ADAPTER TO THE PROBE. DAMAGE TO THE PROBE OR THE ADAPTER CAN OCCUR.

(a) Flush the adapter with water.

NOTE: Use equal parts of water and ethylene glycol when the temperature is between 32°F and -40°F (-40°C to 0°C).

(b) Blow dry filtered air through the adapter.

SUBTASK 34-11-00-160-003

WARNING: MAKE SURE THAT THE PITOT PROBE HEAT IS OFF. A HOT PROBE CAN CAUSE INJURIES TO PERSONNEL.

(2) Wipe the pitot probe with a damp cotton wiper, G00034.

SUBTASK 34-11-00-480-133

CAUTION: MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE PROBE CAN BEND OR TWIST OUT OF TOLERANCE.

(3) Install the pitot test adapter, COM-1916 on the upper pitot probe on the right side of the forward fuselage.

SUBTASK 34-11-00-480-134

(4) Connect the air data model test set, COM-1914 or the Air Data Test Set (non RVSM), COM-13545 to the pitot test adapter, COM-1916.

C. Right Pitot System Leak Test

SUBTASK 34-11-00-790-088

CAUTION: MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

(1) Operate the air data test set to apply pressure of 4.53 ±0.16 inches Hg (gauge), (2.22 ±0.08 psig) (153.4 ±5.4 mB), or 300 ±5 knots.

SUBTASK 34-11-00-790-089

(2) When the test pressure is reached, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-090

(3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-091

(4) Make sure the pressure does not decrease more than 0.16 inches Hg (5.4 mB) (approximately 5 knots) in one minute.

SUBTASK 34-11-00-860-139

(5) Put the system back to ambient pressure.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-020-00-01

MECH | INSP

D. Removal of the Pitot Probe Adapter

SUBTASK 34-11-00-080-071

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

(1) Disconnect the air data test set from the pitot test adapter, COM-1916.

SUBTASK 34-11-00-080-072

(2) Remove the pitot test adapter, COM-1916 from the pitot probe.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-141

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

——— END OF TASK ———

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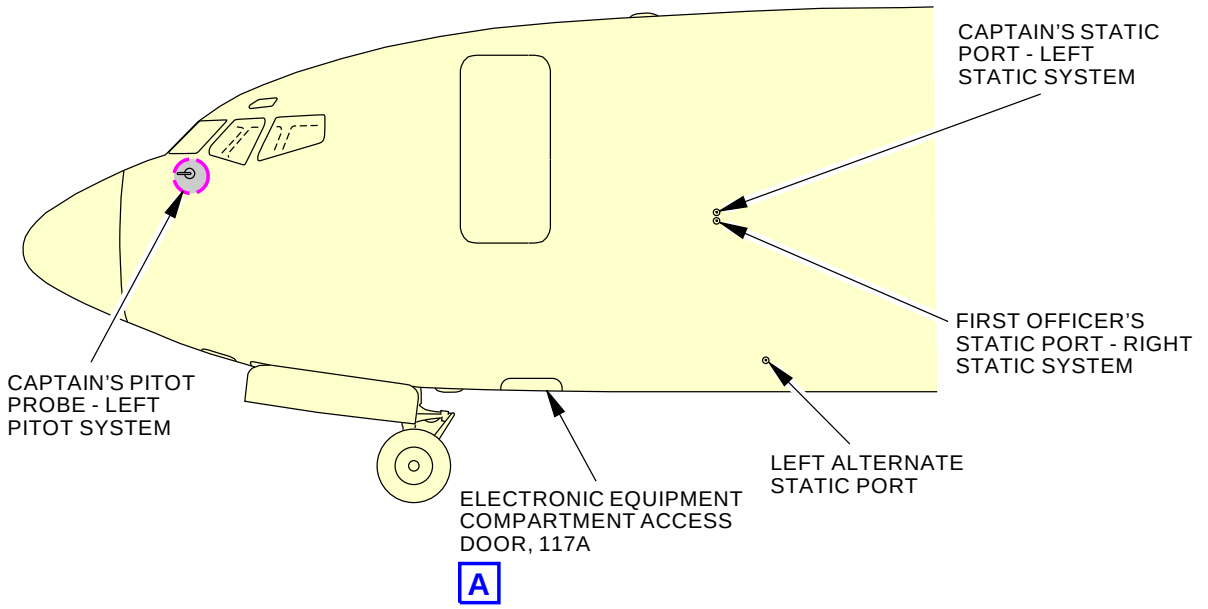
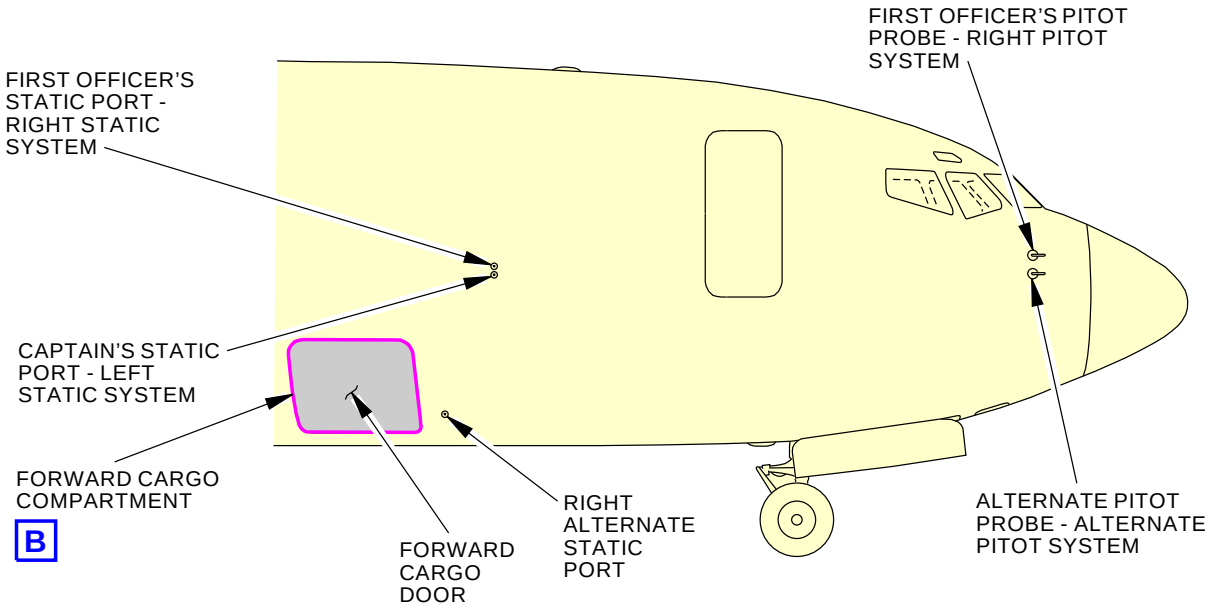
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-020-00-01





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Pitot Static Leakage Test
Figure 1 (Sheet 1 of 2)

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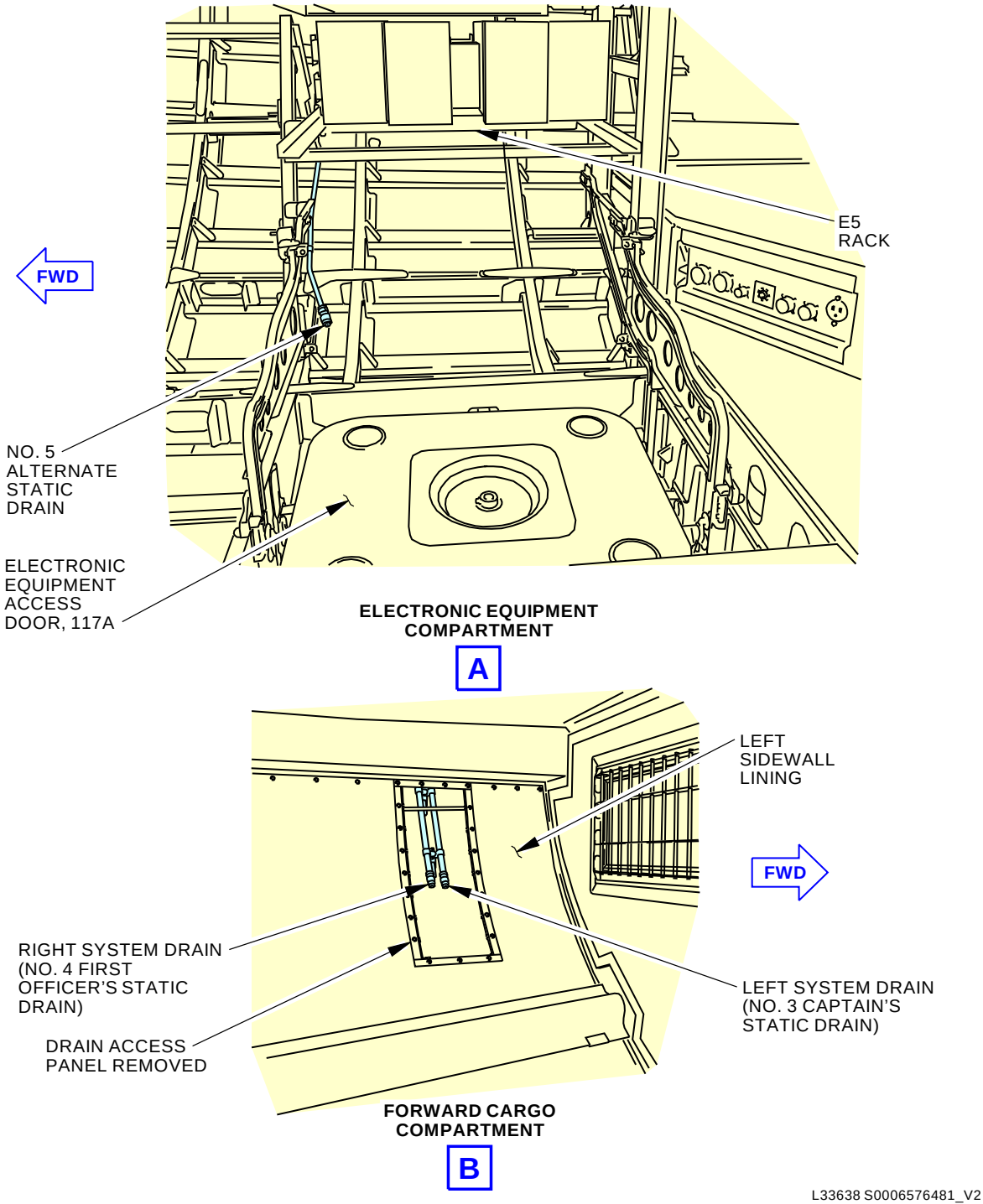
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-020-00-01



Pitot Static Leakage Test
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT STATIC SYSTEM LEAK CHECK			**34-030-00-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL **AVION**				
		ACCESS			ZONE **113 114 121 122 211 212 221 222**

Functional leak check of standby pitot system.

A. References

Reference	Title
AMM 24-22-00-860-813	Supply External Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	BMS15-5 Class A

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-030-00-01

(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADTS405F Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43 Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit, PN ADA737-678) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701M2-3 Supplier: 38002

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-030-00-01

MECH	INSP

TASK 34-11-00-790-812

1. Alternate Pitot System Leak Test

(Figure 1)

A. Prepare for the Leak Test

SUBTASK 34-11-00-860-143

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE FALSE TCAS TARGETS. THESE TCAS TARGETS CAN CAUSE AIR TRAFFIC IN THE VICINITY TO EXECUTE UNNECESSARY EVASIVE MANEUVERS.

(1) Make sure that the ATC transponders are in standby mode.

SUBTASK 34-11-00-860-144

(2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-145

(3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-197

(4) Make sure the AOA vanes are set to zero degrees.

SUBTASK 34-11-00-860-146

(5) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

SUBTASK 34-11-00-860-147

(6) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

NOTE: You must use external power to do this test. APU generator power will not work for this test.

B. Installation of the Pitot Probe Adapter

SUBTASK 34-11-00-170-078

(1) Prepare the pitot test adapter, COM-1916 before you install the adapter on the pitot probe:

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CAUTION: MAKE SURE THAT YOU FLUSH THE PITOT SYSTEM TEST ADAPTER WITH WATER BEFORE YOU ATTACH THE ADAPTER TO THE PROBE. DAMAGE TO THE PROBE OR THE ADAPTER CAN OCCUR.

(a) Flush the adapter with water.

NOTE: Use equal parts of water and ethylene glycol when the temperature is between 32°F and -40°F (-40°C to 0°C).

(b) Blow dry filtered air through the adapter.

SUBTASK 34-11-00-160-004

WARNING: MAKE SURE THAT THE PITOT PROBE HEAT IS OFF. A HOT PROBE CAN CAUSE INJURIES TO PERSONNEL.

(2) Wipe the pitot probe with a damp cotton wiper, G00034.

SUBTASK 34-11-00-480-136

CAUTION: MAKE SURE THAT THE PITOT PROBE HAS NO ADDED WEIGHT ON IT FROM THE TEST HOSE. THE PROBE CAN BEND OR TWIST OUT OF TOLERANCE.

(3) Install the pitot test adapter, COM-1916 on the lower pitot probe on the right side of the forward fuselage.

SUBTASK 34-11-00-480-137

(4) Connect the air data model test set, COM-1914 or the Air Data Test Set (non RVSM), COM-13545 to the pitot test adapter, COM-1916.

C. Alternate Pitot System Leak Test

SUBTASK 34-11-00-790-092

(1) Operate the air data test set to apply pressure of 4.53 ±0.16 inches Hg (gauge), (2.22 ±0.08 psig) (153.4 ±5.4 mB), or 300 ±5 knots.

SUBTASK 34-11-00-790-093

(2) When the test pressure is reached, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-094

(3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-095

(4) Make sure the pressure does not decrease more than 0.16 inches Hg (5.4 mB) (approximately 5 knots) in one minute.

SUBTASK 34-11-00-860-149

(5) Put the system back to ambient pressure.

D. Removal of the Pitot Probe Adapter

SUBTASK 34-11-00-080-073

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE INDICATORS CAN OCCUR.

(1) Disconnect the air data test set from the pitot test adapter, COM-1916.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-030-00-01

MECH	INSP

SUBTASK 34-11-00-080-074

(2) Remove the pitot test adapter, COM-1916 from the pitot probe.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-151

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
D	3	C01071	HEATERS ALPHA VANE RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

——— END OF TASK ———

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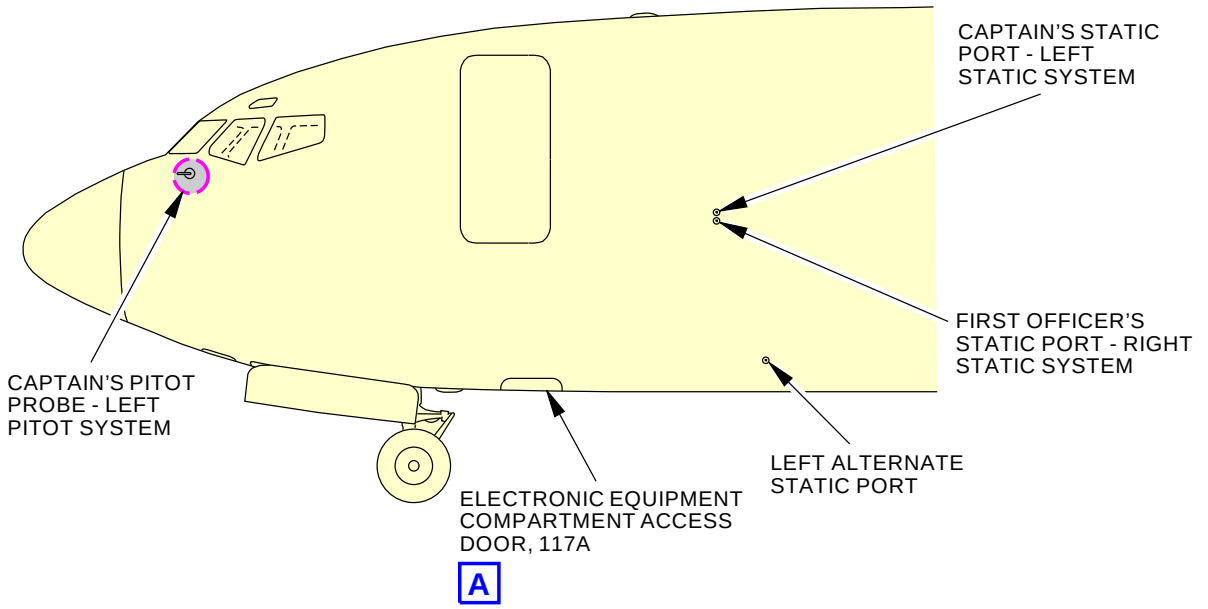
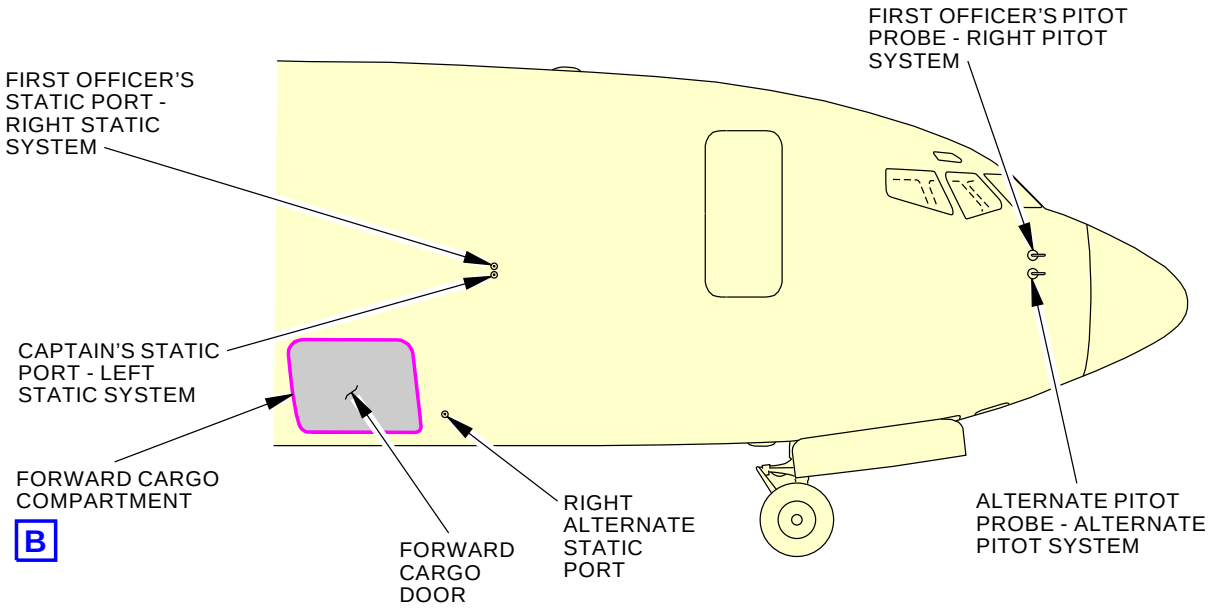
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-030-00-01





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Pitot Static Leakage Test
Figure 1 (Sheet 1 of 2)

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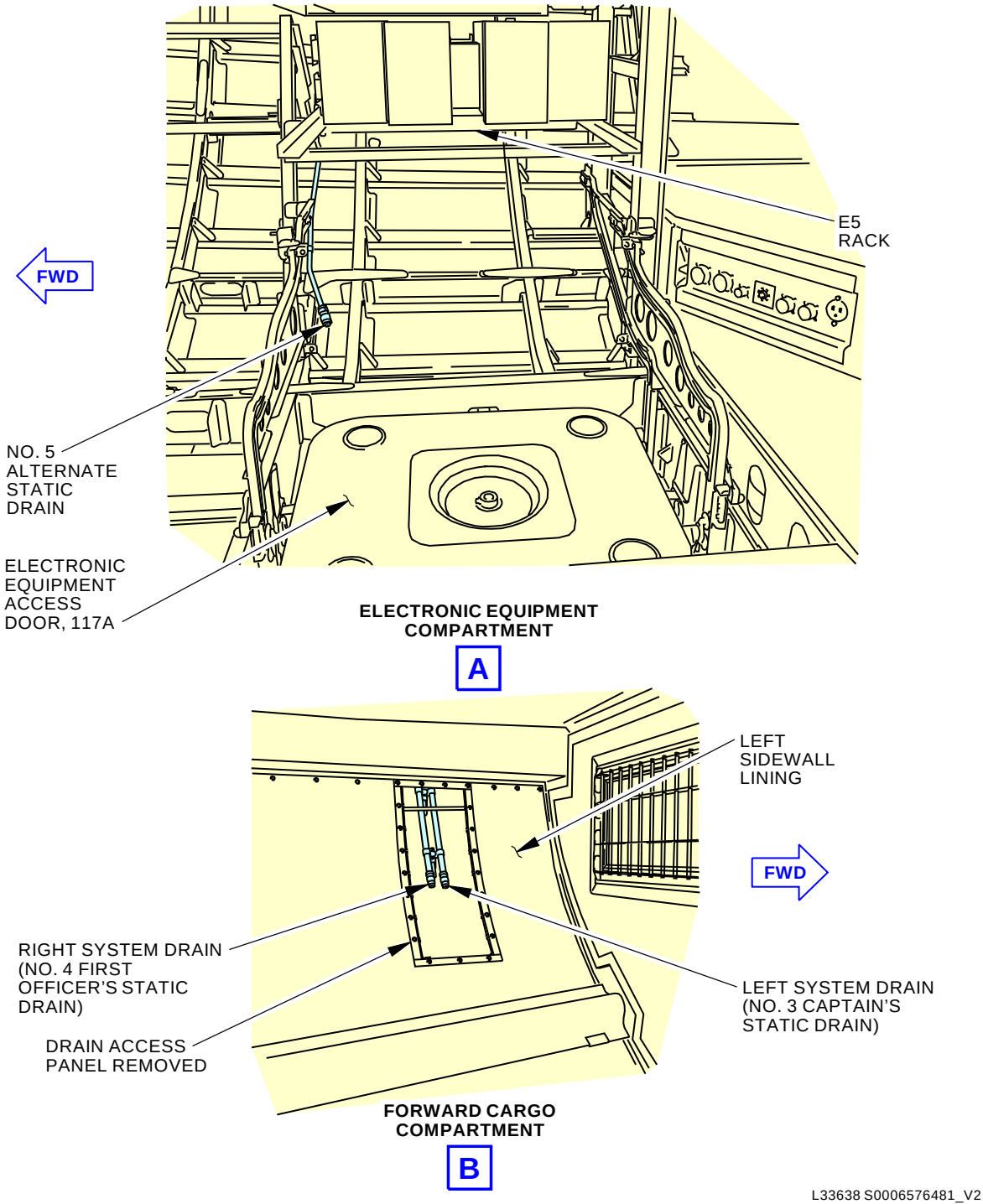
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-030-00-01



Pitot Static Leakage Test
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT STATIC SYSTEM LEAK CHECK			**34-040-00-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL **AVION**				
		ACCESS			ZONE **113 114 121 122 211 212 221 222**

Functional leak check of captain's static system.

A. References

Reference	Title
AMM 24-22-00-860-813	Supply External Power (P/B 201)
AMM 25-52-06-000-801	Cargo Compartment Sidewall Lining - Removal (P/B 401)
AMM 25-52-06-400-801	Cargo Compartment Sidewall Lining - Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

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(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADTS405F Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43 Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-040-00-01

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TASK 34-11-00-790-804

1. Left Static System Low-range Leak Test

(Figure 1)

A. General

(1) You must do the static system low-range leak test when you remove a fitting other than a quick disconnect. You must do the low-range leak test after you flush the pitot-static system.

(2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. Prepare for the Low-range Leak Test

SUBTASK 34-11-00-860-075

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE FALSE TCAS TARGETS. THESE TCAS TARGETS CAN CAUSE AIR TRAFFIC IN THE VICINITY TO EXECUTE UNNECESSARY EVASIVE MANEUVERS.

(1) Make sure that the ATC transponders are in standby mode.

SUBTASK 34-11-00-860-076

(2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-077

(3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-198

(4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-860-079

(5) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-040-00-01

MECH | INSP

C. Installation of Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-480-092

WARNING: WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(1) Seal these two primary static ports with vinyl adhesive Scotch Brand No.471 tape, G02219.

(a) The CAPTAIN static port on the right side of the fuselage.

(b) The CAPTAIN static port on the left side of the fuselage.

SUBTASK 34-11-00-480-093

(2) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. To do this, do this task: Cargo Compartment Sidewall Lining - Removal, AMM TASK 25-52-06-000-801

SUBTASK 34-11-00-480-094

(3) Remove the cap from the No. 3 Captain's Static Drain.

NOTE: The No. 3 Captain's Static Drain is the forward drain, and is connected to the left static system.

SUBTASK 34-11-00-480-096

(4) Install the coupling, COM-1927, on the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-480-210

(5) Connect the air data model test set, COM-1914 or the Air Data Test Set (non RVSM), COM-13545 to the coupling, COM-1927.

D. Installation of Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-012

CAUTION: INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(1) Install the static test adapter, COM-1921, on the CAPTAIN static port, on the right side of the fuselage.

SUBTASK 34-11-00-480-211

(2) Connect the air data test set to the static test adapter, COM-1921.

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SUBTASK 34-11-00-400-013

WARNING: WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(3) Seal the CAPTAIN static port on the left side of the fuselage with Scotch Brand No.471 tape, G02219.

E. Left Static System Low-range Leak Test

SUBTASK 34-11-00-790-060

CAUTION: MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

(1) Operate the air data test set to apply a vacuum to the static system equal to 5,000 feet of altitude above field elevation (ambient pressure minus 5.25 ± 0.25 in. Hg).

SUBTASK 34-11-00-790-061

(2) When the system reaches 5,000 feet above field elevation, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-062

(3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-063

(4) Make sure the altitude does not decrease more than 80 feet (0.07 in. Hg) in one minute.

SUBTASK 34-11-00-860-080

(5) Put the system back to ambient pressure.

F. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-114

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

(1) Disconnect the air data test set from the coupling, COM-1927.

SUBTASK 34-11-00-080-115

(2) Disconnect the coupling, COM-1927, from the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-480-213

(3) Install the cap on the No. 3 Captain's Static Drain.

SUBTASK 34-11-00-210-004

(4) Do a visual inspection of the quick-disconnect fittings that you connected.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-040-00-01

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(a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-480-214

(5) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. To do this, do this task: Cargo Compartment Sidewall Lining - Installation, AMM TASK 25-52-06-400-801

SUBTASK 34-11-00-080-116

WARNING: FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PLUG OR DEFORM THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF IT IS NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

(6) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:

(a) The CAPTAIN static port on the right side of the fuselage.

(b) The CAPTAIN static port on the left side of the fuselage.

G. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-215

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

(1) Disconnect the air data test set, from the static test adapter, COM-1921.

SUBTASK 34-11-00-480-216

CAUTION: REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(2) Remove the static test adapter, COM-1921, from the CAPTAIN static port on the right side of the fuselage.

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SUBTASK 34-11-00-080-054

WARNING: FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PLUG OR DEFORM THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF YOU DO NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

(3) Remove the vinyl adhesive Scotch Brand No.471 tape, G02219 from the CAPTAIN static port on the left side of the fuselage.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-199

(1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

——— END OF TASK ———

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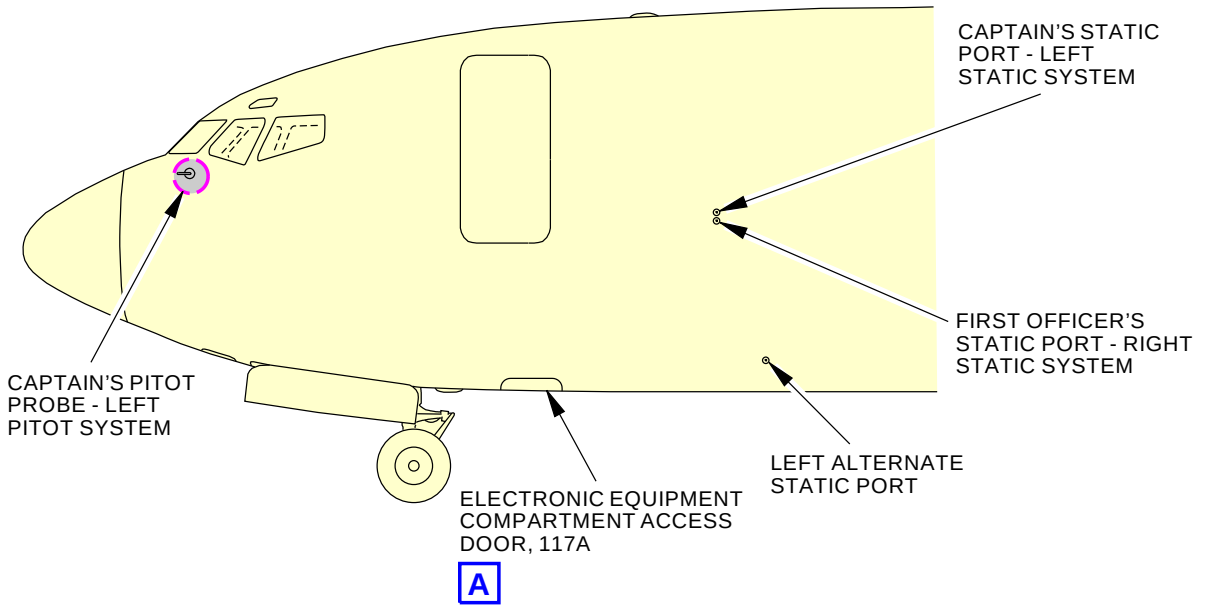
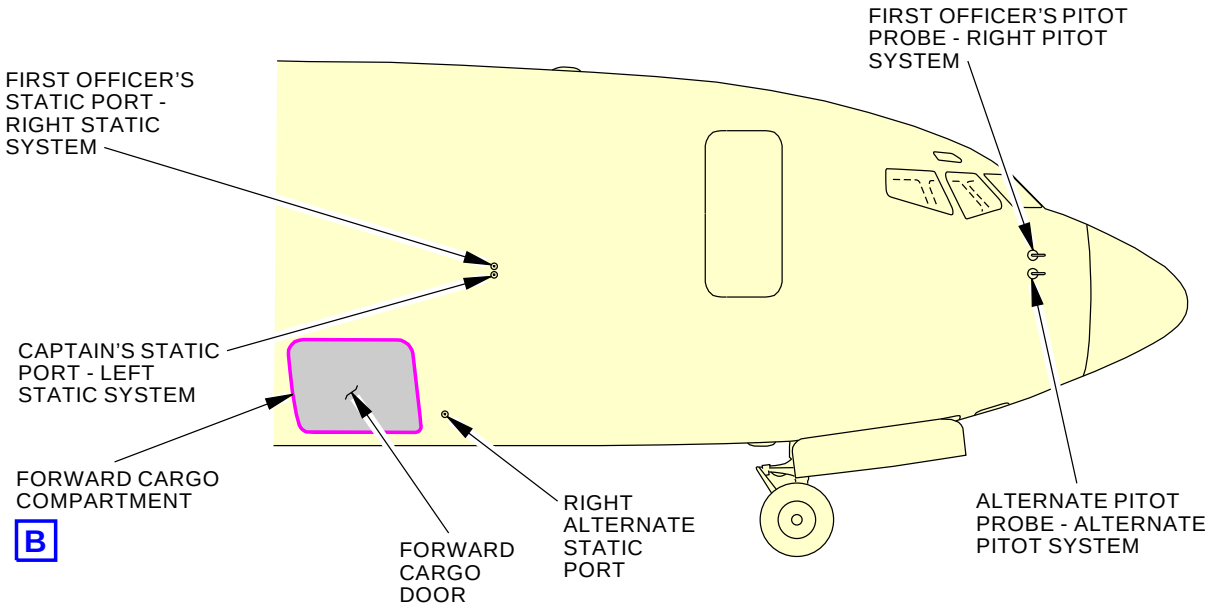
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-040-00-01





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Pitot Static Leakage Test
Figure 1 (Sheet 1 of 2)

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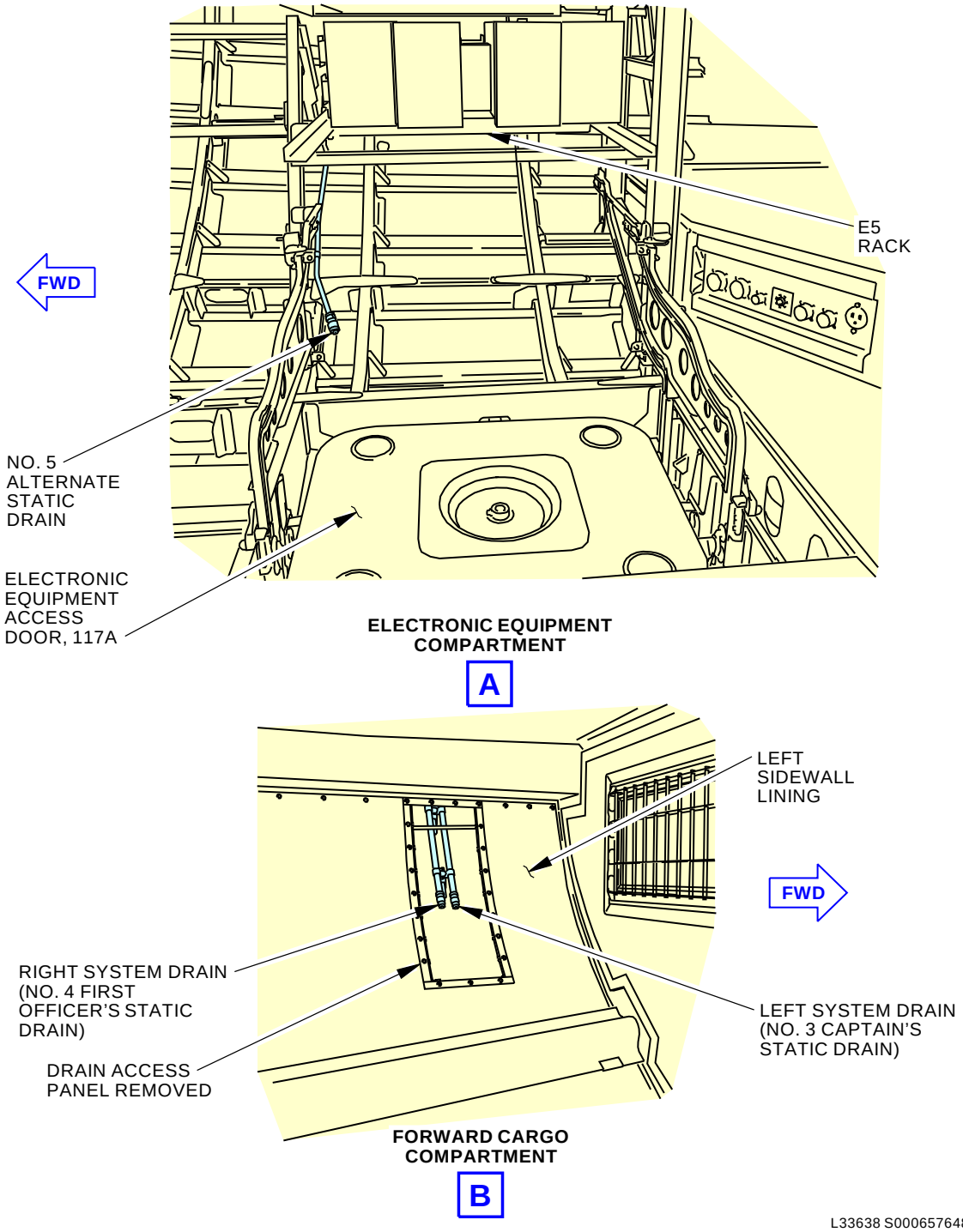
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-040-00-01



Pitot Static Leakage Test
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT STATIC SYSTEM LEAK CHECK			**34-050-00-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY AIRPLANE **ALL** ENGINE **ALL**
STATION	SKILL **AVION**				
		ACCESS			ZONE **113 114 121 122 211 212 221 222**

Functional leak check of first officer's static system.

A. References

Reference	Title
AMM 24-22-00-860-813	Supply External Power (P/B 201)
AMM 24-22-00-860-814	Remove External Power (P/B 201)
AMM 25-52-06-000-801	Cargo Compartment Sidewall Lining - Removal (P/B 401)
AMM 25-52-06-400-801	Cargo Compartment Sidewall Lining - Installation (P/B 401)

B. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-050-00-01

(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADTS405F Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43 Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-050-00-01

MECH	INSP

TASK 34-11-00-790-806

1. Right Static System Low-range Leak Test

(Figure 1)

A. General

(1) You must do the static system low-range leak test when you remove a fitting other than a quick disconnect. You must do the low-range leak test after you flush the pitot-static system.

(2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. Prepare for the Low-range Leak Test

SUBTASK 34-11-00-860-091

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE FALSE TCAS TARGETS. THESE TCAS TARGETS CAN CAUSE AIR TRAFFIC IN THE VICINITY TO EXECUTE UNNECESSARY EVASIVE MANEUVERS.

(1) Make sure that the ATC transponders are in standby mode.

SUBTASK 34-11-00-860-092

(2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-093

(3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-218

(4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-860-095

(5) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-050-00-01

MECH | INSP

C. Installation of the Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-480-106

WARNING: WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(1) Seal these two primary static ports with vinyl adhesive Scotch Brand No.471 tape, G02219.

(a) The FIRST OFFICER static port on the left side of the fuselage.

(b) The FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-480-107

(2) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. To do this, do this task: Cargo Compartment Sidewall Lining - Removal, AMM TASK 25-52-06-000-801

SUBTASK 34-11-00-480-108

(3) Remove the cap from the No. 4 First Officer's Static Drain.

NOTE: The No. 4 First Officer's Static Drain is the aft drain, and is connected to the right static system.

SUBTASK 34-11-00-400-014

(4) Install the coupling, COM-1927, on the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-400-015

(5) Connect the air data model test set, COM-1914 or the Air Data Test Set (non RVSM), COM-13545 to the coupling, COM-1927.

D. Installation of the Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-001

CAUTION: INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(1) Install the static test adapter, COM-1921, on the FIRST OFFICER static port on the right side of the fuselage.

SUBTASK 34-11-00-400-016

(2) Connect the air data test set to the static test adapter, COM-1921.

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SUBTASK 34-11-00-400-017

WARNING: WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(3) Seal the FIRST OFFICER static port on the left side of the fuselage with Scotch Brand No.471 tape, G02219.

E. Right Static System Low-range Leak Test

SUBTASK 34-11-00-790-068

CAUTION: MAKE SURE THAT THE PRESSURE IN THE AIR DATA MODULE (ADM) IS NOT TOO HIGH. PRESSURE THAT IS MORE THAN 39.865 INCHES HG (1,350 MB) WILL CAUSE DAMAGE TO THE ADM.

(1) Operate the air data test set to apply a vacuum to the static system equal to 5,000 feet of altitude above field elevation (ambient pressure minus 5.25 ± 0.25 in. Hg).

SUBTASK 34-11-00-790-069

(2) When the system reaches 5,000 feet above field elevation, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-070

(3) Set the air data test set for the leak check.

SUBTASK 34-11-00-790-071

(4) Make sure the altitude does not decrease more than 80 feet (0.07 in. Hg) in one minute.

SUBTASK 34-11-00-860-096

(5) Put the system back to ambient pressure.

F. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-092

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

(1) Disconnect the air data test set from the coupling, COM-1927.

SUBTASK 34-11-00-080-093

(2) Disconnect the coupling, COM-1927, from the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-480-173

(3) Install the cap on the No. 4 First Officer's Static Drain.

SUBTASK 34-11-00-210-005

(4) Do a visual inspection of the quick-disconnect fittings that you connected.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-050-00-01

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(a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-480-217

(5) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. To do this, do this task: Cargo Compartment Sidewall Lining - Installation, AMM TASK 25-52-06-400-801

SUBTASK 34-11-00-080-094

WARNING: FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PLUG OR DEFORM THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF IT IS NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

(6) Remove the Scotch Brand No.471 tape, G02219, from the static ports at these locations:

(a) The FIRST OFFICER static port on the right side of the fuselage.

(b) The FIRST OFFICER static port on the left side of the fuselage.

G. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-175

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

(1) Disconnect the air data test set from the static test adapter, COM-1921.

SUBTASK 34-11-00-480-176

CAUTION: REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(2) Remove the static test adapter, COM-1921, from the FIRST OFFICER static port on the right side of the fuselage.

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SUBTASK 34-11-00-080-058

WARNING: FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PLUG OR DEFORM THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF IT IS NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

(3) Remove the vinyl adhesive Scotch Brand No.471 tape, G02219 from the FIRST OFFICER static port on the left side of the fuselage.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-219

(1) Do this task: Remove External Power, AMM TASK 24-22-00-860-814.

SUBTASK 34-11-00-860-220

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

——— END OF TASK ———

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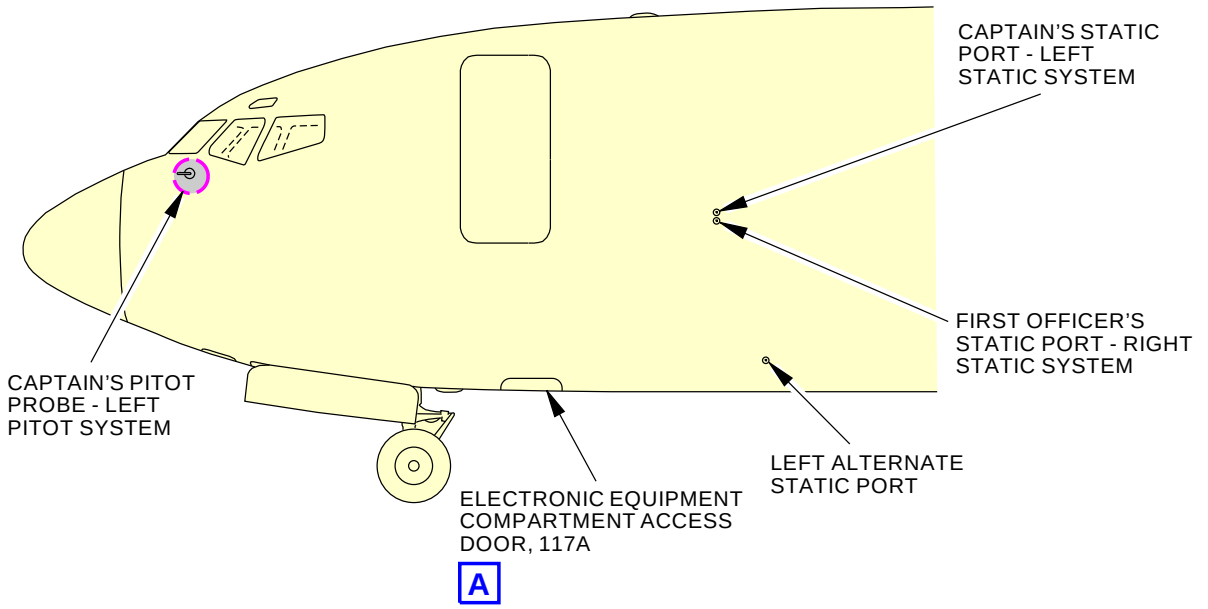
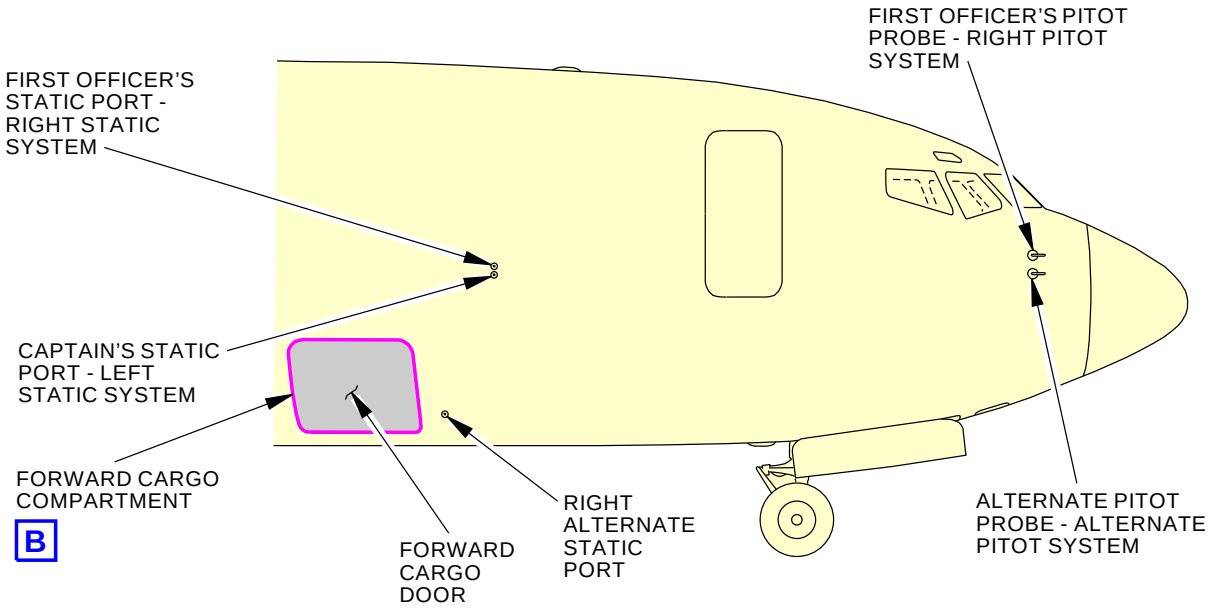
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-050-00-01





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Pitot Static Leakage Test
Figure 1 (Sheet 1 of 2)

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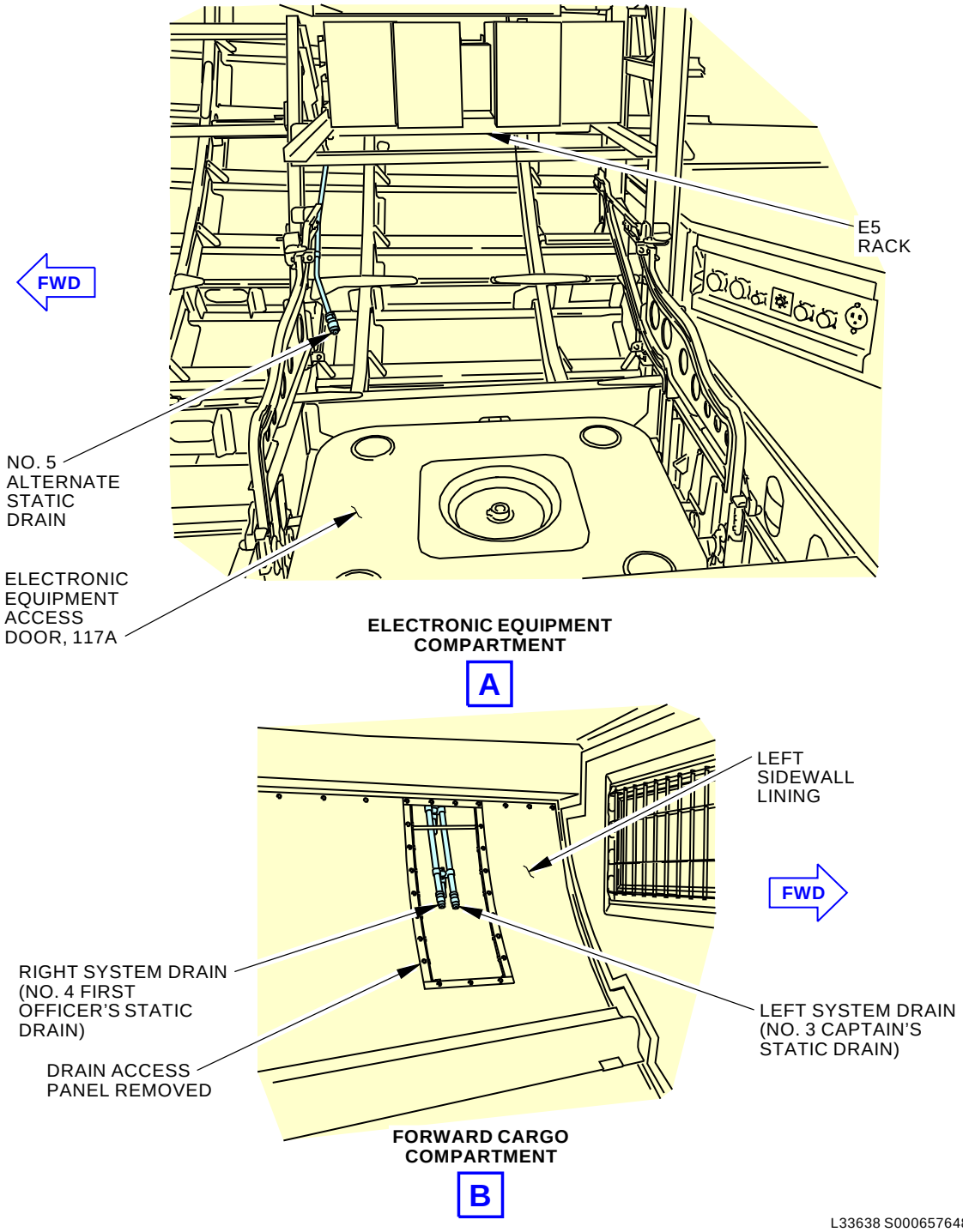
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-050-00-01



Pitot Static Leakage Test
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT STATIC SYSTEM LEAK CHECK			**34-060-00-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AVION**				
		ACCESS			ZONE **113 114 121 122 211 212 221 222**

Functional leak check of standby static system.

A. References

Reference	Title
AMM 24-22-00-860-813	Supply External Power (P/B 201)
AMM 24-22-00-860-814	Remove External Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-13545	Air Data Test Set (non RVSM) used for Leak Checks Part #: 1811HA-463 Supplier: 21844 Part #: 6005KTQA1-103 Supplier: 35012 Part #: MODEL 6150 Supplier: 0RDZ5 Opt Part #: ADC800 Supplier: 41364

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-00-01

(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADTS405F Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43 Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-060-00-01

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TASK 34-11-00-790-808

1. Alternate Static System Low-range Leak Test

(Figure 1)

A. General

(1) You must do the static system low-range leak test when you remove a fitting other than a quick disconnect. You must do the low-range leak test after you flush the pitot-static system.

(2) You can use either the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. Prepare for the Low-range Leak Test

SUBTASK 34-11-00-860-107

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE FALSE TCAS TARGETS. THESE TCAS TARGETS CAN CAUSE AIR TRAFFIC IN THE VICINITY TO EXECUTE UNNECESSARY EVASIVE MANEUVERS.

(1) Make sure that the ATC transponders are in standby mode.

SUBTASK 34-11-00-860-108

(2) Make sure that the Autopilot Flight Director System is off.

SUBTASK 34-11-00-860-109

(3) Make sure that the IRS R and IRS L switches on the IRS Mode Select Unit, located on the P5-69 panel, are in the off position.

SUBTASK 34-11-00-860-111

(4) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

C. Installation of the Drain Coupling, 1QF2-3-64C (Recommended)

SUBTASK 34-11-00-480-118

WARNING: WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(1) Seal the two alternate static ports with vinyl adhesive Scotch Brand No.471 tape, G02219 at these locations:

(a) The ALTERNATE static port on the right side of the fuselage.

(b) The ALTERNATE static port on the left side of the fuselage.

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SUBTASK 34-11-00-480-119

(2) Remove the cap from the No. 5 Alternate Static Drain, in the electronic equipment compartment, below the E-5 rack.

Get access to the drain in the electronic equipment compartment through this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 34-11-00-400-019

(3) Install the coupling, COM-1927, on the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-400-020

(4) Connect the air data model test set, COM-1914 or the Air Data Test Set (non RVSM), COM-13545 to the coupling, COM-1927.

D. Installation of the Static Port Adapter, 33410LH-125-4 (Optional to the Drain Coupling)

SUBTASK 34-11-00-400-004

CAUTION: INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(1) Install the static test adapter, COM-1921, on the ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-400-021

(2) Connect the air data test set to the static test adapter, COM-1921.

SUBTASK 34-11-00-400-022

WARNING: WHEN THE STATIC PORTS ARE COVERED, MAKE SURE THAT CONDITION IS VISIBLE FROM THE GROUND. FAILURE TO OBSERVE AND REMOVE COVERINGS OVER STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(3) Seal the ALTERNATE static port on the right side of the fuselage with Scotch Brand No.471 tape, G02219.

E. Alternate Static System Low-range Leak Test

SUBTASK 34-11-00-790-076

(1) Operate the air data test set to apply a vacuum to the static system equal to 5,000 feet of altitude above field elevation (ambient pressure minus 5.25 ± 0.25 in. Hg).

SUBTASK 34-11-00-790-077

(2) When the system reaches 5,000 feet above field elevation, stop for one minute to allow the system to stabilize.

SUBTASK 34-11-00-790-078

(3) Set the air data test set for the leak check.

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SUBTASK 34-11-00-790-079

(4) Make sure the altitude does not decrease more than 80 feet (0.07 in. Hg) in one minute.

SUBTASK 34-11-00-860-112

(5) Put the system back to ambient pressure.

F. Removal of Drain Coupling, 1QF2-3-64C

SUBTASK 34-11-00-080-096

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE INDICATORS CAN OCCUR.

(1) Disconnect the air data test set from the coupling, COM-1927.

SUBTASK 34-11-00-080-097

(2) Disconnect the coupling, COM-1927, from the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-480-179

(3) Install the cap on the No. 5 Alternate Static Drain.

SUBTASK 34-11-00-210-006

(4) Do a visual inspection of the quick-disconnect fittings that you connected.

(a) Make sure that the actuation ring of the quick-disconnect fitting is fully engaged on the lock pins, and make sure that you see the colored lock ring indicator that shows a correct connection of the quick-disconnect fitting.

SUBTASK 34-11-00-080-098

WARNING: FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PLUG OR DEFORM THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF IT IS NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

(5) Remove the Scotch Brand No.471 tape, G02219, from the ALTERNATE static ports at these locations:

(a) The ALTERNATE static port on the right side of the fuselage.

(b) The ALTERNATE static port on the left side of the fuselage.

G. Removal of Static Port Adapter, 33410LH-125-4

SUBTASK 34-11-00-480-181

CAUTION: MAKE SURE THE PITOT-STATIC SYSTEM IS AT AMBIENT PRESSURE BEFORE YOU DISCONNECT THE TEST SET. IF THE PITOT-STATIC SYSTEM IS NOT AT AMBIENT PRESSURE, DAMAGE TO THE AIR DATA MODULES CAN OCCUR.

(1) Disconnect the air data test set from the static test adapter, COM-1921.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-060-00-01

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SUBTASK 34-11-00-480-182

CAUTION: REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(2) Remove the static test adapter, COM-1921, from the ALTERNATE static port on the left side of the fuselage.

SUBTASK 34-11-00-080-063

WARNING: FAILURE TO REMOVE THE VINYL ADHESIVE TAPE FROM THE STATIC PORTS BEFORE FLIGHT MAY CAUSE LARGE ERRORS IN AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS, WHICH MAY LEAD TO LOSS OF SAFE FLIGHT.

CAUTION: DO NOT PLUG OR DEFORM THE HOLES IN THE PORT. MAKE SURE THAT YOU REMOVE ALL OF THE PIECES OF TAPE FROM THE STATIC PORTS. THE SURFACE OF THE PORT MUST BE SMOOTH AND CLEAN. IF IT IS NOT, THE SYSTEM WILL NOT OPERATE CORRECTLY.

(3) Remove the vinyl adhesive Scotch Brand No.471 tape, G02219 from the ALTERNATE static port on the right side of the fuselage.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-221

(1) Do this task: Remove External Power, AMM TASK 24-22-00-860-814.

——— END OF TASK ———

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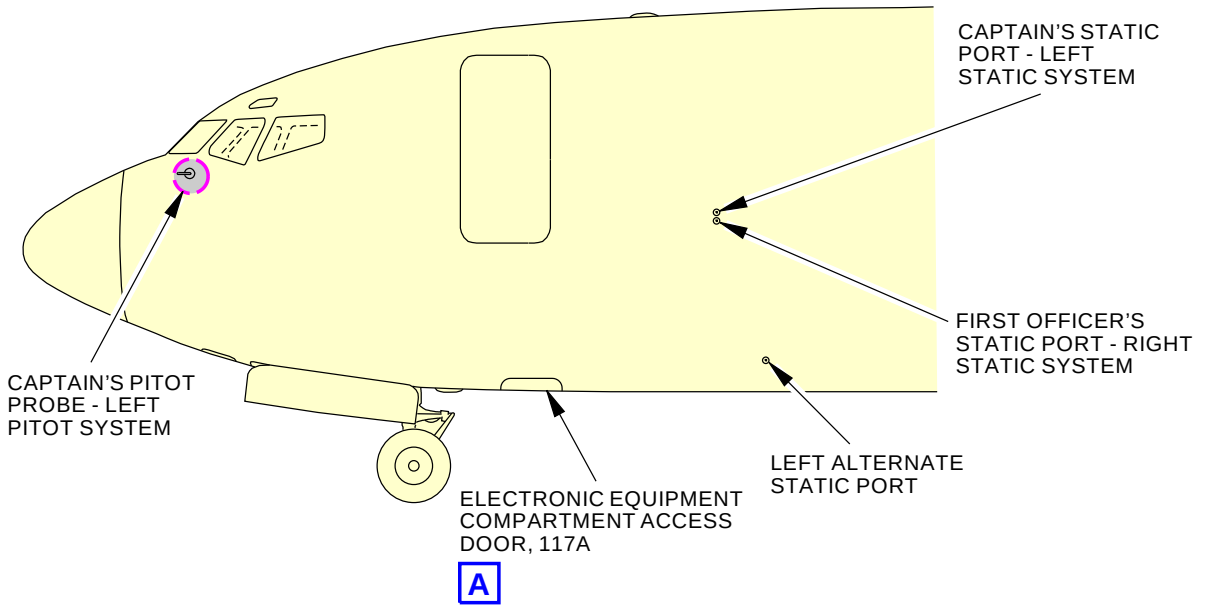
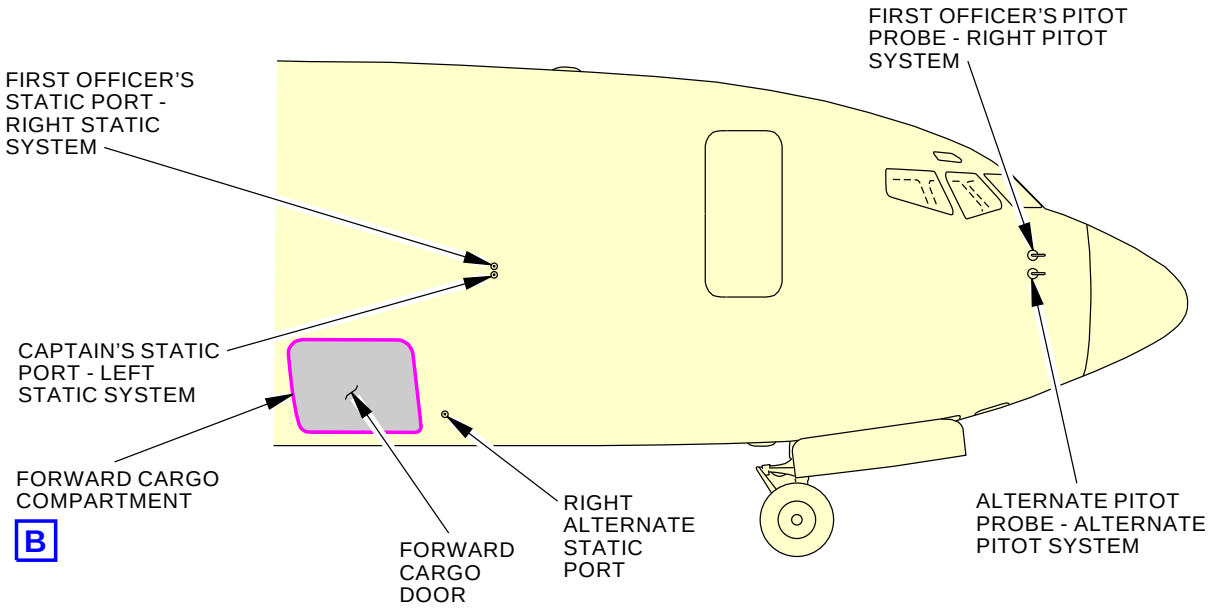
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-00-01





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Pitot Static Leakage Test
Figure 1 (Sheet 1 of 2)

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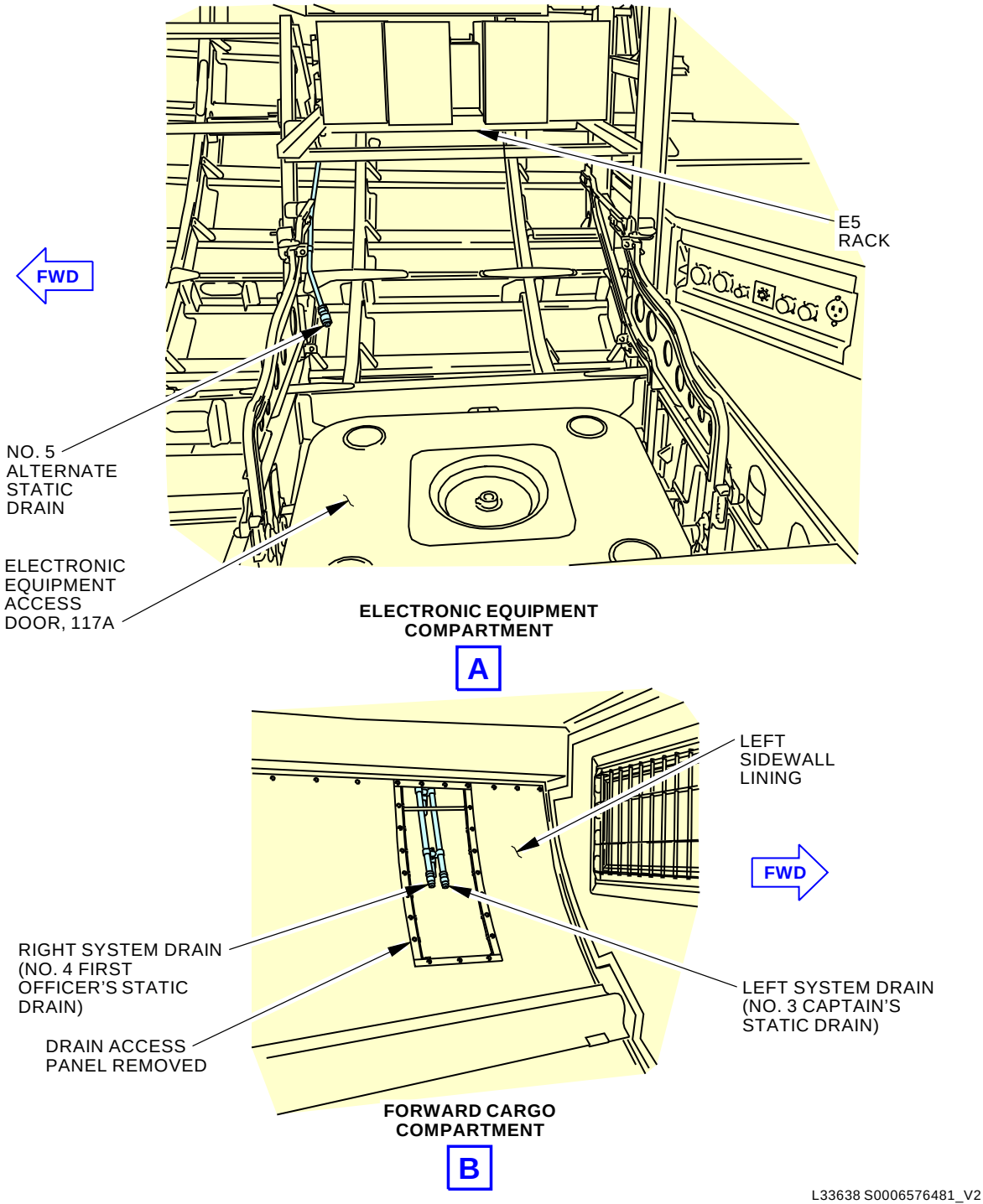
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-00-01



Pitot Static Leakage Test
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		AIR DATA SYSTEM - ALTIMETRY SYSTEM			**34-060-10-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **CREW CABIN**	VERSION **1.1**	THRESHOLD **72 MO**	REPEAT **72 MO**	APPLICABILITY AIRPLANE: **ALL** ENGINE: **ALL**
STATION	SKILL **AIRPL**				
		ACCESS			ZONE **112 117 118 121 122 211 212**

Functional check of the air data system altimetry system.

A. References

Reference	Title
AMM 24-22-00-860-813	Supply External Power (P/B 201)
AMM 24-22-00-860-814	Remove External Power (P/B 201)
AMM 25-52-06 P/B 401	CARGO COMPARTMENT SIDEWALL LININGS - REMOVAL/INSTALLATION
AMM 34-21-04 P/B 401	AIR DATA MODULE - REMOVAL/INSTALLATION

B. Consumable Materials

Reference	Description	Specification
G02219	Tape - Yellow Vinyl Adhesive, Scotch Brand No.471, 1.5 Inches (38.1 mm) Wide	

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1562	Analyzer - Data Bus, ARINC 429 Part #: 01-1001-05 Supplier: 0Z3C6 Part #: 01-1001-12 Supplier: 0Z3C6 Part #: 403557 Supplier: $1272 Part #: 800-0630 Supplier: 1JSZ6 Part #: DT400H Supplier: 0Z3C6 Part #: TYPE 030/026 Supplier: $0494 Part #: UA1410 Supplier: 0H231 Opt Part #: 01-1001-10 Supplier: 0Z3C6 Opt Part #: 01-1404-00 Supplier: 41364 Opt Part #: 429EBP Supplier: 41364 Opt Part #: 429EX Supplier: 41364 Opt Part #: 702125-01 Supplier: $1272 Opt Part #: MODEL 429HBA Supplier: 5J927

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01

(Continued)

Reference	Description
COM-1914	Test Set - Air Data Model FLMTS (Flight Line Maintenance) Part #: 18910920000 Supplier: 89944 Part #: ADTS405F Supplier: U0427 Part #: ADTS530 Supplier: U0427 Part #: ADTS552F Supplier: U0427 Part #: D60340MK Supplier: K1474 Part #: DPS1000 Supplier: 21844 Part #: DPS350 Supplier: 21844 Part #: DPS450 Supplier: 21844 Part #: MODEL 6300 Supplier: 0RDZ5 Part #: MPS34C Supplier: 48RQ2 Part #: MPS43 Supplier: A0197 Part #: MPS45 Supplier: 48RQ2 Part #: MPS49 Supplier: 48RQ2 Part #: TES9463 Supplier: 88277 Opt Part #: 01-0987-00 Supplier: 41364 Opt Part #: 18910480000 Supplier: 89944 Opt Part #: ADTS505 Supplier: U0427 Opt Part #: D60302 Supplier: K1474 Opt Part #: D60340 Supplier: K1474 Opt Part #: D60383 Supplier: K1474 Opt Part #: DPS500 Supplier: 21844 Opt Part #: MPS31C Supplier: 48RQ2
COM-1916	Adapter - Pitot Test (Typically included in Air Data Accessory Kit, PN ADA737-678) Part #: CSA75700HT-3 Supplier: 3BSK6 Part #: P75701M2-3 Supplier: 38002
COM-1921	Adapter - Static Test Part #: 33410LH-125-4 Supplier: 38002 Part #: CSTL19725-4 Supplier: 3BSK6
COM-1926	Coupling - Quick Disconnect, Pitot System Drain Line Part #: 1QF2-2-64A Supplier: 24984
COM-1927	Coupling - Quick Disconnect, Static System Drain Fitting Part #: 1QF2-3-64C Supplier: 24984
SPL-3896	Box - Breakout, Multipurpose, 100/124 pin Part #: C22005-22 Supplier: 81205 Opt Part #: C22005-1 Supplier: 81205

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-060-10-01

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TASK 34-11-00-780-802

1. Altimetry System Test

(Figure 1)

A. General

(1) This task gives instructions to test the altimetry system for correct operation.

(2) You can use the drain coupling or the static port adapter to pressurize the static system. The drain coupling is recommended, but the static port adapter can be used if the drain coupling is not available.

B. Prepare for the System Test

SUBTASK 34-11-00-860-223

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-860-222

CAUTION: MAKE SURE YOU DO NOT SUPPLY ELECTRICAL POWER TO THE PITOT PROBE HEATER. IF YOU DO, YOU CAN DAMAGE THE PITOT PROBE.

(2) Do this task: Supply External Power, AMM TASK 24-22-00-860-813.

SUBTASK 34-11-00-860-225

(3) Follow these maintenance practices for the altimetry system test:

(a) Do not connect or disconnect the test equipment while you have pressure in the pitot-static system.

(b) Make sure that the test equipment, pitot system and static systems are clean and free of contamination.

(c) Make sure that there are no leaks in the test equipment.

(d) Make sure that the difference between the static pressure and pitot pressure line is not larger than 10.9 inches Hg.

(e) Keep the static pressure in the range of 3.26 to 33.31 inches Hg.

(f) Keep the static system pressure less or equal to the absolute pressure applied to the pitot system.

(g) Keep the absolute pressure applied to the static system less or equal to ambient pressure.

(h) Install flow restrictors between the cutoff valve and pitot and static systems.

(i) During adjustment of static pressure, make sure that the rate of change of altitude is less than 5,000 feet per minute.

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(j) Make sure that the Autopilot Flight Director System is OFF during the test.

(k) Supply electrical power to the Air Data Inertial Reference Unit (ADIRS) before you make the Static or Total pressure connection.

C. Captain (CAPT) Altimetry System Test Set Installation

SUBTASK 34-11-00-860-226

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(1) Set the ATC mode switch on the P8-29 ATC control panel, to STANDBY.

SUBTASK 34-11-00-480-247

CAUTION: SUPPORT THE TEST HOSES AND THE ADAPTER SO THEY ADD NO WEIGHT ON THE PITOT PROBES. FAILURE TO DO SO COULD CAUSE THE PITOT PROBES TO NOT BE ALIGNED AND TO BE DAMAGED.

(2) Connect the air data test set to the CAPT pitot and static systems with one test setup from these options:

Option 1: Static Adapter Test Setup

Test Setup		
Figure	Description	More Data
Figure 1 (Sheet 1)	Supply pitot and static pressure from air data test set to Left Pitot and Left Static Air Data Module (ADM)	
Figure 1 (Sheet 2)	Supply static pressure from air data test set to Left Pitot and Left Static ADM	
Figure 1 (Sheet 9)	Supply Pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
Figure 1 (Sheet 10)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

(a) Install the pitot test adapter, COM-1916 on the CAPT pitot probe.

CAUTION: INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(b) Install the static test adapter, COM-1921 on the CAPT static port.

(c) Connect the air data model test set, COM-1914 to the pitot test adapter, COM-1916 and static test adapter, COM-1921.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01

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WARNING: WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(d) Seal the remaining CAPT static ports with Scotch Brand No.471 tape, G02219.

Option 2: System Drain Test Setup

Test Setup		
Figure	Description	More Data
Figure 1 (Sheet 3)	Supply pitot and static pressure from air data test set to Left Pitot and Left Static ADM through system drain fittings	
Figure 1 (Sheet 4)	Supply static pressure from air data test set to Left Pitot and Left Static ADM through system drain fittings	
Figure 1 (Sheet 11)	Supply pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
Figure 1 (Sheet 12)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

(e) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. Refer to CARGO COMPARTMENT SIDEWALL LININGS - REMOVAL/INSTALLATION, AMM 25-52-06/401.

(f) Remove the caps on the CAPT pitot and static system drain fittings.

(g) Install the quick-disconnect coupling, COM-1926, on the CAPT pitot system drain fitting.

(h) Install the quick-disconnect coupling, COM-1927, on the CAPT static system drain fitting.

(i) Install the pitot test adapter, COM-1916 on the CAPT pitot probe.

(j) Install caps on the pitot test adapter, COM-1916.

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WARNING: WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(k) Seal the remaining CAPT static ports with, Scotch Brand No.471 tape, G02219.

(l) Connect the air data model test set, COM-1914 to the quick-disconnect couplings, coupling, COM-1926 and coupling, COM-1927.

D. First Officer (F/O) Altimetry System Test Set Installation

SUBTASK 34-11-00-860-227

WARNING: MAKE SURE THAT THE ATC TRANSPONDERS ARE IN THE STANDBY MODE WHEN YOU SIMULATE ALTITUDE. YOU CAN ACCIDENTALLY CAUSE TCAS TARGETS. AIR TRAFFIC IN THE AREA WILL CHANGE DIRECTION QUICKLY TO GO AWAY FROM THESE TARGETS. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(1) Set the ATC mode switch on the P8-29 ATC control panel, to STANDBY.

SUBTASK 34-11-00-780-008

CAUTION: SUPPORT THE TEST HOSES AND THE ADAPTER SO THEY ADD NO WEIGHT ON THE PITOT PROBES. FAILURE TO DO SO COULD CAUSE THE PITOT PROBES TO NOT BE ALIGNED AND TO BE DAMAGED.

(2) Connect the air data model test set, COM-1914 to the F/O pitot and static systems with one test setup from these options:

Option 3: Static Adapter Test Setup

Test Setup		
Figure	Description	More Data
Figure 1 (Sheet 5)	Supply pitot and static pressure from air data test set to Right Pitot and Right Static Air Data Module (ADM)	
Figure 1 (Sheet 6)	Supply static pressure from air data test set to Right Pitot and Right Static ADM	
Figure 1 (Sheet 9)	Supply Pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
Figure 1 (Sheet 10)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

(a) Install the pitot test adapter, COM-1916 on the F/O pitot probe.

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CAUTION: INSTALL THE STATIC PORT ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

(b) Install the static test adapter, COM-1921pitot test adapter, COM-1916 on the F/O static port.

(c) Connect the air data model test set, COM-1914 to the static test adapter, COM-1921pitot test adapter, COM-1916.

WARNING: WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(d) Seal the remaining F/O static ports with, Scotch Brand No.471 tape, G02219.

Option 4: System Drain Test Setup

Test Setup		
Figure	Description	More Data
Figure 1 (Sheet 7)	Supply pitot and static pressure from air data test set to Right Pitot and Right Static ADM through system drain fittings	
Figure 1 (Sheet 8)	Supply static pressure from air data test set to Right Pitot and Right Static ADM through system drain fittings	
Figure 1 (Sheet 11)	Supply pitot and static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
Figure 1 (Sheet 12)	Supply static pressure from air data test set to Left Pitot, Right Pitot, Left Static, and Right Static ADM through system drain fittings	(a)
(a) CAPT altimetry system test and F/O altimetry system test can be run at the same time when this setup is used.		

(e) Open the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. Refer to CARGO COMPARTMENT SIDEWALL LININGS - REMOVAL/INSTALLATION, AMM 25-52-06/401.

(f) Remove the caps on the F/O pitot and static system drain fittings.

(g) Install the quick-disconnect coupling, COM-1926 on the F/O Pitot System Drain Fitting.

(h) Install the quick-disconnect coupling, COM-1927on the F/O Static System Drain Fitting.

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(i) Install the pitot test adapter, COM-1916 on the F/O pitot probe.

(j) Install caps on the pitot test adapter, COM-1916.

WARNING: WHEN THE STATIC PORTS HAVE COVERS ON THEM, MAKE SURE THAT A PERSON ON THE GROUND CAN SEE THE COVERS. ALSO MAKE SURE YOU ATTACH A TAG TO THE LEFT CONTROL WHEEL IN THE FLIGHT COMPARTMENT AS A REMINDER THAT THE STATIC PORTS HAVE COVERS ON THEM. IF THE COVERS ARE NOT REMOVED FROM THE STATIC PORTS, INCORRECT AIRSPEED-SENSING AND ALTITUDE-SENSING SIGNALS CAN OCCUR. THIS CAN CAUSE DANGEROUS FLIGHT CONDITIONS.

CAUTION: DO NOT PUSH THE TAPE INTO THE STATIC PORTS. YOU CAN CAUSE DAMAGE TO THE STATIC SYSTEM IF YOU PUSH TAPE INTO THE STATIC PORT.

(k) Seal the remaining F/O static ports with, Scotch Brand No.471 tape, G02219.

(l) Connect the air data model test set, COM-1914 to the quick-disconnect couplings, coupling, COM-1926 and coupling, COM-1927.

E. Captain (CAPT) Altimetry System Test

SUBTASK 34-11-00-780-006

(1) Do the CAPT altimetry System Test as follows:

(a) Rockwell Collins FCC:

1) Connect the ARINC 429 Bus analyzer, COM-1562 to the Flight Control Computer (FCC), left test connector J3, to pin 51 (Hi) and pin 52 (Lo).

NOTE: Set equipment ID 038 on the ARINC 429 Bus Analyzer for the instrument to show the correct engineering units.

NOTE: A box, SPL-3896 can be used to connect the data bus analyzer and the Flight Control Computer (FCC).

SUBTASK 34-11-00-780-007

CAUTION: PITOT PRESSURE MUST ALWAYS BE EQUAL OR LARGER THAN THE STATIC PRESSURE APPLIED TO THE SYSTEM. DIFFERENCE BETWEEN THESE TWO PRESSURES (DIFFERENTIAL PRESSURE) MUST NOT BE MORE THAN 10.00 INCHES OF MERCURY. DIFFERENTIAL PRESSURE MUST NOT FALL BELOW ZERO. IF THESE REQUIREMENTS ARE NOT FOLLOWED, DAMAGE TO EQUIPMENT COULD OCCUR.

(2) Apply Static pressure with the air data model test set, COM-1914 for each test point and record test results with one of these:

Table of Test Input and Tolerance Requirements

Figure	Description
Figure 1 (Sheet 13)	Measurement Unit: inches of Mercury (inHg)
Figure 1 (Sheet 14)	Measurement Unit: millibars (mb)

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SUBTASK 34-11-00-960-003

(3) For the CAPT altimetry system test failure do this:

(a) Remove and replace the ADM. Do this task: AIR DATA MODULE - REMOVAL/INSTALLATION, AMM 34-21-04/401

(b) Do the CAPT altimetry system test.

F. First Officers (F/O) Altimetry System Test

SUBTASK 34-11-00-480-248

(1) Do the F/O altimetry System Test as follows:

(a) Rockwell Collins FCC:

1) Connect the ARINC 429 Bus analyzer, COM-1562 to the Flight Control Computer (FCC), left test connector J3, to pin 51 (Hi) and pin 52 (Lo).

NOTE: Set equipment ID 038 on the ARINC 429 Bus Analyzer for the instrument to show the correct engineering units.

NOTE: A box, SPL-3896 can be used to connect the data bus analyzer and the Flight Control Computer (FCC).

SUBTASK 34-11-00-780-009

CAUTION: PITOT PRESSURE MUST ALWAYS BE EQUAL OR LARGER THAN THE STATIC PRESSURE APPLIED TO THE SYSTEM. DIFFERENCE BETWEEN THESE TWO PRESSURES (DIFFERENTIAL PRESSURE) MUST NOT BE MORE THAN 10.00 INCHES OF MERCURY. DIFFERENTIAL PRESSURE MUST NOT FALL BELOW ZERO. IF THESE REQUIREMENTS ARE NOT FOLLOWED, DAMAGE TO EQUIPMENT COULD OCCUR.

(2) Apply Static pressure with the air data model test set, COM-1914 for each test point and record test results with one of these:

Table of Test Input and Tolerance Requirements

Figure	Description
Figure 1 (Sheet 15)	Measurement Unit: inches of Mercury (inHg)
Figure 1 (Sheet 16)	Measurement Unit: millibars (mb)

SUBTASK 34-11-00-960-004

(3) For the F/O altimetry system test failure do this:

(a) Remove and replace the ADM. Do this task: AIR DATA MODULE - REMOVAL/INSTALLATION, AMM 34-21-04/401.

(b) Do the F/O altimetry system test.

G. Captain (CAPT) Altimetry System Test Set Removal

SUBTASK 34-11-00-080-126

(1) Return CAPT pitot and static systems to ambient pressure state and remove air data model test set, COM-1914 set as follows:

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CAUTION: RELEASE THE PRESSURE OR THE VACUUM CONTINUOUSLY AND AT THE SAME TIME FOR THE PITOT AND STATIC SYSTEMS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

(a) Release the pressure or vacuum on the CAPT pitot and static systems to ambient pressure with the air data model test set, COM-1914.

(b) Remove the ARINC 429 Data Bus analyzer, COM-1562.

(c) Disconnect the air data model test set, COM-1914 from the CAPT pitot and static systems as follows:

1) Option 1, static adapter test setup:

a) Disconnect the air data model test set, COM-1914 from the static test adapter, COM-1921 and pitot test adapter, COM-1916.

b) Remove pitot test adapter, COM-1916 from the CAPT pitot probe.

CAUTION: REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

c) Remove the static test adapter, COM-1921 from the CAPT static port.

WARNING: ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

d) Remove the Scotch Brand No.471 tape, G02219, from the remaining CAPT static ports.

2) Option 2, system drain test setup:

a) Disconnect the air data model test set, COM-1914 from the coupling, COM-1926 and coupling, COM-1927.

WARNING: ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

b) Remove Scotch Brand No.471 tape, G02219, from the remaining CAPT static ports.

c) Remove the pitot test adapter, COM-1916 on the CAPT pitot probe.

d) Remove the quick-disconnect coupling, COM-1926 and the coupling, COM-1927 from the drain fittings.

e) Install caps on the CAPT pitot and static system drain fittings.

f) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. Refer to CARGO COMPARTMENT SIDEWALL LININGS - REMOVAL/INSTALLATION, AMM 25-52-06/401.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-060-10-01

MECH	INSP

g) Do a general visual inspection (GVI) of the CAPT pitot and static system drain fittings.

<1> Make sure that the actuation ring is fully engaged on the lock pins.

<2> Make sure that the color lock ring indicator shows that the system drain fitting is connected correctly.

H. First Officer (F/O) Altimetry System Test Set Removal

SUBTASK 34-11-00-080-127

(1) Return F/O pitot and static systems to ambient pressure state and remove air data model test set, COM-1914 as follows:

CAUTION: RELEASE THE PRESSURE OR THE VACUUM CONTINUOUSLY AND AT THE SAME TIME FOR THE PITOT AND STATIC SYSTEMS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

(a) Release the pressure or vacuum on the F/O pitot and static systems to ambient pressure using the air data model test set, COM-1914.

(b) Remove the ARINC 429 Data Bus analyzer, COM-1562.

(c) Disconnect the air data model test set, COM-1914 from the F/O pitot and static systems as follows:

1) Option 3, static adapter test setup:

a) Disconnect the air data model test set, COM-1914 from the static test adapter, COM-1921 and pitot test adapter, COM-1916.

b) Remove pitot test adapters from the F/O pitot probe.

CAUTION: REMOVE THE ADAPTER SLOWLY AND CAREFULLY. THE ADAPTER CAN CAUSE SCRATCHES ON THE STATIC PORT, WHICH CAN CAUSE FALSE ALTITUDE READINGS.

c) Remove static test adapter from the F/O static port.

WARNING: ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

d) Remove Scotch Brand No.471 tape, G02219, from the remaining F/O static ports.

2) Option 4, system drain test setup:

a) Disconnect the air data model test set, COM-1914 from the coupling, COM-1926 and coupling, COM-1927.

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WARNING: ENSURE THAT ALL TAPE AND TAPE RESIDUE IS REMOVED FROM THE PITOT AND STATIC PORTS. FAILURE TO REMOVE THIS MAY CAUSE INCORRECT INFORMATION TO THE FLIGHT CREW AND SYSTEM PLACING THE AIRCRAFT AT RISK.

b) Remove the Scotch Brand No.471 tape, G02219, from the remaining F/O static ports.

c) Remove the pitot test adapter, COM-1916 on the F/O pitot probe.

d) Remove the quick-disconnect coupling, COM-1926 and the coupling, COM-1927 from the drain fittings.

e) Install caps on the F/O pitot and static system drain fittings.

f) Close the primary static system drain access panel, on the left sidewall lining, in the forward cargo compartment. Refer to CARGO COMPARTMENT SIDEWALL LININGS - REMOVAL/INSTALLATION, AMM 25-52-06/401.

g) Do a general visual inspection (GVI) of the F/O pitot and static system drain fittings.

<1> Make sure that the actuation ring of the drain fitting is fully engaged on the lock pins.

<2> Make sure the color lock ring indicator shows that the system drain fitting is connected correctly.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 34-11-00-860-228

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	6	C00566	FLIGHT CONTROL FLAP LOAD RELIEF

SUBTASK 34-11-00-860-236

(2) If electrical power is not necessary, do this: Remove External Power, AMM TASK 24-22-00-860-814.

——— END OF TASK ———

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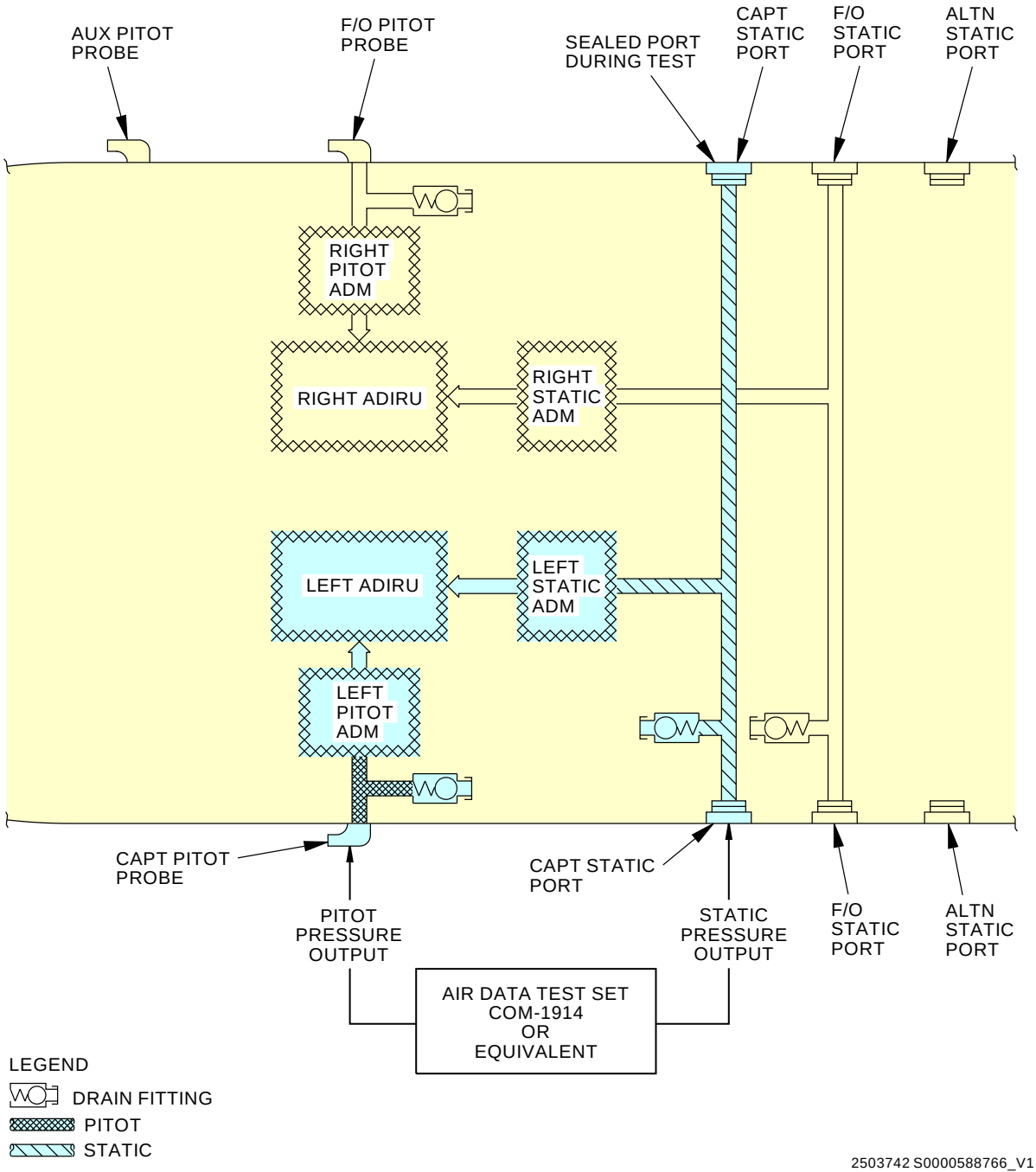
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



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AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 1 of 17)

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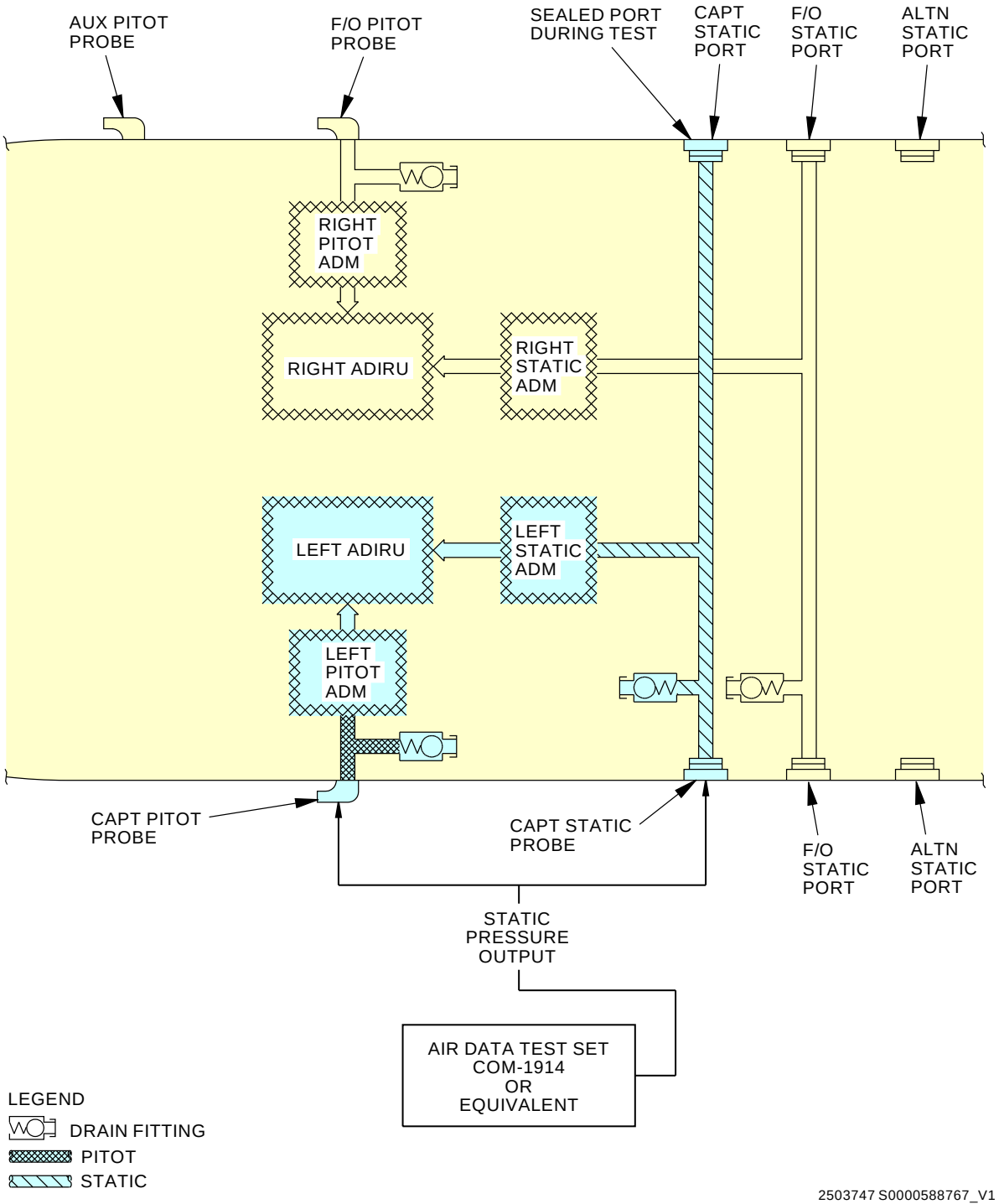
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



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AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 2 of 17)

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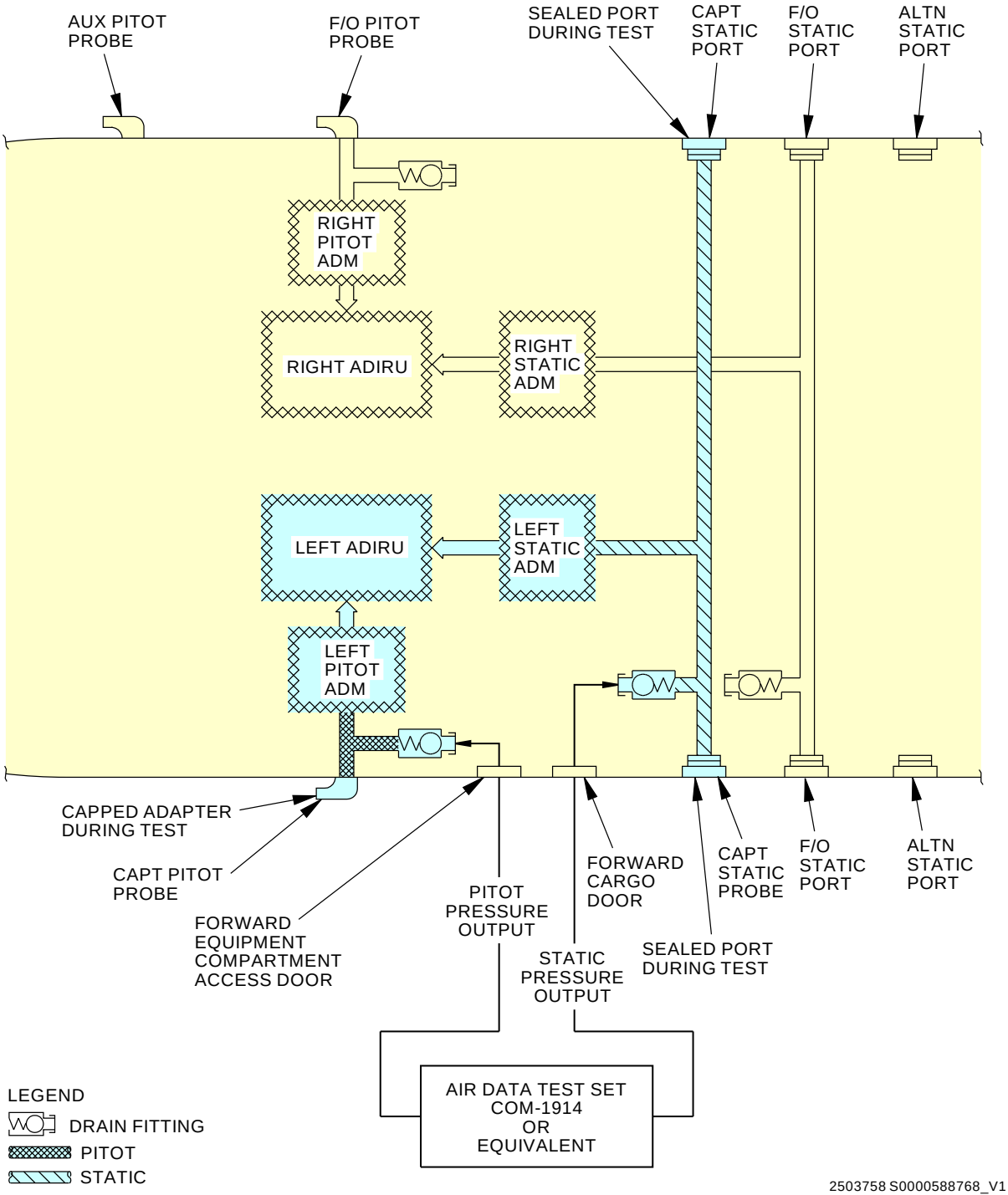
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 3 of 17)

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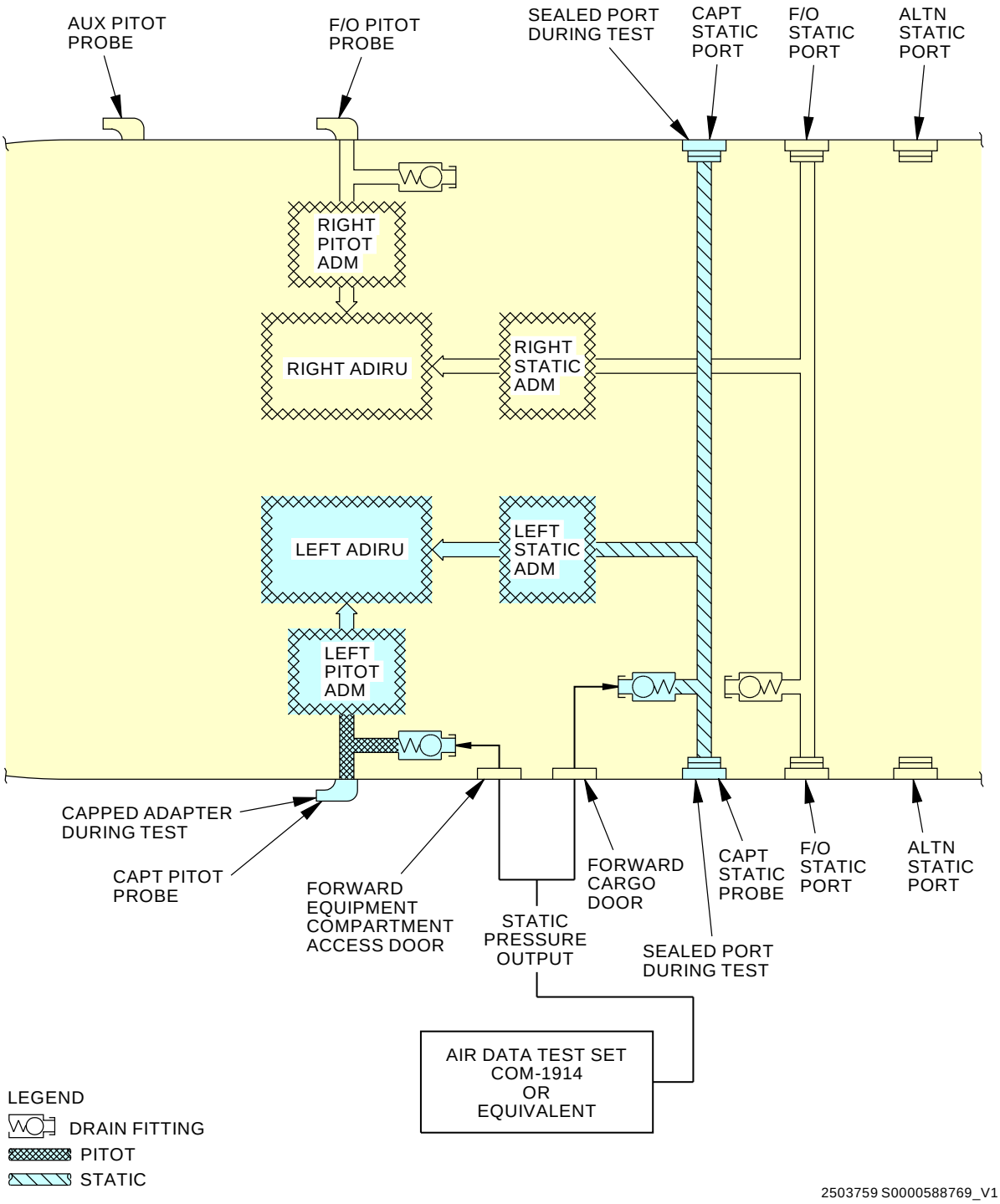
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 4 of 17)

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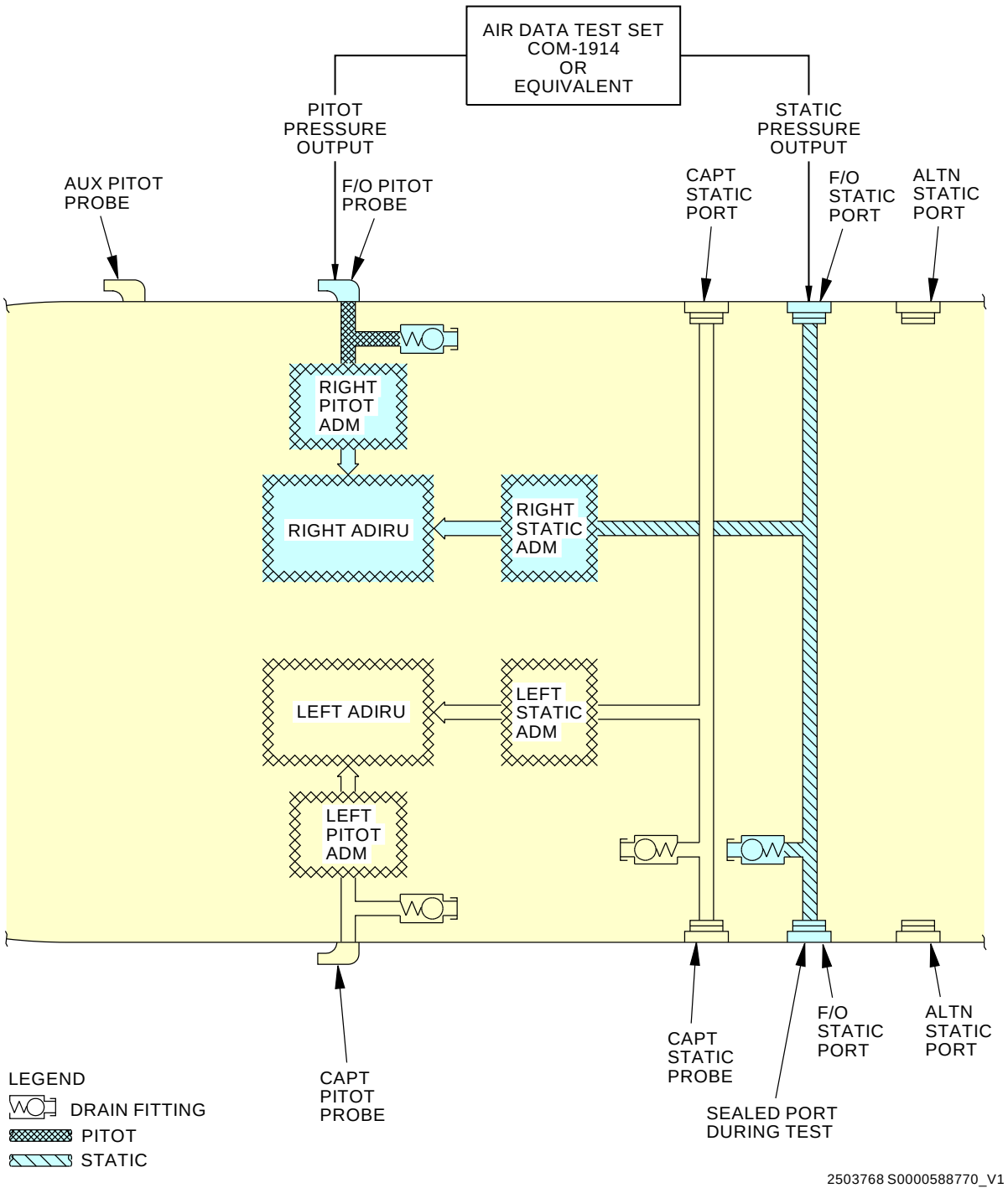
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



2503768 S0000588770_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 5 of 17)

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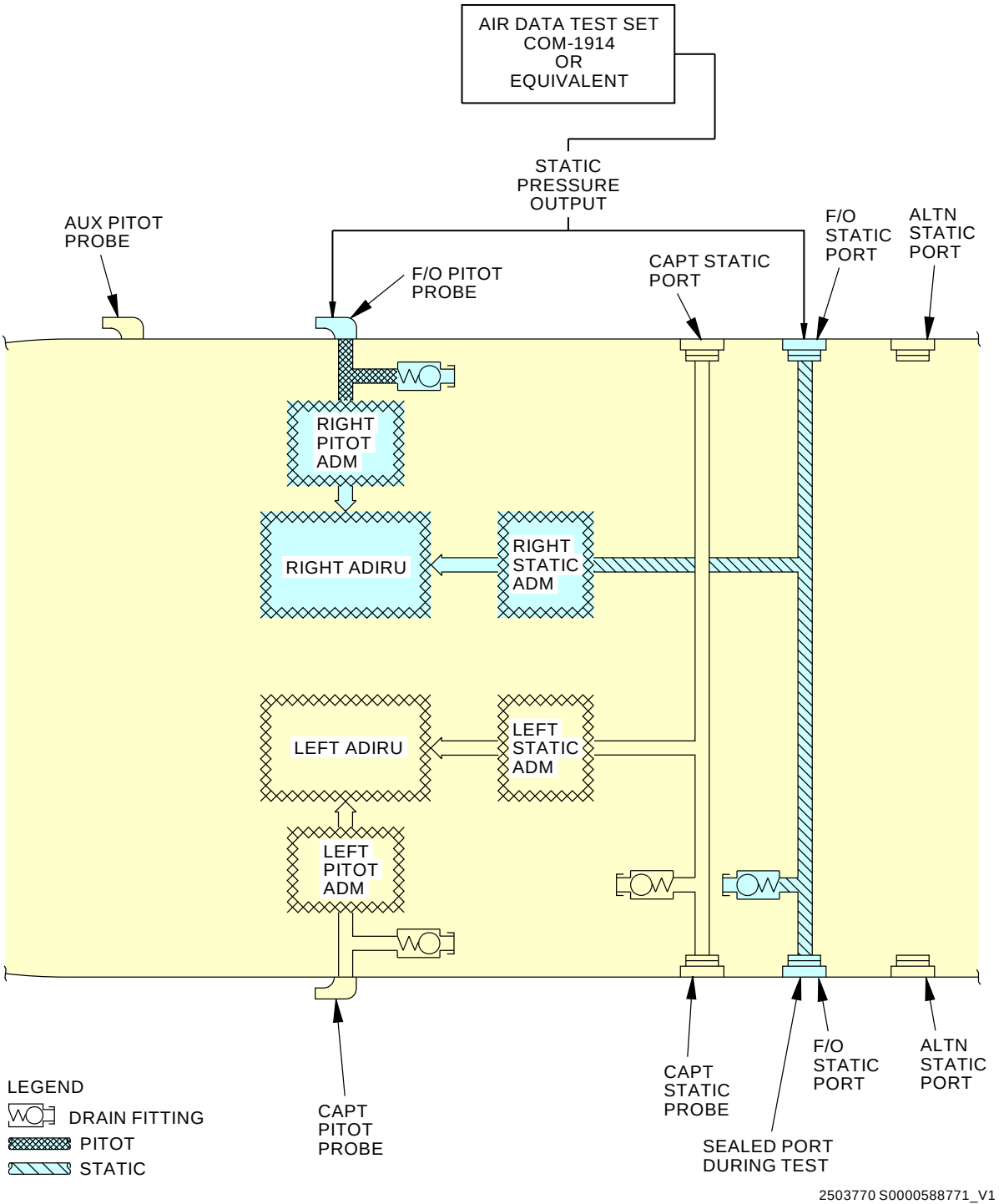
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 6 of 17)

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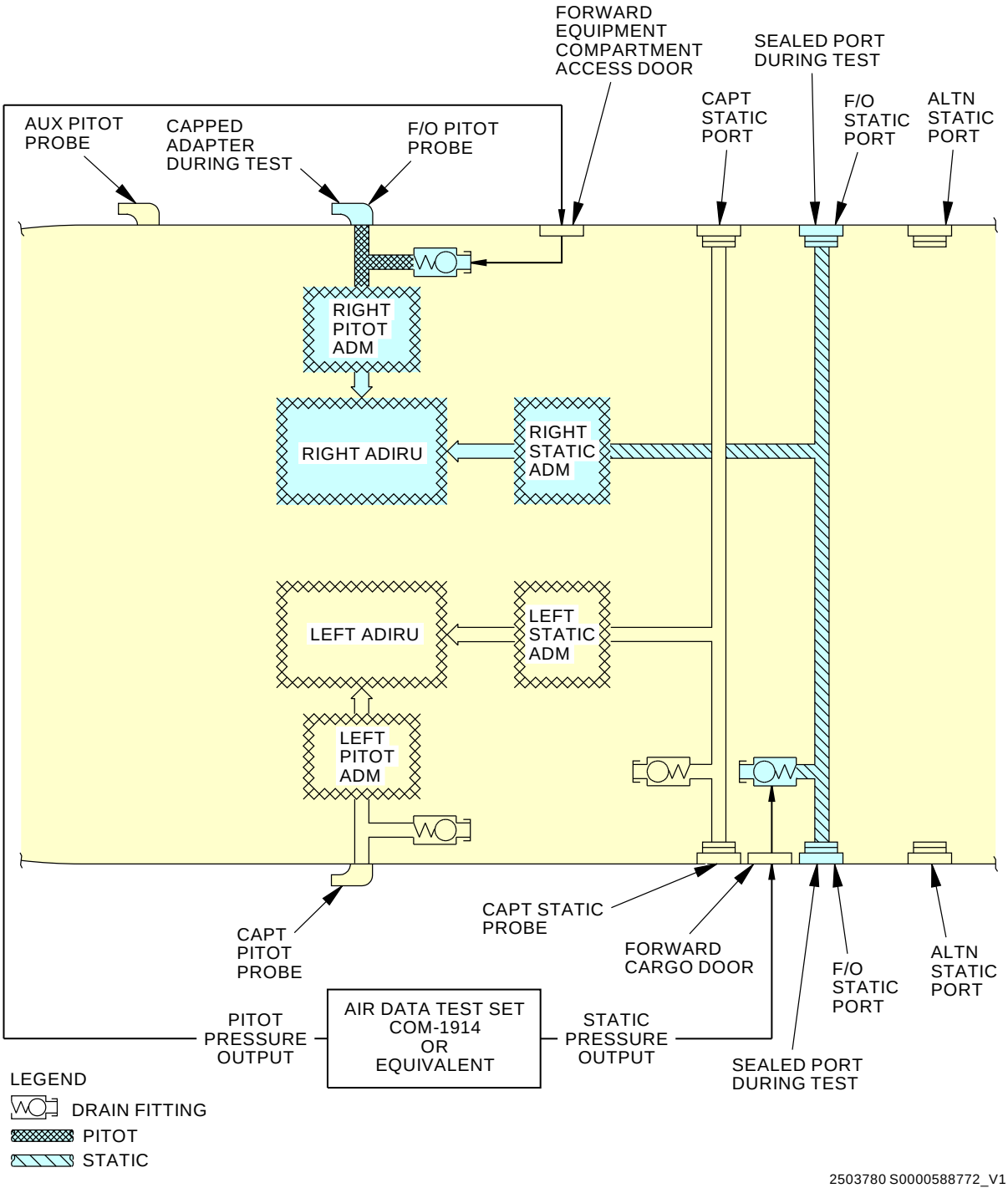
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



2503780 S0000588772_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 7 of 17)

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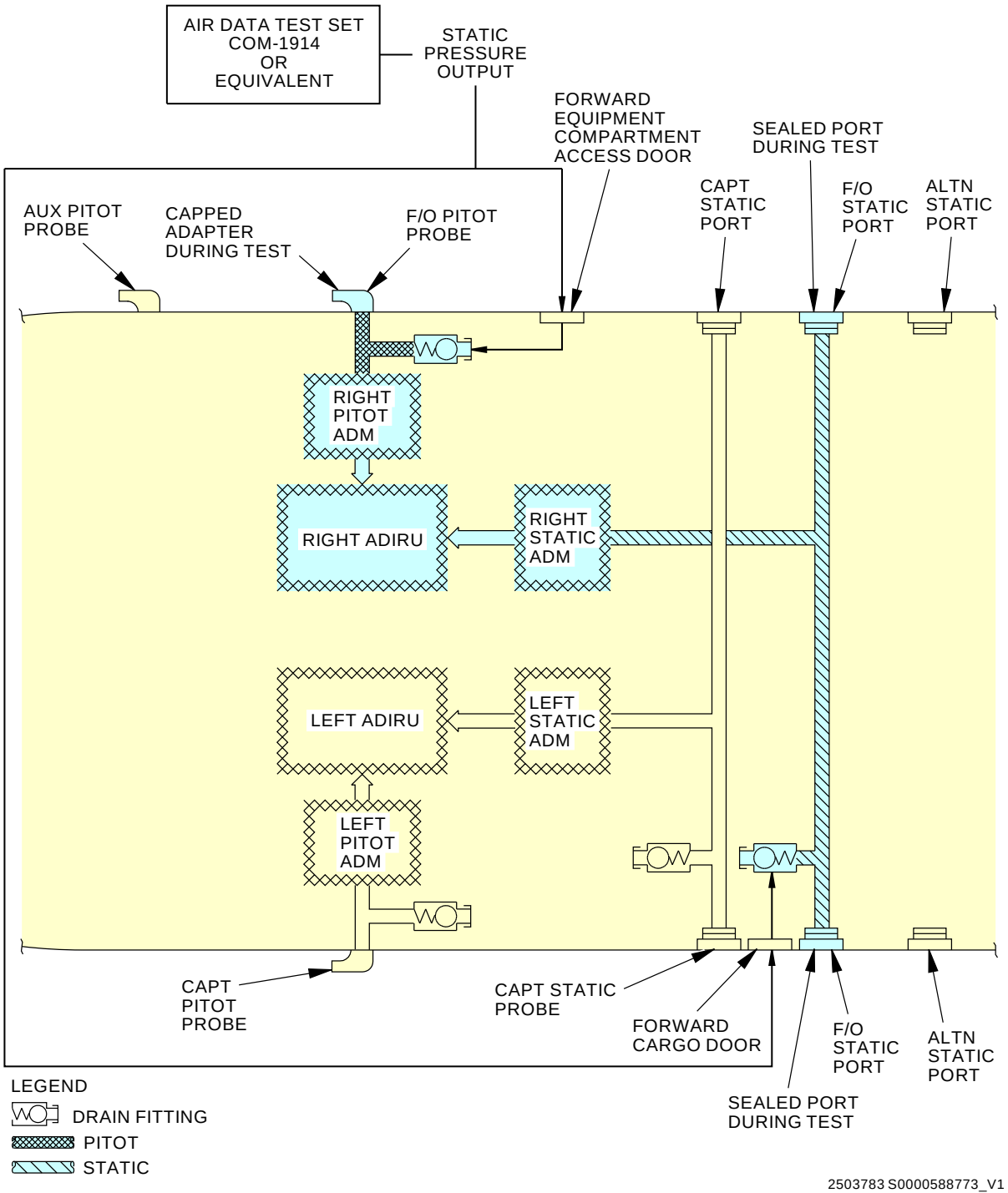
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



2503783 S0000588773_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 8 of 17)

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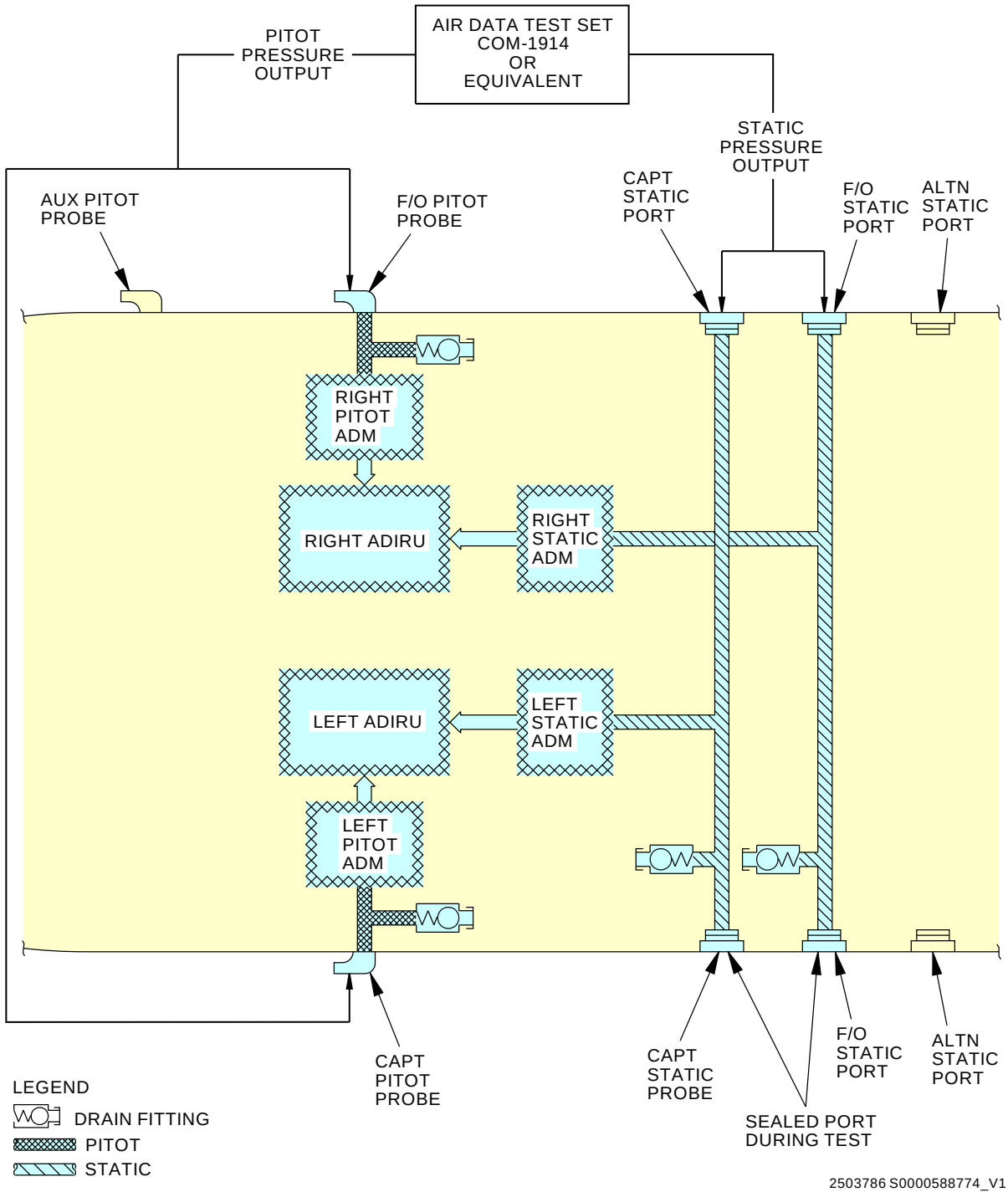
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



2503786 S0000588774_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 9 of 17)

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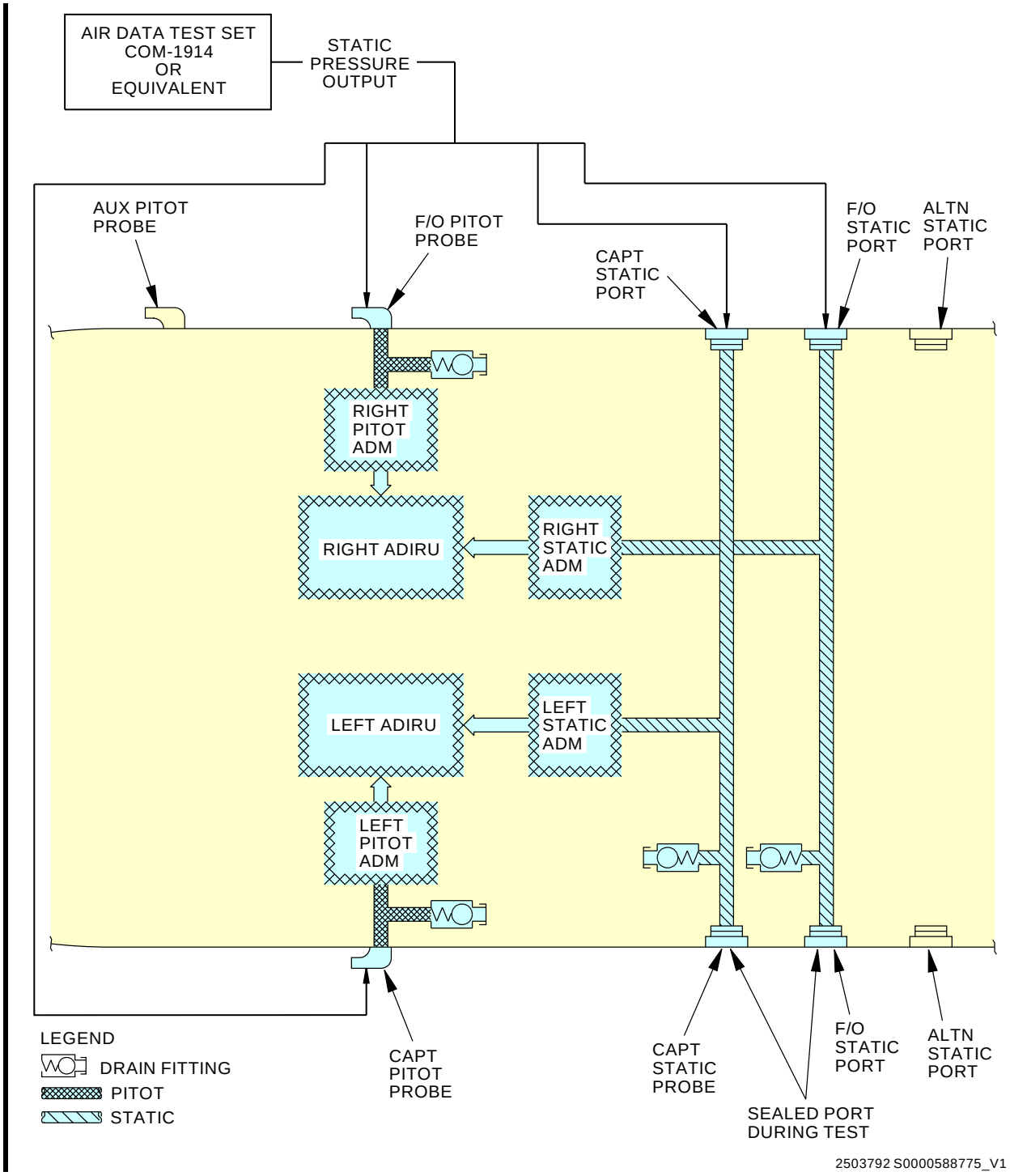
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 10 of 17)

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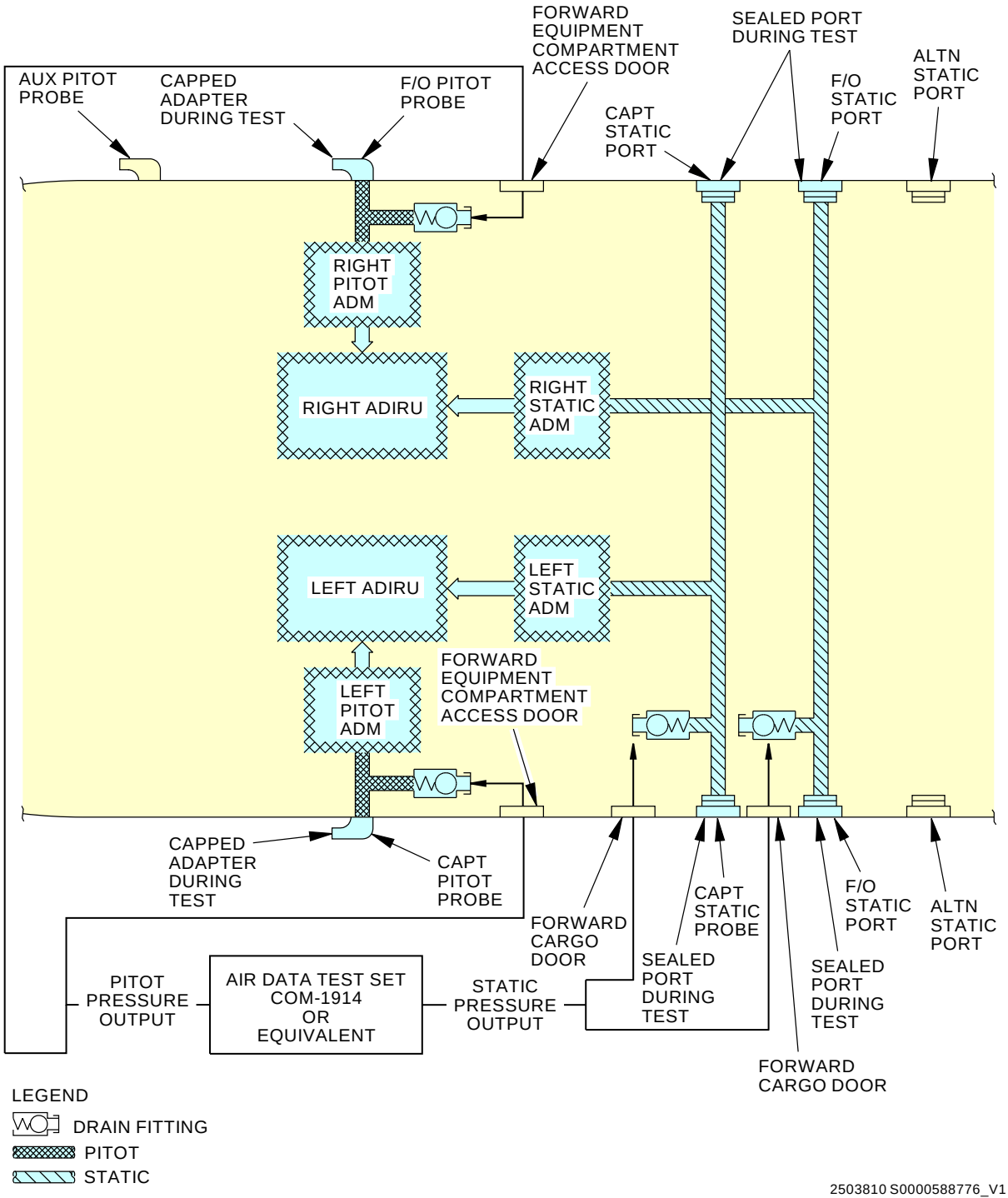
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 11 of 17)

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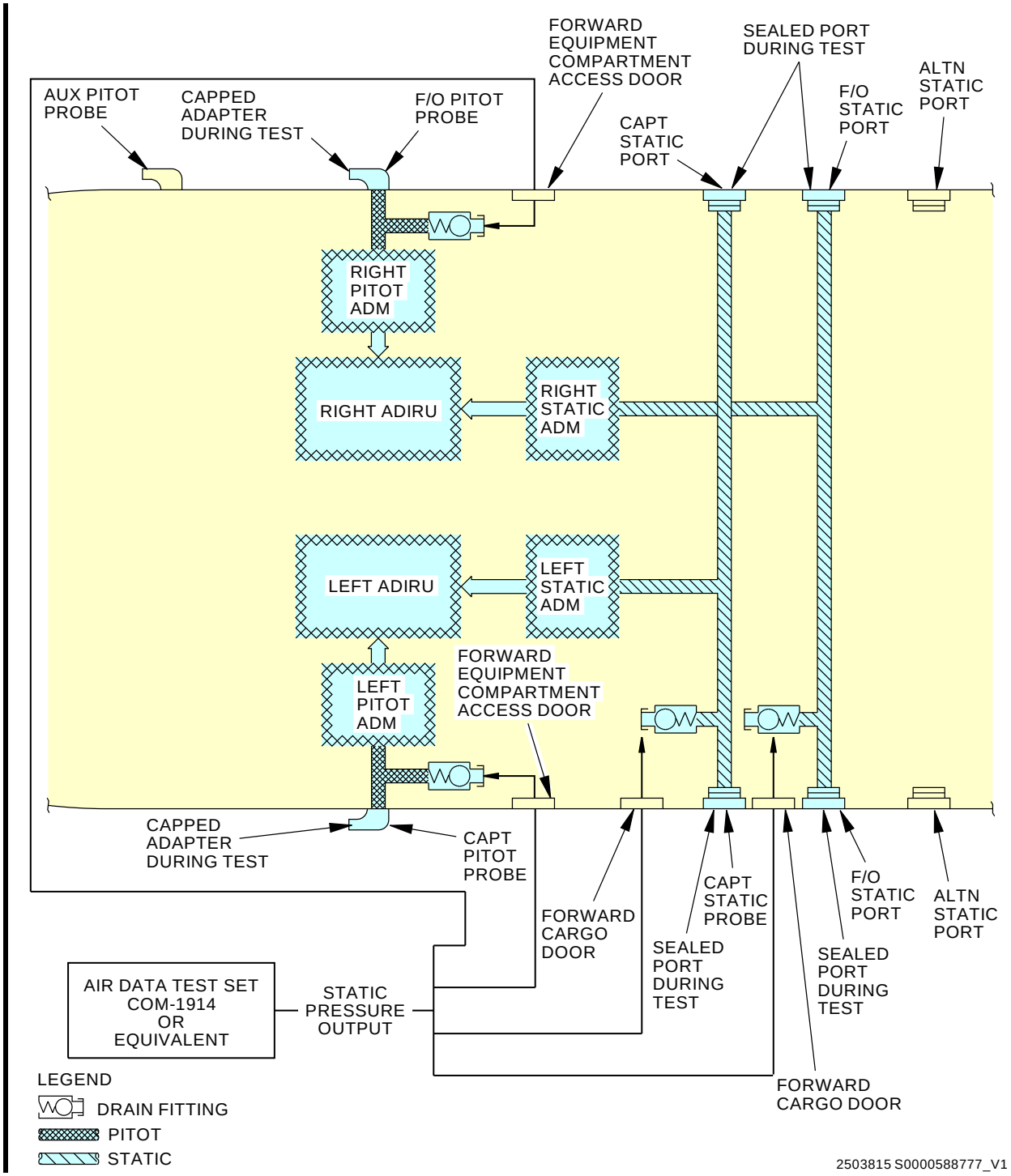
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 12 of 17)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01

Test Point:	Static Pressure, P_S (inHg)	Pitot Pressure, Q_C (inHg)	Air Data Test Set, Static Pressure Output (inHg)	Recorded Pitot Pressure, ARINC 429 Label 242 (inHg)	Differential Pressure = Col A - Col B (inHg)	Tolerance of the Differential Pressure (inHg)	Air Data Test Set, Static Pressure Output (inHg)	Recorded Static Pressure, ARINC 429 Label 245 (inHg)	Differential Pressure = Col C - Col D (inHg)	Tolerance of the Differential Pressure (inHg)	More Data
			A	B			C	D			
1	29.917 ± 0.029	No Entry				± 0.012			± 0.012	(a)	
2	13.585 ± 0.029	No Entry				± 0.012			± 0.012	(a)	
3	5.611 ± 0.029	No Entry				± 0.009			± 0.009	(a)	
4	13.585 ± 0.029	No Entry				± 0.012			± 0.012	(a)	
5	29.917 ± 0.029	No Entry				± 0.012			± 0.012	(a)	
	Entry to the Data Test Set		Total (Pitot) Pressure Measurement- Left Pitot ADM					Static Pressure Measurement- Left Static ADM			

(a) Allow one minute after the Air Data Test Set reaches the input static pressure value before recording measurements.

2503967 S0000588778_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 13 of 17)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01

Test Point:	Static Pressure, P_S (mb)	Pitot Pressure, Q_C (mb)	Air Data Test Set, Static Pressure Output (mb)	Recorded Pilot Pressure, ARINC 429 Label 242 (mb)	Differential Pressure = Col A - Col B (mb)	Tolerance of the Differential Pressure (mb)	Air Data Test Set, Static Pressure Output (mb)	Recorded Static Pressure, ARINC 429 Label 245 (mb)	Differential Pressure = Col C - Col D (mb)	Tolerance of the Differential Pressure (mb)	More Data
		A	B		C		D				
1	1013 ± 1.0	No Entry			± 0.4				± 0.4	(a)	
2	460 ± 1.0	No Entry			± 0.4				± 0.4	(a)	
3	190 ± 1.0	No Entry			± 0.3				± 0.3	(a)	
4	460 ± 1.0	No Entry			± 0.4				± 0.4	(a)	
5	1013 ± 1.0	No Entry			± 0.4				± 0.4	(a)	
	Entry to the Air Data Test Set	Total (Pitot) Pressure Measurement- Left Pitot ADM					Static Pressure Measurement- Left Static ADM				

(a) Allow one minute after the Air Data Test Set reaches the input static pressure value before recording measurements.

2503992 S0000588780_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 14 of 17)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01

Test Point	Static Pressure, P_s (inHg)	Pitot Pressure, Q_c (inHg)	A	B	C	D	Total (Pitot) Pressure Measurement-Right Pitot ADM	Static Pressure Measurement-Right Static ADM	More Data
			Air Data Test Set, Static Pressure Output (inHg)	Recorded Pitot Pressure, ARINC 429 Label 242 (inHg)	Tolerance of the Differential Pressure = Col A - Col B (inHg)	Air Data Test Set, Static Pressure Output (inHg)			Tolerance of the Differential Pressure = Col C - Col D (inHg)
1	29.917 ± 0.029	No Entry			± 0.012		Entry to the Data Test Set	± 0.012	(a)
2	13.585 ± 0.029	No Entry			± 0.012			± 0.012	(a)
3	5.611 ± 0.029	No Entry			± 0.009			± 0.009	(a)
4	13.585 ± 0.029	No Entry			± 0.012			± 0.012	(a)
5	29.917 ± 0.029	No Entry			± 0.012			± 0.012	(a)

(a) Allow one minute after the Air Data Test Set reaches the input static pressure value before recording measurements.

2504004 S0000588781_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 15 of 17)

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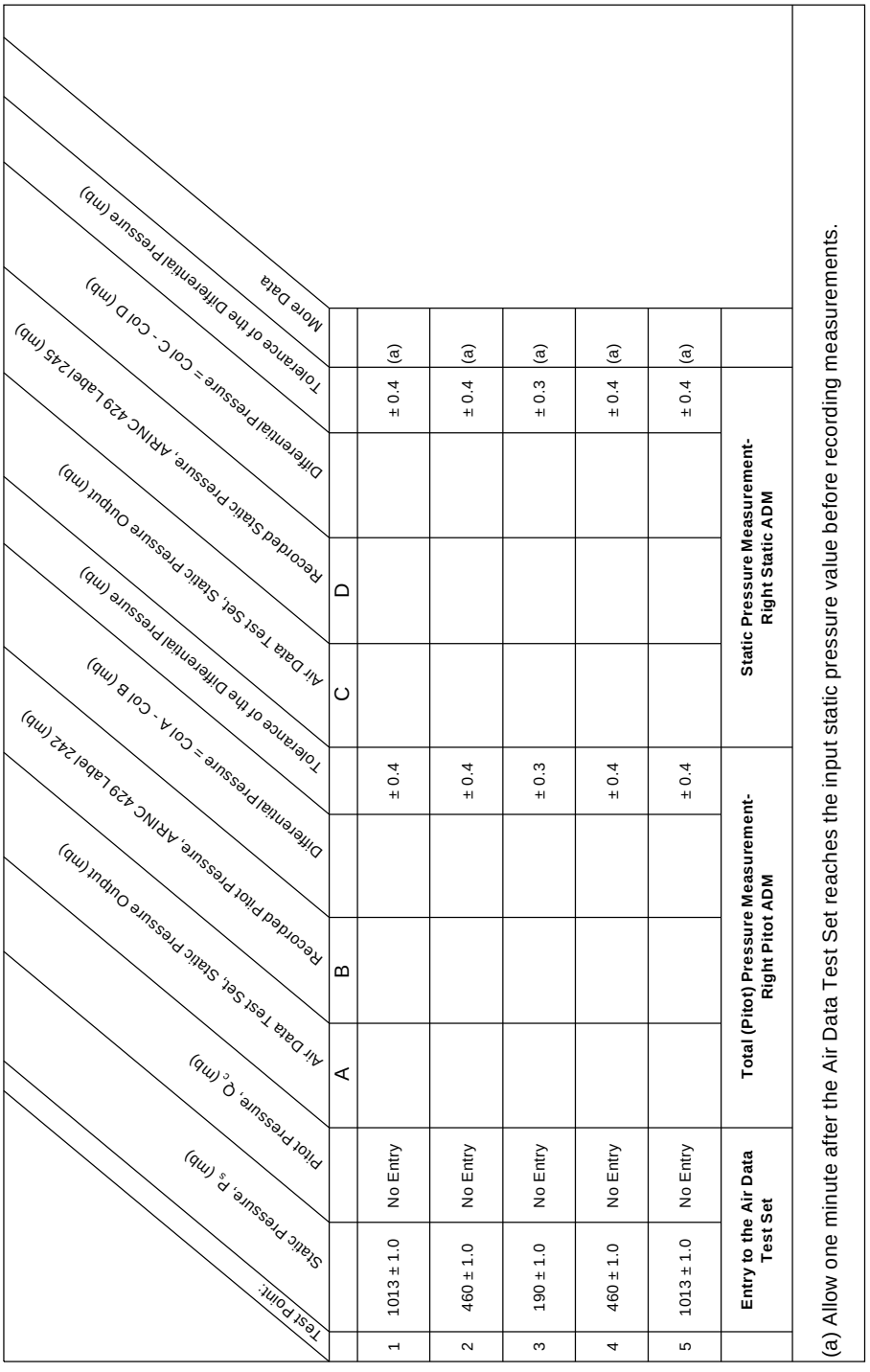
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01



2504005 S0000588782_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 16 of 17)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-060-10-01

Engineering Data Conversion Information

To convert binary data from ARINC 429 Bus Analyzer to engineering data, perform the following:

For ADIRU Label 242 or 245:

a) Make a record of bits 28 through 13. Bits 28 through 13 are the data bits, where bit 28 is the most significant bit and bit 13 is the lease significant bit.

b) Convert bits 28 through 13 from binary to decimal then multiply decimal value by 0.03125 to get the static pressure in mb.

For Example:

Label 245 Bit Position	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	Label 245 decimal value	Conversion rate decimal to mb	Results in mb
Example Binary Data	0	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	32416	0.03125	1013
Conversion to Decimal	0	2^14	2^13	2^12	2^11	2^10	2^9	0	2^7	0	2^5	0	0	0	0	0			
Decimal Values	0	16384	8192	4096	2048	1024	512	0	128	0	32	0	0	0	0	0	32416	0.03125	1013
Example Binary Data	0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	14720	0.03125	460
Conversion to Decimal	0	0	2^13	2^12	2^11	0	0	2^8	2^7	0	0	0	0	0	0	0			
Decimal Values	0	0	8192	4096	2048	0	0	256	128	0	0	0	0	0	0	0	14720	0.03125	460
Example Binary Data	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	6080	0.03125	190
Conversion to Decimal	0	0	0	2^12	0	2^10	2^9	2^8	2^7	2^6	0	0	0	0	0	0			
Decimal Values	0	0	0	4096	0	1024	512	256	128	64	0	0	0	0	0	0	6080	0.03125	190

2504008 S0000588802_V1

AIR DATA SYSTEM - ALTIMETRY SYSTEM TEST - TEST SCHEMATIC
Figure 1 (Sheet 17 of 17)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT PROBES			**34-070-00-01**
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	FUSELAGE	**1.1**	**7500 FH**	**7500 FH**	AIRPLANE **ALL** / ENGINE **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE **113 114**

Detail visual inspection of the pitot probes.

A. References

Reference	Title
AMM 34-11-01-200-803	Pitot Probe - Special Detailed Inspection (P/B 601)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-070-00-01

MECH | INSP

TASK 34-11-01-200-804

1. Pitot Probe - Detailed Inspection

(Figure 1)

A. Pitot Probe Inspection

SUBTASK 34-11-01-860-167

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

SUBTASK 34-11-01-210-006

(2) Visually examine the pitot probe for damage or unwanted material in the drain holes, the pitot opening, or the contour of the probe.

SUBTASK 34-11-01-220-017

(3) Make sure the edge of the pitot opening is sharp.

SUBTASK 34-11-01-220-018

(4) Make sure the inner surface of the probe tip is smooth and rounded.

SUBTASK 34-11-01-220-019

(5) Make sure that the outer surface of the probe tip is smooth and rounded.

SUBTASK 34-11-01-220-020

(6) Make sure the leading edge of the pitot probe does not have nicks.

SUBTASK 34-11-01-220-021

(7) Make sure the leading edge of the pitot probe axis (pitot scarf) is even.

SUBTASK 34-11-01-220-022

(8) If the detailed inspection of the pitot probe is not satisfactory, do a special detailed inspection of the pitot probe (AMM TASK 34-11-01-200-803).

SUBTASK 34-11-01-860-168

(9) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

——— END OF TASK ———

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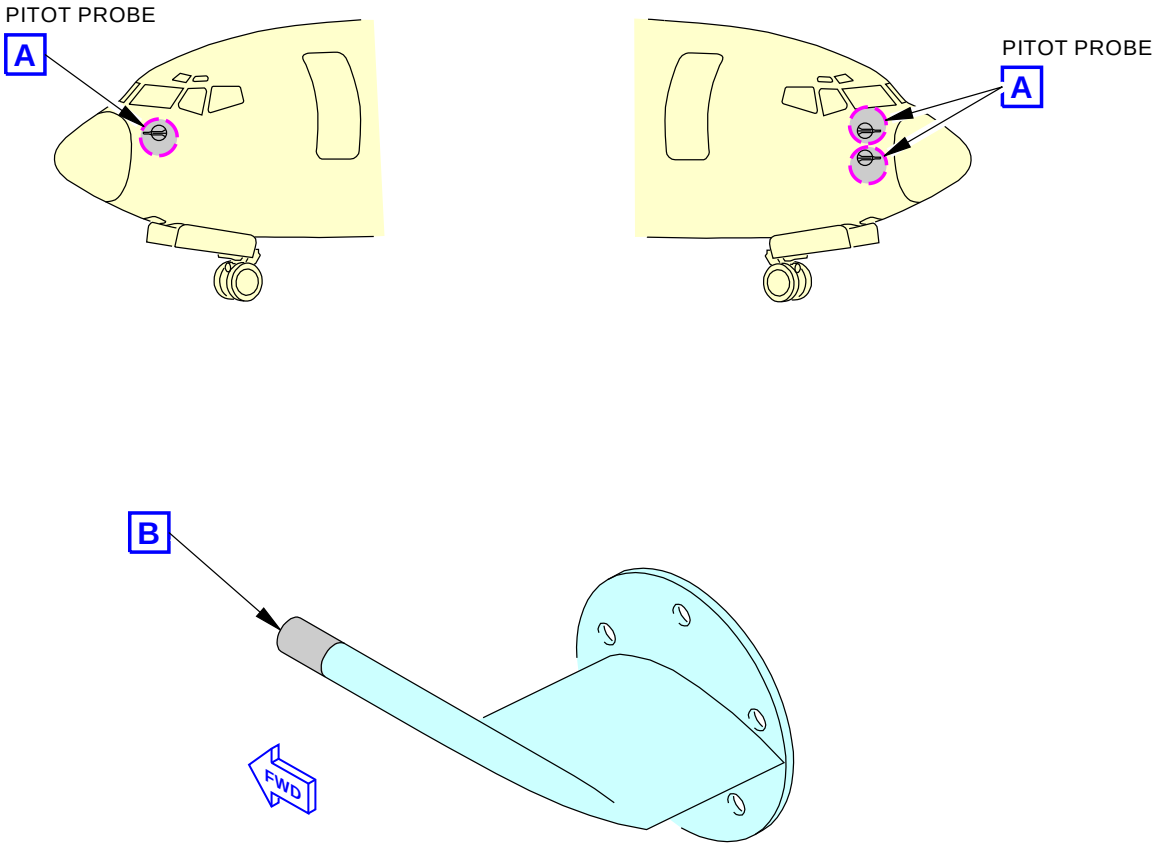
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-070-00-01



PITOT PROBE (EXAMPLE)

A

G05728 S0006576514_V2

Pitot Probe Inspection
Figure 1 (Sheet 1 of 2)

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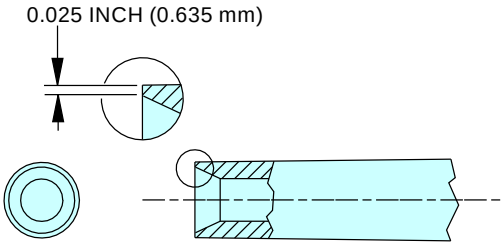
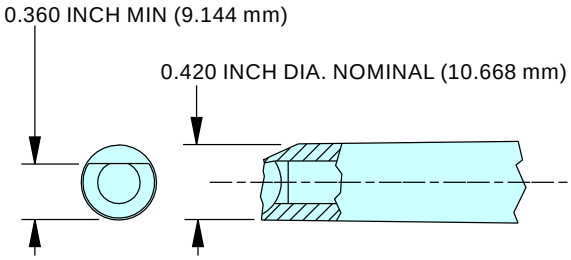
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-070-00-01



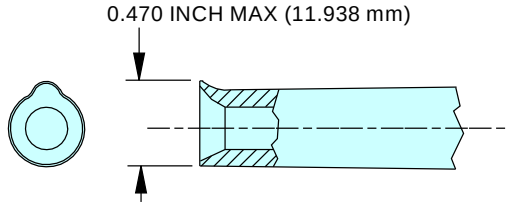
PITOT FLAT

B



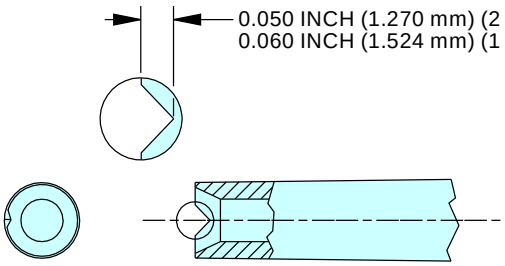
PITOT DENT IN

B



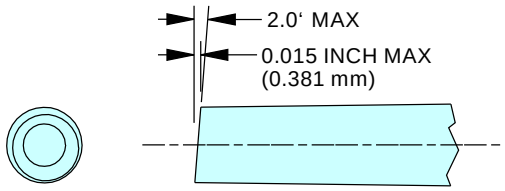
PITOT FLARE OUT

B



PITOT NICK

B



PITOT SCARF

B

G05731 S0006576515_V3

Pitot Probe Inspection
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		STATIC PORTS			**34-080-00-01**
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	FUSELAGE	**1.1**	**15000 FH**	**15000 FH**	AIRPLANE **ALL** / ENGINE **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE **113 114**

Detailed inspection of the static ports.

A. References

Reference	Title
AMM 34-11-02-000-803	Alternate Static Port Removal (P/B 401)
AMM 34-11-02-020-801	Primary Static Port Removal (P/B 401)
AMM 34-11-02-200-801	Static Port - Special Detailed Inspection (P/B 601)
AMM 34-11-02-400-801	Primary Static Port Installation (P/B 401)
AMM 34-11-02-400-803	Alternate Static Port Installation (P/B 401)
SRM 51-10-01	Structural Repair Manual

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-080-00-01

MECH | INSP

TASK 34-11-02-200-803

1. Static Port - Detailed Inspection

(Figure 1 or Figure 2)

A. Inspection Procedure

SUBTASK 34-11-02-220-011

(1) Visually examine the static port for damage.

SUBTASK 34-11-02-210-008

(2) Visually examine the holes in the port for contamination.

SUBTASK 34-11-02-900-008

(3) If there is a problem with a primary static port, replace the port.

(a) These are the tasks:

Primary Static Port Removal, AMM TASK 34-11-02-020-801,

Primary Static Port Installation, AMM TASK 34-11-02-400-801.

SUBTASK 34-11-02-900-009

(4) If there is a problem with an alternate static port, replace the port.

AKS ALL; 737-600, 737-800 OR 737-900

(a) These are the tasks:

Alternate Static Port Removal, AMM TASK 34-11-02-000-803,

Alternate Static Port Installation, AMM TASK 34-11-02-400-803.

AKS ALL

SUBTASK 34-11-02-220-012

(5) Visually examine the surface of the airplane skin in a three inch radius around the port:

(a) Make sure that the surface of the skin is not rough.

(b) If the skin is rough, refer to the Structural Repair Manual (SRM 51-10-01).

SUBTASK 34-11-02-200-001

(6) If the detailed inspection of the static port is not satisfactory, do the Static Port - Special Detailed Inspection (AMM TASK 34-11-02-200-801).

——— END OF TASK ———

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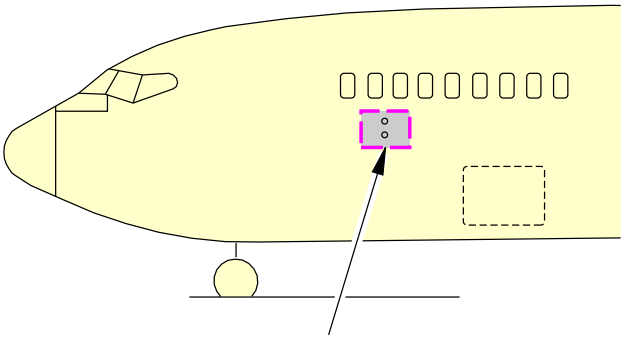
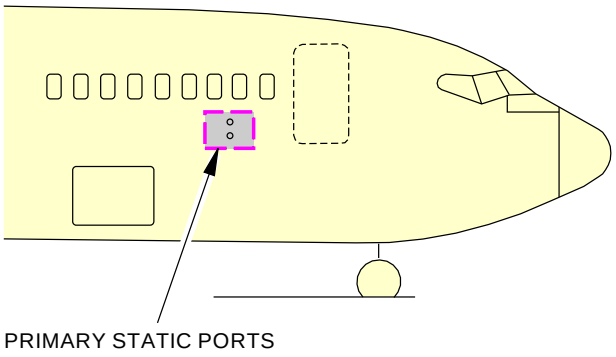
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-080-00-01



(LEFT SIDE)



(RIGHT SIDE)

L49558 S0006576538_V2

Primary Static Port Inspection
Figure 1 (Sheet 1 of 3)

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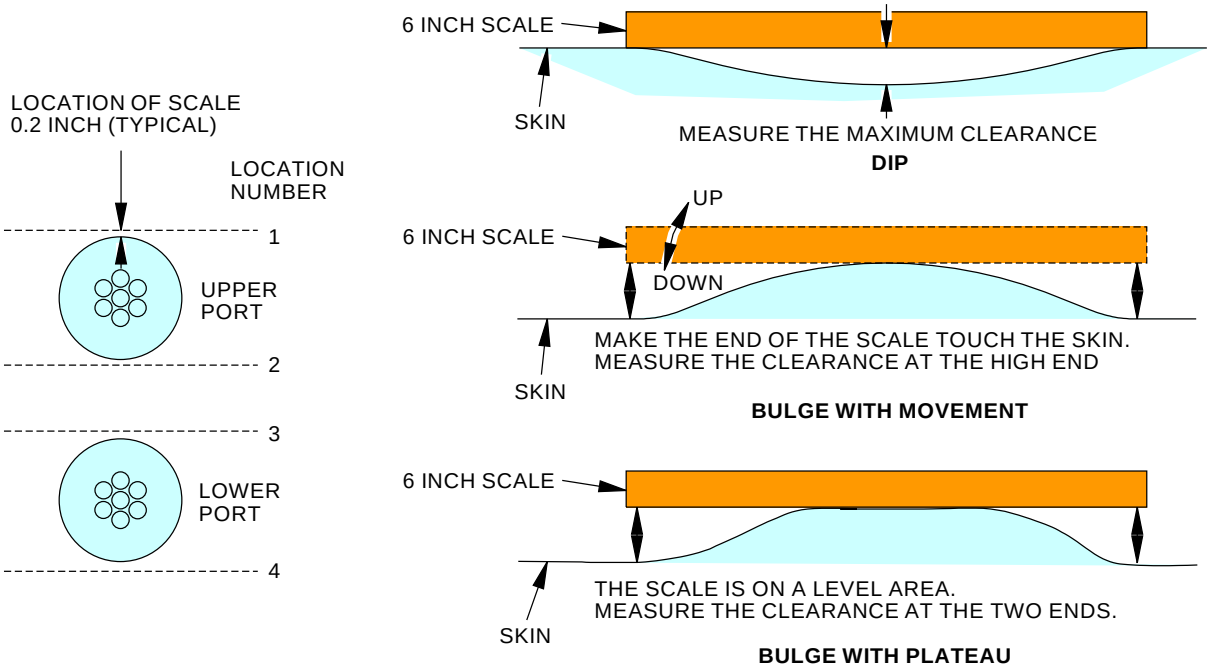
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-080-00-01



LEFT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1	-0.010						
	2	-0.004						
	WAVINESS	-0.007						
LOWER PORT	3		0.008	0.000	0.008			
	4		0.020	0.010	0.020			
	WAVINESS				0.007			
RIGHT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1	-0.010						
	2	-0.000						
	WAVINESS	-0.005						
LOWER PORT	3					0.008	0.000	0.008
	4					0.020	0.010	0.020
	WAVINESS							0.014

EXAMPLE CALCULATIONS OF SKIN WAVINESS MEASUREMENT NEAR PRIMARY STATIC PORTS

L49588 S0006576539_V2

Primary Static Port Inspection
Figure 1 (Sheet 2 of 3)

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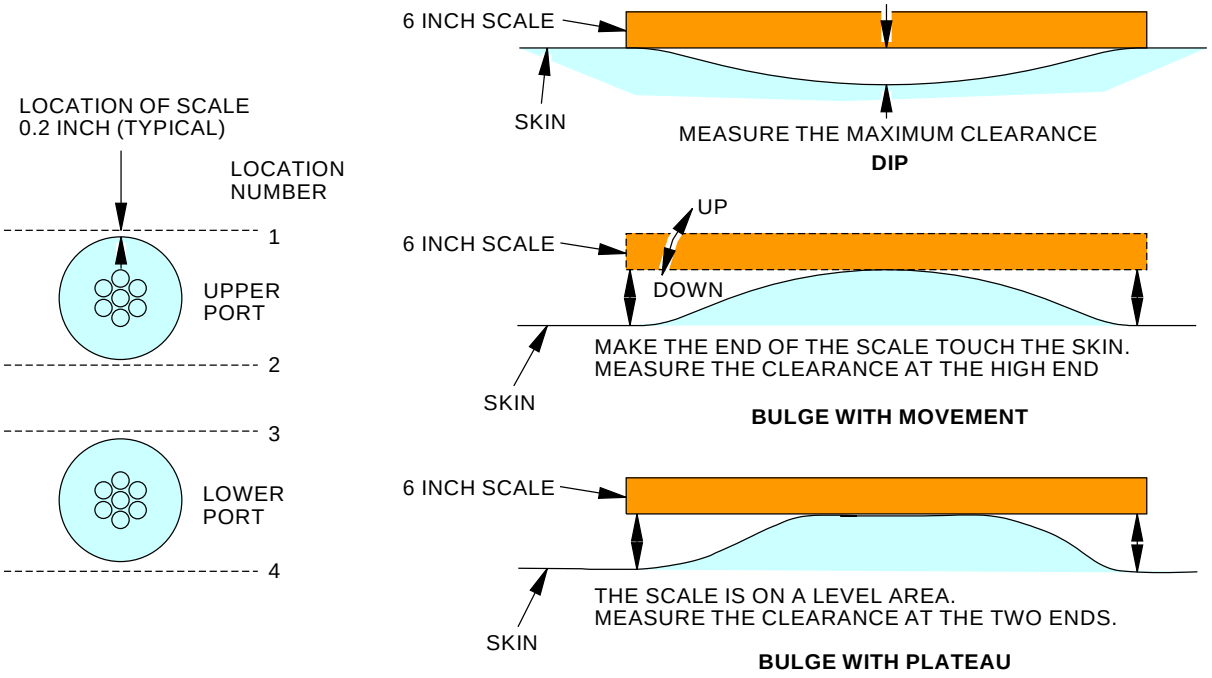
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-080-00-01



LEFT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1							
	2							
	WAVINESS							
LOWER PORT	3							
	4							
	WAVINESS							
RIGHT SIDE								
	LOCATION	DIP	BULGE WITH MOVEMENT			BULGE WITH PLATEAU		
		MAXIMUM	FORWARD	AFT	MAXIMUM	FORWARD	AFT	MAXIMUM
UPPER PORT	1							
	2							
	WAVINESS							
LOWER PORT	3							
	4							
	WAVINESS							

FORM FOR SKIN WAVINESS MEASUREMENT NEAR PRIMARY STATIC PORTS

L49603 S0006576540_V2

Primary Static Port Inspection
Figure 1 (Sheet 3 of 3)

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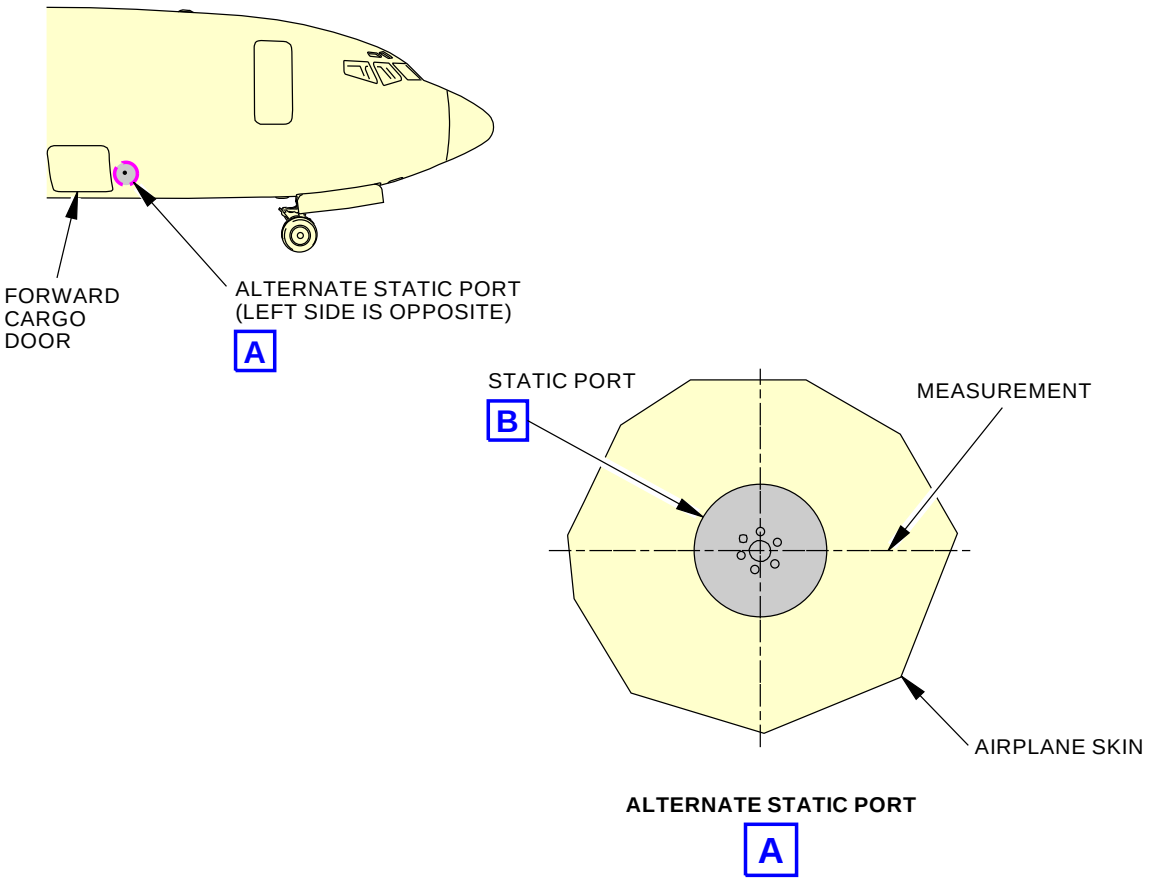
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-080-00-01



G03179 S0006576541_V3

Alternate Static Port Inspection
Figure 2

EFFECTIVITY	SOURCE	STATIC PORTS
AKS ALL	MRB	

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		PITOT SYSTEMS			34-090-00-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	FUSELAGE	1.1	15000 FH	15000 FH	AIRPLANE: 600 700 800 900 900ER; ENGINE: ALL
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		112A			112

Detail inspection for moisture in the pitot systems.

A. References

Reference	Title
AMM 34-11-00-680-801	Pitot Static System - Draining (P/B 301)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-090-00-01

MECH	INSP

TASK 34-11-00-210-801

1. Pitot System - Detailed Inspection of Drains

(Figure 1)

A. Procedure

SUBTASK 34-11-00-210-001

(1) Do a detailed inspection for moisture for the Captains and First Officers pitot system drains.

NOTE: The alternate pitot system does not have a drain fitting. The probe is at the lowest part of the system line so that moisture can drain from the probe.

SUBTASK 34-11-00-680-001

(2) If you find moisture in at least one of the locations above, do this task: Pitot Static System - Draining, AMM TASK 34-11-00-680-801.

——— END OF TASK ———

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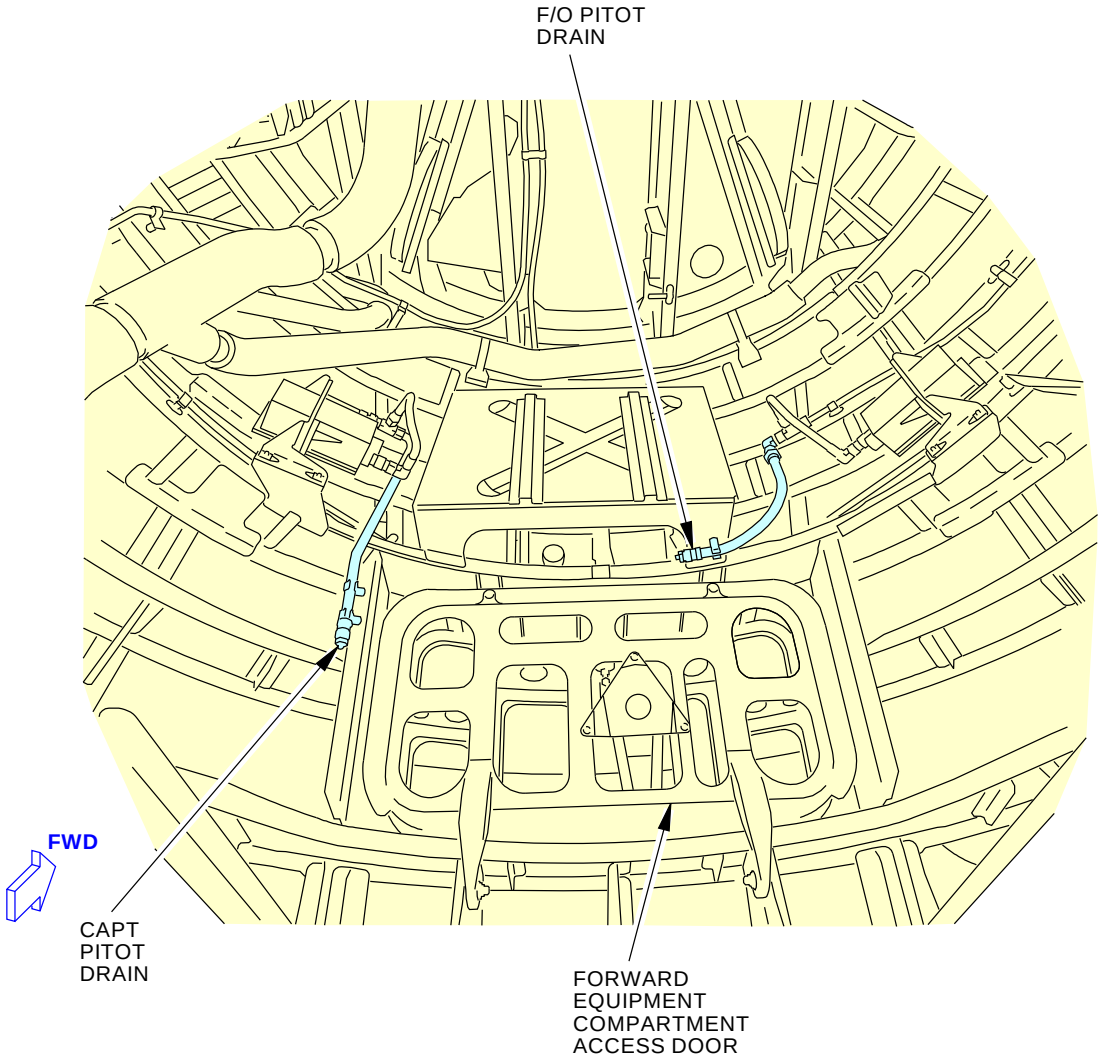
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-090-00-01



FORWARD EQUIPMENT COMPARTMENT

L99129 S0006576475_V3

Pitot System Drains
Figure 1

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		STATIC SYSTEMS			34-100-00-01
DATE	TASK				RELATED CARD
	INSPECTION - DETAILED				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	FUSELAGE	1.1	15000 FH	15000 FH	AIRPLANE: 600 700 800 900 900ER; ENGINE: ALL
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
		117A 821			118 123

Detail inspection for moisture in the static systems.

A. References

Reference	Title
AMM 34-11-00-680-801	Pitot Static System - Draining (P/B 301)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-100-00-01

MECH	INSP

TASK 34-11-00-210-802

1. Static System - Detailed Inspection of Drains

(Figure 1)

A. Procedure

SUBTASK 34-11-00-210-002

(1) Do a detailed inspection for moisture in the static system drains for these systems:

(a) Alternate Static System

(b) First Officers Static System

(c) Captains Static System

SUBTASK 34-11-00-680-002

(2) If you find moisture in at least one of the locations above, do this task: Pitot Static System - Draining, AMM TASK 34-11-00-680-801.

——— END OF TASK ———

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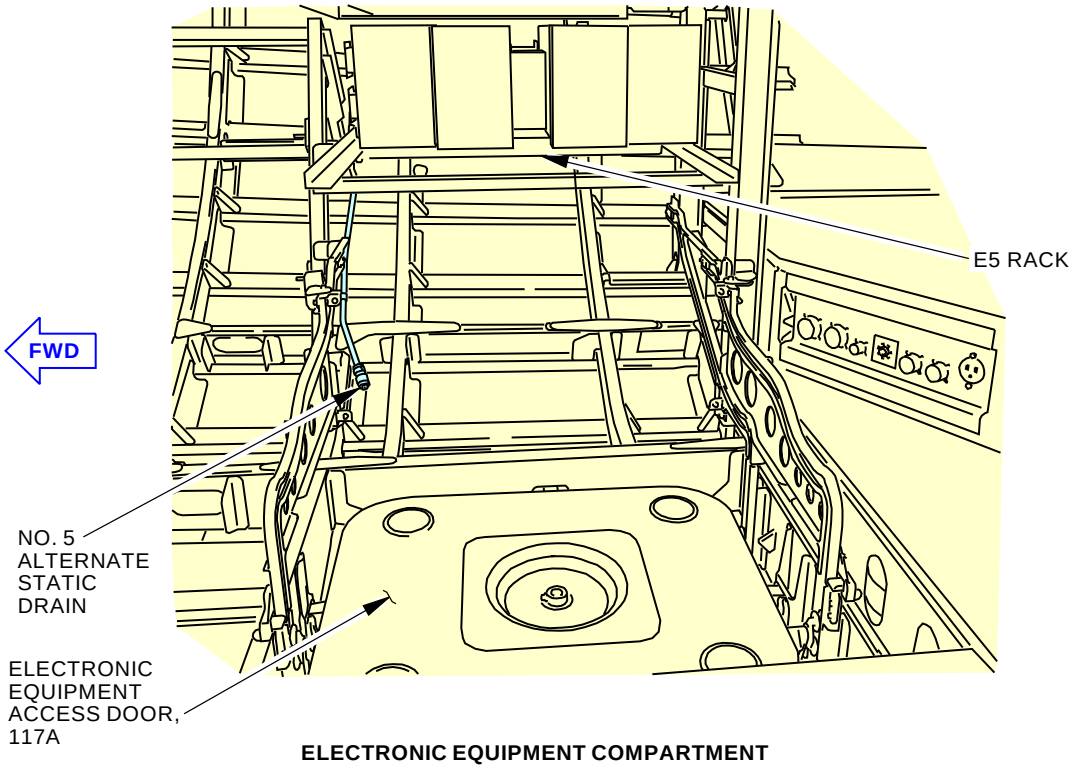
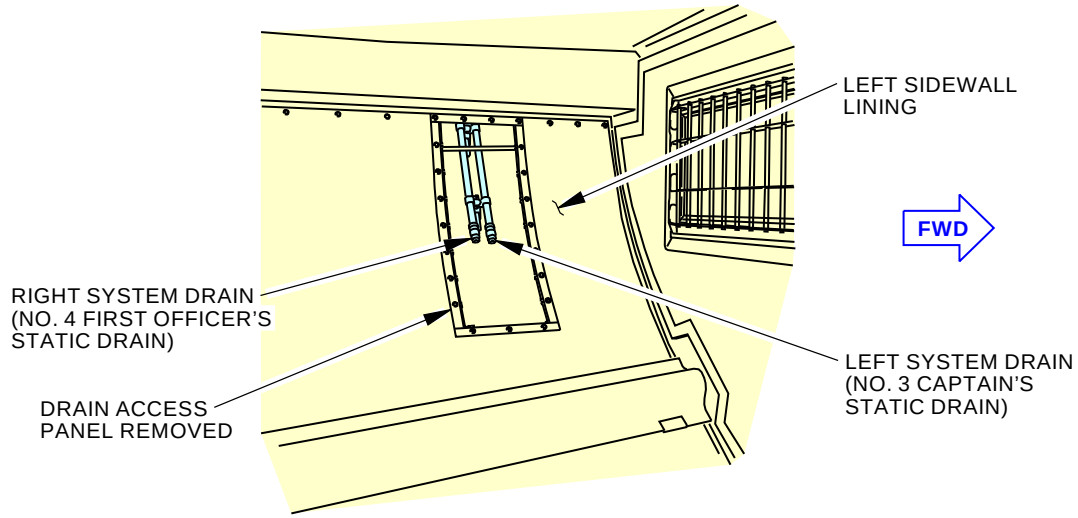
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-100-00-01



ELECTRONIC EQUIPMENT COMPARTMENT



FORWARD CARGO COMPARTMENT

L99116 S0006576473_V2

Static System Drains
Figure 1

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		ATC SYSTEM FUNCTIONAL CHECK			**34-110-00-01**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY
STATION	SKILL **AVION**	**NOTE**			AIRPLANE: **ALL** ENGINE: **ALL**
		ACCESS			ZONE **210**

Perform a functional check of the ATC TRANSPONDER SYSTEM - Test Procedure for airplanes WITHOUT Elementary Surveillance (ELS), Enhanced Surveillance (EHS), Extended Squitter (ES) features using the T-48 or T-49 Test Set. (See reference FAR 91.413)

INTERVAL NOTE: or national requirement.

A. References

Reference	Title
AMM 24-22-00-860-812	Remove Electrical Power (P/B 201)
AMM 32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
AMM 32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
AMM 34-53-00-710-801	Air Traffic Control System - Operational Test (P/B 501)
WDM 34-53-11	Wiring Diagram Manual
WDM 34-53-21	Wiring Diagram Manual

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-10730	Test Set - Ramp, T-48/-49
	Opt Part #: T-48D Supplier: 92606
	Opt Part #: T-49C Supplier: 92606
COM-1617	Meter - RF Power
	Part #: MODEL 43 Supplier: 70998
	Part #: MODEL 43P Supplier: 70998
COM-1920	Element - RF Power, 500 Watt, 950-1260 Mhz
	Part #: 500J Supplier: 70998

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-01

MECH	INSP

TASK 34-53-00-730-802

1. System Test - ATC System (With the TIC T-48 or T-49 Series Test Set)

A. General

(1) This system test is a full check of the ATC system. The system test first does the ATC - Operational Test and then uses the T-48/-49 ramp test set, COM-10730, to examine the left and right ATC systems.

(2) The test set can do all of the tests automatically except the DIVERSITY CHECK, the MAX TRUE AIRSPEED TEST and the IDENT BUTTON CHECK. You must do these tests manually with the TEST button on the test set. If a test has failed, the automatic test sequence will stop and a failed message will show. At the end of the automatic test all data will show.

(3) You can manually do each test individually. Push the TEST button to do each test individually. The test results will show after each test is done.

(4) The test set accessory, the antenna coupler, TAP-115, TAP 118, TAP 119, TAP 125 or TAP 135 used with the applicable test set, is necessary to do a check of the output power, receiver, sensitivity and radio frequency. For the diversity check, the TAP 125 or TAP 135 is necessary.

B. Prepare for the System Test

SUBTASK 34-53-00-710-003

(1) Do this task: Air Traffic Control System - Operational Test, AMM TASK 34-53-00-710-801.

SUBTASK 34-53-00-940-001

(2) Prepare the T-48/-49 ramp test set, COM-10730 and the antenna coupler for the ATC system test:

NOTE: Refer to the applicable test set operational manual for detailed setup information when using the antenna couplers.

NOTE: The test set accessory, the antenna coupler, TAP-115, TAP 118, TAP 119, TAP 125 or TAP 135 used with the applicable test set, is necessary to do a check of the output power, receiver, sensitivity and radio frequency. For the diversity check, the TAP 125 or TAP 135 is necessary.

(a) Pull the pull-ring on the antenna coupler to separate the spring loaded clamp.

(b) Insert the antenna coupler over the necessary ATC antenna.

NOTE: Make sure the antenna coupler is centered.

(c) Push and hold antenna coupler so the EMI gasket compresses to the airplane skin.

(d) Release the pull-ring to keep the coupler in its correct position.

(e) Connect the antenna coupler coax connector to the test set ANTENNA connector.

NOTE: If you use the T-48/-49 ramp test set, COM-10730 accessory, the TAP 125 or TAP 135, the unused coupler cable does not need to be connected to the test set. You test only one antenna at a time.

(f) Push the INTERROGATE button.

NOTE: To read the display push and hold the INTERROGATE switch.

1) The test set will momentarily display:

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Table 1

TEL Instrument

T-4X Rev.XX

2) After the test set has determined the type of transponder under test (Mode S, Mode A, Mode C, etc) the display will change to: No Reply from XPNDR.

SUBTASK 34-53-00-860-026

(3) Put the airplane in the air mode with the BITE in the Proximity Switch Electronics Unit (PSEU), do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

SUBTASK 34-53-00-860-015

(4) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-860-016

(5) Set the captain's and first officer's altimeter to 29.92 inches of mercury.

C. ATC System Test

SUBTASK 34-53-00-860-017

(1) On the ATC control panel do these steps:

(a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.

(b) Set the transponder select switch to the No. 1 system.

(c) Set the mode select switch to the ALT ON position.

SUBTASK 34-53-00-730-001

(2) Push the INTERROGATE switch.

(a) Make sure the test set shows the correct transponder type.

NOTE: If the test set shows "no reply from xpdr", do a check on the test antenna connections. Also, make sure the ATC system is operational.

SUBTASK 34-53-00-730-002

(3) Push the INTERROGATE switch on the test set.

(a) The test set will determine the transponder type.

SUBTASK 34-53-00-860-018

(4) Push the INTERROGATE button again and the test set will initiate a sequence of tests on the transponder.

(a) These tests must be done to complete the ATC system test:

1) ATCRBS/A & SLS

2) ATCRBS/C

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3) ATCRBS/A Mode S All
4) ATCRBS/C Mode S All
5) ATCRBS/A only
6) ATCRBS/C only
7) Mode S Surv Identity
8) Mode S Surv Altitude
9) Mode S Surv Short
10) Undesired Replies
11) Squitter
12) Diversity

NOTE: This test is only available for test sets with the TAP 125 or TAP 135 accessory and must be done manually.

13) MAX TRUE AIRSPEED

NOTE: This test must be done manually.

SUBTASK 34-53-00-210-001

(5) Make sure the display is as follows when the test is complete:

Table 2

CCCC	XXXXXX	YYYYY'
ZZZ W	mmm dbm	nnn MHZ

(a) CCCC is code selected.

(b) XXXXXX is airplane registry number

NOTE: This may appear as the mode S address in hexadecimal. The code may be translated from hexadecimal to tail number on (WDM 34-53-11 or WDM 34-53-21).

(c) YYYYY is airplane altitude in feet (must be ±125' of the Capt's and F/O's altimeter).

(d) ZZZ is the transmitter power output (must be > 125 and < 500 Watts).

(e) mmm is the receiver sensitivity (must be between -77 to -71 dbm).

(f) nnn is the frequency deviation (±1 MHz maximum allowed).

SUBTASK 34-53-00-730-003

(6) Do the DIVERSITY CHECK that follows for the test sets with the TAP 125 or TAP 135 couplers:

NOTE: This test can only be done with the TAP 125 or TAP 135 coupler. If you do not have the TAP 125 or TAP 135 coupler, do the test that uses the Bird RF through-line wattmeter.

(a) Push the TEST button on the test set until you get to the DIVERSITY CHECK.

1) Make sure to pause between each push of the TEST button to allow the test set to do that test step.

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MECH	INSP

(b) The test set will show DIVERSITY and then either PASS of FAIL.

NOTE: If the test shows "Diversity Fail", repeat the test since this may be the result of an interrogation from a near-by radar or other interference, or placement of the coupler on the ATC blade antenna.

SUBTASK 34-53-00-730-004

(7) Do the Diversity Check that follows for the test set without the TAP 125 or TAP 135 coupler:

(a) Disconnect the antenna cable at the top antenna switch connector, D2703, and connect the RF through-line watt element, COM-1920, in its place.

(b) Make a note of the maximum power output and the minimum power output measured by the RF through-line watt meter, COM-1617, during the mode S squitter transmission period.

1) Make sure the minimum power output is 100 times or 20 db lower than the maximum power output.

(c) Disconnect the RF through-line watt element, COM-1920.

(d) Connect the antenna cable at the top antenna switch connector, D2703.

SUBTASK 34-53-00-760-001

(8) Do these steps that follow for the MAX TRUE AIRSPEED TEST:

(a) Push the TEST button on the test set until you get to the MAX TRUE AIRSPEED TEST.

1) Make sure to pause between each push of the TEST button to allow the test set to do that test step.

(b) The test set will show the max true airspeed that has been pin programmed at each transponder.

1) The test set display must be:

Table 3

MAX TRUE AIRSPEED

GT 300 & LE 600 kts

SUBTASK 34-53-00-730-005

(9) Do the steps that follow for the IDENT BUTTON CHECK:

(a) On the ATC control panel do the steps that follow:

1) Set the code switches to a desired ATC ID code

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.

2) Put the ATC select switch to the No. 1 position

3) Put the mode select switch to the ALT ON position.

(b) Make sure the test set displays the desired ATC ID code.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-01

MECH	INSP

(c) Turn the test set off.

(d) Wait a moment, then push the INTERROGATE button.

1) Allow the test set to determine the type of transponder under test.

(e) At the same time push the control panel IDENT button and the test set TEST button.

(f) Make sure the message IDENT is displayed on the test set.

SUBTASK 34-53-00-730-006

(10) Do the test again as necessary, for the right system.

(a) To test the right system, put the ATC select switch to the No. 2 position.

D. Put the airplane back to its Usual Condition.

SUBTASK 34-53-00-860-019

(1) Put the mode select switch to the STBY position.

SUBTASK 34-53-00-840-006

(2) Disconnect and remove the antenna coupler.

SUBTASK 34-53-00-840-002

(3) Disconnect and remove the ATC test set.

SUBTASK 34-53-00-840-005

(4) Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

SUBTASK 34-53-00-860-020

(5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-840-003

(6) If the electrical power is no longer necessary, do this task: Remove Electrical Power, AMM TASK 24-22-00-860-812

——— END OF TASK ———

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		ATC SYSTEM FUNCTIONAL CHECK			**34-110-00-02**
DATE	TASK **FUNCTIONAL**				RELATED CARD
TAIL NUMBER	WORK AREA **FUSELAGE**	VERSION **1.1**	THRESHOLD **24 MO**	REPEAT **24 MO**	APPLICABILITY
STATION	SKILL **AVION**	**NOTE**			AIRPLANE **ALL** ENGINE **ALL**
		ACCESS			ZONE **210**

Perform a functional check of the ATC TRANSPONDER SYSTEM - Test Procedure for airplanes with or without Elementary Surveillance (ELS), Enhanced Surveillance (EHS), Extended Squitter (ES) features using either the IFR ATC-601, IFR 6000 or TR220 Test Set. (See reference FAR 91.413)

INTERVAL NOTE: or national requirement.

A. References

Reference	Title
AMM 22	AUTOFLIGHT
AMM 22-11-00	DIGITAL FLIGHT CONTROL SYSTEM
AMM 22-11-00 P/B 501	DIGITAL FLIGHT CONTROL SYSTEM - ADJUSTMENT/TEST
AMM 24-22-00-860-811	Supply Electrical Power (P/B 201)
AMM 24-22-00-860-812	Remove Electrical Power (P/B 201)
AMM 32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
AMM 32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)
AMM 34	NAVIGATION
AMM 34-21-00	AIR DATA INERTIAL REFERENCE SYSTEM
AMM 34-21-00 P/B 501	AIR DATA INERTIAL REFERENCE SYSTEM - ADJUSTMENT/TEST
AMM 34-21-00-820-801	Air Data Inertial Reference System - Alignment from the FMC CDU (P/B 201)
AMM 34-21-00-820-802	Air Data Inertial Reference System - Alignment from the ISDU (P/B 201)
AMM 34-31-00	INSTRUMENT LANDING SYSTEM
AMM 34-31-00 P/B 501	INSTRUMENT LANDING SYSTEM - ADJUSTMENT/TEST
AMM 34-53-00 P/B 501	AIR TRAFFIC CONTROL (ATC) SYSTEM - ADJUSTMENT/TEST
AMM 34-53-00-710-801	Air Traffic Control System - Operational Test (P/B 501)
AMM 34-58-00	GLOBAL POSITIONING SYSTEM
AMM 34-58-00-710-802	Global Positioning System - Operational Test (P/B 501)
AMM 34-61-00	FLIGHT MANAGEMENT COMPUTER SYSTEM
AMM 34-61-00 P/B 501	FLIGHT MANAGEMENT COMPUTER SYSTEM - ADJUSTMENT/TEST
WDM 34-53-11	Wiring Diagram Manual
WDM 34-53-11, 34-53-21	Wiring Diagram Manual
WDM 34-53-21	Wiring Diagram Manual

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(Continued)

Reference	Title
WDM 34-53-31	Wiring Diagram Manual

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-10727	Test Set - Ramp, IFR-6000 Part #: IFR 6000 Supplier: 51190
COM-10728	Test Set - Ramp, TR-220 Part #: TR-220 Supplier: 92606
COM-4113	Test Set - Ramp, ATC-601 Series Opt Part #: ATC-601 Supplier: 51190 Opt Part #: ATC-601-2 Supplier: 51190

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH | INSP

TASK 34-53-00-730-803

1. ATC System Test (With the ATC-601 Test Set)

A. General

(1) This system test is a more complete check of the ATC system. The system test first does the ATC - Operational Test, then it uses ground test equipment to examine the left and right ATC systems.

(2) The ATC system can be tested with the ATC-601 Series ramp test set, COM-4113 by one of these two methods: Flat Antenna or Direct Connect.

(3) The ATC-601 can test ATCRBS Mode A, Mode C and Mode S transponders. ATC-601 test sets with software version 3.0 or higher can also test Mode S Transponders with Enhanced Surveillance (ELS, EHS, ES and ADS-B) capabilities.

AKS 001-023

(4) The ATC-601 can test the ADS-B functions to the EASA AMC 20-24 requirements for DO-260 compliant transponders. But it can not do tests of DO-260A compliant transponders to the EASA AMC 20-24 requirements.

AKS ALL

(5) The ATC-601 Series ramp test set, COM-4113 uses thirty-nine (39) different tests to check the functionality of the ATC transponder. All thirty-nine (39) tests can be run automatically in the AUTO mode, or individually in the single test mode.

NOTE: The AUTO Test is the preferred test.

(6) In the AUTO mode, the test set will determine the correct set of tests, either Mode A/C or Mode S upon receiving the transponder RF signal, and will automatically run the tests.

NOTE: A passed AUTO test on the ATC-601-series test set meets the requirements in FAR Part 43, Appendix F for all classes of ATCRBS transponders and for classes 1B, 2B, and 3B Mode S transponders. The ATC-601-series test set only verifies a reply frequency range of 1090 +/- 3 MHz.

(7) The details of individual tests conducted during the AUTO TEST are stored in memory and may be reviewed by using the SELECT keys. The PASSED/FAILED indication is shown on top of the page.

(8) If a test section fails or more data is necessary, use the Single Test Sequence. This lets the user do each test individually or see the individual test results.

(9) To do a single test, use the SELECT keys to get to the desired test and push the RUN/STOP key. The test will continue until the RUN/STOP key is pushed again.

(10) Results from the last test done, Auto Test or Single Test, show on the display.

B. Prepare for the System Test

AKS 001-023

SUBTASK 34-53-00-580-001

(1) If the ADS-B tests will be run as part of the ATC System test the airplane location must let the GPS antennas have a clear view of the GPS satellites.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH	INSP

AKS ALL

SUBTASK 34-53-00-710-008

(2) Do this task: Air Traffic Control System - Operational Test, AMM TASK 34-53-00-710-801.

SUBTASK 34-53-00-480-001

(3) For the Direct Connect method, do these steps to connect the test set antenna cable to the ATC antenna switch:

(a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

(b) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(c) For ATC antenna (coax) switch S942, disconnect connector D2703 (ATC Top Antenna) (WDM 34-53-31).

(d) For ATC antenna (coax) switch S943, disconnect connector D2707 (ATC Bottom Antenna) (WDM 34-53-31).

(e) Connect the ATC-601 Series ramp test set, COM-4113 antenna cable to ATC antenna (coax) switch S942 or ATC antenna (coax) switch S943.

(f) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-00-860-056

(4) Make sure that these systems are operational:

(a) DIGITAL FLIGHT CONTROL SYSTEM, AMM SUBJECT 22-11-00

(b) AIR DATA INERTIAL REFERENCE SYSTEM, AMM SUBJECT 34-21-00

(c) INSTRUMENT LANDING SYSTEM, AMM SUBJECT 34-31-00

(d) GLOBAL POSITIONING SYSTEM, AMM SUBJECT 34-58-00

(e) FLIGHT MANAGEMENT COMPUTER SYSTEM, AMM SUBJECT 34-61-00

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH | INSP

SUBTASK 34-53-00-860-059

(5) Do this task: Air Data Inertial Reference System - Alignment from the ISDU, AMM TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, AMM TASK 34-21-00-820-801.

SUBTASK 34-53-00-860-027

(6) Set the captain's and first officer's altimeter to 29.92 inches of mercury.

AKS 001-023

SUBTASK 34-53-00-860-053

(7) Set a selected altitude.

(a) Set a desired altitude in the DFCS MCP Selected Altitude window.

SUBTASK 34-53-00-860-054

(8) Select a Flight ID.

(a) Select the RTE mode key on the FMCS CDU.

(b) Make sure page 1 is shown.

NOTE: If needed, push the next page function key on the CDU until page 1 is shown.

(c) Enter the first 8 characters of the company name in the FLT NO field. This should be the name of the company that conducts the test.

(d) Select LSK 2R on the CDU.

AKS ALL

SUBTASK 34-53-00-860-028

(9) Do these steps at the ATC control panel:

(a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.

(b) Set the transponder select switch to the No. 1 position.

(c) Set the Mode Select switch to the STBY position.

(d) Set the ALT source switch to the No. 1 (or No. 2) air data source position.

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SUBTASK 34-53-00-840-007

MECH | INSP

(10) For the Direct Connect method, do these steps to prepare the ATC-601 Series ramp test set, COM-4113 to test the ATC transponder:

NOTE: The ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.

NOTE: Refer to the ATC-601 Operating Manual for detailed information on setup, test screens, and interpreting results of the tests.

NOTE: It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.

(a) Connect the test set antenna cable to the ATC-601 Series ramp test set, COM-4113 RF I/O connector.

(b) Make sure the antenna connector cover is installed.

NOTE: The connector cover provides the 50 ohm load required when connecting the test set antenna cable to the RF I/O connector.

(c) Push the POWER button on the ATC-601 Series ramp test set, COM-4113.

NOTE: This is a source of interference for radio and L-band radar equipment operating on the airplane and located near the test set. Turn the test set off as soon as the test is completed or when you must perform other radio checks on the airplane.

1) The Start-Up screen will show.

2) Make sure the software version shown on the screen is 3.0 or higher if you are to do Enhanced Surveillance Tests.

(d) Push the SELF TEST key on the test set.

(e) Push the RUN/STOP key to start the self-test.

1) Make sure the test set display shows PASSED.

(f) Push the SETUP key to enter the data in the SETUP #1 MENU. If the SETUP #1 MENU does not show, continue to push the SETUP key until the SETUP #1 MENU shows.

NOTE: The ATC-601 has four Setup Menus. Refer to the ATC-601 Operation Manual for detailed information on the Setup Menus.

1) Use the SLEW key to change the values.

2) Use the SELECT keys to change the items.

3) Use the SELECT keys to select the antenna under test.

(g) In the RANGE field for the TOP and BOTTOM antennas, enter 0 feet.

(h) In the HEIGHT field for the TOP antenna, enter 17 feet.

(i) In the HEIGHT field for the BOTTOM antenna, enter 3 feet.

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MECH	INSP

(j) Set the SELECTED field, enter the UUT antenna, TOP or BOTTOM.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

(k) Enter the cable loss listed on the cable in the LOSS field.

NOTE: The cable loss can be found on the direct connect cable for the test set.

(l) Press any key to exit SETUP #1 MENU

AKS 001-023

(m) Enter the required setup data for the ADS-B tests into the Setup #3 MENU.

NOTE: Refer to the ATC-601 Operation Manual for detailed Setup information.

1) Push the SETUP key until the SETUP #3 MENU shows.
2) Select POS: Set to LOCAL.
3) Select LLAT: Set the local latitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, AMM TASK 34-58-00-710-802), if not, use the IRS position.

4) Select LLONG: Set the local longitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, AMM TASK 34-58-00-710-802), if not, use the IRS position.

5) Select SPEC SERV: Set to DF17.

AKS ALL

SUBTASK 34-53-00-840-013

(11) For the Flat Antenna method, do these steps to prepare the ATC-601 Series ramp test set, COM-4113 to test the ATC transponder:

NOTE: The ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.

NOTE: Refer to the ATC-601 Operating Manual for detailed information on setup, test screens, and interpreting results of the tests.

NOTE: It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH | INSP

CAUTION: KEEP THE REMOTE TEST SET ANTENNA MORE THAN 15 INCHES (0.40 METERS) FROM THE AIRCRAFT ANTENNA WITH THE TEST SET ON. IF THE REMOTE TEST SET ANTENNA IS TOO NEAR THE AIRCRAFT ANTENNA, YOU CAN CAUSE DAMAGE TO THE TEST SET.

(a) Put the test set flat antenna approximately 30 feet from and in the line of sight of the ATC antenna.

NOTE: The flat antenna must be in the line of sight of the ATC antenna and positioned towards the antenna.

NOTE: For the DIVERSITY test, the test set must be at a distance of less than 50 feet (15.2 meters) from the airplane ATC antenna.

(b) Insert the Antenna Shield over the ATC antenna not under test.

NOTE: Refer to the ATC-601 Operation Manual for the Antenna Shield mounting procedure.

NOTE: When testing the bottom antenna and shielding the top antenna is not possible or practical, move the Test Set so that it is not in the line of sight of the top ATC antenna.

(c) Connect the test set antenna cable to the ATC-601 Series ramp test set, COM-4113 ANTENNA connector.

(d) Push the POWER button on the ATC-601 Series ramp test set, COM-4113.

NOTE: This is a source of interference for radio and L-band radar equipment operating on the airplane and located near the test set. Turn the test set off as soon as the test is completed or when you must perform other radio checks on the airplane.

1) The Start-Up screen will show.

2) Make sure the software version shown on the screen is 3.0 or higher if you are to do Enhanced Surveillance Tests.

(e) Push the SELF TEST key on the test set.

(f) Push the RUN/STOP key to start the self test.

1) Make sure the test set display shows PASSED.

(g) Push the SETUP key to enter the data in the SETUP #1 MENU. If the SETUP #1 MENU does not show, continue to push the SETUP key until the SETUP #1 MENU shows.

NOTE: The ATC-601 has four Setup Menus. Refer to the ATC-601 Operation Manual for detailed information on the Setup Menus.

1) Use the SLEW keys to change the values.

2) Use the SELECT keys to change the items.

3) Use the SLEW keys to select the necessary antenna.

(h) In the RANGE field for the TOP and BOTTOM antennas, enter the distance between the tester antenna and the ATC antennas.

(i) In the HEIGHT field for the TOP antenna, enter 17 feet.

(j) In the HEIGHT field for the BOTTOM antenna, enter 3 feet.

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MECH | INSP

(k) In the SELECTED field, enter the UUT antenna, TOP or BOTTOM.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

(l) Enter the gain listed on the ATC-601 Series ramp test set, COM-4113, antenna into the GAIN_1030 and GAIN_1090 field.

(m) Enter the cable loss listed on the cable in the LOSS field.

(n) Press any key to exit SETUP #1 MENU

AKS 001-023

(o) Enter the required setup data for the ADS-B tests into the Setup #3 MENU.

NOTE: Refer to the ATC-601 Operation Manual for detailed Setup information.

1) Push the SETUP key until the SETUP #3 MENU shows.

2) Select POS: Set to LOCAL.

3) Select LLAT: Set the local latitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, AMM TASK 34-58-00-710-802), if not, use the IRS position.

4) Select LLONG: Set the local longitude position.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, AMM TASK 34-58-00-710-802), if not, use the IRS position.

5) Select SPEC SERV: Set to DF17.

AKS ALL

SUBTASK 34-53-00-862-001

(12) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-860-029

WARNING: OBEY THE PROCEDURE THAT PUTS THE AIRPLANE IN THE AIR MODE. IF YOU DO THE PROCEDURE INCORRECTLY, INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

(13) Put the airplane in the air mode with the BITE in the Proximity Switch Electronics Unit (PSEU), do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

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MECH | INSP

SUBTASK 34-53-00-860-062

(14) Set the Mode Select switch to the ALT ON position.

C. ATC System Test - Mode A/C and Mode S Transponders

SUBTASK 34-53-00-730-031

(1) You can select to do the transponder tests in either the Auto Test or Single Test sequence.

NOTE: The AUTO TEST sequence is the preferred method.

SUBTASK 34-53-00-730-032

(2) Do these steps to do the Auto Test sequence:

NOTE: The ATC-601 Series ramp test set, COM-4113 will automatically determine the capabilities of the transponder and select the tests to run. The results of tests done during the AUTO TEST are stored in memory. The SELECT keys are used to show the test results.

NOTE: Refer to the ATC-601 Operation Manual for detailed information.

(a) Push the AUTO TEST key on the ATC-601 Series ramp test set, COM-4113.

(b) Use the RUN/STOP key to start the Auto Test.

NOTE: During the Auto Test, TEST RUNNING, will show at the bottom of the display.

1) The Auto Test will run until it is finished. The results are stored in the tester memory for review.

2) Make sure that an AUTO TEST - PASSED indication shows at the top of the display after the Auto Test.

NOTE: For ATC transponders with enhanced surveillance capabilities, the ATC-601 ramp test set includes the Tests for Enhanced Surveillance in the AUTO TEST sequence. If the Flight ID is not directly entered into the ATC transponder or supplied by the FMC, a failure will occur.

NOTE: The Frequency, Power measurements and Diversity Isolation are also shown on the Auto Test screen.

NOTE: No reply to the UF16, UF20 or UF21 test is not a failure of the ATC system.

NOTE: ”NOT AVAIL” is not a failure of the ATC system. Currently, Boeing aircraft are not using Uplink Extended Length Message (UELM) or Downlink Extended Length Message (DELM) and do not require Airborne Data Link Process (ADLP). An ADLP is necessary for the UELM or DELM function and results in a NOT AVAIL test result when not present.

3) Do a check of the FREQUENCY TEST (for ATCRBS transponders and 1B, 2B and 3B Mode S transponders).

a) Do a visual check of the ATC-601 Series ramp test set, COM-4113 display to make sure that the reply frequency of the transponder is 1090 ± 3 MHz.

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MECH	INSP

4) Do a check of the FREQUENCY TEST (for 1A, 2A and 3A and 4 Mode S transponders).

a) Do a visual check of the ATC-601 Series ramp test set, COM-4113 display to make sure that the reply frequency of the transponder is 1090 ± 1 MHz.

NOTE: Due to limitation of the ATC-601-series test set, the auto test function can cause a false PASS indication. The ATC-601-series test set only verifies a reply frequency range of 1090 ± 3 MHz.

NOTE: This check also applies to classes 1B, 2B and 3B Mode S transponders which incorporate the optional reply frequency of 1090 ± 1 MHz.

5) Make sure the AA (aircraft address) field shows the correct Mode S Address. Refer to WDM 34-53-11 or WDM 34-53-21 for the Mode S Address code.

6) If a test section fails or more data is necessary, do the Single Test procedure to view or to do individual tests.

SUBTASK 34-53-00-730-030

(3) If necessary, do these steps to do the Single Test sequence:

(a) Use the SELECT key to select each test on the ATC-601 Series ramp test set, COM-4113.

(b) Use the RUN/STOP key to start or stop the individual tests.

NOTE: Each Single Test continues until stopped. Use the RUN/STOP key to stop the test.

(c) Make sure that the display shows PASSED for each test.

(d) Review the test results.

NOTE: Refer to the ATC-601 Operation Manual for detailed information on test screens and interpreting results of the tests

AKS 001-023

D. ATC System Test - Tests for Enhanced Surveillance

SUBTASK 34-53-00-730-033

(1) For airplanes with Enhanced Surveillance capabilities, the ATC-601 Series ramp test set, COM-4113 will include the Enhanced Surveillance tests in the AUTO TEST sequence. Use the SELECT keys to see the test results after the AUTO TEST is completed.

NOTE: ATC-601 test sets with software version 3.0 or higher must be used to do the Enhanced Surveillance tests.

(2) The SINGLE TEST sequence can also be used to do the Enhanced Surveillance tests. Use the SELECT keys to select the test to do and view the test results.

Make sure that the display shows PASSED for each test.

NOTE: Results from the last test run, Auto Test or Single Test, are shown on the display.

NOTE: Refer to the ATC-601 Operation Manual for detailed setup and test information.

(3) The tests that follow are for Elementary Surveillance:

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued) | MECH | INSP

- Flight ID BDS 2,0
- Data Link Capability Report BDS 1,0 Part 1
- Data Link Capability Report BDS 1,0 Part 2
- Common Usage GICB Cap Report BDS 1,7
- ACAS Resolution Advisory BDS 3,0

(4) The tests that follow are for Enhanced Surveillance:

- Selected Vert Intent Report BDS 4,0 Part 1
- Selected Vert Intent Report BDS 4,0 Part 2
- Track & Turn Report BDS 5,0
- Heading & Speed Report BDS 6,0

E. ATC System Test - Tests for ADS-B

SUBTASK 34-53-00-730-034

(1) For airplanes with ADS-B capabilities, the ATC-601 Series ramp test set, COM-4113 will include the ADS-B tests in the AUTO TEST sequence. Use the SELECT keys to see the test results after the AUTO TEST is completed.

NOTE: Refer to the ATC-601 Operation Manual for detailed setup and test information.

(2) The SINGLE TEST sequence can also be used to do the ADS-B tests. Use the SELECT keys to select the test to do and view the test results.

NOTE: Results from the last test run, Auto Test or Single Test, are shown on the DISPLAY.

(3) The tests that follow are for ADS-B:

- Ext Squitter Airborne Position BDS 0,5
- Ext Squitter Ident & Category BDS 0,8

(4) Do a check of the ADS-B test results.

NOTE: The test results that follow satisfy the EASA AMC 20-24 requirements for ADS-B.

(a) Do a check of the Airborne Position

1) Use the SELECT keys to select the Ext Squitter Airborne Position test.
2) Make sure that the LAT and LONG fields show the present position of the airplane.

(b) Do a check of the Pressure Altitude.

1) Use the SELECT keys to select the Ext Squitter Airborne Position test.
2) Make sure that the BARO PR ALT field shows the airplane Barometric Pressure Altitude +/-125 ft.

(c) Do a check of the Surveillance Status.

1) Notify local ATC facilities that transponder testing of the Surveillance Status will be performed.
2) Use the SELECT keys to select the Ext Squitter Airborne Position test.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued) | MECH | INSP

3) On the ATC control panel, change the code switches to a different ATC ID code.

4) Make sure that the SURVL STAT field changes to TEMP ALERT.

NOTE: Current Boeing aircraft do not have an Airborne Data Link Processor (ADLP) installed and the transponders do not have an embedded ADLP. The SURVL STAT should show NO INFO.

5) Set code switches on the ATC control panel back to the original code.

6) Push the IDENT switch on the ATC Control Panel.

7) Make sure that the SURVL STAT field shows SPI.

NOTE: Current Boeing aircraft do not have an Airborne Data Link Processor (ADLP) installed and the transponders do not have an embedded ADLP. The SURVL STAT should show NO INFO.

(d) Do a check of the Position Quality Indicator.

1) Use the SELECT keys to select the Ext Squitter Airborne Position test.

2) Make sure that the TYPE field does not show 0 or 18.

NOTE: If TYPE shows 0 the transponder does not receive position data from the IRS or MMR. A TYPE of 18 indicates the transponder receives position data but not from the MMR.

(e) Do a check of the Aircraft Identity.

1) Use the SELECT keys to select the Ext Squitter Ident & Category test.

2) Make sure that the correct data is shown in the following fields:

a) The AA (aircraft address) field shows the Mode S Address. Refer to (WDM 34-53-11 and WDM 34-53-21) for the Mode S Address code.

b) The FLIGHT ID field shows the same Flight ID entered into the FMC.

I **AKS ALL**

F. Repeat ATC System Tests

SUBTASK 34-53-00-730-025

(1) Repeat the System Test for the other antenna.

(a) For the Direct Connect method.

1) Change the ATC-601 Series ramp test set, COM-4113 antenna cable to connect to the other ATC antenna switch.

2) Change the ATC-601 Series ramp test set, COM-4113 SELECTED field in the SETUP #1 MENU to test the other antenna.

(b) For the Flat Antenna method.

1) Change the ATC-601 Series ramp test set, COM-4113 SELECTED field in the SETUP #1 MENU to test the other antenna.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH | INSP

(2) Do the ATC System Tests again for the right or No. 2 system.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

(a) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2

(b) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

(c) To test the right or No. 2 system, put the ATC select switch to the No. 2 position and use the No. 2 (or No. 1) air data source.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 34-53-00-860-063

(1) Set the mode selector on the ATC control panel to the STBY position.

SUBTASK 34-53-00-080-006

(2) For the Flat Antenna method, remove the antenna shield cover, if installed.

SUBTASK 34-53-00-080-007

(3) For the Direct Connect method, do these steps to disconnect the antenna cable from the ATC antenna switch:

(a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

(b) Disconnect and remove the ATC-601 Series ramp test set, COM-4113 antenna cable.

(c) For ATC antenna (coax) switch S942, connect connector D2703 (ATC Top Antenna) (WDM 34-53-31).

(d) For ATC antenna (coax) switch S943, connect connector D2707 (ATC Bottom Antenna) (WDM 34-53-31).

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH | INSP

(e) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
B	5	C00186	ATC 1

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	14	C00188	ATC 2
E	14	C01194	ATC ANT SWITCH

SUBTASK 34-53-00-840-008

(4) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-902-001

(5) Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

SUBTASK 34-53-00-700-002

(6) Do this task: Air Traffic Control System - Operational Test, AMM TASK 34-53-00-710-801

SUBTASK 34-53-00-860-060

(7) Set the ADIRU switches to the OFF position, if the ADIRUs are not necessary.

SUBTASK 34-53-00-840-014

(8) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——— END OF TASK ———

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-110-00-02

MECH | INSP

TASK 34-53-00-730-806

2. ATC System Test (With the TR-220 Test Set)

A. General

(1) This system test is a full check of the ATC system. The system test first does the ATC - Operational Test and then uses the test set to examine the left and right ATC systems.

(2) The TR-220 Test Set is capable of testing ATCRBS Mode A, Mode C and Mode S transponders. The operator can select between an Automatic series of tests and a Manual series of tests. The Test Set will determine the correct set of tests, either Mode A/C or Mode S upon receiving the transponder RF signal. The TR-220 can also test Mode S Transponders with Enhanced Surveillance (EHS) capabilities.

AKS 001-023

(3) The TR-220 Test Set with software version 5.20 or higher can also test the Automatic Dependent Surveillance Broadcast (ADS-B) functions. The ADS-B tests satisfy the EASA AMC 20-24 requirements.

AKS ALL

(4) The test set can do all of the tests automatically except the IDENT BUTTON CHECK. You must do this test manually with the test set. If a test has failed, the automatic test sequence will stop and a failed message will show. At the end of the automatic test all data will show.

(5) You can manually do each test individually. Push the AUTO/TEST/MANUAL switch to the MANUAL position to do each test individually. The test results will show after each test is done. After each test is completed, you must toggle the MANUAL switch to advance to the next test in the series.

(6) Operation with the antenna coupler TAP-200 used with the test set, reduces Radio Frequency emissions from the transponder being tested. It is not necessary to use the coupler to perform these tests.

(7) If it is necessary to simulate the aircraft at altitude, notify the local ATC that the transponder testing is in progress.

B. Prepare for the System Test

AKS 001-023

SUBTASK 34-53-00-580-003

(1) If the ADS-B tests will be run as part of the ATC System test the airplane location must let the GPS antennas have a clear view of the GPS satellites.

AKS ALL

SUBTASK 34-53-00-861-002

(2) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

SUBTASK 34-53-00-860-043

(3) Make sure that these systems are operational:

(a) Digital Flight Control System (AUTOFLIGHT, AMM CHAPTER 22)

(b) Air Data Inertial Reference System (NAVIGATION, AMM CHAPTER 34)

(c) Instrument Landing System (NAVIGATION, AMM CHAPTER 34)

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH	INSP

(d) Air Traffic Control System (NAVIGATION, AMM CHAPTER 34)

(e) Flight Management Computer System (NAVIGATION, AMM CHAPTER 34)

SUBTASK 34-53-00-710-007

(4) Do this task: Air Traffic Control System - Operational Test, AMM TASK 34-53-00-710-801.

SUBTASK 34-53-00-860-044

(5) On the ATC control panel do these steps:

(a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.

(b) Set the transponder select switch to the No. 1 system.

(c) Set the mode select switch to the ALT ON position.

(d) Set the ALT source switch to the No. 1 (or No. 2) air data source position.

SUBTASK 34-53-00-860-045

(6) Set the captain's and first officer's altimeter to 29.92 inches of mercury.

AKS 001-023

SUBTASK 34-53-00-860-046

(7) Set a selected altitude.

(a) Set a desired altitude in the DFCS MCP Selected Altitude window.

SUBTASK 34-53-00-860-047

(8) Select a Flight ID.

(a) Select the RTE function key on the FMC MCDU.

(b) Make sure page 1 is shown.

NOTE: If needed push the next page function key on the MCDU until page 1 is shown.

(c) Enter a Flight ID on the MCDU scratchpad (i.e. BOE1234).

(d) Select LSK 2R on the MCDU.

AKS ALL

SUBTASK 34-53-00-860-048

WARNING: OBEY THE PROCEDURE THAT PUTS THE AIRPLANE IN THE AIR MODE. IF YOU DO THE PROCEDURE INCORRECTLY, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(9) Put the airplane in the air mode with the BITE in the Proximity Switch Electronics Unit (PSEU), do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

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MECH | INSP

SUBTASK 34-53-00-860-049

(10) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-860-050

(11) Prepare the TR-220 ramp test set, COM-10728 and the antenna coupler, if desired, for the ATC system test:

NOTE: The TR-220 ramp test set has an ‘‘auto test’’ function which checks more parameters of the transponder under test, than are required by FAR 43, Appendix F. Ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results and compliance with FAR 43, Appendix F.

NOTE: Refer to the TR-220 Operating Manual for detailed information on setup, test screens, and interpreting results of the tests.

(a) Connect the test set antenna, or antenna coupler, coax connector to the test set ANTENNA connector.

NOTE: You can use the direct cable connection procedure to perform this test. If you do the direct cable connection, follow the instructions in the ramp test set Operating Manual.

(b) Put the TEST SET switch in the ON position.

1) The test set will display a startup screen, then do a self test.

a) Make sure the display indicates SELF TEST PASS.

(c) Turn the UUT FUNCTION switch on the test set to the XPDR position.

1) The test set will determine the transponder type and display the correct Start Page.

a) Make sure the test set shows the correct transponder type.

NOTE: If the test set shows "no reply from xpdr", do a check on the test antenna connections. Also, make sure the ATC system is serviceable.

C. ATC System Test - Mode A/C and Mode S Transponders

SUBTASK 34-53-00-730-016

(1) You can select to do these Mode A/C or Mode S tests in either an Automatic or Manual Test sequence.

NOTE: Make sure you consult FAR 91.413 and PART 43 Appendix F for test requirements and acceptable results.

NOTE: The TR-220 Operating Manual also contains information about the tests.

(a) Mode A/C test sequence.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH	INSP

- Mode A Test
- Mode C Test
- Mode A SLS Test
- Sensitivity Test
- Power and Frequency Test

(b) Mode S test sequence.

- Mode A Test
- Mode C Test
- Mode A SLS Test
- Mode A All Call Test
- Mode C All Call Test
- Mode A Only Test
- Mode C Only Test
- Mode S Surveillance Identity Test
- Mode S Surveillance Altitude Test
- Mode S Short Air to Air Surveillance Test
- Mode S Communication Identity Test
- Mode S Communication Altitude Test
- Undesired Replies Test
- Squitter Test
- Max True Airspeed Test
- Diversity Test
- Sensitivity Test
- Power and Frequency Test

NOTE: For airplanes with Enhanced Surveillance functions, the TR-220 test set includes the Flight ID test in the MODE S test sequence.

SUBTASK 34-53-00-730-017

(2) Do these steps to run the Automatic Test sequence.

(a) Toggle the AUTO/TEST/MANUAL switch to the AUTO position. The test set starts an automatic sequence of tests on the transponder.

(b) When the Automatic Test sequence completes with no failures, the display window shows two alternating sets of data.

(c) Make sure the AA (aircraft address) field shows the correct Mode S Address. Refer to WDM 34-53-11 or WDM 34-53-21 for the Mode S Address code.

(d) If a test fails during the Automatic Test sequence, the test set stops at that test. The display window shows FAIL along with the framing pulses, pulse width and separation in microseconds.

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MECH	INSP

1) You can override and skip to the next test in the sequence by toggling the AUTO/TEST/MANUAL switch to the AUTO position.

NOTE: It is recommended that the cause of the failure be determined before you do the next test.

2) To repeat a failed test, toggle the AUTO/TEST/MANUAL switch to the MANUAL position.

SUBTASK 34-53-00-730-018

(3) Do these steps to run the Manual Test sequence.

(a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the first test of the transponder. The display window shows the name of the test and the word Testing.

(b) When the test is complete the display window shows the test name and the test results.

(c) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the next test in the sequence.

SUBTASK 34-53-00-730-019

(4) Do these steps to do the IDENT TEST.

NOTE: The IDENT function can only be tested in the Manual Test sequence for either the Mode A/C or Mode S transponder.

(a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the first test of the transponder. The display window shows the name of the test and the word Testing.

(b) Wait until the display window shows the test results.

(c) Push the IDENT switch on the ATC control panel.

1) IDENT should show on the TR-220 ramp test set, COM-10728 display window for 20 seconds to make sure the SPI pulse is received from the transponder.

SUBTASK 34-53-00-730-023

(5) Do these steps to do the Mode S Surveillance Altitude Test.

(a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position until M S SURV ALT is shown.

(b) Make sure that the altitude value shown on the TR-220 ramp test set, COM-10728 display agrees with the altitude on the captain's and first officer's altimeter within ±125 feet.

I **AKS 001-023**

D. ATC System Test - Additional Tests for Enhanced Surveillance

SUBTASK 34-53-00-730-020

(1) You can use the manual test sequence to do any additional tests required for enhanced surveillance.

NOTE: The TR-220 Operating Manual contains information about the tests.

(a) Mode S Enhanced Surveillance Test Sequence

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued)

MECH | INSP

- BDS5 Roll Angle
- BDS5 True Track Angle and Track Angle Rate
- BDS5 True Airspeed and Ground Speed
- BDS6 Indicated Airspeed, Heading and Mach Number
- BDS6 Barometric Altitude Rate and Inertial Vertical Velocity
- BDS 10 Datalink
- BDS1 Subnet Network Number
- BDS1 Mode S Specific Services Capability
- BDS1 Aircraft Identification Capability
- BDS1 Uplink UELM/Downlink DELM Capability
- BDS 1,7
- BDS 1,8
- BDS 1,9
- BDS3 Resolution Advisory
- BDS4 Selected Altitude
- BDS4 Barometric Pressure and Target Altitude
- BDS4 VNAV, ALT Hold, and Approach Modes

SUBTASK 34-53-00-730-035

(2) To check the Flight ID function, do the steps that follow:

NOTE: The TR-220 test set includes the Flight ID test in the MODE S test sequence.

(a) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position until the M S Comm ID test shows.

(b) Make sure that the Flight ID field shows the same Flight ID entered into the FMC.

NOTE: The Flight ID also shows on one of the two alternating displays at the end of the MODE S automatic test sequence.

SUBTASK 34-53-00-730-021

(3) To do the remaining Enhanced Surveillance tests, do these steps at the test set TR-220 ramp test set, COM-10728:

(a) Push the TO/START - FROM/STOP switch to the TO position to show the EHS menu.

1) Make sure the display window shows the Mode S Enhanced Surveillance menu.

(b) Push the UP/FWD - DOWN/REV switch to the UP position to select the applicable uplink/downlink format, UF5/DF21 or UF0/DF16. The recommended selection is UF0/DF16.

(c) Toggle the AUTO/TEST/MANUAL switch to MANUAL to start the first test.

NOTE: Test sequence starts at test previously run.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued) | MECH | INSP

1) When the test is complete, the results are shown on the display window.

2) Make sure that the data field shown is not blank.

(d) Toggle the AUTO/TEST/MANUAL switch to the MANUAL position to begin the next test in the sequence.

(e) Continue until the required tests are completed.

1) Make sure that the data fields shown are not blank.

E. ATC System Test - Additional Tests for ADS-B

NOTE: The TR-220 requires Software Version 5.20 or higher to perform the following ADS-B tests. The test results satisfy the EASA AMC 20-24 ADS-B requirements.

SUBTASK 34-53-00-730-028

(1) You can use the manual test sequence to do any additional tests required for ADS-B.

(a) The ADS-B Test Sequence is as follows:

NOTE: Airplane must be in the Ground Mode to display the BDS 0,6 Surface Position Report. Only the top ATC antenna will transmit the 0,6 SURFACE POS BDS.

- Airborne Position Report
- Surface Position Report
- Aircraft Identification and Type Report
- Airborne Velocity Report
- Velocity Hex
- Mode S Address
- Latitude & Longitude
- Airborne Surveillance Status
- Position Hex
- Type 28 Decoded
- Type 28 Hex
- Type 29 Decoded
- Type 29 Hex
- Type 31 Hex
- Horizontal Position Integrity

SUBTASK 34-53-00-730-029

(2) Do the ADS-B test setup.

NOTE: Refer to the TR-220 Operating Manual for detailed information on the ADS-B test setup.

(a) Set the test set UUT FUNCTION switch to the SETUP position.

(b) Toggle the AUTO/TEST/MANUAL switch to MANUAL to select the LAT/LON screen.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued)

MECH | INSP

(c) Set the local latitude and longitude positions.

1) Use the TO/START-FROM/STOP switch to select to the field that needs to be set.

2) Use the UP/FWD-DOWN/REV switch to change the values.

NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, AMM TASK 34-58-00-710-802), if not, use the IRS position.

SUBTASK 34-53-00-730-036

(3) Do the ADS-B tests.

NOTE: The test results that follow satisfy the EASA AMC 20-24 requirements for ADS-B.

(a) Set the UUT FUNCTION switch to ADS-B TX position.

NOTE: When the UUT FUNCTION switch is set to ADS-B TX, the display will first show the Position screen.

(b) Do a check of the Airborne Position.

1) On the Airborne Position screen, make sure that the Latitude/Longitude field shows the present position.

(c) Do a check of the Pressure Altitude.

1) On the Airborne Position screen, make sure that the Altitude field shows the airplane barometric pressure altitude +/- 125 ft.

(d) Do a check of the Aircraft Identity.

1) Set the AUTO/TEST/MANUAL switch to the MANUAL position to show the Identification screen.

2) Make sure that Flight ID field shows the same Flight ID entered into the FMC.

(e) Do a check of the Mode S Address.

1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until Mode S Address screen shows.

2) Make sure that the Mode S Address field shows the correct Mode S Address. Refer to (WDM 34-53-11, 34-53-21) for the Mode S Address code.

(f) Do a check of the Airborne Surveillance Status.

1) Notify local ATC facilities that transponder testing of the Surveillance Status will be performed.

2) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Airborne Surveillance Status screen shows

3) On the ATC control panel, change the code switches to a different ATC ID code.

4) Make sure that the SURV STAT field changes to TEMP ALERT.

5) Set code switches on the ATC control panel back to the original code.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued) | MECH | INSP

6) Push the IDENT switch on the ATC Control Panel.

7) Make sure that the SURV STAT field shows SPI.

(g) Do a check of the Airborne Position Quality Indicator.

1) Set the AUTO/TEST/MANUAL switch to the MANUAL position until the Position Hex screen shows.

2) Make sure that the TYP field does not show 0 or 18.

NOTE: If TYPE shows 0 the transponder does not receive position data from the IRS or MMR. A TYPE of 18 indicates the transponder receives position data but not from the MMR.

AKS ALL

F. Repeat ATC System Tests

SUBTASK 34-53-00-730-022

(1) Repeat the System Test for the other antenna.

(2) Do the ATC System Tests again for the right or No. 2 system on the upper and lower antennas.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

(a) To test the right system, put the ATC select switch to the No. 2 position.

G. Put the airplane back to its Usual Condition.

SUBTASK 34-53-00-840-012

(1) Put the mode select switch to the STBY position.

SUBTASK 34-53-00-080-004

(2) Disconnect and remove the antenna coupler, if installed.

SUBTASK 34-53-00-080-005

(3) Disconnect and remove the ATC test set.

SUBTASK 34-53-00-860-051

(4) Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

SUBTASK 34-53-00-860-052

(5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-862-007

(6) If the electrical power is no longer necessary, do this task: Remove Electrical Power, AMM TASK 24-22-00-860-812

——— END OF TASK ———

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

MECH | INSP

TASK 34-53-00-730-805

3. ATC System - System Test (With the IFR 6000 Test Set)

A. General

(1) This system test is a full check of the ATC system. The system test first does the ATC - Operational Test and then uses the IFR-6000 ramp test set, COM-10727 to examine the left and right ATC systems.

(2) The XPDR Mode of the IFR 6000 provides flight line test capability for ATCRBS and Mode S transponders using an Auto Test. The XPDR Auto Test contains one main screen (the Auto Test Screen) and up to 17 additional test screens. The Auto Test can complete a full FAR Part 43, Appendix F Test, providing decode and display of Elementary and Enhanced surveillance GICB extracted DAPs (Downlinked Aircraft Parameters) .

(3) A passed Auto Test complies with the FAR Part 43 Appendix F test requirements.

(4) All data normally required to verify transponder operation in accordance with FAR 91.413, Part 43, Appendix F, is shown on the Auto Test Screen. Details of individual tests conducted during the AUTO TEST are stored in memory in the Test Sets TEST LIST. Tests in the TEST LIST can be reviewed or run individually by use of DATA and SELECT keys.

(5) Different classes of transponders are tested to built-in test limits by selection of configuration files. If the class of transponder is unknown, generic configuration files are provided for ATCRBS and Mode S transponders that apply the widest system limits.

(6) Mode S Transponder level is automatically determined when running a test.

AKS 001-023

(7) The IFR-6000 can also test airplanes with ADS-B functions. The ADS-B tests are not included with the AUTO TEST. They have separate setup and test screens.

AKS ALL

(8) The test is applicable to the left and the right ATC system. Set the transponder select switch on the ATC control panel to the applicable position to do a test of that system.

B. Prepare for the System Test

AKS 001-023

SUBTASK 34-53-00-580-002

(1) If the ADS-B tests will be run as part of the ATC System test the airplane location must let the GPS antennas have a clear view of the GPS satellites.

AKS ALL

SUBTASK 34-53-00-860-042

(2) Make sure that these systems are operational:

(a) DFCS - DIGITAL FLIGHT CONTROL SYSTEM - ADJUSTMENT/TEST, AMM 22-11-00/501

(b) ADIRS - AIR DATA INERTIAL REFERENCE SYSTEM - ADJUSTMENT/TEST, AMM 34-21-00/501

(c) MMR - INSTRUMENT LANDING SYSTEM - ADJUSTMENT/TEST, AMM 34-31-00/501

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MECH	INSP

(d) ATC - AIR TRAFFIC CONTROL (ATC) SYSTEM - ADJUSTMENT/TEST, AMM 34-53-00/501

(e) FMCS - FLIGHT MANAGEMENT COMPUTER SYSTEM - ADJUSTMENT/TEST, AMM 34-61-00/501

SUBTASK 34-53-00-710-006

(3) Do this task: Air Traffic Control System - Operational Test, AMM TASK 34-53-00-710-801

SUBTASK 34-53-00-860-034

(4) Set the captain's and first officer's altimeter to 29.92 inches of mercury.

AKS 001-023

SUBTASK 34-53-00-860-057

(5) Set a selected altitude.

(a) Set a desired altitude in the DFCS MCP Selected Altitude window.

SUBTASK 34-53-00-860-058

(6) Select a Flight ID.

(a) Select the RTE function key on the FMC MCDU.

(b) Make sure page 1 is shown.

NOTE: If needed push the next page function key on the MCDU until page 1 is shown.

(c) Enter a Flight ID on the MCDU scratchpad (i.e. BOE1234).

(d) Select LSK 2R on the MCDU.

AKS ALL

SUBTASK 34-53-00-860-035

(7) On the ATC control panel do these steps:

(a) Set the code switches to a desired ATC ID code.

NOTE: Use the ATC ID code 7776 or the Mode A code specified by the local ATC authority.

Do not use codes 7500, 7600-7677, 7700-7775 and 7777. These are emergency codes.

(b) Set the transponder select switch to the No. 1 position.

(c) Set the Mode Select switch to the ALT ON position.

(d) Set the ALT source switch to the No. 1 (or No. 2) air data source position.

SUBTASK 34-53-00-865-003

(8) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-860-037

(9) Put the airplane in the air mode with the BITE in the Proximity Switch Electronics Unit (PSEU), do this task:Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801

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SUBTASK 34-53-00-840-011

MECH | INSP

(10) Prepare the IFR-6000 ramp test set, COM-10727, for the ATC system test.

NOTE: The IFR-6000 ramp test set has an ‘‘auto test’’ function which checks more parameters of the transponder under test, than are required by FAR 43, Appendix F. Ramp test set operating instructions provides charts, distance limitations and required airplane antenna configurations for satisfactory ramp test set results. It is recommended that the ramp test set operator have the most current operating instructions for the ramp test set and be familiar with its operation when determining the acceptability of transponder results and compliance with FAR 43, Appendix F.

NOTE: The software version for the IFR-6000 ramp test set should be version 1.03.02 or higher for the ATC system test.

(a) Mount the Directional Antenna on the Test Sets friction hinge and connect the Directional Antenna ANT Connector to the Test Set ANT Connector via the 12 in. coaxial cable.

NOTE: You can use the direct cable connection procedure to perform this test. If you do the direct cable connection, follow the instructions in the ramp test set operations manual.

(b) Push the POWER Key to energize the Test Set On.

NOTE: The IFR 6000 is equipped with a Self Test for quick performance evaluation. An abbreviated Self Test is run at Power-Up. The full Self Test is initiated manually. Refer to the IFR 6000 Operation Manual for the full Self Test procedure.

(c) Push the SETUP Control Key to show the setup screens. Continue pushing the SETUP Control Key to cycle to the SETUP-GENERAL Screen. Use the NEXT PARAM and PREV PARAM Soft Keys to set each parameter.

NOTE: Refer to the IFR 6000 Operation Manual for detailed information on setup.

(d) Push the SETUP Control Key to show the setup screens. Continue pushing the SETUP Control Key to cycle to the SETUP-XPDR Screen. Use the NEXT PARAM and PREV PARAM Soft Keys to set each parameter.

NOTE: Setup XPDR Screen contains parameters which determine operational characteristics of the XPDR Functional Mode. Unless otherwise stated, last used values are retained on Power-up.

1) Select ANTENNA: Set to TOP or BOTTOM depending on which aircraft antenna is under test.
2) Select RF PORT: Set to ANTENNA.
3) Select ANT RANGE: Set to setup range from IFR 6000 antenna to the Unit Under Test (UUT) Antenna.
4) Select ANT HEIGHT: Set to setup height from IFR 6000 antenna to the UUT Antenna.

NOTE: The lower antenna is approximately 4 feet (1.2 m) above ground level. The upper antenna is approximately 18 feet (5.5 m) above ground level.

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MECH	INSP

5) Select ANT CABLE LOSS: Set to cable loss found on cable.

6) Select ANT GAIN (dBi): set 1.03 GHz and 1.09 GHz antenna gain to figures marked on supplied Directional Antenna.

7) Select UUT ADDRESS: Set to AUTO (defaults to AUTO on power-up). AUTO selection Mode S address is obtained via ATCRBS/Mode S All Call (FAR Part 43, Appendix F approved method).

NOTE: Refer to the IFR 6000 Operation Manual for more detailed information on UUT Address selection.

8) Select DIVERSITY: Set to ON.

NOTE: If Diversity Isolation Test is enabled, make sure the Antenna Shield is installed to the top or bottom UUT antenna prior to running the test. Refer to IFR 6000 Operation Manual for the Antenna Shield mounting procedure.

NOTE: For the DIVERSITY test, the test set must be at a distance of less than 50 feet (15.2 meters) from the airplane antenna.

9) Select CHECK CAP: Set to YES.

10) Select PWR LIM: Set to FAR 43.

CAUTION: DO NOT OPERATE THE TEST SET WHEN ITS ANTENNA IS LESS THAN 15 IN. (381 MM) FROM THE AIRPLANE ANTENNA. DAMAGE TO THE TEST SET CAN OCCUR.

(e) Position the Test Set ≤50 feet from and in line of sight with the UUT antenna.

(f) Insert the Antenna Shield over the ATC antenna not under test.

NOTE: Refer to the IFR 6000 Operation Manual for the Antenna Shield mounting procedure.

NOTE: When testing the bottom antenna and shielding the top antenna is not possible or practical, move the Test Set so that it is not in the line of sight of the top ATC antenna.

C. ATC System Test

SUBTASK 34-53-00-730-012

(1) Do the ATC System Test:

NOTE: When first powered-up, the Test Set displays blank data fields. The last test results are displayed while Test Set remains powered on.

(a) Push the XPDR Mode Key on the IFR-6000 ramp test set, COM-10727 to return to XPDR Auto Test Screen.

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MECH	INSP

(b) Push the CONFIG Soft Key to show the XPDR CONFIG Screen. Use the Data Keys to select the desired configuration file. Push the RETURN Soft Key to confirm the selection.

NOTE: Eight predefined Configurations are provided to determine the PASS/FAIL limits applied to ERP, Frequency and MTL measurements. Configurations are named by class and option. Refer to the IFR 6000 Operation Manual for predefined Configuration details

NOTE: If the transponder class is not known, select the GENERIC ATCRBS or GENERIC MODE S configuration file.

(c) To do the Auto Test, push the RUN TEST Soft Key. When the Auto Test completes, a PASS or FAIL indication is shown at the top of the Auto Test screen.

NOTE: The Auto Test Screen is the primary test screen and displays most UUT parameters requiring user verification.

NOTE: A passed Auto Test complies with the FAR Part 43 Appendix F test requirements.

NOTE: Refer to the IFR 6000 Operation Manual for detailed information on test screens and interpreting results of the tests.

(d) Make sure the AA (aircraft address) field shows the correct Mode S Address. Refer to WDM 34-53-11 or WDM 34-53-21 for the Mode S Address code.

(e) Push the TEST LIST Soft Key to show the complete Auto Test List. Tests may be reviewed or run individually by use of the DATA and SELECT keys.

NOTE: When a Mode S configuration is selected the test list is displayed over two screens. When an ATCRBS configuration is selected the test list is displayed on one screen.

(f) To do the tests individually in the Test List, do these steps:

1) Use the DATA Keys to select desired test. Push the SELECT TEST Soft Key to show the selected test.
2) Push the RETURN Soft Key to show the XPDR Auto Test Screen.
3) Push the RUN TEST Soft Key to the start test.

NOTE: The test runs until stopped. Each pass through the test sequence updates the PASS/FAIL indication.

4) Push the STOP TEST Soft Key to the stop test.
5) Push the NEXT TEST Soft Key to show the next test.
6) Push the PREV TEST Soft Key to show the previous test.
7) Push the RETURN Soft Key to show the test list and select desired test.

I **AKS 001-023**

SUBTASK 34-53-00-730-027

(2) To do the tests for ADS-B, do the following:

(a) Do the ADS-B test setup

NOTE: Refer to the IFR 6000 Operation Manual for detailed information on ADS-B test setup.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued)

MECH | INSP

1) Push the SETUP Key until the SETUP-XPDR Screen is shown.
2) Push the ADS-B SETUP Soft Key.
3) Set the parameters by pushing the NEXT PARAM soft key. Push the PREV PARAM to select the field. Use DATA Keys to slew the data.
   a) Select POS DECODE: Set to LOCAL
   b) Select LAT: Set the local latitude position.
      NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, AMM TASK 34-58-00-710-802), if not, use the IRS position.
   c) Select LONG: Set the local longitude position.
      NOTE: Position data is on the FMC CDU POS REF page. Use GPS position if GPS antennas have a clear view of the GPS satellites (Global Positioning System - Operational Test, AMM TASK 34-58-00-710-802), if not, use the IRS position.
   d) Select ADS-B MON: Set to DF17.
   e) Select GICB: Set to DF20.

(b) Do the ADS-B tests.

NOTE: Refer to the IFR-6000 Operation Manual for detailed information on test screens and interpreting results of the tests.

1) Push the XPDR mode key twice to show the ADS-B/GICB Main Menu.
2) Push the ADS-B MON Soft Key to show the ADS-B MON list screen.
   a) The ADS-B MON list screen will show the following extended squitter BDSs:
      - 0,5 AIRBORNE POS
      - 0,6 SURFACE POS
      - 0,8 IDENT & CAT
      - 0,9 AIRBORNE VEL
      - 6,1 A /C STATUS
      - 6,2 TARG STATE
      - 6,5 A /C OP STATUS
3) Push the RUN TEST soft key to start the test . When a specific extended squitter BDS is captured, AVAIL will be shown to the right of the BDS name.

   NOTE: The test will continue to run until the STOP TEST soft key is pushed.

   NOTE: Airplane must be in the Ground Mode to capture the 0,6 SURFACE POS BDS. Only the top ATC antenna will transmit the 0,6 SURFACE POS BDS.

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AKS 001-023 (Continued)

MECH | INSP

4) You can use the Data Keys to select a specific BDS and push the BDS DATA soft key to show the selected BDS screen.

NOTE: To show the next or previous BDS screen, push the NEXT TEST or PREV TEST soft keys.

5) Push the RETURN soft key to return to the ADS-B MON list screen.

(c) Do a check of the ADS-B test results.

NOTE: The test results that follow satisfy the EASA AMC 20-24 requirements for ADS-B.

1) Do a check of the Airborne Position.

a) Select the 0,5 BDS with the BDS Data soft key.

b) Make sure that the LAT and LONG fields show the position data entered in the ADS-B setup screen.

2) Do a check of the Pressure Altitude.

a) Select the 0,5 BDS with the BDS Data soft key.

b) Make sure that the BARO PRESS ALT field shows the airplane Barometric Pressure Altitude +/-125 ft.

3) Do a check of the Surveillance Status.

a) Notify local ATC facilities that transponder testing of the Surveillance Status will be performed.

b) Select the 0,5 BDS with the BDS Data soft key.

c) On the ATC control panel, change the code switches to a different ATC ID code.

d) Make sure that the SURVEILLANCE STATUS field changes to TEMP ALERT.

e) Set code switches on the ATC control panel back to the original code.

f) Push the IDENT switch on the ATC Control Panel.

g) Make sure that the SURVEILLANCE STATUS field shows SPI.

4) Do a check of the Position Quality Indicator.

a) Select the 0,5 BDS with the BDS Data soft key.

b) Make sure that the TYPE field does not show 0 or 18.

NOTE: If TYPE shows 0 the transponder does not receive position data from the IRS or MMR. A TYPE of 18 indicates the transponder receives position data but not from the MMR.

5) Do a check of the Aircraft Identity.

a) Select the 0,8 BDS with the BDS Data soft key.

b) Make sure that the correct data is shown in the following fields:

<1> The AA (aircraft address) field shows the Mode S Address. Refer to (WDM 34-53-11, 34-53-21)for the Mode S Address code.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-110-00-02

AKS 001-023 (Continued) | MECH | INSP

<2> The FLIGHT ID field shows the same Flight ID entered into the FMC (SUBTASK 34-53-00-860-058).

I **AKS ALL**

D. Repeat System Tests

SUBTASK 34-53-00-730-013

(1) Repeat the System Test for the other antenna.

SUBTASK 34-53-00-730-014

(2) Repeat the System Test for the No. 2 or right system on the upper and lower antennas.

NOTE: To meet FAR requirements both the left and right systems must be tested on both upper and lower antennas.

E. Put the Airplane Back to its Usual Condition

SUBTASK 34-53-00-080-003

(1) Set the mode selector on the ATC control panel to the STBY position.

(2) Remove the test set, IFR-6000 ramp test set, COM-10727.

(3) Remove the antenna shield, if installed.

SUBTASK 34-53-00-860-038

(4) Do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

SUBTASK 34-53-00-865-002

(5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	18	C00451	LANDING GEAR AURAL WARN

SUBTASK 34-53-00-862-006

(6) If the electrical power is no longer necessary, do this task:Remove Electrical Power, AMM TASK 24-22-00-860-812.

——— END OF TASK ———

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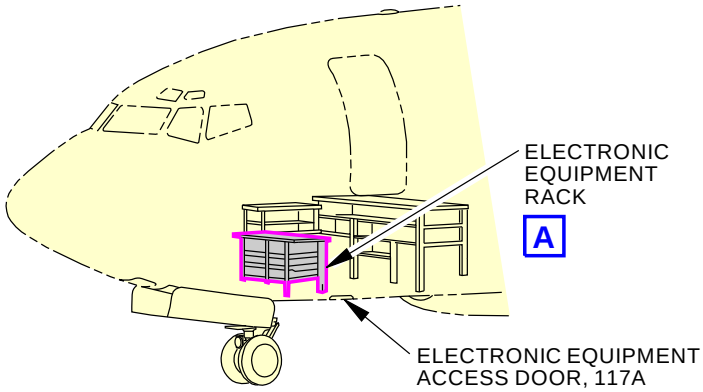
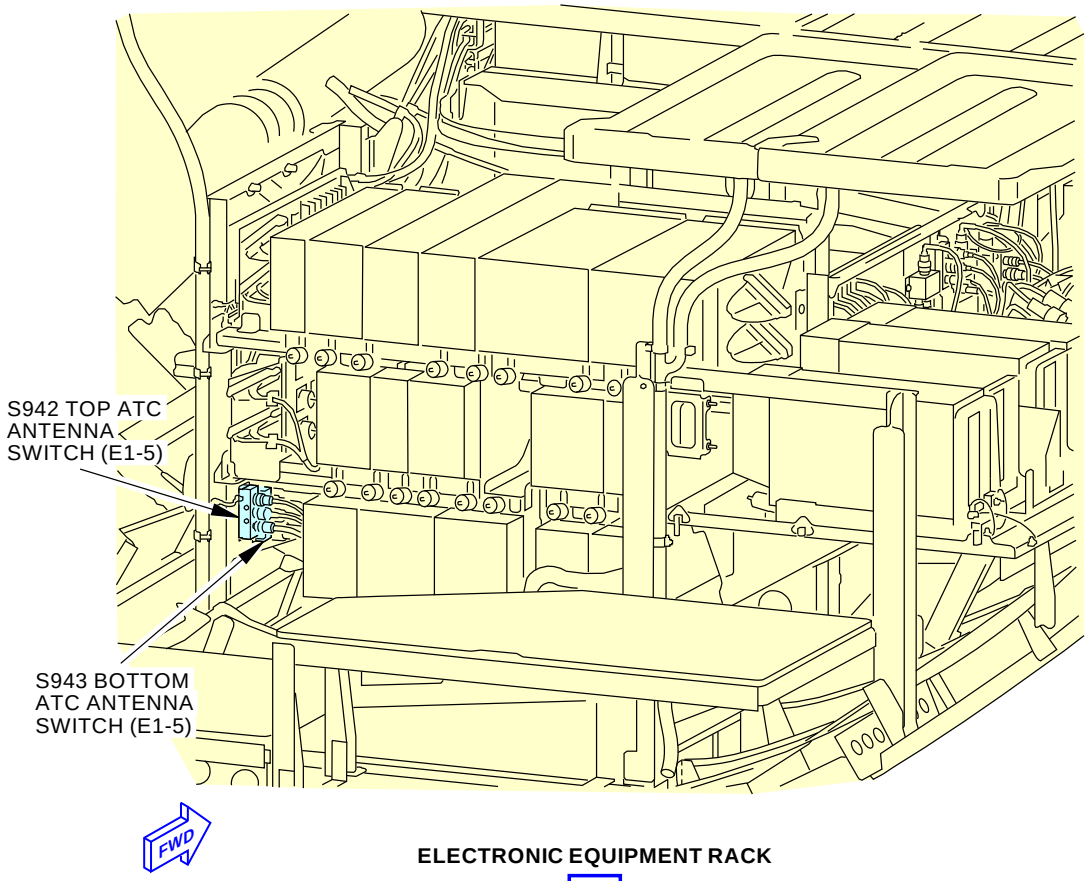
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-110-00-02





ELECTRONIC EQUIPMENT RACK

A

2106556 S0000449842_V3

ATC Antenna Switch Location
Figure 1

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		INTEGRATED STANDBY FLIGHT DISPLAY			**34-130-00-01**
DATE	TASK **REPLACE**				RELATED CARD
TAIL NUMBER	WORK AREA **E/E COMPARTMENT**	VERSION **1.1 NOTE**	THRESHOLD **3 YR**	REPEAT **3 YR**	APPLICABILITY AIRPLANE **ALL NOTE** ENGINE **ALL**
STATION	SKILL **ELEC**				
		ACCESS			ZONE **117**

Discard the dedicated battery/charger internal battery for the integrated standby flight display.

INTERVAL NOTE: At manufacture's life limit.

AIRPLANE NOTE: If Installed.

A. References

Reference	Title
AMM 06-41-00-800-801	Finding an Access Door or Panel on the Lower Half of the Fuselage (P/B 201)
AMM 20-10-07-000-801	E/E Box Removal (P/B 201)
AMM 20-10-07-400-801	E/E Box Installation (P/B 201)
AMM 20-40-12 P/B 201	ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES - MAINTENANCE PRACTICES
AMM 24-22-00-860-811	Supply Electrical Power (P/B 201)

B. Consumable Materials

Reference	Description	Specification
A00270	Compound - Threadlocking, Low-strength - Loctite 222	

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-130-00-01

MECH	INSP

TASK 34-24-03-000-801

1. ISFD Dedicated Battery Charger and Battery Pack Removal

(Figure 1)

A. Prepare for the removal

WARNING: REMOVE ELECTRICAL POWER AND GROUND THE UNIT BEFORE YOU DO MAINTENANCE WORK. THE UNIT CAN CONTAIN ELECTRICITY AND CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

SUBTASK 34-24-03-840-002

(1) Before you touch the battery charger or battery pack, do the procedure for devices that are sensitive to electrostatic discharge (ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES - MAINTENANCE PRACTICES, AMM 20-40-12/201

B. Removal Procedure - ISFD Dedicated Battery System

SUBTASK 34-24-03-860-001

(1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

SUBTASK 34-24-03-010-001

(2) To get access to the main equipment center, open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(AMM TASK 06-41-00-800-801).

SUBTASK 34-24-03-860-010

(3) Open this circuit breaker and attach a DO-NOT-CLOSE tag:

(a) Front of the battery charger, M2100, E4-1:

1) DBC Output Breaker

SUBTASK 34-24-03-020-001

CAUTION: DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE ISFD DEDICATED BATTERY CHARGER [1]. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ISFD DEDICATED BATTERY CHARGER [1].

(4) To remove the battery charger [1], do this task: E/E Box Removal, AMM TASK 20-10-07-000-801.

C. Removal Procedure - Battery Pack

SUBTASK 34-24-03-860-008

(1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-130-00-01

MECH	INSP

SUBTASK 34-24-03-010-002

(2) Do these steps to remove the battery pack from the ISFD dedicated battery system:

(a) Remove the 14 screws [4] from the battery charger cover [3].

(b) Remove the bottom screw from the hold down hook [2] on the front plate of the battery charger.

(c) Remove the battery charger cover [3] from the base.

(d) Disconnect the battery pack [5] from the battery charger power circuit board.

(e) Remove the battery pack [5] from the battery charger.

——— END OF TASK ———

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-130-00-01

MECH | INSP

TASK 34-24-03-400-801

2. ISFD Dedicated Battery Charger and Battery Pack Installation

(Figure 1)

A. Prepare for the installation

WARNING: REMOVE ELECTRICAL POWER AND GROUND THE UNIT BEFORE YOU DO MAINTENANCE WORK. THE UNIT CAN CONTAIN ELECTRICITY AND CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

SUBTASK 34-24-03-840-001

(1) Before you touch the battery charger or battery pack, do the procedure for devices that are sensitive to electrostatic discharge (ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES - MAINTENANCE PRACTICES, AMM 20-40-12/201

B. Installation Procedure - Battery Pack

SUBTASK 34-24-03-860-009

(1) Do these steps to install the battery pack in the ISFD dedicated battery system:

(a) Make sure that the spacer [6] and the insulators [7] are oriented as shown in Figure 1

(b) Put a serviceable battery pack [5] in the battery charger base.

NOTE: The battery pack is serviceable when it has between 20 Vdc and 25Vdc. The battery pack is charged to 27.5Vdc in less than 150 minutes by the dedicated battery charger, and is maintained at 25Vdc by the charger.

(c) Connect the battery pack [5] to the battery charger power circuit board.

(d) Install the battery charger cover [3] to the battery charger base by aligning the screw holes in the cover with the screw holes in the base.

(e) Apply a small amount of Loctite 222 compound, A00270 to the 14 screws [4] removed from the battery charger cover.

(f) Attach the battery charger cover [3] to the base with the 14 screws [4].

1) Torque the 14 screws [4] to 5 ±1 in-lb (0.6 ±0.1 N·m).

(g) Install the bottom hold down hook [2] screw.

1) Torque the screw to 16 ±1 in-lb (1.8 ±0.1 N·m)

C. Installation Procedure - ISFD Dedicated Battery System

SUBTASK 34-24-03-860-006

(1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

SUBTASK 34-24-03-860-003

(2) Make sure that this circuit breaker is open:

(a) Front of the battery charger, M2100, E4-1:

1) DBC Output Breaker

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SUBTASK 34-24-03-420-001

CAUTION: DO NOT TOUCH THE CONNECTOR PINS OR OTHER CONDUCTORS ON THE BATTERY CHARGER. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE BATTERY CHARGER.

(3) To install the battery charger [1], do this task: E/E Box Installation, AMM TASK 20-10-07-400-801.

SUBTASK 34-24-03-860-007

(4) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

SUBTASK 34-24-03-860-004

(5) Remove the DO-NOT-CLOSE tag and close this circuit breaker:

(a) Front of the battery charger, M2100, E4-1:

1) DBC Output Breaker

SUBTASK 34-24-03-710-001

(6) Make sure that the red light on the face of the battery charger is not on.

D. Installation Test

SUBTASK 34-24-03-860-005

(1) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

SUBTASK 34-24-03-700-001

(2) Make sure a display shows on the integrated standby flight display.

NOTE: The display will show flags for approximately 15 seconds. After approximately 3 minutes, the display will change to an attitude display.

SUBTASK 34-24-03-700-002

(3) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

SUBTASK 34-24-03-700-003

(4) Make sure a display shows on the integrated standby flight display.

NOTE: This step tests the dedicated battery operation. The battery is replaced every three years for normal maintenance.

NOTE: To restart the display initialization, push and release the ATT RST button on the face of the ISFD.

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-130-00-01

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SUBTASK 34-24-03-700-004

(5) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	8	C01551	ISFD

SUBTASK 34-24-03-710-002

(6) Make sure that the red FAULT light on the face of the battery charger is not on.

NOTE: If the fault light is not on and a display shows on the integrated standby flight display, the battery charger is serviceable.

(a) The red FAULT light comes on when there is a fault with the battery charger or the battery, from one or more of these conditions:

1) Battery charger operating temperature is more than the maximum 180°F (83°C) or less than the minimum 5°F (-15°C).

2) Battery charger circuits do not provide the correct output voltage.

3) Voltage levels of the cells in the battery pack are not equal.

SUBTASK 34-24-03-410-002

(7) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(AMM TASK 06-41-00-800-801).

——— END OF TASK ———

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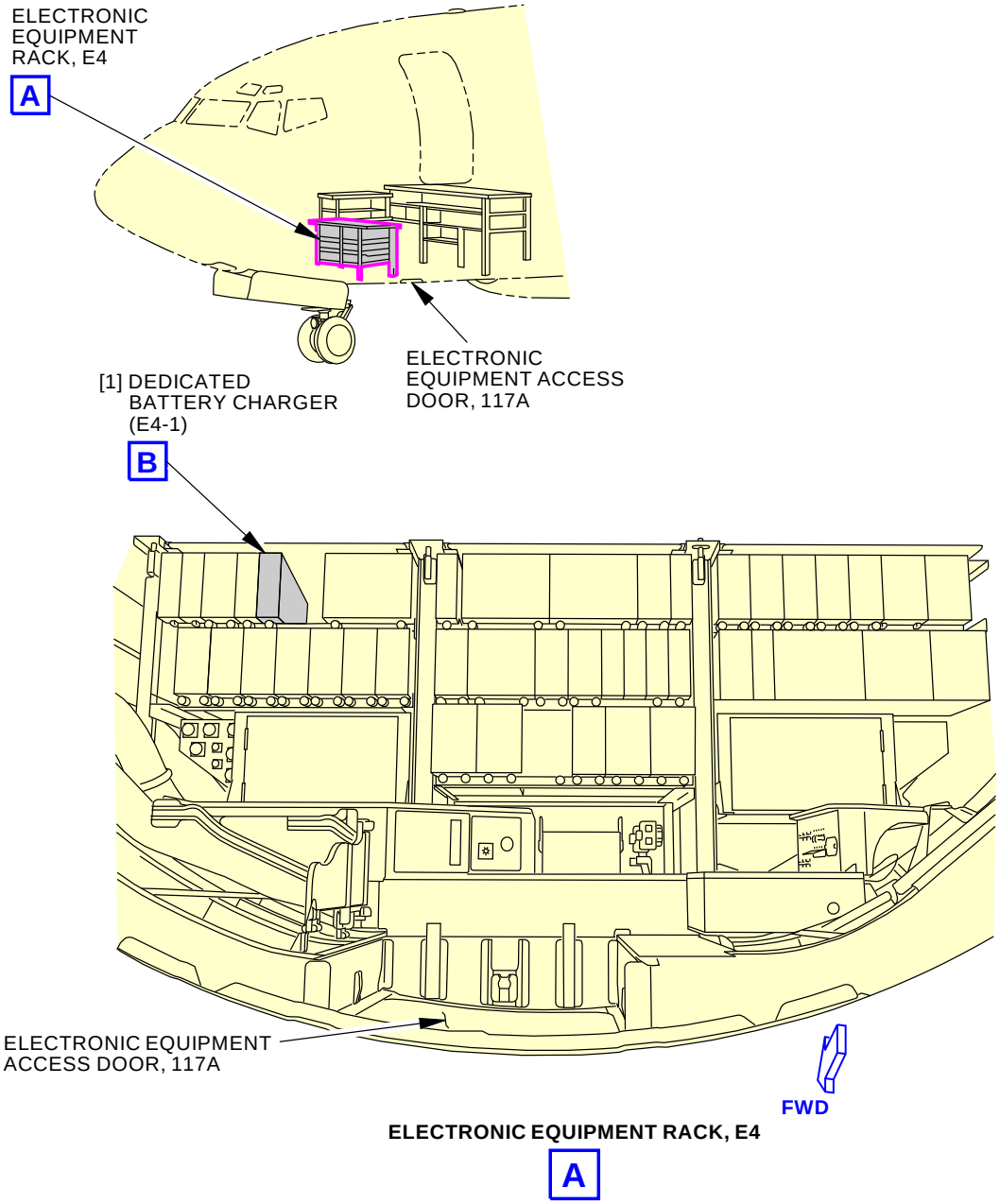
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-130-00-01



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ISFD Dedicated Battery Charger Installation
Figure 1 (Sheet 1 of 2)

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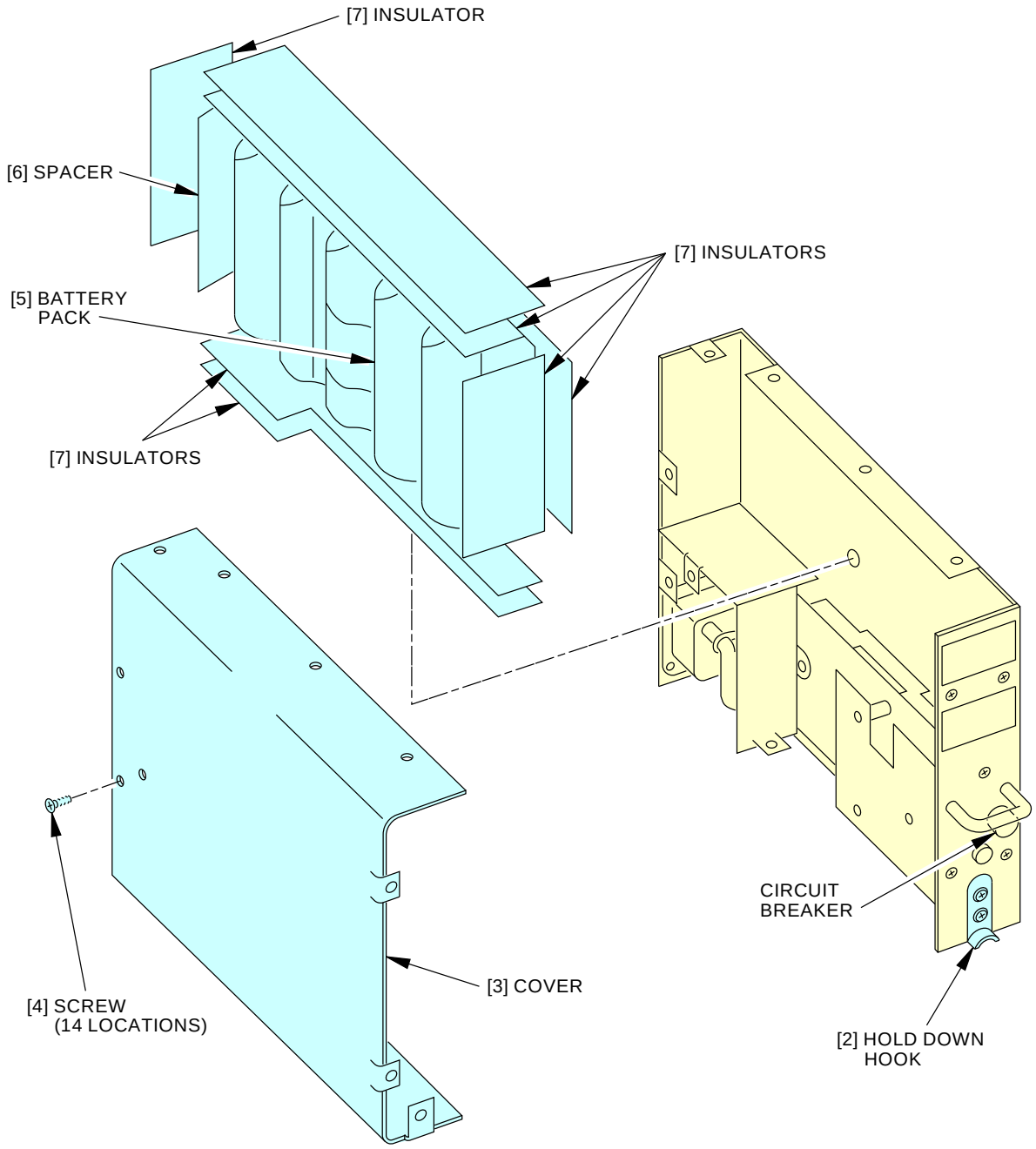
DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO.
				34-130-00-01



DEDICATED BATTERY CHARGER

B

2131332 S0000460950_V2

ISFD Dedicated Battery Charger Installation
Figure 1 (Sheet 2 of 2)

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AIRLINE CARD NO		TITLE			BOEING CARD NO.
		INTEGRATED STANDBY FLIGHT DISPLAY			**34-140-00-01**
DATE	TASK				RELATED CARD
	OPERATIONAL				
TAIL NUMBER	WORK AREA	VERSION	THRESHOLD	REPEAT	APPLICABILITY
	CREW CABIN	**1.1**	**9000 FH**	**9000 FH**	AIRPLANE: **ALL NOTE** / ENGINE: **ALL**
STATION	SKILL				
	AIRPL				
		ACCESS			ZONE
					212

Operationally check the Integrated Standby Flight Display Dedicated Battery/Charger.

AIRPLANE NOTE: If Installed.

A. References

Reference	Title
AMM 24-22-00-860-811	Supply Electrical Power (P/B 201)
AMM 24-22-00-860-812	Remove Electrical Power (P/B 201)
AMM 34-24-03 P/B 401	ISFD DEDICATED BATTERY CHARGER - REMOVAL/INSTALLATION

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DATE	TAIL NUMBER	STATION	AIRLINE CARD NO.	BOEING CARD NO. 34-140-00-01

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TASK 34-24-02-710-802

1. ISFD Dedicated Battery System - Operational Test

A. General

SUBTASK 34-24-02-800-001

(1) This procedure is a scheduled maintenance task to see if the battery charger and battery pack for the integrated standby flight display are operational.

B. Prepare for the Operational Test

SUBTASK 34-24-02-860-014

(1) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

C. Operational Test of the Dedicated Battery System and Battery Pack for the Integrated Standby Flight Display

SUBTASK 34-24-02-210-006

AKS ALL

(1) Do a check to see if the ISFD dedicated battery system (E4-1) and battery pack are serviceable:

(a) Make sure that the red FAULT light on the front of the battery charger is not on.

NOTE: The red FAULT light shows that the battery charger or the battery pack are not serviceable. The battery charger or battery pack can be not serviceable because of problems with battery charger operating temperature, battery charger voltage output, or battery pack cell voltage.

NOTE: If the red FAULT light is not on and a display shows on the integrated standby flight display, the battery charger and battery are serviceable.

(b) If the battery charger or battery pack are not serviceable, do this task: (ISFD DEDICATED BATTERY CHARGER - REMOVAL/INSTALLATION, AMM 34-24-03/401)

(c) Make sure that the yellow “ALT”, “SPD”, “ATT” and “INIT XXs” flags are displayed on the ISFD for approximately 10 to 15 seconds after power up.

NOTE: “XXs” refers to the time remaining (in seconds) for the ISFD to complete its initialization. Timer starts at 90s and counts down to 0s.

(d) After 15 seconds make sure the display still show “ATT” and “INIT XXs” on the ISFD.

(e) After 120 seconds, make sure the display change to an attitude display.

AKS ALL; AIRPLANES WITH THE INTEGRATED STANDBY FLIGHT DISPLAY

D. Put the Airplane Back to Its Usual Condition

SUBTASK 34-24-02-860-018

(1) Do this task: Remove Electrical Power, AMM TASK 24-22-00-860-812.

——— END OF TASK ———

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