PITOT-STATIC SYSTEM - MAINTENANCE PRACTICES

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to clean the pitot and static lines.

   B. The cleaning of the pitot and static lines is done with the application of dry air or dry nitrogen with a pressure equivalent to 25 psi to the tubing in the pitot sensor-to-instrument or anemometric sensor port-to-instrument directions.

   C. The aircraft has two pitot sensors (Pitot 1 and 2 sensors), four anemometric-static ports (Anemometric-Static ports 1, 2, 3, and 4), and one pitot/static sensor (Pitot/Static sensor 3).

   D. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
34-13-00-600-801-A ♦	PITOT AND STATIC LINES - CLEANING	ALL

TASK 34-13-00-600-801-A
EFFECTIVITY: ALL

2. PITOT AND STATIC LINES - CLEANING

A. General

(1) This task gives the procedures to clean the pitot and static system lines.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-41-02/100	-
AMM TASK 20-10-03-000-801-A/400	TUBING - REMOVAL
AMM TASK 20-10-03-400-801-A/400	TUBING - INSTALLATION
AMM TASK 21-32-01-000-801-A/400	CABIN-PRESSURE ACQUISITION MODULE - REMOVAL
AMM TASK 21-32-01-400-801-A/400	CABIN-PRESSURE ACQUISITION MODULE - INSTALLATION
AMM TASK 21-32-01-700-801-A/500	CABIN-PRESSURE ACQUISITION MODULE - FUNCTIONAL TEST
AMM TASK 25-11-01-000-801-A/400	PILOT SEAT - REMOVAL
AMM TASK 25-11-01-400-801-A/400	PILOT SEAT - INSTALLATION
AMM TASK 28-41-00-200-801-A/600	-
AMM TASK 34-01-01-000-801-A/400	ISIS - REMOVAL
AMM TASK 34-01-01-400-801-A/400	ISIS - INSTALLATION
AMM TASK 34-01-01-700-801-A/500	ISIS (THALES) - FUNCTIONAL TEST
AMM TASK 34-11-00-700-801-A/500	-
AMM TASK 34-11-01-000-801-A/400	-
AMM TASK 34-11-01-400-801-A/400	-
AMM TASK 34-12-00-700-801-A/500	-
AMM TASK 34-12-01-000-801-A/400	-
AMM TASK 34-12-01-400-801-A/400	-
AMM TASK 34-13-00-790-802-A/500	PITOT-STATIC SYSTEM 1 - LEAKAGE TEST
AMM TASK 34-13-00-790-803-A/500	PITOT-STATIC SYSTEM 2 - LEAKAGE TEST
AMM TASK 34-13-00-790-804-A/500	STANDBY SYSTEM - LEAKAGE TEST
AMM TASK 34-13-01-000-801-A/400	PITOT SENSOR - REMOVAL
AMM TASK 34-13-01-400-801-A/400	PITOT SENSOR - INSTALLATION
AMM TASK 34-13-02-000-801-A/400	PITOT/STATIC SENSOR 3 - REMOVAL
AMM TASK 34-13-02-400-801-A/400	PITOT/STATIC SENSOR 3 - INSTALLATION
AMM TASK 34-15-00-700-801-A/500	ADC SYSTEM - FUNCTIONAL CHECK
AMM TASK 34-15-01-000-801-A/400	AIR DATA COMPUTER (ADC) - REMOVAL
AMM TASK 34-15-01-400-801-A/400	AIR DATA COMPUTER (ADC) - INSTALLATION

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
GSE 128	Air Data Kit	To connect the air hose to the anemometric-static ports	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Cockpit or outside the aircraft
1	Helps the other technician	Cockpit or outside the aircraft

I. Preparation (Figure 201) (Figure 202) (Figure 203) (Figure 204) (Figure 205)

SUBTASK 841-002-A

(1) (This step is applicable to aircraft with Standby Altimeter and Airspeed Indicators) Preparation to clean the Pitot/Static Sensor 3 lines (Figure 201):

(a) Perform a visual inspection of LH/RH Pitot Static Probes for damage, corrosion and obstruction.

(b) On the RH Electrical Power/Distribution Box, open the PITOT HTG 3 circuit breaker and attach a DO-NOT-CLOSE tag to it.

(c) Remove pitot/static sensor 3 (AMM TASK 34-13-02-000-801-A/400).

(d) Disconnect the end of the tube of pitot/static 3 system line P from the standby airspeed indicator (AMM TASK 34-12-01-000-801-A/400).

(e) Disconnect the ends of the tube of pitot/static 3 system line S1 from the standby altimeter (AMM TASK 34-11-01-000-801-A/400) and from the standby airspeed indicator (AMM TASK 34-12-01-000-801-A/400).

(f) Disconnect the end of the tube of pitot/static 3 system line S2 from the cabin-pressure acquisition module (CPAM) (AMM TASK 21-32-01-000-801-A/400).

(2) (This step is applicable to aircraft with ISIS) Preparation to clean the Pitot/Static 3 Sensor lines (Figure 202):

(a) On the RH Electrical Power/Distribution Box, open the PITOT HTG 3 circuit breaker and attach a DO-NOT-CLOSE tag to it.

(b) Remove the pitot/static sensor 3 (AMM TASK 34-13-02-000-801-A/400).

(c) Remove the ISIS (AMM TASK 34-01-01-000-801-A/400).

(d) Disconnect the end of the tube of pitot/static 3 system line S2 from the cabin-pressure acquisition module (CPAM) (AMM TASK 21-32-01-000-801-A/400).

(3) Preparation to clean the Pitot 1 and 2 Sensor Lines (Figure 203):

(a) On the LH Electrical Power/Distribution Box, open the PITOT 1 HEATING circuit breaker and attach a DO-NOT-CLOSE tag to it.

(b) On the RH Electrical Power/Distribution Box, open the PITOT 2 HEATING circuit breaker and attach a DO-NOT-CLOSE tag to it.

(c) Remove pitot sensors 1 and 2 (AMM TASK 34-13-01-000-801-A/400).

(d) Disconnect the ends of the tube of pitot 1 system line P1 from air data computer 1 (ADC 1) (AMM TASK 34-15-01-000-801-A/400) and from the pitot 1 drain line.

(e) Disconnect the ends of the tube of pitot 2 system line P2 from air data computer 2 (ADC 2) (AMM TASK 34-15-01-000-801-A/400) and from the pitot 2 drain line.

(4) Preparation to clean the Anemometric-static System Lines (Figure 204) (Figure 205):

(a) On the LH Electrical Power/Distribution Box, open the PITOT 1 HEATING circuit breaker and attach a DO-NOT-CLOSE tag to it.

(b) On the RH Electrical Power/Distribution Box, open the PITOT 2 HEATING circuit breaker and attach a DO-NOT-CLOSE tag to it.

(c) Disconnect the static ADC 1 hose (10) from air data computer 1 (ADC 1) (AMM TASK 20-10-03-000-801-A/400). Install a cap to the end of the hose.

(d) Install a cap to the end of the ADC1 fitting (9).

(e) Disconnect the static ADC2 hose (2) from air data computer 2 (ADC 2) (AMM TASK 20-10-03-000-801-A/400). Install a cap to the end of the hose.

(f) Install a cap to the end of the ADC2 fitting (1).

(g) (Applicable to aircraft S/N 004 thru 017) Remove floor panel 231AF (AMM MPP 06-41-02/100).

(h) (Applicable to aircraft S/N 003, 018 and on) Remove the pilot seats (AMM TASK 25-11-01-000-801-A/400) and floor panels 221EF and 222FF (AMM MPP 06-41-02/100).

(i) Disconnect the hoses of anemometric-static ports S1 (6) and S3 (8) from the fittings (AMM TASK 20-10-03-000-801-A/400). Install caps to the end of the hoses.

(j) Install a cap to the fitting of the tee (7) which was connected to the anemometric-static S1 port hose (6).

(k) Disconnect the hoses of anemometric-static ports S2 (5) and S4 (4) from the fittings (AMM TASK 20-10-03-000-801-A/400). Install caps to the end of the hoses.

(l) Install a cap to the fitting of the tee (3) which was connected to the anemometric-static port S2 hose (5).

J. Clean Pitot-Static System (Figure 201) (Figure 202) (Figure 203) (Figure 204) (Figure 205)

SUBTASK 610-002-A

CAUTION: APPLY DRY NITROGEN OR DRY AIR WITH A PRESSURE EQUIVALENT TO 25 PSI INTO THE TUBE, IN THE PITOT SENSOR-TO-INSTRUMENT OR COMPONENT DIRECTION.

(1) Cleaning of the Pitot/Static 3 Sensor Lines (Figure 201) (Figure 202):

(a) Clean static line S2 of the Pitot/Static 3 System as follows:

1 Connect the nitrogen or air hose to the end of the S2 line tube, which was connected to the pitot sensor.

2 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

(b) (This step is applicable to aircraft with Standby Altimeter and Airspeed Indicators) Clean static line S1 of the Pitot/Static 3 System as follows:

1 Install a cap to the end of the S1 line tube which was connected to the standby airspeed indicator.

2 Connect the nitrogen or air hose to the end of the S1 line tube, which was connected to the pitot sensor.

3 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

4 Remove the cap from the end of the S1 line tube which was connected to the standby airspeed indicator.

5 Install the cap to the end of the S1 line tube which was connected to the standby altimeter.

6 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

7 Remove the cap from the end of the S1 line tube which was connected to the standby altimeter.

(c) (This step is applicable to aircraft with ISIS) Clean static line S1 of the Pitot/Static 3 System as follows:

1 Disconnect the hoses from the ISIS static fitting (AMM TASK 20-10-03-000-801-A/400).

2 Connect the nitrogen or air hose to the ISIS static hose.

3 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

4 Install caps to the ISIS static hose ends.

5 Connect the nitrogen or air hose to the end of the S1 line tube, which was connected to the pitot sensor.

6 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

(d) (This step is applicable to aircraft with Standby Altimeter and Airspeed Indicators) Clean the pitot line P of the Pitot/Static 3 System as follows:

1 Connect the nitrogen or air hose to the end of the P line tube, which was connected to the pitot sensor.

2 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

(e) (This step is applicable to aircraft with ISIS) Clean the pitot line P of the Pitot/ Static 3 System as follows:

1 Connect the nitrogen or air hose to the end of the P line tube, which was connected to the pitot sensor.

2 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

3 Connect the nitrogen or air hose to the ISIS pressure hose.

4 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

5 Install caps to the ISIS pressure hose ends.

(2) Cleaning of the Pitot 1 and 2 Sensor Lines (Figure 203):

NOTE: These procedures are applicable to the pitot 1 and 2 sensor lines.

(a) Clean pitot line P1 of the Pitot 1 System as follows:

1 Install a cap to the end of the P1 line tube which was connected to the pitot 1 drain line.

2 Connect the nitrogen or air hose to the end of the P1 line tube, which was connected to the pitot 1 sensor.

3 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

4 Remove the cap from the end of the P1 line tube which was connected to the pitot 1 drain line.

5 Install the cap to the end of the P1 line tube which was connected to the air data computer 1.

6 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

7 Remove the cap from the end of the P1 line tube which was connected to the micro air data computer 1.

(b) Clean pitot line P2 of the Pitot 2 System as follows:

1 Install a cap to the end of the P2 line tube which was connected to the pitot 2 drain line.

2 Connect the nitrogen or air hose to the end of the P2 line tube, which was connected to the pitot 2 sensor.

3 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

4 Remove the cap from the end of the P2 line tube which was connected to the pitot 2 drain line.

5 Install the cap to the end of the P2 line tube which was connected to air data computer 2.

6 Apply nitrogen or air with a pressure equivalent to 25 psi.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

7 Remove the cap from the end of the P2 line tube which was connected to micro air data computer 2.

(3) Cleaning of the Anemometric-static System Lines (Figure 204) (Figure 205):

NOTE: These procedures are applicable to the anemometric-static port 1, 2, 3, and 4 lines.

(a) Clean the anemometric-static port S1 and S4 lines as follows:

1 Remove the cap from the end of the ADC1 hose (10).

2 Connect the nitrogen or air hose to the ADC1 hose (10).

3 Apply nitrogen or dry air with a pressure equivalent to 25 psi for 2 minutes or more.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

4 Install a cap to the end of the ADC1 hose (10).

5 Remove the cap from the end of the anemometric-static port S1 hose (6).

6 Connect the nitrogen or air hose to the anemometric-static port S1 hose (6).

7 Apply nitrogen or dry air with a pressure equivalent to 25 psi for 2 minutes or more.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

8 Install a cap to the end of the anemometric-static port S1 hose (6).

9 Remove the cap from the end of anemometric-static port S4 hose (4).

10 Connect the nitrogen or air hose to the anemometric-static port S4 hose (4).

11 Apply nitrogen or dry air with a pressure equivalent to 25 psi for 2 minutes or more.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

12 Install a cap to the end of the anemometric-static port S4 hose (4).

(b) Clean the anemometric-static port S2 and S3 line as follows:

1 Remove the cap from the end of the ADC2 hose (2).

2 Connect the nitrogen or air hose to the ADC2 hose (2).

3 Apply nitrogen or dry air with a pressure equivalent to 25 psi for 2 minutes or more.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

4 Install a cap to the end of the ADC2 hose (2).

5 Remove the cap from the end of the anemometric-static port S2 hose (5).

6 Connect the nitrogen or air hose to the anemometric-static port S2 hose (5).

7 Apply nitrogen or dry air with a pressure equivalent to 25 psi for 2 minutes or more.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

8 Install a cap to the end of the anemometric-static port S2 hose (5).

9 Remove the cap from the end of the anemometric-static port S3 hose (8).

10 Connect the nitrogen or air hose to the anemometric-static port S3 hose (8).

11 Apply nitrogen or dry air with a pressure equivalent to 25 psi for 2 minutes or more.

NOTE: Make sure that the line is not clogged and that the nitrogen or air can flow freely.

12 Install a cap to the end of the anemometric-static port S3 hose (8).

K. Follow-on

SUBTASK 842-002-A

(1) (This step is applicable to aircraft with Standby Altimeter and Airspeed Indicators) Follow-on procedure for the Pitot/Static Sensor 3 Lines (Figure 201):

(a) Install pitot/static sensor 3 (AMM TASK 34-13-02-400-801-A/400).

(b) Connect the end of the tube of pitot/static 3 system line P to the standby airspeed indicator (AMM TASK 34-12-01-400-801-A/400).

(c) Connect the ends of the tube of pitot/static 3 system line S1 to the standby altimeter (AMM TASK 34-11-01-400-801-A/400) and to the standby airspeed indicator (AMM TASK 34-12-01-400-801-A/400).

(d) Connect the end of the tube of pitot/static 3 system line S2 to the cabin-pressure acquisition module (CPAM) (AMM TASK 21-32-01-400-801-A/400).

(2) (This step is applicable to aircraft with ISIS) Follow-on procedure for the Pitot/Static 3 Sensor Lines (Figure 202):

(a) Install pitot/static sensor 3 (AMM TASK 34-13-02-400-801-A/400).

(b) Remove the caps from the ISIS static and pressure hoses.

CAUTION: MAKE SURE THAT THE FLEXIBLE TUBE IS NOT TWISTED BEFORE AND AFTER TORQUE APPLICATION.

(c) Connect the static hose to the ISIS static fitting and the pressure hose to the ISIS pressure fitting (AMM TASK 20-10-03-400-801-A/400).

(d) Install the ISIS (AMM TASK 34-01-01-400-801-A/400).

(e) Connect the end of the tube of pitot/static 3 system line S2 to the cabin-pressure acquisition module (CPAM) (AMM TASK 21-32-01-400-801-A/400).

(3) Follow-on procedure for the Pitot Sensor 1 and 2 lines (Figure 203):

(a) Install pitot sensors 1 and 2 (AMM TASK 34-13-01-400-801-A/400).

(b) Connect the ends of the tube of pitot 1 system line P1 to air data computer 1 (ADC 1) (AMM TASK 34-15-01-400-801-A/400) and to the pitot 1 drain line.

(c) Connect the ends of the tube of pitot 2 system line P2 to air data computer 2 (ADC 2) (AMM TASK 34-15-01-400-801-A/400) and to the pitot 2 drain line.

(4) Follow-on procedure for the Anemometric-static System lines (Figure 204) (Figure 205):

(a) Remove the cap from the end of the anemometric-static port S1 hose (6).

(b) Remove the cap from the tee (7).

CAUTION: MAKE SURE THAT THE FLEXIBLE TUBE IS NOT TWISTED BEFORE AND AFTER TORQUE APPLICATION.

(c) Connect the anemometric-static port S1 hose (6) to the tee (7) (AMM TASK 20-10-03-400-801-A/400).

(d) Remove the cap from the end of the anemometric-static port S3 hose (8).

CAUTION: MAKE SURE THAT THE FLEXIBLE TUBE IS NOT TWISTED BEFORE AND AFTER TORQUE APPLICATION.

(e) Connect the anemometric-static port S3 hose (8) to the fitting (AMM TASK 20-10-03-400-801-A/400).

(f) Remove the cap from the end of the anemometric-static port S2 hose (5).

(g) Remove the cap from the tee (3).

CAUTION: MAKE SURE THAT THE FLEXIBLE TUBE IS NOT TWISTED BEFORE AND AFTER TORQUE APPLICATION.

(h) Connect the anemometric-static port S2 hose (5) to the tee (3) (AMM TASK 20-10-03-400-801-A/400).

(i) Remove the cap from the end of the anemometric-static port S4 hose (4).

CAUTION: MAKE SURE THAT THE FLEXIBLE TUBE IS NOT TWISTED BEFORE AND AFTER TORQUE APPLICATION.

(j) Connect the anemometric-static port S4 hose (4) to the fitting (AMM TASK 20-10-03-400-801-A/400).

(k) Remove the cap from the ADC1 fitting (9).

(l) Remove the cap from the end of the ADC1 hose (10).

CAUTION: MAKE SURE THAT THE FLEXIBLE TUBE IS NOT TWISTED BEFORE AND AFTER TORQUE APPLICATION.

(m) Connect the static ADC 1 hose (10) to air data computer 1 (ADC 1) (AMM TASK 20-10-03-400-801-A/400).

(n) Remove the cap from the ADC2 fitting (1).

(o) Remove the cap from the end of the ADC2 hose (2).

CAUTION: MAKE SURE THAT THE FLEXIBLE TUBE IS NOT TWISTED BEFORE AND AFTER TORQUE APPLICATION.

(p) Connect the static ADC 2 hose (2) to air data computer 2 (ADC 2) (AMM TASK 20-10-03-400-801-A/400).

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

NOTE: The inspection of fuel quantity indication harness is a part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations of the Maintenance Review Board Report (MRB).

(r) (Applicable to aircraft S/N 004 thru 017) Install floor panel 231AF (AMM MPP 06-41-02/100).

(s) (Applicable to aircraft S/N 003, 018 and on) Install floor panels 221EF and 222FF (AMM MPP 06-41-02/100) and the pilot seats (AMM TASK 25-11-01-400-801-A/400).

(t) On the LH Electrical Power/Distribution Box, close the PITOT 1 HEATING circuit breaker and remove the DO-NOT-CLOSE tag from it.

(u) On the RH Electrical Power/Distribution Box, close the PITOT 2 HEATING circuit breaker and remove the DO-NOT-CLOSE tag from it.

(v) On the RH Electrical Power/Distribution Box, close the PITOT HTG 3 circuit breaker and remove the DO-NOT-CLOSE tag from it.

(w) Do a functional check of the Standby Altimeter System (AMM TASK 34-11-00-700-801-A/500).

(x) Do a functional check of the Standby Airspeed System (AMM TASK 34-12-00-700-801-A/500).

(y) Do a functional check of the ISIS (AMM TASK 34-01-01-700-801-A/500).

(z) Do a functional check of the ADC System (AMM TASK 34-15-00-700-801-A/500).

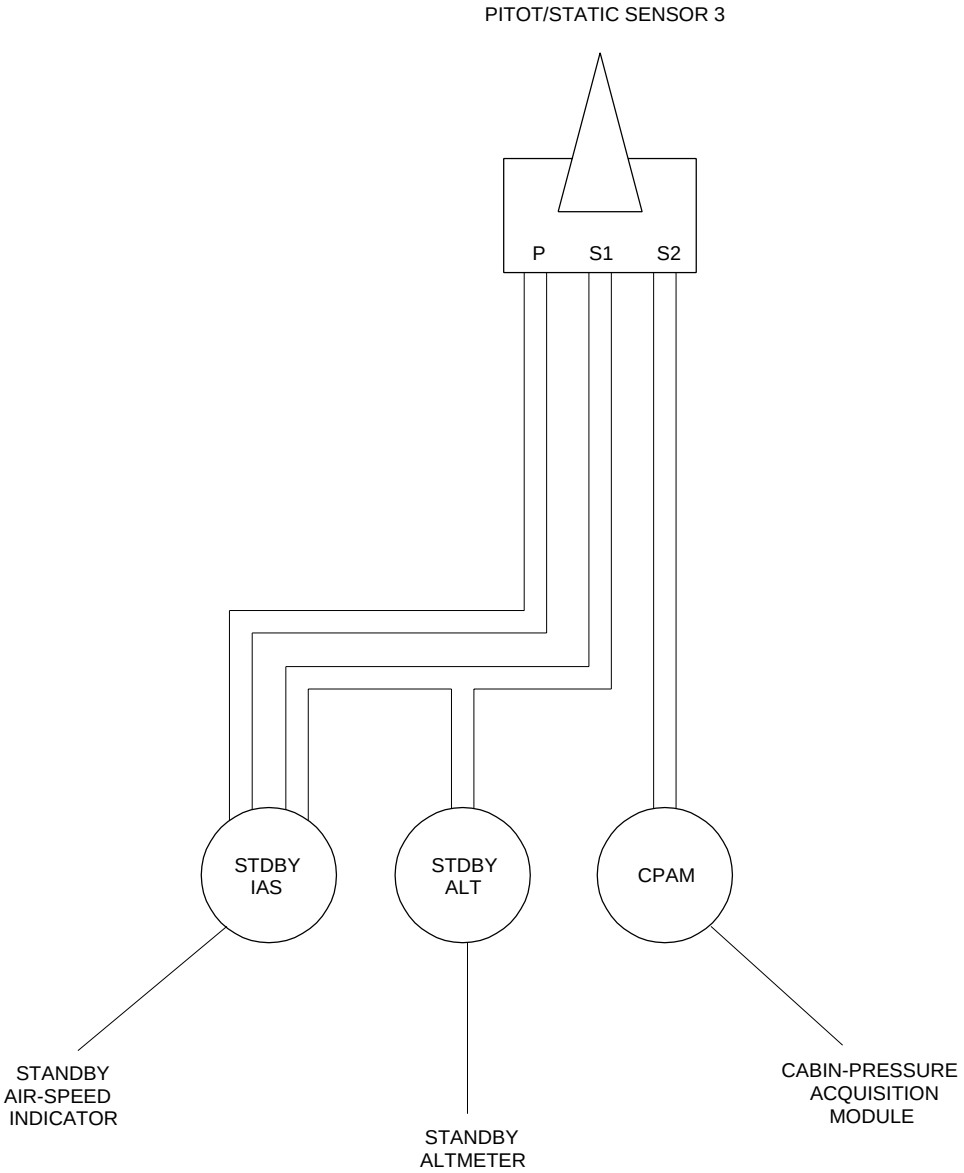
(aa) Do the System 1 leakage test (AMM TASK 34-13-00-790-802-A/500) and the System 2 leakage test (AMM TASK 34-13-00-790-803-A/500).

(ab) Do the Standby System leakage test (AMM TASK 34-13-00-790-804-A/500)

(ac) Do a functional check of the Cabin Pressure Acquisition Module (CPAM) (AMM TASK 21-32-01-700-801-A/500).

EFFECTIVITY: AIRCRAFT WITH ALTIMETER AND AIRSPEED STANDBY INDICATORS

Pitot/Static 3 Sensor Lines - Schematic Diagram
Figure 201



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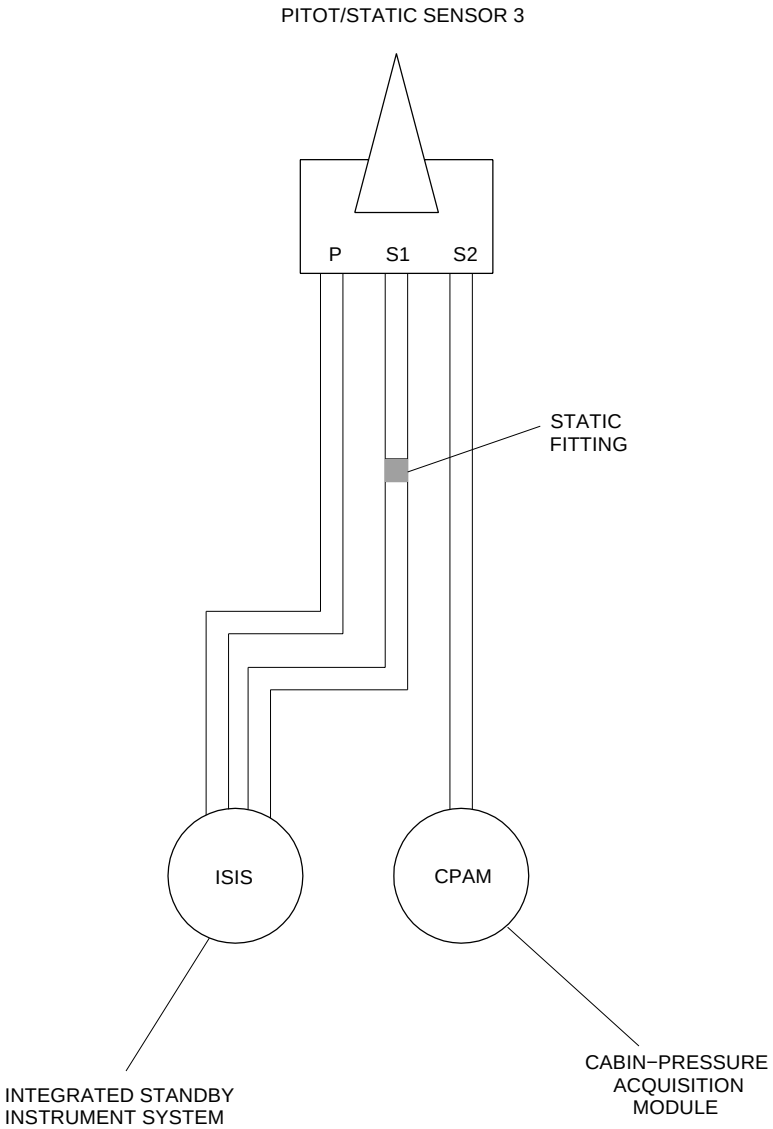
EFFECTIVITY: AIRCRAFT WITH ISIS
Pitot/Static 3 Sensor Lines - Schematic Diagram
Figure 202



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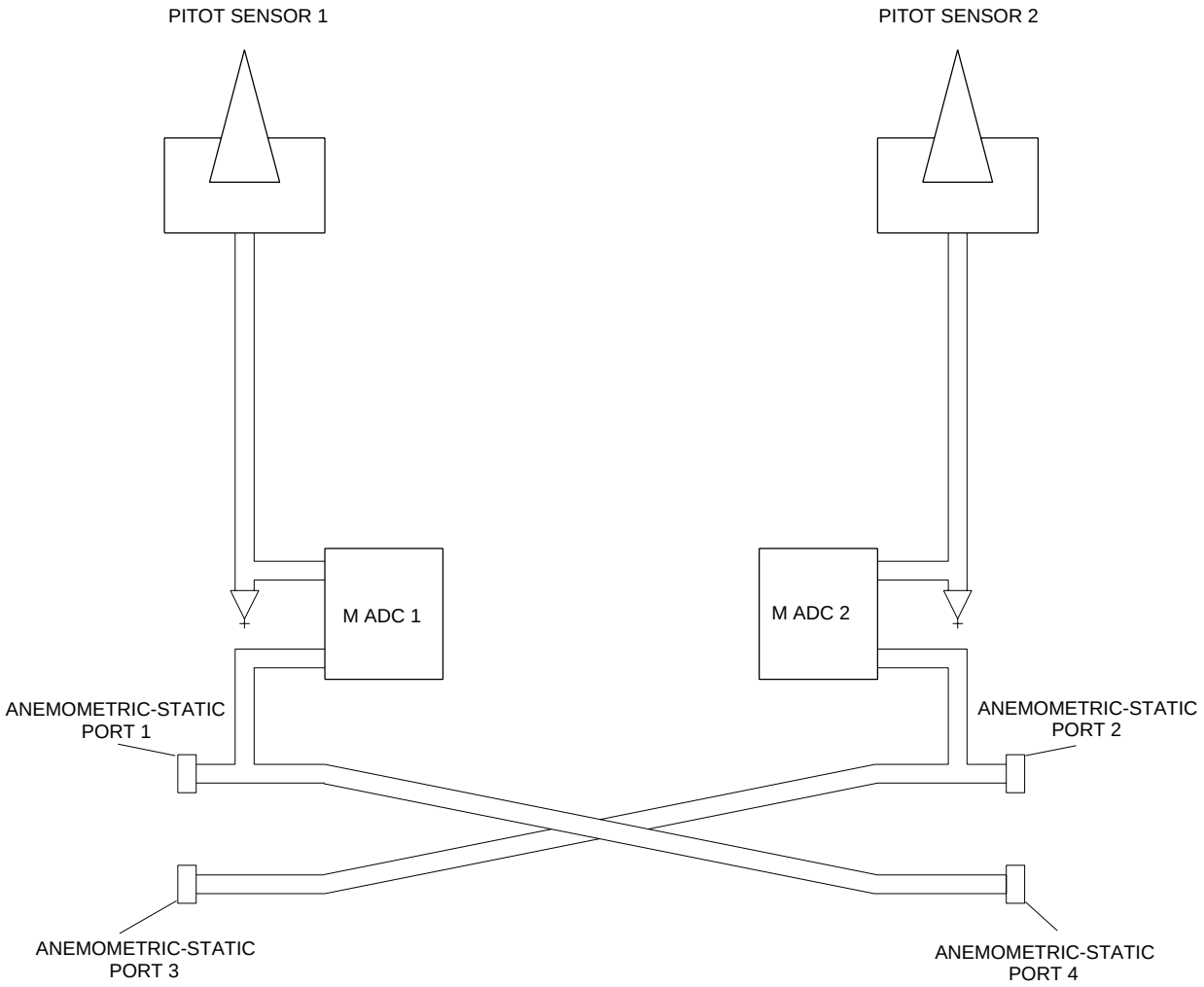
EFFECTIVITY: ALL

Pitot 1 and 2 Sensor Lines - Schematic Diagram
Figure 203



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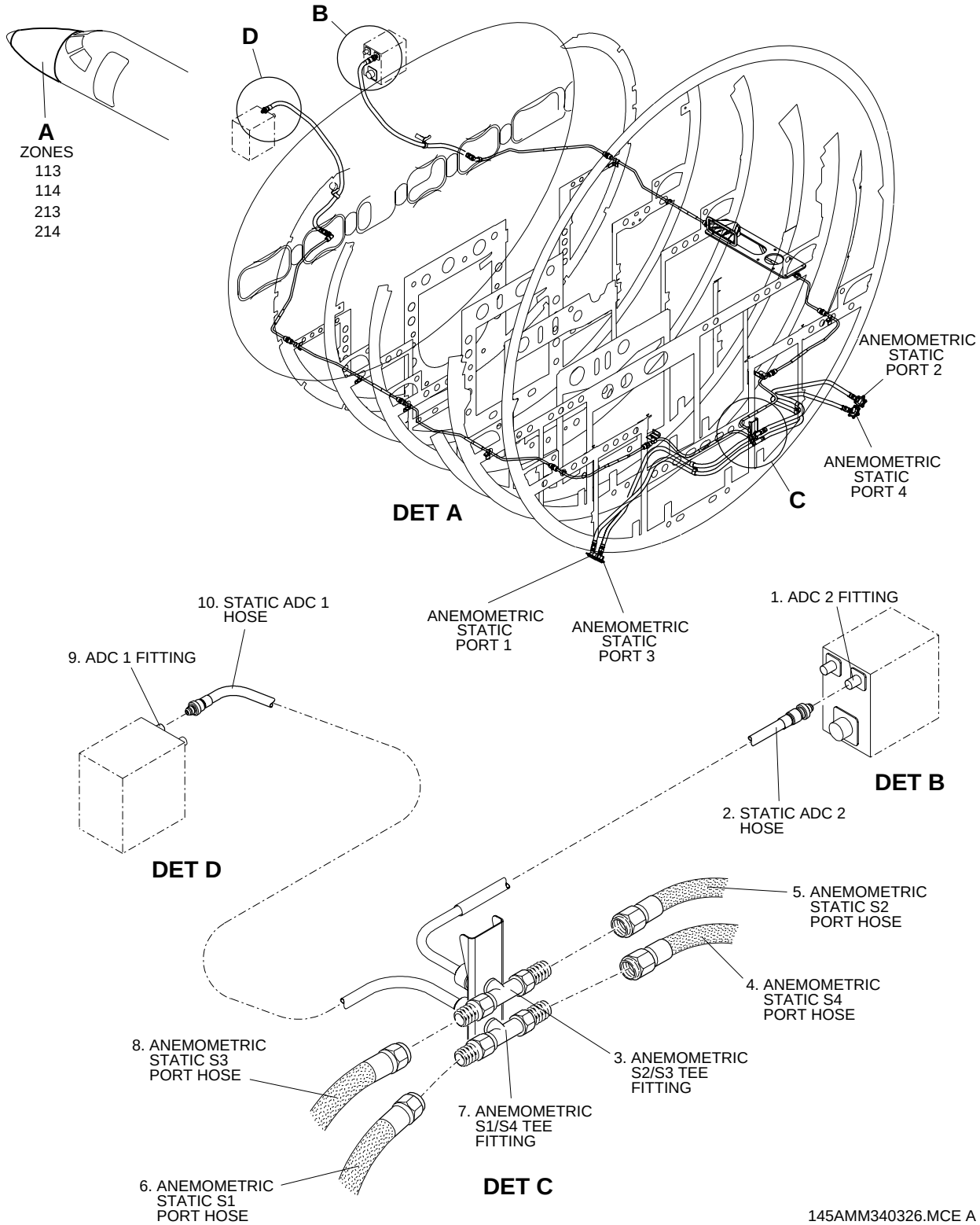
EFFECTIVITY: 004-017

Anemometric System Static Line
Figure 204



EFFECTIVITY: 003, 018 AND ON
Anemometric System Static Line
Figure 205