LOW AIRSPEED AWARENESS SYSTEM - ADJUSTMENT/TEST
TKS Anti-Ice

1. General

A. This section gives the procedures to do a test of the Low Airspeed Awareness (LAA) system (97.5 KIAS). The LAA system is installed on airplanes that have the G1000 system installed and airplanes that do not have the G1000 installed. Do the steps applicable to the airplane systems installation.

2. Equipment

NOTE: The use of equivalent equipment is permitted for the equipment shown on Table 501.

A. Table 501

NAME	NUMBER	MANUFACTURER	USE
Air Data Tester	101-00184	Barfield 4101 NW 29th Street Miami, FL 33142-5617	To supply pressure or vacuum for the pitot and static system tests.
Pitot Static Test Adaptor	PS4769	Nav-Aids Ltd. 2955 Diab Street Montreal, Quebec H4S 1M1	To attach portable air data tester to pitot system.

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3. Low Airspeed Awareness System Functional Test

A. Do a Low Airspeed Awareness System Functional Test (Refer to Low Airspeed Awareness - Maintenance Practices, Figure 201, Figure 202, Figure 203,and Figure 204 as applicable).

(1) For airplanes with the G1000, disconnect the left and right pitot/static heater electrical connectors (PL004 left, PR004 right) at each wing.

NOTE: When the pitot/static heat system is in operation the P/S HEAT L/R CAS message with show on the primary flight display.

(2) For airplanes that do not have G1000, disconnect the left and right pitot/static heater electrical connectors (P92 left, P152 right) at each wing.

(3) Connect an air data tester to the pitot/static system. Refer to Table 501.

(4) Connect external electrical power to the airplane.

(5) Set the BATTERY switch to the ON position.

NOTE: For airplanes that have G1000 the reference designator for the BATTERY switch is (SC005) and for airplanes that do not have the G1000 the reference designator for the BATTERY switch is (S219).

(6) Engage the circuit breakers on the left circuit breaker panel that follow:

- LEFT PITOT HEAT
- RIGHT PITOT HEAT
- STALL WARN

(7) Set the P/S HEAT/ LOW A/S AWARE switch to the ON position.

(a) Make sure that the BELOW ICING MIN SPD annunciator/switch (SI033) comes on (white).

(8) For airplanes with G1000 do the steps that follow:

(a) Move the SW/CB PNLS/ANNUN dimmer (RI010) knob to the DAY position and then out of the DAY position.

1 Make sure that the intensity of the BELOW ICING MIN SPD annunciator/switch changes from day to night when the knob is moved in and out of the DAY position.

(b) Push the BELOW ICING MIN SPD annunciator/switch and at the same time, move the SW/CB PNLS/ANNUN dimmer knob to the DAY position, and then out of the DAY position.

1 Make sure that the intensity of the BELOW ICING MIN SPD annunciator/switch (amber) changes when the knob is moved.

(9) For airplanes that do not have G1000, do the steps that follow:

(a) Set the DAY/NIGHT switch to the NIGHT position.

(b) Adjust the ENG INST dimmer.

1 Make sure that the intensity of the BELOW ICING MIN SPD annunciator/switch changes when the dimmer knob is moved in and out of the DAY position.

(c) Push the BELOW ICING MIN SPD annunciator/switch and at the same time, move the SW/CB PNLS/ANNUN dimmer knob.

1 Make sure that the intensity of the BELOW ICING MIN SPD annunciator/switch (amber) changes when the knob is moved.

(10) Use the air data tester to set the airspeed above 97.5 KIAS.

(a) Make sure that the BELOW ICING MIN SPD annunciator/switch goes off when the airspeed exceeds 97.5 KIAS +2 or -2 KIAS.

(11) Pull the control yoke back.

NOTE: This lets the airspeed warning horn operate.

(12) Use the air data tester to reduce the airspeed below 97.5 KIAS.

(13) When the airspeed goes below 97.5 KIAS +2 or -2 KIAS make sure that:

(a) The BELOW ICING MIN SPD annunciator/switch shows amber and then white.

(b) The airspeed warning horn operates when the light is amber.

(14) Move the control yoke forward.

(a) Make sure that the airspeed warning horn stops operation.

(15) Move the control yoke back.

(a) Make sure that the airspeed warning horn operates.

(16) Use the air data tester to increase the airspeed above 97.5 KIAS.

(17) When the airspeed goes above 97.5 KIAS +2 or -2 KIAS.

(a) The BELOW ICING MIN SPD annunciator/switch goes out.

(b) The airspeed warning horn stops operation.

(18) Use the air data tester to reduce the airspeed below 97.5 KIAS.

(19) When the airspeed goes below 97.5 KIAS +2 or -2 KIAS make sure that:

(a) The BELOW ICING MIN SPD annunciator/switch shows amber and then white.

(b) The airspeed warning horn operates when the light is amber.

(20) Push the BELOW ICING MIN SPD annunciator/switch.

(a) Make sure that the annunciator/switch goes solid white.

(b) Make sure that the horn stops operation.

(21) Use the air data tester to set the airspeed above 97.5 KIAS.

(a) Make sure that when the airspeed is more than 97.5 KIAS +2 or -2 KIAS, the BELOW ICING MIN SPD annunciator/switch goes off.

(22) Set the P/S HEAT/ LOW A/S AWARE switch to the off position.

(a) Make sure that the BELOW ICING MIN SPD annunciator/switch does not flash .

(23) Set the P/S HEAT/ LOW A/S AWARE switch to the on position.

(a) Make sure that the BELOW ICING MIN SPD annunciator/switch flashes for approximately one half a second.

NOTE: The airspeed must still be set above 97.5 KIAS.

(24) Set the P/S HEAT/ LOW A/S AWARE switch to the OFF position.

(25) Set the airspeed to zero KIAS.

(26) Remove the air data tester from the airplane.

(27) For airplanes that have G1000 installed do the steps that follow:

(a) Connect the left and right pitot/static heater electrical connectors (PL004 left, PR004 right) at each wing.

(b) Disengage the LEFT PITOT HEAT circuit breaker on the left circuit breaker panel.

(c) Set the P/S HEAT/ LOW A/S AWARE switch to the ON position.

1 Make sure that the P/S HEAT L CAS message shows on the primary flight display.

(d) Set the P/S HEAT/ LOW A/S AWARE switch to the OFF position.

(e) Engage the LEFT PITOT HEAT circuit breaker on the left circuit breaker panel.

(f) Disengage the RIGHT PITOT HEAT circuit breaker on the left circuit breaker panel.

(g) Set the P/S HEAT/ LOW A/S AWARE switch to the ON position.

1 Make sure that the P/S HEAT R CAS message shows on the primary flight display.

(h) Set the P/S HEAT/ LOW A/S AWARE switch to the OFF position.

(i) Engage the RIGHT PITOT HEAT circuit breaker on the left circuit breaker panel.

(28) For airplanes that do not have G1000 do the steps that follow:

(a) Connect the left and right pitot/static heater electrical connectors (P92 left, P162 right) at each wing.

(b) Disengage the LEFT PITOT HEAT circuit breaker on the left circuit breaker panel.

(c) Set the P/S HEAT/ LOW A/S AWARE switch to the ON position.

1 Carefully make sure that the right pitot/static heater operates.

2 Carefully make sure that the left pitot/static heater does not operates.

3 Wait two minutes and make sure that the RIGHT PITOT HEATER circuit breaker is engaged.

(d) Engage the LEFT PITOT HEAT circuit breaker on the left circuit breaker panel.

(e) Disengage the RIGHT PITOT HEAT circuit breaker on the left circuit breaker panel.

(f) Set the P/S HEAT/ LOW A/S AWARE switch to the ON position.

1 Carefully make sure that the left pitot/static heater operates.

2 Carefully make sure that the right pitot/static heater does not operates.

3 Wait two minutes and make sure that the LEFT PITOT HEATER circuit breaker is engaged.

(g) Set the P/S HEAT/ LOW A/S AWARE switch to the OFF position.

(29) Set the BATTERY switch to the OFF position.

NOTE: For airplanes that have G1000 the reference designator for the BATTERY switch is (SC005) and for airplanes that do not have the G1000 the reference designator for the BATTERY switch is (S219)

(30) Remove external electrical power from the airplane.

END OF TASK