

LOW AIRSPEED AWARENESS SYSTEM - MAINTENANCE PRACTICES

TKS Anti-Ice

1. General

- A. This section gives the maintenance procedures for the Low Airspeed Awareness (LAA) system. The LAA system is installed on airplanes that have the TKS system installed. The LAA system is installed on Airplanes 20800518 and On, Airplanes 208B2067 and On, and Airplanes 208B0001 Thru 208B2066 that incorporate CAB08-7.
- B. The LAA system is installed on airplanes that have the G1000 system installed and airplanes that do not have the G1000 system installed. The LAA system gives the crew warning indications if airspeed goes below 97.5 KIAS +2 or -2 KIAS. The maintenance procedures for the LAA systems on airplanes with G1000 installed and airplanes without G1000 installed are similar.
- C. Correct maintenance of the pitot/static system is necessary for correct operation of the altimeter, vertical speed indicator, airspeed indicator, and Low Speed Awareness (LAA) airspeed switch (UI028). Leaks, moisture, and blockages in the pitot system will cause incorrect airspeed indications. Static system malfunctions will affect indications of all three instruments and the airspeed switch. Clean components and correct installation are necessary for maintenance of the pitot-static system. When you replace pitot-static system components, use the minimum quantity of antiseize compound on the threads of the metal and the plastic connections. Always prevent too much compound that can go into the pitot-static system lines. Tighten connections tightly, but be very careful not to tighten too much and cause a distortion of the fittings.

CAUTION: Except for the use of the system drains and alternate static source pressure valves, make sure that you do a leak test after the static pressure system is opened or closed. Refer to Pitot System Inspection and Leak Test.

2. Low Airspeed Awareness (LAA) Annunciator/Switch Removal/Installation

- A. Remove the LAA Annunciator/Switch (SI033) (Refer to Figure 201, or Figure 203 as Applicable).
 - (1) Remove external electrical power from the airplane.
 - (2) Set the BATTERY switch (SC005) on the circuit breaker switch panel, to the OFF position.
 - (3) Make sure that the P/S HEAT/LOW A/S AWARE switch is in the OFF position.
 - (4) Disengage the LEFT PITOT HEAT and RIGHT PITOT HEAT circuit breakers on the left circuit breaker panel.
 - (5) Remove the face of the switch from the annunciator.

NOTE: The switch face stays connected to the switch because of its wiring.
 - (6) Loosen the retainer tab screws.
 - (7) Disconnect the electrical connector (PI033) from the annunciator.
 - (8) Remove the annunciator from the instrument panel.
- B. Install the LAA Annunciator/Switch (SI033) (Refer to Figure 201, or Figure 203 as Applicable).
 - (1) Connect the electrical connector (PI033) to the annunciator.
 - (2) Put the annunciator far enough in the instrument panel that the retainer tabs will engage the instrument panel structure.
 - (3) Slowly tighten the retainer tabs.
 - (4) Install the switch face to the switch.
 - (a) Make sure that the face snaps in place.
 - (5) Do a test of the LAA system. Refer to Low Airspeed Warning System - Adjustment/Test (With TKS Anti-Ice System).

3. Low Airspeed Awareness (LAA) Logic Module Removal/Installation

- A. Remove the Logic Module (UI027) (Refer to Figure 201, and Figure 202, and Figure 203, and Figure 204 as Applicable).
 - (1) Set the BATTERY switch on the circuit breaker switch panel, to the OFF position.

NOTE: For airplanes that have G1000 the reference designator for the BATTERY switch (SC005) and for airplanes that do not have G1000 the reference designator for the BATTERY switch is (S219).
 - (2) Remove external electrical power from the airplane.
 - (3) Disconnect the battery terminals.
 - (4) Attach a warning tag to the battery and external power receptacle that have the statement that follows:

WARNING: DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS

- (5) Make sure that the P/S HEAT/LOW A/S AWARE switch is in the OFF position.
- (6) Disengage the LEFT PITOT HEAT and RIGHT PITOT HEAT circuit breakers on the left circuit breaker panel.
- (7) Remove the left circuit breaker panel.
- (8) Remove the electrical connector (PI027) from the LAA logic module.
- (9) Remove the screws that attach the logic module to the logic module bracket.
- (10) Remove the LAA logic module from the structure of the circuit breaker panel.

B. Install the LAA Logic Module (UI027) (Refer to Figure 201, and Figure 202, or Figure 203, and Figure 204 as Applicable).

- (1) Put the LAA logic module in its position on the module bracket.
- (2) Install the screws that attach the LAA logic module to the module bracket.
- (3) Connect the electrical connector (PI027) to the LAA logic module.
- (4) Install the circuit breaker panel.
- (5) Remove the warning tags from the external power receptacle and the battery.
- (6) Connect the battery terminals.
- (7) Do a test of the LAA system. Refer to Low Airspeed Warning System - Adjustment/Test (With TKS Anti-Ice System).

4. Low Airspeed Awareness (LAA) System Airspeed Switch Removal/Installation

A. Remove the LAA System Airspeed Switch (UI028) (For airplanes with the G1000, refer to Figure 201, and Figure 202. For airplanes that do not have G1000, refer to Figure 203, and Figure 204 as applicable).

- (1) Remove external electrical power from the airplane.
- (2) Set the BATTERY switch on the circuit breaker switch panel, to the OFF position.

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

- (3) Disconnect the electrical connector (PI028) from the LAA airspeed switch.
- (4) Identify, and disconnect the lines that follow:
 - The pitot line
 - The static line.

- (5) Put a cap on each of the two lines.
- (6) Remove the two nuts and washers that attach the LAA pressure switch to the mounting bracket.
- (7) Remove the pressure switch.
- (8) Remove the two unions from the switch.

B. Install the LAA System Airspeed Switch (UI028) (Refer to Figure 20,1 and Figure 202, or Figure 203, and Figure 204 as Applicable).

- (1) Install the two unions to the switch with new packing.
- (2) Put the airspeed switch in its position the mounting bracket.
- (3) Install the two washers and nuts that attach the airspeed switch to the mounting bracket.
- (4) Make sure that the ports marked P and S correctly oriented for the pitot and static line installation.
- (5) Remove the caps from the pitot and static lines.
- (6) Identify the pitot line and static line and connect them to the LAA airspeed switch as follows:
 - (a) Connect the pitot line to the port marked P.
 - (b) Connect the static line to the port marked S.
- (7) Connect the electrical connector (PI028) to the pressure switch.
- (8) Do a test of the LAA system. Refer to Low Airspeed Warning System - Adjustment/Test (With TKS Anti-Ice System).

5. Airspeed Warning Horn Removal/Installation

A. To remove and replace the airspeed warning horns (Refer to Pitot/Static - Maintenance Practices, Airspeed Warning Horn

Removal/Installation).

Figure 201 : Sheet 1 : LAA Switch and Circuit Breaker Installation (G1000)

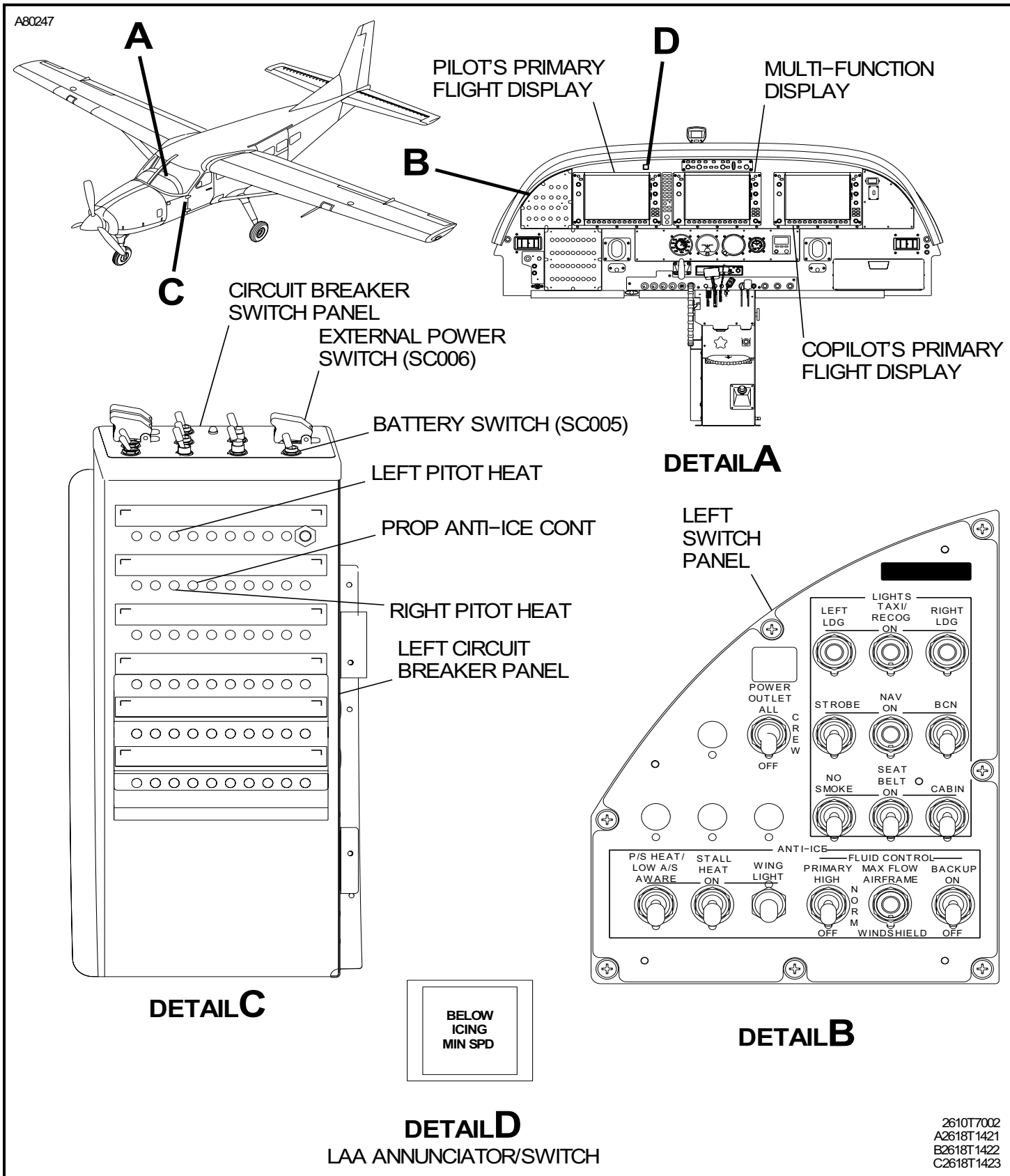


Figure 202 : Sheet 1 : LAA Components Installation (G1000)

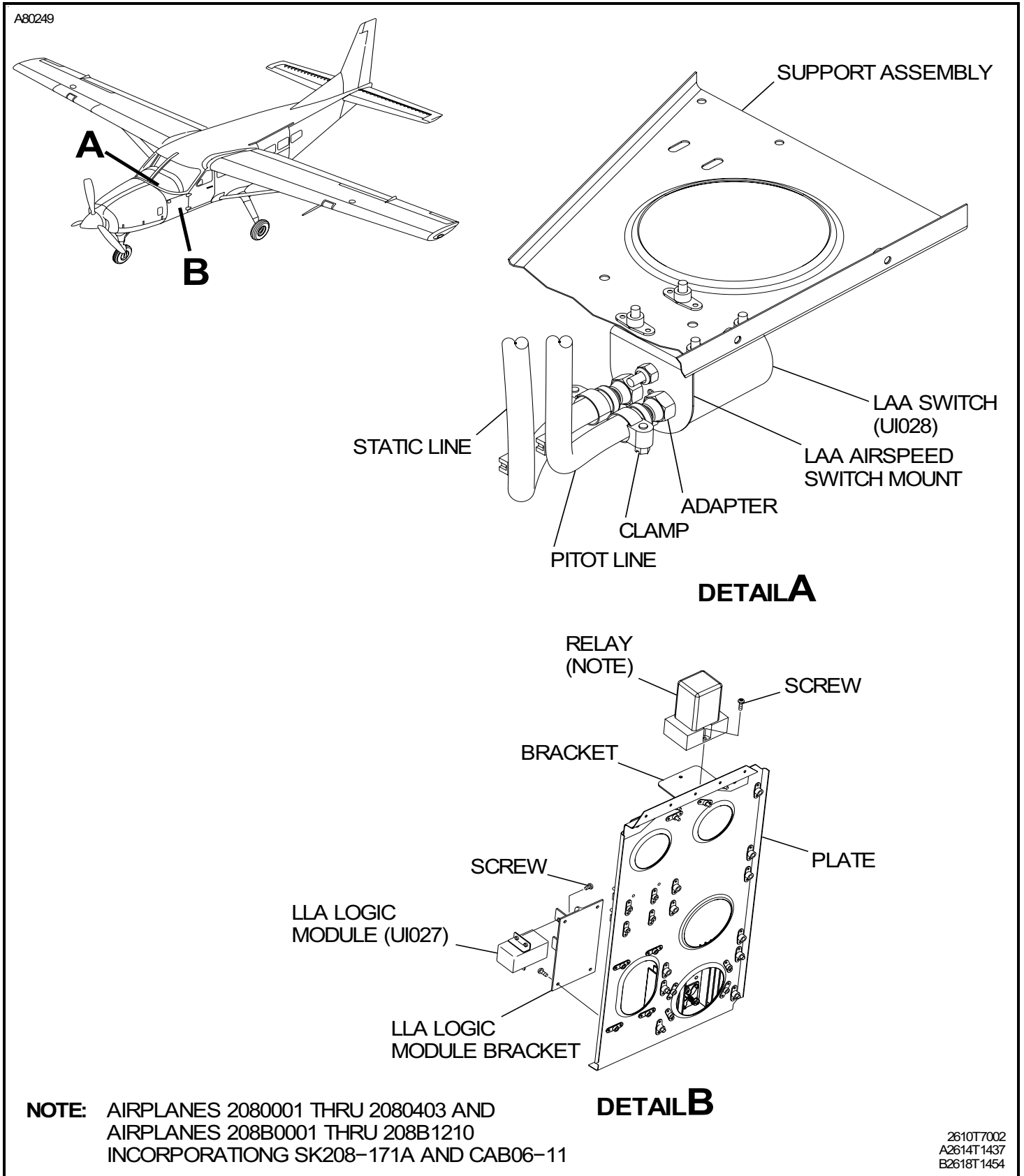
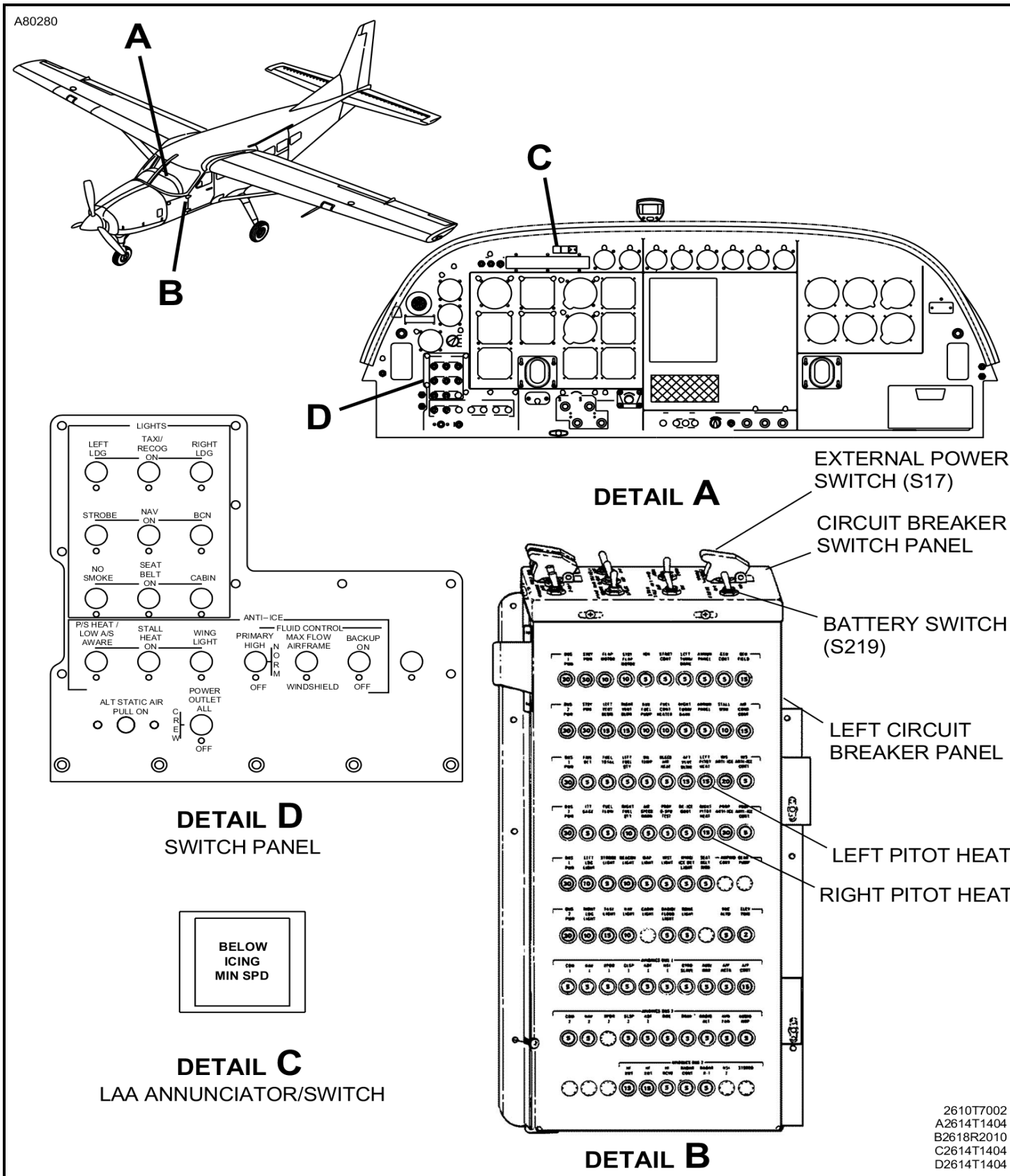


Figure 203 : Sheet 1 : LAA Switch and Circuit Breaker Installation (Non-G1000)



2610T7002
 A2614T1404
 B2618R2010
 C2614T1404
 D2614T1404

Figure 204 : Sheet 1 : LAA Components Installation (Non-G1000)

