

LED PASSENGER/CARGO COMPARTMENT LIGHTING - TROUBLESHOOTING

1. General

- A. This section gives the troubleshooting procedures for the passenger reading and cargo dome LED lighting. For a general description of the passenger/cargo compartment and reading LED lights refer to LED Passenger/Cargo Compartment Lighting - Description and Operation.
- B. Use the Model 208 Wiring Diagram Manual with the procedures in this section.

2. Tools and Equipment

- A. No special tools or equipment are necessary to do the procedures in this section.

3. Dome Lighting Troubleshooting

- A. If the dome lights do not come on when the CABIN switch (SI020) light switch is set to the ON position. Do the steps that follow:
 - (1) Make sure that the CABIN LTS circuit breaker electric power box found in the engine compartment is engaged.
 - (a) If the circuit breaker was not engaged, engage it and do the steps that follow.
 - (2) If the circuit breaker is engaged and the dome lights do not come on, make sure the courtesy lights come on when the CABIN switch is set to the ON position.
 - (3) If the courtesy lights do not come do the steps that follow.

CAUTION: Make sure that the CABIN LTS circuit breaker is not engaged before you examine the courtesy light wiring bundle or do a continuity check.

- (4) If the airplane has a cabin light timer installed examine the wiring bundles for continuity as follows:
 - (a) Between the CABIN switch (SI020) and the cabin timer.
 - (b) Between the passenger door switch (SZ002) and the cabin timer.
 - (c) Between the CABIN switch and the cargo door switch (SC022).
 - (d) Between the passenger door switch and the cargo door switch.
 - (e) Between the CABIN switch and the electric power box.
- (5) Repair any wiring damage.
- (6) If wiring repair is done do the steps that follow:
 - (a) Put external electrical power on the airplane.
 - (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (d) Make sure that the CABIN LTS circuit breaker is engaged.
 - (e) Set the CABIN switch to the ON position.
 - (f) Make sure that the dome lights come on.
 - (g) Set the CABIN switch to the OFF position.
 - (h) Set the EXTERNAL POWER switch to the OFF position.
 - (i) Set the BATTERY switch to the OFF position.
 - (j) Remove external electrical power from the airplane.
- (7) Get access to the CABIN switch. Refer to Incandescent Passenger/Cargo Compartment Lighting - Maintenance Practices.
 - (a) Examine the switch for continuity when it is operated.
 - (b) If the switch is unserviceable replace it. Refer to Refer to Incandescent Passenger/Cargo Compartment Lighting - Maintenance Practices.
- (8) If the switch was replaced do the steps that follow:
 - (a) Put external electrical power on the airplane.
 - (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (d) Make sure that the CABIN LTS circuit breaker is engaged.

- (e) Set the CABIN switch to the ON position.
 - (f) Make sure that the dome lights come on.
 - (g) Set the CABIN switch to the OFF position.
 - (h) Set the EXTERNAL POWER switch to the OFF position.
 - (i) Set the BATTERY switch to the OFF position.
 - (j) Remove external electrical power from the airplane.
- (9) If the switch was serviceable, replace the passenger door switch. Refer to Incandescent Passenger/Cargo Compartment Lighting - Maintenance Practices.
- (10) If the switch was replaced do the steps that follow:
- (a) Put external electrical power on the airplane.
 - (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (d) Make sure that the CABIN LTS circuit breaker is engaged.
 - (e) Set the CABIN switch to the ON position.
 - (f) Make sure that the dome lights come on.
 - (g) Set the CABIN switch to the OFF position.
 - (h) Set the EXTERNAL POWER switch to the OFF position.
 - (i) Set the BATTERY switch to the OFF position.
 - (j) Remove external electrical power from the airplane.
- (11) Replace the cargo door switch (SC022).
- (12) If the switch was replaced do the steps that follow:
- (a) Put external electrical power on the airplane.
 - (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (d) Make sure that the CABIN LTS circuit breaker is engaged.
 - (e) Set the CABIN switch to the ON position.
 - (f) Make sure that the dome lights come on.
 - (g) Set the CABIN switch to the OFF position.
 - (h) Set the EXTERNAL POWER switch to the OFF position.
 - (i) Set the BATTERY switch to the OFF position.
 - (j) Remove external electrical power from the airplane.
- (13) If the switch is serviceable replace the cabin light timer (BC003) (if installed). Refer to Incandescent Passenger/Cargo Compartment Lighting - Maintenance Practices.
- (14) If the timer was replaced do the steps that follow:
- (a) Put external electrical power on the airplane.
 - (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (d) Make sure that the CABIN LTS circuit breaker is engaged.
 - (e) Set the CABIN switch to the ON position.
 - (f) Make sure that the dome lights come on.
 - (g) Set the CABIN switch to the OFF position.
 - (h) Set the EXTERNAL POWER switch to the OFF position.
 - (i) Set the BATTERY switch to the OFF position.
 - (j) Remove external electrical power from the airplane.
- (15) If the timer is serviceable, replace the CABIN LTS circuit breaker found in the electric power box.

(16) If the circuit breaker was replaced do the steps that follow:

- (a) Put external electrical power on the airplane.
- (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
- (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
- (d) Make sure that the CABIN LTS circuit breaker is engaged.
- (e) Set the CABIN switch to the ON position.
- (f) Make sure that the dome lights come on.
- (g) Set the CABIN switch to the OFF position.
- (h) Set the EXTERNAL POWER switch to the OFF position.
- (i) Set the BATTERY switch to the OFF position.
- (j) Remove external electrical power from the airplane.

B. If one of the Cargo Compartment Dome light does not come on when the CABIN switch (SI020) light switch is set to the ON position. Do the steps that follow.

(1) Replace the applicable dome light LED lamp with a known good lamp.

- (a) Put external electrical power on the airplane.
- (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
- (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
- (d) Make sure that the CABIN LTS circuit breaker is engaged.
- (e) Set the CABIN switch to the ON position.
- (f) Make sure that the dome lights come on.
- (g) Set the CABIN switch to the OFF position.
- (h) Set the EXTERNAL POWER switch to the OFF position.
- (i) Set the BATTERY switch to the OFF position.
- (j) Remove external electrical power from the airplane.

(2) If the dome light does not come on remove the applicable light to get access to the dome light wiring. Refer to LED Dome Light - Removal/Installation.

CAUTION: Make sure that the CABIN LTS circuit breaker is not engaged before you examine the courtesy light wiring bundle or do a continuity check.

(3) Examine the lighting wiring bundles for continuity as follows:

- (a) If the airplane has a cabin light timer installed, do a continuity check between the applicable dome light airplane wiring terminals and the cabin timer (BC003).
- (b) For all airplanes, do a continuity check between the applicable dome light airplane wiring terminals and the cargo door switch (SC022).
- (c) For the passenger door dome light, do a continuity check between the dome light airplane wiring terminals and the CABIN switch.

(4) Repair any wiring damage.

(5) If wiring repair is done do the steps that follow:

- (a) Put external electrical power on the airplane.
- (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
- (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel, to the ON position.
- (d) Make sure that the CABIN LTS circuit breaker is engaged.
- (e) Set the CABIN switch to the ON position.
- (f) Make sure that the dome lights come on.
- (g) Set the CABIN switch to the OFF position.
- (h) Set the EXTERNAL POWER switch to the OFF position.

- (i) Set the BATTERY switch to the OFF position.
- (j) Remove external electrical power from the airplane.

4. Reading Light Troubleshooting

A. If the reading lights do not come on when each light's pushbutton switch is pushed to the ON position. Do the steps that follow:

- (1) Make sure that the RNDG LIGHT circuit breaker found on the left circuit breaker panel is engaged.
- (2) If the circuit breaker is not engaged, engage it and make sure that each of the reading lights come on when each lights pushbutton switch is pushed to the ON position.
- (3) If the reading lights do not come on do the steps that follow.

CAUTION: Make sure that the RNDG LIGHT circuit breaker is not engaged before you examine the reading light wiring bundle or do a continuity check.

- (4) Remove a reading light assembly to get access to reading light wiring bundle. Refer to LED Reading Light And Switch - Removal/Installation Passenger LED Reading Light Removal/Installation.

NOTE: The same unserviceable wiring splice can cause more than one reading light to not come on when their related switch is pushed to the ON position. Refer to the Model 208 Wiring Diagram Manual.

- (5) Do a continuity check between the reading light wiring and the left circuit breaker panel.

(6) Repair any wiring damage.

(7) If wiring repair is done do the steps that follow:

- (a) Install the removed reading light. Refer to LED Reading Light and Switch Passenger LED Reading Light Removal/Installation.
- (b) Put external electrical power on the airplane.
- (c) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
- (d) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
- (e) Make sure the RNDG LIGHT circuit breaker is engaged.
- (f) Push each of the reading light pushbutton switches to the ON position.
 - 1 Make sure that each of the reading lights comes on.
- (g) Push each of the reading light switches to the off position.
- (h) Set the EXTERNAL POWER switch to the OFF position.
- (i) Set the BATTERY switch to the OFF position.
- (j) Remove external electrical power from the airplane.

B. If a reading light does not come on when the reading light pushbutton switch is pushed to the ON position. Do the steps that follow.

(1) Replace the applicable reading light LED lamp with a known good lamp.

- (a) Put external electrical power on the airplane.
- (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
- (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
- (d) Make sure the RNDG LIGHT circuit breaker is engaged.
- (e) Push the reading light pushbutton switch to the ON position.
 - 1 Make sure that the reading light comes on.
- (f) Push the reading light pushbutton switch to the off position.
- (g) Set the EXTERNAL POWER switch to the OFF position.
- (h) Set the BATTERY switch to the OFF position.
- (i) Remove external electrical power from the airplane.

(2) If the reading light does not come on remove the applicable light to get access to the light wiring. Refer to LED Reading Light and Switch Passenger LED Reading Light Removal/Installation.

CAUTION: Make sure that the CABIN LTS circuit breaker is not engaged before you examine the courtesy light wiring bundle or do a continuity check.

- (3) Do a continuity check between the reading light wiring and the left circuit breaker panel.
- (4) Repair any wiring damage.
- (5) If wiring repair is done do the steps that follow:
 - (a) Install the removed reading light. Refer to LED Reading Light and Switch Passenger LED Reading Light Removal/Installation.
 - (b) Put external electrical power on the airplane.
 - (c) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (d) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (e) Make sure the RNDG LIGHT circuit breaker is engaged.
 - (f) Push the reading light pushbutton switch to the ON position.
 - 1 Make sure that the reading light comes on.
 - (g) Push the reading light pushbutton switch to the off position.
 - (h) Set the EXTERNAL POWER switch to the OFF position.
 - (i) Set the BATTERY switch to the OFF position.
 - (j) Remove external electrical power from the airplane.
- (6) If the wiring is serviceable replace the reading light switch. Refer to LED Reading Light and Switch Passenger LED Reading Light Removal/Installation.
- (7) If the pushbutton switch was replaced do the steps that follow:
 - (a) Put external electrical power on the airplane.
 - (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (d) Make sure the RNDG LIGHT circuit breaker is engaged.
 - (e) Push the reading light pushbutton switch to the ON position.
 - 1 Make sure that the reading light comes on.
 - (f) Push the reading light pushbutton switch to the off position.
 - (g) Set the EXTERNAL POWER switch to the OFF position.
 - (h) Set the BATTERY switch to the OFF position.
 - (i) Remove external electrical power from the airplane.
- (8) If the pushbutton switch is serviceable replace the reading light. Refer to LED Reading Light and Switch Passenger LED Reading Light Removal/Installation
- (9) If the reading light was replaced do the steps that follow:
 - (a) Put external electrical power on the airplane.
 - (b) Set the BATTERY switch found on the left circuit breaker panel switch panel to the ON position.
 - (c) Set the EXTERNAL POWER switch found on the circuit breaker switch panel to the ON position.
 - (d) Make sure the RNDG LIGHT circuit breaker is engaged.
 - (e) Push the reading light pushbutton switch to the ON position.
 - 1 Make sure that the reading light comes on.
 - (f) Push the reading light switch to the off position.
 - (g) Set the EXTERNAL POWER switch to the OFF position.
 - (h) Set the BATTERY switch to the OFF position.
 - (i) Remove external electrical power from the airplane.