

LED EXTERIOR LIGHTING - ADJUSTMENT/TEST

1. General

- A. This section gives the procedures for the adjustment and test of the LED exterior lights. The exterior LED light tests included in these procedures are the, Landing/Taxi Lights, NAV/Anti-Collision Light, Ground Recognition Light, Courtesy Light Operational Test, and the Wing Inspection Light.

2. LED Landing/Taxi Light Adjustment/Test

- A. LED Landing/Taxi Light Adjustment (Refer to Figure 501).

NOTE: The taxi and the landing lights each are supplied electrical power from separate circuit breakers.

- (1) Level the airplane. Refer to Chapter 8, Leveling - Maintenance Practices.
 - (a) Make sure that the pilot seat rail is on a horizontal plane.
 - (2) Park the airplane 50 feet from a wall or any suitable light reflecting surface.
 - (3) Remove the screws that attach the lens assembly to the light assembly.
 - (a) Remove the lens assembly from the light assembly.
 - (4) Measure distance from ground surface up to center of lamps and record.
 - (5) Apply external electrical power to the airplane.
 - (6) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the BUS position.
 - (7) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the ON position.
 - (8) Use the vertical and horizontal adjustment screws to a focal point straight forward and at a height 63 inches below center of lamps as recorded before.
 - (9) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the OFF position.
 - (10) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the OFF position.
 - (11) Remove external electrical power from the airplane.
 - (12) Install the lens assembly as follows:
 - (a) Put the lens assembly in its correct position on the light assembly.
 - (b) Install the screws that attach the lens to the light assembly.
- B. LED Taxi Light Assembly Test
- (1) Apply external electrical power to the airplane.
 - (2) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the BUS position.
 - (3) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the ON position.
 - (4) Make sure that TAXI LIGHT circuit breaker found on the left circuit breaker panel, is engaged.
 - (5) Test the recognition LED lights as follows:
 - (a) Set the TAXI/RECOG switch (SI015) to the ON position.
 - (b) Set the TAXI/RECOG switch (SI015) to the OFF position.
 - (6) Set the EXTERNAL POWER switch to the OFF position.
 - (7) Set the BATTERY switch to the OFF position.
 - (8) Remove external electrical power from the airplane.
- C. LED Landing Light Test
- (1) Apply external electrical power to the airplane.
 - (2) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the BUS position.
 - (3) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the ON position.
 - (4) Make sure that LEFT LNG LIGHT and RIGHT LNG LIGHT circuit breaker found on the left circuit breaker panel, are engaged.
 - (5) Test the landing lights as follows:
 - (a) Set the LEFT LNG (SI016) and the RIGHT LNG (SI014) light switch found on the left switch panel, to the ON position.

- (b) Make sure that each of the LED's on each of the left and right landing lights are on.
- (c) Set the LEFT LDG (SI016) and the RIGHT LDG (SI014) LDG light switch to the OFF position.
- (6) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the OFF position.
- (7) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the OFF position.
- (8) Remove external electrical power from the airplane.

3. NAV/Anti-Collision Light Operational Test

A. Do the NAV/Anti-Collision Light Operational Test

- (1) Make sure that the NAV LIGHT and STROBE LIGHT circuit breakers found on the left circuit breaker panel, are engaged.
- (2) Apply external electrical power to the airplane.
- (3) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the BUS position.
- (4) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the ON position.
- (5) Test the NAV lights.
 - (a) Set the NAV switch (SI017) found on the left switch panel, to the ON position.
 - 1 Make sure that the NAV light on each wing tip are operational.
 - 2 Make sure that the tail position light on each wing tip are operational.
 - (b) Set the NAV switch to the OFF position.
- (6) Test the anti-collision lights.
 - (a) Set the STROBE switch (SI018) found on the left switch panel, to the ON position.
 - 1 Make sure that the anti-collision light on each wing tip are operational.

NOTE: The anti-collision light has a built-in diagnostic function that will stop the operation of the light after 9 to 10 short flashes if it detects a problem. Proper system operation is indicated by a rate of approximately 50 flashes-per-minute. The functional test should be active long enough to make sure that the system has completed its diagnostic check.

- (b) Set the STROBE switch to the OFF position.
- (7) Set the EXTERNAL POWER switch to the OFF position.
- (8) Set the BATTERY switch to the OFF position.
- (9) Remove external electrical power from the airplane.

4. Ground Recognition Light Operational Test

A. Do the Ground Recognition Light Operational Test.

- (1) Make sure that the BEACON LIGHT circuit breaker found on the left circuit breaker panel, is engaged.
- (2) Apply external electrical power to the airplane.
- (3) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the BUS position.
- (4) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the ON position.
- (5) Set the BCN switch (SI009) found on the left switch panel, to the ON position.
 - (a) Make sure that the Ground Recognition Light is operational.
- (6) Set the BCN switch to the off position.
- (7) Set the EXTERNAL POWER switch to the OFF position.
- (8) Set the BATTERY switch to the OFF position.
- (9) Remove external electrical power from the airplane.

5. Courtesy Light Operational Test

A. Do the Courtesy Light Operational Test.

- (1) Make sure that the CABIN LT circuit breaker in the electrical power box, found in the engine compartment is engaged.

- (2) Apply external electrical power to the airplane.
- (3) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the BUS position.
- (4) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the ON position.
- (5) Set the CABIN switch (SI020) found on the left switch panel, to the ON position.
 - (a) Make sure that the Courtesy Light is operational.
- (6) Set the CABIN switch to the off position.
- (7) Set the EXTERNAL POWER switch to the OFF position.
- (8) Set the BATTERY switch to the OFF position.
- (9) Remove external electrical power from the airplane.

6. Wing Inspection Light Operational Test

A. Wing Inspection Light Operational Test.

- (1) Make sure that the WING ICE DET LIGHT circuit breaker found on the left circuit breaker panel, is engaged.
- (2) Apply external electrical power to the airplane.
- (3) Set the EXTERNAL POWER switch (SC006) found on the circuit breaker switch panel, to the BUS position.
- (4) Set the BATTERY switch (SC005) found on the circuit breaker switch panel, to the ON position.
- (5) Set the WING LIGHT switch (SI021) found on the left switch panel, to the ON position.
 - (a) Make sure that the Wing Inspection Light is operational.
- (6) Set the WING LIGHT switch to the off position.
- (7) Set the EXTERNAL POWER switch to the OFF position.
- (8) Set the BATTERY switch to the OFF position.
- (9) Remove external electrical power from the airplane.

Figure 501 : Sheet 1 : LED Landing/Taxi/Recognition Light Adjustment

