

5.0 Maintenance and Repair

To keep the L-804 light operating efficiently, follow a preventive maintenance schedule. Refer to [Table 6](#) and, refer to FAA AC 150/5340-26 for more detailed information.



WARNING

Electric Shock

Read installation instructions in their entirety before starting installation.

- Refer to the FAA Advisory Circular AC 150/5340-26, Maintenance of Airport Visual Aids Facilities, for instructions on safety precautions.
- Observe all safety regulations. To avoid injuries, always disconnect power before making any wiring connections or touching any parts. Refer to FAA Advisory Circular AC 150/5340-26.
- Become familiar with the general safety instructions in this section of the manual before installing, operating, maintaining or repairing this equipment.
- Read and carefully follow the instructions throughout this manual for performing specific tasks and working with specific equipment.
- Make this manual available to personnel installing, operating, maintaining or repairing this equipment.
- Follow all applicable safety procedures required by your company, industry standards and government or other regulatory agencies.
- Route electrical wiring along a protected path. Make sure they will not be damaged by moving equipment.
- Protect components from damage, wear, and harsh environment conditions.
- Allow ample room for maintenance, panel accessibility, and cover removal.
- Protect equipment with safety devices as specified by applicable safety regulations.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning prior to returning power to the circuit.
- Turn off the disconnect switch or main circuit breaker attempting to service the fixture

Failure to observe these warnings may result in personal injury, death, or equipment damage.

5.1 Maintenance Schedule

Table 6: L-804 Runway Guard Light Maintenance

Interval	Maintenance Task	Action
Daily	Check for burned-out LED Engine.	Replace the PC board or the light fixture. Refer to <i>Replacing LED Engine</i> in this section.
	Check for dim LED.	Clean lens. Replace the PC board or the light fixture, if necessary. Refer to <i>Replacing the LED Engine</i> in this section.
Weekly	Check for vegetation.	Remove vegetation. Use weed killer.
	Check for dirty lens.	Clean the lens.
	Check for incorrect aiming angle.	Adjust elevation setting.
Semiannually	Check for moisture in the fixture.	Check for cracks in the lens or housing. Repair or replace lens or housing.
Annually	Inspect fixture for deterioration.	Repair or replace fixture.
	Inspect cable insulation.	

5.2 Replacing Lens and Lens Gasket

To replace the lens, perform the following procedure:

1. See [Figure 7](#) . Remove the Visors located over each of the lenses.
2. Remove the six screws around each lens that on the face plate. Then remove the six screws found in the middle of the faceplate and remove the faceplate.
3. Remove the damaged lens and gasket. Discard the lens and examine the gasket. If gasket is damage do not reuse. Remove any debris from the gasket and the install the gasket onto the lens. Position and center the lens assembly over the LED engine.



Note

Before replacing mounting hardware remove all dried Loctite compound and place 1 drop new Loctite 242 onto each screw. Torque the mounting hardware as shown in [Figure 7](#) .

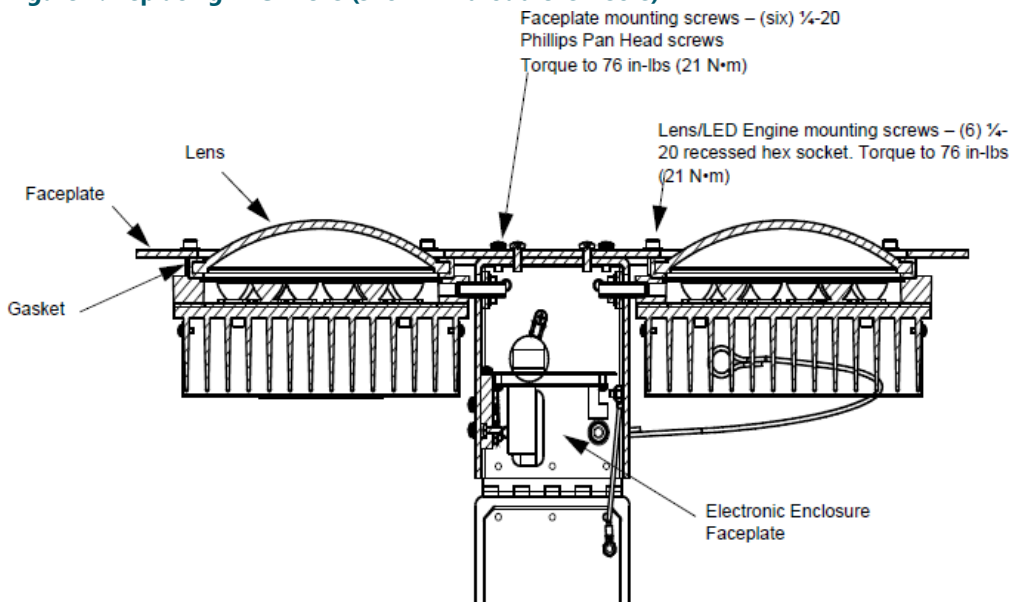
4. Replace the faceplate over the LED engines and align the LED engine and lens assembly with the mating openings in the faceplate. First, fasten the faceplate to the electrical enclosure and then fasten the LED engine assembly and lens to the faceplate.
5. Reinstall the visors.



Note

Refer to the *Parts* section for part numbers.

Figure 7: Replacing ERGL Lens (shown without lens visors)



5.3 Replacing LED Engines

To replace the LED engine, perform the following procedure:



Note

Individual LEDs cannot be replaced.

1. See [Figure 7](#) . Open Enclosure Lid and then disconnect the LED Engine power leads from the PCB Assembly.
2. See [Figure 10](#) . Remove the PCB mounting screws found on the outside of the enclosure.
3. See [Figure 8](#) . Remove both visors from the mounting clips on the face of the faceplate.
4. Next, remove the hex socket shoulder screws head cap screws found around each of the lenses.
5. Now remove the Phillips head screws hex screws found in the middle area of the faceplate and remove the faceplate and set the faceplate assembly on a workbench.
6. See [Figure 15](#) . Reach into the enclosure and remove the Hex Nut and washers from pipe nipple found inside toward the back of the enclosure. Next pull the Light Engine w/attached cooling fins away from the enclosure.
7. See [Figure 14](#) . Remove the four small Phillips head screws that fasten the Heat Sink Cover from the heat sink. Remove the LED Engines from the heat sink by removing the four hex socket screws that are located between the cooling fins on the backside of the heat sink. Inspect the rubber gasket and replace if gasket is damaged.



Note

Depending whether the LED Light Assembly has its power cable come out the side as in [Figure 8](#) or out the back as in [Figure 9](#) will determine which assembly procedure you will follow.



Note

Before replacing mounting hardware remove all dried Loctite compound and place 1 drop of new Loctite 242 onto each screw.

5.3.1 Replacing the same type LED Assembly

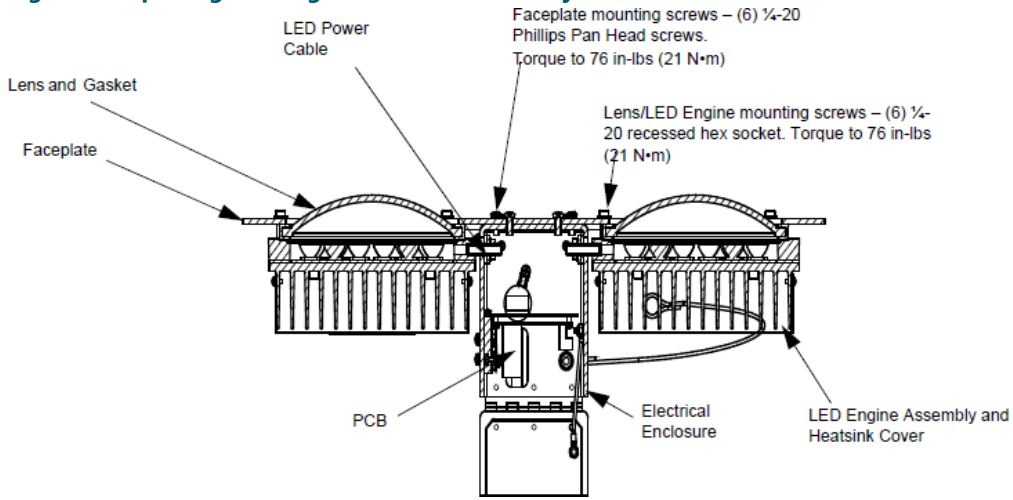
1. Install the new LED Engine Assembly and reassemble ERGL in reverse order as disassembly.
2. Torque the mounting hardware as shown in [Figure 8](#) .



Note

Refer to the *Parts* section for part numbers.

Figure 8: Replacing LED Engine - old LED assembly



5.3.2 Replacing an LED assembly with side power cable with a LED rear power cabled assembly

Figure 9: Replacing LED Engine - new LED assembly

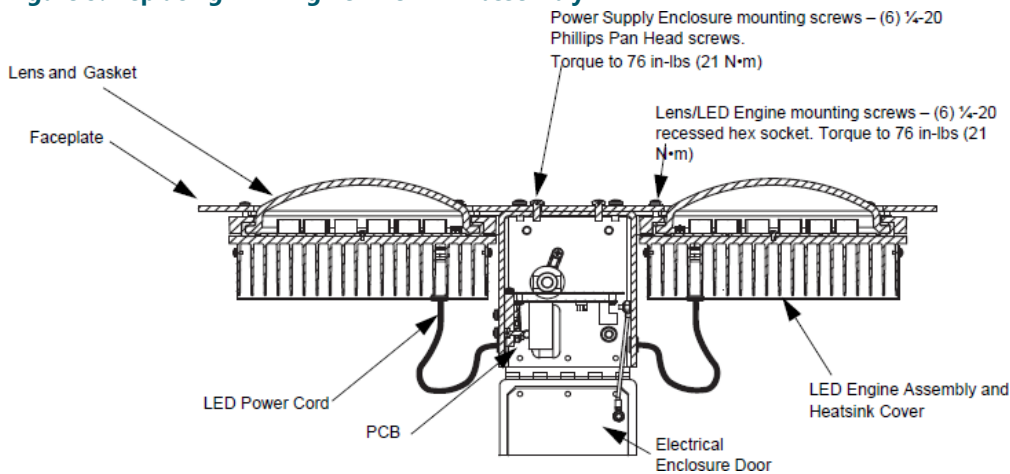


Table 7: 94A0520 LED Light Kit Parts

Part Number	Description	94A0520-1X/ QTY.	94A0520-2X/ QTY.	94A0520-3X/ QTY.
44A7234-Y1	L-804 LED RGL Light Eng Assembly Traffic Signal Yellow	2	2	-
44A7234-R1	L-804 LED RGL Light Eng Assembly Red	-	-	2
63A1125	Hole Plug 5/8 Diameter		2	
64A0177-16	10-32 X 1 Pan Head PHIL		12	
64A0990-12	#10-32 X 3/4 Stainless Steel Stud		4	
65A0015-19	10-32 Hex Nut		8	
66A0015-17	#10 Flat washer		12	
66A0015/24	1/4 Flat washer		12	
66A0026/17	#10 Split Lock washer		12	
77A0222	Liquid Tight Cord Grip NI PL BR 3/8 NPT Cord W/Nut		2	

1. Drill a 0.688-inch (17.5 mm) hole as shown in [Figure 10](#) .
2. Plug the open hole using (2) Hole Plug 5/8 Diameter, as shown in [Figure 10](#) .
3. Replace the four small Phillips head screws that fasten the Heat Sink Cover from the heat sink. Inspect the rubber gasket and replace if gasket is damaged. Connect the LED Engine to the heat sink by replacing the four hex socket screws that are located between the cooling fins on the backside of the heat sink.
4. Reach into the enclosure and connect the Hex Nut and washers from pipe nipple found inside toward the back of the enclosure. Connect the Light Engine w/attached cooling fins to the enclosure.
5. Install the six Phillips head screws in the middle area of the faceplate and attach the faceplate assembly.
6. Install the six hex socket shoulder screws around each of the LED assembly lenses.
7. Replace the visor from the mounting clips on the face of the faceplate. Use two #10-32 X 3/4 Stainless Steel Studs for each visor as shown in [Figure 10](#) . The studs are threaded and are to be screwed in finger-tight.



Note

Connect the five PCB mounting screws to the enclosure. Connect the LED power leads to the PCB assembly.

Figure 10: LED Light Kit Assembly Diagram

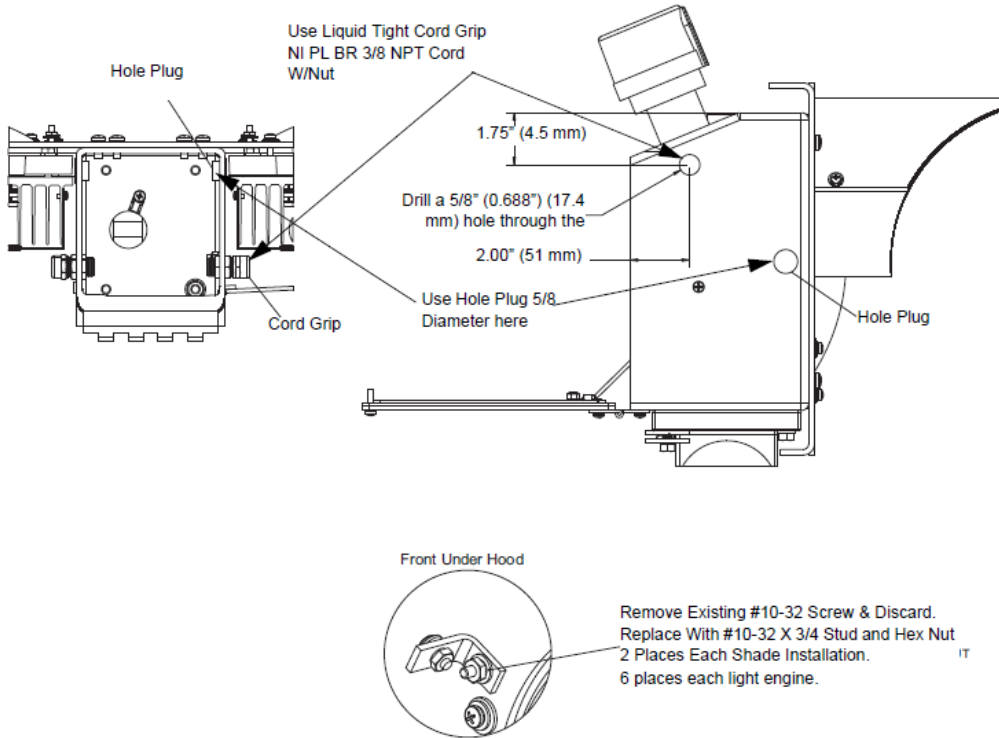
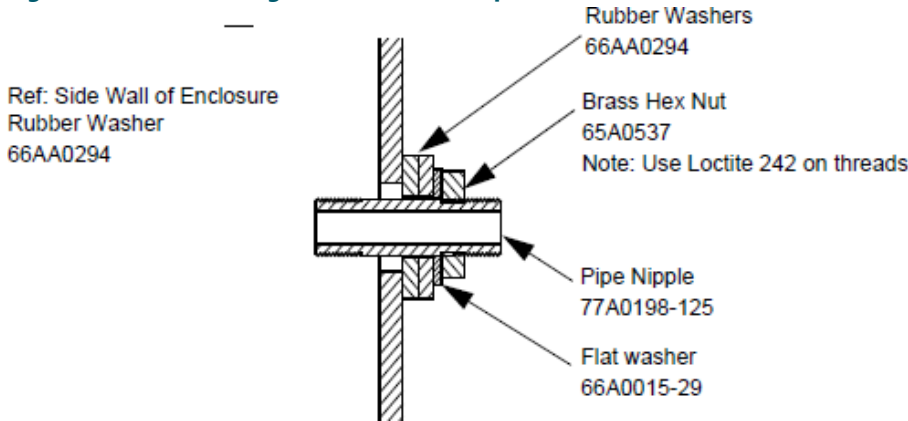


Figure 11: ERGL LED Engine Feed Thru Components

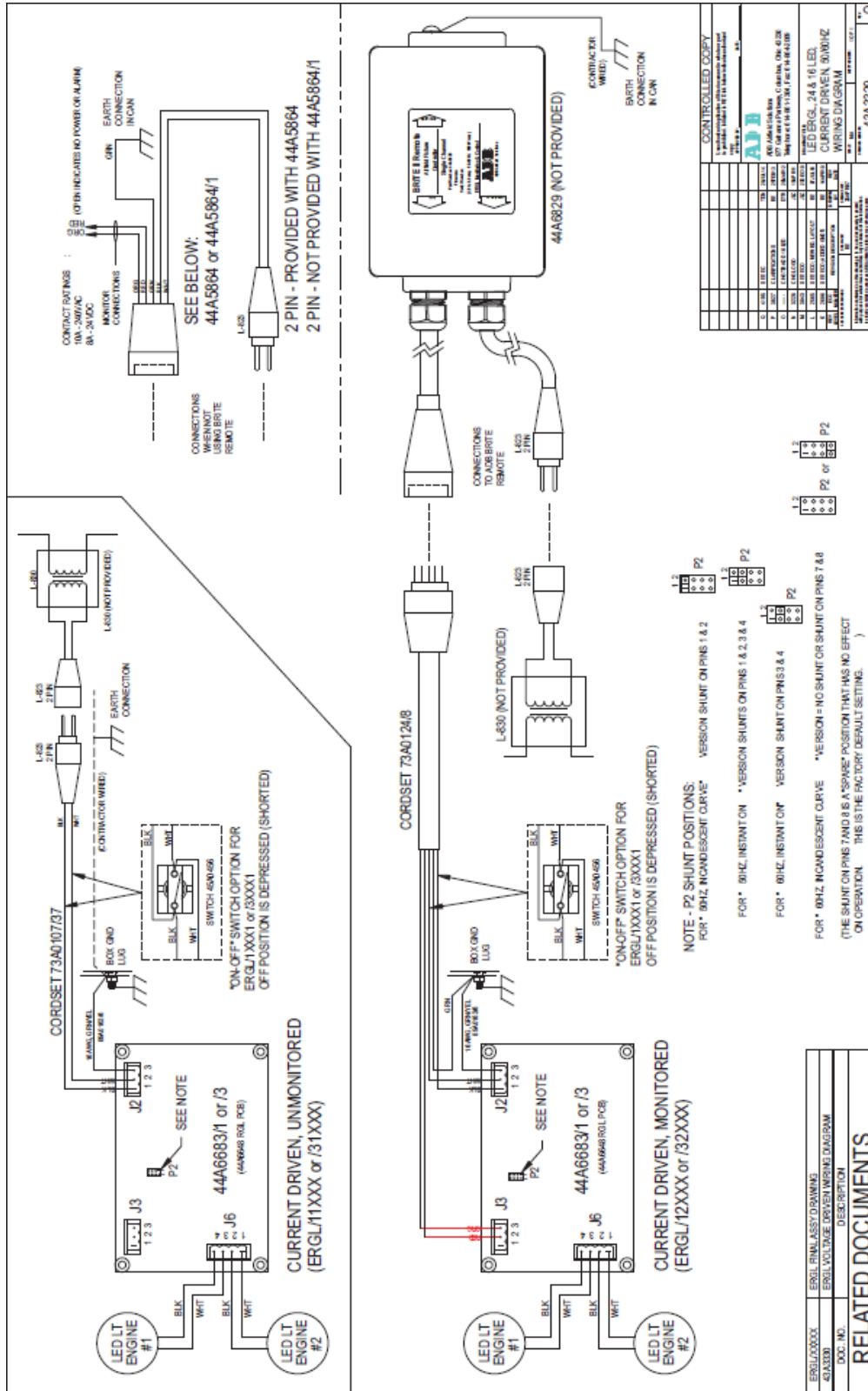


5.3.3 Adjusting Vertical and Horizontal Settings

See installation procedure section on " [Horizontal Aiming](#) " on page 13 thru " [Vertical Aiming](#) " on page 15.

6.0 Electrical Diagrams

Figure 12: 43A3329 LED RGL Current Driven



7.0 Parts

To order parts, call ADB Safegate Customer Service or your local representative. Use the accompanying illustration, to describe and locate parts correctly. See the spare parts list to order.

Ordering Code^{3,4}

ERGL - X X X X

Power

- 1 = Current-Driven, 60 Hz
- 2 = ICAO Voltage-Driven, 120 VAC, ±10%, 50/60 Hz⁶
- 3 = Current-Driven, 50 Hz⁶
- 4 = ICAO Voltage-Driven, 240 VAC, ±10%, 50/60 Hz⁶
- 5 = FAA Voltage-Driven, 120 VAC, ±10%, 50/60 Hz
- 6 = FAA Voltage-Driven, 240 VAC, ±10%, 50/60 Hz

Monitoring

- 1 = No Monitoring (2-pin cord set)
- 2 = Monitoring Option 1⁷
- 3 = Monitoring Option 2⁸

LED Color

- 1 = FAA Traffic Signal Yellow⁹
- 2 = Traffic Signal Red^{2,5,9}
- 3 = ICAO Aviation Yellow^{1,5,6}

Photocell Feature

- 1 = Without photocell, current-driven only
- 2 = With photocell, voltage-driven only

Incoming Power On/Off Switch

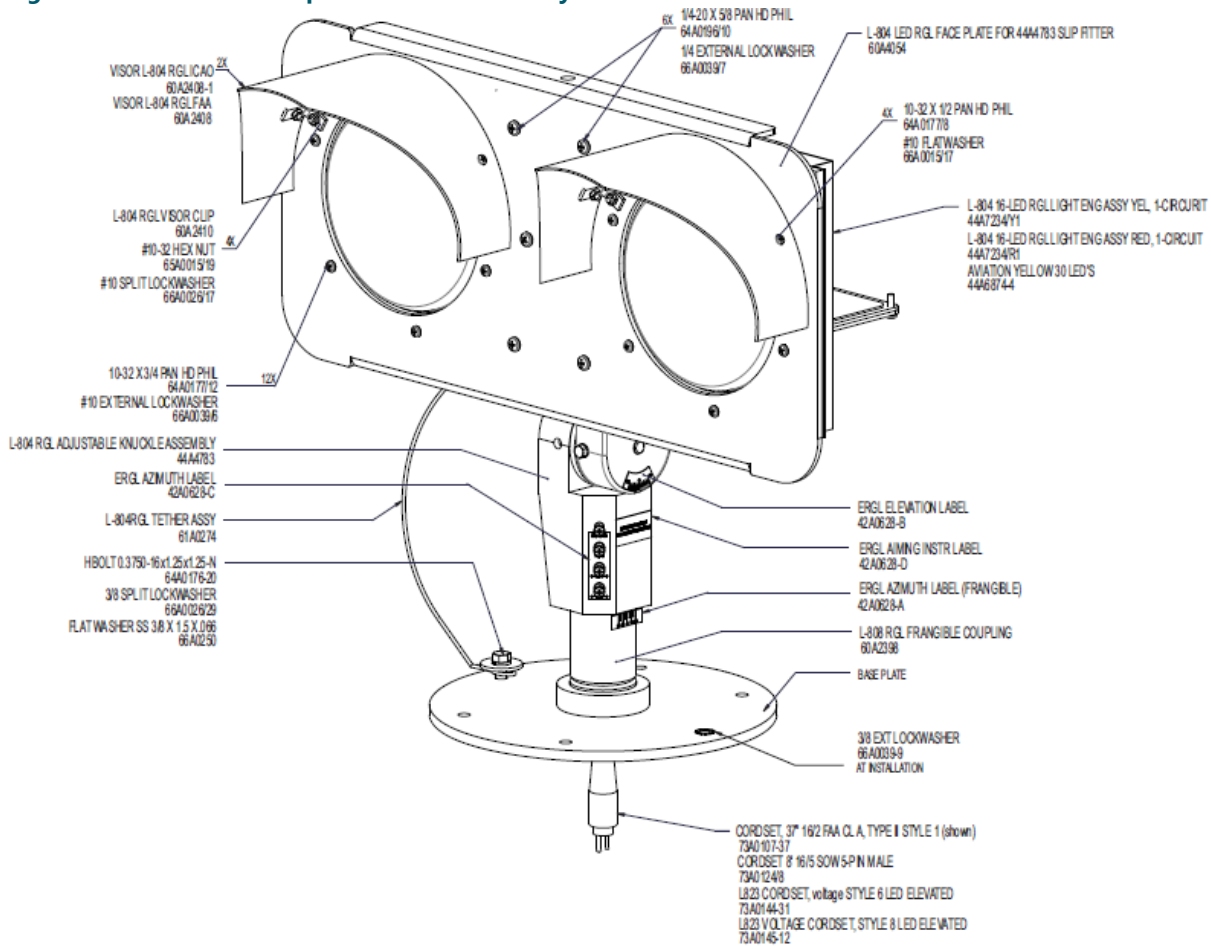
- 0 = No switch
- 1 = With on/off switch

Notes

- ¹ Complies with color and illumination of ICAO Annex 14, Vol. 1, 6th edition specifications for Runway Guard Lights. Color only valid with Power options 1-4.
- ² Color not recognized by the FAA.
- ³ 1832RGL base plate is ordered and shipped separately. See data sheet 2012 for details.
- ⁴ Shipped from factory preset for incandescent on/off curve light output. Can be field modified for instant on/off operation. It is recommended that instant on/off be implemented only on dedicated 5-step CCR circuits.
- ⁵ Not ETL Certified.
- ⁶ The L-804(L) LED part numbers that carry the CE Mark include: ERGL - 21320, ERGL-31310, ERGL-41320
- ⁷ Monitoring Option 1 provides a fault alarm. A dry contact closure is externally connected via a 5-pin plug (supplied) to indicate alarm status. Alarm status can be communicated using a BRITE II Remote (Part No. 44A6829).
- ⁸ Monitoring Option 2 provides a fault alarm for BRITE III applications. A dry contact closure is externally connected to a BRITE III Remote via a cord set adapter (Part No. 44A7024 - purchased separately).
- ⁹ Color only valid with Power Options 1, 3, 5 and 6.

7.1 Parts Diagrams

Figure 14: ERGL Main Components Final Assembly

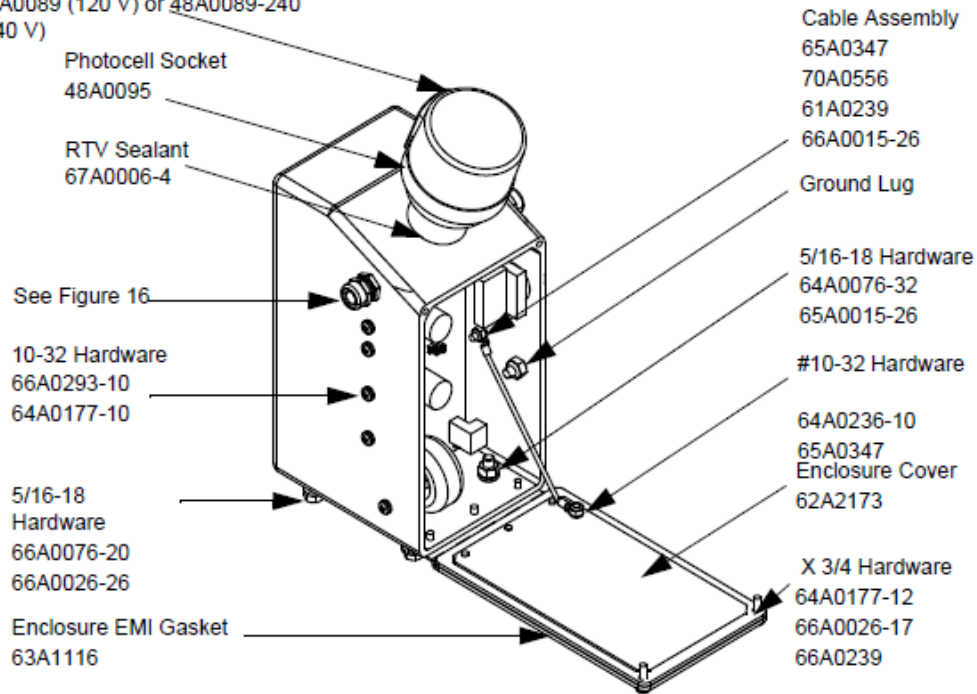


NOTE: See Part List for complete description

Figure 15: ERGL Main Components Enclosure Assembly

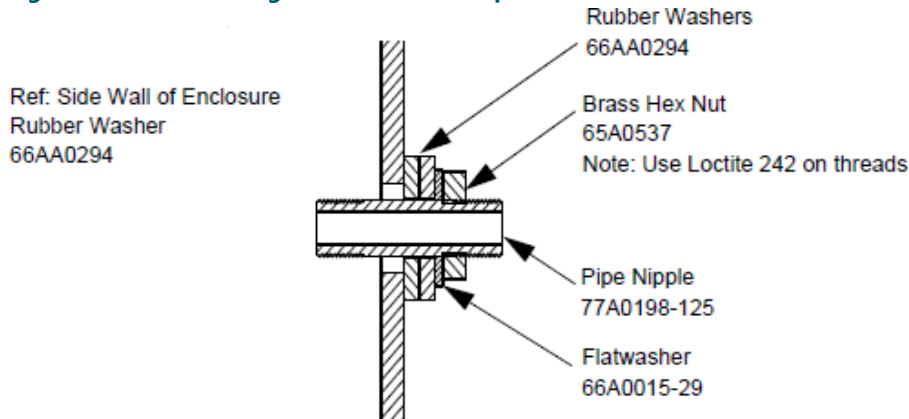
Photocell – Mode 2 Only

48A0089 (120 V) or 48A0089-240 (240 V)



NOTE: See Part List for complete description.

Figure 16: ERGL LED Engine Feed Thru Components

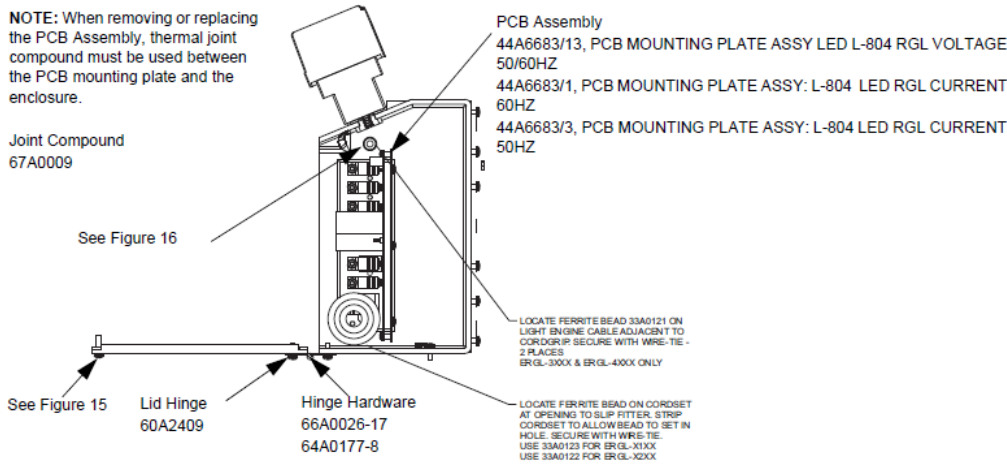


NOTE: See Part List for complete description.

Figure 17: ERGL PCB Assembly

NOTE: When removing or replacing the PCB Assembly, thermal joint compound must be used between the PCB mounting plate and the enclosure.

Joint Compound
67A0009



NOTE: See Part List for complete description

Figure 18: Voltage Driven

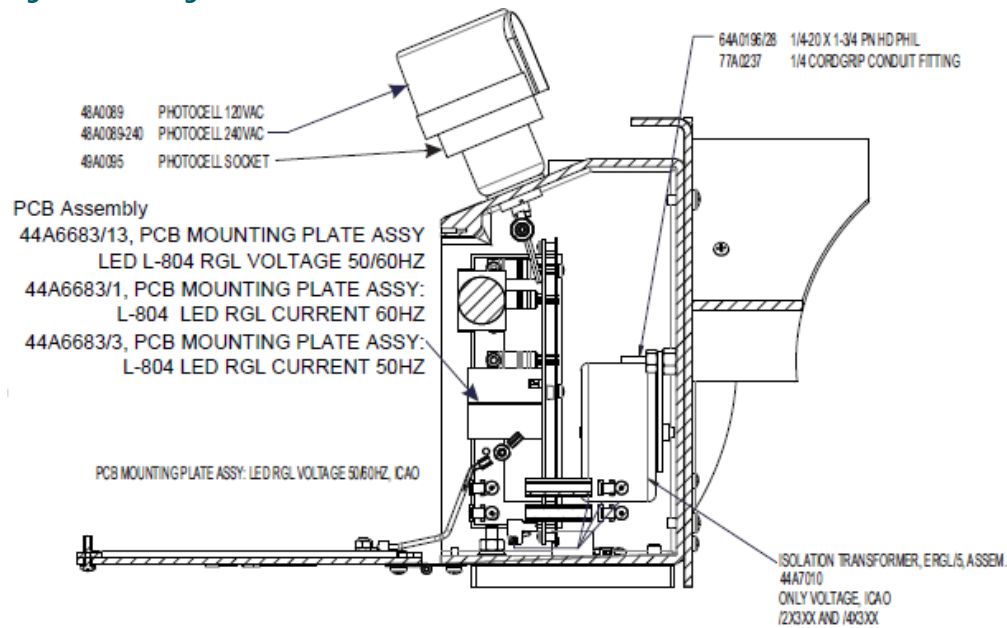
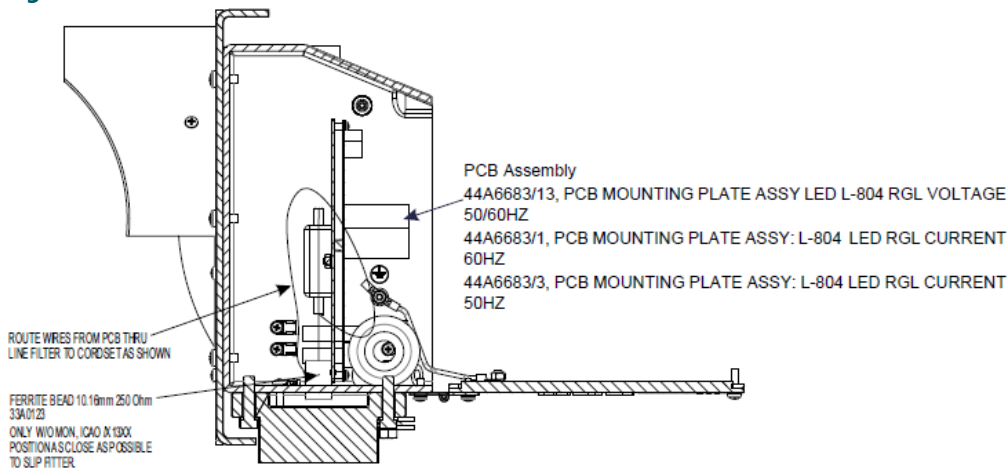


Figure 19: Current Driven



7.1.1 Spare Parts List

Table 8: Spare Parts

Description	Part No.
Base plate, L-867B heavy-duty	1832RGL
Canopy (FAA)	60A2408
Canopy (ICAO)	60A2408-1S
Canopy brackets	60A2410
Frangible column, 2 - 11.5 TPI (Used with 1832RGL)	60A2398
Frangible coupling, 11 TPI threaded (Normally used in metric applications. Not for use with 1832RGL base plate)	60A2398-1
Fuse, 1.5A (voltage-driven, mounted on PCB)	47A0179-5
Gasket, EMI, enclosure	63A1116
Gasket, lens	63A1122
Lens, clear	63A1123
On/Off switch, current-driven	45A0456-1
On/Off switch, voltage-driven	45A0474
Photocell, 120 VAC	48A0089
Photocell, 240 VAC	48A0089-240
Photocell socket	49A0095
Power supply ass'y, 16 or 24 LED light engine,current-driven,60Hz	44A6683-1
Power supply ass'y,16 or 24 LED light engine,current-driven,50Hz ¹	44A6683-3
Power supply ass'y,16 LED light engine,voltage-driven,50/60Hz ¹	44A6683-13
Power supply ass'y, 24 LED light engine, voltage-driven, 50/60 Hz ¹	44A6683-2
Power supply ass'y, 32 LED, 95-264 VAC, 50/60 Hz, ICAO ¹	44A6683-10
Power supply ass'y, 32 LED, current driven, 50 Hz, ICAO ¹	44A6683-11
Power supply ass'y, 32 LED, current driven, 60 Hz, ICAO ¹	44A6683-12

Notes

¹ Includes power supply PC board, heat-sink, and mounting bracket

Appendix A: SUPPORT

Our experienced engineers are available for support and service at all times, 24 hour/7 days a week. They are part of a dynamic organization making sure the entire ADB SAFEGATE is committed to minimal disturbance for airport operations.

ADB SAFEGATE Support

Live Technical Support - Americas

If at any time you have a question or concern about your product, just contact ADB SAFEGATE's technical service department. Trained in all areas of system issues, troubleshooting, quality control and technical assistance, our highly experienced Technical support specialists are available 24 hours a day, seven days a week to provide assistance over the phone.

ADB SAFEGATE **Americas Technical Service & Support (US & Canada): +1-800-545-4157**

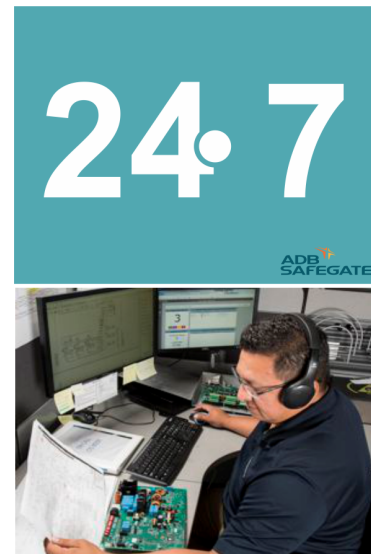
ADB SAFEGATE Americas Technical Service & Support (International): +1-614-861-1304

During regular business hours, you can also Chat with a Service Technician. We look forward to working with you!

Before You Call

When you have an airfield lighting or system control system problem it is our goal to support airfield maintenance staff as quickly as possible. To support this effort we ask that you have the following information ready before calling.

- The *airport code*
- If not with an airport, then company name (prefer customer id number)
- Contact phone number and email address
- Product with part number preferable or product number
- Have you reviewed the product's manual and troubleshooting guide
- Do you have a *True RMS* meter available (and any other necessary tools)
- Be located with the product ready to troubleshoot



Note

For more information, see www.adbsafegate.com, or contact ADB SAFEGATE Support via email at support@adbsafegate.com or

Brussels: +32 2 722 17 11

Rest of Europe: +46 (0) 40 699 17 40

Americas: +1 614 861 1304. Press 3 for technical service or press 4 for sales support.

China: +86 (10) 8476 0106

A.1 ADB SAFEGATE Website

The ADB SAFEGATE website, www.adbsafegate.com, offers information regarding our airport solutions, products, company, news, links, downloads, references, contacts and more.

A.2 Recycling

A.2.1 Local Authority Recycling

The disposal of ADB SAFEGATE products is to be made at an applicable collection point for the recycling of electrical and electronic equipment. The correct disposal of equipment prevents any potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling. The recycling of materials helps to conserve natural resources. For more detailed information about recycling of products, contact your local authority city office.

A.2.2 ADB SAFEGATE Recycling

ADB SAFEGATE is fully committed to environmentally-conscious manufacturing with strict monitoring of our own processes as well as supplier components and sub-contractor operations. ADB SAFEGATE offers a recycling program for our products to all customers worldwide, whether or not the products were sold within the EU.

ADB SAFEGATE products and/or specific electrical and electronic component parts which are fully removed/separated from any customer equipment and returned will be accepted for our recycling program.

All items returned must be clearly labeled as follows:

- For *ROHS/WEEE* Recycling
- Sender contact information (Name, Business Address, Phone number).
- Main Unit Serial Number.

ADB SAFEGATE will continue to monitor and update according for any future requirements for *EU directives* as and when *EU member states* implement new *regulations* and or *amendments*. It is our aim to maintain our *compliance plan* and assist our customers.

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