



External Power Supply Kit for AGSF-L and AGSB-L Signs  
94A0738/00

## Service Bulletin

ALN176, Rev. D, 2021/10/20

  
**ADB  
SAFEGATE**



## A.0 Disclaimer / Standard Warranty

### CE certification

The equipment listed as CE certified means that the product complies with the essential requirements concerning safety and hygiene. The European directives that have been taken into consideration in the design are available on written request to ADB SAFEGATE.

### ETL certification

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### All Products Guarantee

ADB SAFEGATE will correct by repair or replacement per the applicable guarantee above, at its option, equipment or parts which fail because of mechanical, electrical or physical defects, provided that the goods have been properly handled and stored prior to installation, properly installed and properly operated after installation, and provided further that Buyer gives ADB SAFEGATE written notice of such defects after delivery of the goods to Buyer. Refer to the Safety section for more information on Material Handling Precautions and Storage precautions that must be followed.

ADB SAFEGATE reserves the right to examine goods upon which a claim is made. Said goods must be presented in the same condition as when the defect therein was discovered. ADB SAFEGATE further reserves the right to require the return of such goods to establish any claim.

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Products manufactured by ADB SAFEGATE are guaranteed against mechanical, electrical, and physical defects (excluding lamps) which may occur during proper and normal use for a period of two years from the date of ex-works delivery, and are guaranteed to be merchantable and fit for the ordinary purposes for which such products are made.



#### Note

See your sales order contract for a complete warranty description.

Replaced or repaired equipment under warranty falls into the warranty of the original delivery. No new warranty period is started for these replaced or repaired products.

### FAA Certified products manufactured by ADB SAFEGATE

ADB SAFEGATE L858 Airfield Guidance Signs are warranted against mechanical and physical defects in design or manufacture for a period of 2 years from date of installation, per FAA AC 150/5345-44 (applicable edition).

ADB SAFEGATE LED products (with the exception of obstruction lighting) are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years from date of installation, per FAA EB67 (applicable edition). These FAA certified constant current (series) powered LED products must be installed, interfaced and powered with and through products certified under the FAA Airfield Lighting Equipment Program (ALECP) to be included in this 4 (four) year warranty. This includes, but is not limited to, interface with products such as Base Cans, Isolation Transformers, Connectors, Wiring, and Constant Current Regulators.



## Note

See your sales order contract for a complete warranty description.

Replaced or repaired equipment under warranty falls into the warranty of the original delivery. No new warranty period is started for these replaced or repaired products.

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## Liability

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### WARNING

Use of the equipment in ways other than described in the catalog leaflet and the manual may result in personal injury, death, or property and equipment damage. Use this equipment only as described in the manual.

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ADB SAFEGATE cannot be held responsible for injuries or damages resulting from non-standard, unintended uses of its equipment. The equipment is designed and intended only for the purpose described in the manual. Uses not described in the manual are considered unintended uses and may result in serious personal injury, death or property damage.

Unintended uses, includes the following actions:

- Making changes to equipment that have not been recommended or described in this manual or using parts that are not genuine ADB SAFEGATE replacement parts or accessories.
- Failing to make sure that auxiliary equipment complies with approval agency requirements, local codes, and all applicable safety standards if not in contradiction with the general rules.
- Using materials or auxiliary equipment that are inappropriate or incompatible with your ADB SAFEGATE equipment.
- Allowing unskilled personnel to perform any task on or with the equipment.

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# 1.0 Safety

## Introduction to Safety






This section contains general safety instructions for installing and using ADB SAFEGATE equipment. Some safety instructions may not apply to the equipment in this manual. Task- and equipment-specific warnings are included in other sections of this manual where appropriate.

## 1.1 Safety Messages


### HAZARD Icons used in the manual

For all HAZARD symbols in use, see the Safety section. All symbols must comply with ISO and ANSI standards.

Carefully read and observe all safety instructions in this manual, which alert you to safety hazards and conditions that may result in personal injury, death or property and equipment damage and are accompanied by the symbol shown below.

	<b>WARNING</b> Failure to observe a warning may result in personal injury, death or equipment damage.
	<b>DANGER - Risk of electrical shock or ARC FLASH</b> Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage. ARC Flash may cause blindness, severe burns or death.
	<b>WARNING - Wear personal protective equipment</b> Failure to observe may result in serious injury.
	<b>WARNING - Do not touch</b> Failure to observe this warning may result in personal injury, death, or equipment damage.
	<b>CAUTION</b> Failure to observe a caution may result in equipment damage.

### Qualified Personnel

	<b>Important Information</b> The term <b>qualified personnel</b> is defined here as individuals who thoroughly understand the equipment and its safe operation, maintenance and repair. Qualified personnel are physically capable of performing the required tasks, familiar with all relevant safety rules and regulations and have been trained to safely install, operate, maintain and repair the equipment. It is the responsibility of the company operating this equipment to ensure that its personnel meet these requirements. Always use required personal protective equipment (PPE) and follow safe electrical work practice.
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### 1.1.1 Introduction to Safety



#### CAUTION

##### Unsafe Equipment Use

This equipment may contain electrostatic devices, hazardous voltages and sharp edges on components

- Read installation instructions in their entirety before starting installation.
- 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.
- Install all electrical connections to local code.
- Use only electrical wire of sufficient gauge and insulation to handle the rated current demand. All wiring must meet local codes.
- 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.

**Failure to follow this instruction can result in serious injury or equipment damage**

### Additional Reference Materials



#### Important Information

- IEC - International Standards and Conformity Assessment for all electrical, electronic and related technologies.
- IEC 60364 - Electrical Installations in Buildings.
- FAA Advisory: AC 150/5340-26 (current edition), Maintenance of Airport Visual Aid Facilities.
- Maintenance personnel must refer to the maintenance procedure described in the ICAO Airport Services Manual, Part 9.
- ANSI/NFPA 79, Electrical Standards for Metalworking Machine Tools.
- National and local electrical codes and standards.

### 1.1.2 Intended Use



#### CAUTION

##### Use this equipment as intended by the manufacturer

This equipment is designed to perform a specific function, do not use this equipment for other purposes

- Using this equipment in ways other than described in this manual may result in personal injury, death or property and equipment damage. Use this equipment only as described in this manual.

**Failure to follow this instruction can result in serious injury or equipment damage**



### 1.1.3 Maintenance Safety



#### **DANGER**

##### **Electric Shock Hazard**

This equipment may contain electrostatic devices

- Do not operate a system that contains malfunctioning components. If a component malfunctions, turn the system OFF immediately.
- Disconnect and lock out electrical power.
- Allow only qualified personnel to make repairs. Repair or replace the malfunctioning component according to instructions provided in its manual.

**Failure to follow these instructions can result in death or equipment damage**

### 1.1.4 Material Handling Precautions, ESD



#### **CAUTION**

##### **Electrostatic Sensitive Devices**

This equipment may contain electrostatic devices

- Protect from electrostatic discharge.
- Electronic modules and components should be touched only when this is unavoidable e.g. soldering, replacement.
- Before touching any component of the cabinet you shall bring your body to the same potential as the cabinet by touching a conductive earthed part of the cabinet.
- Electronic modules or components must not be brought in contact with highly insulating materials such as plastic sheets, synthetic fiber clothing. They must be laid down on conductive surfaces.
- The tip of the soldering iron must be grounded.
- Electronic modules and components must be stored and transported in conductive packing.

**Failure to follow this instruction can result in equipment damage**

### 1.1.5 Arc Flash and Electric Shock Hazard



## DANGER

### Series Circuits have Hazardous Voltages

This equipment produces high voltages to maintain the specified current - Do NOT Disconnect while energized.

- Allow only qualified personnel to perform maintenance, troubleshooting, and repair tasks.
- Only persons who are properly trained and familiar with ADB SAFEGATE equipment are permitted to service this equipment.
- An open airfield current circuit is capable of generating >5000 Vac and may appear OFF to a meter.
- Never unplug a device from a constant current circuit while it is operating; Arc flash may result.
- Disconnect and lock out electrical power.
- Always use safety devices when working on this equipment.
- Follow the recommended maintenance procedures in the product manuals.
- Do not service or adjust any equipment unless another person trained in first aid and CPR is present.
- Connect all disconnected equipment ground cables and wires after servicing equipment. Ground all conductive equipment.
- Use only approved ADB SAFEGATE replacement parts. Using unapproved parts or making unapproved modifications to equipment may void agency approvals and create safety hazards.
- Check the interlock systems periodically to ensure their effectiveness.
- Do not attempt to service electrical equipment if standing water is present. Use caution when servicing electrical equipment in a high-humidity environment.
- Use tools with insulated handles when working with airfield electrical equipment.

**Failure to follow these instructions can result in death or equipment damage**

## 2.0 External Power Supply Kit for AGSF-L and ADSB-L Signs

Description: Provides users with installation instructions to install the 94A0738 external power supply kit onto AGSF-L or AGSB-L Signs.

### 2.1 About this manual

#### 2.1.1 Introduction

- Install the external power supply kit.

#### 2.1.2 How to work with the manual

1. Become familiar with the structure and content.
2. Carry out the actions completely and in the given sequence.



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## 3.0 Installation

Read this manual in its entirety prior to starting any steps. Read all of the safety warnings prior to starting any steps.

The ADB Safegate L-858(L) Signature Series AGSF-L sign with this power supply enclosure option is only FAA (ETL) certified if installed by ADB Safegate personnel.

### 3.1 Introduction

This service bulletin provides the detailed procedures required to safely and correctly install the external power supply kit on an ADB Safegate Sign.

### 3.2 Inspection on Arrival

Check that all parts from [Figure 1](#) are in the package. There should also be a drill template.



#### Note

The power supply is not included with this kit.

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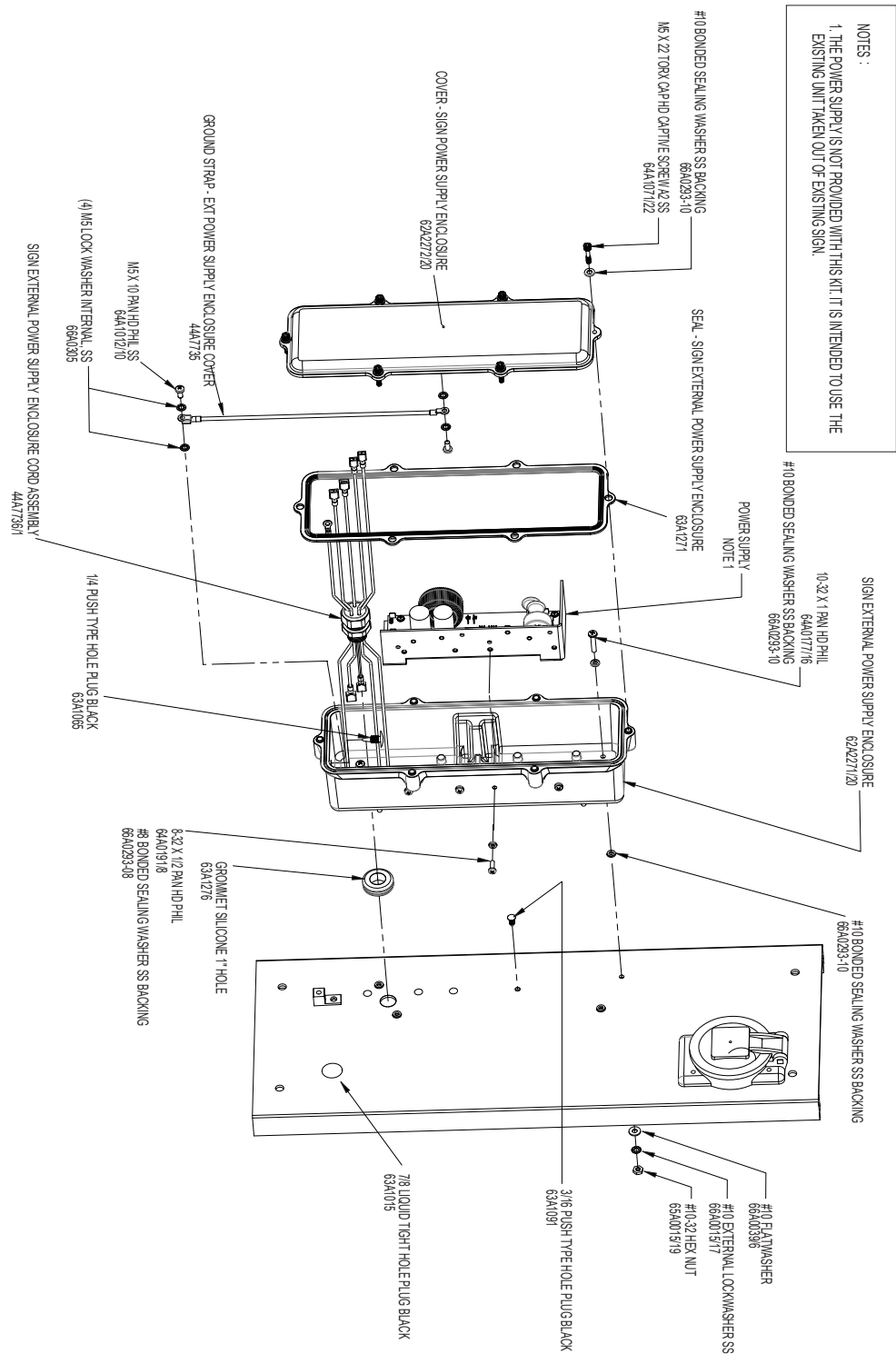
### 3.3 Storage

Store the product on a dry location on a shelf in a warehouse or maintenance shop.

### 3.4 Equipment and Accessories Supplied

The diagram identifies the equipment sent with this kit and notes what is not supplied.

Figure 1: Sign Kit Parts



## Parts

Description	Part Number	QTY
SIGN EXTERNAL POWER SUPPLY ENCLOSURE	62A2271/20	1
COVER - SIGN EXTERNAL POWER SUPPLY ENCLOSURE	62A2272/20	1
SEAL - SIGN EXTERNAL POWER SUPPLY ENCLOSURE	63A1271	1
GROUND STRAP - EXTERNAL POWER SUPPLY ENCLOSURE	44A7735/1	1
GROUND STRAP - EXTERNAL POWER SUPPLY ENCLOSURE COVER	44A7735	1
SIGN EXTERNAL POWER SUPPLY ENCLOSURE CORD ASSEMBLY	44A7736/1	1
7/8 LIQUID TIGHT HOLE PLUG BLACK	63A1015	1
1/4 PUSH TYPE HOLE PLUG BLACK	63A1065	1
3/16 PUSH TYPE HOLE PLUG BLACK	63A1091	4
GROMMET SILICONE 1" HOLE	63A1276	1
10-32 X 1 PAN HD PHIL	64A0177/16	4
8-32 X 1/2 PAN HD PHIL	64A0191/8	4
M5 X 10 PAN HD PHIL SS	64A1012/10	2
M5 X 22 TORX CAP HD CAPTIVE SCREW A2 SS	64A1071/22	6
10-32 HEX NUT	65A0015/19	4
#10 FLATWASHER	66A0015/17	4
#10 EXT LOCKWASHER 18-8 SS	66A0039/6	4
#8 BONDED SEALING WASHER SS BACKING	66A0293/08	4
#10 BONDED SEALING WASHER SS BACKING	66A0293/10	14
M5 INT LOCKWASHER SS	66A0305	4
WIRE BUTT SPLICE VINYL INSULATED 16-14 AWG	71A0054	2

## 3.5 Site Information

This procedure can be completed in the field, however ADB Safegate recommends that the installation be done in the maintenance shop to keep any mess you'll make off of the airfield.

## 3.6 Installation Procedures

1. Disconnect power or turn off power to the sign.
2. Open the sign and remove the panels from one side of the sign.
3. Disconnect the wires from the power supply.  
Do not damage these wires, they will be used later.
4. Remove the power supply retaining screws.
5. Place the black 3/16-inch push type hole plug into the holes left by the removal of the power supply. Refer to [Figure 2](#).
6. Identify and mark the correct placement of the 7/8 inch (0.875 inch) cable penetration hole. Refer to [Figure 2](#). Center of the hole is always 5.75 inches up from the sign bottom and 2.75 from left edge.
7. Mark the center of the cable penetration hole to be drilled. Refer to [Figure 2](#). Center of the hole is always 5.75 inches up from the sign bottom and 2.75 inches from left edge.
8. Ensure the area behind the location to be drilled is clear. Drill a 1/8" pilot hole at this mark.

9. Ream or enlarge the 1/8 inch (0.125 inch) pilot hole to a 1 inch hole. If 1 inch hole cutter is not available you may drill a hole between (25 mm) tight and (26 mm) which gives some space. Clean the hole of any burrs or rough edges.
10. Place the template (PN: T1156) over the hole you drilled and align the large hole made in step 9.
11. Using the template as a guide drill the (4) 7/32 inch (0.219 inch) holes used to attach the external power supply enclosure. Clean the holes of any burrs or rough edges.
12. Install the 1 inch grommet in the cable penetration hole.
13. Attach the power supply in the external enclosure using the retaining screws and seal washers provided in the kit.
14. Pull the cord assembly through the cable penetration hole made in step 9.
15. Attach the external enclosure with the supplied screws shown in diagram in [Figure 1](#).  
  
Slip on the first #10 Bonded Sealing Washer with Stainless Steel Backing onto the #10-32 X 1 Pan-Head Phillips screw with SS backing against the screw head. Then insert the screw assembly through the external power supply enclosure mounting holes from the inside. Slide on the other #10 Bonded Sealing Washer with Stainless Steel Backing so the rubber side meets the enclosure. Repeat for the 3 remaining mounting holes. Refer to [Figure 3](#).  
  
Mount the external power supply enclosure to the sign and attach the flat washer, the external lock-washer, and then the hex nut to secure the enclosure. Repeat for the 3 remaining mounting screws. Refer to [Figure 3](#).
16. Connect the wires to the sign's internal wires. Connect the power supply to the wire harness. See [Figure 3](#).

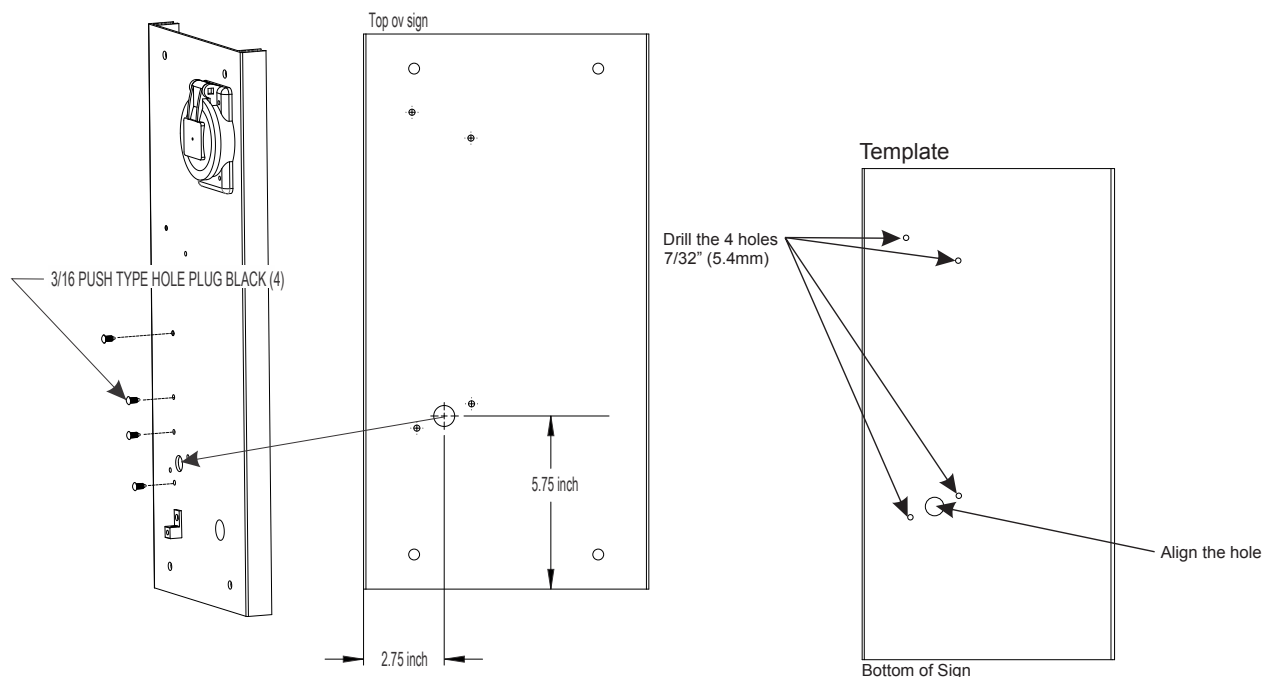


### Note

The wire connectors only fit the proper connectors on the power supply. This is also true for the internal sign wires disconnected in step 3.

17. Close the external power supply cover.  
See [Figure 3](#).
18. Close up the sign.
19. Return power to the sign.
20. Test the sign.
21. Return to service.

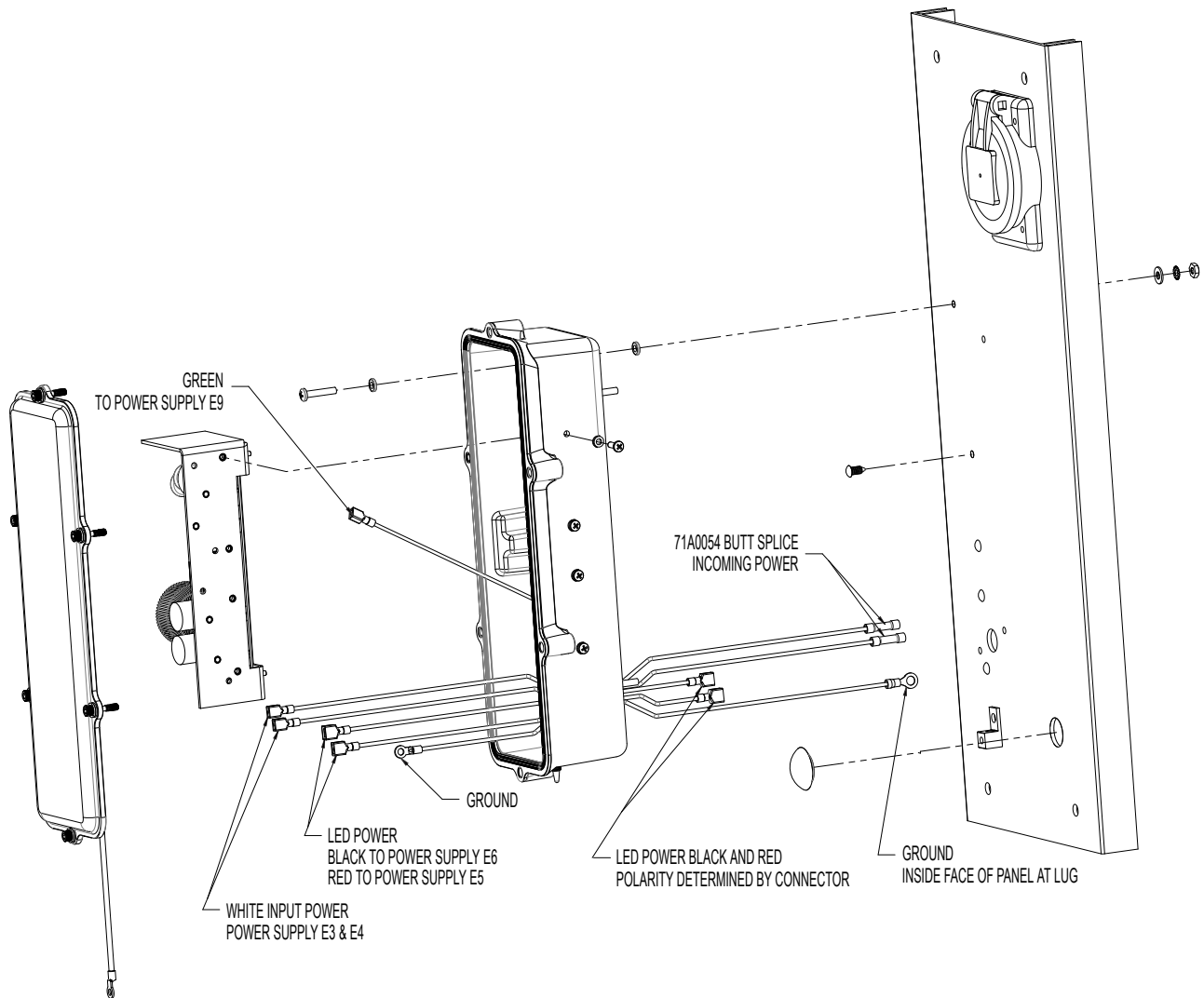
**Figure 2: Sign and Template Diagrams**





## 3.7 Installation Diagrams

Figure 3: Assembly Diagram





## Company Addresses

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