

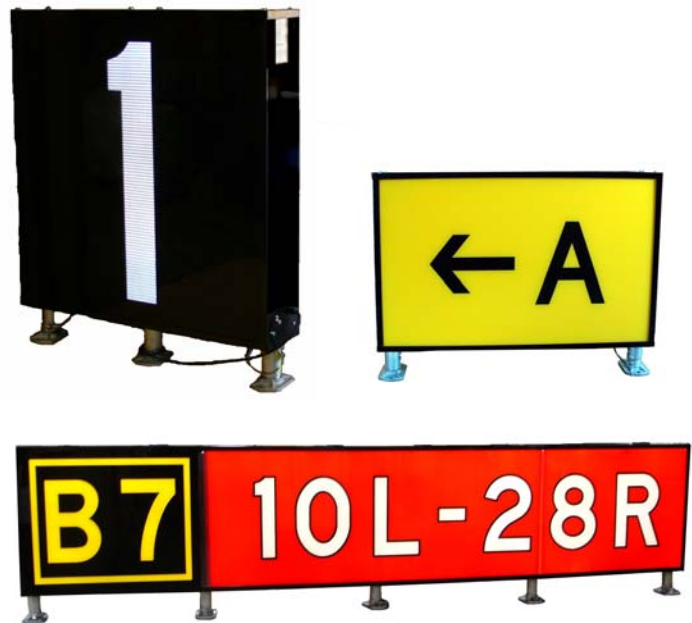
Retain for future use.

Rev. C, 5/27/14

After Retrofitting an ADB Airfield Solutions' Signature Series Sign with this retrofit kit, the sign is equivalent to ADB sign P/N SXXX-7XX3XX0, which is

ETL certified to FAA AC 150/5340-18 (current revision)

Incandescent L-858Y/R/L/B Sign Kit 94A0676 Size 1, 2, 3, 4 and, 5 Internally Illuminated



Service Bulletin
ALN165

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1.0 94A0676 Sign Upgrade Kit

Incandescent Sign Upgrade Kit.

This kit is designed to upgrade an incandescent lamp sign's power supply from the top mounted to the side mounted version.

The 94A0676 kit includes all the parts required to complete the upgrade.

Tools required but not included:

- A #2 Phillips screwdriver,
- A #2 flat blade screwdriver,
- A (.312 in) 5/16-inch socket,
- A (14 mm) (.5 in) 1/2-inch socket,
- A (.187 in) 3/16-inch drill bit,
- A (.218 in) 7/32-inch drill bit,
- Electric drill motor
- Wire cutters
- Center punch
- Knee pads
- Leather gloves

1.1 About this manual

The manual shows the information necessary to:

- Install the Incandescent sign power supply upgrade kit.
1. Become familiar with the structure and content.
 2. Carry out the actions completely and in the given sequence.



1.1.1 How to work with the manual

1.1.2 Record of changes

Page	Rev	Description	Checked	Approved	Date
All	A	Released Manual	JG	ER	04/25/14
	B	changed to TSB to ALN filename			5/1/14
	C	Spares clarification	RW	ER	5/27/14

1.1.3 Icons used in the manual

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.

	WARNING <ul style="list-style-type: none">• Failure to observe a warning may result in personal injury, death or equipment damage.
	CAUTION <ul style="list-style-type: none">• Failure to observe a caution may result in equipment damage.

1.1.4 Safety



WARNING

Allow only qualified personnel to perform maintenance, troubleshooting, and repair tasks.

- Only persons who are properly trained and familiar with ADB Airfield Solutions equipment are permitted to service this equipment.
- 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 Airfield Solutions replacement parts. Using unapproved parts or making unapproved modifications to equipment may void agency approvals and create safety hazards.
- Check 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 electrical equipment.

1. Turn off power to the sign.
2. Lockout and tag out the sign power source.
3. Ground the power leads to the field.

1.2 Incandescent Sign Parts Removal

1.2.1 Remove the Covers

1. Remove the top covers and the sign legend panels and set aside for later reassembly.

Figure 1: Sign Assembly - Side View

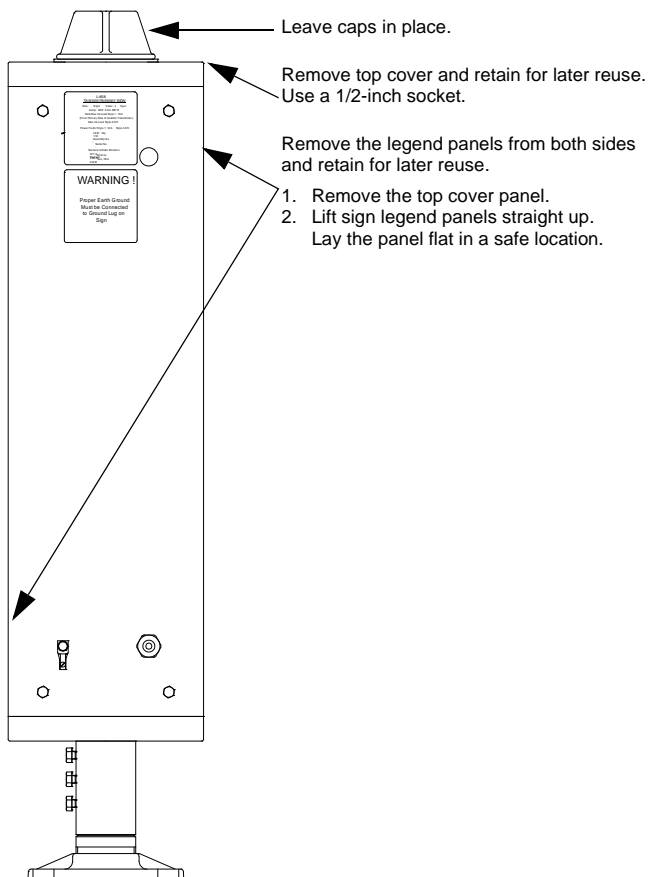
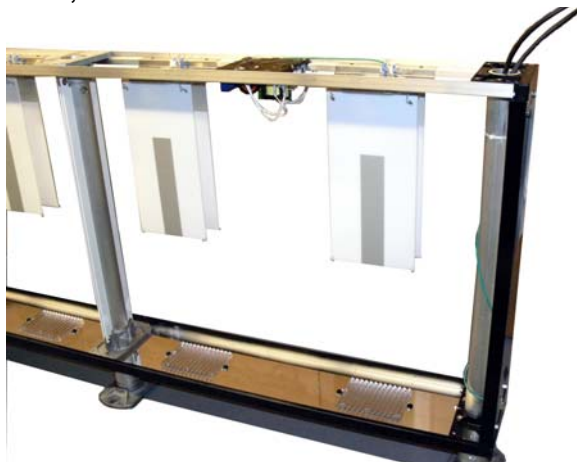


Figure 2: Sign - Face View, Covers Removed



1.2.2 Remove the Sign Electronics

2. Remove the following non-structural interior components: bridge rectifiers, transformers, electronic assemblies, and the wiring between those units.

NOTE: Only disconnect the wiring from the old power supply.

Do not remove the wiring from the power supply to or between the light assemblies.

Figure 3: Parts Removal Diagrams

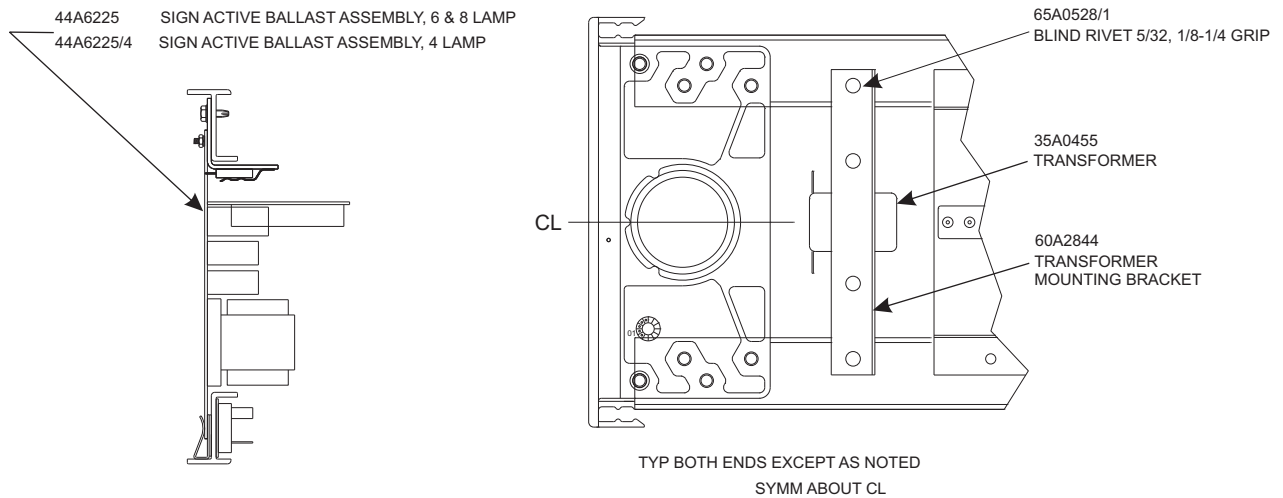
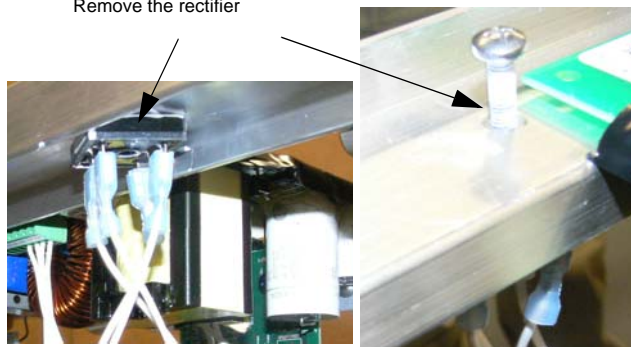


Figure 4: Remove the Incandescent Sign Rectifier

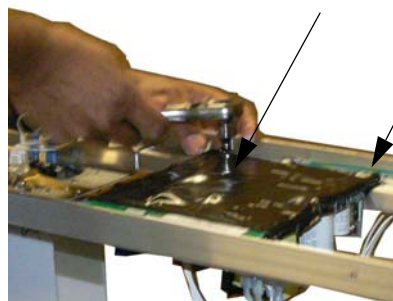
Remove the rectifier



Disconnect the wires from the rectifier assembly. Remove the rectifier by removing the 6/32 x 1-inch Phillips Pan Head Screw.

Figure 5: Removing the Incandescent Power Supply

Use a 5/16 socket



Remove the power supplies for each module (3) hex-head screws

Disconnect all the wires from the power supply. Use a 5/16 socket to remove the power supply hex-head retaining screws. Place the power supply in an anti-static bag for storage or discard properly.

Figure 6: Diagram of the top rail

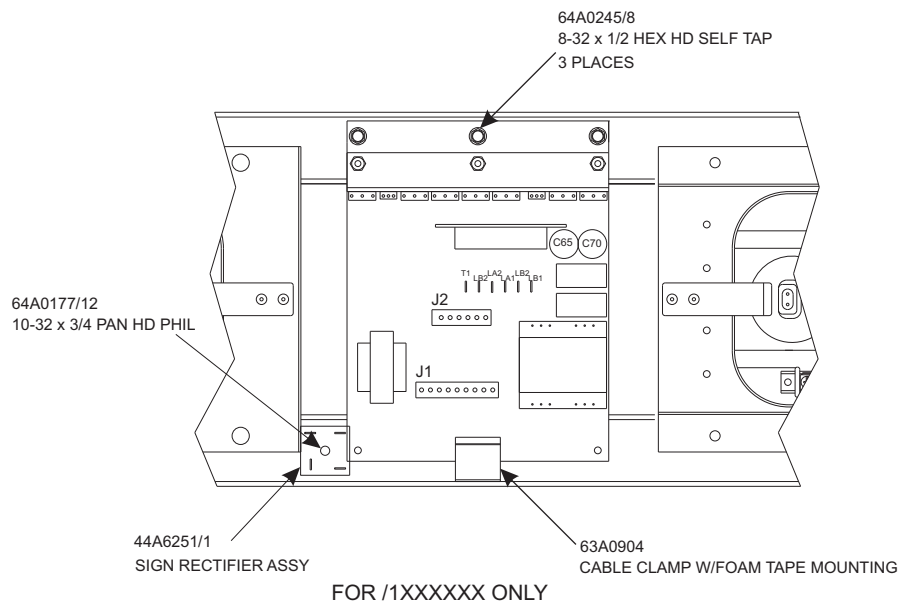
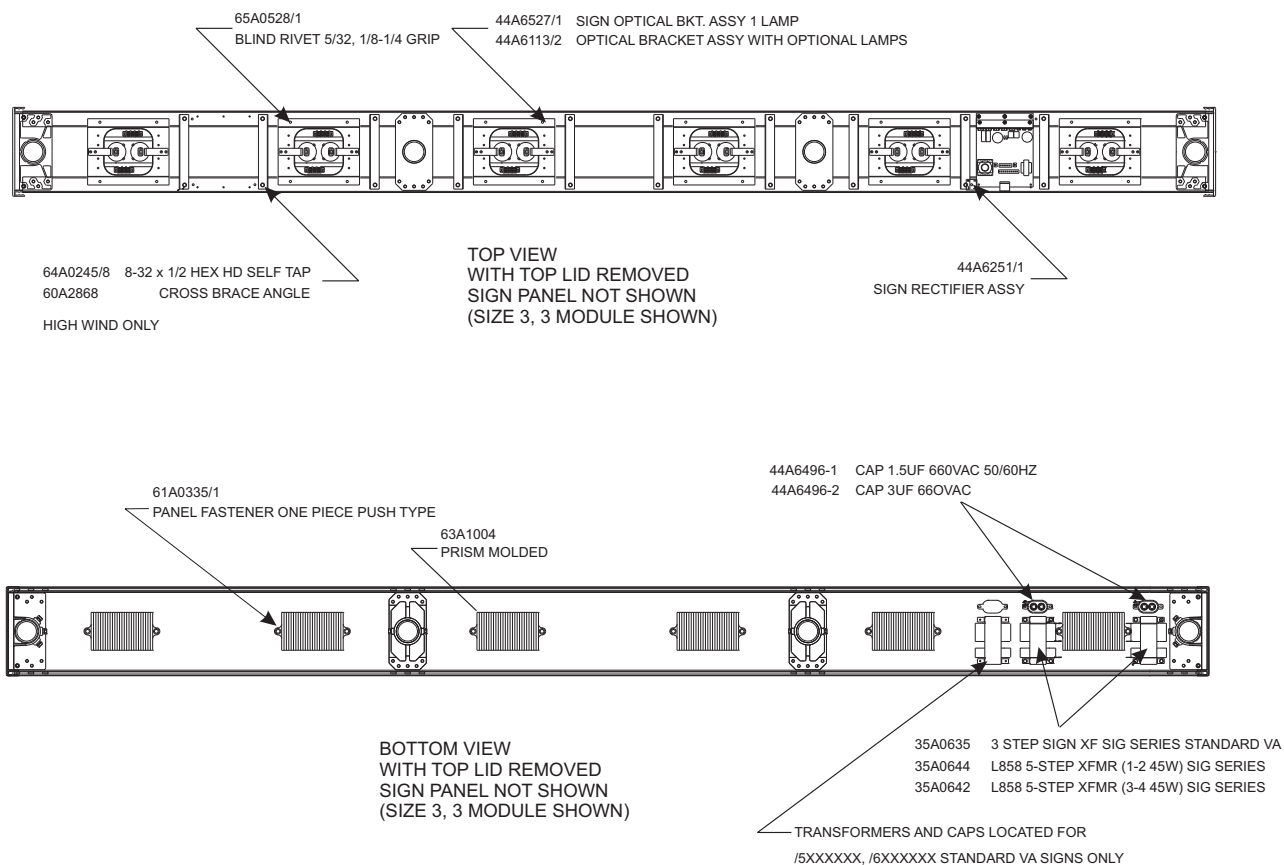


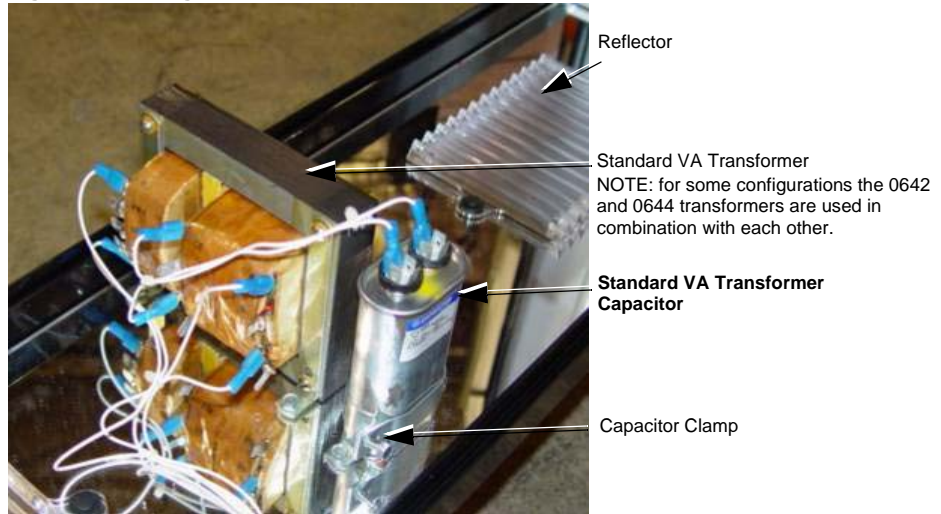
Figure 7: Top and Bottom Components Diagram



1.2.3 Standard VA Transformer and Capacitor Removal

Remove the Transformers, Capacitors and the Capacitor Clamps.

Figure 8: Regular VA Transformer and CAP

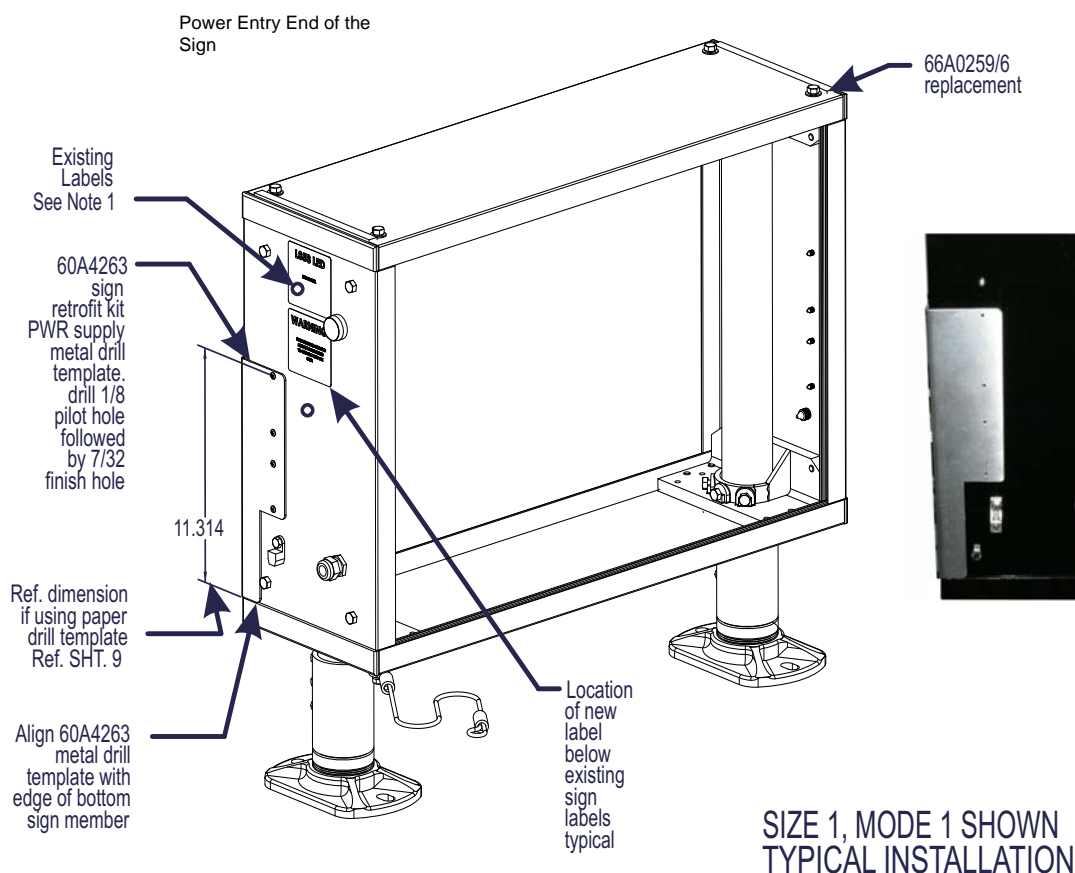


1.3 Installation

Table 1: Kit Part List

Part	Description	Qty	Unit
44A7199/200	HALOGEN SIGN PWR SUPPLY ASSEMBLY, 6.2A	1.00000	EA
44A7341/10	GEN-2 SIGN GND LEAD ASSY, 10"	1.00000	EA
60A4263	ADB SIGN RETROFIT DRILL TEMPLATE	1.00000	EA
70A0328	MALE DISC 16-14AWG .25X.03 INS	2.00000	EA
70A0329	FEM DISC 16-14AWG .25X.03 INS	2.00000	EA
89A0008/9	16AWG WIRE 600V 200C WHITE	6.00000	FT

1. Install the new power supply assembly 44A7199/200.
2. Place the Power Supply template in place as shown below.
3. Drill the 7/32-inch holes. Remove any burring by scoring the hole from inside of the sign with a cross blade screwdriver. This will allow the thermal plate of the power supply to sit flush against the side of the sign for optimum heat transfer.



4. Screw the (4) 6-32 x 1/2-inch Phillips Pan Head screws into the power supply mounting bracket through the side panel.

NOTE: For the following procedures refer to the schematic diagrams.

1.3.1 Installing the
Halogen Lamp Sign Power
Supply



Attach the power supply board, refer to Table 2 for the power supply board connections. See also "Schematics" on page 9.

1. Connect the power supply to the incoming power.
2. Connect the power supply leads to the leads used to connect the old power supply to the lamps.

Table 2: Halogen Sign Power Supply Connections

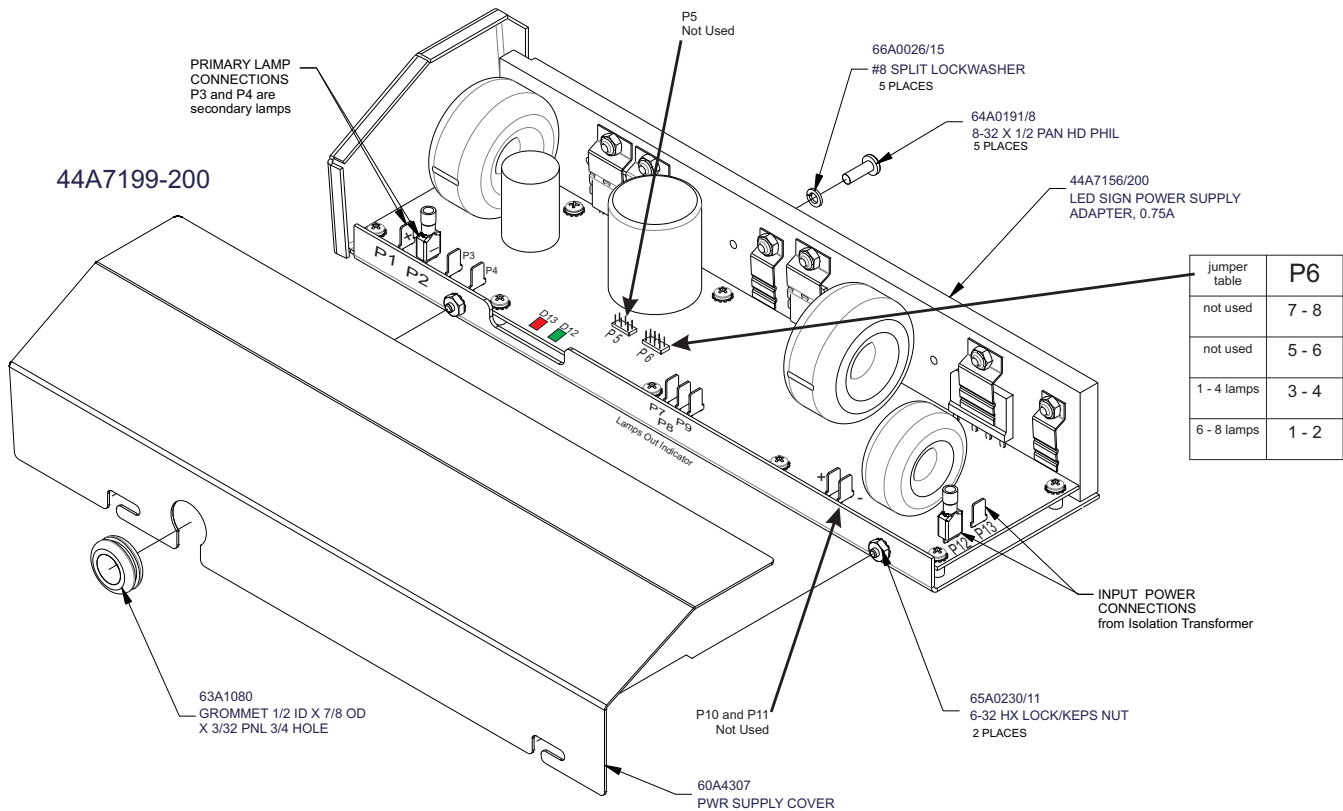
This connector...	Connects to this device...
P1, P2	A string of up to eight 48 W primary lamps
P3, P4	A string of up to eight 48 W backup lamps
P12, P13	The output of a 6.6 A isolation transformer providing input power for the halogen sign
P7, P8, P9	Optional lamps-out indicator

Refer to Table 3 for the power supply LEDs.

Table 3: Halogen Sign Power Supply LEDs

LED	Function
Green (D12)	Flashes at 120 beats per minute when power is applied to the power supply board.
Red (D13)	Indicates the power supply board assembly is not able to maintain a regulated lamp current. This also indicates that at least one lamp is burnt out.

Figure 9: Halogen Sign Power Supply 44A7199-200 with Cover Removed



NOTE: Order 44A7156-200 for spares when the cover does not need to be replaced. 44A7199-200 is 44A7156-200 plus the cover.

1.4 Schematics

1.4.1 Halogen Sign Wiring

Figure 10: Halogen Wiring Diagram (43A02656 Sheet 1)

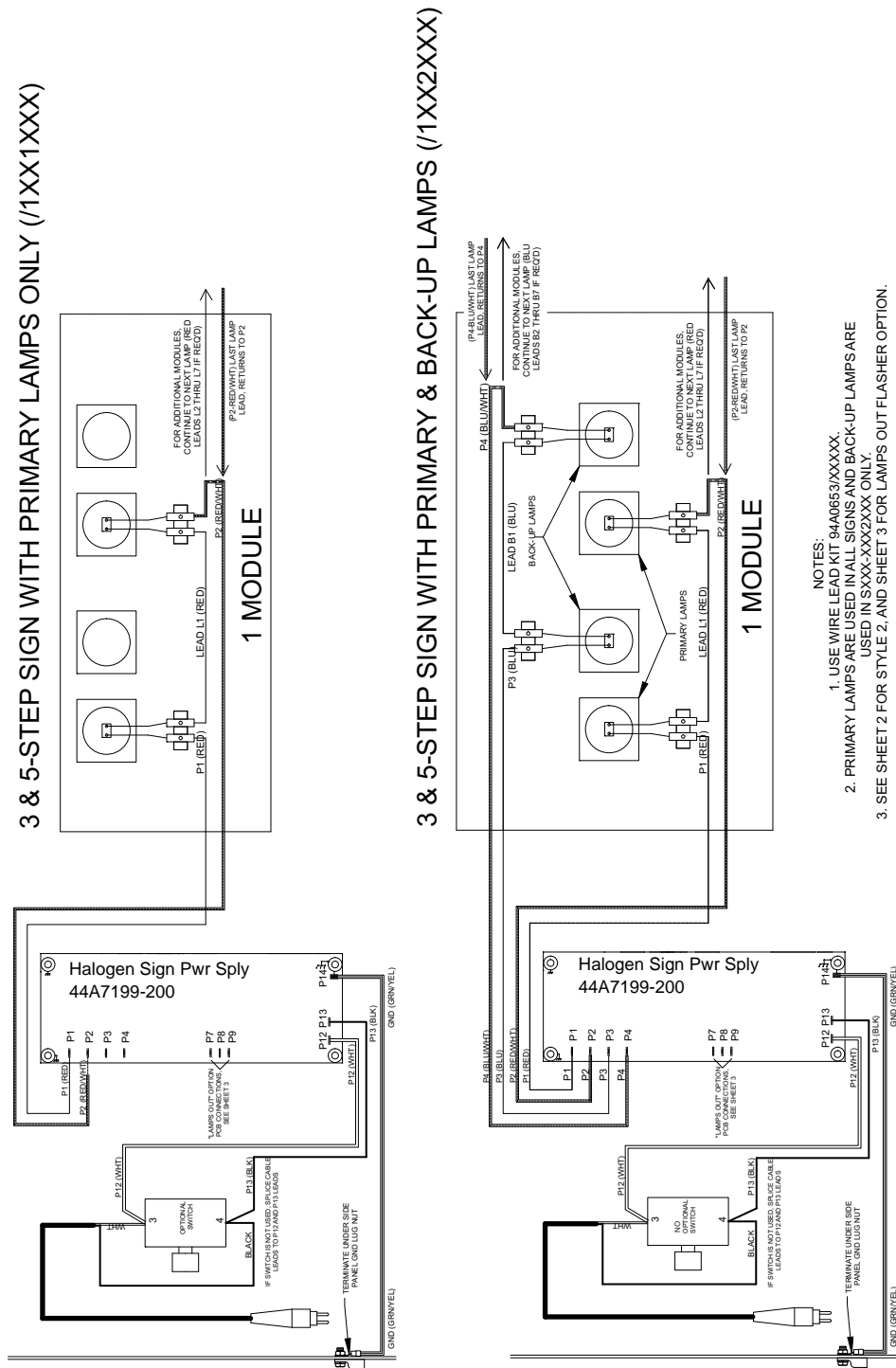


Figure 11: Halogen Wiring Diagram (43A02656 Sheet 2)

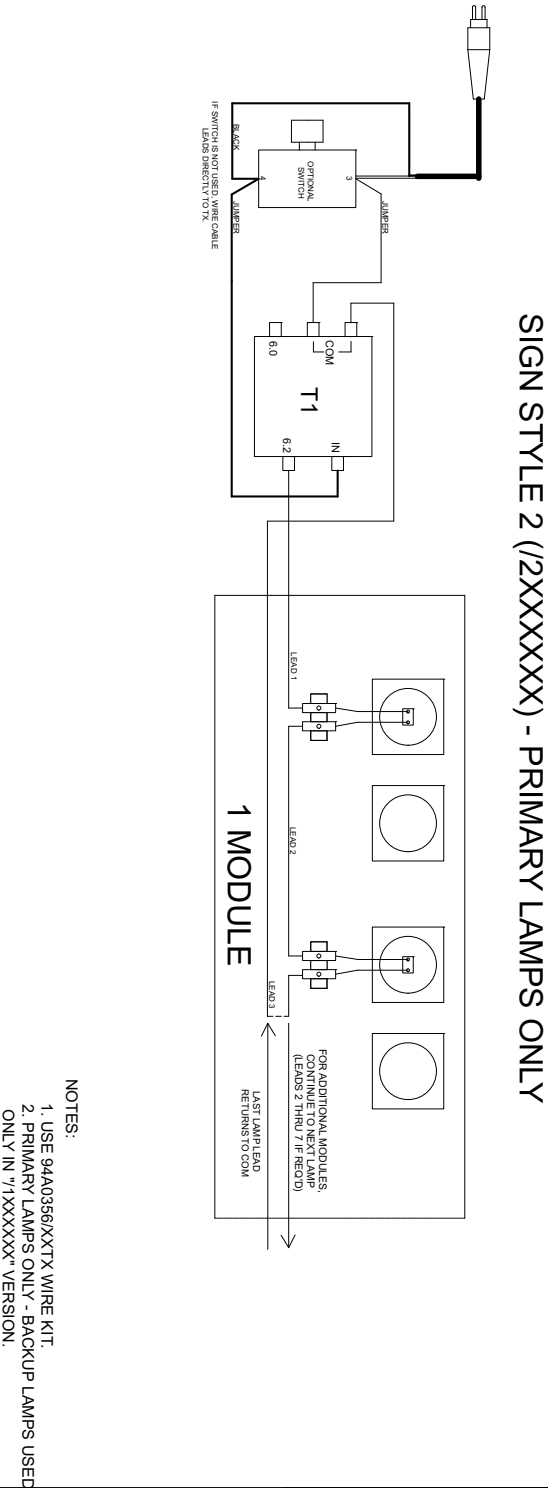
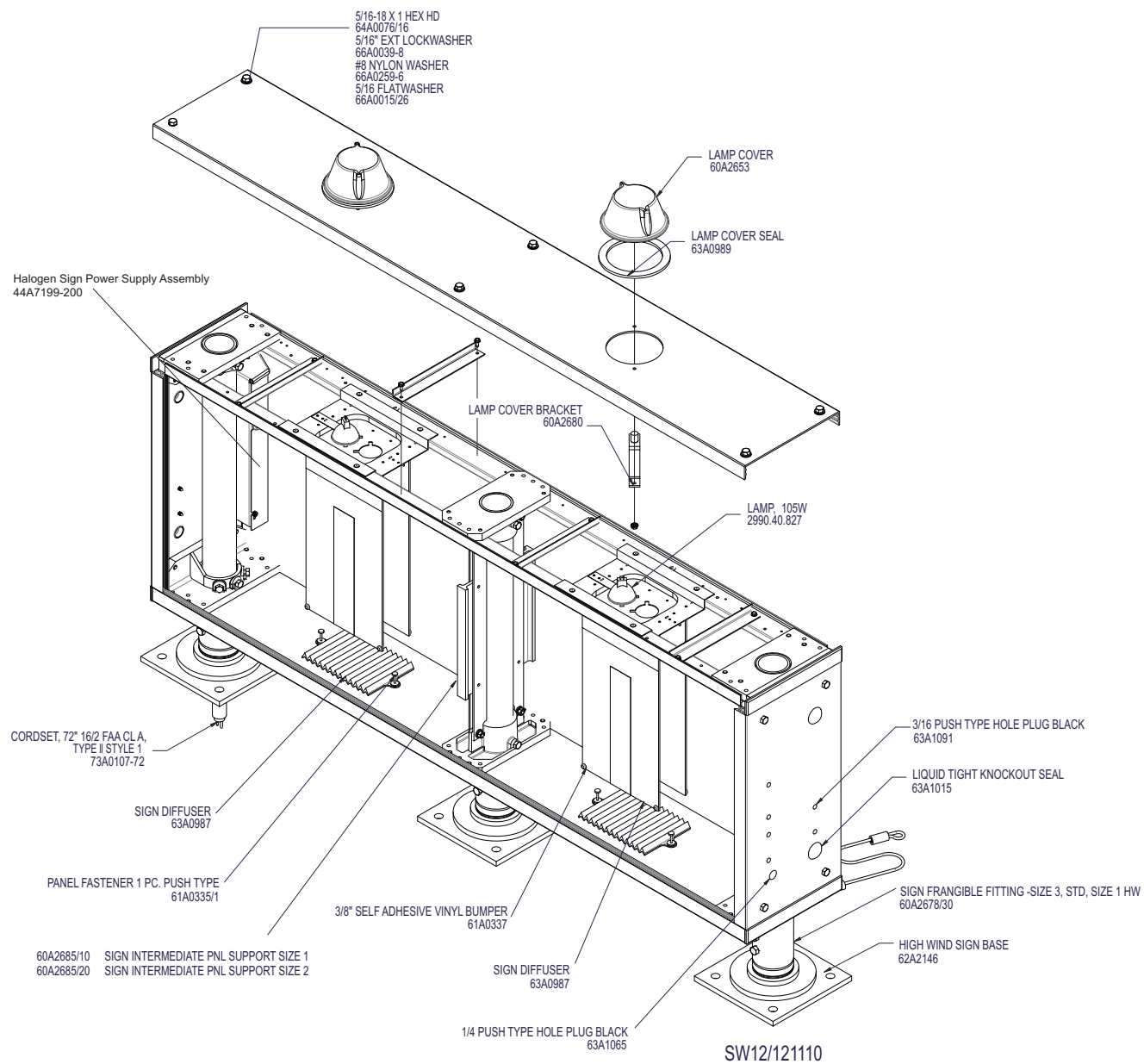


Figure 12: Halogen Sign Parts



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