

2562551 Rev. A1 0620

## Safety Message to Installers of Warning Light Equipment

### **▲ WARNING**

People's lives depend on your proper installation and servicing of Federal Signal products. It is important to read and follow all instructions shipped with this product and the original product. Listed below are some other important safety instructions and precautions you should follow:

- To properly install a light assembly, you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment.
- Frequently inspect the light system to ensure that it is operating properly and is securely attached to the vehicle.
- Always refer to the vehicle service manuals when performing equipment installations on a vehicle.
- When drilling into a vehicle structure, ensure that both sides of the surface are clear of anything that could be damaged.
- Locate the light system controls so the VEHICLE and CONTROLS can be operated safely under all driving conditions.
- If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.
- Do not install equipment or route wiring in the deployment path of an airbag. Failure to observe this warning will reduce the effectiveness of the airbag or potentially dislodge the equipment, causing serious injury to you or others.
- To avoid damage to the light bar, do not overtighten screws and nuts.
- This product contains high intensity LED devices. To prevent permanent eye damage, DO NOT stare into the light beam at close range.
- For additional precautions and information, refer to the instructions packed with related products.
- File these instructions in a safe place and refer to them when maintaining or reinstalling the product.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

## Introduction

This publication provides instructions for installing the Valor light bar to a vehicle with the Permanent Mounting Kit.

## Unpacking the Kit

After unpacking the kit, inspect it for damage that may have occurred in transit. If it has been damaged, file a claim immediately with the carrier, stating the extent of damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them. Ensure that the parts shown in Table 1 are contained in the packing carton. If you are missing any parts, contact Customer Support at 1-800-264-3578, 7 a.m. to 5 p.m., Monday through Friday (CT). An installer-supplied control head for controlling the functions of the light bar is also required.

Table 1 Kit contents

Qty.	Description	Part No.
1	Foot Assembly, Mounting, LH	8651119
1	Foot Assembly, Mounting, RH	8651120
8	Lockwasher, 5/16-inch, SS	7074A020
8	Nut, 5/16-18, Steel, HCR	7059125

The four items above are installed on new light bars at the factory.

4	Bracket Assembly, Adj. Foot	8652174
4	Pad, Mounting	8572029
8	Washer, 5/16-inch, Black SS	7072234
8	Lockwasher, 5/16-inch, SS Black	7074A020-01
8	Screw, 5/16-18, Pan Torx, SS Black	7000434-10
4	Screw, #10 Type B, Pan Torx, SS Black	7011246-08
4	Nut, Acorn, 1/4-20	7054A010
4	Nut, Jam, 1/4-20	7057A049
4	Bolt, Toggle, 1/4-20	8422A032

### **CAUTION**

**HEAVY OBJECT:** Use lifting aids and proper lifting techniques when removing or replacing this product. Failure to heed this warning may cause personal injury.

## Installing the Service Kit Mounting Hook

### **NOTICE**

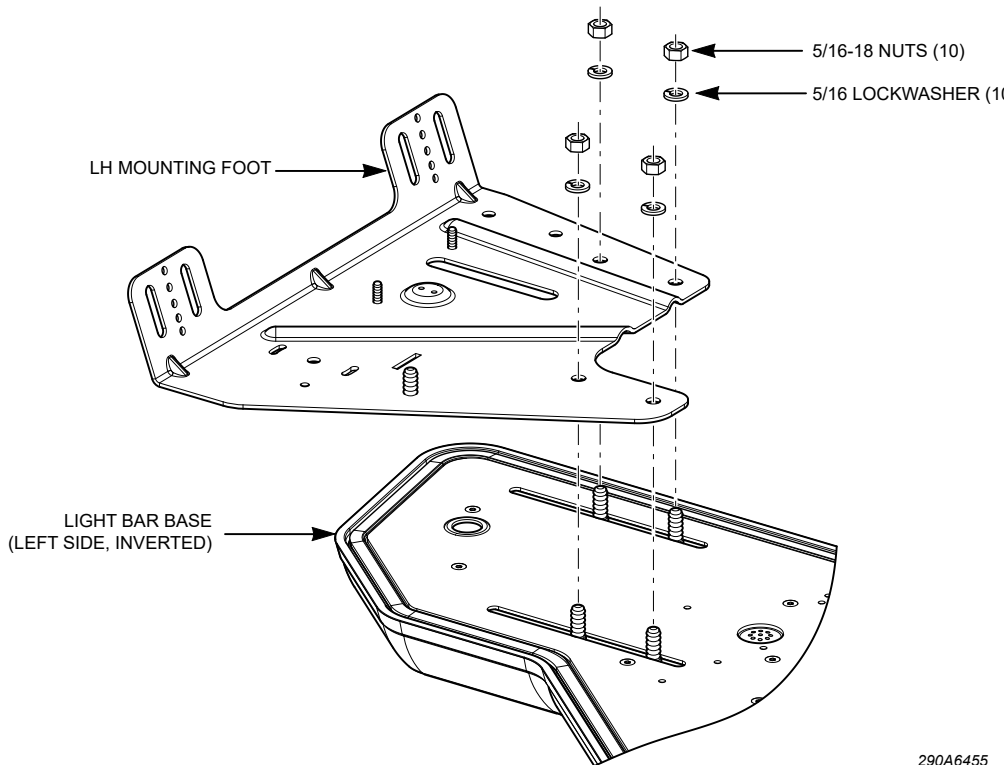
**ENSURE PROPER INSTALLATION OF MOUNTING FEET:** Note that the LH Mounting Foot is for the left side of the light bar and the RH Mounting Foot is for the right side. Failure to follow this precaution may damage the light bar.

If you are installing a new light bar, skip this section and refer to “Preparing the Valor for Mounting” on page 4.

To install the mounting foot assemblies:

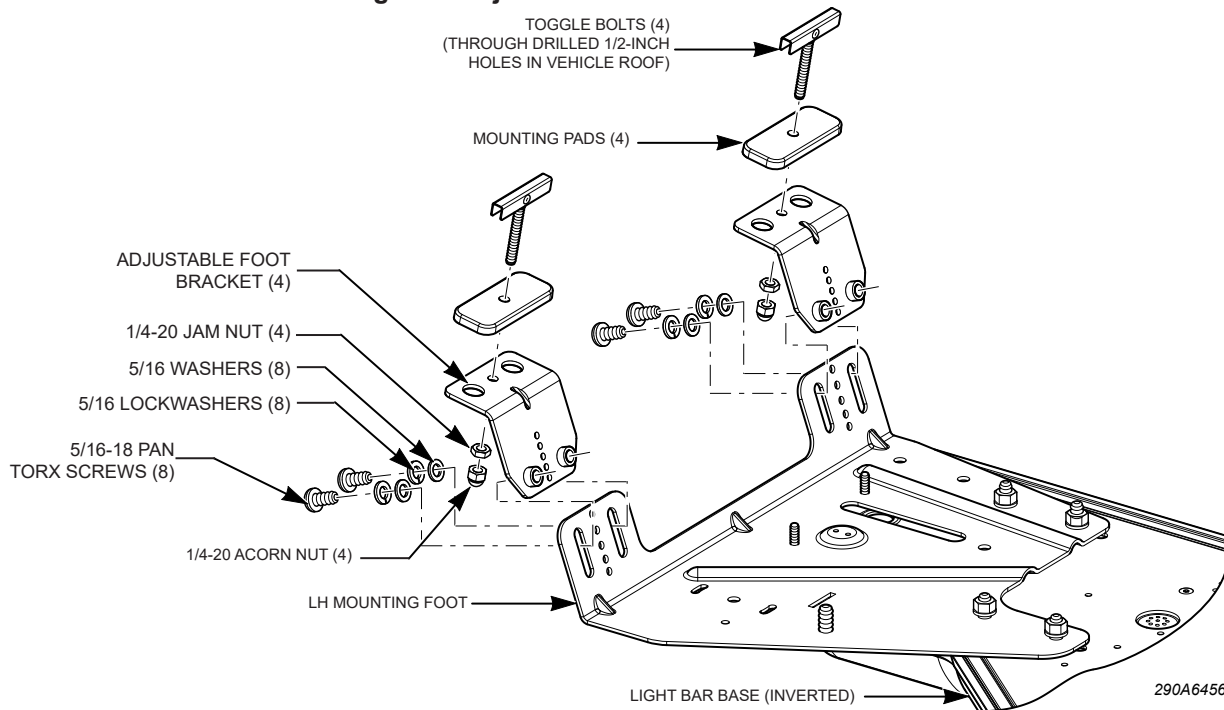
1. Install a mounting foot assembly using the 5/16-inch nuts and lockwashers as shown in Figure 1 on page 3. Tighten the nuts only enough to hold the mounting foot assembly in place. A nut and lockwasher are not required on the captive stud in the mounting foot.
2. Repeat step 1 with the other mounting foot assembly.

Figure 1 Service Kit mounting foot installation



290A6455

Figure 2 Adjustable foot bracket installation



290A6456

## Installing the Adjustable Foot Brackets (New Light Bars)

New light bars may require loosening of the 5/16-inch nuts to allow adjustment of the mounting feet.

1. Using the 5/16-18 Torx head screws, 5/16-inch flat washers, and 5/16-inch lockwashers, install the adjustable foot brackets on the mounting feet. See Figure 2 on page 3.
2. For the maximum light bar height, position the bolts in the adjustable feet at the bottom of the slots. Tighten the bolts only enough to hold the adjustable feet in place.
3. Peel the backing paper from the rubber mounting pads and apply the them to the adjustable feet as shown in Figure 2 on page 3.

## Preparing the Valor for Mounting

### **⚠ WARNING**

**ROOF SUPPORT STRUCTURE:** *There is a roof support member that spans the distance between the driver and passenger side. DO NOT DRILL THROUGH THIS MEMBER! Adjust any hole locations until the holes can be drilled without going through this member. Failure to follow this warning will weaken the roof of the vehicle and may lead to an increased chance of bodily injury or death in a roll-over accident.*

### **⚠ WARNING**

**DRILLING PRECAUTIONS:** *When drilling holes, check the area into which you are drilling to ensure you do not damage vehicle components while drilling. All drilled holes should be deburred and all sharp edges should be smoothed. All wire routings going through drilled holes should be protected by a grommet or convolute/split loom tubing.*

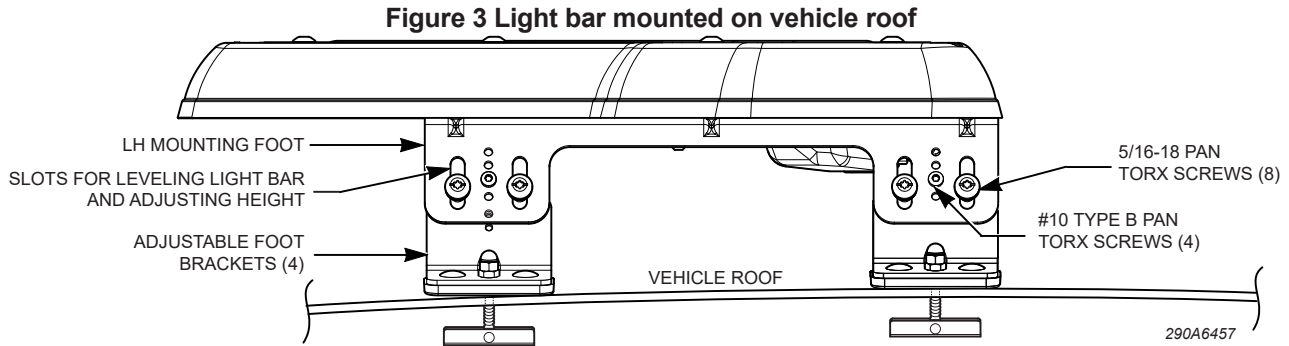
**IMPORTANT:** Plan all cable routing before completing the installation. Plan the location of the wire-routing hole in the vehicle roof so that the power and communication cables do not have tight bends and have some slack to allow disconnection on removal.

To prepare the light bar for mounting:

1. Place the light bar assembly on the vehicle roof at the desired location. Usually the assembly is installed so that the mounting hooks attach at, or immediately behind, the door center post.
2. Adjust both mounting foot assemblies in or out until the mounting pads rest near the edge of the roof or gutter where the roof is the most rigid.
3. Center the light bar assembly so that the end of the assembly and edge of the roof are equidistant on each side of the vehicle. Adjust the mounting feet, if required, before tightening the 5/16-inch hex nuts.
4. To maximize aerodynamic efficiency, it is recommended that the lighting system be mounted as high as possible. Adjust the adjustable foot brackets on the mounting feet as required.
5. Ensure that the light bar is level. If it is not level, adjust it by rotating it in the slots in the mounting feet.
6. Using the adjustable foot brackets as a template, scribe two drill position marks on the roof at each end of the light bar.
7. Carefully remove the light bar, invert it on soft rags, and tighten the eight 5/16-inch nuts that secure the mounting feet to the light bar. Place the light bar on the roof and recheck the positioning of the

two drill-position marks.

- Using the holes that are most closely aligned between the 5/16-inch Torx head screws, install a #10 Type B pan Torx screw to lock in the adjustment. Minor adjustment may be necessary. Repeat this step for all four adjustable foot brackets. See Figure 3.



### Mounting the Valor on the Vehicle

To permanently mount the vehicle to the roof:

- Remove the light bar from the roof and drill a 1/2-inch diameter hole at the each of the four drill position marks.
- Insert a toggle bolt through the rubber mounting pad in each of the four adjustable foot brackets. To avoid dropping the bolts through the roof before the light bar is installed, start the 1/4-inch jam nuts on the toggle bolts. See Figure 2 on page 3 and Figure 3 above.
- Place the light bar assembly on the roof, working the toggle bolts into the drilled 1/2-inch holes. Seal the holes with installer-supplied RTV.
- Tighten the jam nuts just until the rubber pad begins to bulge. Do not exceed 60 in-lb torque.
- Saw off the toggle bolts 3/16 inch above the jam nuts and screw on the acorn nuts. The light bar assembly should now be solidly anchored to the roof.

**IMPORTANT:** Frequently inspect the light bar assembly to ensure that all fasteners and brackets are tight.

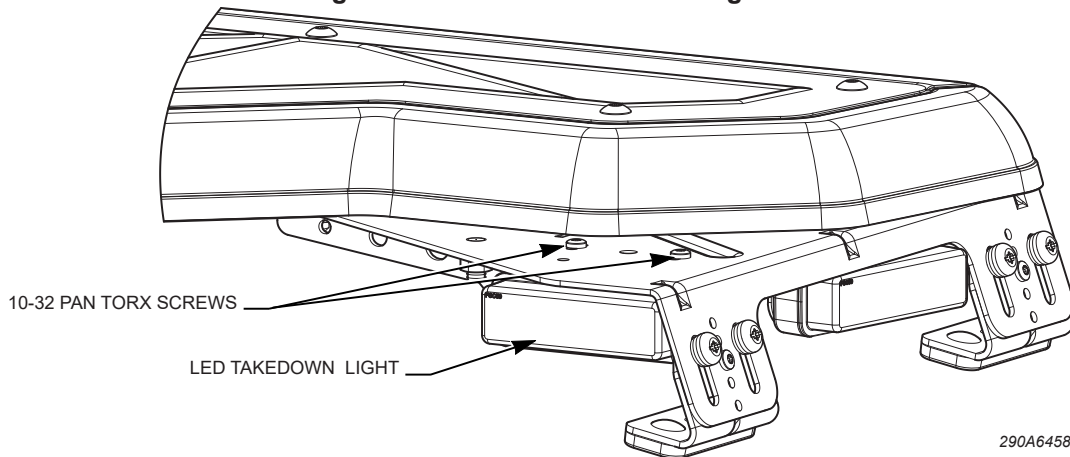
### Aiming the Optional HotFoot LED Takedown Lights

The optional HotFoot LED takedown lights are factory installed and wired. The horizontal aim of the takedown light is adjustable +/- 10 degrees. See Figure 4 on page 6.

To aim the takedown lights:

- Loosen the 10-32 pan Torx screws securing the lights.
- Reposition the lights and tighten the screws.

Figure 4 LED HotFoot takedown light



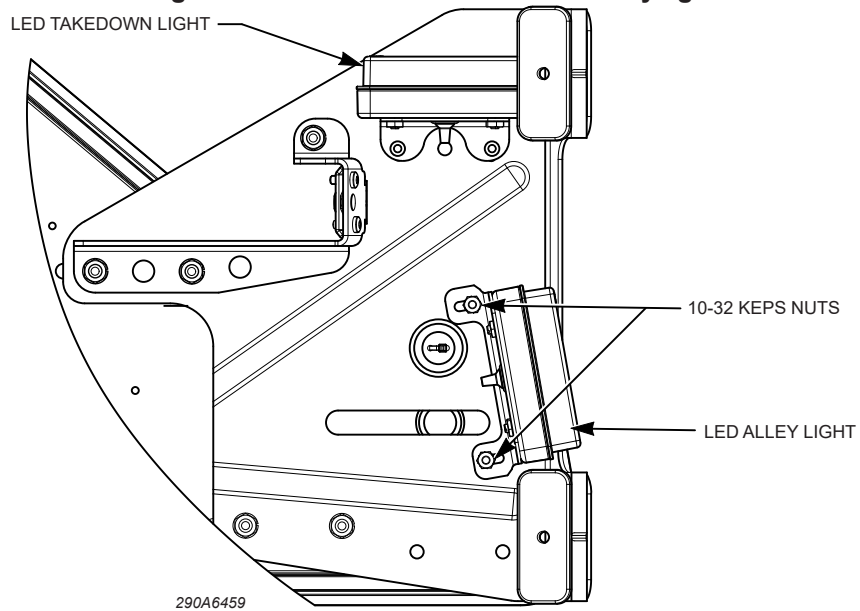
### Adjusting the Optional HotFoot LED Alley Lights

The optional HotFoot LED alley lights are factory-installed and wired. The factory position is 10 degrees forward. The lights are horizontally adjustable up to -10 degrees.

To horizontally adjust the alley lights:

1. Loosen the 10-32 Keps® nuts on the underside of the HotFoot as shown in Figure 5.
2. Reposition the lights and tighten the 10-32 Keps nuts.

Figure 5 LED Hotfoot takedown and alley lights



## **Ordering Replacement Parts**

To order replacement parts, please contact your local dealer/distributor or:

Customer Support  
Federal Signal Corporation  
Phone: 1-800-264-3578  
7 a.m. to 5 p.m., Monday through Friday (CT)

## **Getting Technical Support**

For technical support, please contact:

Federal Signal Corporation  
Service Department  
Phone: 1-800-433-9132  
Email: empsserviceinfo@fedsig.com

## **Getting Repair Service**

The Federal Signal factory provides technical assistance with any problems that cannot be handled locally. Any product returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization (RMA). Obtain a RMA from a local Distributor or Manufacturer's Representative. Provide a brief explanation of the service requested or the nature of the malfunction.

Address all communications and shipments to the following:

Federal Signal Corporation  
Service Department  
2645 Federal Signal Dr.  
University Park, IL 60484-3167

## **Limited Warranty**

This product is subject to and covered by a limited warranty, a copy of which can be found at [www.fedsig.com/SSG-Warranty](http://www.fedsig.com/SSG-Warranty). A copy of this limited warranty can also be obtained by written request to Federal Signal Corporation, 2645 Federal Signal Drive, University Park, IL 60484, email to [info@fedsig.com](mailto:info@fedsig.com) or call +1 708-534-3400.

This limited warranty is in lieu of all other warranties, express or implied, contractual or statutory, including, but not limited to the warranty of merchantability, warranty of fitness for a particular purpose and any warranty against failure of its essential purpose.



2645 Federal Signal Drive  
University Park, Illinois 60484-3167

[www.fedsig.com](http://www.fedsig.com)

Customer Support

Police/Fire-EMS: 800-264-3578 • +1 708 534-3400

Work Truck: 800-824-0254 • +1 708 534-3400

Technical Support: 800-433-9132 • +1 708 534-3400

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