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## Safety Message to Installers of Federal Signal Warning Light Systems

### **▲ 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 Low Hook-On Mounting Kit. To complete the installation, it is necessary to purchase a vehicle-specific mounting hook 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 the 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).

Table 1 Kit contents

Qty.	Description	Second Item No.
4	Screw, #10, Type B, Pan-Head Torx®, Steel	7011246-08
12	Nut, 5/16-18, High-Corrosion Resistant	7059125
2	Nut, Flange 5/16-18, High-Corrosion Resistant	7065078
12	Washer, Flat, Stainless Steel, 0.344 x 3/4 x 0.050 inch	7072A031
12	Lockwasher, Split 5/16 inch Screw, Stainless Steel.	7074A020
2	Retainer, Nut, Arjent/Vista	8583490
1	Foot, Low, LH, Valor, (Left)	865101872
1	Foot, Low, RH, Valor, (Right)	865101873
1	Bracket, Low, Hook Attach, LH, Valor (Left)	865101874
1	Bracket, Low, Hook Attach, RH, Valor (Right)	865101875

The items above are factory-installed on new light bars.

Qty.	Description	Second Item No.
8	Screw, Machine, 5/16-18, Torx. Steel	7000434-14
4	Screw #10, Type B, Pan-Head, Torx, Steel	7011246-08
8	Washer, Flat, Stainless Steel, 0.344 inch, .0563 inch outer diameter	7072234
8	Lockwasher, Split, 5/16 inch	7074A020-01
4	Mounting Pad	8572029
4	Valor Low Hook Adjuster Assembly	865101876
1	Keeper Plate Kit	8583193

### Installing the Service Kit Mounting Feet

**⚠ WARNING**

**HEAVY OBJECT:** Use lifting aids and proper lifting techniques when removing or replacing the light bar. Failure to follow this warning may cause personal injury.

**NOTICE**

**HOOK ATTACH BRACKET RETAINER NUTS:** Torque the two 5/16 in nuts that retain the hook-attach bracket to the mounting foot to 16-24 in-lb only. See Figure 2 on page 4.

**NOTICE**

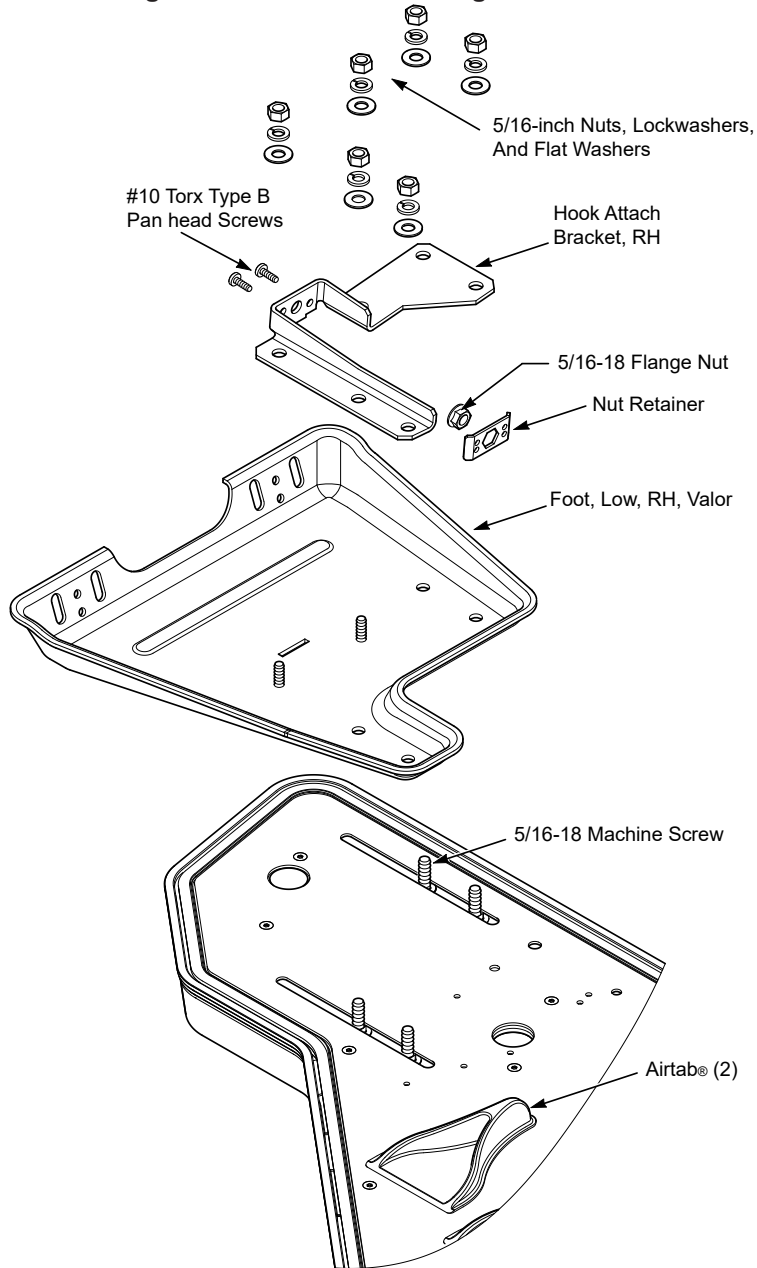
**PROPER MOUNTING FEET INSTALLATION:** Before installing the mounting feet and hook-attach bracket, note that the LH foot and bracket are for the left side of the light bar, and the RH foot and bracket are for the right side. Failure to note this difference may damage the light bar.

The service kit requires the assembly of the mounting feet on the light bar. If you are installing a new light bar that is shipped with the mounting feet already assembled, see "Installing the Adjustable Foot Brackets" on page 4. New light bars may require that you loosen the 5/16-inch nuts to adjust the positions of the mounting feet on the vehicle roof. Before installing the light bar, plan all cable routing.

To install the mounting feet:

1. To avoid marring the plastic domes, invert the light bar on soft rags or cardboard.
2. Install a mounting foot assembly and a hook-attach bracket on the Valor using the 5/16-18 nuts and lockwashers. Tighten the nuts only enough to hold the mounting foot assembly in place. See Figure 1.

**Figure 1 Service kit mounting foot installation**



3. Use a nut retainer and two #10 Type B pan head Torx® screws to trap the 5/16-18 flange nut on the backside of the hook-attach bracket.
4. Repeat Steps 2 and 3 with the other mounting foot assembly.

## Installing the Adjuster Brackets

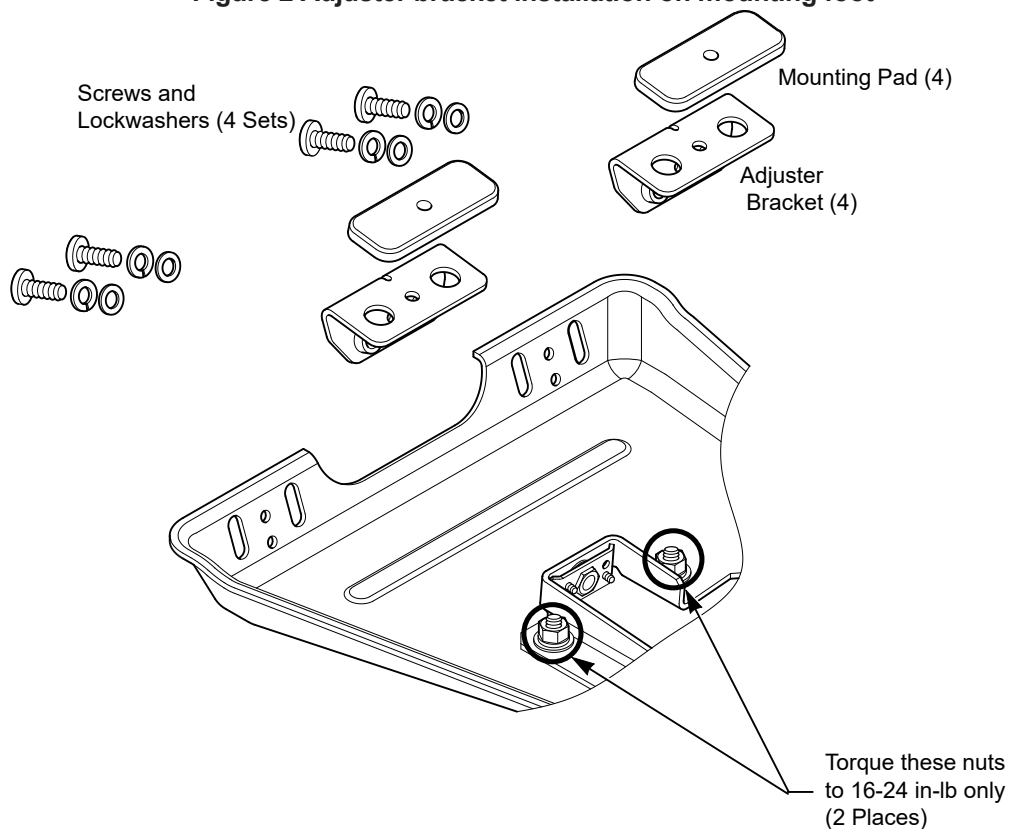
The adjuster brackets enable you mount the Valor at the desired height and to level the light bar.

**NOTE:** Depending on the vehicle and the desired mounting height, you may need to remove the Airtabs®.

To install the adjuster brackets:

1. Invert the light bar on soft rags or cardboard to avoid marring the plastic domes.
2. Use the 5/16-18 Torx screws, 5/16-inch flat washers, and 5/16-inch lockwashers to install adjuster brackets on the mounting feet. See Figure 2.

Figure 2 Adjuster bracket installation on mounting foot



3. To avoid marring the roof, make the initial adjustment at the maximum mounting height of the light bar.
4. Position the screws in the adjuster brackets at the bottom of the slots. Tighten the screws only enough to hold the adjuster brackets in place.
5. Snap the rubber mounting pads to the adjuster brackets as shown in Figure 2.
6. To continue with the installation, see “Preparing the Valor for Hook Mounting” on the next page.

## Preparing the Valor for Hook Mounting

### **⚠ WARNING**

**ROOF SUPPORT STRUCTURE:** There is a roof support structure that spans the distance between the driver and passenger sides. **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 rollover accident.

### **NOTICE**

**DRILLING PRECAUTIONS:** Before drilling holes, check the area into which you plan to drill to ensure that you do not damage vehicle components. All drilled holes should be deburred and all sharp edges should be smoothed. All wires going through drilled holes should be protected by grommet or convolute/split-loom tubing.

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.

Before proceeding, refer to the instructions provided with the separately purchased mounting hook kit.

To prepare the light bar:

1. Place the light bar assembly on the vehicle roof at the selected 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 as far outboard as possible. Figures 3 and 4 show the preferred positions.

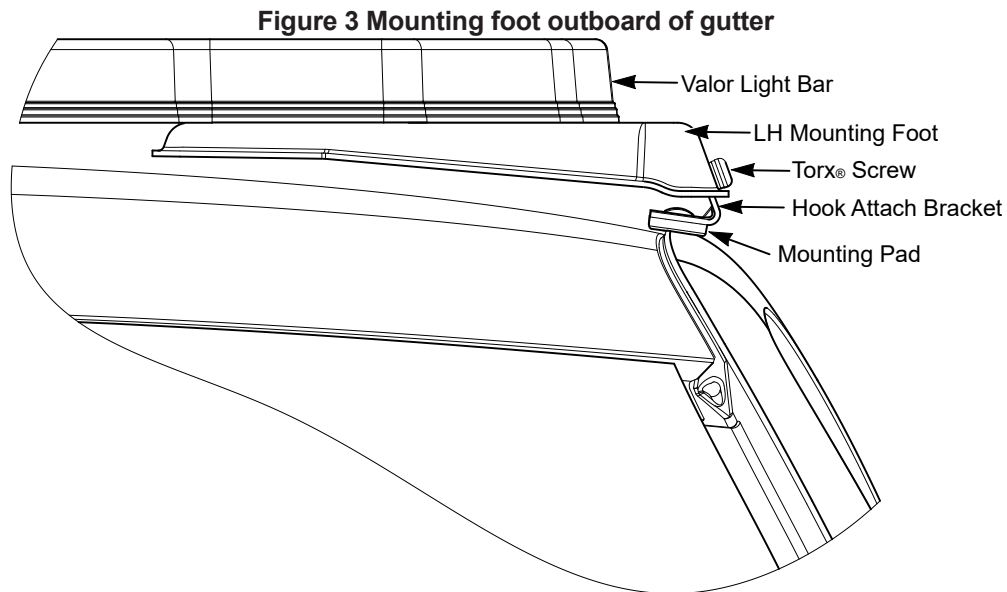


Figure 4 Mounting foot inboard of gutter

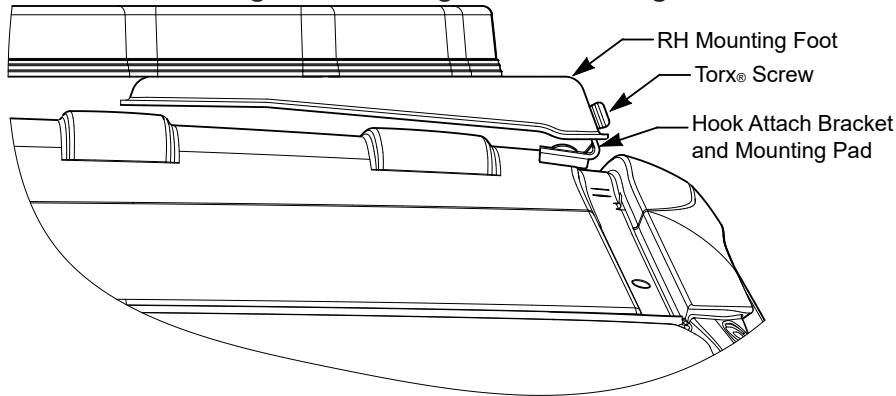
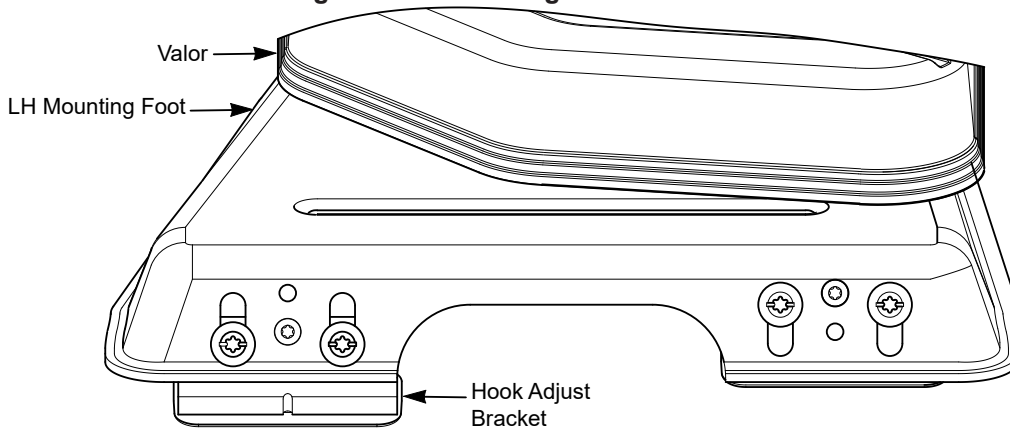


Figure 5 LH mounting foot side view



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. Ensure that the gutter hooks, when installed, will not interfere with the door or door glass. Improper clamping on the vehicle roof may result if the gutter hooks contact the mounting feet. If needed, adjust the mounting feet before tightening the 5/16-inch hex nuts.
4. Remove the light bar assembly from the vehicle roof and place it on soft rags or cardboard to avoid marring the plastic domes.
5. Turn the light bar assembly over so that the bottom of the assembly faces up.
6. Tighten to 10-15 ft-lb the eight 5/16-inch nuts (four on each mounting foot) installed in Step 2 under "Installing the Adjustable Foot Brackets" on page 4.

### Hook Mounting the Valor on the Vehicle

To mount the light bar on the vehicle:

1. Place the light bar assembly back into its original position on the vehicle roof.
2. Move the adjuster brackets to the desired height while keeping the light bar level slightly nose down (1/8 inch). To prevent roof damage, make sure that there is no contact with the roof.

3. Using the holes that are most closely aligned between the 5/16 in Torx pan-head screws, install a #10 Type B pan-head Torx screw to lock in the adjustment. Minor adjustments may be necessary. Repeat this step for all four adjuster brackets. See Figures 3 through 5.
4. Tighten all eight 5/16-inch Torx® pan head screws that fasten the adjuster brackets to the mounting feet.
5. To fasten the mounting hook, refer to the keeper plate instructions (Federal Signal P/N 2562480) included in the supplied keeper plate kit.

**NOTICE**

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

### **Getting Technical Support**

For technical support, please contact:

Federal Signal Corporation  
Service Department  
Phone: 1-800-433-9132  
Fax: 1-800-343-9706  
Email: empSERVICEinfo@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.



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