

25500092 Rev. B1 0221

## Safety Message to Installers

### **⚠ WARNING**

People's lives depend on your safe installation of our products. It is important to read, understand, and follow all instructions shipped with this product and the related add-on products. Listed below are some other important safety instructions and precautions you should follow.

- To properly install this product you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and use of safety warning equipment.
- When drilling or cutting into a vehicle structure, ensure that both sides of the surface are clear of anything that could be damaged.
- Do not install equipment or route wiring in the deployment path of an airbag.
- Refer to the instructions included with related products for additional precautions and information.
- Frequently inspect the Opticom to ensure that it is operating according to the original manufacturer's specifications and that it is securely attached to the vehicle.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

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

## Introduction

This publication contains instructions for mounting the Opticom Models 795H-EXTB-D and 795H-EXTB-P with mounting hardware for the Integrity®, Legend®, Valor®, Allegiant®, Navigator®, Vision® SLR, and Split Vision SLR light bars.

### **⚠ WARNING**

***READ AND UNDERSTAND INSTRUCTIONS: Included with Opticom Models 795H-EXTB-D and 795H-EXTB-P is the Installation Instruction Manual, part number 79-1000-0316 (Federal Signal part number 2562457) for the GTT Opticom Infrared System Model 795H Low Profile LED Emitter. Before installing the equipment, read, understand, and follow all directions in the manual. Failure to follow the instructions may result in property damage, serious injury, or death and/or void the warranty.***

### **⚠ WARNING**

***INSTALLATION PRECAUTION: The GTT Opticom Model 795H-EXTB-D and 795H-EXTB-P must be used with the Federal Signal designated mounting brackets and hardware as provided from the factory for proper installation. Failure to follow proper installation as outlined in this manual may result in property damage, serious injury, or death and/or void any associated warranties.***

### **⚠ WARNING**

***INSTALLATION PRECAUTION: The Opticom External Model 795H-EXTB must NOT be installed on any light bar other than the Integrity, Legend, Valor, Allegiant, Navigator, Vision SLR, and Split Vision SLR. The Opticom must be physically attached to these light bars according to the instructions in this publication. All associated mounting brackets and hardware must be used with the light bar as provided from the factory. Failure to follow this warning may result in property damage, serious injury, or death, and/or void the warranty.***

## Unpacking the Kit

After unpacking the product, inspect it for damage that may have occurred in transit. If it has been damaged or is missing a part, do not attempt to install or operate it. 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 all parts in Table 1 have been included. 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).

The 795H-EXTB is not intended for use with the low profile mounting foot option.

**NOTE:** The roof ribs of some vehicles (for example, the Ford Interceptor Utility) may interfere with the 795H-EXTB-D or 795H-EXTB-P when mounted on an Integrity or Legend light bar. To create the necessary clearance, use Shim Kit Z865300717.

The Model 795H-EXTB-D and 795H-EXTB-P are shipped with the following parts:

- Installation Instructions for the Opticom Infrared System Model 795H Low-Profile LED Emitter, part number 79-1000-0316 (Federal Signal part number 2562457).
- Opticom Infrared LED External Emitter. Includes 25-foot control cable for the Opticom Infrared LED External Emitter with connector compatible with the GTT programmable Interface Cable Assembly. (The Interface Cable Assembly can be purchased separately through GTT. Refer to GTT manual 2562457, page 20 for the part number.)

**Table 1 795H-EXTB-D (driver) or 795H-EXTB-P (passenger)**

Qty.	Description	Part Number
1	Bracket, DS	801002908-D
1	OR Bracket, PS	801002908-P
3	Screw, #10 Plastite®, Black	70000612-06
3	5/16-inch Carriage Bolt, 1 inch	7004025-16
2	5/16-inch Carriage Bolt, 1-1/2 inch	7004029
3	5/16-inch Flat Washer	7072A031
3	5/16-inch Lockwasher	7074A020
3	5/16-inch Nut	7059125
1	Screw, Slot, HWH, 1/4-20, TT	7011219-16
1	1/4-inch Lockwasher, SS	7074A016
3	1/4-inch Flat Washer, SS	7072A024
5	3/8-inch Flat Washer	7072A035
1	Cable Tie	150A146

**NOTE:** The parts listed in Table 1 apply to the new design. The only parts that are common to the new and older models are the emitter and cable.

Z801002910A-X Retrofit kit also includes items in Table 2

**Table 2 Z801002910A-X Retrofit kit**

Qty.	Description	Part No.
1	Housing, 795HB-EXT	801002905
1	Seal, 795HB-EXT	801002907
1	Cap, 795HB-EXT	801002906
1	Cable, 25-foot Opticom	8010009
1	Cable Tie	150A109
1	Cable Tie, UV Stable, Blk	150A146
2	Scr, Mach, 6-32, Pan, Phil, SS	7000A427-06
1	Nameplate, 795H-EXTB	1613042

**NOTE:** The parts listed in Table 2 apply to the new design. The only parts that are common to the new and older models are the emitter and cable.

### Preparing to Install the Model 795H-EXTB-D and 795H-EXTB-P

**⚠ WARNING**

**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 or death.

**⚠ WARNING**

**SEAT REMOVAL PRECAUTION:** If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.

**⚠ WARNING**

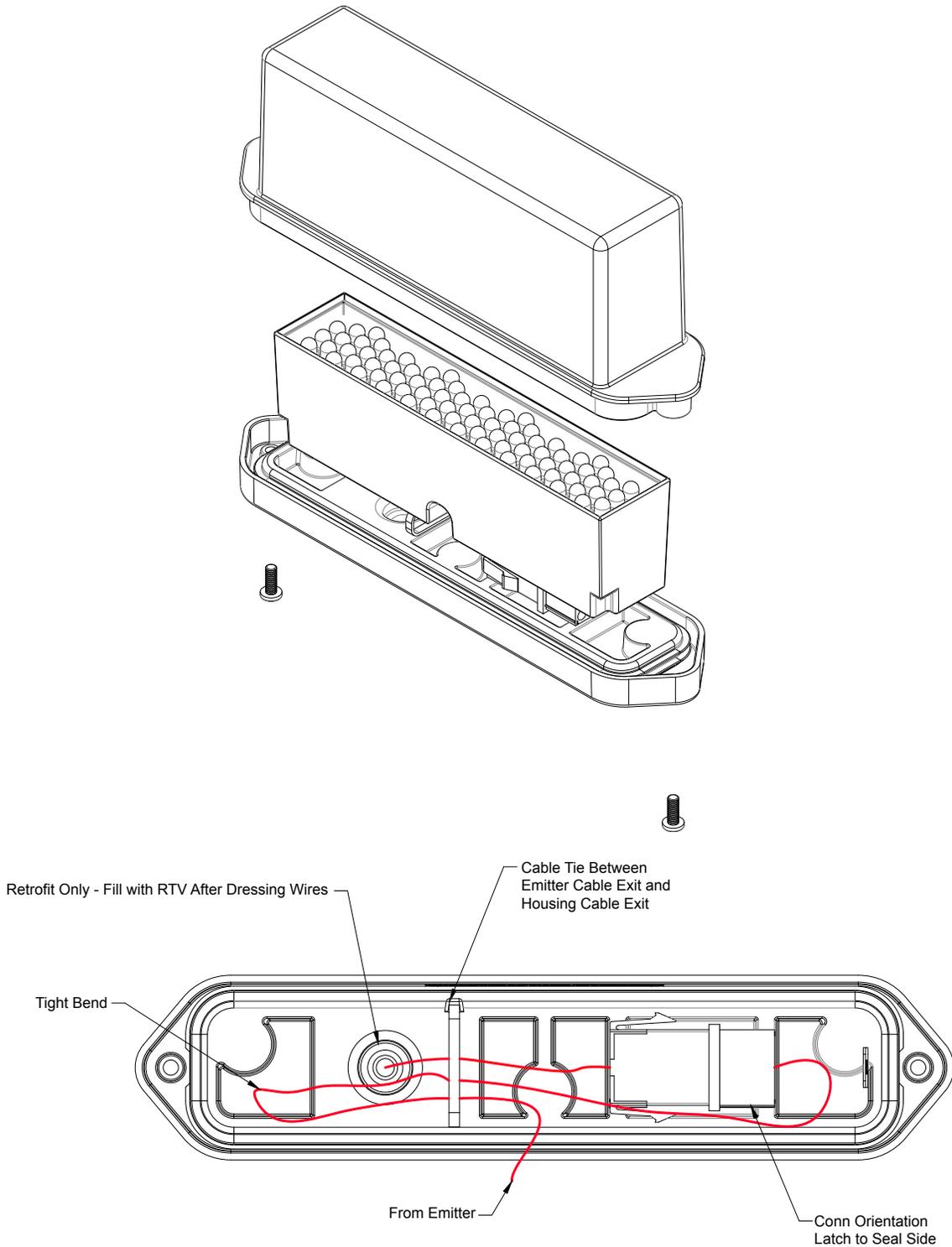
**DRILLING PRECAUTIONS:** Before drilling holes, check the area into which you plan to drill to ensure that you do not damage vehicle components. All drilled holes should be deburred and all sharp edges should be smoothed. Additionally, all exterior drilled holes must be sealed with Motorcraft® seam sealer T-A-2-B or equivalent to prevent the potential exposure to carbon monoxide or other potentially harmful fumes. Failure to observe this warning could cause serious injury or death.

To prepare the external Opticom for installation on the Integrity®, Legend®, Allegiant®, Navigator®, Valor®, or Vision® SLR light bar:

**NOTE:** For retrofit only, disassemble the old unit, saving only the emitter. Slide the new cable through the seal and the cap. A small amount of water-based lubricant is helpful. Dress the cable as shown in Figure 1. The white cable tie goes inside the unit, the black tie on the seal outside. See Figure 2 on page 5.

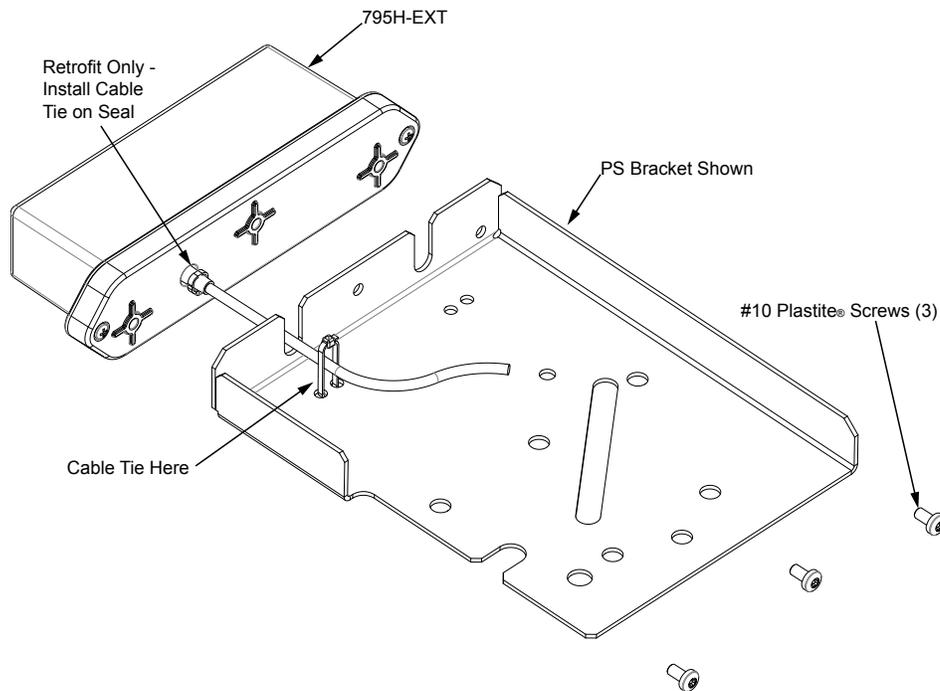
1. Determine the routing path of the external 25-foot cable from the Opticom.
2. Route the cable to the power and the control switch.
3. Complete the connections, programming, and testing per the installation instructions for the Opticom Infrared System Model 795H Low-Profile LED Emitter, part number 79-1000-0316 (Federal Signal part number 2562457). To access the connector for programming, remove the two 6-32 screws securing the cap. Hold the cap securely and lift the housing off, to minimize disturbance of the wire dressing. Make the necessary connections for programming. See Figure 1.

Figure 1 Opticom emitter removed from housing



4. After testing the emitter, ensure that the wires are properly dressed. Apply RTV silicone at the location where the cable exits the housing (retrofit only). See Figure 2. Ensure the seal is properly seated on the cap, then slide the housing over the emitter and seat it to the cap.

**Figure 2 Opticom secured in mounting bracket**



5. Install the two #6-32 screws. Do not overtighten screws.
6. Install the cable tie through indicated holes and loosely around the cable.
7. Place the Opticom on the mounting bracket and secure the bracket to the rear of the Opticom with three #10 Plastite® screws. Tighten the cable tie snugly.

### Attaching the Opticom to the Light Bar

To attach the Opticom with the bracket to the light bar, follow the instructions specific to your model of Federal Signal light bar as described below. Ensure that the Opticom is facing straight forward and is parallel with the road surface. Note that the figures show only one side; the other side is a mirror image. Do not overtighten fasteners.

- Legend®, Navigator®, Allegiant®, and Integrity® with standard or HotFoot® mount: Attach the bracket to the light bar with three 5/16 by 1-inch carriage bolts, 5/16-inch flat washers, 5/16-inch lock washers, and nuts in the kit. See Figure 3 on page 7.
- Legend and Integrity with alternative HotFoot mount: The bracket can be installed between light bar and the HotFoot. Use the existing light bar hardware, but replace the inboard carriage bolts with the 5/16 by 1-1/2-inch carriage bolts in the kit. Place one 5/16-inch flat washer from the kit on each of the outboard carriage bolts between the HotFoot and the light bar. When lifting the HotFoot assembly off the light bar to install the bracket, ensure that the existing 5/16-inch flat washers stay between the plastic foot and nut-support plate on the two inboard carriage-bolt positions. See Figure 4 on page 8.
- Valor®: Attach the bracket between the light bar and the foot with the existing light bar hardware plus two 5/16-inch flat washers from the kit. Place the flat washers on the two rear bolts between the light bar and the foot. See Figure 5 on page 9.

- Vision SLR®: Attach the bracket between the light bar and the foot with the existing light bar hardware plus one 3/8-inch flat washer from the kit. Place the flat washer on the rear bolt between the light bar and the foot. See Figure 6 on page 10.
  - Three-pod Vision SLR: Place the bracket between the light bar and foot with the existing light bar hardware and the 1/4-inch screw, 1/4-inch lockwasher, one 1/4-inch flat washer, and one 3/8-inch flat washer from the kit. Remove the flathead screw indicated in the figure. Place the flat washer on the rear bolt between the light bar and the foot. See Figure 7 on page 11.
  - Six- and eight-pod Split Vision SLR: Attach the bracket between the light bar and outboard foot with existing bar hardware plus the 1/4-inch hardware and five 3/8-inch flat washers from the kit. See Figure 8 on page 12.
1. To clear the front lip on the extrusion, place two 1/4-inch flat washers between the light bar and the bracket.
  2. Place two 3/8-inch flat washers between the light bar and the bracket on the front 3/8-inch bolt.
  3. Place three 3/8-inch flat washers between the light bar and the mount on the rear bolt.

### Completing the Installation

**⚠ WARNING**

***MAINTAIN PROPER OPTICOM ALIGNMENT: Failure to maintain the proper alignment of the Opticom may cause it to malfunction, resulting in property damage, serious injury, or death.***

To complete the installation:

1. Wire the Opticom according to the Instructions for the Opticom Infrared System Model 795H Low-Profile LED Emitter, part number 79-1000-0316 (Federal Signal part number 2562457).
2. Use a level to ensure that the Opticom does not tilt up or down and is parallel to the road surface. If it is tilted, refer to the instruction manuals included with the light bar to adjust the light bar mounting feet and the camera platform to horizontally level the Opticom.

Figure 3 Legend®, Allegiant®, Navigator®, and Integrity® with standard or HotFoot® mount

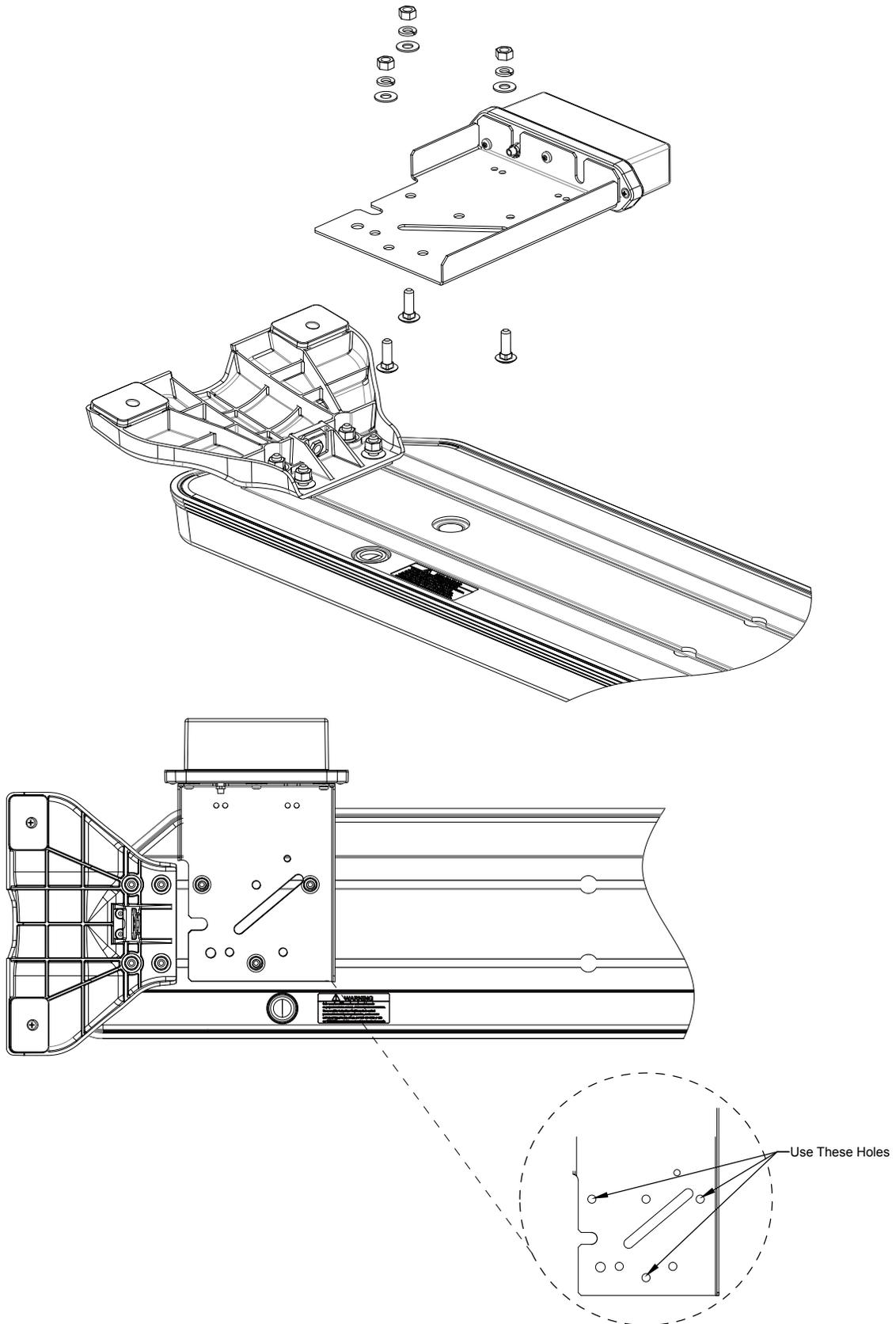


Figure 4 Legend® and Integrity® alternative HotFoot® mount

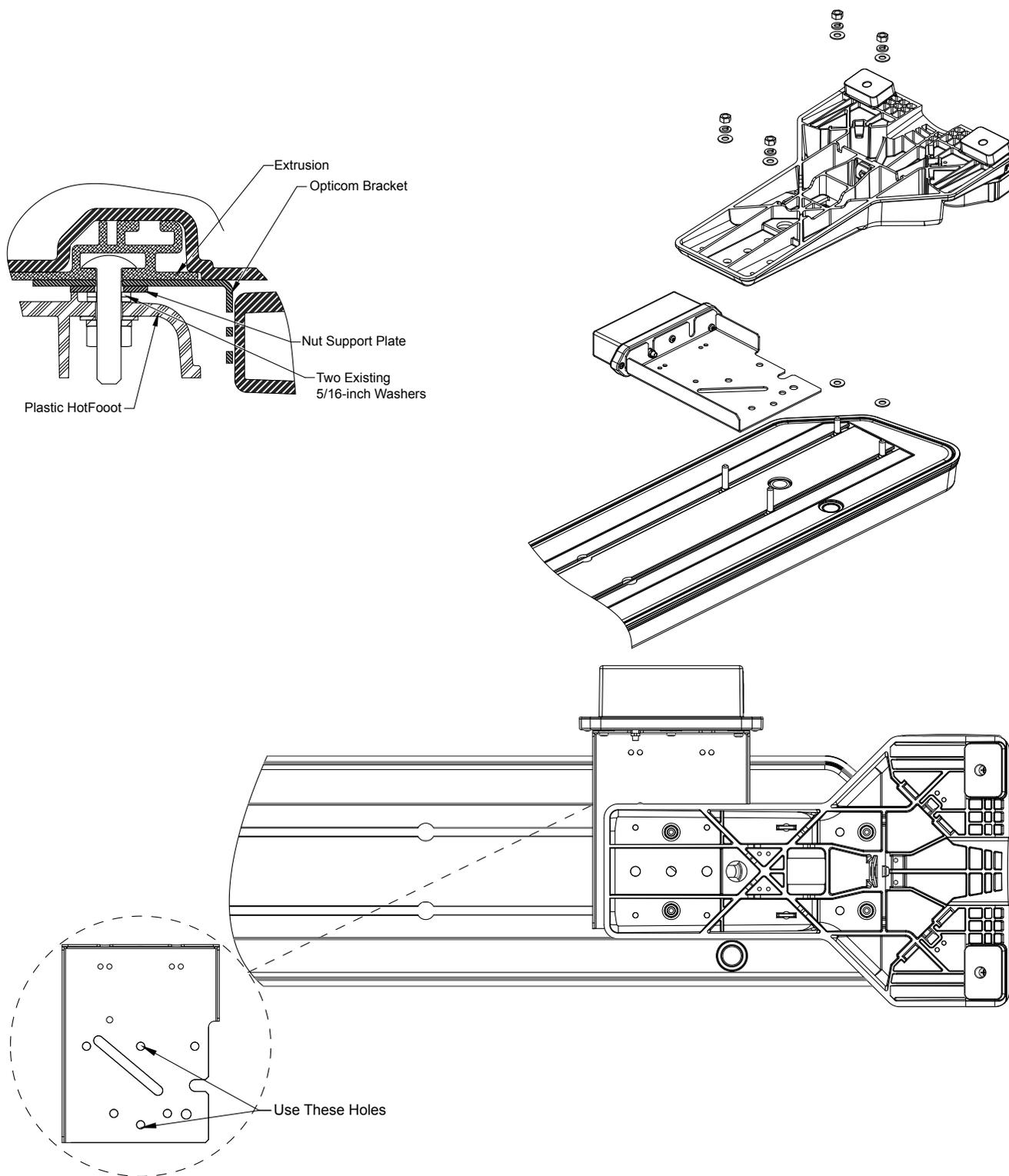


Figure 5 Opticom mounted between Valor® light bar and foot

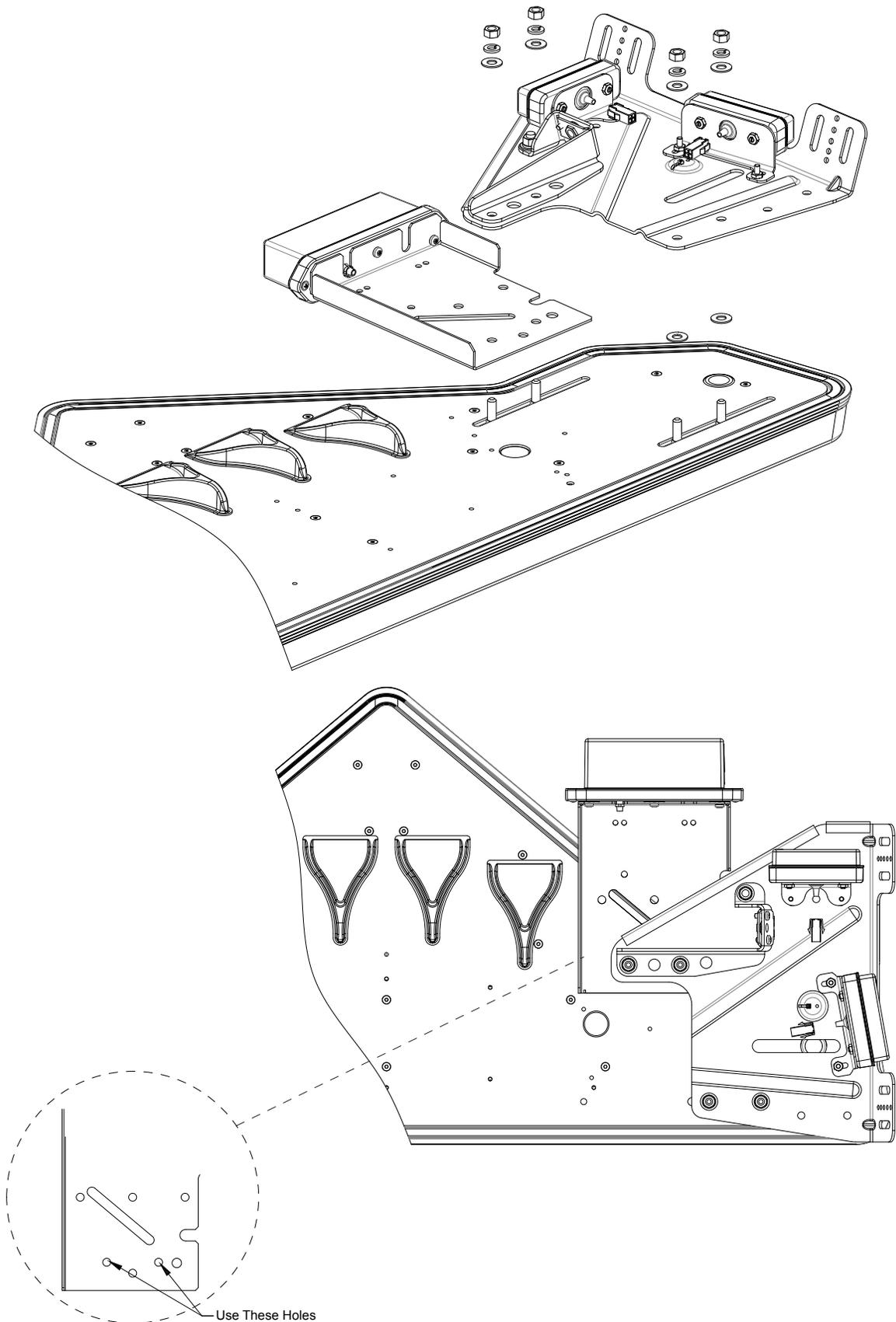


Figure 6 Opticom mounted between Vision® SLR light bar and foot

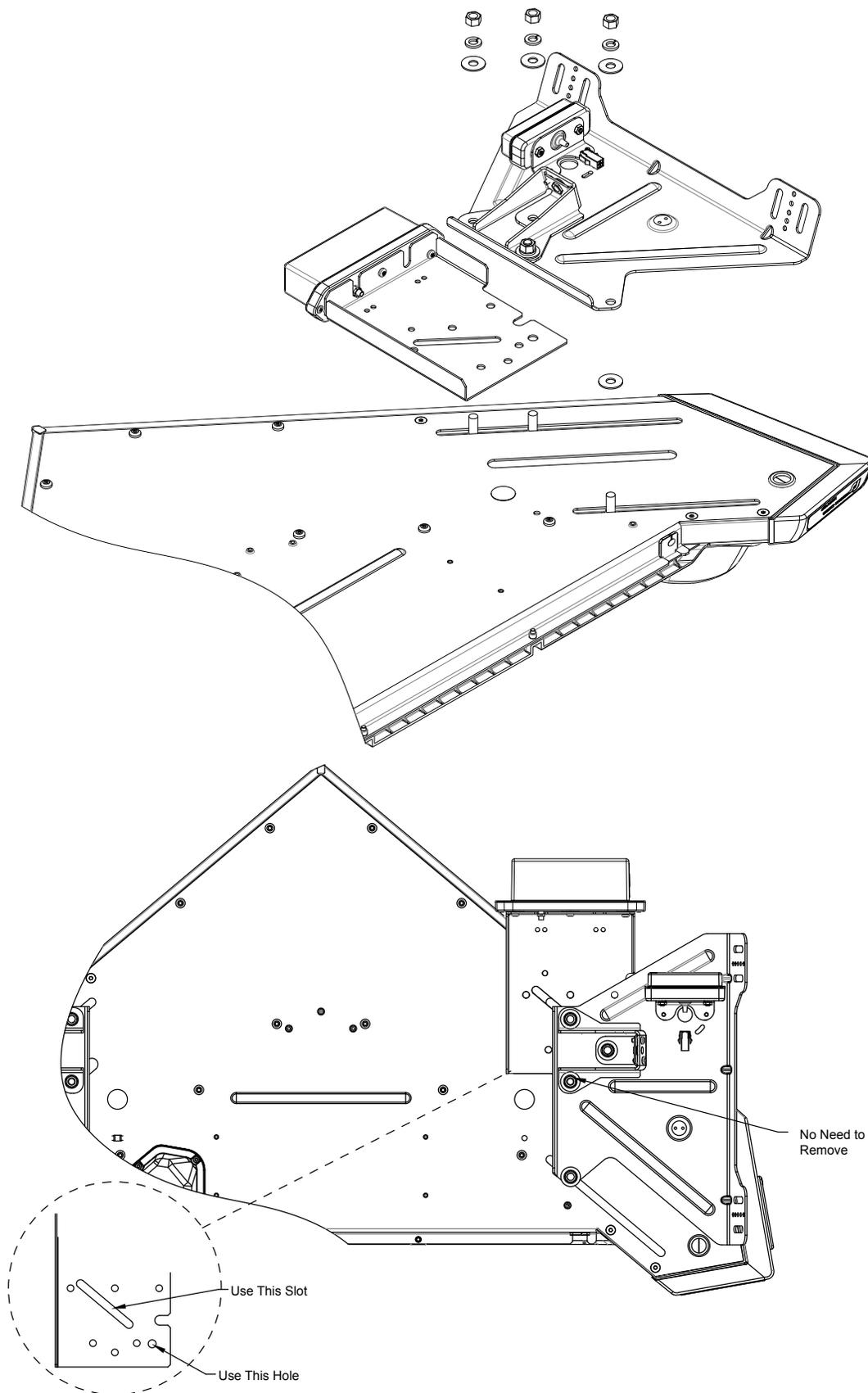


Figure 7 Opticom mounted between 3-Pod Vision® SLR light bar and foot

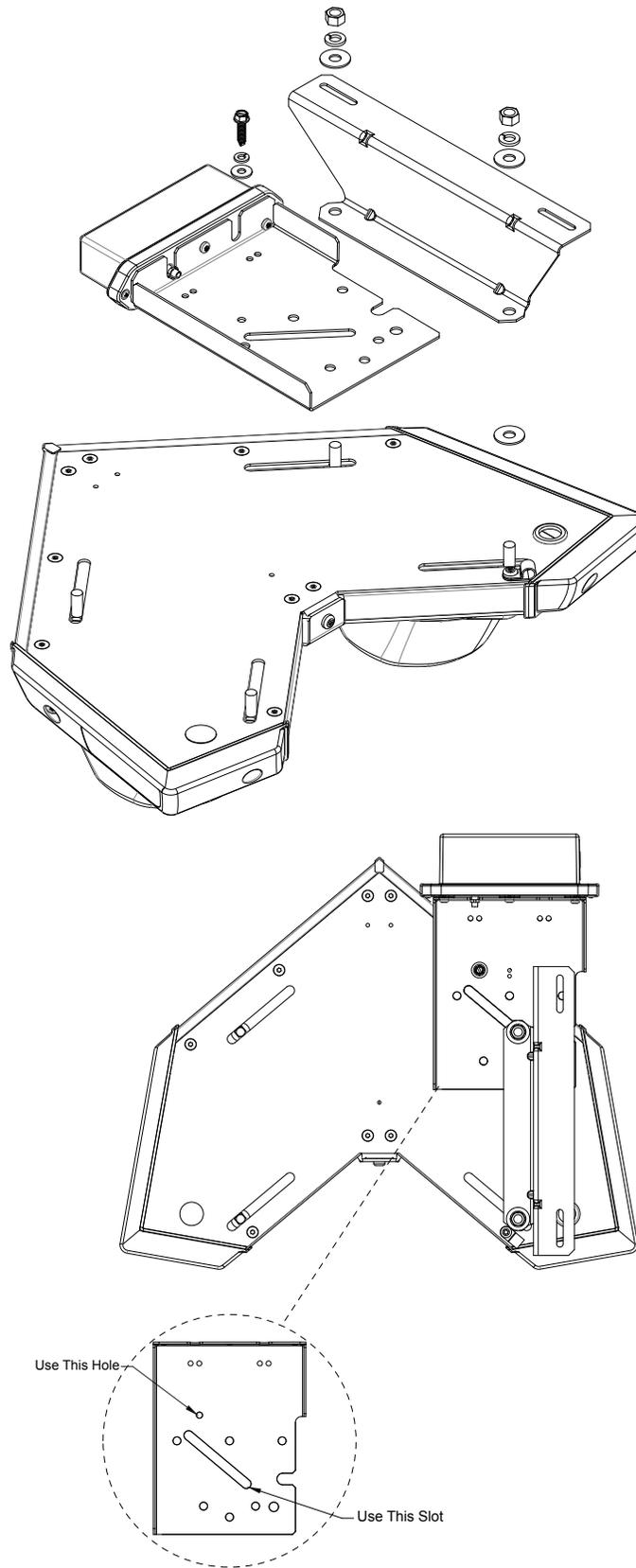
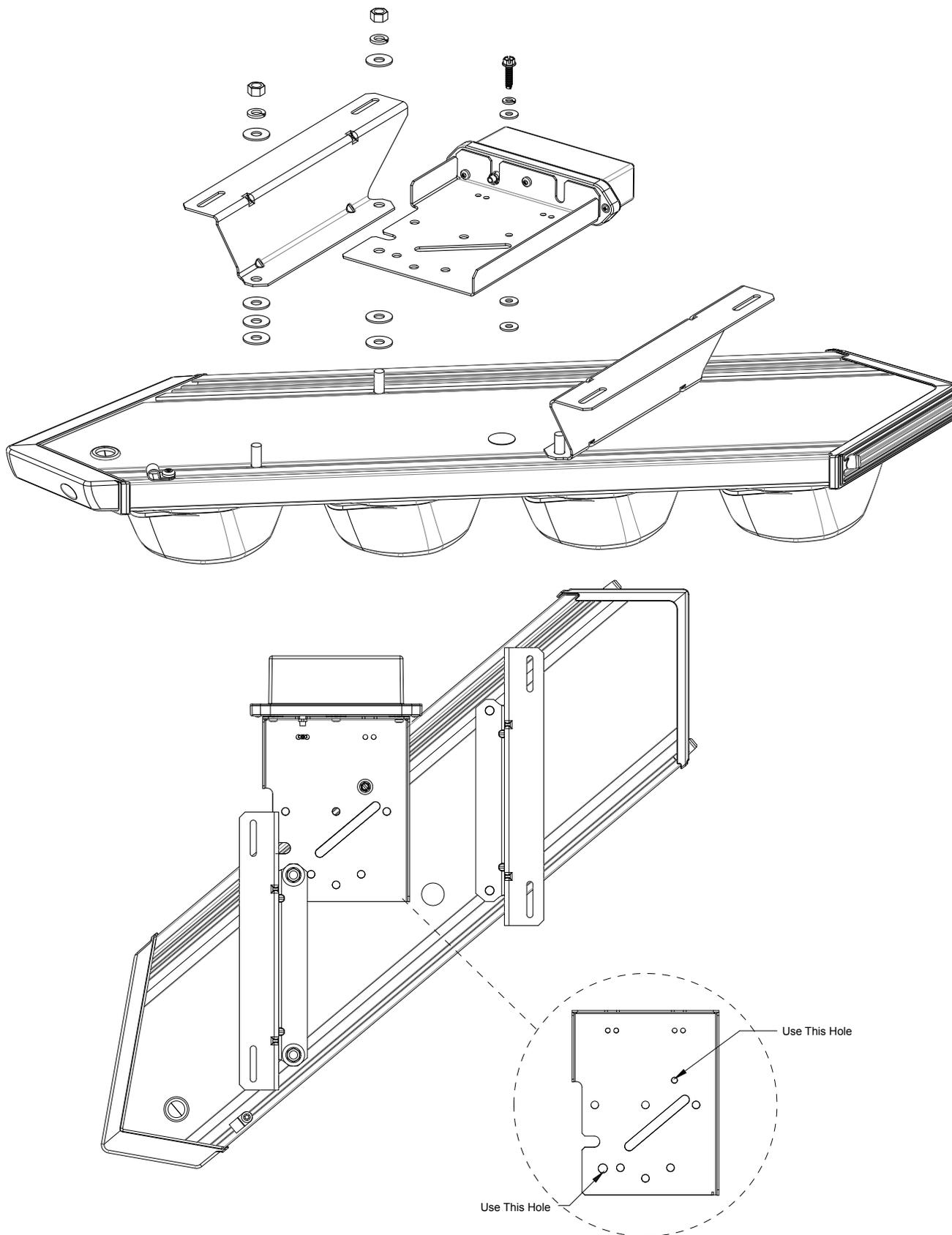


Figure 8 Opticom mounted between 8-Pod Split Vision® SLR light bar and outboard foot



**⚠ WARNING**

**VEHICLE FACTORS MAY AFFECT PRODUCT PERFORMANCE:** *Communication between the internally-mounted Federal Signal Opticom Model 795H-INT and an intersection signaling detector may be adversely affected by factors that vary by vehicle, resulting in a communication range that may be below the municipal requirement. These factors include the downward slope, thickness, and overall curvature of the windshield, applied window tint or polarized films, the cleanliness of the windshield, sunlight reflected off the front hood, and other factors unique to the vehicle. The performance of the Opticom Model 795H-EXTB MUST first be validated by the municipality/installer with an actual trial in all varying types of first-responder vehicles within the municipality before it is deployed for general use. Failure to validate this product within the internal environment in which it is to be used may result in serious injury or death.*

## **Getting Technical Support or Service**

If the Opticom Model 795H-EXTB is within the GTT limited warranty and powers up, but does not operate properly, or if you need technical support for the operation of the Opticom, contact the GTT Service Department:

Global Traffic Technologies, LLC  
7800 Third Street North  
St. Paul, Minnesota 55128-5441  
1-800-258-4610  
<http://www.gtt.com>

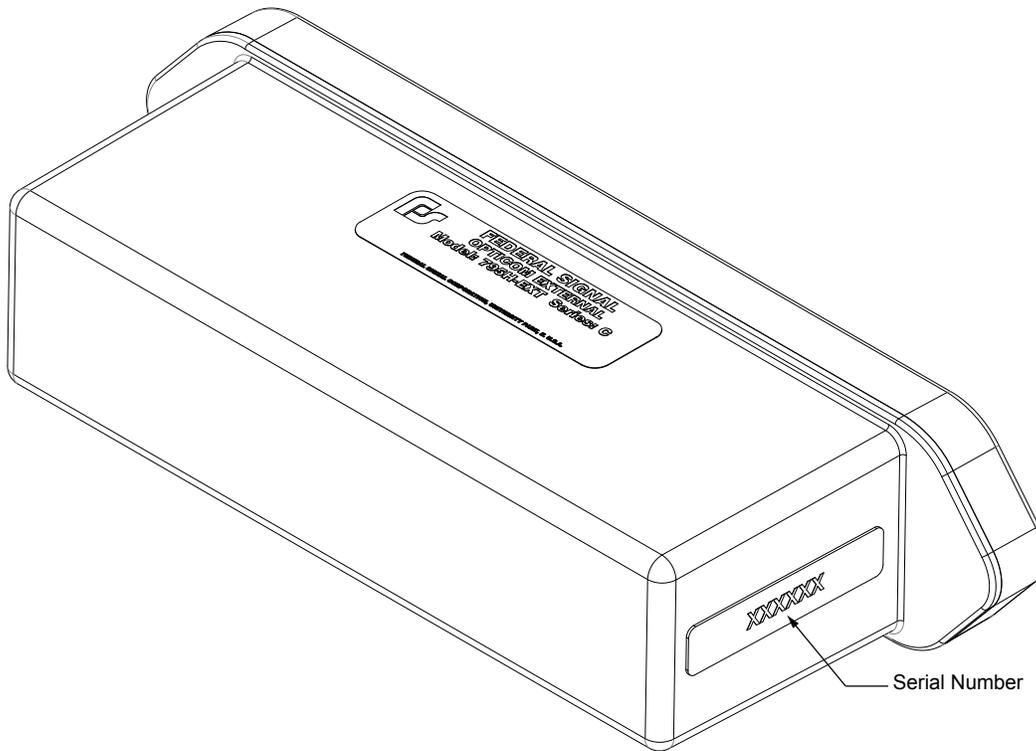
If the Opticom Model 795H-EXTB is within the GTT limited warranty and does not power up, or if after you have contacted GTT Technical Support the Opticom does not operate per the instructions provided by GTT Technical Support, or if you need assistance when installing the Opticom, contact the Federal Signal Service Department:

Service Department  
Federal Signal Corporation  
2645 Federal Signal Drive  
University Park, IL 60484-3167  
800-433-9132  
[www.fedsig.com](http://www.fedsig.com)

**Limited Warranty**

Global Traffic Technologies, LLC (GTT) provides a limited warranty from the date of purchase for the components within the housing of the GTT Opticom Model 795H-EXTB. For details, see the Model 795H Wiring and Programming Instructions manual, part number 79-1000-0316 (Federal Signal part number 2562457) supplied with the Opticom. Please provide GTT with the purchase date and the serial number of the Model 795H-EXTB when calling for technical support. The serial number is on the housing shown in the figure below.

**Figure 9 Location of serial number on housing**





**FEDERAL SIGNAL**  
Safety and Security Systems

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

© Copyright 2014-2021 Federal Signal Corporation  
All trademarks are property of their respective owners.