

25500817 Rev A0 0223

Safety Message to Installers and Service Personnel of Emergency Vehicle Safety 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. Listed below are some other important safety instructions and precautions you should follow.

Before Installation or Service

Qualifications

- To properly install or service this equipment, you must have a good understanding of automotive electrical procedures and systems along with proficiency in the installation and service of safety warning equipment. Always refer to the vehicle service manuals when installing equipment on a vehicle.

Electrical Hazards

- Never attempt to install aftermarket equipment that connects to the vehicle wiring without reviewing a vehicle wiring diagram available from the vehicle manufacturer. Ensure that your installation will not affect vehicle operation and safety functions or circuits.

During Installation or Service

- To avoid a battery explosion, always disconnect the negative battery cable first and reconnect it last. Avoid a spark when connecting near or to the battery. The gasses produced by a battery can cause a battery explosion that could result in vehicle damage and serious injury.
- Do not install equipment or route wiring or a plug-in cord in the deployment path of an airbag.
- Before mounting any components, check the manual to ensure that the component you are installing is suitable for use in that area of the vehicle. Many components are not suitable for use in the engine compartment or in other areas subject to extreme environmental exposure.
- When drilling into a vehicle structure, ensure that both sides of the surface are clear of anything that could be damaged. Remove all burrs from drilled holes to prevent electrical shorts, and grommet all drilled holes through which wiring passes. Ensure that mounting screws do not cause electrical or mechanical damage to the vehicle.

After Installation or Service

- If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.
- To ensure proper operation, test all vehicle functions, including horn operation, vehicle safety functions, and vehicle light systems. Ensure that installation has not affected vehicle operation or changed any vehicle safety function or circuit.
- After installation and testing are complete, provide a copy of these instructions to instructional staff and all operating personnel.
- 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.

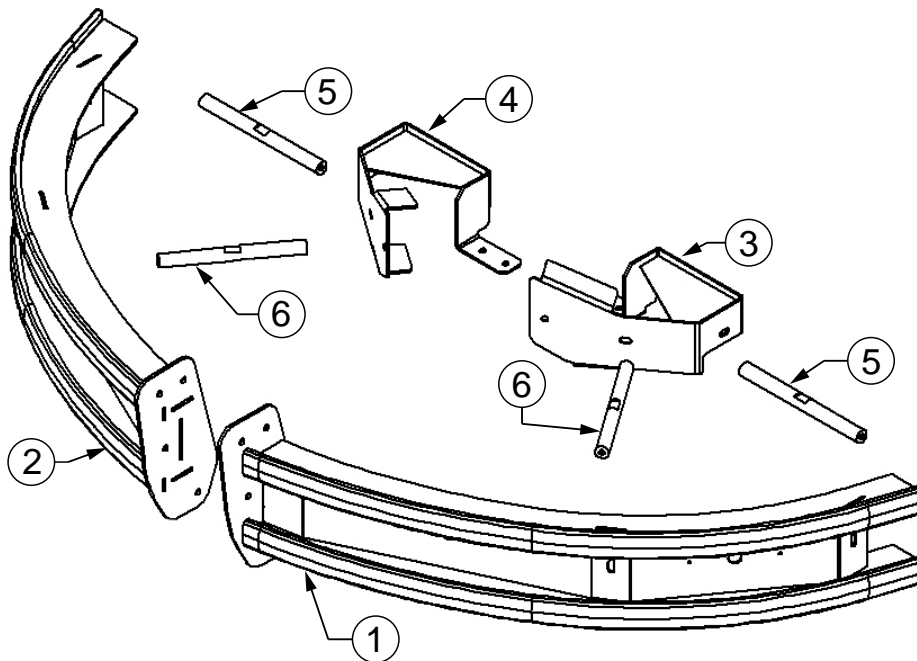
Unpacking the Product

After unpacking the product, inspect it for damage that may have occurred in transit. If it has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of the damage. Failure to identify the damage before installation could lead to rejection of any claim. Carefully check all envelopes, shipping labels, and tags before removing or destroying them. Ensure that the parts listed in Table 1 are included in the package. If you are missing any parts, contact Federal Signal Customer Support at 1-800-264-3578, 7 a.m. to 5 p.m., Monday through Friday (CT).

Table 1 Kit contents

Item	Description	Qty.
1	Driver Side Lower Guard Assembly	1
2	Passenger Side Lower Guard Assembly	1
3	Driver Side Mounting Bracket	1
4	Passenger Side Mounting Bracket	1
5	Long Spacer Rod	2
6	Short Spacer Rod	2
7	5/16-18 x 1-inch Hex Head Bolt	12
8	5/16-18 x 2.5-inch Hex Head Bolt	2
9	5/16-18 x 1.5-inch Button Head Bolt	6
10	5/16-inch Flat Washer	32
11	5/16-inch Lock Washer	20
12	5/16-inch Hex Nut	12

Figure 1 Kit parts



Installing the Lower Guard

⚠ WARNING

PUSH BUMPER PRECAUTION: Installing a push bumper on a vehicle may raise the vehicle's minimum collision speed for airbag deployment. It is imperative that police officers wear safety belts when operating the motor vehicle. Failure to follow this warning may cause serious injury or death.

NOTICE

THREAD DAMAGE AND GALLING: Use anti-seize lubricant on all stainless steel fasteners to prevent thread damage and galling.

To install the lower guard:

1. Starting from step 8 on instruction sheet 25500816 for the push bumper, locate the mounting brackets (Items 3 and 4).
2. Slide the mounting bracket (Item 3) over the vehicle bumper. Be sure to align the bottom tab with the existing holes in the vehicle's frame and install the 5/16-18 x 1-inch hex head bolts, flat washers, lock washers and nuts as shown in Figure 2. Torque the hardware to 24-28 ft-lb.

Figure 2 Bottom mounting location and hardware



- Using the indicated hole in figure 3 as a guide, drill a hole through the vehicle's bumper using a 21/64-inch drill bit.

Figure 3 Hole location, passenger side shown



- In the previously drilled hole, use the 5/16-18 x 2.5-inch hex head bolt, flat washers, lock washer, and nut to secure the bracket to the vehicle's bumper.
- Tighten all hardware, and then repeat steps 3 and 4 for the opposite side.
 - Torque 5/16-inch bolts to 24-28 ft-lb
- Return to instruction sheet 25500816 for the push bumper and proceed with installing the front fascia of the vehicle, but leave the fender area open so you can access the lower guard mounting brackets. Proceed with the push bumper installation. Once complete, continue with the lower guard installation.

IMPORTANT: Trimming is required on the front fascia.

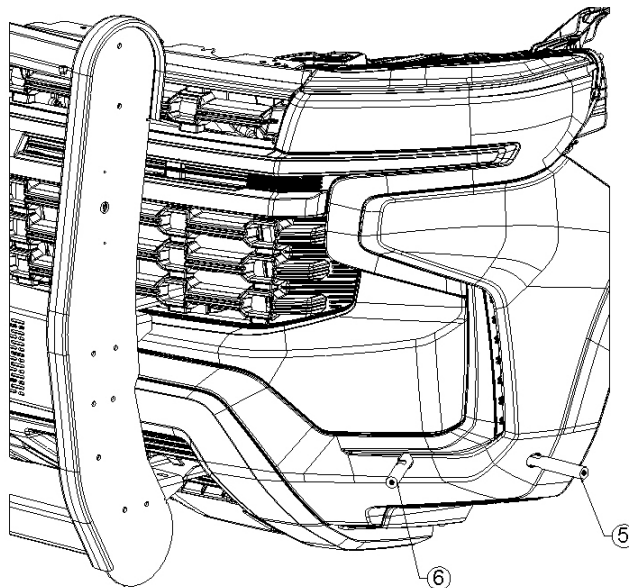
- Use the template shown in Figure 8 or 9 as a guide, keeping in mind that the templates are not to scale. Using a center punch, mark the center of the two specified holes on the fascia. See Figure 4 for the proper alignment of the template.

Figure 4 Driver side template alignment



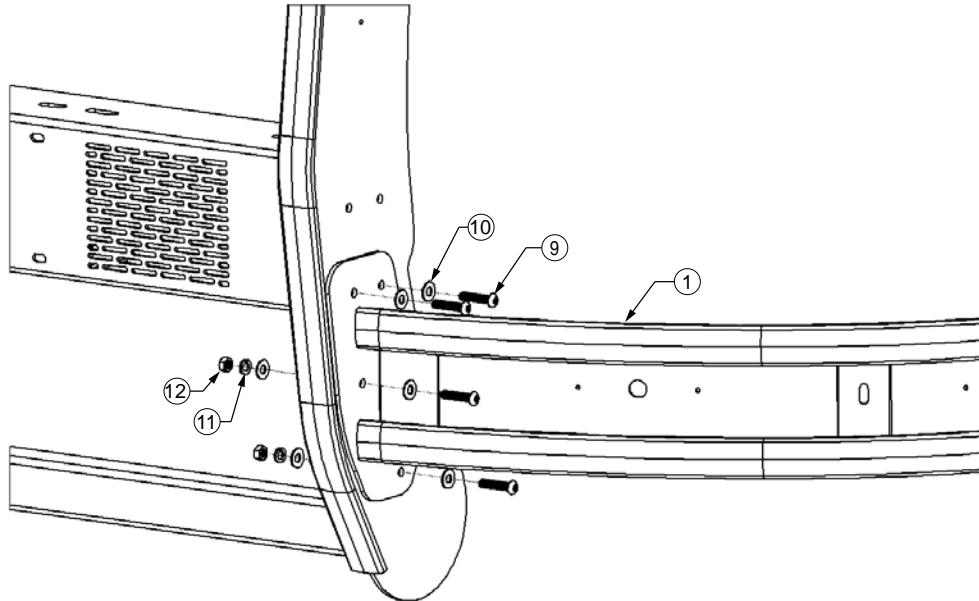
8. Using a 1-inch hole saw, cut out the two holes and then clean the edges. Repeat steps 7 and 8 for the opposite side.
9. Slide one short spacer rod (Item 6) into the front-facing hole of the fascia and attach it to the mounting bracket using a 5/16-inch hex head bolt, flat washer, and lock washer. Slide one long spacer rod (Item 5) into the side hole of the fascia and attach it to the mounting bracket using a 5/16-inch hex head bolt, flat washer, and lock washer. Repeat these steps on the opposite side. See Figure 5.

Figure 5 Spacer rods coming through vehicle fascia



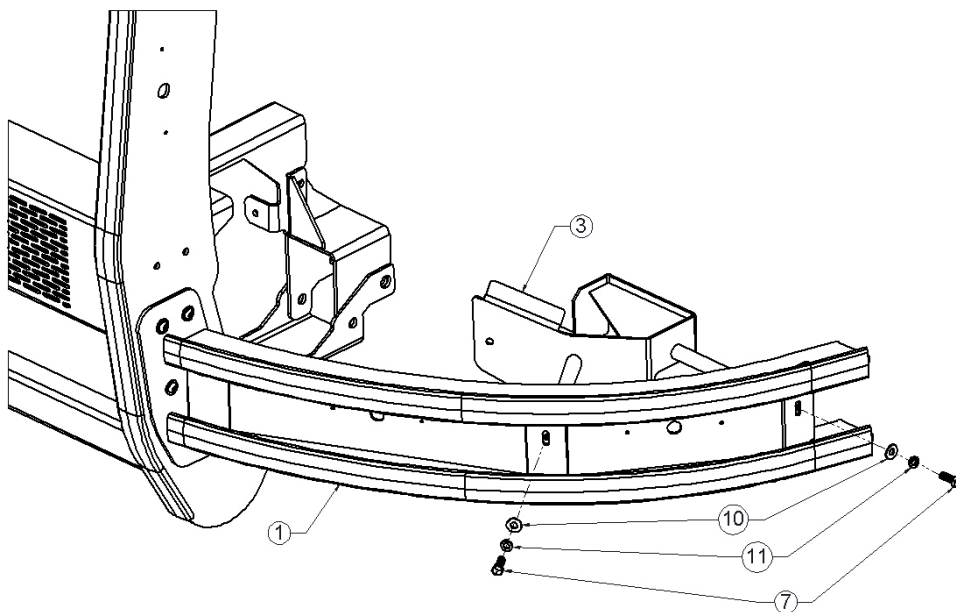
- Referring to the note in step 10 of instruction sheet 25500816 for the push bumper, remove the forward-most bolt on the lower bracket of the push bumper and loosely attach the lower guard to the side of the push bumper using the 5/16-inch button head bolts, flat washers, lock washers, and hex nuts. See Figure 6.

Figure 6 Attach the pit bar to the push bumper



- Using the 5/16-inch hex head bolt, flat washer, and lock washer, loosely attach the lower guard assembly to the spacer rods protruding from the front fascia. Align and adjust the lower guard as necessary, then tighten all hardware on the current side.
 - Torque 5/16" bolts to 24-28 ft-lb

Figure 7 Attach spacer rods to pit bar



- Repeat steps 11 and 12 for the opposite side.

Figure 8 Driver Side Template (Not to scale)

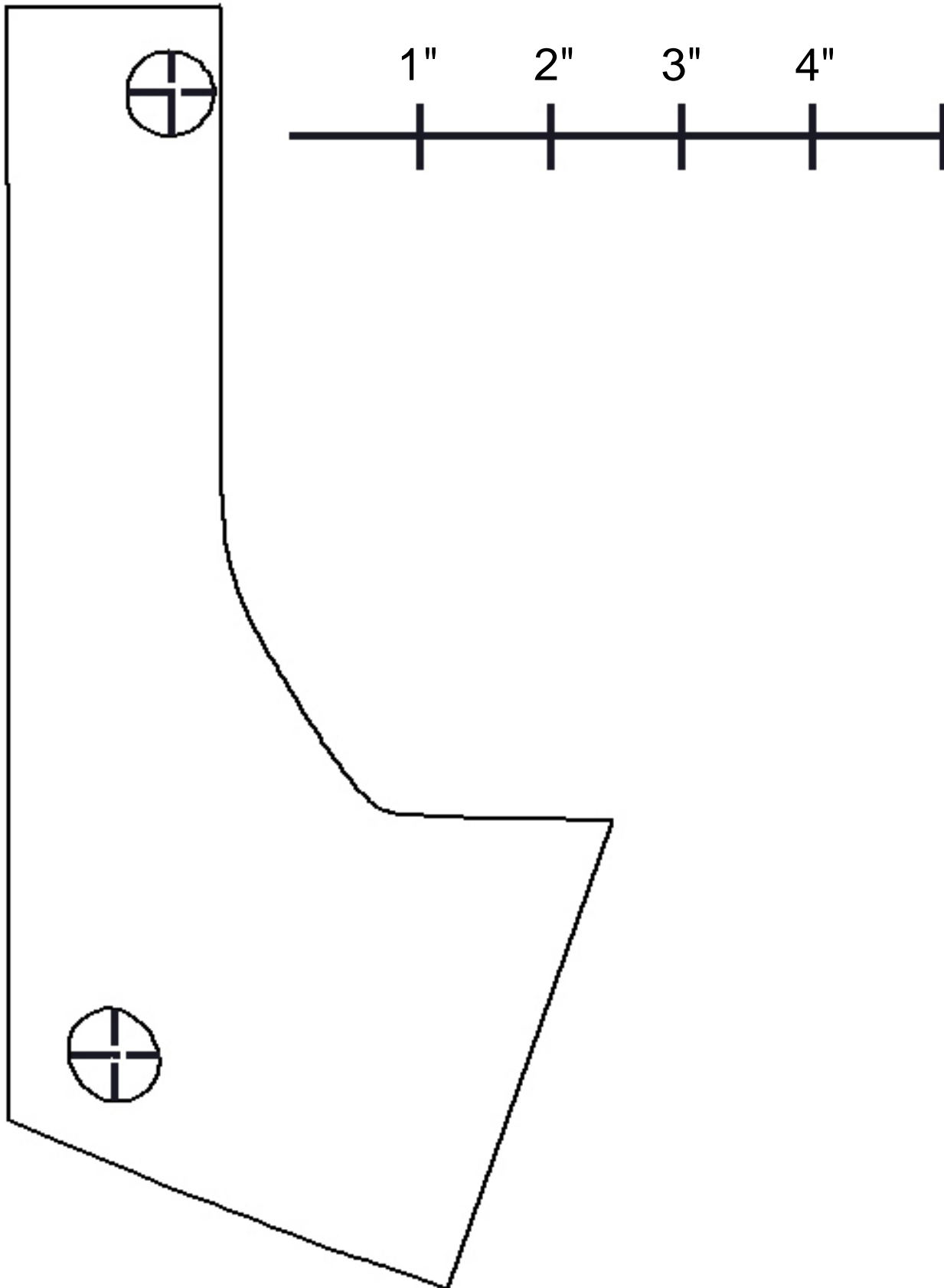
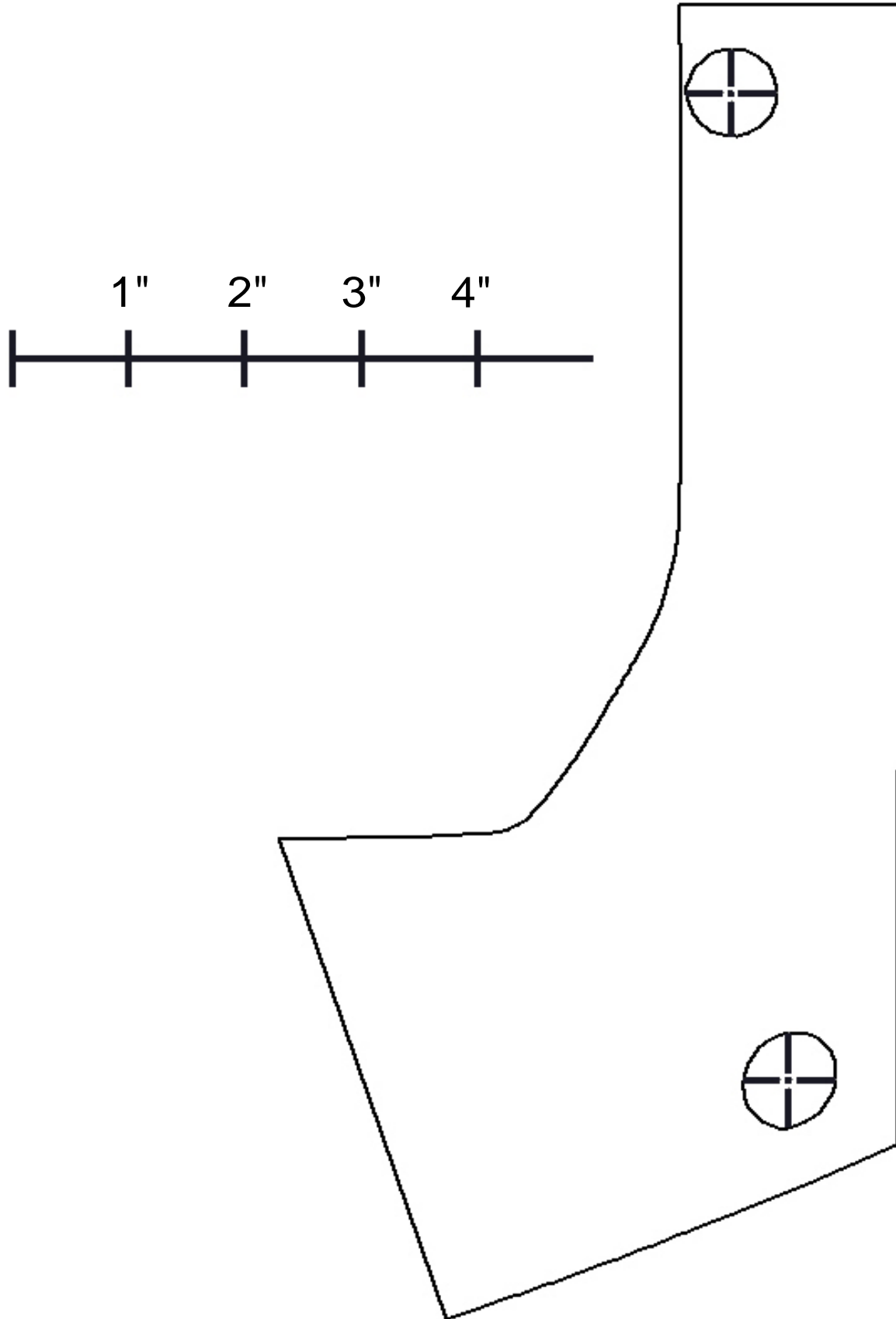


Figure 9 Passenger Side Template (Not to scale)



Maintaining the Lower Guard Assembly

Regularly clean the textured powder coat finishes with either a soft cloth or a brush with mild soap and warm water. Avoid using any harsh chemicals, as this will damage the product's finish. Pressure washing this product is the most efficient way to remove heavy dirt and grime. The pressure washer should be used on a low-pressure setting with filtered water for best results. Using high pressure can damage the product's finish.

Getting Technical Support

For technical support, please contact:

Federal Signal Corporation
Service Department
Phone: 1-800-433-9132
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 an 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. 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 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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