

25500241 Rev. A0 0915

Safety Message to Installers and Service Personnel of Emergency Vehicle Safety Equipment

⚠ WARNING

The lives of people depend on your proper installation and servicing of Federal Signal products. It is important to read and follow all instructions shipped with this product. In addition, 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 be sure 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, be sure that both sides of the surface are clear of anything that could be damaged. Remove all burrs from drilled holes to prevent electrical shorts, grommet all drilled holes through which wiring passes. Also 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 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 damage. **Failure to identify 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). Disposal of all shipping materials must be carried out in accordance with national and local codes and standards.

Table 1 (Refer to items in figures starting on page 5)

Item	Qty.	Description	Tools Needed
1	1	Push Bumper Assembly	Ratchet
2, 3	2	Upper Mounting Bracket, Driver/Passenger	Torque Wrench
4, 5	2	Bottom Mounting Bracket, Driver/Passenger	Allen Socket
6	6	M12 x 30 mm Hex-Head Flange Bolt (Yellow Zinc)	2" Hole Saw
7	6	M12 Serrated Flange Nut (Yellow Zinc)	15 mm Socket
8	2	M10 x 35 mm Socket-Head Cap Screw (Yellow Zinc)	16 mm Socket
9	2	M10 Cupped Washer (Yellow Zinc)	18 mm Socket
10	2	M12 x 35 mm Hex-Socket Button-Head Screw (Black Plated SS)	Socket Extension
11	6	M12 Cupped Washer (Black Plated SS)	18 mm Wrench
12	6	M12 Serrated Flange Nut (Black Plated SS)	Punch
13	4	M12 x 40 mm Hex-Socket Button-Head Screw (Black Plated SS)	Drill Motor

Installing the Push Bumper

⚠ 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 their motor vehicle. Failure to follow this warning may cause serious injury or death.*

NOTICE

THREAD DAMAGE AND GALLING: *To prevent thread damage and galling, anti-seize lubricant must be used on all stainless steel fasteners.*

1. Prepare the vehicle:

- a. Locate and remove the two rectangular tow hook covers on the bumper insert (Figure 1 on page 3). To remove them, trimming may be required.

NOTE: Some models may have factory-installed tow hooks. If so, remove the tow hooks before trimming the tow hook covers.

- b. Locate the template (Figure 2 on page 3) and place it on the bumper between the bumper insert and below the grille (Figure 3 on page 3).

- c. Use a punch to mark the center of the circle on the template, then cut a 2" hole using a hole saw.
- d. See Figure 3. Locate the M10 factory bolt behind the 2" hole and remove it.

Figure 1

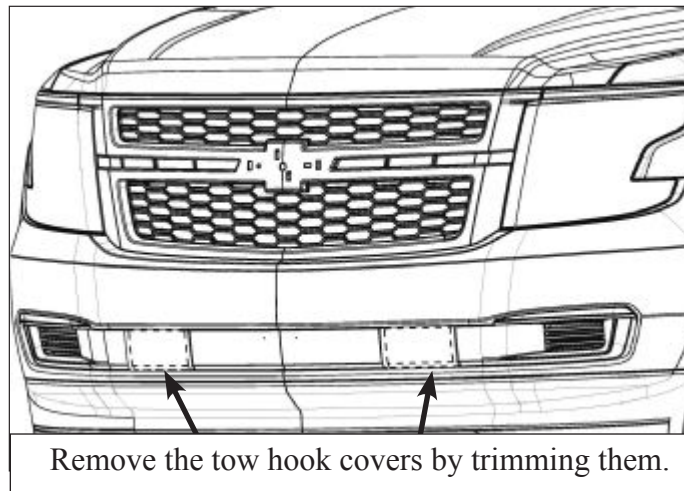


Figure 2

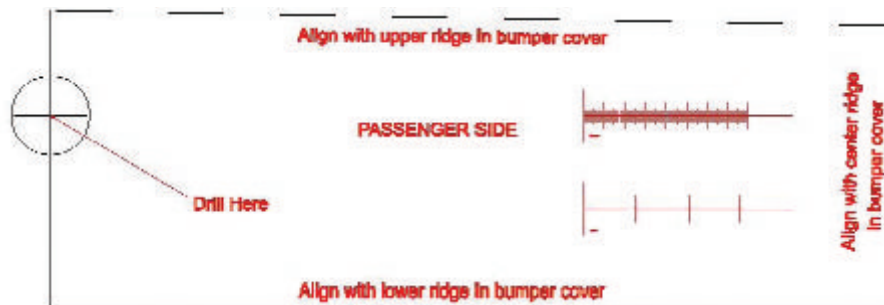
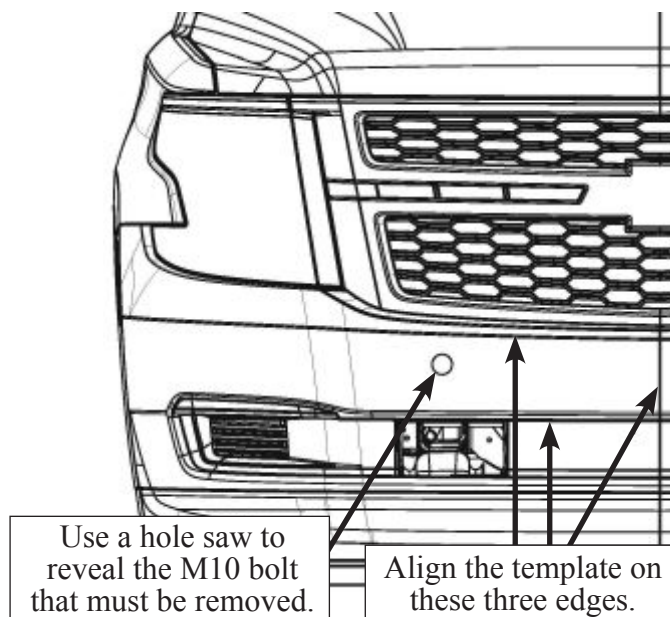


Figure 3



- e. See Figure 4. Remove the driver- and passenger-side splash guards from the undercarriage.

Figure 4



2. Install the bottom brackets:

- a. Locate the passenger-side and driver-side bottom brackets (Items 4 and 5 in Figure 5) and position each one where the rectangular piece is trimmed from the bumper cover of the vehicle (Figure 6).

Figure 5

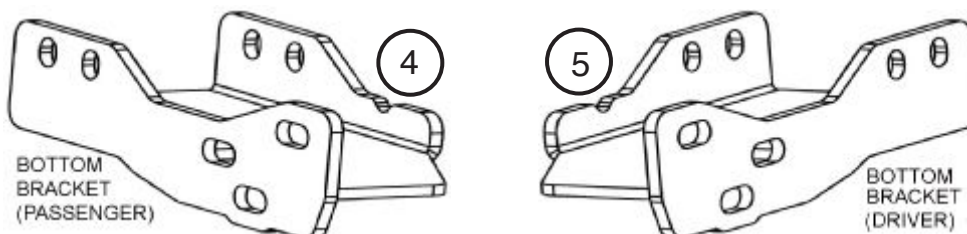
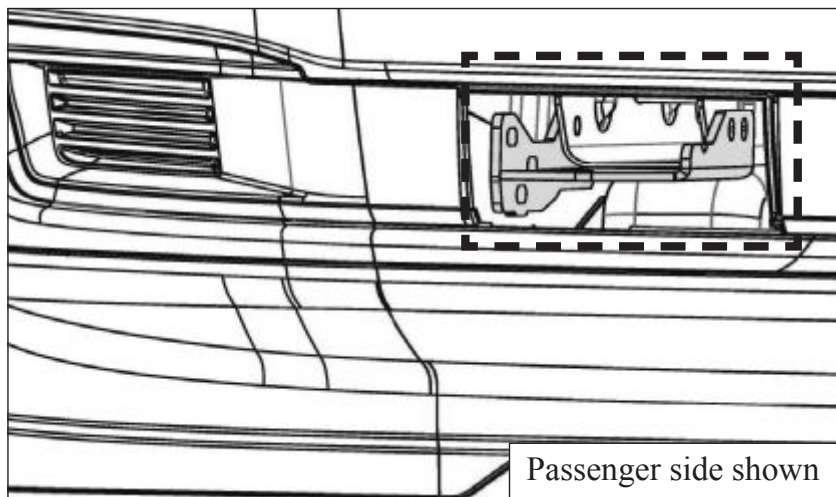
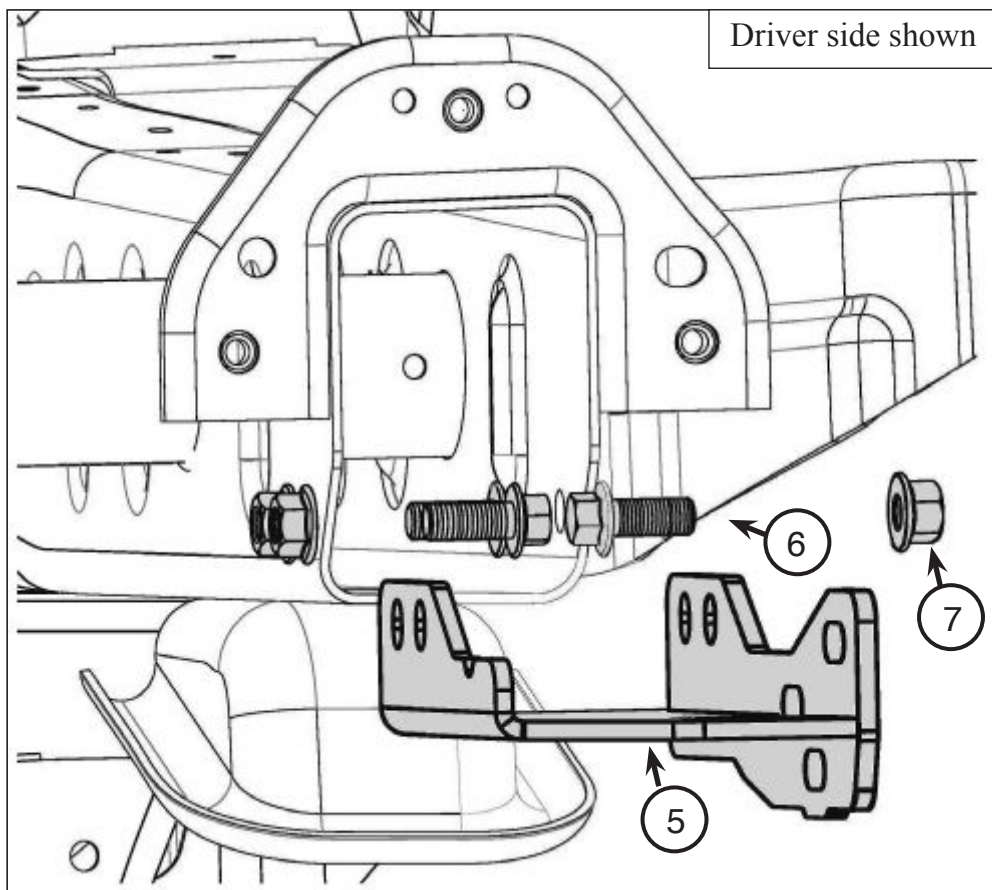


Figure 6



- b. Loosely attach the bottom bracket (Item 5) to the frame using three M12 hex-head flange bolts (Item 6) and three M12 serrated flange nuts (Item 7). Refer to Figure 7.

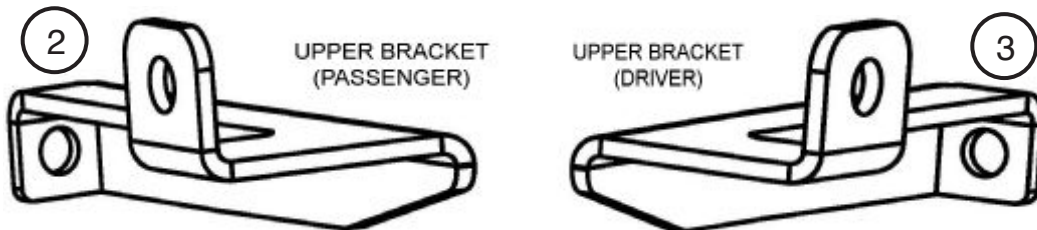
Figure 7



3. Install the upper brackets:

- a. Locate the upper mounting brackets (Items 2 and 3 in Figure 8), and attach them to the frame where you made the circular 2" hole using the template (Figure 9 on page 6).

Figure 8



- b.** Loosely attach the upper mounting brackets (Item 3) using two M10 socket-head cap screws (Item 8) and two M10 cupped washers (Item 9). Refer to Figures 9 and 10.

Figure 9

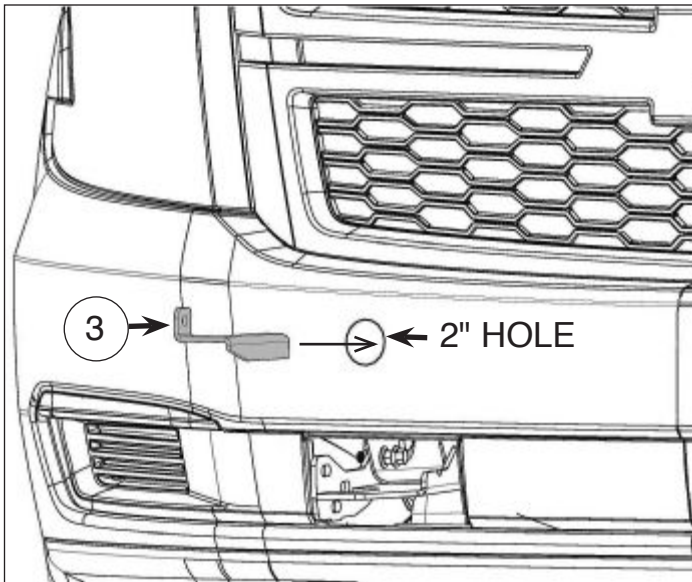
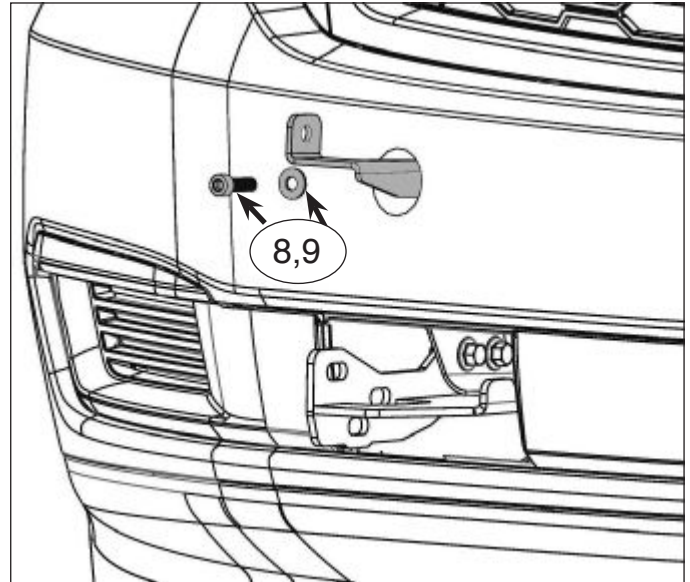


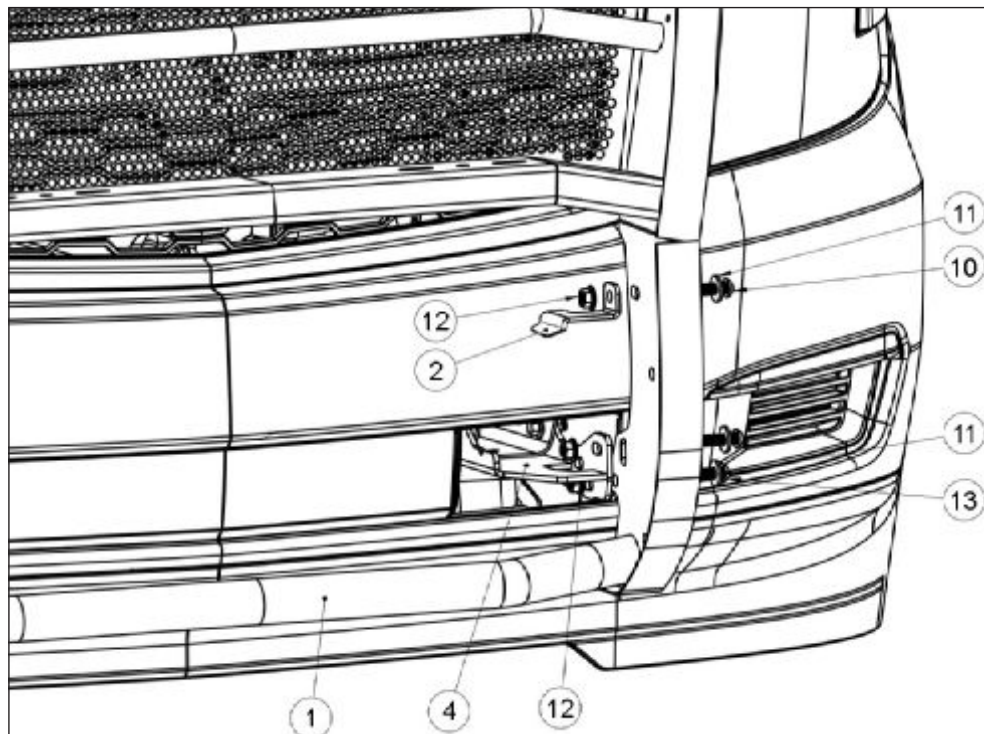
Figure 10



4. Install the push bumper:

- a.** Attach the push bumper to the bottom brackets using four M12 x 40 hex-socket button head screws (Item 13), four M12 cupped washers (Item 11) and four M12 serrated flange nuts (Item 12). Refer to Figure 11.

Figure 11



- b. Attach the push bumper to the upper brackets using two M12 x 35 hex-socket button head screws (Item 10), two M12 cupped washers (Item 11) and two M12 serrated flange nuts (Item 12). Refer to Figure 11 on page 6.
- c. Align and adjust the push bar, then tighten and torque:
 - M10 hardware to 30 ft-lb to 35 ft-lb
 - M12 hardware to 50 ft-lb to 55 ft-lb.

Figure 12



Maintaining the Push Bar Assembly

Regularly clean stainless steel and gloss black finishes with a mild soap and water. Apply a non-abrasive wax or polish. To polish small scratches on stainless steel, use stainless steel polish. To avoid making scratches on the stainless steel surfaces, follow the grain of the steel while polishing.

Getting Technical Support and Service

Federal Signal Corporation will service your equipment or provide 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 number. The RMA number can be obtained from your local distributor or Federal Signal. Please provide a brief explanation of the service requested or the nature of the malfunction. Contact your local dealer/distributor for replacement parts availability or contact the Federal Signal Service Department (7 a.m. to 5 p.m., Monday through Friday, Central Time) at:

Service Department
Federal Signal Corporation
2645 Federal Signal Drive
University Park, IL 60484-3167
800-433-9132, 800-343-9706 (fax)



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