

25500245 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 (see Figure 1 on page 3 and Figure 8 on page 5)

Item	Qty.	Description	Tools Needed
1	2	Pit Bar Rail Assembly (passenger side shown)	Ratchet
2	2	Main Mounting Brackets (passenger side shown)	Screwdriver
3	2	Inner Support Brackets (passenger side shown)	14 mm Wrench
4	2	3.00" Long Spacers	14 mm Socket
5	2	M10 Hex Bolt (Yellow Zinc)	Allen Wrench
6	2	M10 Cupped Washer (Yellow Zinc)	18 mm Wrench
7	2	M10 Flange Nut (Yellow Zinc)	15 mm Socket
--	2	M12 Flange Nut (Yellow Zinc) (not shown)	13 mm Socket
8	2	M12 Cupped Washer (Black Plated SS)	10 mm Socket
9	2	M12 x 120 Socket-Head Cap Screw (Black Plated SS)	8 mm Socket
10	4	M10 Button Head Screw (Black Plated SS)	6 mm Socket
11	4	M10 Cupped Washer (Black Plated SS)	Ratchet Extension
--	4	M10 Flange Nut (Black Plated SS) (not shown)	Torque Wrench
--	2	1.50" Rubber Grommets (not shown)	Transfer Punch
--	2	Drill Templates (driver and passenger) (Figure 9 on page 5)	Hole Saw

Installing the Pit Bar

⚠ 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.

To install the pit bar:

1. Remove the entire front grille and bumper cover (front fascia) assembly from the front of the vehicle. Refer to Figures 2 through 7.
2. Loosely install the main mounting brackets for the pit bar to the frame of the vehicle using the supplied M10 hardware and factory M8 hardware. Refer to Figure 8 on page 5.

- Loosely install the inner support brackets for the pit bar using the factory M10 hardware. Refer to Figure 8 on page 5.
- Snap the bumper cover onto the vehicle, but do not yet install the fasteners.
- Use the supplied paper template to mark the locations of the drill holes for the pit bar spacers. Refer to Figure 9 on page 5.
- Drill the marked area with a 1/4" drill bit. Use a screwdriver as a probe to verify that the pilot holes are in line with the holes in the main mounting brackets, then drill them using a 1-3/8" hole saw

Figure 1

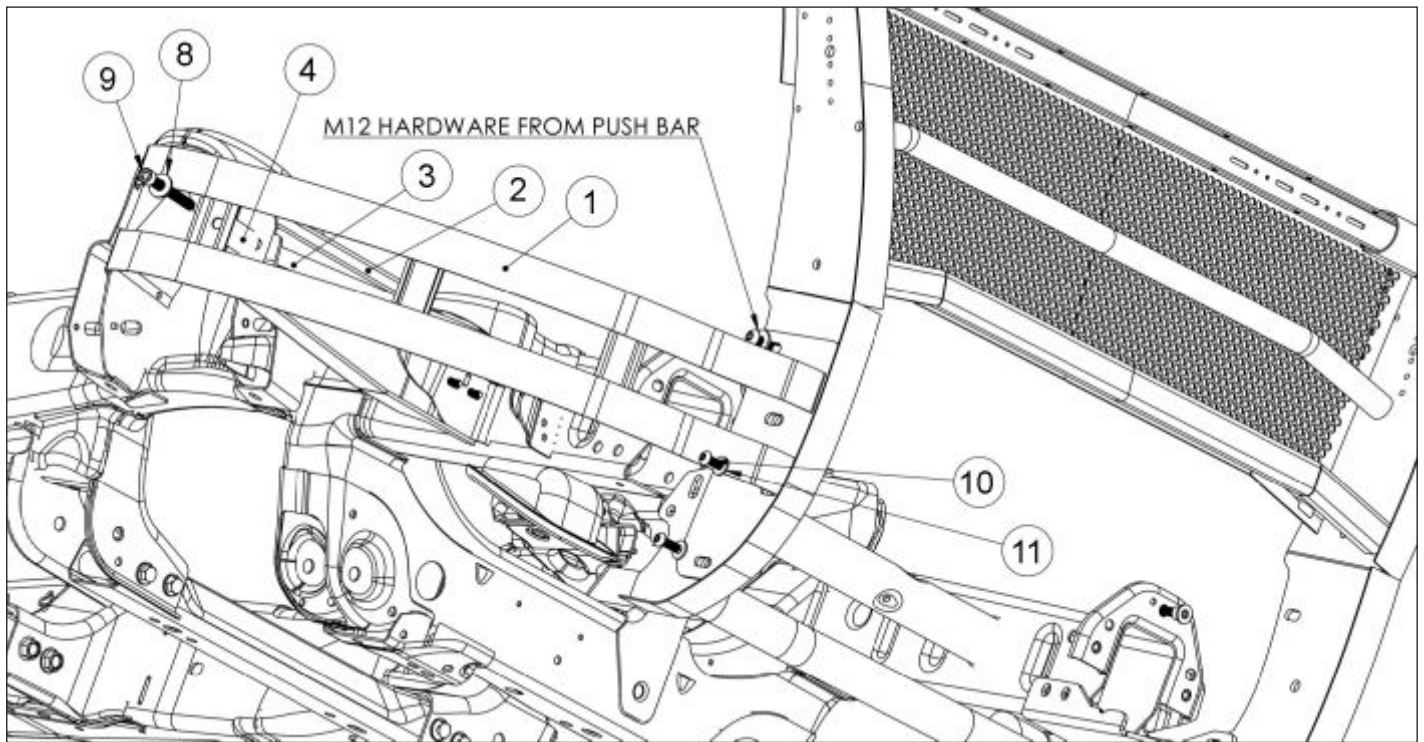


Figure 2

Figure 3

Remove the plastic radiator cover by popping up the plastic rivets securing it.



Remove all of the M6 bolts securing the grille to the radiator support.



Figure 4

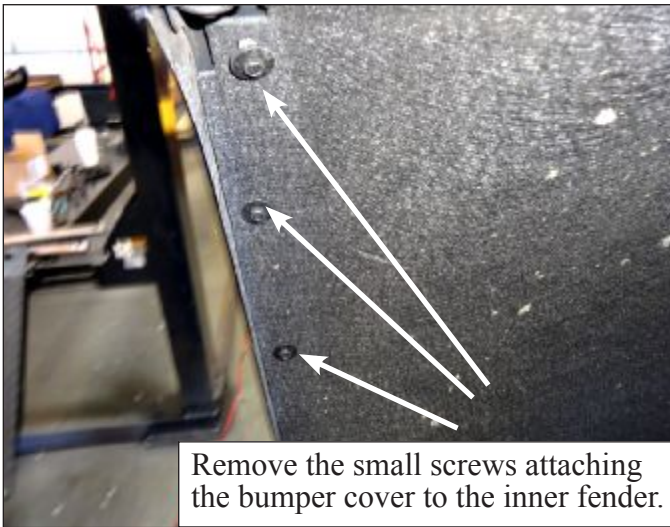


Figure 5



Figure 6

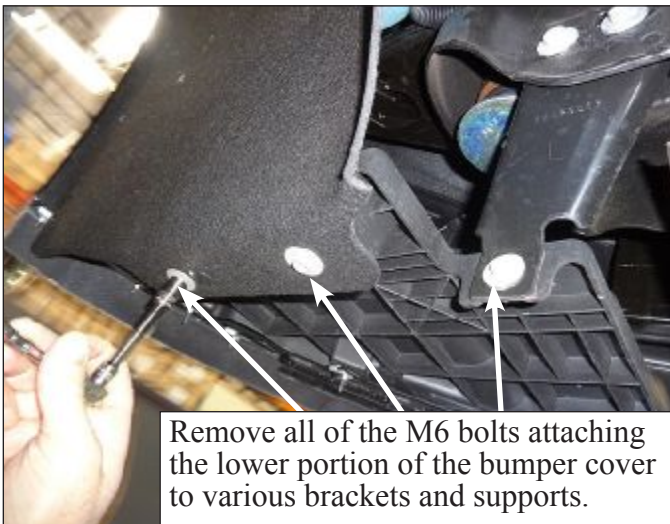
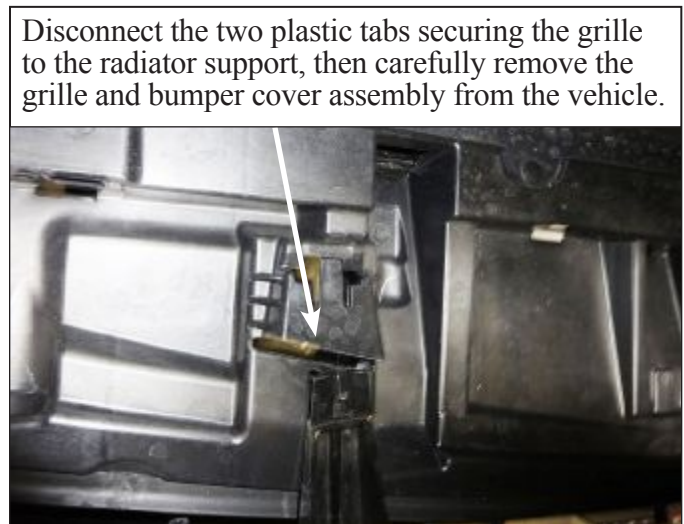


Figure 7



7. Install the PBX04 push bar according to the instructions included with the push bar kit, but do not fully tighten the mounting hardware.
8. Install the supplied grommets into the 1-3/8" drilled holes. Secure the grommets with an appropriate adhesive.
9. On one side at a time, loosely attach the pit bar rails to the push bar using the mounting hardware for the push bar plus the supplied M10 button head bolts.
10. Insert the supplied spacers through the grommets in the drilled 1-3/8" holes.
11. With the spacers in place, loosely attach the pit bar rails to the main mounting brackets using the supplied M12 socket head bolts, cupped washers and flange nuts (the nuts go behind the bumper cover).

NOTE: It is necessary to reach up through the lower splash shield or plastic inner fender in order to hold the M12 nuts with an open-end wrench while tightening the bolts. Refer to Figure 10 on page 5.

Figure 8

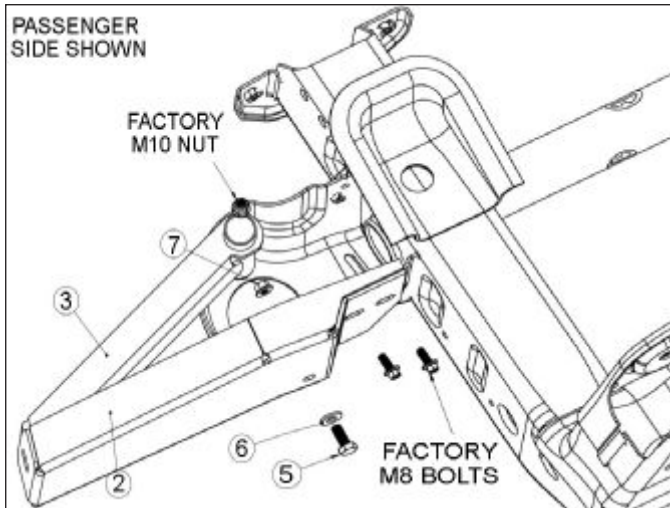
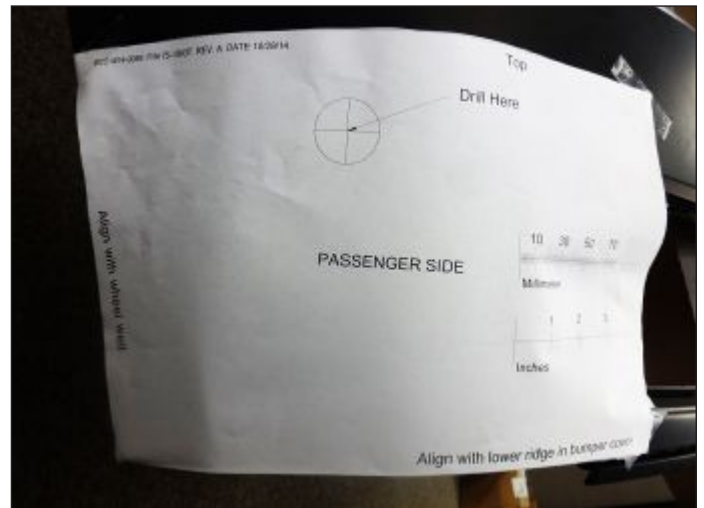


Figure 9



12. Align and adjust the pit bars as necessary then tighten and torque the mounting hardware:

M10: 30 ft-lb to 35 ft-lb

M12: 50 ft-lb to 55 ft-lb

13. Reinstall and tighten all remaining factory hardware for the front bumper cover.

Figure 10

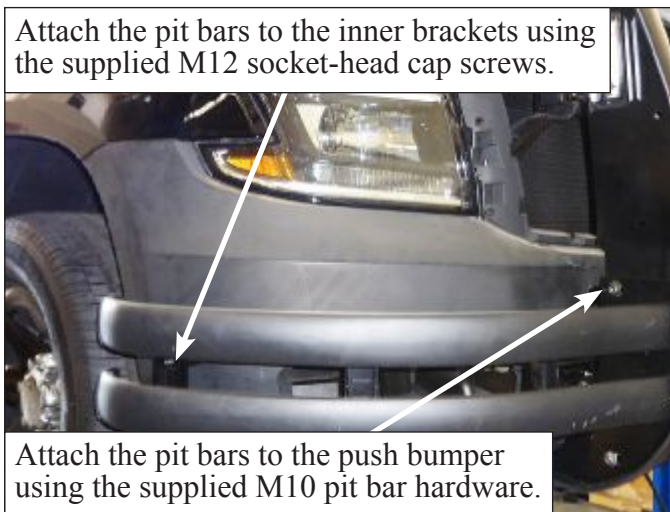


Figure 11



Maintaining the Pit 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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