

25500244 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** Kit contents and tools needed (see Figure 1 on page 3)

Item	Qty.	Description	Tools Needed
1	2	Pit Bar Rail Assembly (driver side shown)	Ratchet
2	2	Inner Mounting Brackets	17 mm Socket
3	4	1.50" Rubber Grommets	17 mm Wrench
4	2	Long Spacers	Allen Wrench
5	2	Medium Spacers	18 mm Wrench
6	4	M12 Flange Nut (Black)	15 mm Socket
7	4	M12 Long Socket-Head Cap Screw (Black)	Ratchet Extension
8	4	M12 Cupped Washer (Black)	Torque Wrench
9	4	M10 Long Hex Bolts (Yellow)	Transfer Punch
10	4	M10 Cupped Washer (Yellow)	Hole Saw
11	4	M10 Flange Nut (Yellow)	Drill Motor
12	4	M10 Button-Head Screw (Black)	Deburr Tool
13	4	M10 Cupped Washer (Black)	--
14	4	M10 Flange Nut (Black)	--
15	2	Drill Template (Driver and Passenger) (not shown)	--

## 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.***

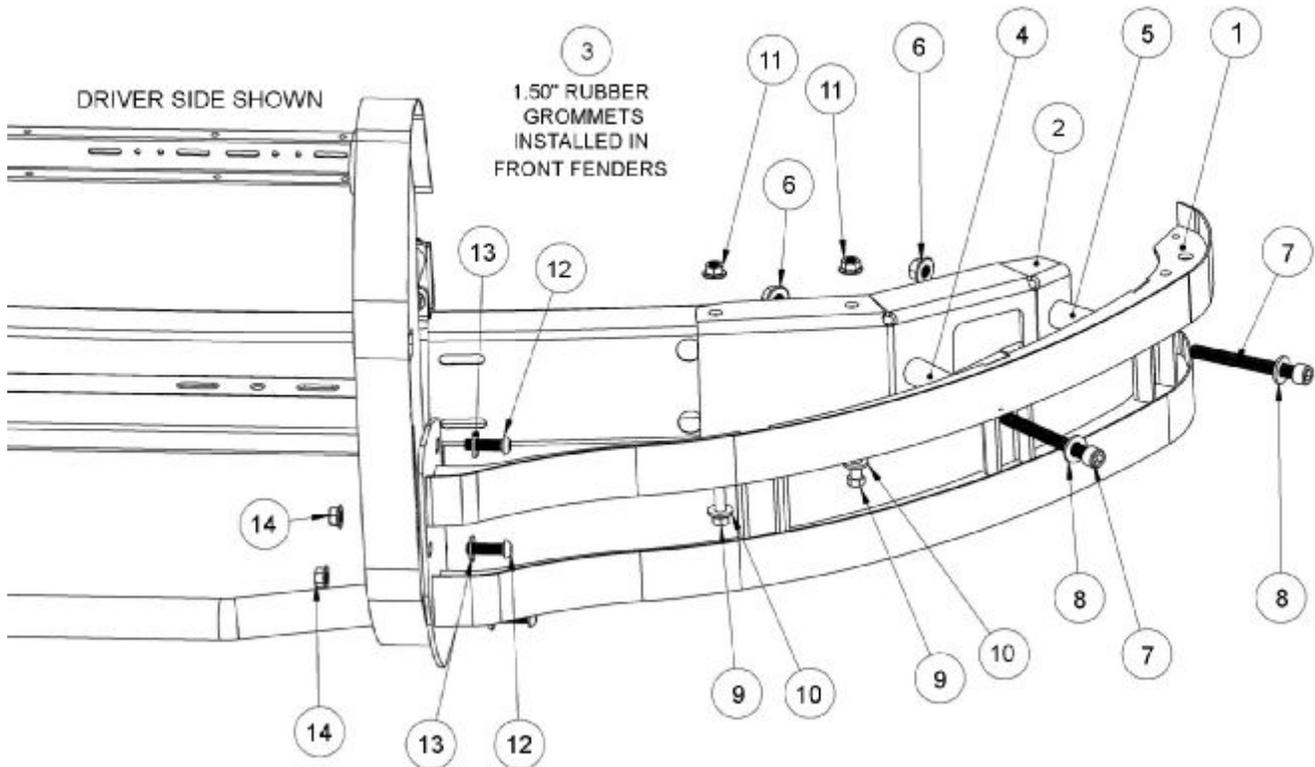
### **NOTICE**

***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 fascia (referred to as front clip) from the front of the vehicle. Follow the directions in 25500240 for the PBX03 push bar to accomplish this.
2. If they have not been installed yet, attach the push bar mounting brackets contained in the PBX03 kit (refer to 25500240).

Figure 1



3. See Figure 1. On one side at a time, attach the inner mounting brackets for the pit bar (Item 2) to the steel bumper channel using the supplied long M10 hex bolts (Item 9), cupped washers (Item 10) and flange nuts (Item 11) (use the yellow zinc plated hardware) (Figure 3.)

**NOTE:** For the driver-side installation, some vehicles require the air inlet plenum to be trimmed slightly for the bracket to fit (Figure 2).

Figure 2

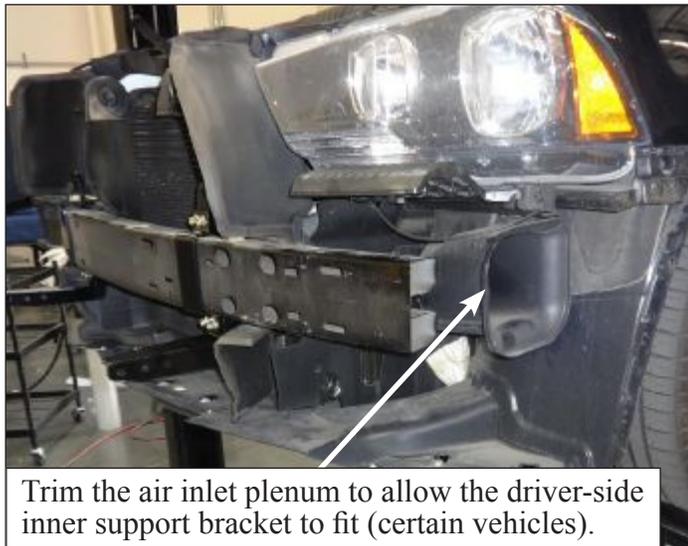
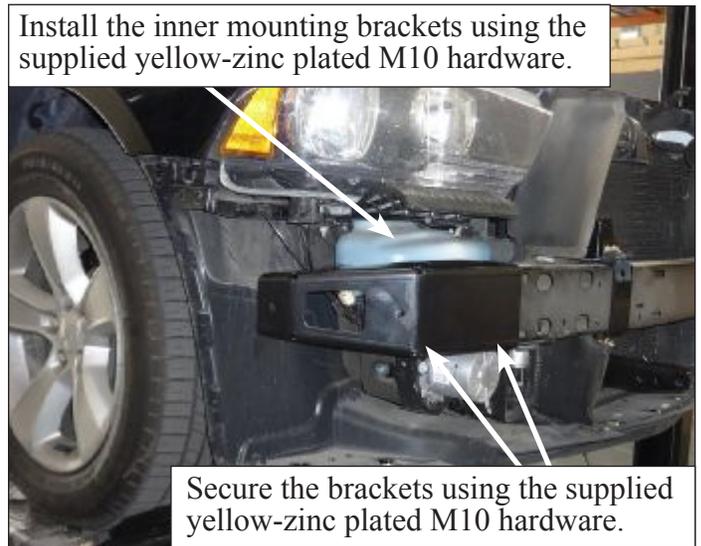


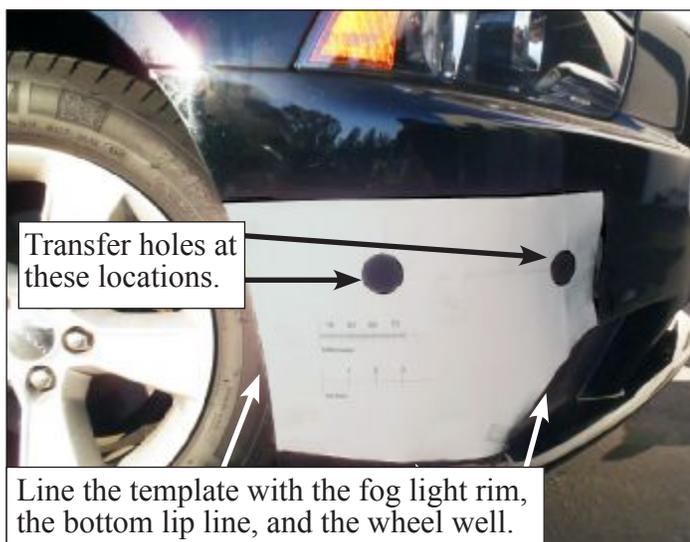
Figure 3



## Installing the PBX-PIT03 Pit Bar in the Dodge Charger (2011 and Newer)

5. Push the inner mounting brackets (Item 2) flush against the steel bumper channel, then torque the M10 hardware (Items 9,10,11) to 30 ft-lb to 35 ft-lb.
6. There is a plastic crash channel inside the clip that will interfere with the brackets. Trim the crash channel as necessary in order to reinstall the front clip (separating it from the clip makes trimming easier). Additionally there is a lower grille in the clip that will interfere with the lower mounting brackets; either remove it or trim it as necessary.
7. Snap the plastic front clip back on the vehicle, but do not attach the retaining screws that are in the fender well area. Refer to 25500240 for details.
8. Install the PBX03 push bar on the front of the vehicle per 25500240. Leave the mounting hardware loose because much of it will be reused to mount the pit bar rails.
9. Line the template (Item 15) up with the wheel well of the vehicle as shown on Figure 4. Use a transfer punch to mark drilling locations on the front clip of the vehicle.
10. You will need to drill holes using a 1/4" drill bit and then verify that the holes line up. This can be done using a Phillips screw driver or suitable punch as a probe to verify that the drilled 1/4" holes are in line with the mounting holes on the inner mounting brackets.
11. See Figure 4. Using the 1/4" holes as a pilot, take a 1-1/2" hole saw to drill 1-1/2" holes in the proper locations.

**Figure 4**



**Figure 5**



12. Deburr the 1.50" holes and install the rubber grommets (Item 4).
13. See Figure 5. Loosely mount the pit bar rail assemblies (Item 1) to the PBX03 push bar. For each side (passenger and driver) use three M10 button head screws (Item 12), along with three M10 cupped washers (Item 13), and three M10 flange nuts (Item 14).
14. Place the supplied spacers (Items 4 and 5) inside the drilled 1-1/2" holes. The longer spacer (Item 4) goes toward the center portion on the vehicle.

15. Place an M12 cupped washer (Item 8) on each M12 socket head cap screw (Item 7). Then feed the hardware through the pit bar rail assembly (Item 1), spacers (Items 4 and 5), and the inner mounting bracket (Item 2).
16. Reach through the opening between the front clip and the plastic splash guard beneath the vehicle to thread an M12 flange nut (Item 6) on each of the M12 socket head cap screws (Item 7) (Figure 6).

**Figure 6**



**Figure 7**



17. Align and adjust the pit bars and push bar as necessary then tighten and torque all remaining fasteners:

M10 30 ft-lb to 35 ft-lb

M12 50 ft-lb to 55 ft-lb

18. Install all remaining OEM fasteners securing the front clip to the vehicle.

## **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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Safety and Security Systems

2645 Federal Signal Drive, University Park, IL 60484-3167  
Phone: 708-534-3400 • 800-264-3578 Fax: • (800) 682-8022  
[www.fedsig.com](http://www.fedsig.com)