

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 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.

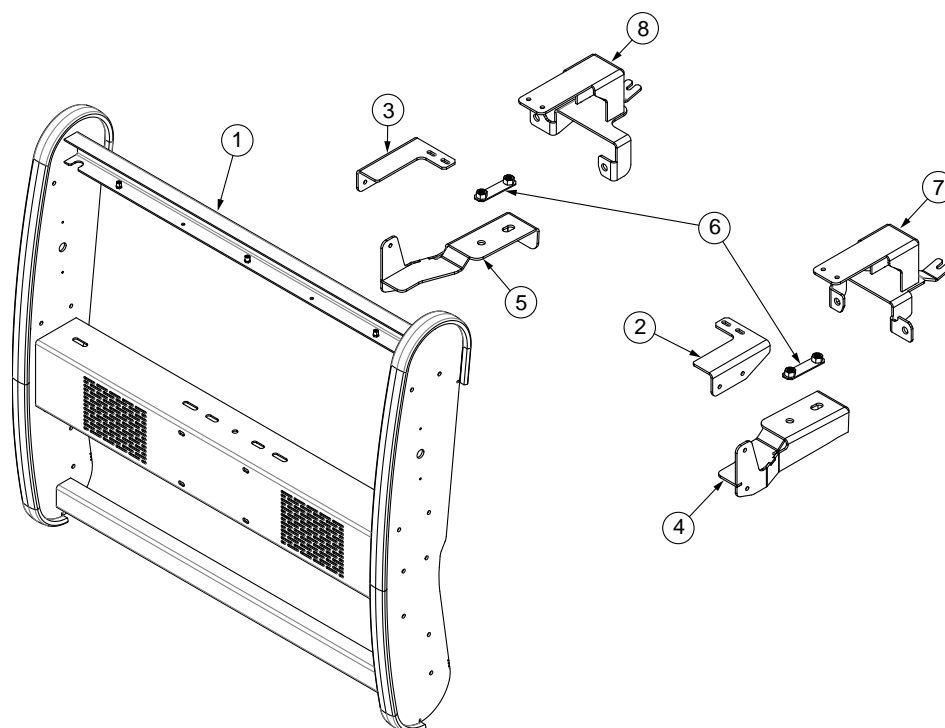
Unpacking the Product

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 (See Figure 1)

Item	Description	Part Number	Qty.
1	Push Bumper Assembly	806204235	1
2	Driver Side Upper Bracket	806204239-DS	1
3	Passenger Side Upper Bracket	806204239-PS	1
4	Driver Side Lower Vehicle Bracket	806204245-DS	1
5	Passenger Side Lower Vehicle Bracket	806204245-PS	1
6	Bolt Plate Assembly	806204348	2
7	Driver Side Upper Vehicle Bracket	806204242-DS	1
8	Passenger Side Upper Vehicle Bracket	806204242-PS	1
9	5/16-18 x 1.5-inch Hex Head Bolt	N/A	4
10	1/2-13 x 1.5-inch Hex Head Bolt	N/A	4
11	5/16-18 x 1.5-inch Button Head Bolt	N/A	8
12	5/16 Flat Washer	N/A	24
13	1/2 Flat Washer	N/A	4
14	5/16 Lock Washer	N/A	12
15	1/2 Lock Washer	N/A	4
16	5/16 Hex Nut	N/A	12

Figure 1 Kit parts



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 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 push bumper:

1. Remove the radiator grille according to the manufacturer's instructions. Refer to Figures 2 through 6 for the locations of all fasteners that must be removed to remove the grille.

Figure 2 Air deflector push pin locations under the hood

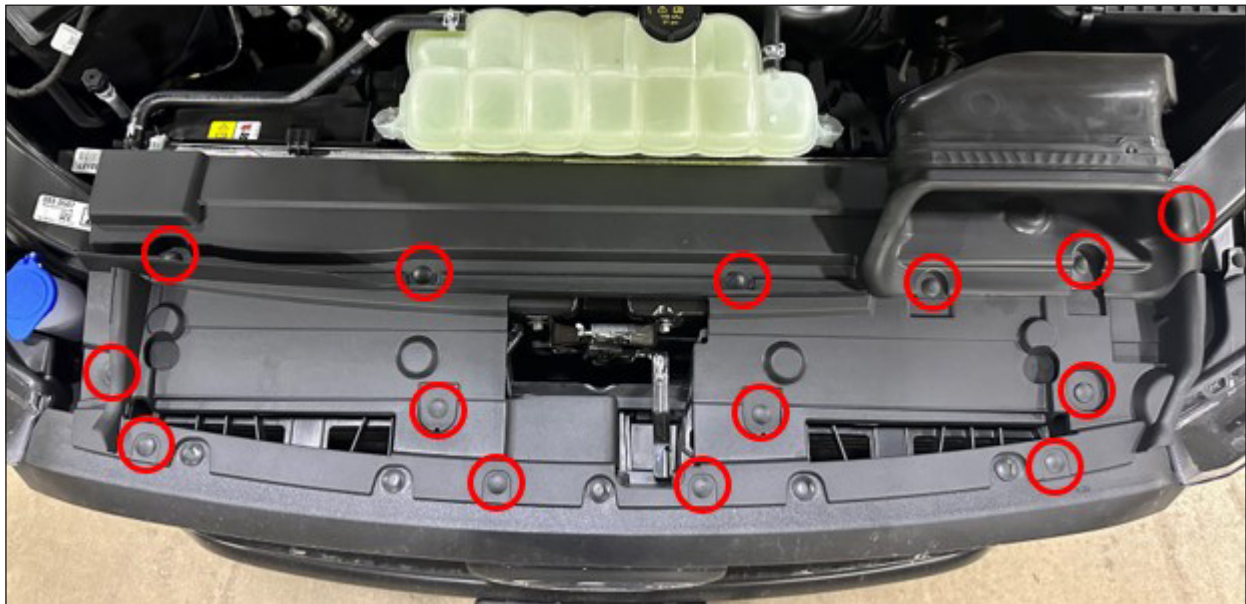


Figure 3 Disconnect electrical connectors and cable retainer

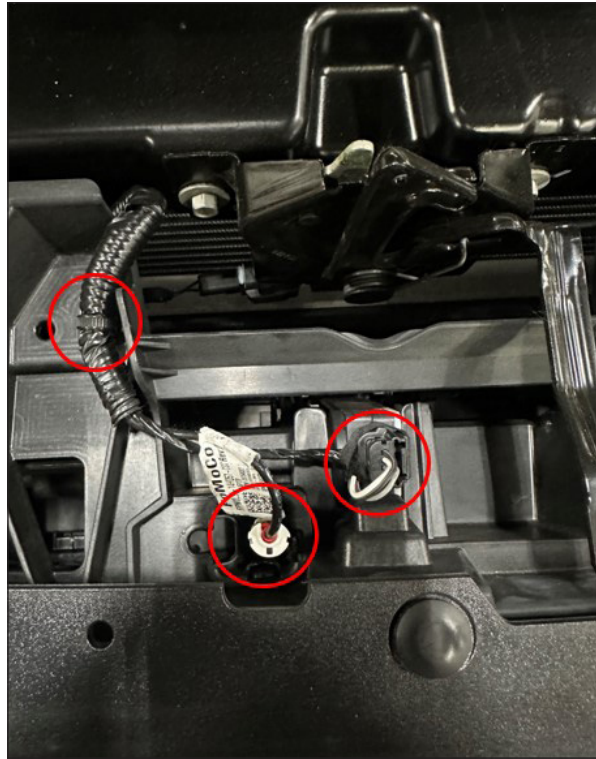


Figure 4 Front bumper upper cover trim panel fastener locations in wheel-well (Driver side shown)



Figure 5 Grille fasteners to be removed



Figure 6 Grille shutter mounting bolts to be removed (Driver side shown)



2. Remove the grille assembly.

3. If equipped, remove the tow hooks and tow hook covers and proceed to step 6. Refer to Figures 7 and 8 for the locations of the bolts to remove the tow hook. When removing the tow hooks, be sure to keep the factory bolt plate in place in the frame as this will be used to attach the lower brackets. Retain the factory bolts from the tow hooks as well.

Figure 7 Front tow hook bolt to be removed



Figure 8 Rear tow hook to be removed (accessible from underneath the vehicle)



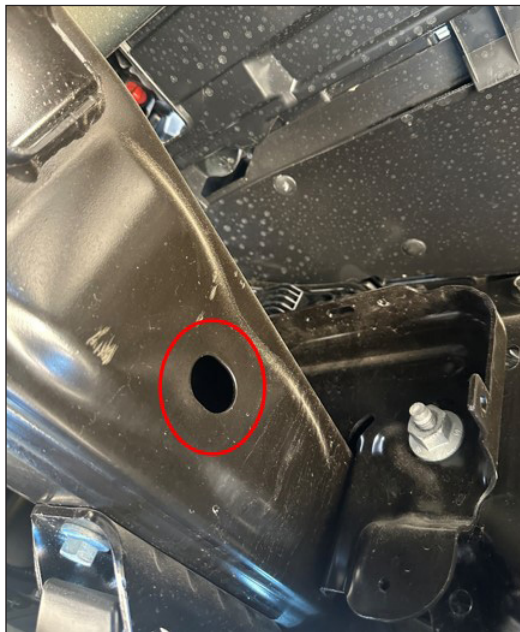
4. If your vehicle does not have factory tow hooks, cut out the plastic pieces in the lower valance shown in Figure 9 to access the lower bracket mounting point.

Figure 9 Locations to be cut out of lower valance



5. With the lower valance trimmed, insert one bolt plate assembly (Item 6) into the driver and passenger side frame and align with the first two holes in the bottom of the frame. Note that there is a hole on the side of the frame, shown in Figure 10, that may be easier than inserting the bolt plate assembly from the front frame opening.

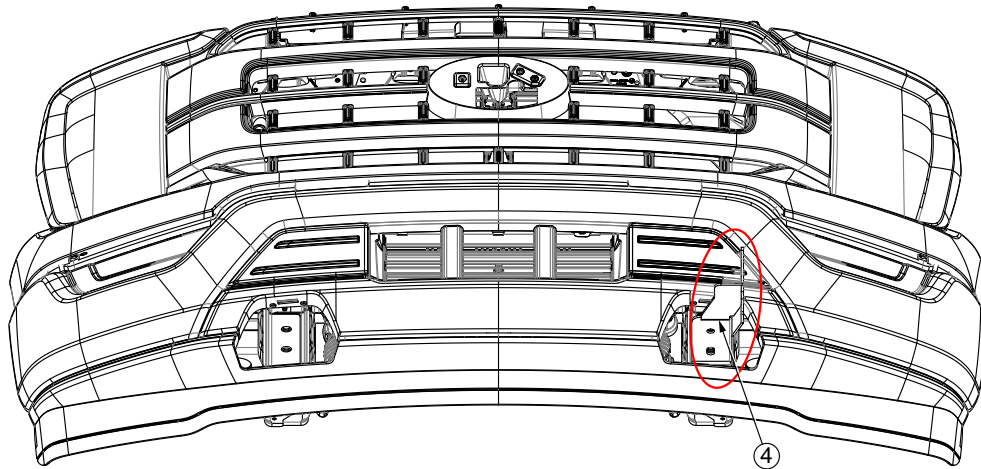
Figure 10 Access hole in the side of the vehicle frame



NOTE: If installing the lower guard, refer to instruction sheet part number 25500829 included with the lower guard assembly.

6. Slide the driver side lower vehicle bracket (Item 4) into the opening and use the retained factory bolts (or the 1/2-inch bolt, flat washer, and lock washer if your vehicle did not come with tow hooks) to attach the bracket to the frame. Repeat this step for the opposite side. See Figure 11 for reference.

Figure 11 Driver side lower vehicle bracket location



7. On the driver side, remove the indicated bolt and nuts shown in Figures 12 and 13.

NOTICE: If you are installing the push bumper on a vehicle that does not have the 3.5L EcoBoost engine, you must purchase two of each of the following Ford® part numbers to ensure proper fitment. Failure to do so could result in a loose fitment of the push bumper.

- Bolt part number: W720595-S439
- Nut part number: W707288-S442

Figure 12 Driver side charge air cooler bracket bolt location

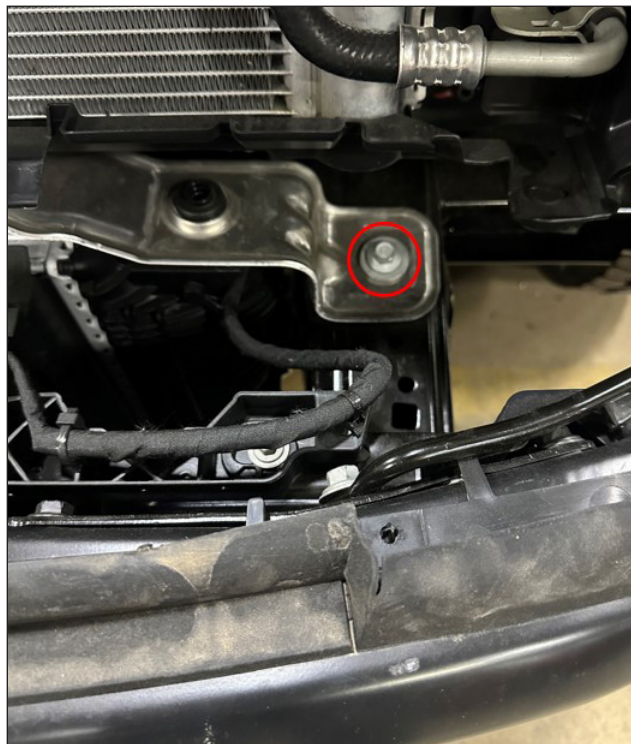
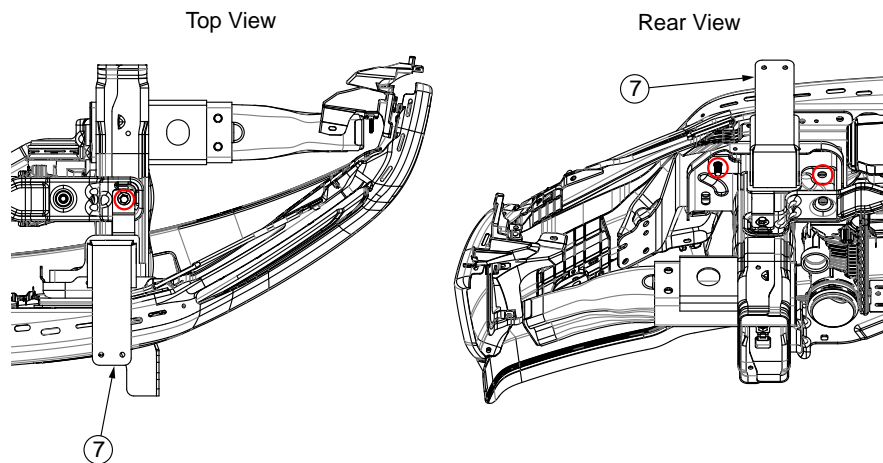


Figure 13 Driver side bumper nut locations



8. With the hardware removed, slide the driver side upper vehicle bracket (Item 7) over the protruding bolts of the bumper and line up the back tab slot over the bolt hole. See Figure 14. Reinstall the vehicle bumper nuts and bolt.
- Torque the nuts to 76 ft-lb
 - Torque the bolt to 30 ft-lb

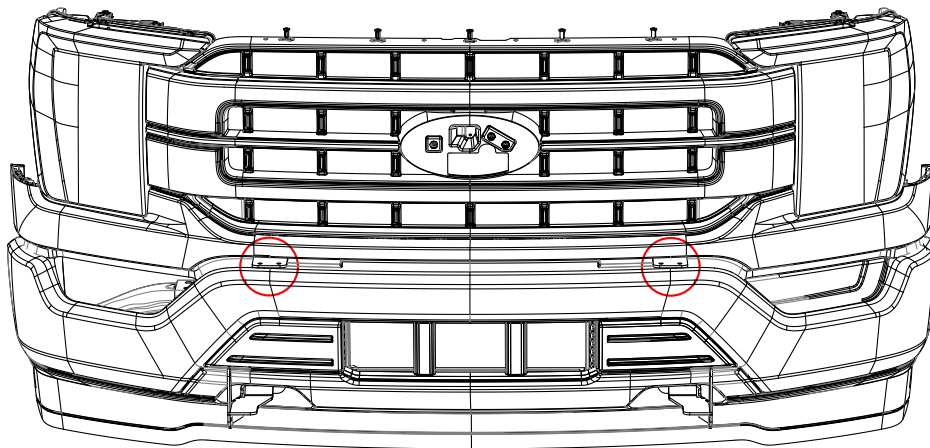
Figure 14 Driver side bracket



9. Repeat steps 7 and 8 for the opposite side.

- Carefully reinstall the grille assembly back onto the vehicle, ensuring that the brackets protrude through the indicated locations in Figure 15.

Figure 15 Bracket location coming through the fascia

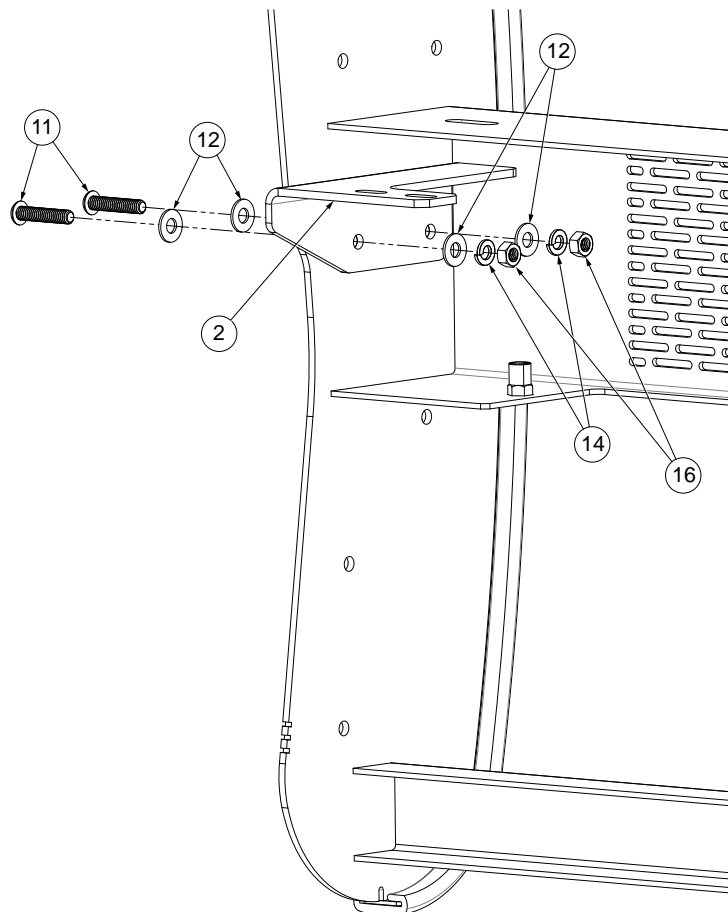


- Using the 5/16-18 by 1.5-inch button head bolts, lock washers, flat washers, and hex nuts, install the driver and passenger upper brackets to the push bumper. See Figure 16.

NOTE: If installing the lower guard, do not tighten the forward-most bolt on the upper bracket.

- Torque 5/16-inch bolts to 24-28 ft-lb

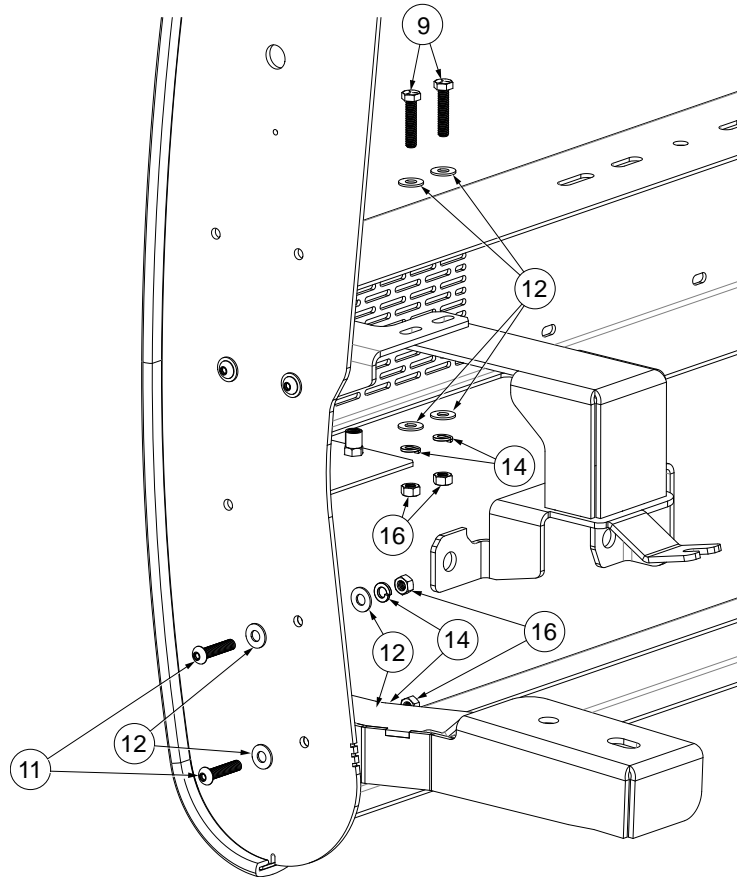
Figure 16 Attach brackets to push bumper



- 12.** With the assistance of another technician, position the push bumper over the top brackets that are installed on the vehicle and insert the 5/16-18 by 1.5-inch hex head bolts, flat washers, lock washers, and hex nuts through each bracket and loosely tighten. Using the 5/16-18 by 1.5-inch button head bolts, lock washers, flat washers, and hex nuts, attach the push bumper to the lower brackets. See Figure 17.

NOTE: If installing the lower guard, do not tighten the upper bolt on the lower bracket.

Figure 17 Attach push bumper to the vehicle



- 13.** Align and adjust the push bumper as necessary and then tighten all hardware unless otherwise specified.

- Torque 5/16-inch bolts to 24-28 ft-lb

Maintaining the Push Bumper 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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