

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. 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.

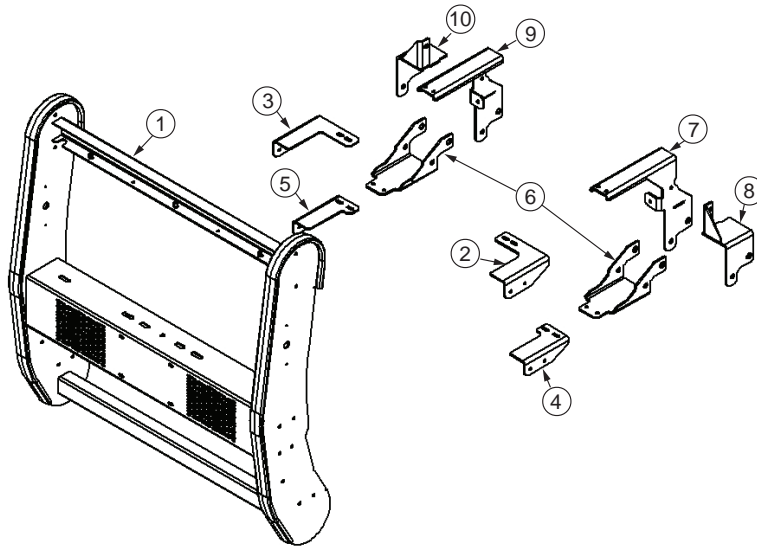
Unpacking the Product

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 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	Qty.
1	Push Bumper Assembly	1
2	Driver Side Upper Bracket	1
3	Passenger Side Upper Bracket	1
4	Driver Side Lower Bracket	1
5	Passenger Side Lower Bracket	1
6	Lower Vehicle Bracket	2
7	Driver Side Upper Vehicle Bracket	1
8	Driver Side Upper Over Frame Bracket	1
9	Passenger Side Upper Vehicle Bracket	1
10	Passenger Side Upper Over Frame Bracket	1
11	5/16-18 x 1-inch Hex Head Bolt	4
12	5/8-11 x 5-inch Hex Head Bolt	2
13	1/2-13 x 5-inch Hex Head Bolt	2
14	5/16-18 x 1.5-inch Button Head Bolt	8
15	5/16 Flat Washer	40
16	5/8 Flat Washer	4
17	1/2 Flat Washer	4
18	5/16 Lock Washer	20
19	5/8 Lock Washer	2
20	1/2 Lock Washer	2
21	5/16 Hex Nut	20
22	5/8 Hex Nut	2
23	1/2 Hex Nut	2
24	5/16-18 x 1.5-inch Hex Head Bolt	8

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.

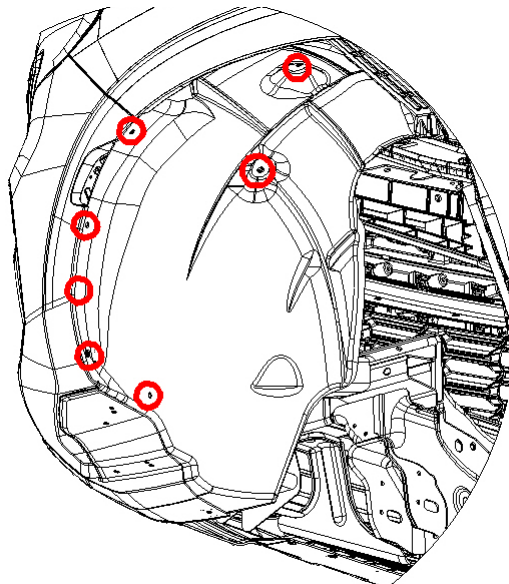
NOTICE

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 front fascia per the manufacturer's instructions. Refer to Figures 2 through 10 for the locations of all fasteners that need to be removed to remove the fascia.

Figure 2 Fascia fastener locations in wheel well



Remove bolts in those locations.

Figure 3 Fascia fastener locations under wheel well

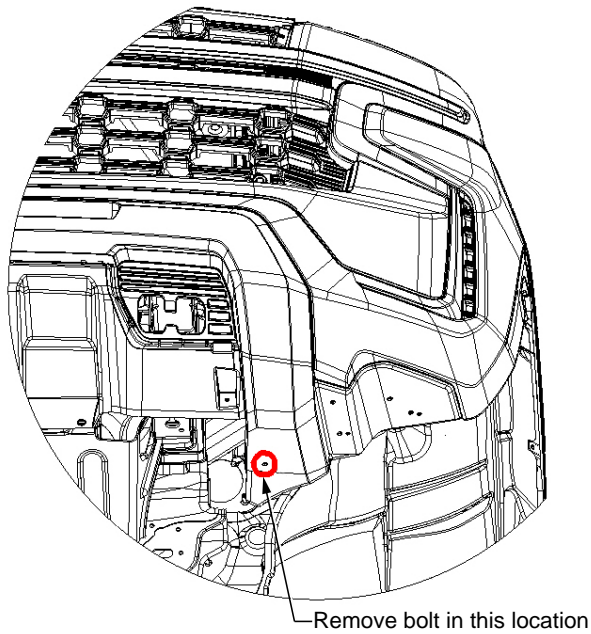


Figure 4 Fascia fastener fender location

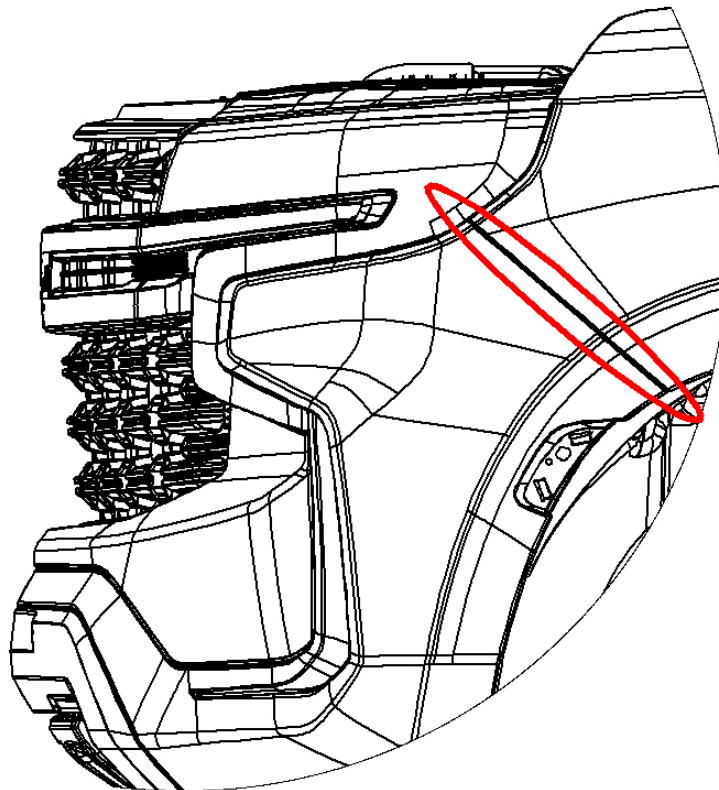


Figure 5 Fascia fender fasteners to be removed

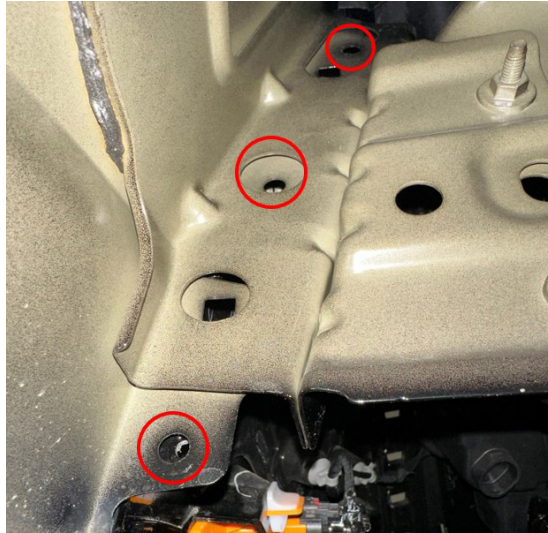
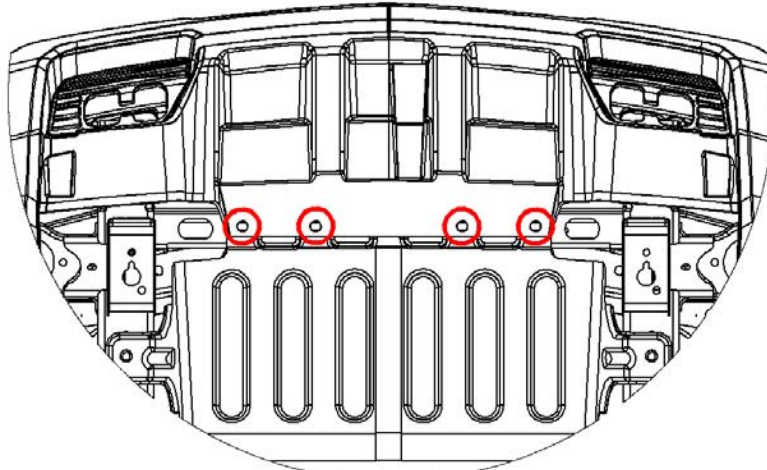


Figure 6 Fascia fender fasteners to be removed from skid plate



Remove bolts from skid plate.

Figure 7 Fascia fasteners to be removed from fascia support brace behind wheel well



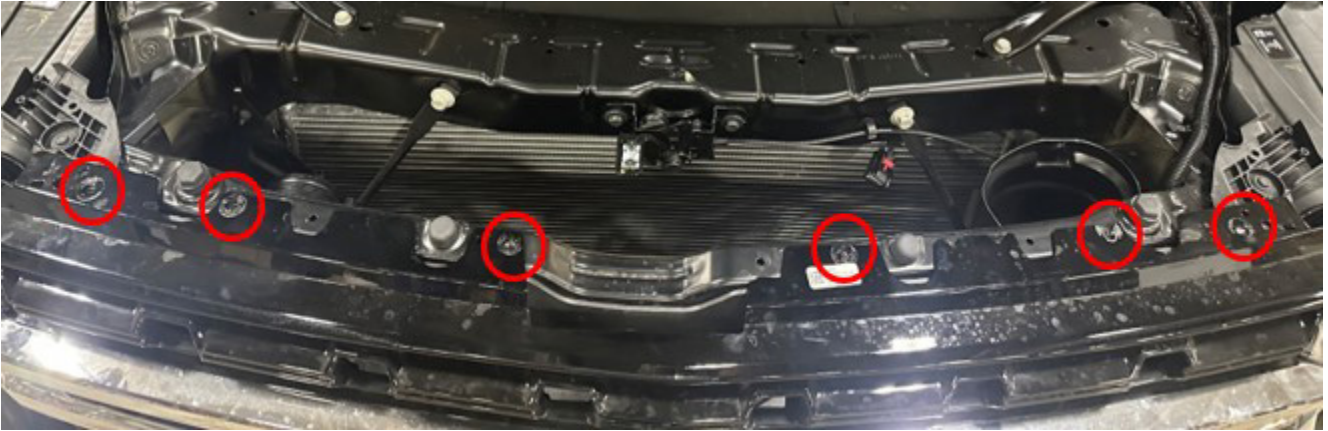
Figure 8 Hood latch fasteners to be removed



Figure 9 Intake air splash shield fasteners to be removed

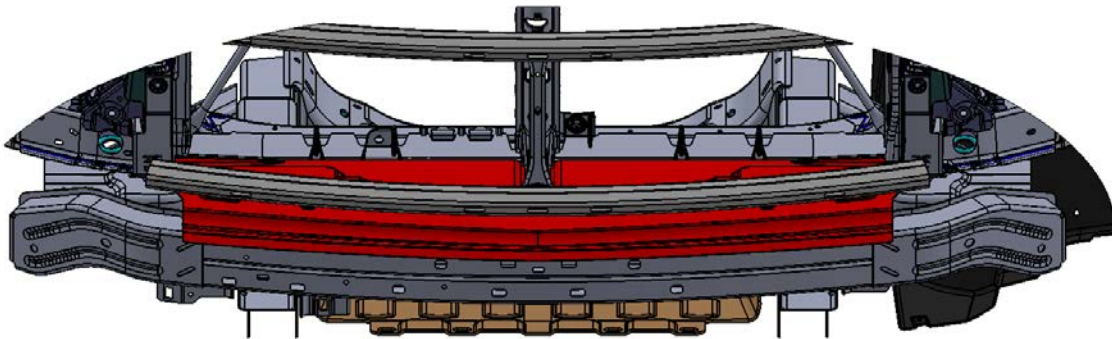


Figure 10 Front grill fasteners to be removed



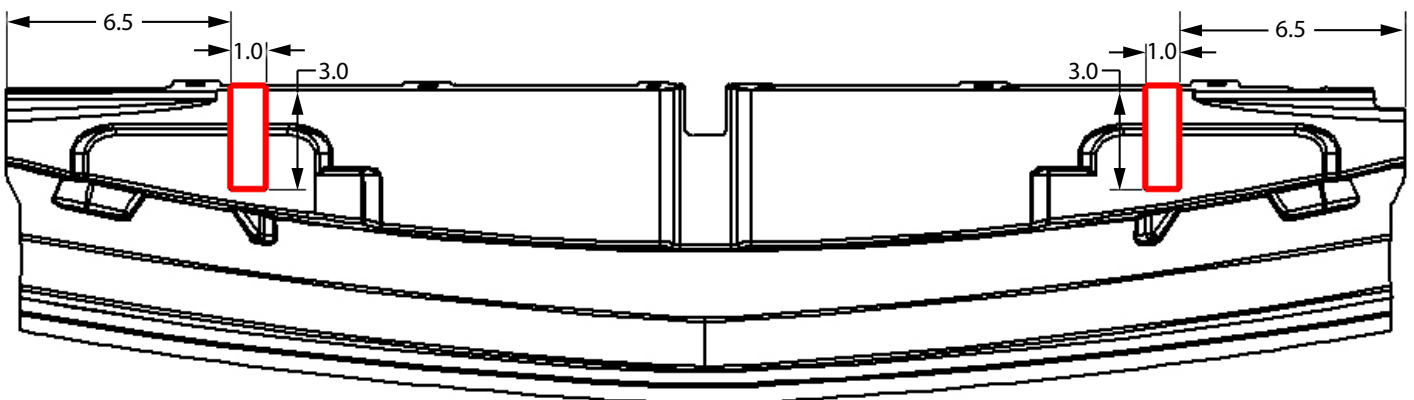
2. With the fascia now removed, locate the lower radiator baffle (the red part shown in Figure 11) and remove it.

Figure 11 Lower radiator baffle to be removed



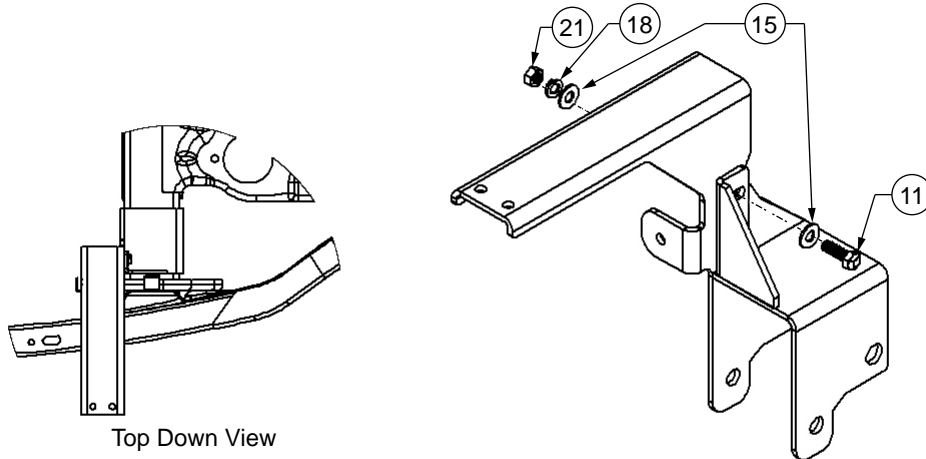
3. With the lower radiator baffle removed, cut out the indicated area of the baffle to clear room for the upper vehicle bracket. Refer to Figure 12 for the dimensions of the cutout.

Figure 12 Lower radiator baffle cutout dimensions (shown in inches)



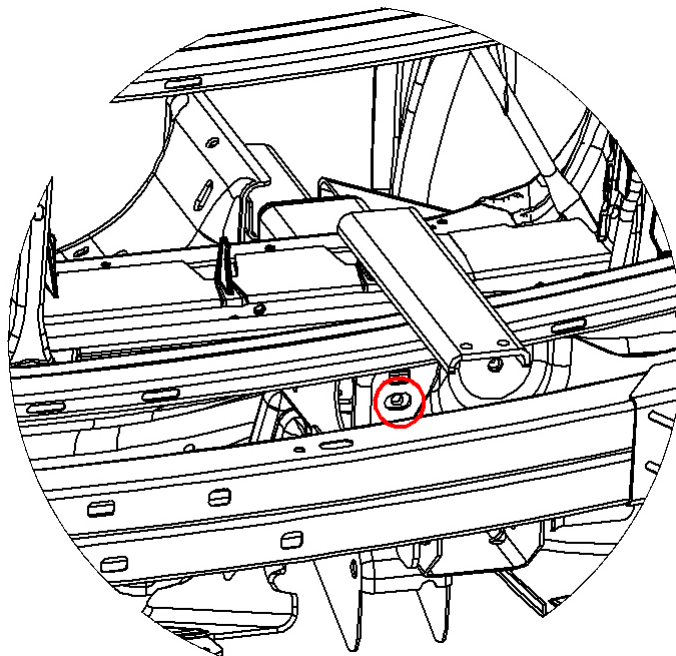
4. If your vehicle comes equipped with front tow hooks, remove them at this time.
5. Orient the driver side upper vehicle (item 7) and upper over frame (item 8) brackets over the frame of the vehicle as shown in Figure 13. Loosely install a 5/16-18 by 1-inch hex head bolt, flat washers, lock washer, and nut to secure the two brackets together.

Figure 13 Driver side brackets



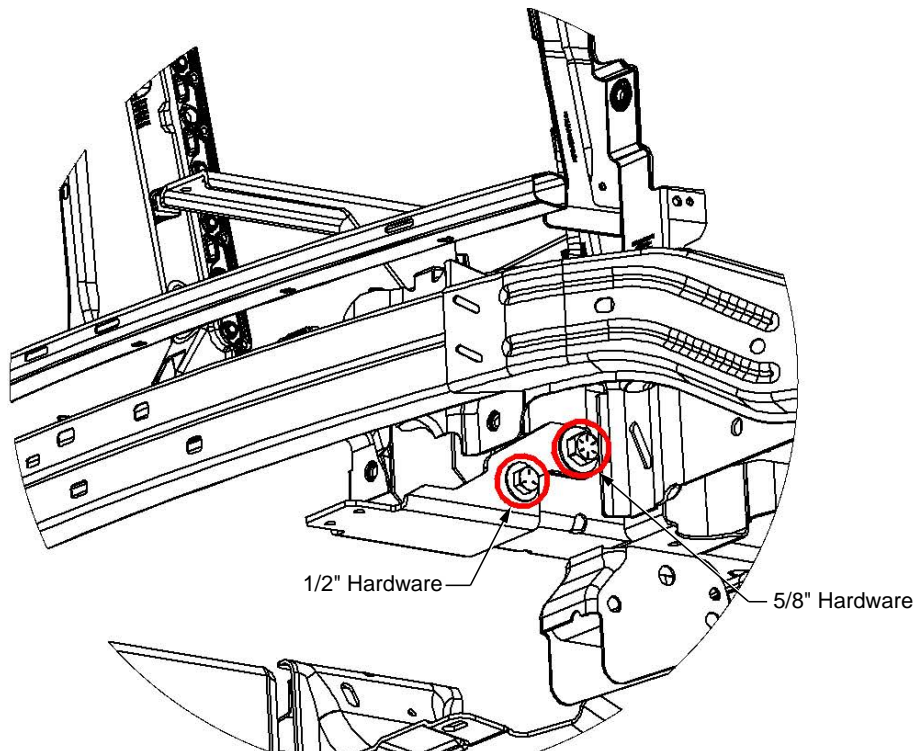
6. Locate the indicated hole in figure 14 and loosely install a 5/16-18 by 1-inch hex head bolt, flat washers, lock washer, and nut to secure the upper vehicle bracket to the bumper plate.

Figure 14 Hole location



7. Slide the lower vehicle bracket (item 6) over the upper brackets and align the holes of the brackets. Loosely install the 5/8-inch hardware and the 1/2-inch hardware as shown in Figure 15. Tighten all hardware.
 - Torque 5/16-inch bolts to 24-28 ft-lb
 - Torque 1/2-inch bolts to 55-59 ft-lb
 - Torque 5/8-inch bolts to 112-114 ft-lb

Figure 15 Bracket location

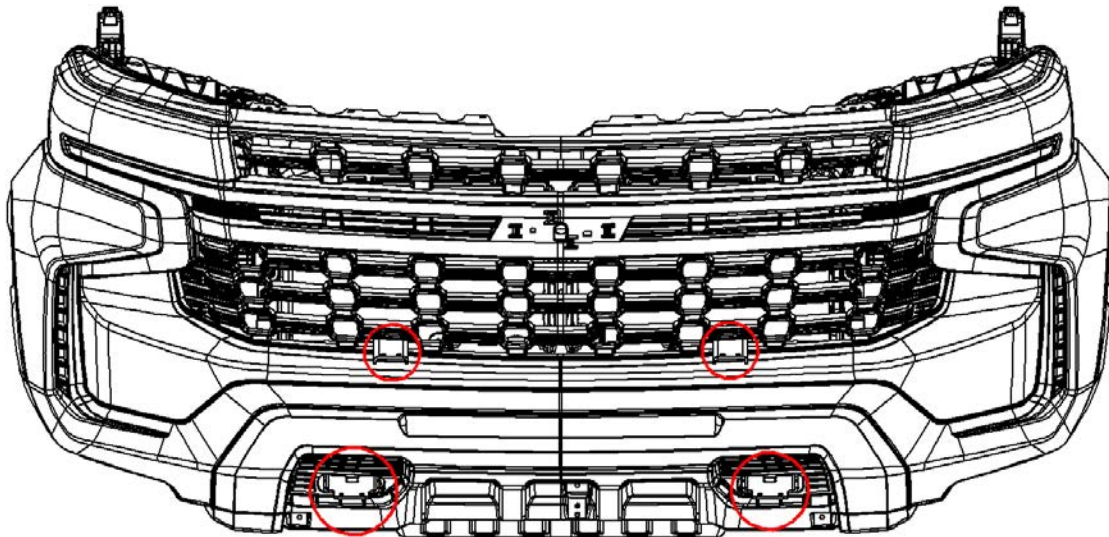


8. Repeat steps 5-7 for the passenger side brackets.

NOTE: If installing the lower guard, refer to the instruction sheet part number 25500817, included with the lower guard assembly.

9. Carefully reinstall the fascia back onto the vehicle, ensuring that the brackets protrude through the indicated locations in Figure 16.

Figure 16 Bracket location coming through the fascia

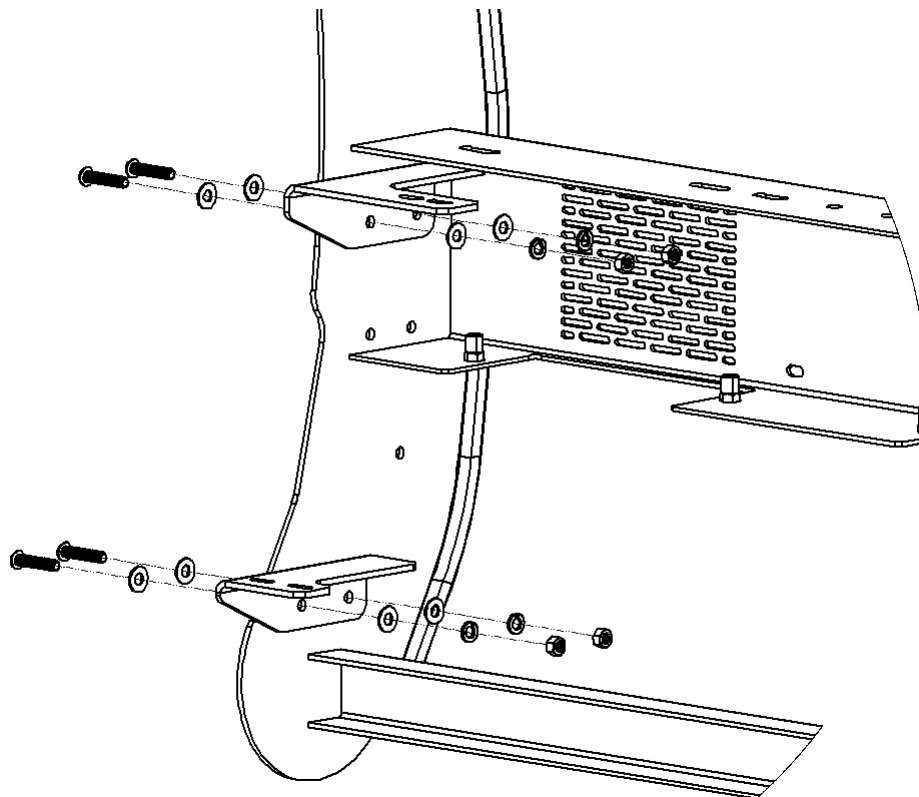


- Using the 5/16-18 by 1.5-inch long button head bolts, lock washers, flat washers, and hex nuts, install the driver and passenger upper and lower brackets to the push bumper. See Figure 17.

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

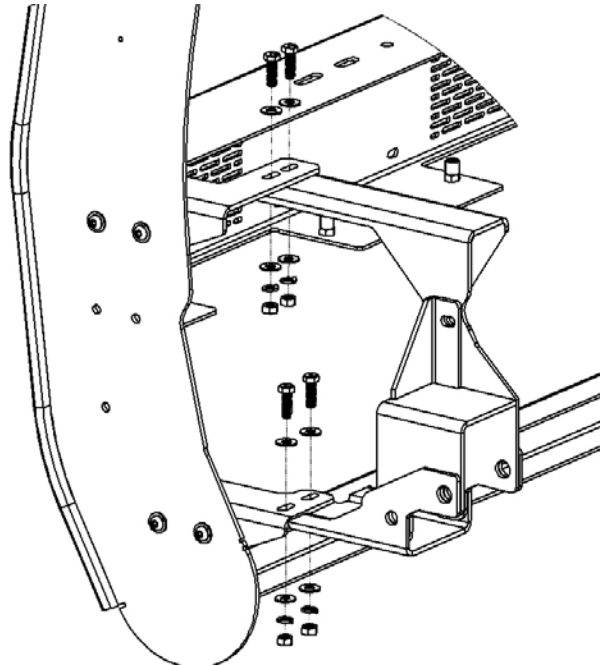
- Torque 5/16-inch bolts to 24-28 ft-lb

Figure 17 Attach brackets to push bumper



11. With the assistance of another technician, position the push bumper over the brackets that are installed on the vehicle and insert the 5/16-18 by 1.5-inch long hex head bolts, flat washers, lock washers, and hex nuts through each bracket and loosely tighten. See Figure 18.

Figure 18 Attach push bumper to the vehicle



12. Align and adjust the push bumper as necessary and then tighten all hardware.

- 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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