

25500319 Rev. A1 0916

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.

Applicable Vehicles

The HRX is applicable to the 2015 Ford F-150, 2008-2012 Ford Super Duty, 1999-2007 Chevy/GMC Silverado/Sierra Classic 1500/2500/3500, 2008-2014 Chevy/GMC Silverado/Sierra 1500/2500/3500, 2004-2008 Ford F-150, 2009-2012 FORD F-150, 07-12 Toyota Tundra, 2002-2012 Dodge Ram 1500, 2003-2012 Dodge Ram 2500/3500, and 1988-1998 Chevy/GMC C/K 1500/2500/3500.

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

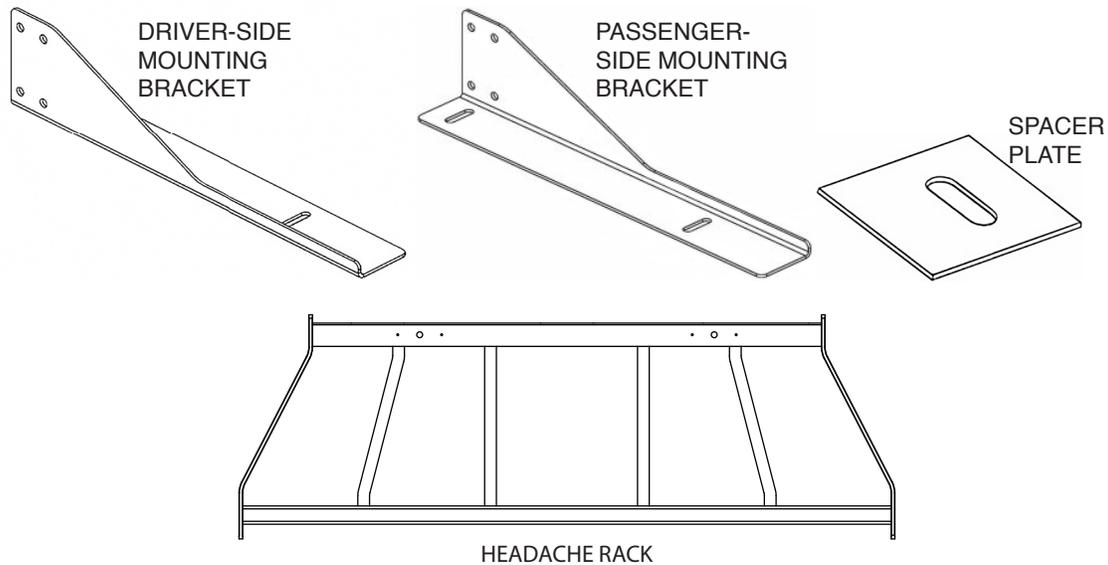
Item	Qty.	Description	Tools Needed
1	1	Headache Rack	18 mm Socket
2	1	Mounting Bracket, Driver Side	18 mm Wrench
3	1	Mounting Bracket, Passenger Side	18 mm Wrench
4	8	M12 Button Head Bolt	8 mm Allen Tool
5	24	M12 Flat Washer	Ratchet
6	12	M12 Lock Washer	Torque Wrench
7	12	M12 Hex Nut	2 ft Ratchet Extension (optional)
8	4	M12 x 60 mm Hex-Head Bolt	9/16" Drill Bit
9	2	Spacer Plate (2009-2011 Ford F-150)	Drill Motor
10	2	M12 45 mm Bolt Plate	
11	2	M12 35 Bolt Plate (2015 Ford F-150)	
12	8	M12 Plastic Retainer	
13	2	Plastic Cap (2015 F-150)	
14	1	Fish Wire (20 inches) (2015 F-150)	
15	1	Fish Wire (1 meter) (2015 F-150)	

- ▶ **IMPORTANT:** Before installing the HRX headache rack to the truck, install the mesh screen to the headache rack. Refer to the instructions included with the screen.

Installing the Headache Rack (all applications except the 2015 Ford F-150)

- For drilling, hardware, and special instructions for the 2015 F-150, see page 5.

Figure 1



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 headache rack:

1. See Figure 2 on page 4. Assemble the driver-side and passenger-side mounting brackets to the headache rack using 8 M12 button head bolts, 16 M12 flat washers, 8 M12 lock washers, and 8 M12 hex nuts. Do not fully tighten the nuts yet.
2. Place the assembled headache rack on the bed rails and center it. Using the brackets as templates, mark the four drilling locations, then remove the rack and brackets.
3. Drill the marked holes with a 9/16" drill bit.
 - For 2009-2011 Ford F-150 trucks with factory bed caps, use the provided spacer plates (Figure 1) under the front of the mounting brackets to level the headache rack.
4. Install the driver-side mounting bracket starting with the forwardmost mounting location using one of the options shown in Figures 3 and 4 on page 4. Rotating the mounting bracket 90 degrees enables you to access the fasteners through the stake pocket. Repeat this step for the passenger-side bracket.
5. Install the headache rack to the mounting brackets as described in Step 1.

NOTE: The light tabs on the upper crossmember face the cab.
6. Align and adjust the headache rack as needed, then fully tighten all hardware. Torque all M12 fasteners to 50-55 ft-lb.

Figure 2

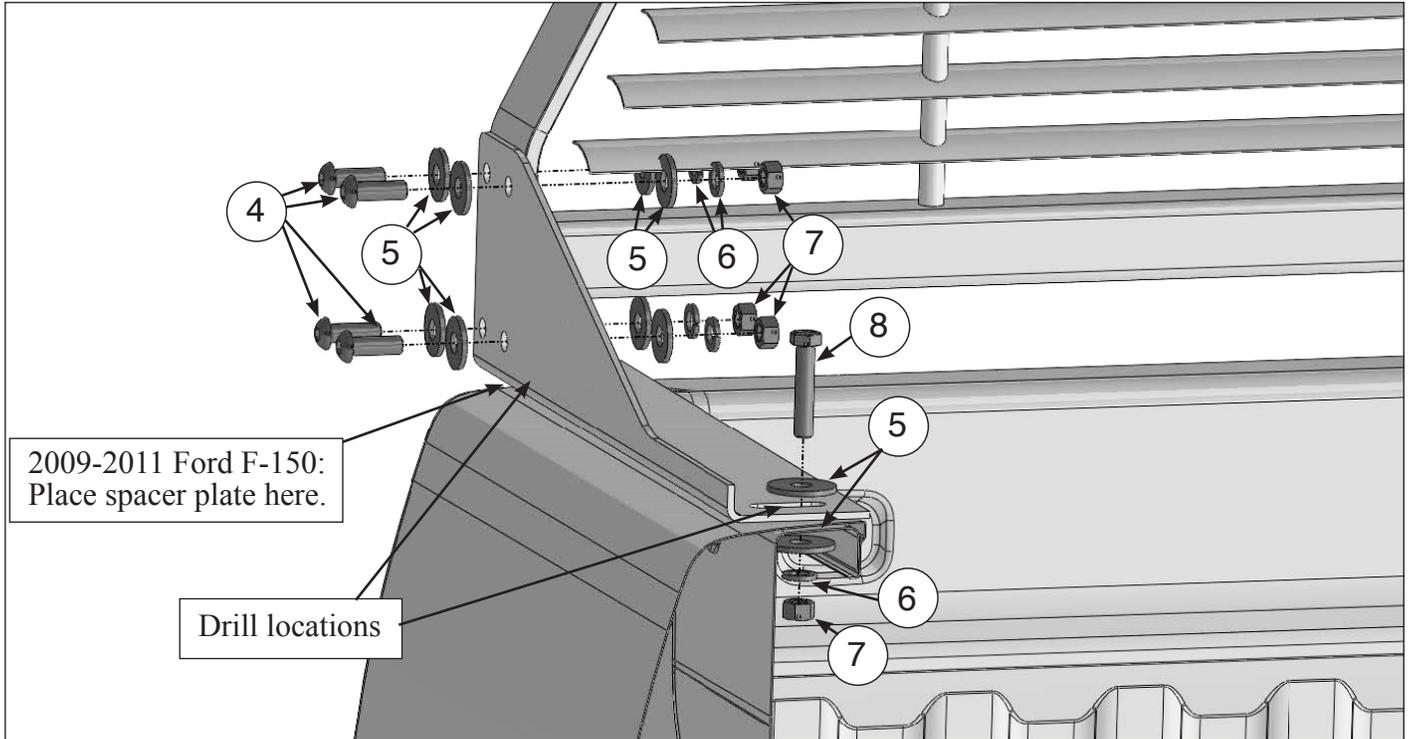
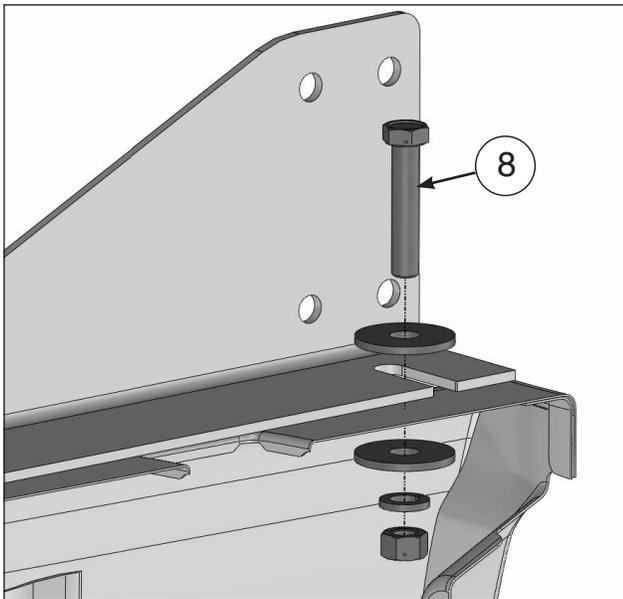
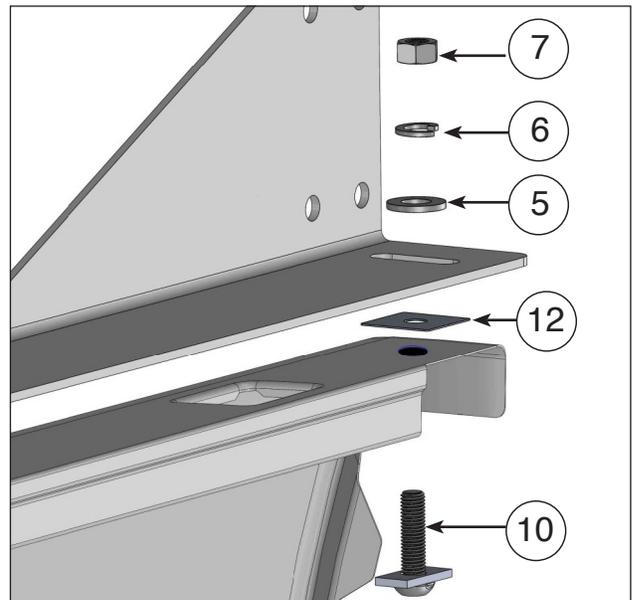


Figure 3



Option A: Use this bolt/washer nut installation method if there is access to the lower nut. A 2 ft ratchet extension works well with this method.

Figure 4



Option B: Use this bolt plate installation method if there is no access for Option A. Use a plastic retainer to prevent the bolt plate from falling.

Installing the Headache Rack on the 2015 Ford F-150

To install the headache rack:

1. See Figure 2 on page 4. Assemble the driver-side and passenger-side mounting brackets to the headache rack using 8 M12 button head bolts, 16 M12 flat washers, 8 M12 lock washers, and 8 M12 hex nuts. Do not fully tighten the nuts yet.
2. Place the assembled headache rack on the bed rails and center it. Using the brackets as templates, mark the rear drilling holes at 2-3/8 inches from the inside edge of the slot in the bracket (Figure 9 on page 6.) Mark the front drilling holes at the center mark of the slot in the bracket. Remove the rack and brackets.
3. Drill the marked holes with a 9/16" drill bit.
4. Place a plastic retainer (Item 12) on each bolt plate (Items 10 and 11). Fold them as shown on Figure 5 and Figure 6.

Figure 5



Figure 6



Figure 7



5. Place two layers of electrical tape around the bolt as show on Figure 7.

IMPORTANT: Poly retainer and electrical tape must be used to insulate and prevent the contact between the steel bracket and the aluminum truck body. Contact between steel and aluminum creates corrosion.

6. Insert the 20-inch fish wire into the front hole and pull it up in front of the gap between the bed and the cabin (Figure 8 on page 6).
7. Thread the fish wire onto the 45 mm bolt plate (Item 10) and carefully pull the fish wire to insert the nut plate from the bottom into the hole. Use this same procedure for the rear location using the 35 mm π bolt plate (Item 11) and the 1 meter fish wire (Item 15).
8. Install the driver-side mounting bracket starting with the forwardmost mounting location using the options shown in Figure 4 on page 4. Rotating the mounting bracket 90 degrees enables you to access the fasteners through the stake pocket. Repeat this step for the passenger-side bracket.
9. See Figure 3. Install the headache rack to the mounting brackets as described in Step 2 above.

NOTE: The light tabs on the upper crossmember face the cab.

Installing the HRX Series Pickup Truck Headache Rack

- Align and adjust the headache rack as needed, then fully tighten all hardware. Torque all M12 fasteners to 50-55 ft-lb.
- Install the plastic caps (Item 13) on the rear nut-plates (Figures 7 and 8).

Figure 5



Figure 6



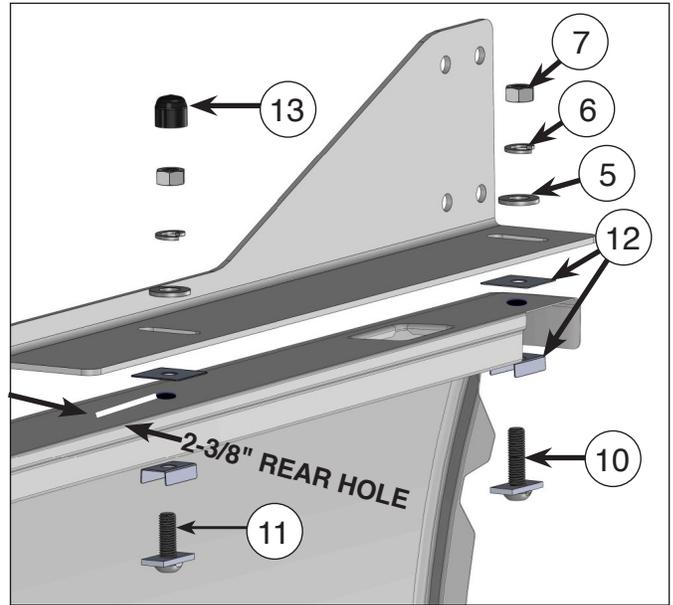
Figure 7



Figure 8



Figure 9



Installing MicroPulse Lights to the HRX01 Headache Rack

The Model HRX01 headache rack has screw holes for mounting MicroPulse lights. Two MPS600U lights fit on the front of the rack, and two Model MPS600U or MPS1200U lights fit on the rear.

To install the MicroPulse lights:

1. Select a location for the MicroPulse lights.
2. Use the provided 3 mm screws to secure the lights to the rack.
3. Refer to the wiring instructions included with the lights to complete the installation.

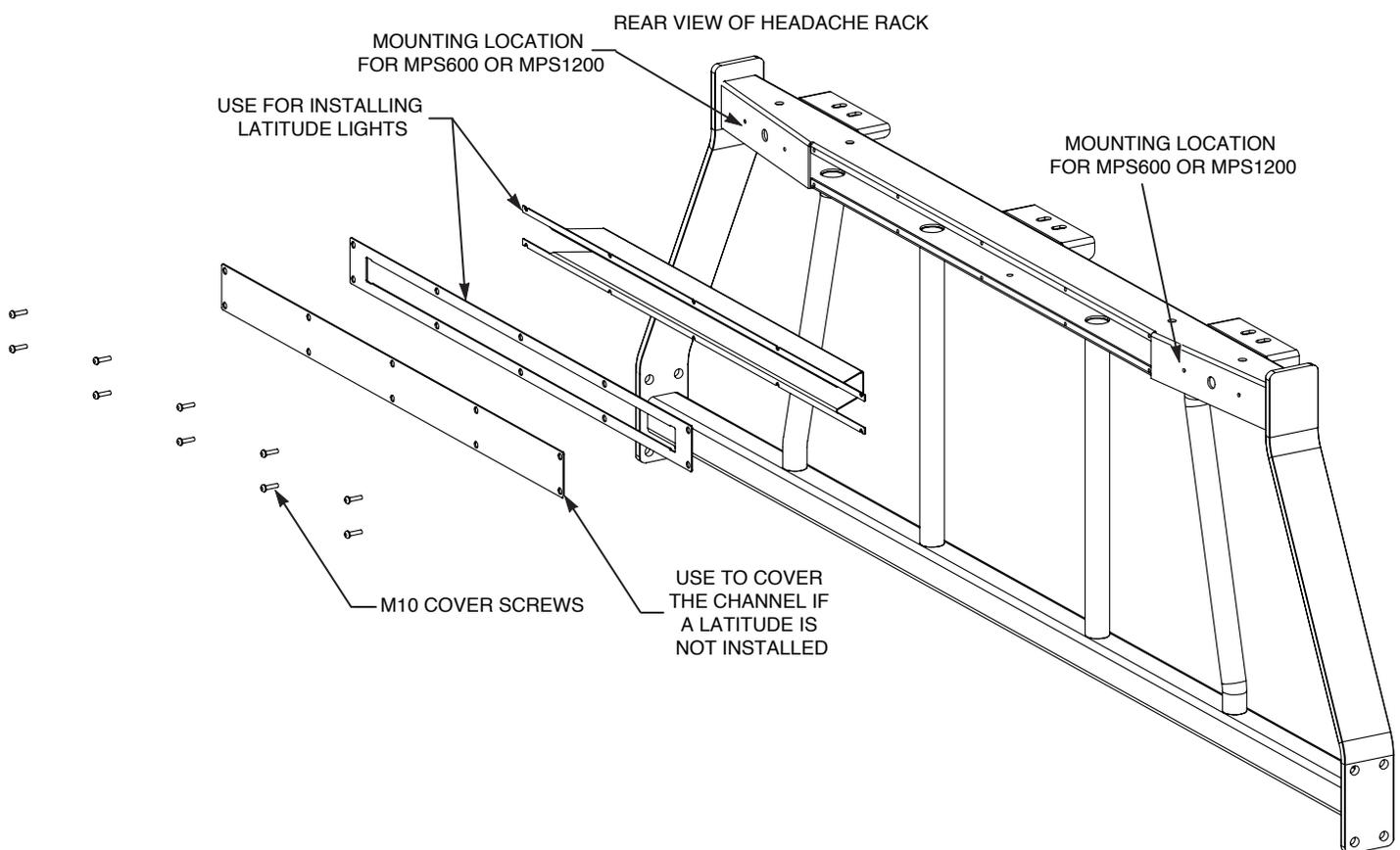
Installing Latitude Lights to the HRX01 Headache Rack

The Model HRX01 has a channel for the installation of Latitude directional lights. If you are not installing the lights, secure the cover to the channel with the 10 M4 screws.

To install the Latitude lights

1. Secure the lights to the channel with the hardware included with the lights (Figure 10).
2. Install the Latitude/channel assembly to the HRX01 using the 10 M4 screws and bezel.
3. Refer to the wiring instructions included with the lights to complete the installation.

Figure 10



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)
www.fedsig.com