

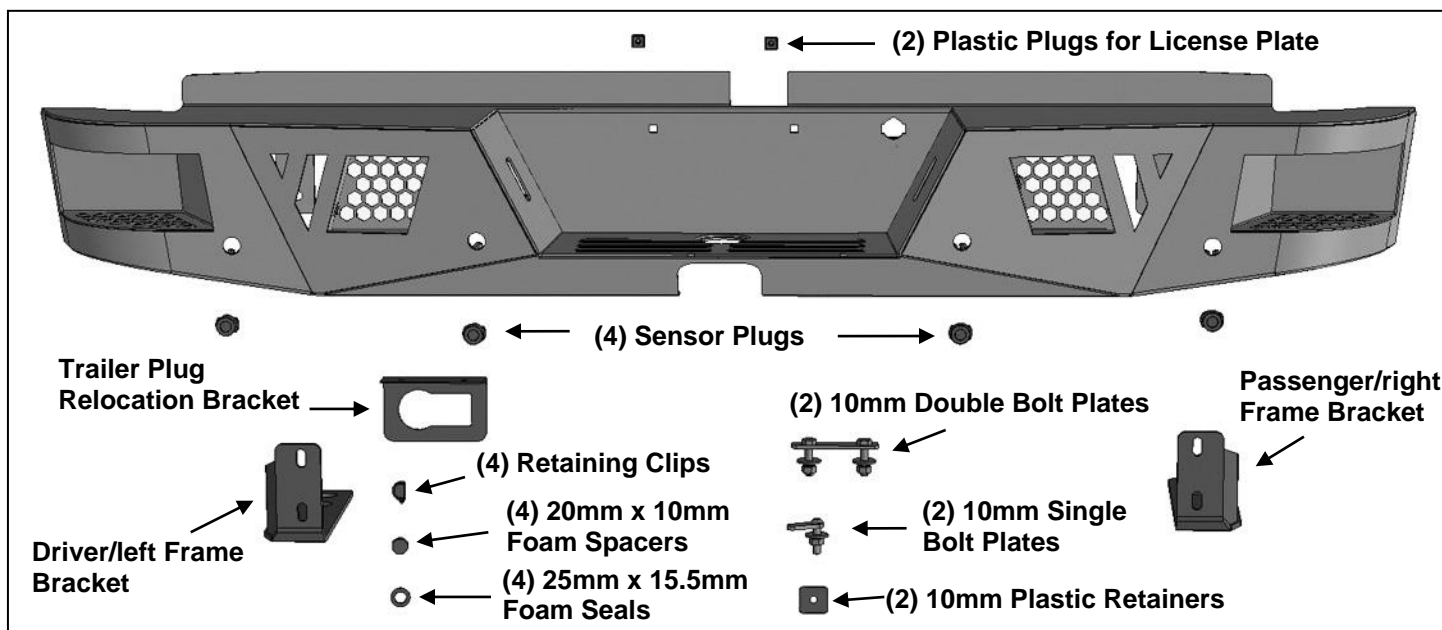


INSTALLATION INSTRUCTIONS

**LD1 REAR BUMPER
19-20 FORD RANGER
PART# ARB-FOR A**

PARTS LIST:

1	LD1 Rear Bumper Assembly	2	10mm Plastic Retainers
1	Driver/left Mounting Bracket	2	10mm x 35mm Double Bolt Plates
1	Passenger/right Mounting Bracket	2	10mm x 35mm Single Bolt Plates
1	Trailer Plug Relocation Bracket	6	10mm x 30mm x 2.5mm Flat Washers
4	Sensor Hole Plugs	6	10mm Lock Washers
4	Sensor Retaining Clips	6	10mm Hex Nuts
4	20mm x 10mm Foam Spacers	8	4mm x 10mm Button Head Bolts
4	25mm x 15.5mm x 2mm Foam Seals	1	2.5mm Wrench
1	Sensor Covers Kit	2	6mm x 20mm Button Head Bolts
2	Plastic Plugs for license plate mount	4	6mm x 18mm x1.6mm Flat Washers
10	Nylon Wire Ties	2	6mm Nylon Lock Nuts



PROCEDURE:

REMOVE CONTENTS FROM BOX. VERIFY ALL PARTS ARE PRESENT. READ INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION. ASSISTANCE IS RECOMMENDED TO AVOID POSSIBLE INJURY OR DAMAGE TO THE VEHICLE.

1. Remove the license plate from the bumper. Unplug any wiring harnesses leading to the bumper, **(Figure 1)**. Move wiring harnesses away from bumper.
2. Place blocks or jack stands under the bumper to support it during mounting bolt removal. Once the bumper has been safely supported, remove the factory hex bolts attaching the bumper to the bottom of the frame and remove the bumper assembly, **(Figures 1 & 2)**. **WARNING!** Assistance is required to hold the bumper in place during hardware removal to prevent bumper from falling.
3. Disassemble the bumper and remove the bumper bracket reinforcement, (or receiver hitch, if equipped with tow package). Remove the wiring harness, license plate lights, trailer plug and spare tire access lock from the factory bumper. Remove sensors, (if equipped), from bumper, **(Figures 3 & 4)**.
4. Select (1) 10mm Single Bolt Plate. Insert the Bolt Plate into the end of the frame and through the hole in the outer side of the frame, **(Figures 5 & 6)**. Select the driver/left Frame Mounting Bracket, **(Figure 7)**. Attach the Bracket to the Bolt Plate with (1) 10mm Flat Washer, (1) 10mm Lock Washer and (1) 10mm Hex Nut. Leave hardware loose at this time. Repeat this Step to attach the passenger/right Frame Mounting Bracket to the end of the frame.
5. With assistance, hold the bumper reinforcement, (or receiver hitch), up to the bottom of the frame. Reuse the factory hex bolts to attach the bumper reinforcement, (or receiver hitch), to both Brackets and frame, **(Figure 8)**. Do not fully tighten hardware at this time.

6. Determine if the vehicle is equipped with sensors. **NOTE:** Depending on tow package, it may be necessary or easier to install sensors, (if equipped), before installing the Bumper.

Models without bumper sensors:

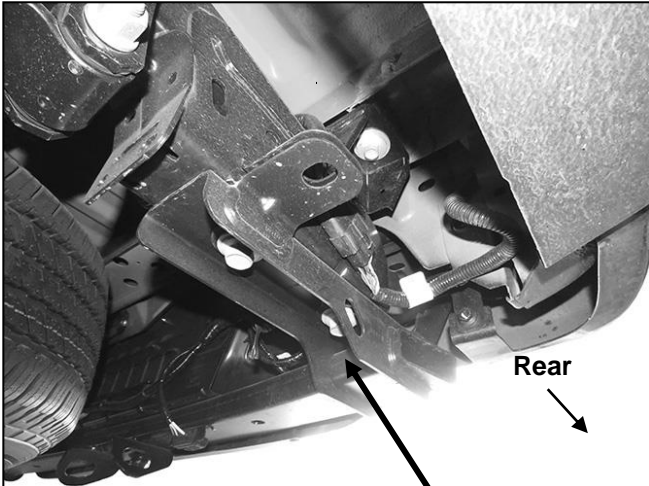
- a. Select the included (4) Rubber Plugs.
- b. From behind bumper, push plugs into sensor mounting holes, **(Figure 9)**. Screws have been provided to lock the plugs in the sleeve. Use is optional.
- c. Install wiring harness for license plate lights.

Models with bumper mounted sensors:

- a. Remove sensors from factory bumper, **(Figure 3)**.
 - b. Remove the silicone seal from the end of the sensor. Slide the included larger Sensor Seal over front of sensor, **(Figure 10)**.
 - c. Insert sensor with Seal into sensor mount on back of Bumper, **(Figure 11)**.
 - d. Place Foam Spacer over end of sensor. Push Sensor Retaining Clip into sensor mount and lock into mounting holes, **(Figure 11)**.
 - e. Repeat previous Steps to install remaining sensors.
 - f. Install wiring harness.
 - g. **Optional:** Secure each sensor to the socket with (2) 4mm x 10mm Button Head Screws, **(Figure 9)**. **IMPORTANT:** Sensors fit snug in sockets. The 4mm Screws are used to apply slight pressure to lock the sensors in place. Tighten both screws evenly until they touch the sensor body only. Do not overtighten screws or damage to sensors will result.
7. **Optional LED light installation at ends of bumper** (sold separately).
- a. Insert light into opening and up to mounting slot. Check for clearance between front and back of light. If necessary, remove the screens from the back of the openings, **(Figure 12)**. **IMPORTANT:** Screens are easier to remove before Bumper is installed.
 - b. Follow the light manufacturer's instructions to attach each light to slot in the Bumper opening.
 - c. Repeat the above steps for remaining light installation.
 - d. Follow light manufacturer's instructions for adjustment and to properly wire the light to the vehicle electrical system after Bumper installation.
8. Install the license plate lights and spare tire access lock, **(Figure 13)**.
9. Plug the bumper harness into the lights and sensors, (if equipped).
10. Select (1) 10mm Double Bolt Plate, **(Figure 14)**. Insert the Double Bolt Plate into and through the back of the mounting tab on the LD1 Bumper. Thread (1) 10mm Plastic Retainer onto the Bolt Plate to hold it in position, **(Figure 15)**. Repeat to install the remaining Double Bolt Plate on the passenger/right side of the Bumper.
11. With assistance, hold the Bumper up against the Brackets. Guide the Bolt Plates through the Brackets. Temporarily support the weight of the Bumper. **WARNING:** To avoid possible injury or damage to the vehicle, do not proceed until the bumper is fully and safely supported.
12. Attach the Bumper to the driver/left Bracket with (2) 10mm Flat Washers, (2) 10mm Lock Washers and (2) 10mm Hex Nuts, **(Figure 15)**. Snug but do not fully tighten hardware at this time. Repeat this Step to attach the passenger/right side of the Bumper to the Bracket.
13. Push the included (2) Plastic Plugs into the square holes in the Bumper for the license plate, **(Figure 16)**. On models with tow package, attach Plug Relocation Bracket to bottom of the Bumper with the included (2) 6mm Button Head Bolts, (4) 6mm Flat Washers and (2) 6mm Nylon Lock Nuts, **(Figure 16)**. Push trailer plug into Bracket and plug into harness.
14. Slowly open the tailgate and check for clearance. Level and adjust the bumper and fully tighten all hardware including all Bracket to frame hardware.
15. Plug the bumper wiring harness into the main harness. Use the included Wire Ties to secure the wiring harness to the bumper and frame as necessary.
16. Do periodic inspections to the installation to make sure that all hardware is secure and tight.

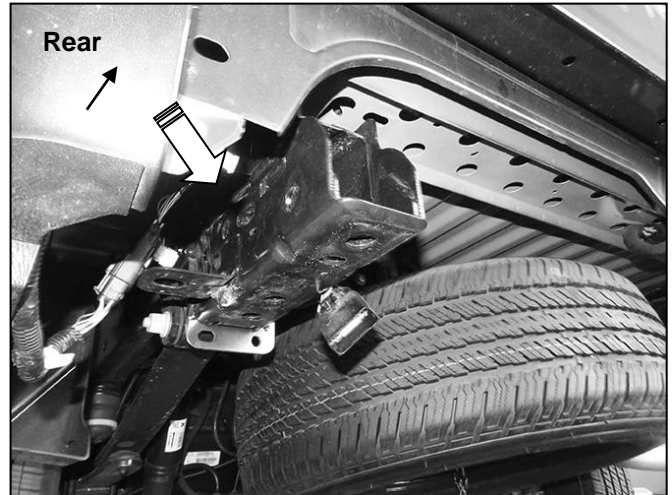
To protect your investment, Do not use any type of polish or wax that may contain abrasives that could damage the finish. Mild soap may be used to clean the Bumper assembly.

Driver/left Side Installation Pictured

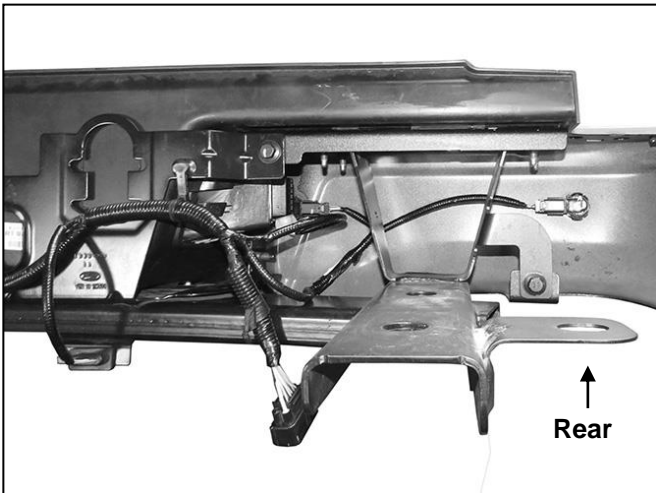


(Fig 1) Unplug all harnesses. Remove hex bolts from bottom of bumper reinforcement (pictured) or receiver hitch to remove bumper assembly

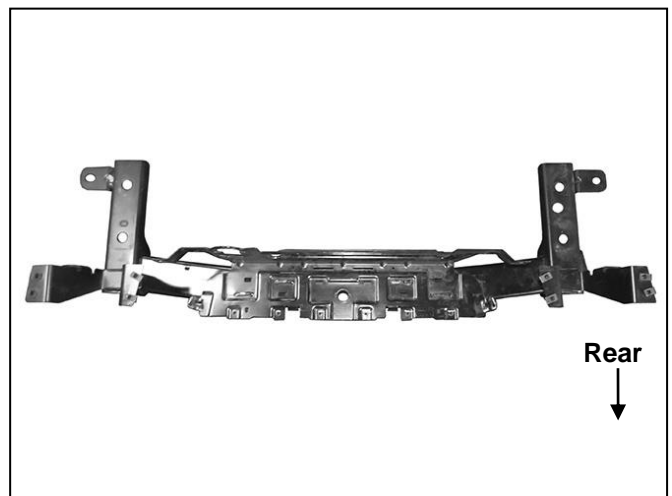
WARNING! Do not crawl under bumper unless the bumper is properly supported on blocks or stands or the bumper may fall.



(Fig 2) Bumper assembly removed. Remove clip attaching harness to outside of frame (arrow)



(Fig 3) Disassemble bumper to remove bumper reinforcement (pictured) or receiver hitch, wiring harness, sensors, license plate lights and trailer plug as equipped



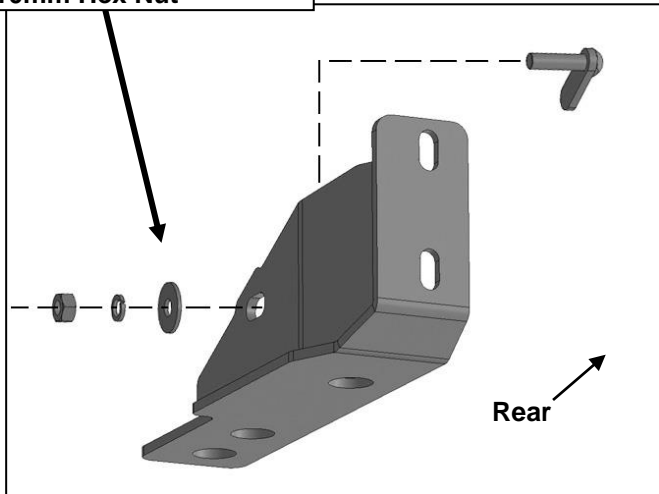
(Fig 4) Remove bumper reinforcement (pictured) or receiver hitch from bumper

Driver/left Side Installation Pictured



(Fig 5) Insert 10mm Single Bolt Plate into open end of frame and out hole in side of frame

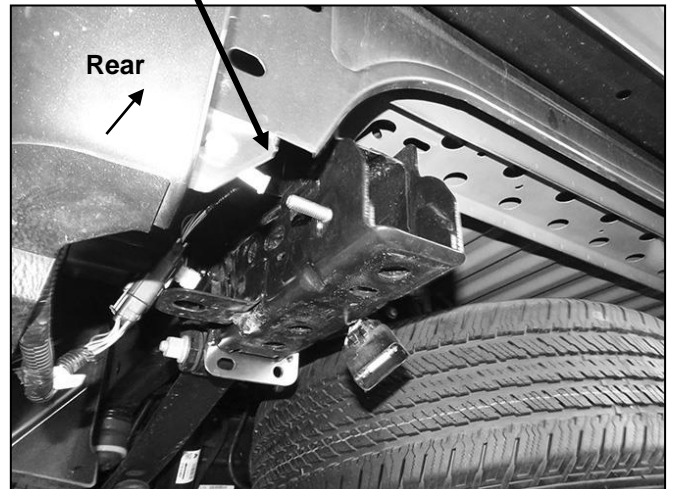
10mm Single Bolt Plate
10mm Flat Washer
10mm Lock Washer
10mm Hex Nut



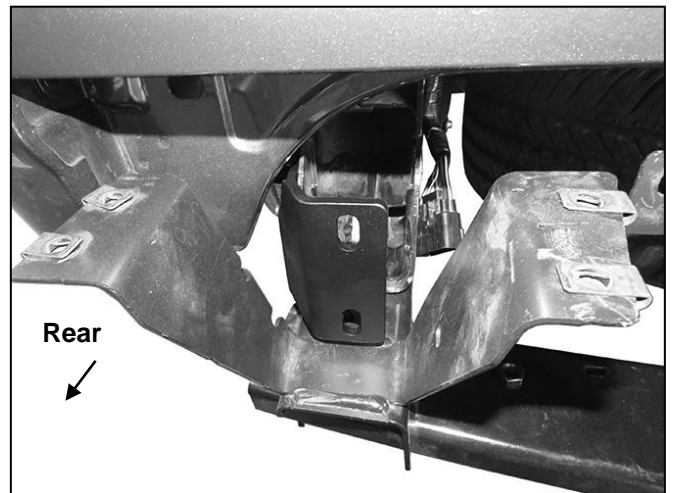
(Fig 7) Attach driver/left Mounting Bracket to Bolt Plate. Reuse factory hex bolts to attach bumper reinforcement or receiver hitch to bottom of Brackets and frame

WARNING! Do not remove bumper bolts unless the bumper is properly supported on blocks or stands or the bumper may fall.

10mm Single Bolt Plate

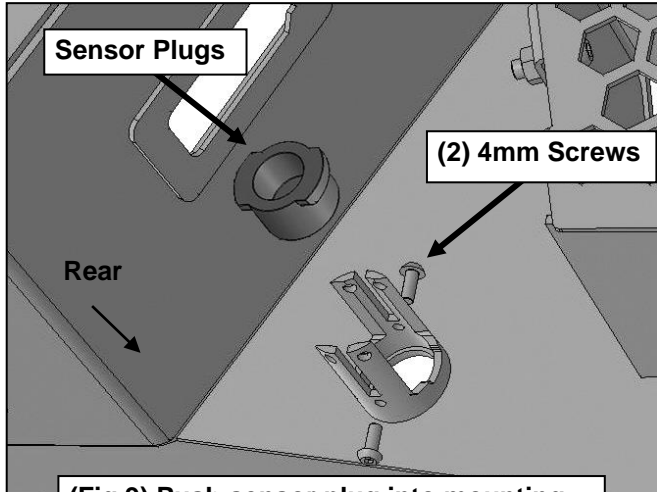


(Fig 6) Attach driver/left Frame Bracket to Bolt Plate

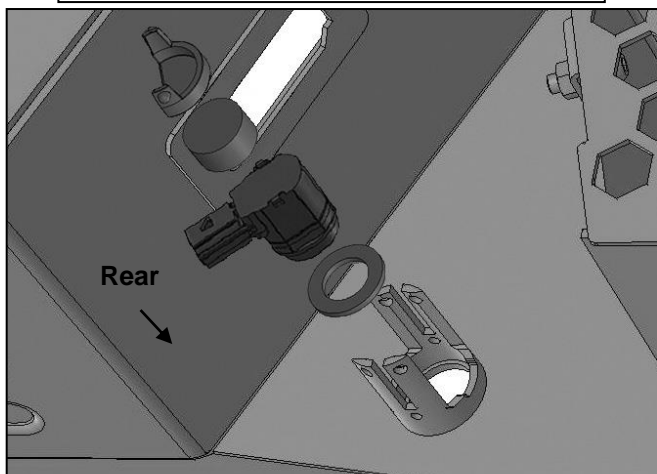


(Fig 8) Driver/left Bumper Bracket and factory bumper reinforcement installed

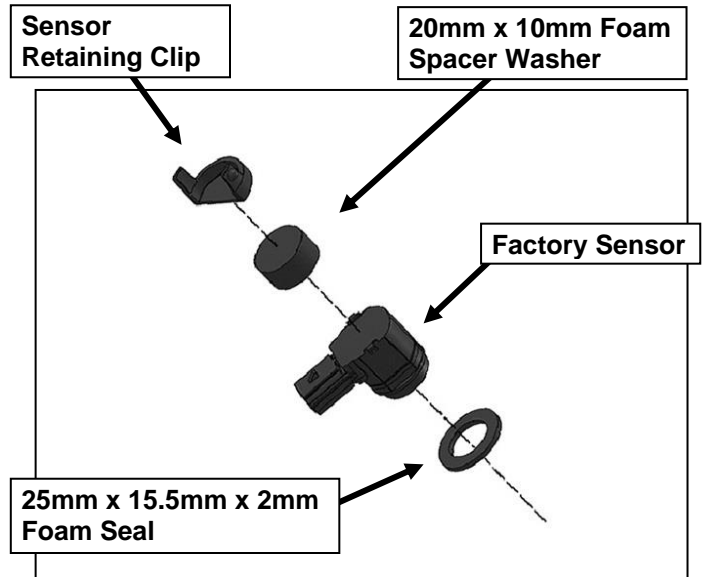
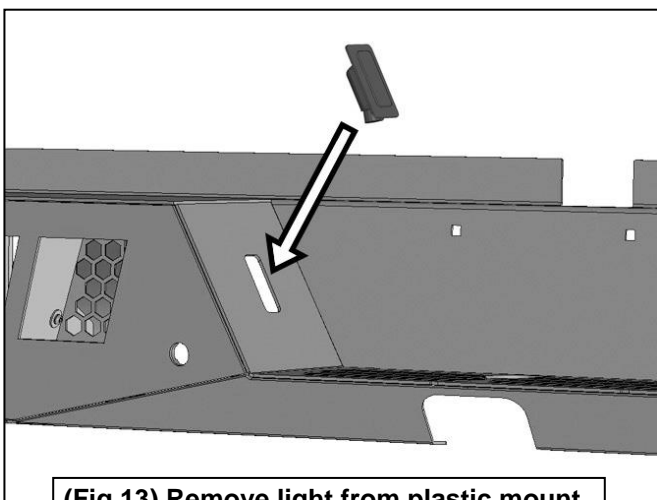
Driver/left Side Installation Pictured



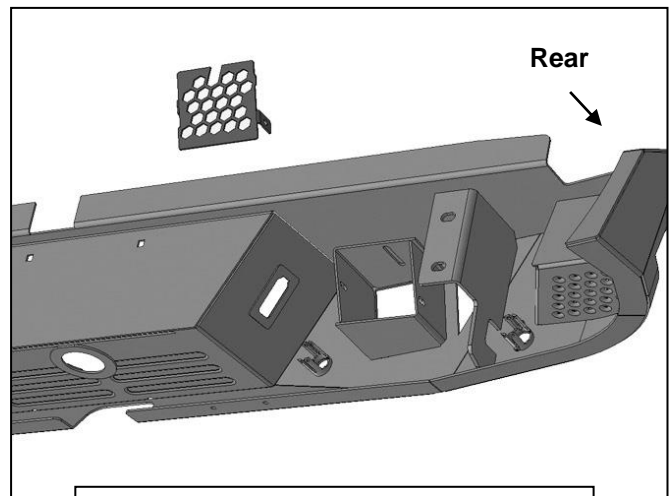
(Fig 9) Push sensor plug into mounting sleeve. Use of 4mm Screws is optional



(Fig 11) Insert the sensor into the sensor sleeve



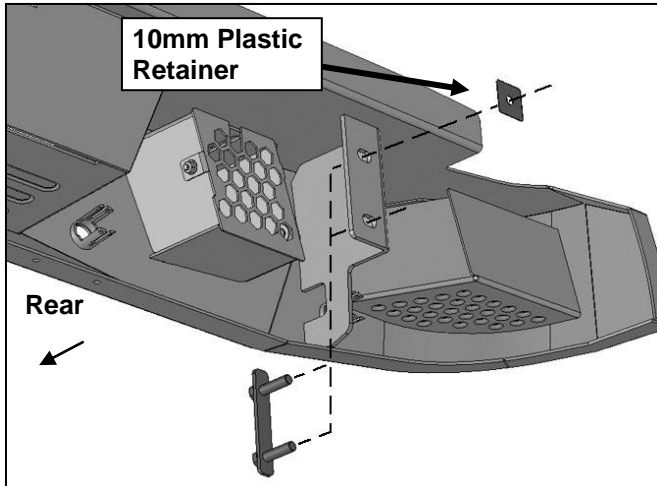
(Fig 10) Remove factory seal and push Foam Washer onto end of



(Fig 12) Remove screens for additional access or to clear lights as needed

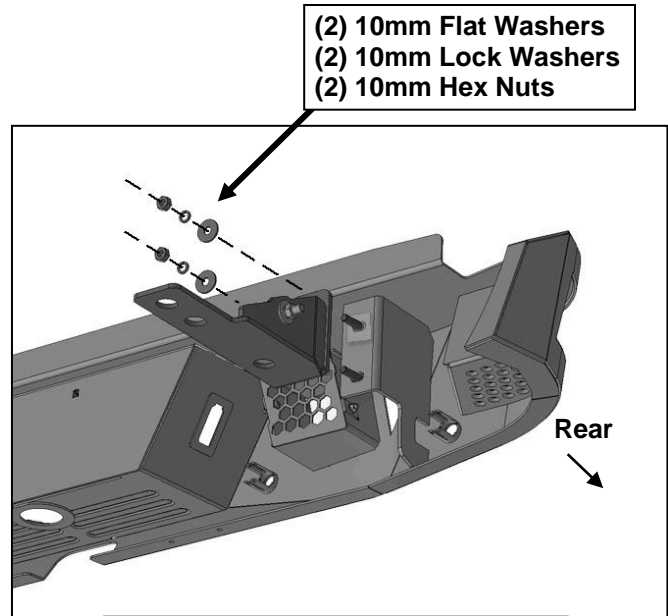
WARNING! Do not crawl under bumper unless the bumper is properly supported on blocks or stands or the bumper may fall.

Driver/left Side Installation Pictured



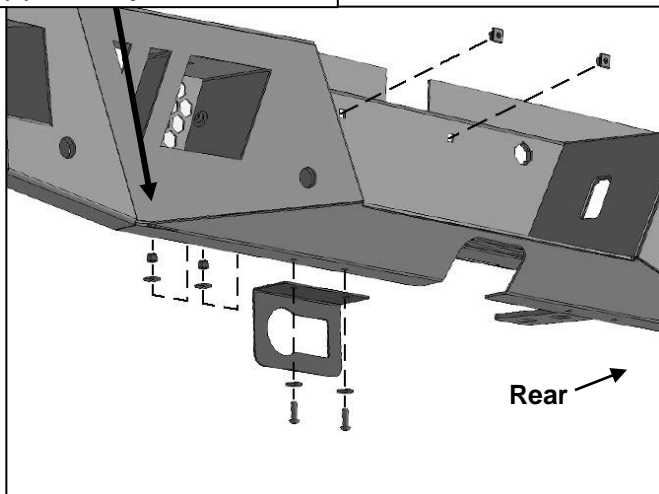
(Fig 14) Insert 10mm Double Bolt Plate into and through back of mounting tab on back of Bumper

WARNING! Do not crawl under bumper unless the bumper is properly supported on blocks or stands or the bumper may fall.



(Fig 15) Attach Bumper to Bracket

- (2) 6mm x 20mm Button Head Screws
- (4) 6mm Flat Washers
- (2) 6mm Nylon Lock Nuts



(Fig 16) Push plastic plugs into holes for license plate. Models with receiver hitch, attach towing harness Relocation Bracket to bottom of Bumper

