



HD MODULAR REAR BUMPER

(2021-2026 F-150)

INSTALLATION INSTRUCTIONS

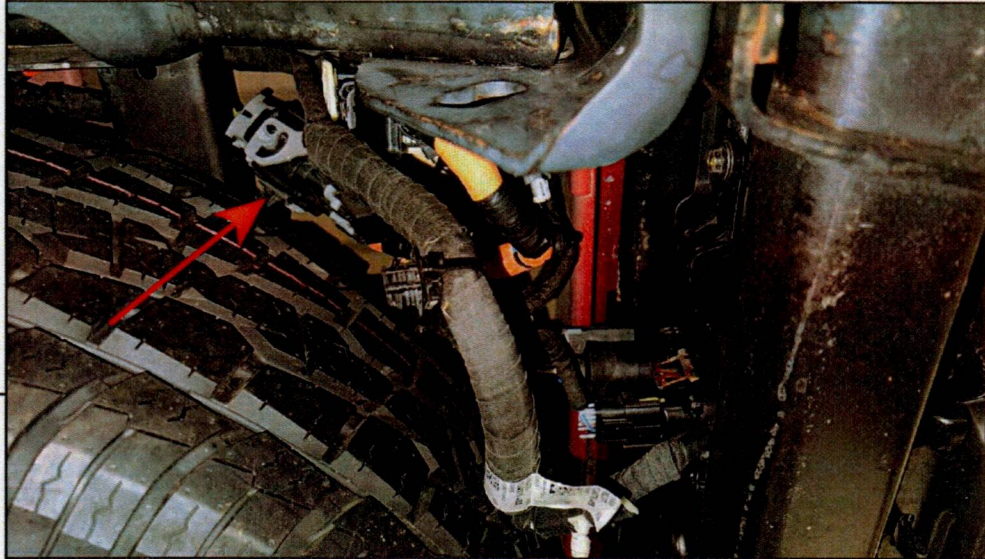
CONTENTS

- (1) LH Bumper Panel
- (1) RH Bumper Panel
- (1) Center Bumper Panel
- (2) 3/4" D-Rings
- (2) License Plate Screw Plastic Retainers
- (1) LH Mounting Bracket (w/ Hitch)
- (1) LH Mounting Bracket (w/o Hitch)
- (1) RH Mounting Bracket (w/ Hitch)
- (1) RH Mounting Bracket (w/o Hitch)
- (1) Pedestrian Sensor Relocation Bracket
- (2) Lighting Port Mesh Panels
- (6) Proximity Sensor Install Kits
- (2) Proximity Sensor Extension Harnesses
- (6) M12 Plastic Stud Retainers
- (6) M12x1.75 x 40mm Bolts
- (6) M12 Lock Washers
- (6) M12 Flat Washers
- (4) M10 Plastic Stud Retainers
- (2) M10x1.50 30mm Double Stud Plate [Long]
- (2) M10x1.50 30mm Double Stud Plate [Short]
- (2) M10x1.50 x 35mm Bolts
- (10) M10 Flat Washers
- (8) M10 Lock Nuts
- (4) M6x1.00 x 20mm Combo Allen Bolts
- (4) M6 Flange Nuts
- (1) 4mm Allen Key
- (10) Cable Ties

TOOLS REQUIRED

- 15/16" Socket
- 8, 10, 13, 16, 18, 19mm Sockets
- Ratchet / Breaker Bar
- Floor Jack
- 4mm Allen Key

SKU # T647161

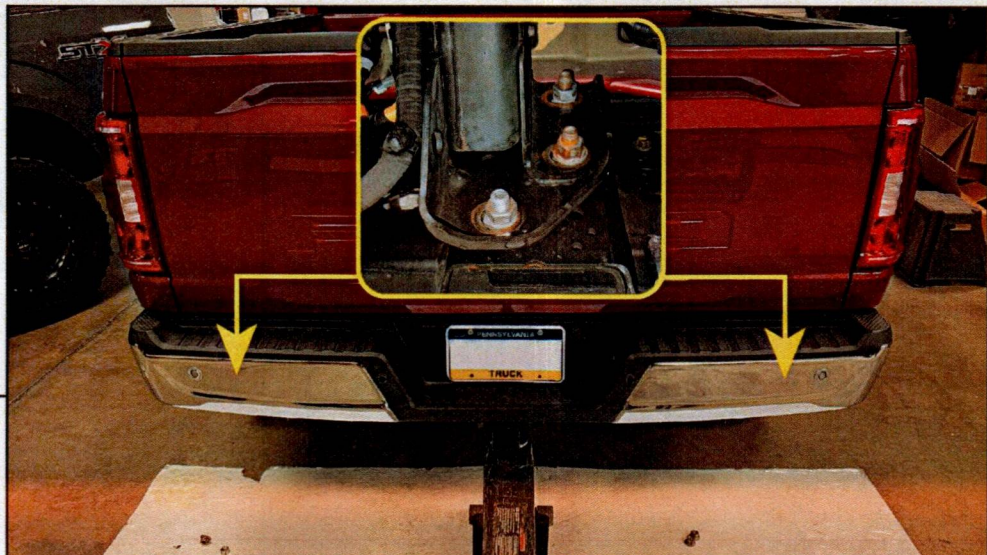


STEP 1

From under the vehicle, locate the rear bumper harness connector on the driver's side of the vehicle.

-To disconnect the main harness, fold the gray lever over the connector, and once the lever is fully folded, pull the connectors away.

-Remove (1) 10mm bolt above the connector to remove the bumper harness grounding point from the vehicle frame.

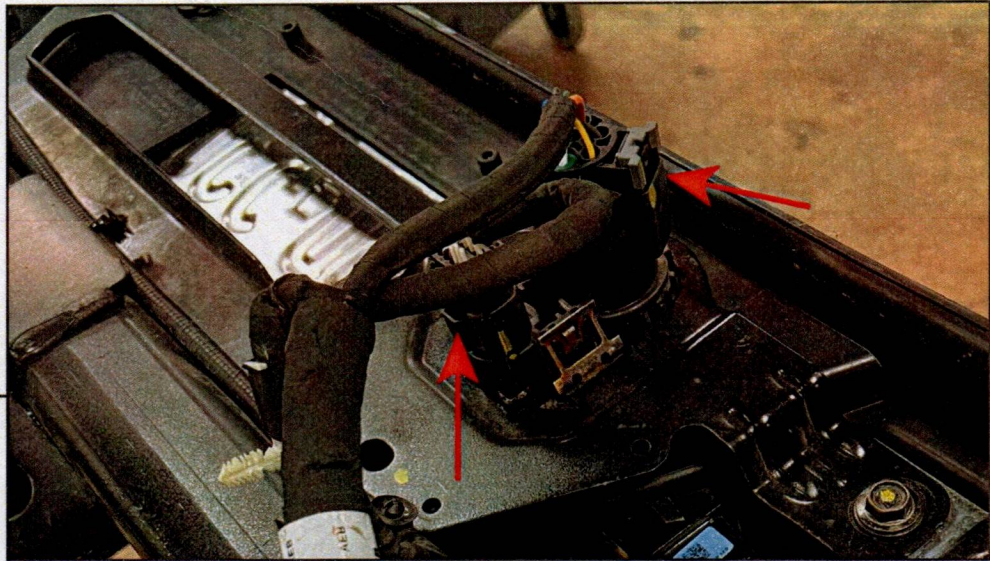


STEP 2

Support the vehicle bumper & hitch assembly with a floor jack. Then, remove (3) 15/16" nuts from each side of the bumper.

With a helper, lift the bumper from the vehicle and place on a soft workable surface.

STEP 3



With the bumper on a workable surface, locate the rear bumper components.

Unplug the (2) trailer lighting connectors by pressing the tab while pulling each connector away from the trailer lighting port.

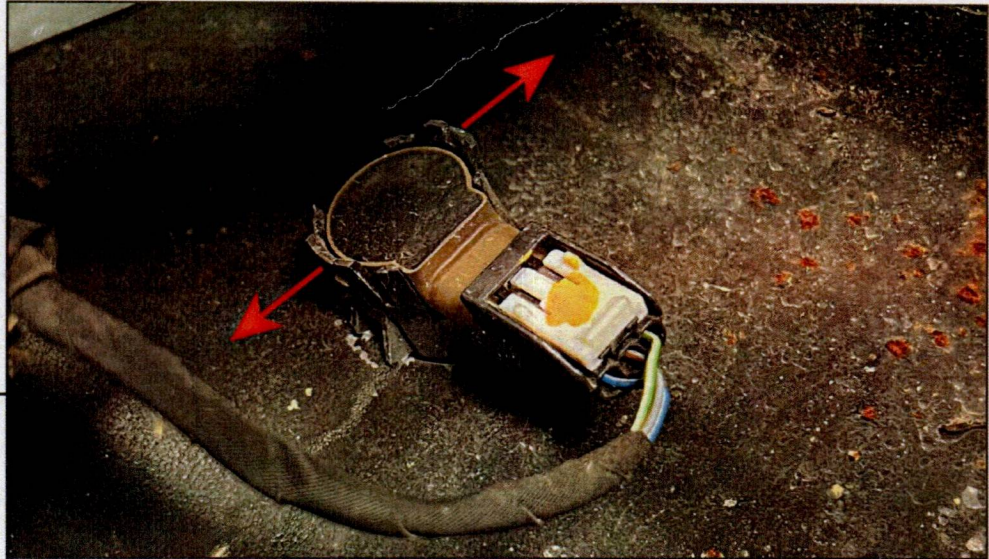
Note: The round connector may have a gray lock. If necessary, slide the gray lock back on the connector before pressing the tab.

STEP 4



If equipped, locate each of the bumper proximity sensors. Slide the white lock back on the connector, and press the white/black tab while pulling the connector away to unplug the sensor. Repeat this step for all proximity sensors.

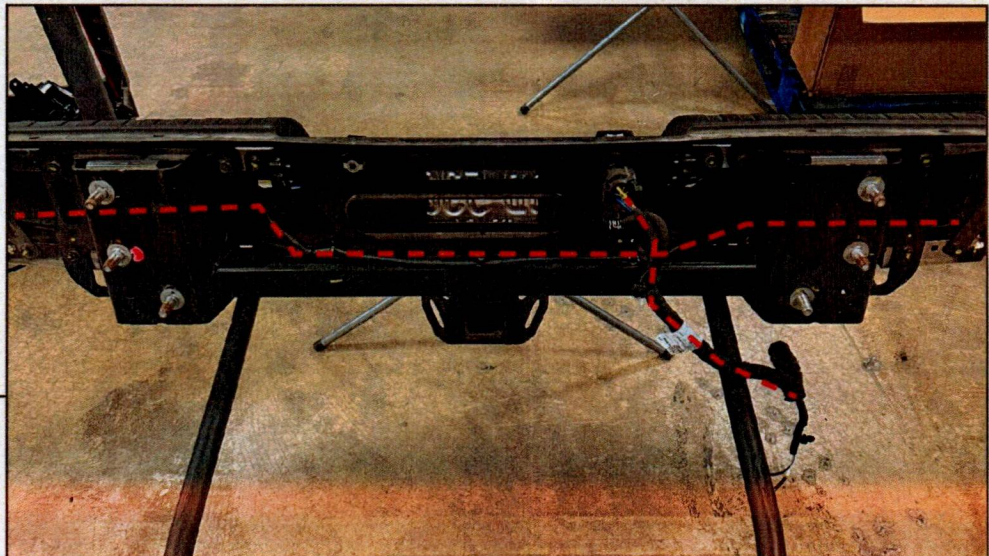
STEP 5



With all sensors unplugged, remove each sensor by pushing the retaining tabs back, and lifting the sensor out of the retaining port.

Repeat this step for all proximity sensors.

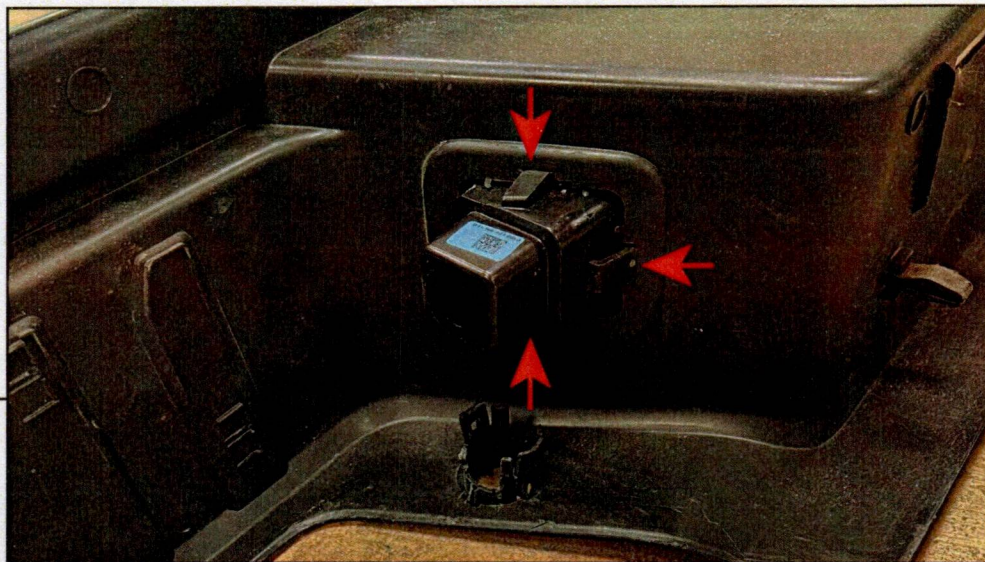
STEP 6



Twist each license plate lamp socket counter-clockwise 90 degrees to remove the bulb & harness from the light housing.

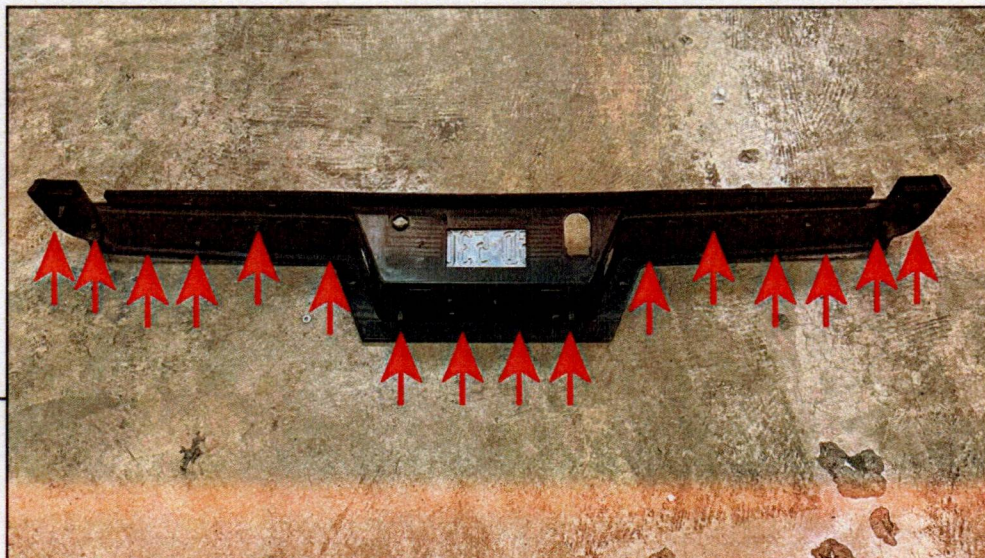
Using a pry tool, begin to dislodge the wiring harness retainers securing the harness to the bumper/hitch assembly. Set the wiring harness aside.

STEP 7



Using a pry tool, press the (3) tabs on the license plate lamp housings, and remove the light housings through the face of the bumper. Set the light housings aside.

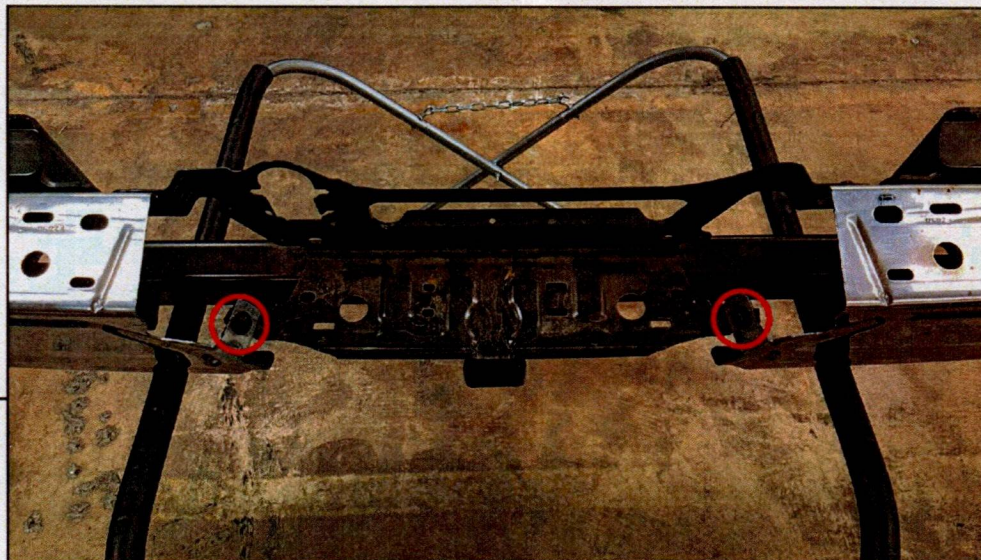
STEP 8



Remove the spare tire lock using the vehicle key. Remove the trailer lighting port by pressing the (2) metal tabs on the back of the bumper, the port will be removed through the face of the bumper.

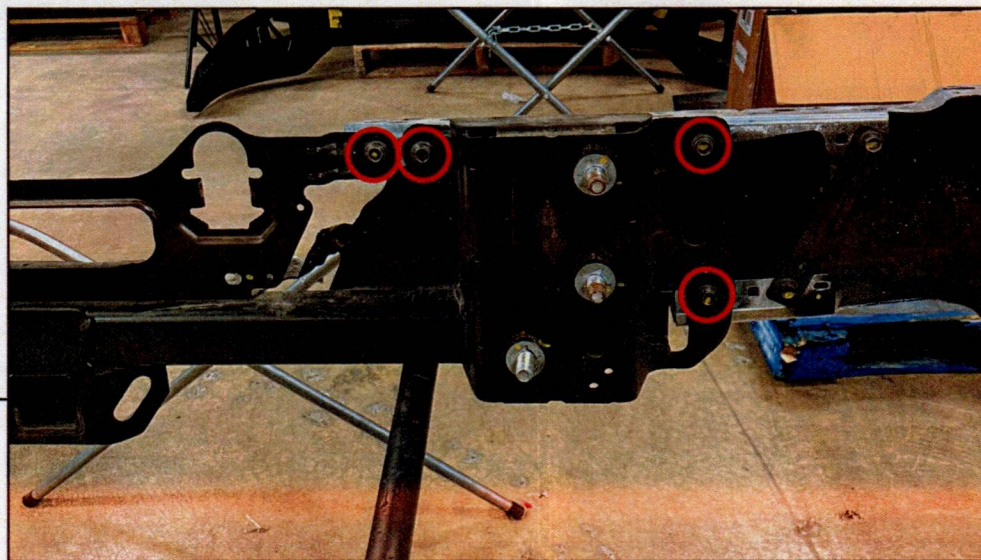
Using a pry tool or pliers, begin to press the plastic tabs on the plastic bumper pad to release the plastic pad from the metal portion of the bumper.

STEP 9



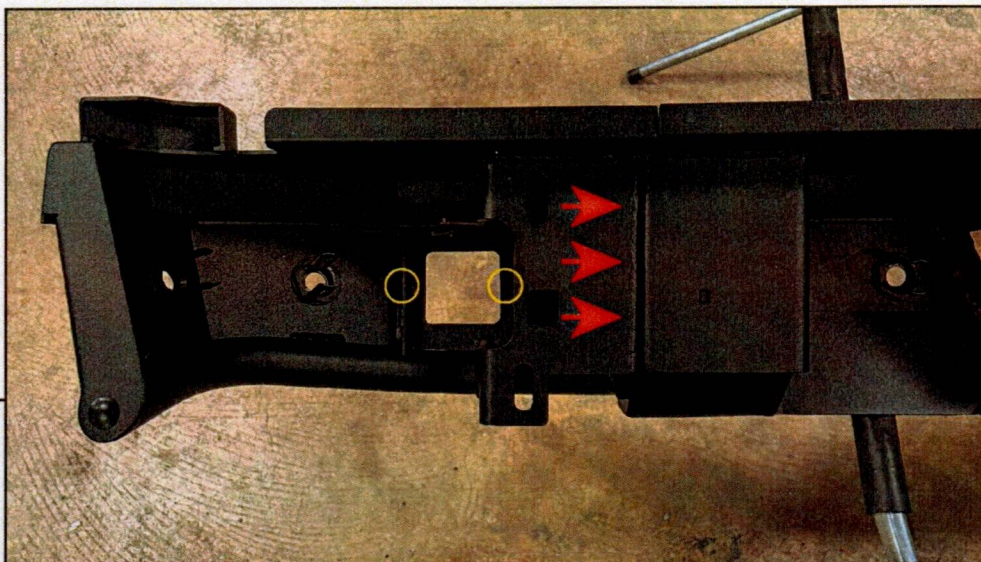
With the plastic pad removed, locate and remove (2) 13mm bolts from the center of the bumper.

STEP 10



Remove (4) 13mm bolts from each side of the hitch assembly. Set the metal bumper caps aside.

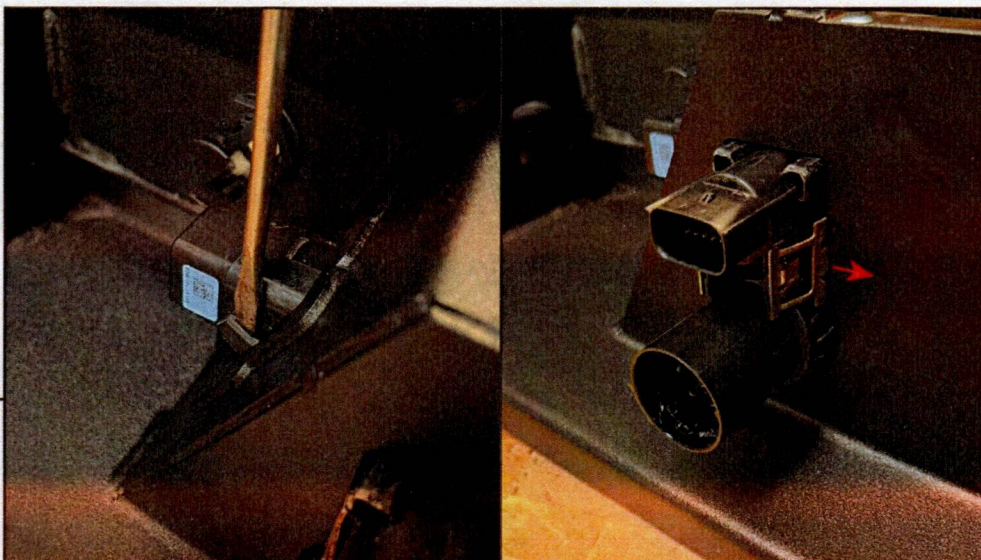
STEP 11



Lay out and identify the bumper components. If desired, install the lighting port mesh panels to the end cap using (2) M6 Allen bolts and (2) M6 flange nuts.

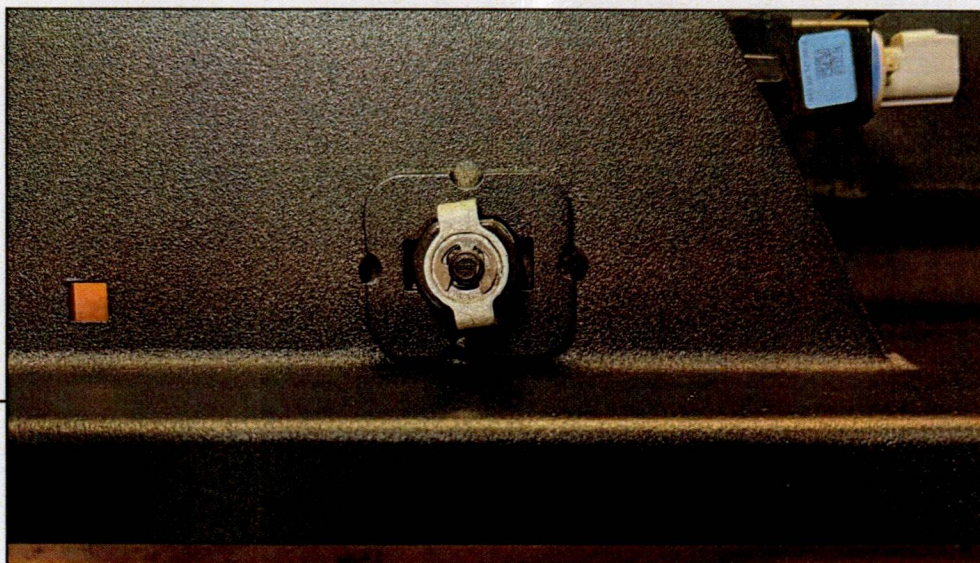
Install each end of the bumper to the center section using (3) M12 x 40mm bolts, (3) M12 lock washers, and (3) M12 flat washers into the welded nuts within each side of the center section. Ensure the face of the bumper on the center section and the end align evenly.

STEP 12



Fit the OEM license plate lamps and trailer lighting connector into the face of the rear bumper.

Note: If the mounting tabs do not fully engage to the bumper, use a small flathead screwdriver and gently lift the mounting tabs on each part up to fully engage to the bumper.



STEP 13

Using the vehicle key, fit the spare tire lock into the face of the rear bumper, and turn 90 degrees to engage the lock to the bumper.

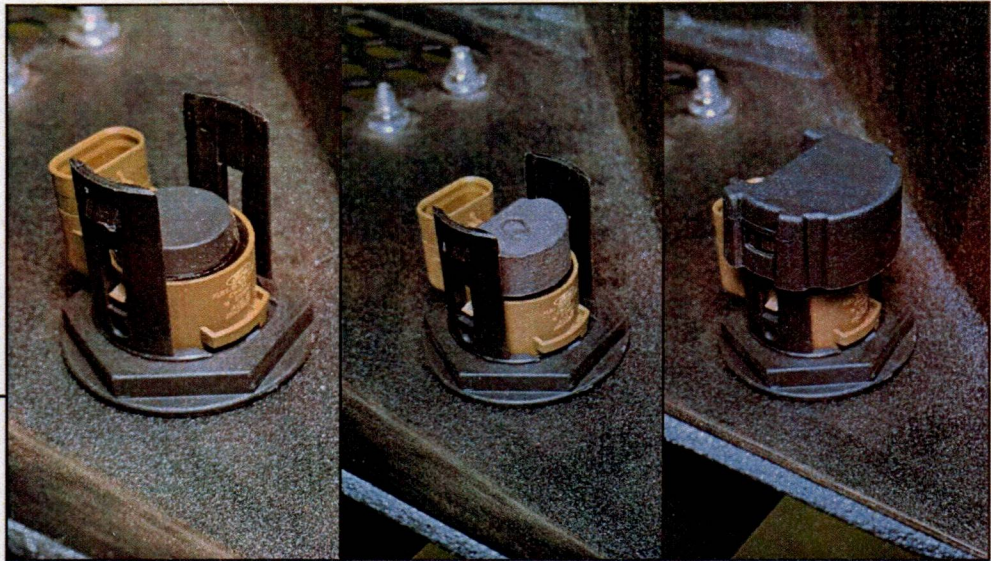


STEP 14

Proximity Sensors: Remove the rubber gasket from around the sensor. Install the provided foam ring gasket around the sensor.

Vehicles without Proximity Sensors, skip to Step 17.

STEP 15



Sensor Mounting Option 1:

Place the sensor into the designated port, ensuring the mounting tabs are within the slots. Adhere (1) rubber grommet to the sensor using the attached adhesive. Place (1) foam pad onto the rubber grommet. Place the (1) plastic cap onto the assembly, ensuring the (2) tabs lock into place to secure the sensor tightly to the port.

STEP 16

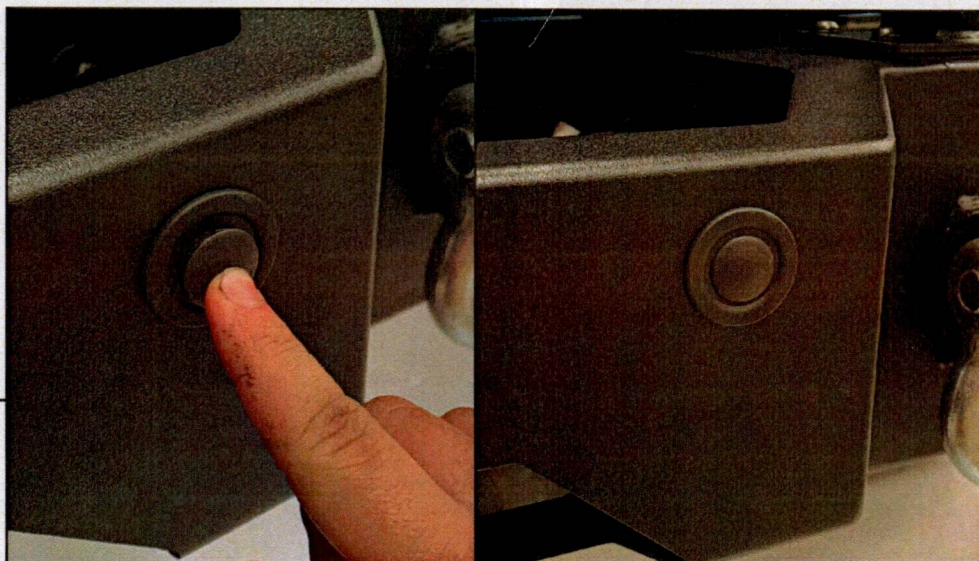


Sensor Mounting Option 2:

Place the sensor into the designated port, ensuring the mounting tabs are within the slots. Using (2) Phillips screws, gently tighten the screws until moderate pressure is on the sides of the sensor to hold the sensor into place.

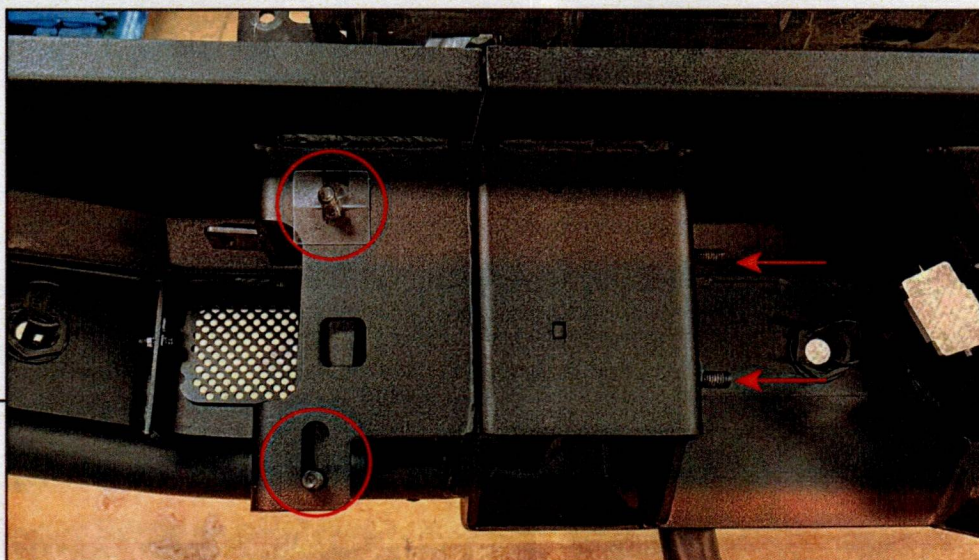
Note: Do NOT over-tighten the screws as the sensor can become damaged.

STEP 17



No Sensors: Press the plastic cap into the backup sensor housing through the face of the bumper.

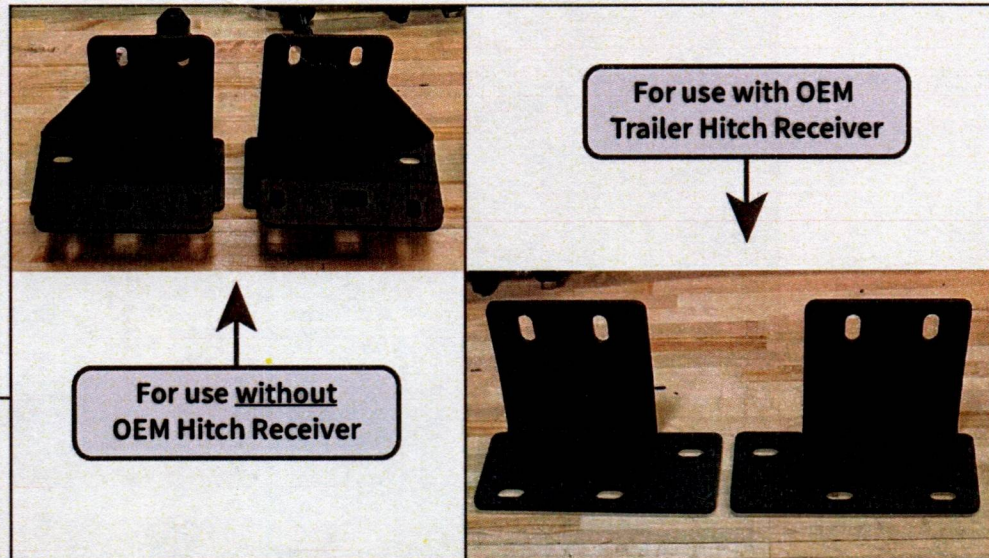
STEP 18



Fit the larger (1) M10 x 30mm double stud plate through the rear of the bumper, and hold in place using (1) M10 plastic stud retainer. **Note: Vehicles without trailer hitch receiver will not use this hardware.**

Fit the smaller (1) M10 x 30mm double stud plate through the side of the mounting pad on the center section of the bumper, and hold in place using (1) M10 plastic stud retainer.

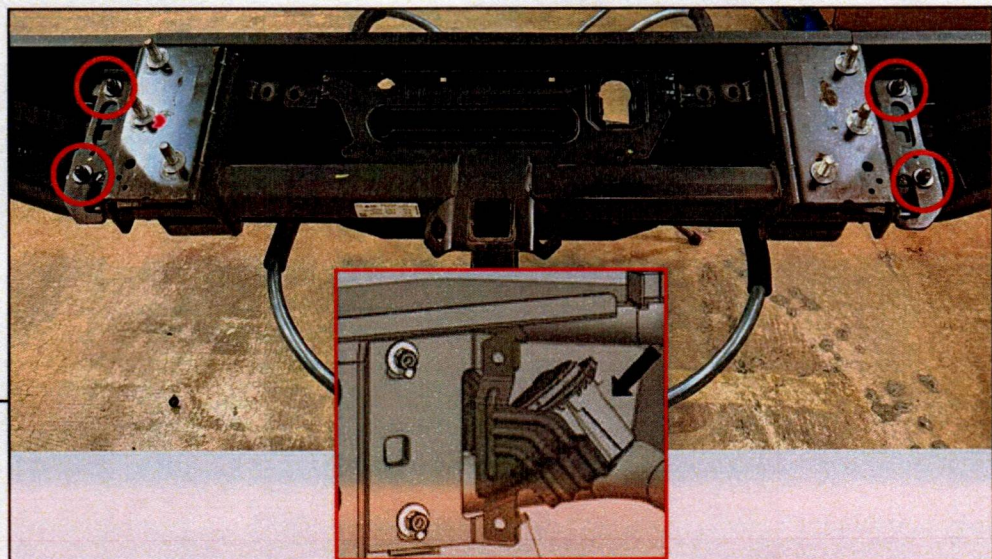
STEP 19



Use the diagram above to determine the required mounting brackets for the installation.

Fit the mounting brackets to the bumper utilizing the previously placed M10 stud plates, M10 flat washers and M10 lock nuts.

STEP 20

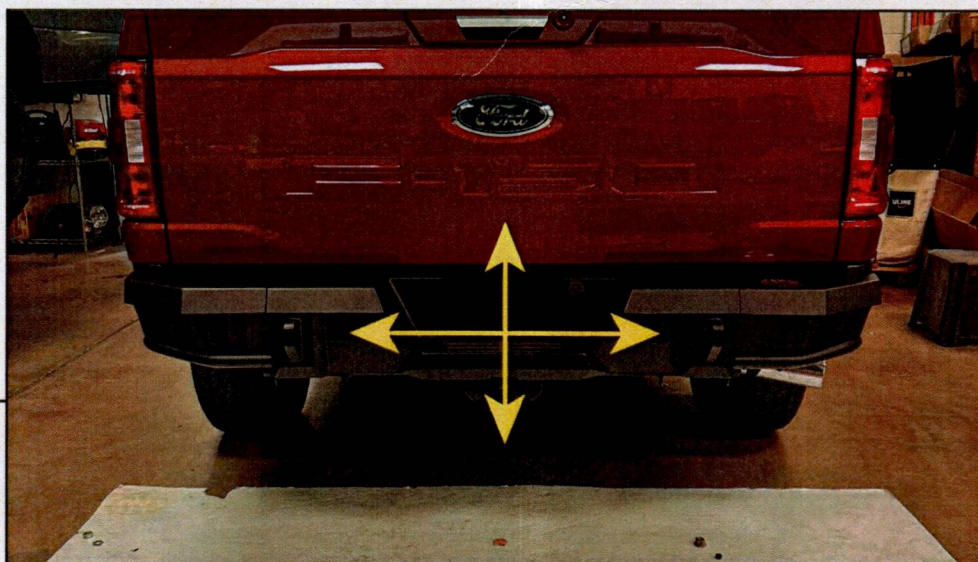


Vehicles with OEM Hitch Receiver: Place the hitch assembly to the bumper, and loosely secure using the included (4) M10 flat washers, and (4) M10 lock nuts. Allow these bolts to remain loose until the assembly is mounted to ensure adequate adjustments later.

Vehicles without Hitch Receiver: Transfer the triple stud plate from the original bumper to the previously mounted brackets, retain into place using the included (6) M12 plastic stud retainers.

PowerBoost Model: Transfer the Pedestrian Sensor assembly from the original bumper to the Driver side of the new bumper using the included bracket with the M10 stud plate and hardware before placing the hitch into place.

STEP 21



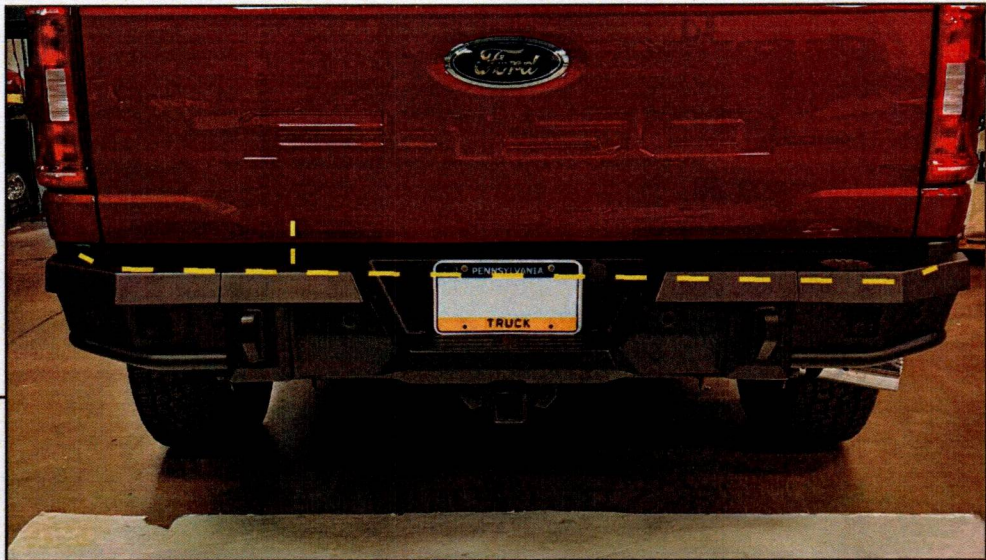
With a helper, lift the bumper to the vehicle and loosely secure into place reusing the original (6) 21mm bumper/hitch retaining nuts. Adjust the bumper to best fit the vehicle, and tighten the hitch to the frame, and then secure the M10 hardware from Step 20.

STEP 22



Press the (2) license plate plastic screw inserts into the square holes in the center of the bumper. Then, secure the vehicle license plate to the bumper reusing the original license plate screws.

STEP 23



Neatly route the bumper wiring harness along the bumper/vehicle frame.

Plug in the trailer light connector, license plate lamps, proximity sensors, and pedestrian sensor (if applicable). Use the included cable ties where necessary. Use the included proximity sensor extension harnesses if necessary. Ensure to avoid hot/moving components when mounting harnesses.

Plug the main connector into the chassis harness, re-secure the ground using the original hardware.

STEP 24



Install the (2) 3/4" D-Rings, if desired. Secure wiring harness using the included (10) cable ties.

Installation is now complete.