



INSTALLATION MANUAL
VENGEANCE FRONT BUMPER
PRODUCT NUMBER: D645X
APPLICATION: 2024 FORD RANGER RAPTOR



IMPORTANT SAFETY GUIDE | Your safety and the safety of others is very important.

In order to help you make informed decisions about safety, we have provided the following warnings, safety precautions, installation instructions, and other important information to alert you to potential hazards that could hurt you or others.

Please do a job safety analysis before each task to identify potential hazards for your situation and remove/protect against them. Use own good judgment and take your time.

Check packaged materials immediately upon arrival to ensure that all listed parts are included and undamaged.

Read and understand all warnings, safety precautions, and instructions before installing this product.

SENSORS FIELD OF VIEW MAY BE ALTERED WITH USE OF THE REPLACEMENT BUMPER.

WARNINGS

- Failure to observe the following warnings and instructions provided in this manual could lead to severe injury and/or death.
- For professional installation only. Careless installation and/or operation can result in serious injury, death, and/or equipment damage. All liability for installation and use rests with the user or consumer.
- Fab Fours, Inc. only approves installing this product according to these written instructions with the hardware provided. Failure to install according to these instructions will invalidate the warranty. This includes, but is not limited to, using alternative installation methods, hardware, or materials.
- This product is for off road use only.

SAFETY PRECAUTIONS

- Always remove jewelry and wear eye protection.
- Always use extreme caution when jacking up a vehicle for work. Set emergency brake and use tire blocks. Locate and use the vehicle manufacturers designated lifting points. Use jack stands.
- Always use appropriate and adequate care in lifting components into place.
- Always ensure components will remain secure during installation and operation.
- Always wear safety glasses when installing this kit. A drilling operation will cause flying metal chips. Flying chips can cause serious eye injury.
- Always use extreme caution when drilling a vehicle. Always disconnect power before welding. Thoroughly inspect the area to be drilled (on both sides of material when possible) prior to drilling, and relocate any objects that may be damaged.
- Always use extreme caution when welding a vehicle. Thoroughly inspect the area to be welded (on both sides of material when possible) prior to welding, and relocate any objects that may be a fire hazard. When welding in a cab, make sure the interior surfaces are covered (e.g., welding blanket) and a fire extinguisher is at hand.
- Always use extreme caution when cutting and trimming during fitting.
- Always tighten all nuts and bolts securely per installation instructions.
- Always route electrical cables carefully. Avoid moving parts, components that become hot, and rough or sharp edges.
- Always insulate and protect all exposed wiring and electrical terminals.
- Perform regular inspections and maintenance on mounts and hardware.

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A MESSAGE FROM THE OWNER



Fab Fours' was born out of a passion for customizing vehicles and a love of the outdoors. Our engineering team uses the latest 3D design software to turn new product ideas into reality. In our factory, designs come to life with the combination of cutting edge technology for metal cutting and forming and an American workforce that puts its' heart and pride into every product.

From design and manufacturing, to quality and delivery, Fab Fours' mission is to be the market leader for steel truck and jeep accessories. We make sure a quality product is delivered on time, more than expected, better than expected to our customers.

Enjoy your new Fab Fours product. Welcome to the family!

Greg Higgs

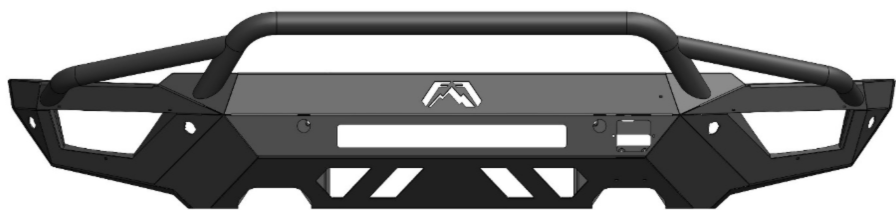
FOUNDER, FAB FOURS

GETTING STARTED

Before you begin the installation process of your new Fab Fours product, we suggest laying out all materials and parts on a pad or protective surface.

Failure to fully account for all components before beginning installation may leave vehicle immobile until part is acquired. Refer to the next pages as an inventory check.

PROVIDED MATERIALS



23308 - VENGEANCE FRONT BUMPER



23313, 23314 - DRIVER + PASSENGER
SIDE FOG LIGHT BRACKET



22352 - LIGHT BAR L-BRACKETS
QTY:2



61784 - PLASTIC SHEET

61632 EPOXY QTY:2

REQUIRED TOOLS

- 7/16" SOCKET/WRENCH
- 5/8" SOCKET/WRENCH
- 10MM SOCKET WRENCH
- 13MM SOCKET WRENCH
- 15MM SOCKET WRENCH
- 21MM SOCKET WRENCH
- ALAN KEY SET
- STAR HEAD BITS
- 1/4" DRILL BIT
- BODY PRY TOOL
- CUTTING TOOL
- 7/16-14 AND M6X1.0 TAPS ADVISED

ASSISTANCE

We recommend two people perform the installation as items are heavy and may need to be held in place while installing.

ORGANIZATION

Disassemble the vehicle where you can catalog and store everything. We suggest labeling and bagging all the OEM bolts when removing from the vehicle. Failure to keep track of parts could lead to an inability to properly reinstall components.

HARDWARE KIT | 50493-HW

IDENTIFICATION NUMBER	COMPONENT DESCRIPTION	QTY
50493-HW	M6-1.0 X 14MM STAINLESS STEEL BUTTON HEAD CAP SCREW	9
50493-HW	M6 X 1 STAINLESS STEEL FLANGE NUT	8
50493-HW	M6-1.0 X 20MM BLACK BUTTON HEAD CAP SCREW	2
50493-HW	7/16"-14 X 1-1/4" YELLOW ZINC HEX HEAD CAP SCREW, GRADE 8	6
50493-HW	7/16" YELLOW ZINC USS FLAT WASHER, GRADE 8	6
50493-HW	1/4"-20 X 1" STAINLESS STEEL HEX HEAD CAP SCREW	6
50493-HW	1/4"-20 STAINLESS STEEL NYLOCK INSERT LOCK NUT	6
50493-HW	1/4" STAINLESS STEEL FLAT WASHER	12
50493-HW	242 MEDIUM STRENGTH THREADLOCKER	1

DISASSEMBLY & INSTALLATION

1. Using a 10mm Socket wrench, remove the five (5) screws from the bottom of the center plastic trim piece. Figure 1.

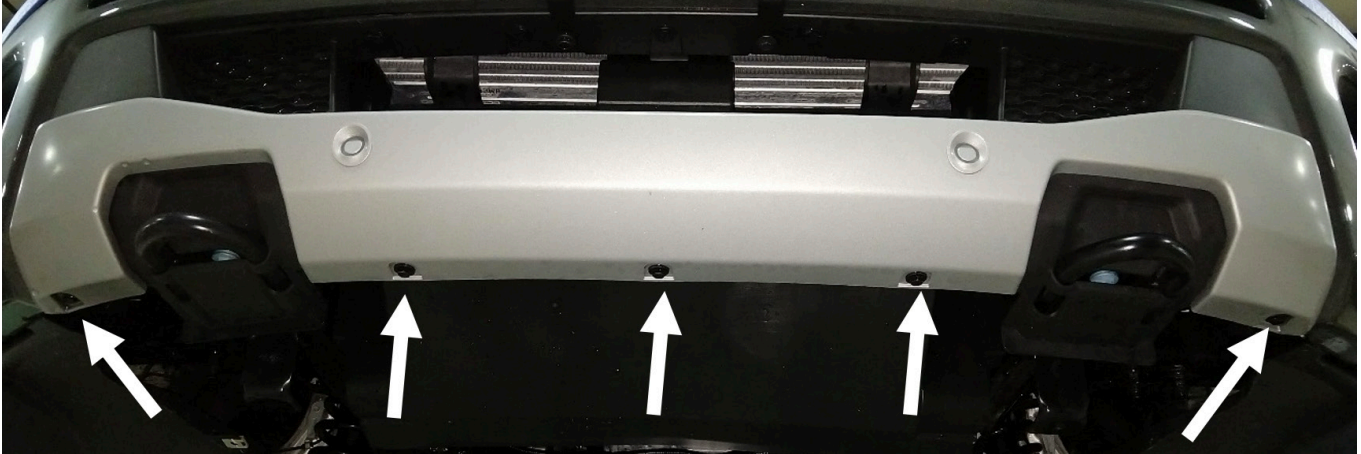


Figure 1

2. Using a plastic body panel pry tool, remove the five (5) plastic body panel rivets by prying up on the center pin and then pulling the rivet out. Figure 2.

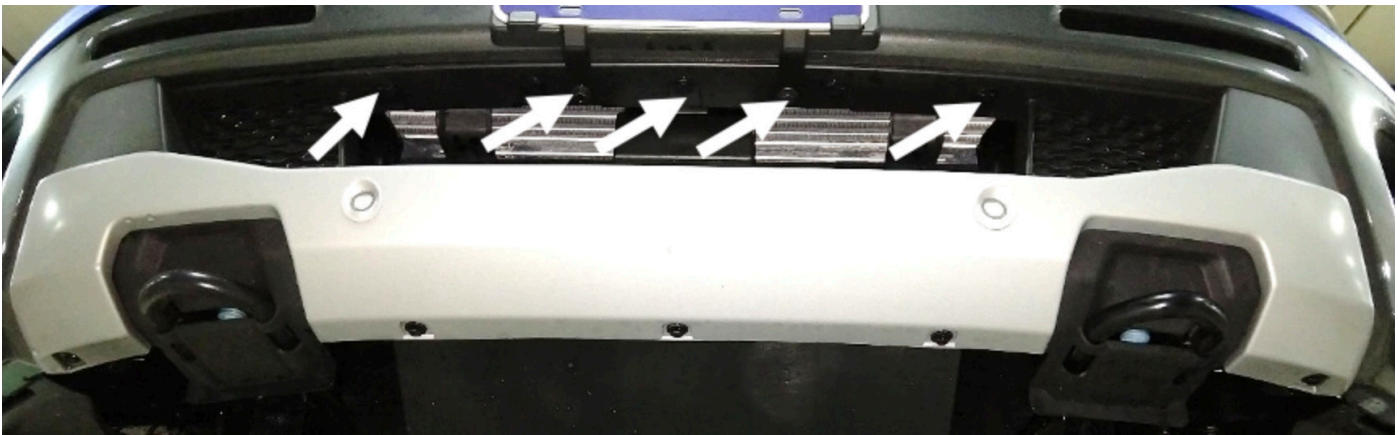


Figure 2

3. Using a plastic body panel pry tool, pry the plastic bumper cover away from the metal frame. There are ten clips that hold the cover to the frame. Figure 3.



Figure 3

4. At the top of the grill under the hood, disconnect the bumper sensor harness and feed the harness through the grill in preparation to remove the OE bumper.

5. Using a 21mm socket wrench, remove the six (6) nuts that attach the bumper the frame. Remove the OE bumper from the truck at this point. Figure 4.

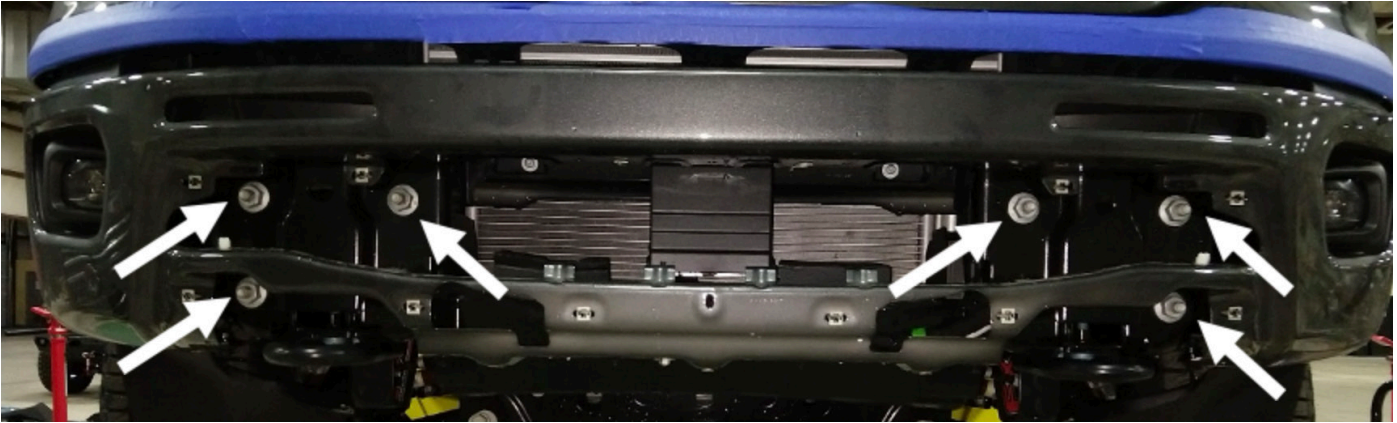


Figure 4

6. Using a flathead screw driver, break off the bolt retaining plates and remove the bolt plates from the frame horn. Repeat this process on the passenger side frame rail. Figure 5.

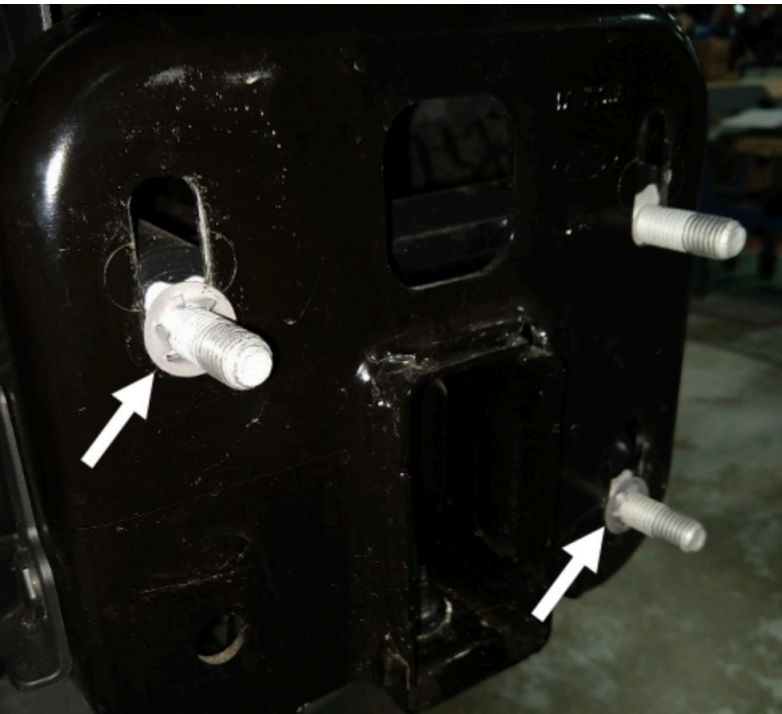


Figure 5

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7. Remove the 3x button head bolts from the driver and passenger side (DS, PS) of the inner bumper structure. Remove the mounting plate from the bumper. Figure 6.



Figure 6

8. Remove the 2x button head bolts and 10mm hex head bolt from the DS and PS bumper end caps. Figure 7.

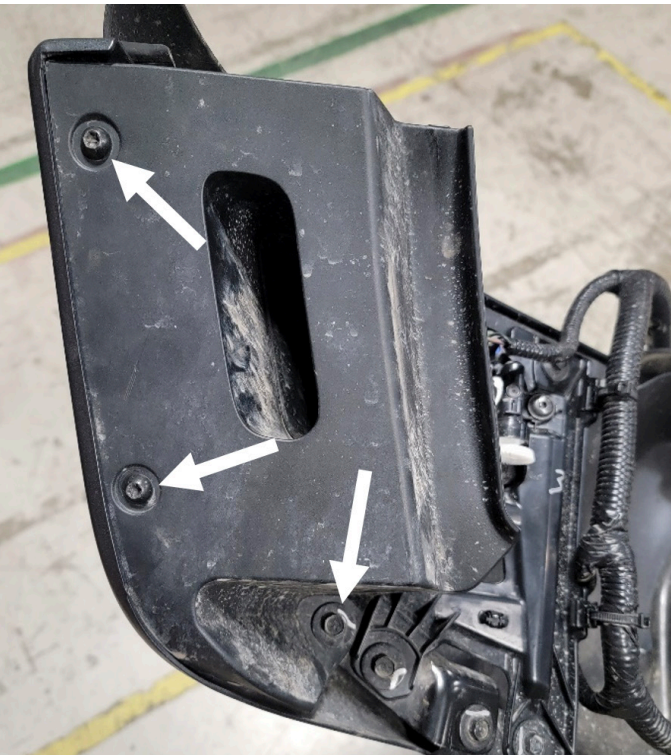


Figure 7

9. Remove the 4x 10mm hex head bolts from the fog light brackets. Figure 8.



Figure 8

10. Remove the remaining 10mm bolt holding the end support on to access the outside parking sensor. Figure 9.



Figure 9

-
11. Remove the 4x parking sensors from the DS and PS wings of the bumper by carefully pushing the sensor housing clips away from the sensor while pushing the sensor out of the housing. Figure 10.



Figure 10

12. Remove the outside parking sensor housings by carefully compressing the clips on either side of the housing and pushing the housing out of the bumper shell. Figure 11.

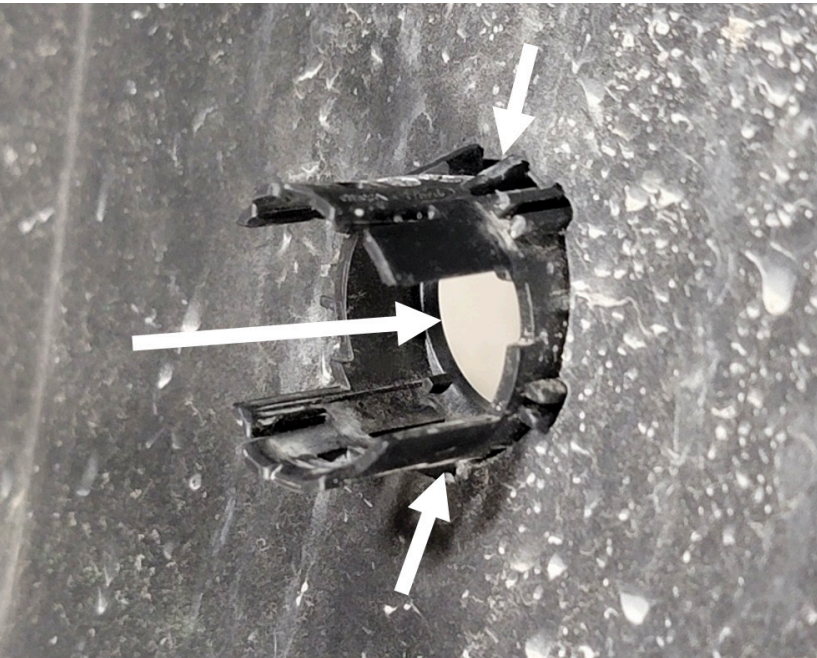


Figure 11

13. Remove the center 2x sensors from their housings following the instructions from step 11. Remove the housings using a flat head screw driver to carefully pry the welded housings from the bumper shell. Figure 12.

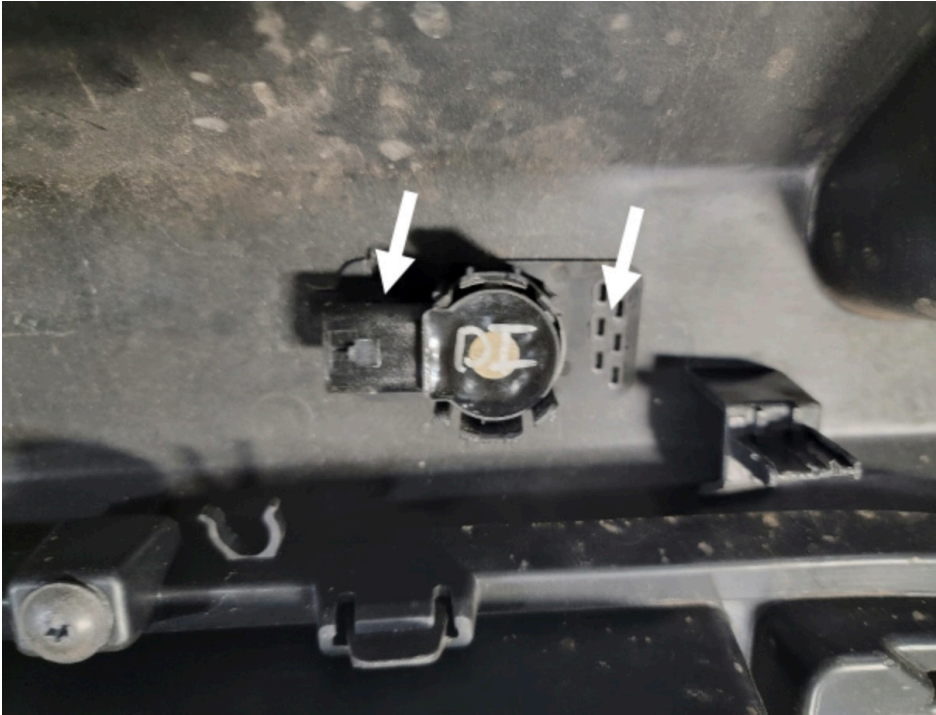


Figure 12

14. Remove the Adaptive Cruise Control sensor from the center of the bumper by removing the 3x 10mm bolts holding the bracket to the bumper shell. Figure 13.



Figure 13

15. Remove the 2x fog light housings from the bumper shell by removing the 8x plastic rivets from the top of the housing. Remove the 2x button head cap screws from the bottom of the housings and remove them from the bumper. Figure 14-15.



Figure 14



Figure 15

16. Remove the 3x button head cap screws holding the fog lights to the DS and PS brackets. Figure 16.

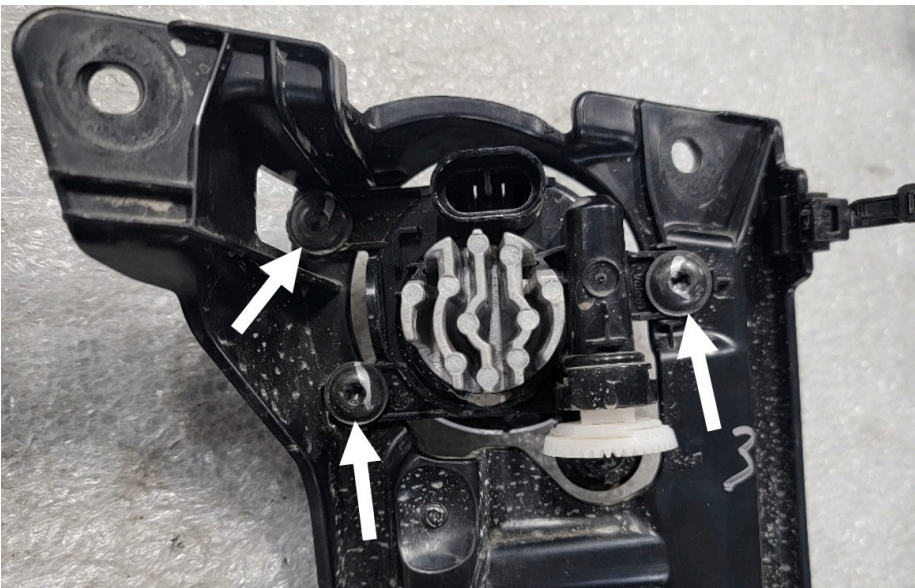


Figure 16

17. All needed components from the OE bumper shown below. Sensor Harness. 6x Parking sensors and sensor housings. 2x fog lights and fog light housings. Adaptive Cruise Control (ACC) sensor and bracket. Figure 17.



Figure 17

18. Remove the ACC sensor from its bracket and trim the bracket mounting flanges off. Figure 18.

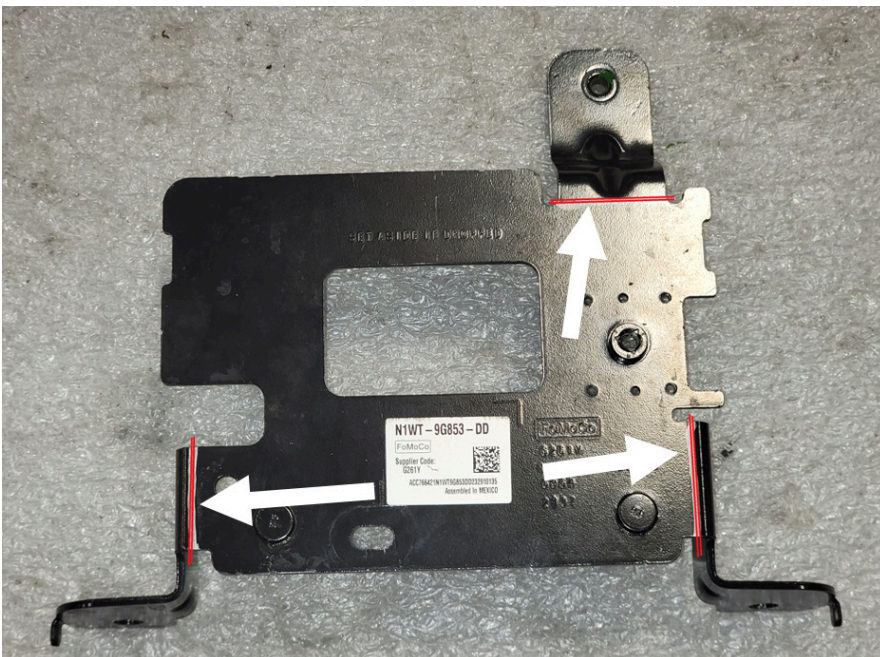


Figure 18

19. Mark and drill 2x 1/4" holes in the ACC bracket shown below. Figure 19.

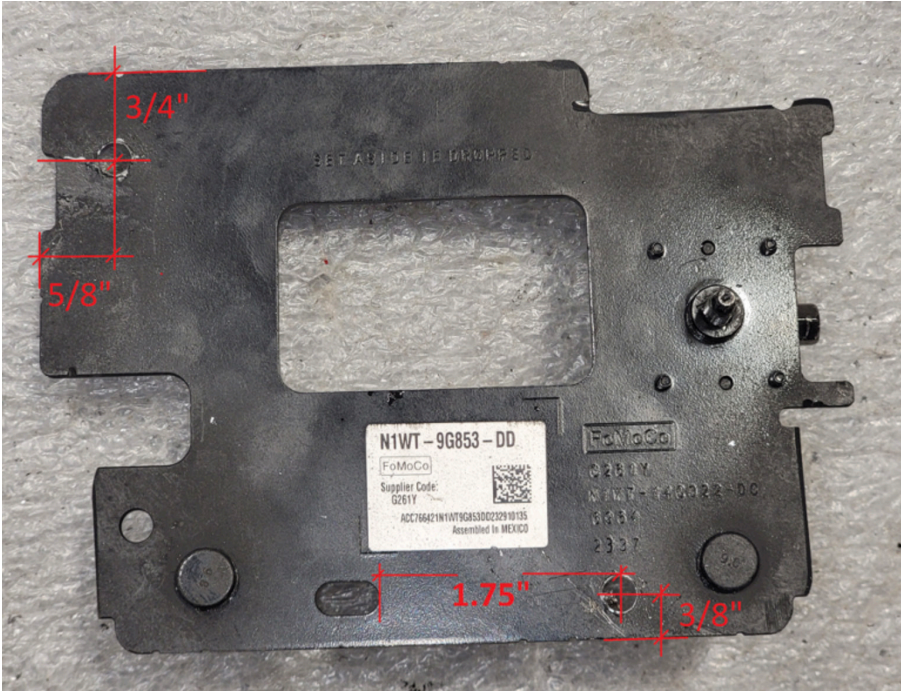


Figure 19

20. Trim the provided ACC sensor plastic cover plate to the specifications shown below. Figure 20.

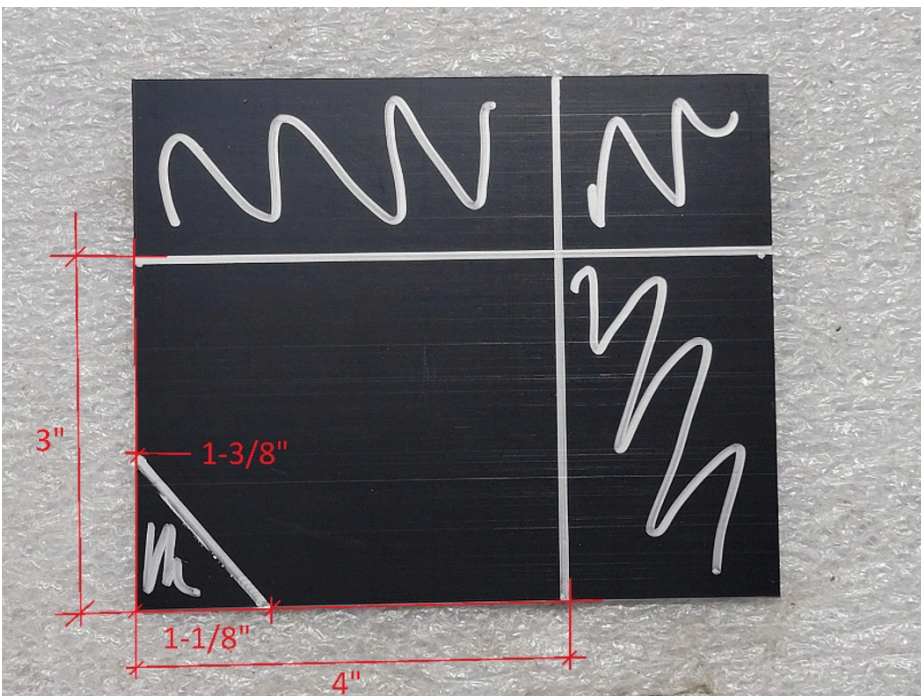


Figure 20

21. Hold the cut plastic cover plate into the bumper over the ACC sensor hole. Mark and drill the two mounting holes into the plastic cover plate using a 1/4" drill bit. Figure 21.



Figure 21

22. Use the provided M6 Black Button Head Cap Screws from the hardware to kit along with 2x M6 flange nuts to attach the plastic cover plate to the bumper shell. Advised to use the provided 242 threadlocker on the bolts. Figure 22.



Figure 22

23. Use the provided epoxy packets to attach the sensor housings to the Fab Fours bumper shell. Place each sensor housing into their respective location on the Fab Fours bumper. Mix the epoxy packs together and put epoxy on each side of the housing to hold them in place. Figure 23-24.

NOTE: It is advised to hold the center sensor housings in place while the epoxy sets to ensure they stay tight against the bumper shell.



Figure 23

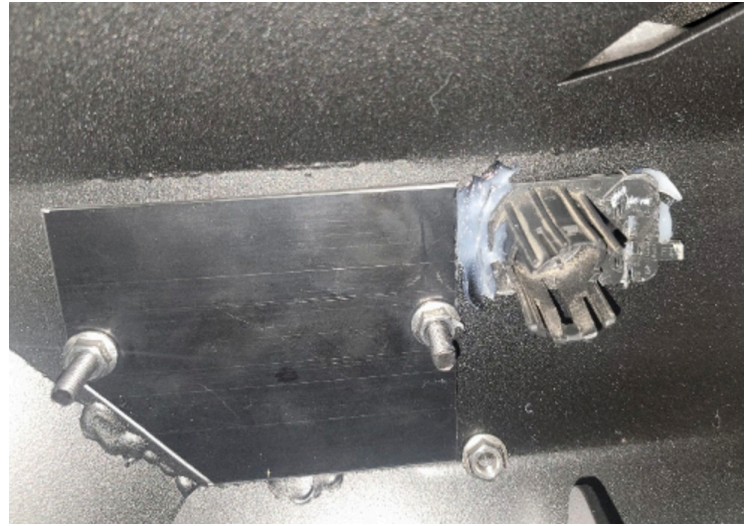


Figure 24

Sensor Harness Extension:

24. **Center Sensors:** Remove the wire conduit between the two center sensors at the intersection to extend the distance between the sensors. Use the conduit and electrical tape to recover the wires once extended. Figure 25-26.



Figure 25



Figure 26

ACC Sensor: Remove the wire conduit at the intersection between the ACC sensor plug and the main harness. Separated the wires until you gain 6-8" of extra harness and then recover the wires with the conduit and electrical tape. Figure 27.

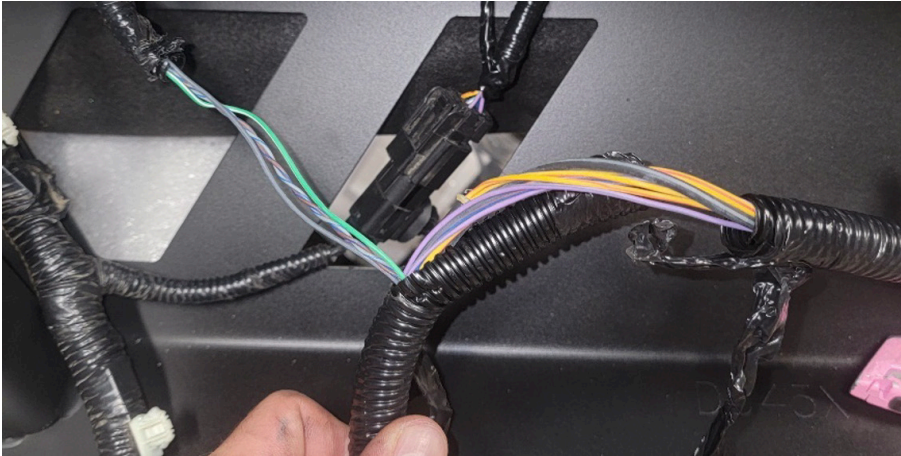


Figure 21

Side Sensors: Due to inconsistent OE sensor harness lengths, the distance between the outside sensors may need to be extended by removing the conduit at the intersection between the outsider sensors and separate the wires to gain extra length.

25. Run the sensor harness through the bumper (make sure the harness plug is on the Driver side of the bumper) and carefully plug the sensors into their respective housings.

26. Reattach the ACC sensor onto its modified bracket and plug the sensor into the harness before attaching it to the bumper. Place the ACC bracket onto the bumper bracket and use the provided 3x Button Head Cap Screws to attach it to the bumper. Advised to use the provided 242 threadlocker on the bolts. Figure 28.

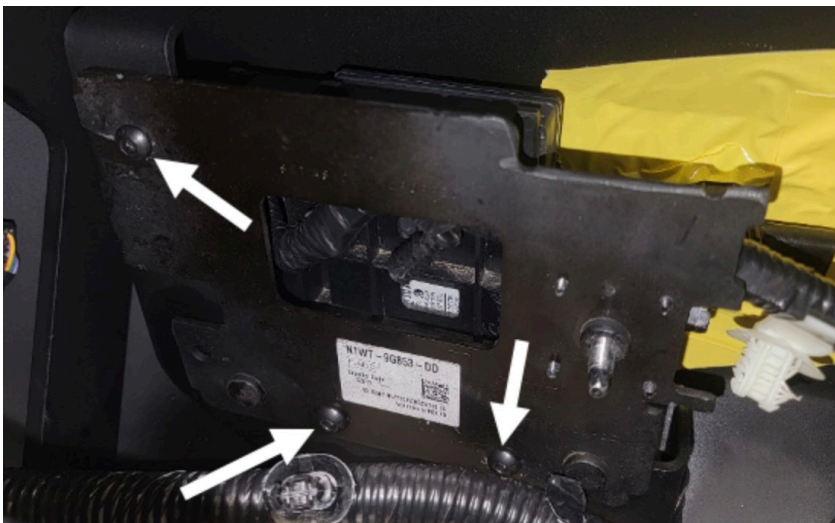


Figure 28

Instructions for OE fog light installation. If installing aftermarket lights, skip to Step 30.

27. Use the provided 6x M6 Button Head Cap Screws and flange nuts to attach the OE fog lights to the provided light brackets. Figure 29.

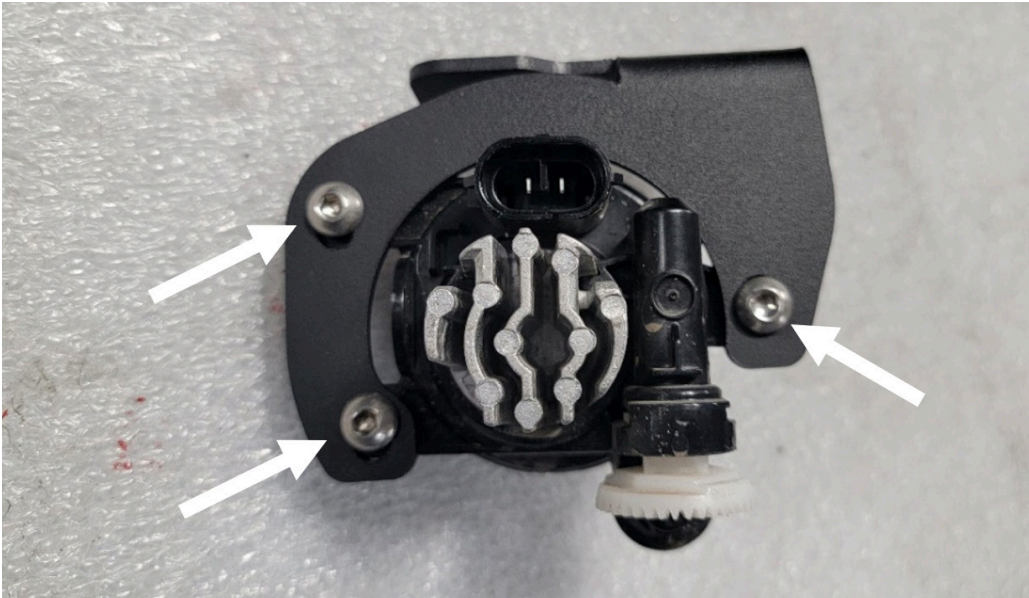


Figure 29

28. Place the OE fog light housings into the bumper light boxes and use 2x plastic rivets removed during Step 15 to hold the housings in place. Figure 30.

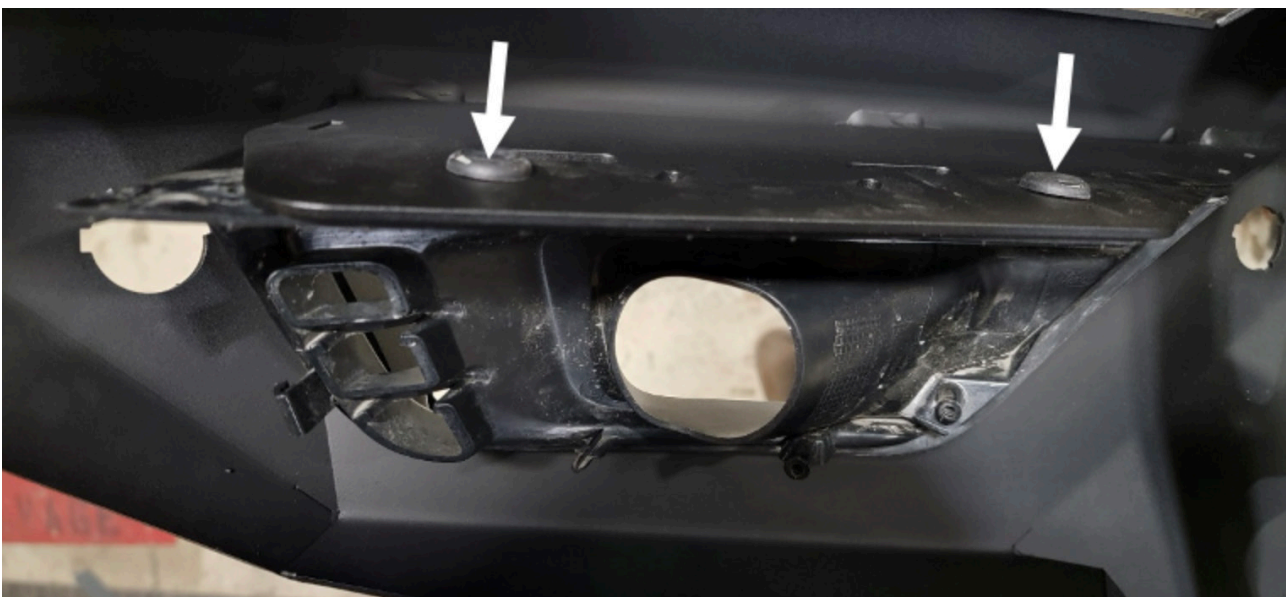


Figure 30

29. Install the fog light brackets from Step 27 to the housings using the provided 2x stainless steel 1/4" hex head cap screws, flat washers, and nylock lock nuts. Once installed, plug the fog lights into the wire harness. Figure 31.

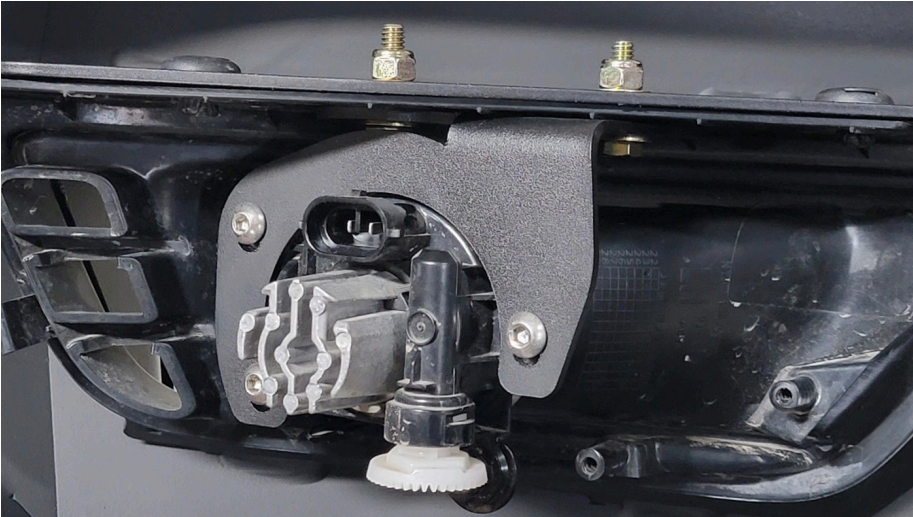


Figure 31

30. With assistance, hold the bumper up to the truck frame and install using the provided 7/16" yellow zinc hex head screws with flat washers. Use the provided 242 threadlocker pack on the bolt thread before install. Figure 32.



Figure 32

31. Reconnect the sensor harness at the top of the grill.
32. Fully tighten bumper mounting hardware and enjoy your Fab fours Vengeance bumper!

CONTACT INFORMATION

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**“IF YOU’RE LOOKING FOR MORE OF THE SAME,
THEN YOU’VE COME TO THE WRONG PLACE.”**

- GREG HIGGS

