

## MTO Series

2021 FORD F-150

FRONT BUMPER WINCH & NON WINCH



### TOOLS REQUIRED

- 13, 18, 21 & 22mm
- T30
- Push Pin Removal Tool
- Grinder or Sawzall
- Zip Ties

### SKILL LEVEL

- Intermediate
  - 2 people
- Intermediate skill level required.

### TIME REQUIRED

- 3.5 Hours
- Time to install this should take about 3.5 hours

## WARNINGS/CAUTIONS BEFORE STARTING INSTALLATION

Before you install this kit – Read and understand all instructions, warnings, cautions, and notes contained in this installation instruction guide. Consult your vehicle owner's manual for proper disconnection of electrical and lifting of vehicle if required for installation of this product.

This install may require some technical skills and knowledge of basic mechanical work. If you do not feel that you are capable of performing this install please take this product to a trained professional.

*DV8 Offroad is not responsible for any bodily injury or harm to you or your vehicle as a result of an improper install.*

Proper installation of this kit required knowledge of the factory recommended procedures for removal and installation of original equipment components. We recommend that the factory shop manual and any special tools needed to service your vehicle be on hand during the installation. Installation of this kit without proper knowledge of the factory recommended procedures may affect the performance of these components and the safety of the vehicle

- Always wear eye protection when operating power tools

*Inspect all contents of this package to make sure product is not damaged and all installation hardware has been included. If parts are missing from kit, please be prepared to provide the following information*

1. Name of purchase location
2. Bar Code on side of box
3. Date above bar code
4. Date inside box cover

# INSTALLATION MANUAL

## STEP 1

Begin by unpacking all items and inspecting for missing pieces or damage. If you have any concerns, please contact the company the product was purchased from.

### Hardware Included:

- |                       |                       |
|-----------------------|-----------------------|
| (6) M14 x 35mm Bolts  | (6) M12 Nuts          |
| (6) M14 Lock Nuts     | (6) M12 Split Washers |
| (12) M14 Flat Washers | (12) M12 Flat Washers |
| (6) M12 x 50mm Bolts  | (4) Bumper Spacers    |



## STEP 2

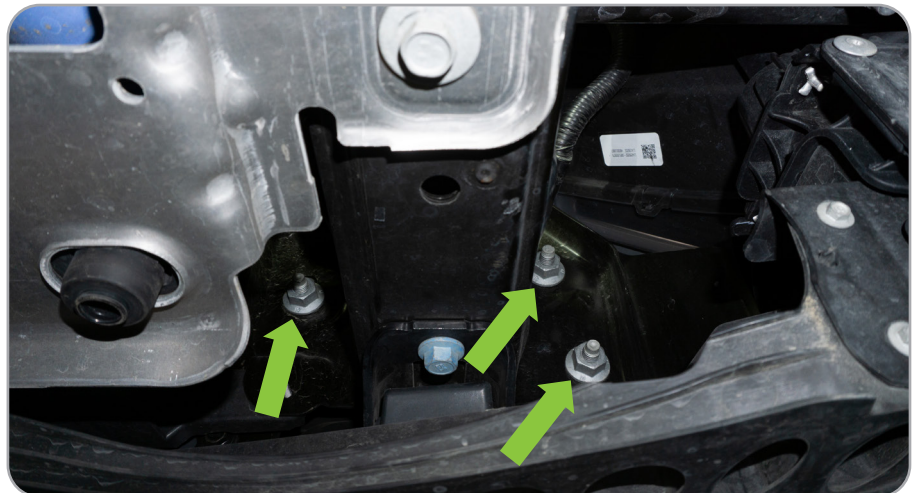
Begin by unplugging the bumper from the main wire harness on the truck. The plug can be found located on top of the frame rail under the passenger side headlight.

*Note: If you have trouble removing this plug, you can wait until the bumper has been unbolted, however this will require additional help to hold the bumper and remove the plug.*



## STEP 3

To remove the bumper, using a 21mm socket, remove the three mounting nuts on each frame rail.



# INSTALLATION MANUAL

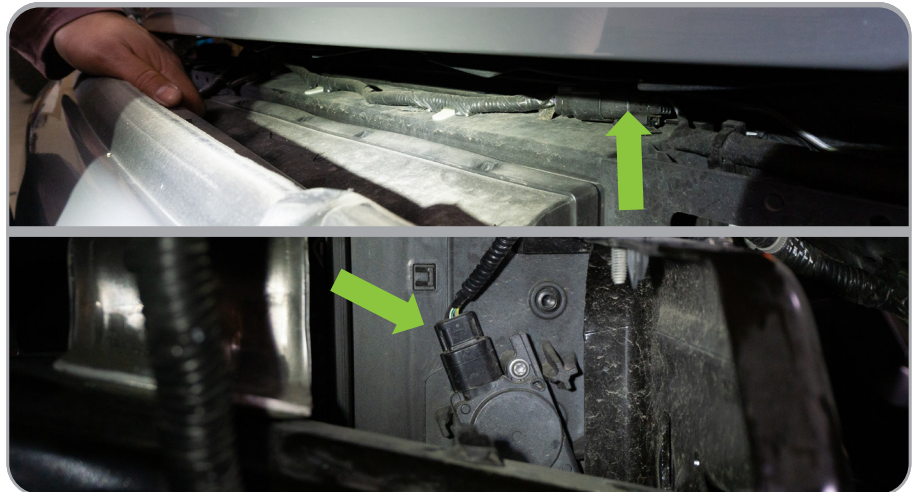
## STEP 4

Once the nuts are removed, pull the bumper off by leaning the center back and pulling forward.



## STEP 5

Once the bumper is off you will have to remove two plugs still attached to the bumper. One is directly under the grille in the center, and the second is on the passenger near the main plug removed earlier. Unclip both plugs to allow the bumper to be pulled free. Set bumper on soft surface face down.



# INSTALLATION MANUAL

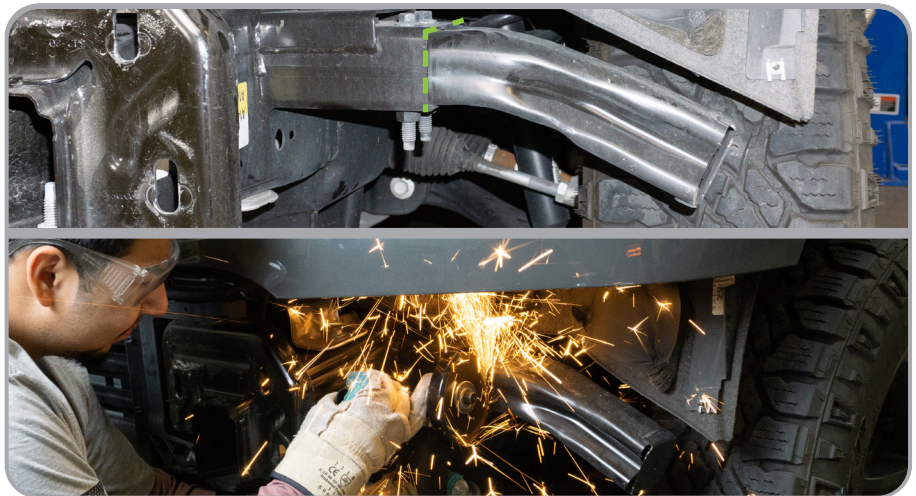
## STEP 6

Remove the shutter shroud by removing the clips around the outside.



## STEP 7

Using a grinder or a Sawzall, safely cut the crash bars on each side of the frame. Ensure to paint any exposed metal to prevent corrosion.



# INSTALLATION MANUAL

## STEP 8

If your bumper is equipped from the factory with front parking sensors, begin by removing the automatic air dampening system on the factory bumper using a 13mm socket on the three bolts located on each side.



## STEP 9

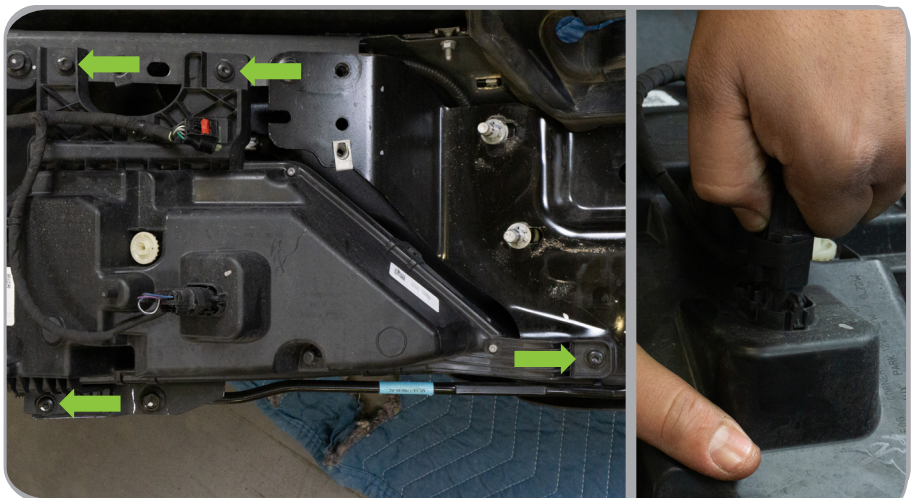
Unplug the connector on each side of the air dampening system and set off to the side.



## STEP 10

Using a T30 torx bit, remove the four bolts holding fog light housing on each side of the factory bumper. Unplug the fog lights and set off to the side.

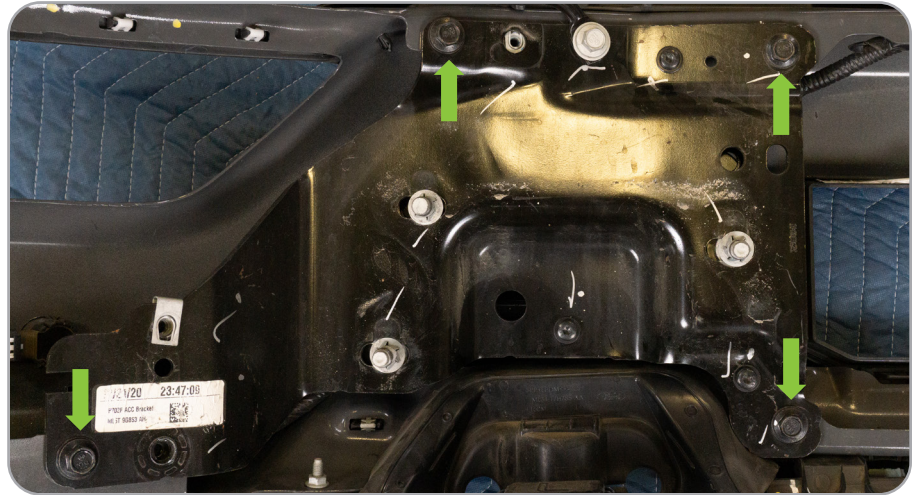
*NOTE: The bumper wire harness has a mount on the fog light. Using your push pin removal tool, remove the harness from each light.*



# INSTALLATION MANUAL

## STEP 11

Using a 13mm socket, remove the four bolts holding each bumper bracket.



## STEP 12

If you have an adaptive cruise control (ACC) module, unplug this off the driver side bracket and set off to the side since this will not be a part of the bumper install.

**NOTE:** To relocate the ACC module, you will need the FBFF1-BR. Use the FBFR1-BR instructions for relocation steps before you continue with remainder of bumper install.



# INSTALLATION MANUAL

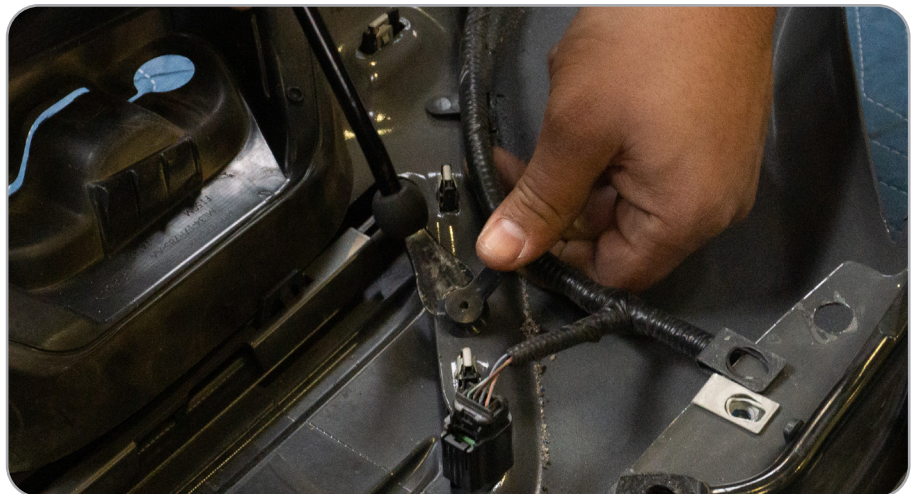
## STEP 13

After you have full access to the bumper wire harness, unclip each sensor from the bracket by spreading the side of the sensor bezels. Do not overextend these tabs since they can break.



## STEP 14

Using the push pin tool, remove the harness from all points on the factory bumper.



# INSTALLATION MANUAL

## STEP 15

To remove the sensor bezels from the bumper, squeeze the side of the bezel from the back and pull the face from the front.



## STEP 16

Moving to the DV8 bumper, install the supplied foam pads to the wings of the bumper.



## STEP 17

Using a 22mm and 21mm socket, install the wings onto the center section using the supplied M14 bolts.

*NOTE: If you do not have factory sensors, use the provided sensor plugs and with your setup, change to step 23.*





# INSTALLATION MANUAL

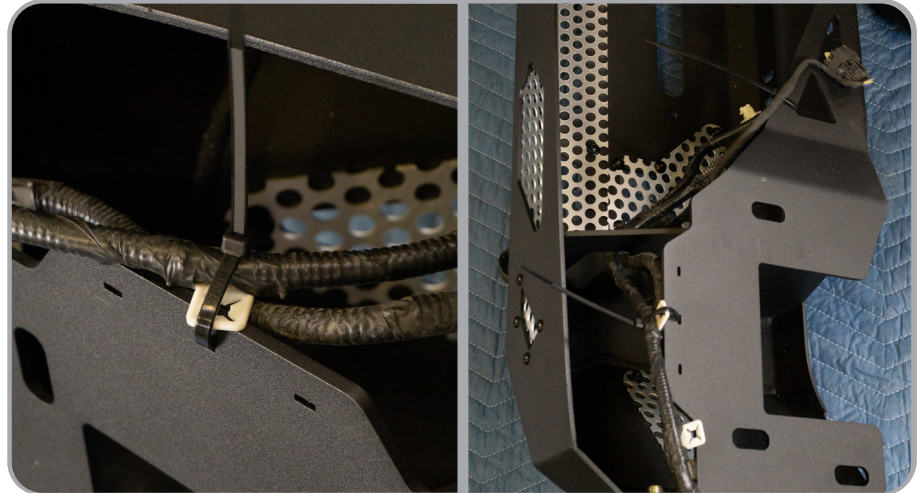
## STEP 18

Install the factory wire harness into the bumper with the main plug lying at the passenger side of the bumper. Loosely lay the sensors over the correlating holes. Different levels of factory trims will offer different amounts of sensors on the front bumper. Utilize the holes on the bumper that closely relate to the factory bumper. Any remaining holes will utilize the provided sensor plugs.



## STEP 19

Once the sensors are in place, loosely secure the wire into place with zip ties (not provided) using the welded in zip tie tabs.



## STEP 20

Our bumper sensor holes are keyed to fit each sensor bezel into the correct spot on the bumper. To install your factory sensor bezels into the DV8 bumper, look for the letters marked on each bezel. For example, this bezel is marked "FIL" meaning "front inner left".



# INSTALLATION MANUAL

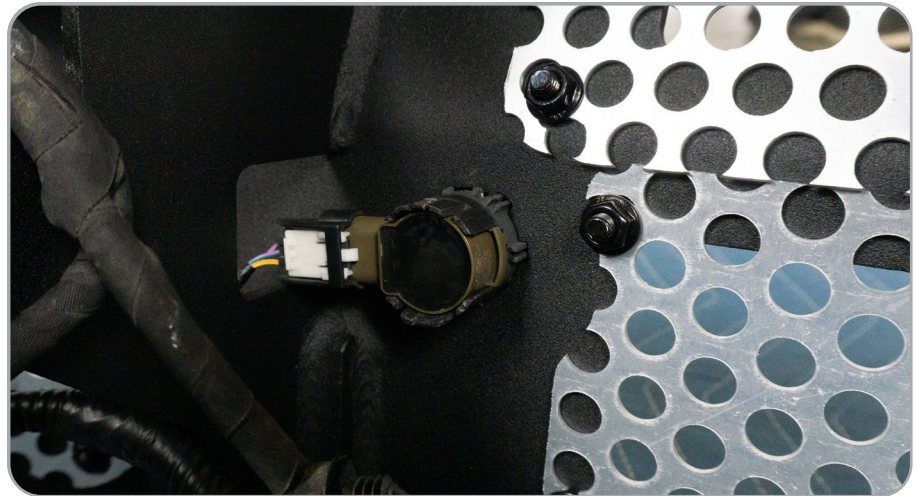
## STEP 21

After each bezel is matched up to the correct location, you need to trim the tabs on the bezel. Since our bumpers use a thicker material, you will need to either use snips or a small Dremel to shave down the tabs. Take a little material off and test fit until tabs click into place and bezel fits flush.



## STEP 22

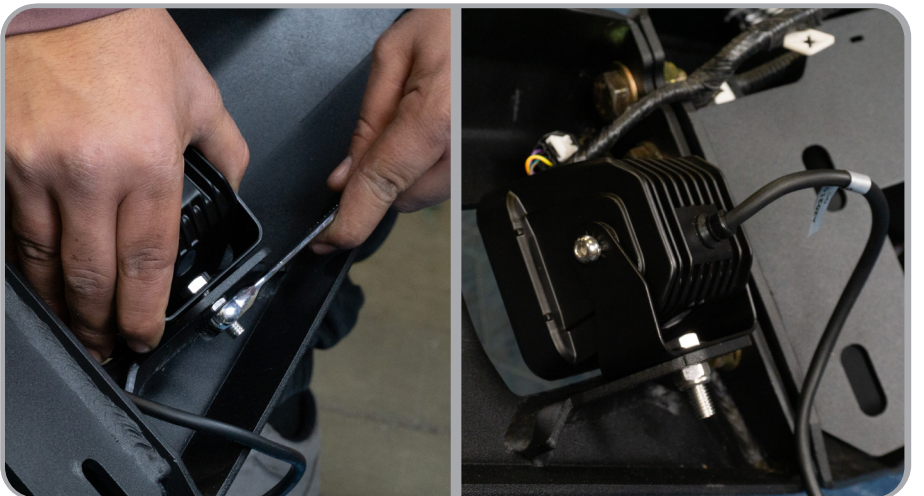
From the back, click each sensor into the bezel while holding the face of the bezel. Make sure both tabs on the bezel are flat against the sensor and that the sensor is sitting flush in the bezel.



## STEP 23

Install 3" pods into the wings using hardware provided with the light.

*NOTE: We are using two 3" DV8elite pod lights for this install.*



# INSTALLATION MANUAL

## STEP 24

If you are running the FBFF1-10 winch version of this bumper, install your winch now. Secure the wires away from the back of the bumper to ensure that they do not get in the way during the bumper install.



## STEP 25

With help, lift the bumper over the frame horns and using the provided M12 hardware and a 18mm socket and wrench, mount the bumper to the factory bumper mounts. Leave loose to allow for adjustment.

*NOTE: We included some spacers with the bumper. These are used to bring the wings up closer to the body and can be used based on your preference. If needed, prior to install of the top two bolts on each side, place up to two spacers on each side prior to securing hardware.*



# INSTALLATION MANUAL

## STEP 26

With help hold bumper into place where you have even gaps all around and tighten hardware down to 70 ft. lbs.



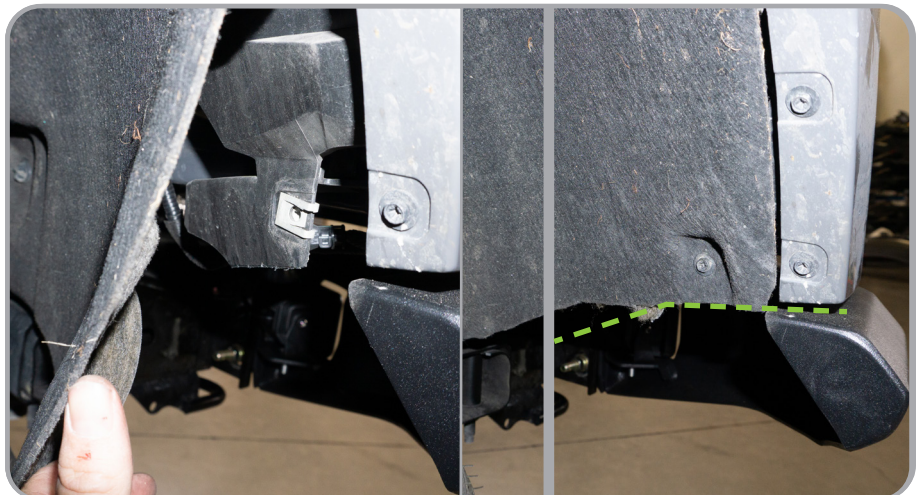
## STEP 27

Plug in center grille connector and main bumper harness connector.



## STEP 28

To trim your inner fender, using snips or a sharp razor blade, carefully cut the inner fender. Make sure to leave the mounting hole near the bumper wing to the inner fender intact to secure the inner fender.



# INSTALLATION MANUAL

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## STEP 29

Double check all hardware is secure and wire fog lights to your preference and wire your winch if applicable.

