

INSTALLATION MANUAL VICOWL

PRODUCT NUMBER: VC3900 APPLICATION: 2019 GMC 1500



**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 WILL 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 it's 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!

FOUNDER, FAB FOURS

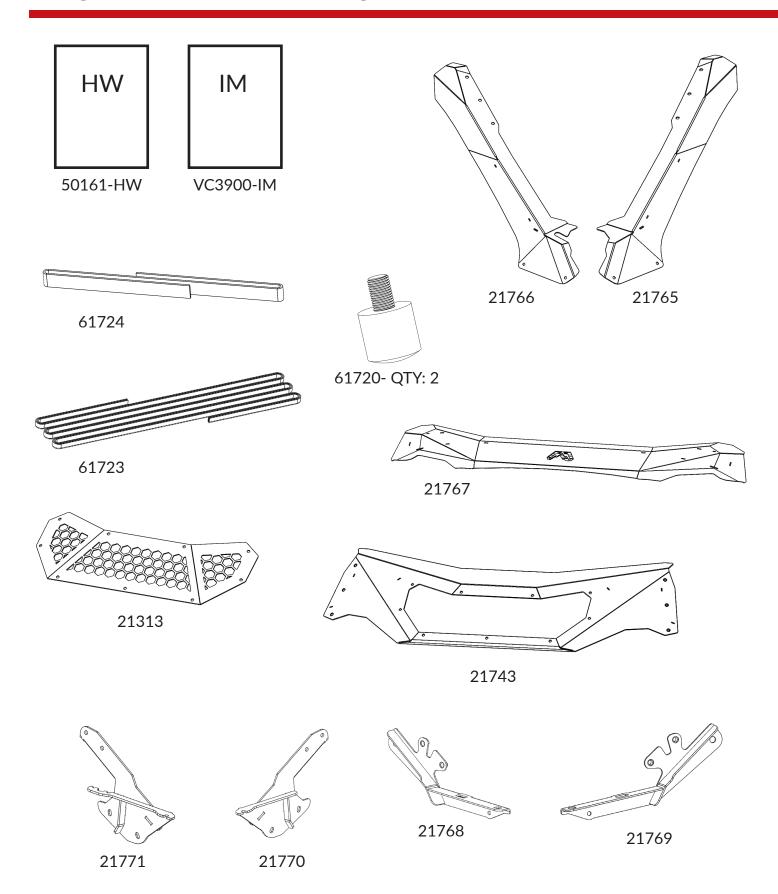
# **GETTING STARTED**

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**



### HARDWARE KIT | 50161

FAB FOURS IDENTIFICATION	COMPONENT Description	QTY
50161- HW	Oil-embedded thrust bearing	2
50161- HW	Oil-embedded flanged sleeve bearing	2
50161- HW	Threadlocker, blue loctite® 242, 0.02 oz. capsule	1
50161- HW	3/8"-16 x 1 1/4 ", yellow zinc, hex cap screw, grade 8	6
50161- HW	5/16"-18, Nylock hex nut	11
50161- HW	5/16", stainless steel, flat washer	11
50161- HW	5/16"-18 x 3/4", stainless steel, button head cap screw	9
50161- HW	5/16", rubber bonded sealing washer	9
50161- HW	1/2", yellow zinc, flat washer, grade 8	2
50161- HW	17/32" drill bit with a 1/2" shank	1
50161- HW	3/8"- expandable inset tool	1
50161- HW	3/8"-16 X 3/4" stainless steel, button head cap screw	10
50161- HW	3/8", rubber bonded sealing washer	10
50161- HW	3/8"-16, knurled Rivet Nut	4
50161- HW	10mm, stainless steel, ball stud, 5/16"-18 threads	2
50161- HW	3/8", yellow zinc, flat washer, grade 8	10
50161- HW	3/8", yellow zinc, lock washer, grade 8	6
50161- HW	3/8"-16, yellow zinc, Nylock nut, grade 8	2
50161- HW	1/4"-20 x 1", yellow zinc, hex cap screw, grade 8	2
50161- HW	1/4"-20, yellow zinc, hex nut, grade 8	2
50161- HW	1/4", yellow zinc, lock washer, grade 8	2
50161- HW	1/4", yellow zinc, flat washer, grade 8	4

### **TOOLS REQUIRED**

- 3/16" Allen Wrench
- 7/23" Allen Wrench
- 9/16" Open end wrench
- 1/2" Open end wrench
- (2) 7/16" Open end wrench
- 3/8" Drive ratchet
- 3/8" Drive, 9" extension
- 3/8" Drive 9/16" socket
- 3/8" Drive, 1/2" socket
- 3/8" Drive, 13mm socket
- Scissors
- 1/4" Drill bit
- 3/8" Drill bit
- Painters tape
- Pen or pencil
- Knife
- Pick or small flat head screwdriver
- Plastic panel pry bar
- 6" Ruler

### **INSTALLATION**

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.

## **DISASSEMBLY**

1. Apply a small amount of blue painter's tape across the hood and fender on both driver and passenger side. Mark the tape with a straight-line perpendicular with the hood and fender body seam. Use a knife to cut the tape along the hood and fender seam.

Note: Step one is recommended to assist you in realignment of the hood during reassembly.

- 2. Loosen the four (4) OEM nuts on each side that secure the hood to the upper hood hinge bracket so they can be removed by hand. (Figure 1)
- 3. Disconnect any electrical connections and washer fluid lines if your vehicle is equipped.
- 4. With assistance, remove the hood bolts and remove the hood.
- 5. Remove both the wiper cowl trim panel from both the driver side and passenger side by pulling out towards the center of the windshield.
- 6. Remove the three (3) screws holding the splash shield to the wheel well. (Figure 2, #1)
- 7. Remove the single bolt from the splash shield. (Figure 2, #2)



Figure 1

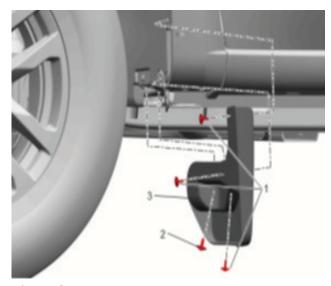
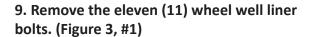
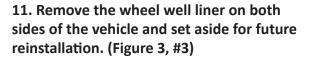


Figure 2

8. Remove the splash shield from the fender area and set aside for future reinstallation.







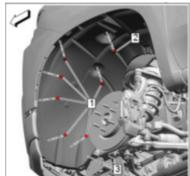




Figure 3

12. Using a small pick or screwdriver, pry out on the metal spring clip (Figure 4, #2). Pull the air spring head (Figure 4, #1) away from the ball stud (Figure 4, #4) while the spring clip is pulled away. Disconnect the air spring from the bracket only and leave attached to frame rail. Rotate forward out of the way.

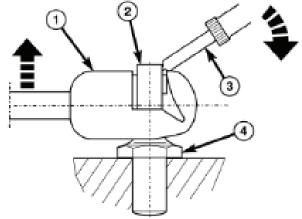


Figure 4

13. Remove the two (2) lower hood hinge bolts. (Figure 5, #1)

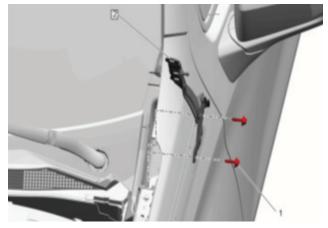


Figure 5

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14. Remove the hood hinges from the fender area and set aside as they won't be used with this product.

### **HOOD HINGE INSTALLATION**

- 1. Install the brass bushing into the upper hole in the upper bracket. (Figure 6)
- 2. Stack the 3/8"-16 Nylock nut on the flat washer and place over the brass bushing. Add the brass thrust washer, followed by the lower bracket, flat washer and 3/8"-16 hex cap screw. Tighten the Nylock nut making sure the thrust washer does not pop out of the brass bushing. (Figure 6)
- 3. Fully assemble and tighten the driver side hood hinge opposite of what is shown in Figure 6.

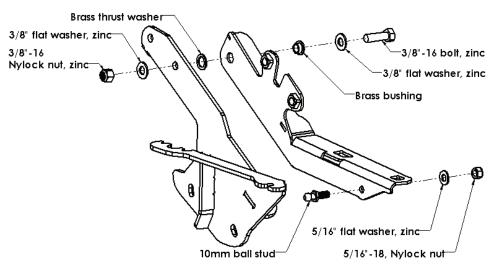


Figure 6 (Passenger Side)

4. Using a 7/16" wrench, install and fully tighten the antenna to the passenger side bracket using the 1/4"-20 yellow zinc hex cap screw, yellow zinc flat washer, yellow zinc flat washer, yellow zinc lock washer and yellow zinc hex nut bolt stack provided in the hardware kit. (Figure 7)

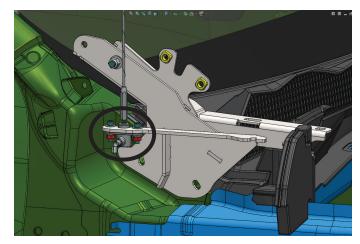
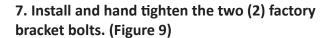


Figure 7

5. Insert the passenger side bracket where the OEM bracket was removed.

6. Using the factory fender bolt, hand tighten the front bracket mount. (Figure 8)



8. Using a ruler, set the height of the upper hole 1-1/16" above the closest portion of the fender profile. (Figure 10)

9. Using either an open-end wrench or ratchet, fully tighten the lower two bolts, then the front fender bolt.

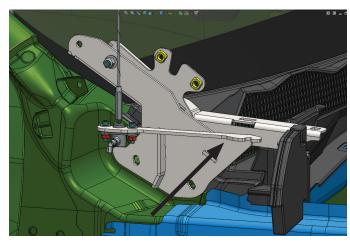


Figure 8

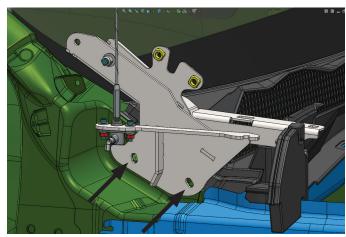


Figure 9

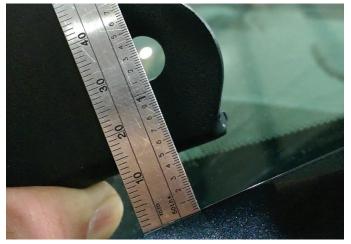
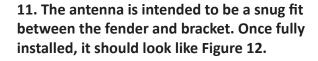


Figure 10

10. Using a 1/2" open ended wrench and 1/2" socket/ratchet, install the ball joint, flat washer and M8 Nylock nut from the provided hardware kit. Snap the OEM air spring to the ball stud on the upper bracket. (Figure 6, Figure 11)



12. Repeat the same steps for the driver side bracket except the antenna installation.

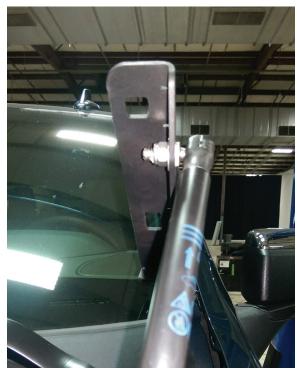


Figure 11

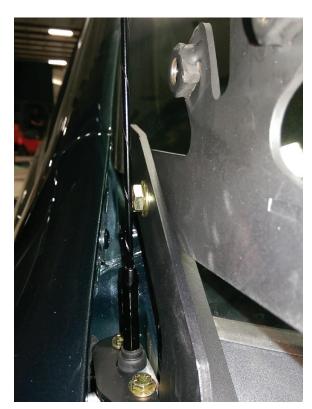


Figure 12

## **HOOD INSTALLATION**

- 1. With assistance, lift the hood onto the upper bracket of the hood brackets and hand tighten the four (4) factory nuts.
- 2. Align the upper bracket with the missing paint marks made under the hood from the factory brackets.
- 3. Lower the hood slowly and check for uniform hood gap and alignment of lines on blue tape made during the disassembly of the OEM hinges. Adjust as needed. (Figure 13)
- 4. Slowly raise the hood just enough to reach in with a 13mm socket and ratchet and fully tighten down the four factory bolts securing the hood.
- 5. Fully raise hood and reconnect the gas assist springs on the ball joint on the hinge upper arm.

Note: Be mindful of how high you raise the hood while making adjustments to alignment. It is possible that the hood will shift without your knowledge if hood is raised too high.



Figure 13

### **VICOWL PREASSEMBLY**

Note: It's highly recommended that all weld nuts are chased with the appropriate taps to clean out any powder coat or foreign debris prior to assembly. Tap sizes needed to do this are 1/2"-13 and 3/8"-16.

1. Install and hand tighten the rubber bumpers and 1/2" flat washers to the visor. (Figure 14)

Note: The rubber bonded washer is used on the outside surface of the visor to reduce any powder coat wear marks that would be created using flat washers and visible if bolts are moved due to reassembly of visor with light insert.

2. Using a 3/16" Allen wrench and 1/2" socket/ ratchet, install and tighten the visor trim (or light insert if purchased) into the back of the visor using the nine (9) 5/16"-18 bolts, rubber bonded washer, flat washer, and 5/16"-18 Nylock nut provided in the hardware kit. The bolt stack starts from the outside and finishes with the nut on the inside. (Figure 15)

Note: bolt stacks with a rubber bonded washer will never feel fully tight. Tighten the bolt just enough before the rubber squeezes out.

3. From the bulk strip of 1" wide neoprene rubber strip, cut and install the three (3) strips to the inside of both arms. (Figure 16)

Note: leave about a 1/8" reveal on the edge of the arms. This will ensure the rubber strip doesn't shift or show after installation. There will be extra material.



Figure 14



Figure 15



Figure 16

4. Loosely install both ViCowl arms to the visor using the six (6) 3/8"-16 yellow zinc, hex cap screws and rubber bonded washers provided in the hardware kit. (Figure 17)



Figure 17

5. Install the edge trim with adhesive onto the leading edge of the Cowl. (Figure 18)

Note: Do not stretch the seal as you apply it to the Cowl. Doing so may cause the seal to pull away from the sheet metal in the future.



Figure 18

- 6. The edge seal should terminate at the hook of the Cowl on each end.
- 7. Trim the edge seal for fit and finish. (Figure 19)

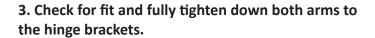


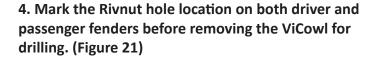
Figure 19

15

### **VICOWL INSTALLATION**

- 1. With assistance, lift the upper ViCowl assembly up over the hood and slowly lower the arms into position. The arm mounting bracket should rest to the outside of the lower hinge and line up with the rear bolt hole.
- 2. Loosely install the 3/8"-16 yellow zinc, hex cap screw, yellow zinc lock washer and yellow zinc flat washer through the lower hinge bracket and into the arm securing the ViCowl from falling lower on the vehicle. (Figure 20)





Note: A high degree of accuracy is needed when marking the Rivnut locations. Hold the arm tight to fender if needed while marking. The Rivnuts constitute a majority percentage of the mounting strength of the upper ViCowl to the vehicle. A hole center punch is recommended followed by incremental pilot holes to the finish hole size of the included 17/32" drill bit. You will have trouble lining up bolt holes if Rivnuts are misplaced.



6. Use the 1/8" drill bit to drill pilot holes in each of the marked locations. Then use a 3/8" drill bit to drill a bigger hole. Drill directly perpendicular to the side of the fender. (Figure 22)

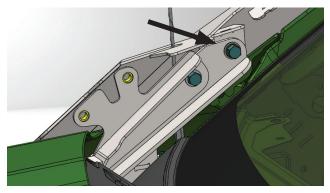


Figure 20



Figure 21



Figure 22

- 7. Fully dill out the holes with the 17/32" drill bit. (Figure 23)
- 8. With the expendable tool threaded into the Rivnut, insert it into one of the holes making sure that it fits in far enough to flush the collar of the Rivnut to fender panel. For an exceptional installation coat the knurls of the Rivnut with Loctite.



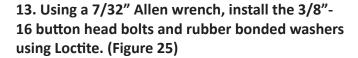
Figure 23

9. Place the 9/16" box end wrench on the body of the expendable tool and the 9/16" socket and ratchet on the bolt head on the back side of the tool. (Figure 24)



Figure 24

- 10. Tighten the bolt into the Rivnut until it becomes snug in the fender panel. DO NOT OVER TIGHTEN CAUSING THE INSERT TO SPIN!
- 11. Repeat steps 6-10 to drill the remaining Rivnut hole locations marked on the vehicle.
- 12. With assistance, reinstall the upper ViCowl using steps 1-3 of the ViCowl installation section.



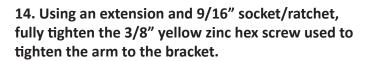
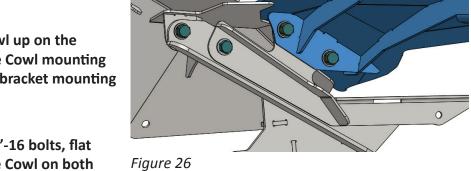




Figure 25

- 15. Check for symmetry of the visor and both arms. Using a 7/32" Allen Wrench, fully tighten the six (6) 3/8" stainless steel button head screws with rubber washers.
- 16. With assistance, lower the Cowl up on the mounting surface of the arms. The Cowl mounting surface goes to the outside of the bracket mounting surface.
- 17. Loosely install the four (4) 3/8"-16 bolts, flat washers and lock washers into the Cowl on both passenger and driver side. (Figure 26)



16. Using a plastic panel pry bar, insert the pry bar under the Cowl and on top of the arm to maintain a symmetrical gap on each arm. (Figure 27)

Note: An 1/8" gap is required on both sides to prevent rubbing the Cowl and the arm together and causing damage.

17. Push down the front of the Cowl closing any gap that may be between the hood and the edge trim of the Cowl. Fully tighten down the front and back bolts.

Note: We recommend using an impact driver, long extension, and swivel to make tighten down of the Cowl hardware.



Figure 27

- 18. Remove the plastic panel pry bar.
- 19. Repeat steps 16-18 for the opposite side of the vehicle.
- 20. Once the ViCowl is fully installed, reinstall the well liners and splash guard.