



**BLACK HORSE
OFF ROAD**

TEL: 1-866-XANATOS

INSTALLATION INSTRUCTIONS

MD1 FRONT BUMPER

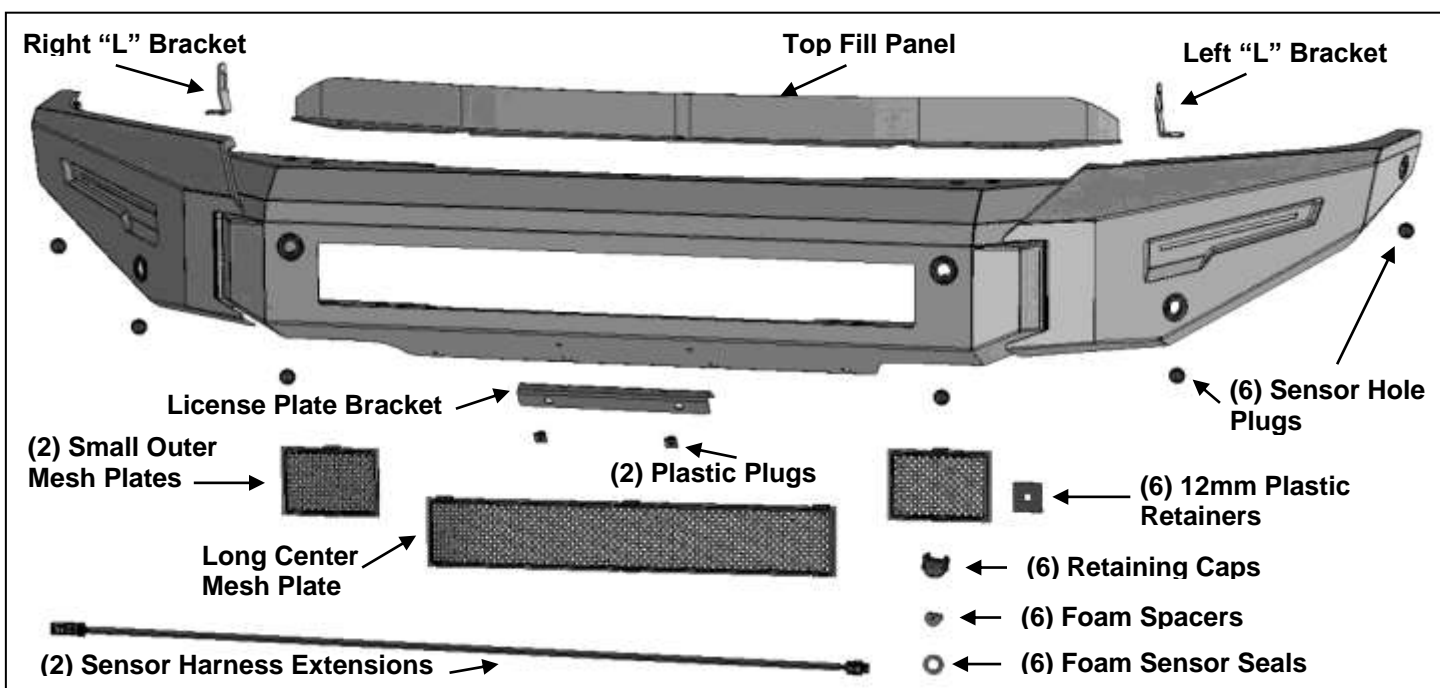
2021-2023 FORD F150 (Excl. 2022-2023 F150 Lightning EV)

PART#AFB-F121-BU

MD-1 FRONT BUMPER
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PARTS LIST:

1	MD-1 Front Bumper	6	12mm Nylon Lock Nuts
1	Bumper Top Fill Panel	4	10-1.5mm x 30mm Hex Bolts
1	Long Center Mesh Plate	4	10mm x 20mm x 2mm Flat Washers
2	Small Outer Mesh Plates	4	10mm Lock Washers
1	Driver/left "L" Bracket (center LED light)	2	8-1.25mm x 20mm Hex Bolts
1	Passenger/right "L" Bracket (center LED light)	2	8-1.25mm x 16mm Hex Bolts
1	License Plate Bracket	6	8mm x 24mm x 2mm Flat Washers
2	Plastic Plugs for license plate mount	4	8mm Lock Washers
1	LED Wiring Harness Kit	2	8mm Hex Nuts
6	Sensor Retaining Caps	10	6-1.0mm x 20mm Combo Bolts
6	20mm x 10mm Foam Spacers	5	6-1.0mm x 20mm Button Head Bolts
6	15.5mm x 25mm x 2mm Foam Seals	10	6mm x 18mm x 1.6mm Flat Washers
6	Sensor Hole Plugs	10	6mm Flange Nuts
2	Sensor Wiring Harness Extensions	5	6mm Nylon Lock Nuts
6	12mm Plastic Retainers	12	Self-Tapping Screws
6	12-1.75mm x 35mm Hex Bolts	1	4mm Wrench
12	12mm x 32mm x 3mm Flat Washers		



PROCEDURE:

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

1. Remove the license plate and bracket.
2. From behind the front bumper, unplug and remove the active air dam from the bottom of the frame, **(Figures 1 & 2)**. It is not necessary to remove the lift motors, only remove the (6) bolts to remove the air dam.
3. With the air dam out of the way, locate and unplug the main harness plug on the top of the passenger/right frame rail behind the bumper bracket, **(Figure 3)**. Unplug any remaining harnesses leading to the bumper. On hybrid models, temporarily unplug and remove the speaker assembly for

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the pedestrian audible alert system from the driver/left frame channel, **(Figure 4)**. Note speaker is located on the inner side of the frame, behind the driver/left bumper bracket. From below, remove the hex bolt and drop the speaker down, unplug and remove, **(Figure 5)**.

4. Place blocks or jack stands under the front bumper to support it during mounting hardware removal. Once the bumper has been safely supported, remove the large hex nuts from the back of each bumper bracket attaching the bumper to the bumper brackets, **(Figure 6)**. **WARNING!** Assistance is required to hold the bumper in place during hardware removal to prevent the bumper from falling. Carefully slide the bumper off over the tow hooks if equipped.
5. On models with bolt-on frame extensions, remove the extensions from outside of frame, **(Figure 6)**. **NOTE:** It may be necessary to cut the bolts to remove frame extensions, (removal is optional).
6. Carefully unwrap the Bumper assembly. Pull outward to unfold the passenger/right outer wing until fully extended, **(Figure 7)**. Anchor the Wing to the back of the Bumper with the included (2) 10mm x 30mm Hex Bolts, (2) 10mm Lock Washers and (2) 10mm Flat Washers, **(Figure 8)**. Leave hardware loose at this time. Repeat this Step to unfold and attach the driver/left Wing to the Bumper. **IMPORTANT:** There is a small amount of adjustment in the Wings that can increase or decrease the final width of the Bumper. Loosen the (2) pivot bolts and the (2) anchor bolts and pull each Wing outward as far as possible to start, **(Figure 9)**. Snug hardware but do not fully tighten at this time.
7. Select the Top Fill Panel, **(Figure 10)**. Attach the Fill Panel to the inside, top of the Bumper with the included (3) 6mm x 20mm Button Head Bolts, (6) 6mm Flat Washers and (3) 6mm Nylon Lock Nuts.
8. Disassemble the factory front bumper to unplug and remove sensors and wiring harness from bumper. Pay attention to mounting location of all sensors for proper reinstallation.
9. Determine if the vehicle is equipped front sensors:

Models without bumper sensors:

- a. Select the included (6) Plastic Plugs.
- b. From the front, push the plugs into the sensor mounting holes, **(Figure 11)**.

Models with bumper mounted parking sensors:

- a. Select the driver/left outer sensor. Remove the silicone seal from the end of the sensor. Slide the included larger Foam Sensor Seal over front of sensor, **(Figure 12)**.
 - b. Insert sensor with Seal into driver/left outer sensor mount, **(Figure 13)**.
 - c. Place Foam Spacer over end of sensor. Push Sensor Retaining Cap onto sensor mount and lock into mounting holes, **(Figure 13)**.
 - d. Repeat previous Steps to install remaining sensors.
 - e. Install wiring harness for sensors. **NOTE:** Use the included (2) Wire Harness Extensions to extend the length of the factory harness to reach all sensors.
 - f. **Optional:** Secure each sensor to the socket with (2) 4mm Self Tapping Screws. **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.
10. Determine if accessory lights, (not included), or Screen Fill Panels will be installed at this time. **NOTE:** It may be easier to install Fill Panels and/or lights before installing Bumper. **IMPORTANT:** On Ecoboost models, center LED Light installation that partially or fully blocks the opening in the Bumper is not recommended. Blocking the Ecoboost engine may cause overheating.

Screen Fill Panel Installation (do not install fill panels if installing lights).

- a. Select desired long center or small outer Screen Fill Panels, **(Figures 14 & 15)**.
- b. Attach Screen Fill Panels as needed with the included 6mm Button Head Combo Bolts and 6mm Flange Nuts, **(Figure 14)**. Fully tighten Fill Panel hardware at this time. Repeat to install all Panels as desired.

Inner center LED bar style light installation (light not included).

- a. Select the passenger/right "L" Light Bar Bracket, **(Figure 16)**. **NOTE:** "L" Brackets are offset to adjust for different widths of LED Bar Lights and can be installed on either side as needed.
- b. Attach the "L" Bracket to the slot on the back of the Bumper with (1) 8mm x 20mm Hex Bolt, (2) 8mm Flat Washers, (1) 8mm Lock Washer and (1) 8mm Hex Nut, **(Figure 16)**. Repeat this Step to

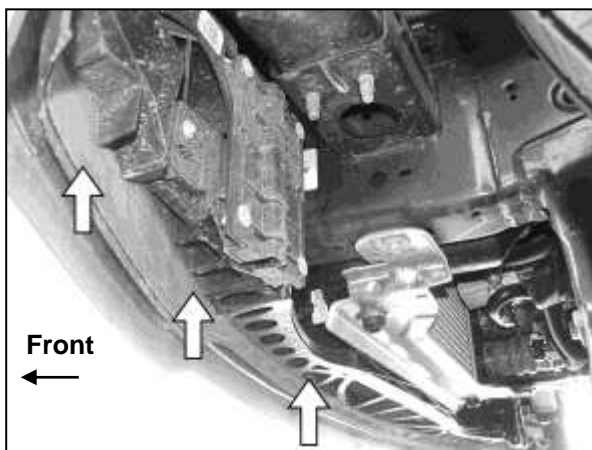
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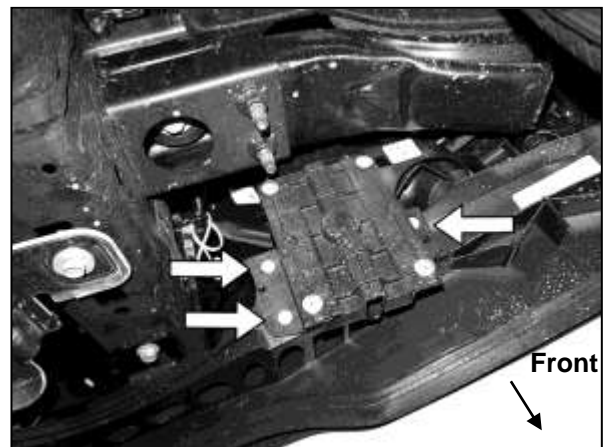
install the remaining “L” Bracket on the other side of the Bumper. **IMPORTANT:** The Bumper features slots designed for most 20” and 30” bar style lights. Attach the Brackets to the correct slots in the Bumper. If necessary, hold the light up to the slots to help determine correct slots to use.

- c. Attach the light to the “L” Brackets with the hardware included with the light or the supplied (2) 8mm x 16mm Hex Bolts, (2) 8mm Lock Washers and (2) 8mm Flat Washers, **(Figure 16)**. Do not fully tighten hardware at this time.
11. Select (1) 12mm x 35mm Hex Bolt, (1) 12mm Flat Washer and (1) 12mm Plastic Retainer. Slide the Flat Washer onto the Hex Bolt. Insert the Hex Bolt and Washer into and out the back of the mounting plate on the driver/left side of the Bumper, **(Figure 17)**. Thread the 12mm Plastic Retainer onto the end of the Hex Bolt. Tighten the Retainer up against the mounting plate to secure the Hex Bolt in place, **(Figure 18)**. **NOTE:** The Plastic Retainers are used to hold the Hex Bolts in place and help in Bumper installation. Use is not mandatory for installation. Repeat this Step to attach (2) Hex Bolts with Washers to the remaining slots in the driver/left mounting plate, **(Figure 18)**.
12. Repeat the previous Step to install the (3) 12mm Hex Bolts with Washers on the passenger/right side of the Bumper.
13. With assistance, position the Bumper Assembly up to the frame. 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.
14. Attach the Bumper to the (6) 12mm Hex Bolts with the included (6) 12mm Flat Washers and (6) 12mm Nylon Lock Nuts, **(Figure 19)**. Do not fully tighten hardware at this time.
15. Level and adjust the Bumper and fully tighten all hardware. **IMPORTANT:** Adjust wings on bumper as needed and fully tighten all wing pivot and mounting hardware, **(Figure 20)**. If necessary, temporarily remove bumper to fully tighten inner 10mm anchor hardware.
16. Attach the License Plate Bracket to the holes in the bumper with the included (2) 6mm x 20mm Button Head Screws, (4) 6mm Flat Washers and (2) 6mm Nylon Lock Nuts, **(Figure 21)**. Insert (2) Plastic Plugs into the square holes in the Bracket. Reuse the factory screws to attach the license plate to the plastic plugs.
17. Models with parking sensors, plug the bumper wiring harness into the factory harness.
18. 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.

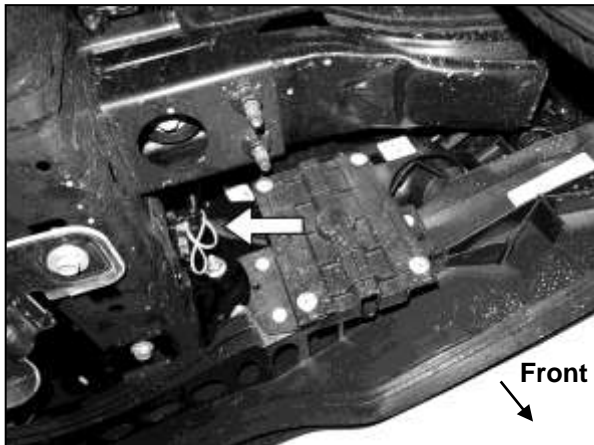


(Fig 1) Active air dam behind bumper

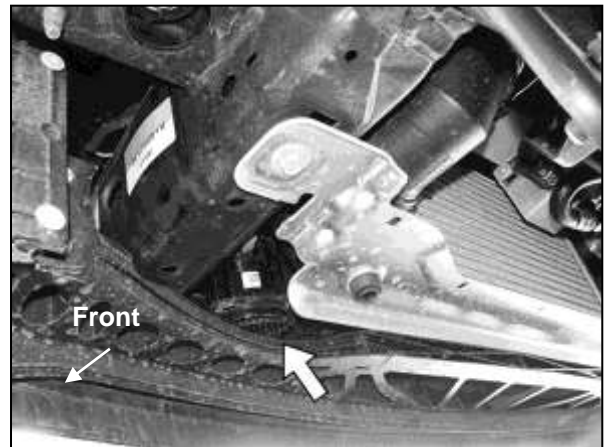


(Fig 2) Remove bolts (arrows) to remove active air dam from motors (passenger/right side pictured)

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(Fig 3) Locate and unplug main harness plug on passenger/right side of bumper (arrow)



(Fig 4) Hybrid Models Only, locate alert speaker behind driver/left side of bumper



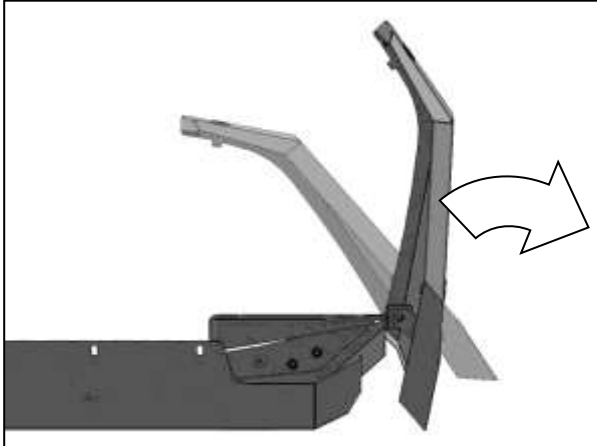
(Fig 5) Remove bolt (arrow) to temporarily remove audible alert speaker located behind driver/left side of bumper (hybrid models only-pictured from below)

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



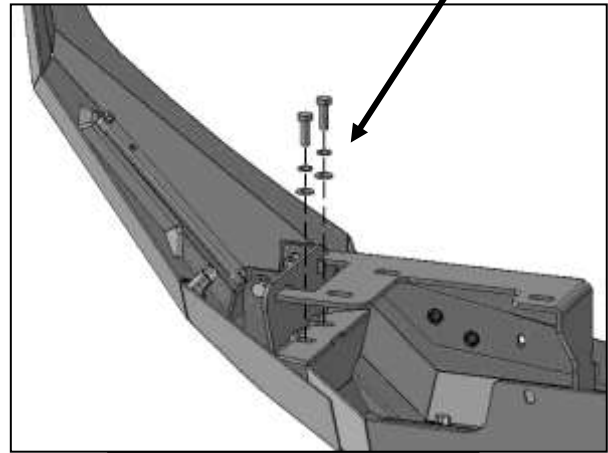
(Fig 6) Remove bumper. Also remove the factory frame extension (arrow-optional)

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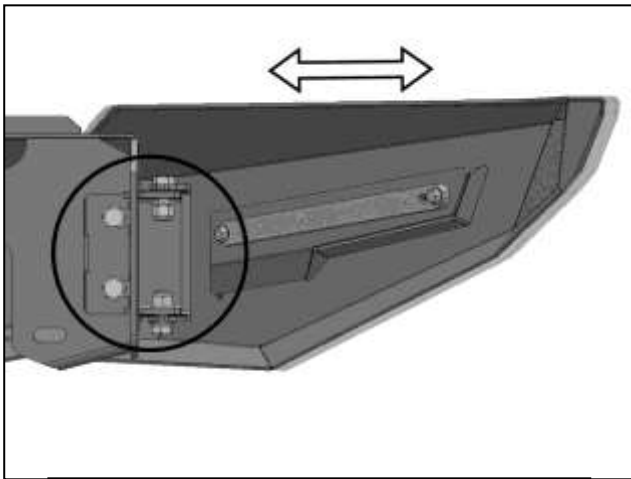


(Fig 7) Unfold outer Wings from center Bumper. Passenger/right side illustrated from below

- (2) 10mm Hex Bolts**
- (2) 10mm Lock Washers**
- (2) 10mm Flat Washers**

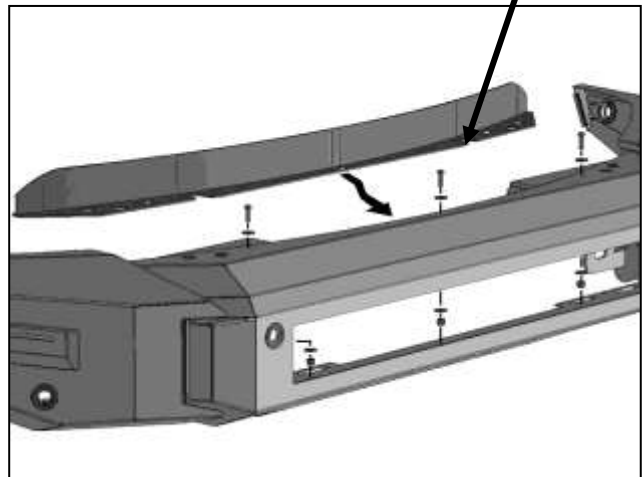


(Fig 8) Anchor outer Wings to back of center Bumper



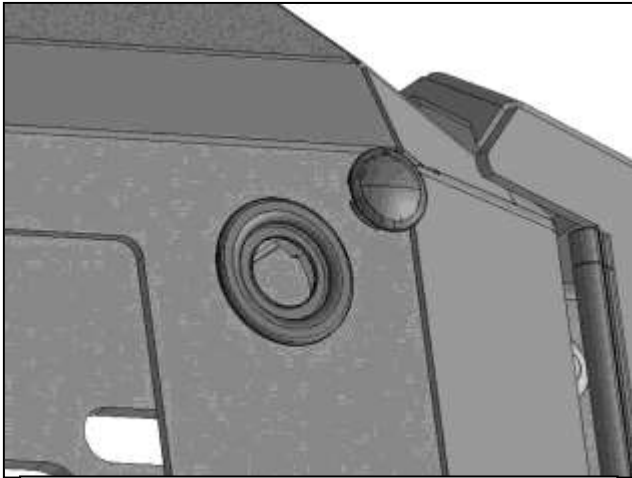
(Fig 9) Loosen hardware and pull Wing outward to widen overall Bumper

- (3) 6mm x 20mm Button Head Bolts**
- (6) 6mm Flat Washers**
- (3) 6mm Nylon Lock Nuts**

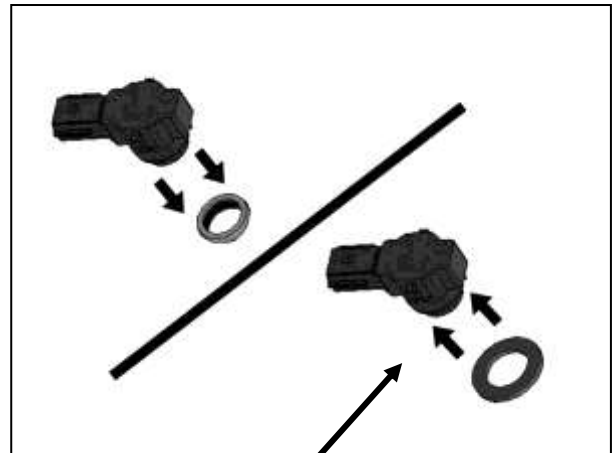


(Fig 10) Attach Top Fill Panel to inside/top of Bumper

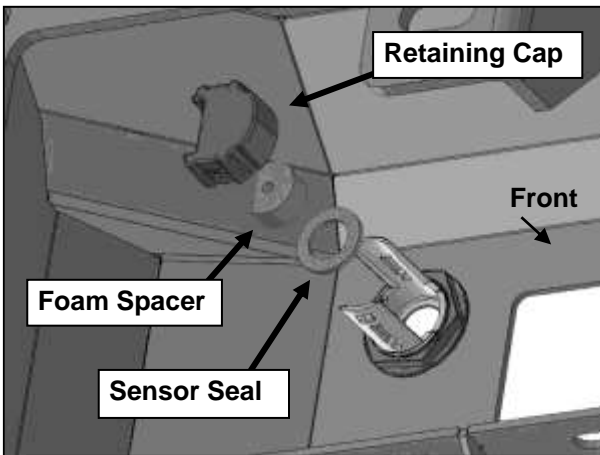
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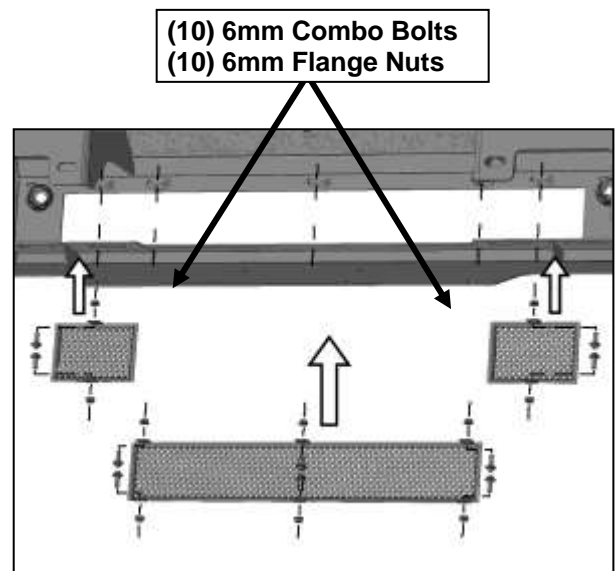
(Fig 11) Push Plastic Plug into sensor mount



(Fig 12) Remove silicone seal from sensor. Slide large Seal over end of sensor (arrow)



(Fig 13) Insert sensor assembly into the sensor mount on back of Bumper



(Fig 14) Attach Outer and Center Mesh Plates to tabs on the back of the bumper as desired

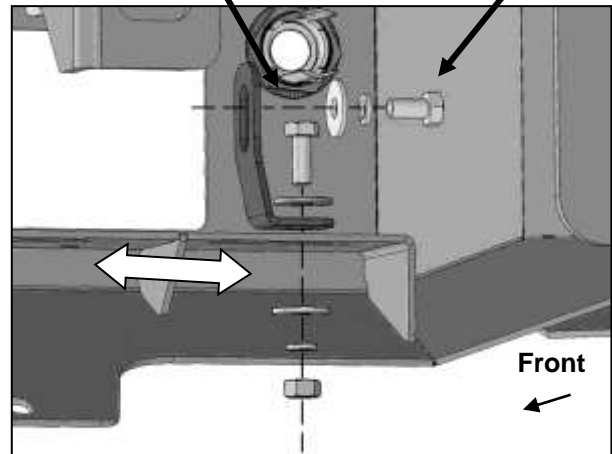
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(Fig 15) Outer and Center Mesh Plates attached

**8mm x 20mm Hex Bolt
 (2) 8mm Flat Washers
 8mm Lock Washer
 8mm Hex Nut**

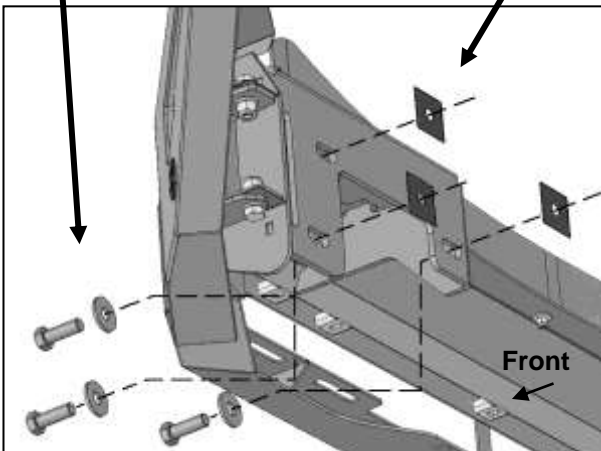
**8mm x 16mm Hex Bolt
 8mm Lock Washer
 8mm Flat Washer**



(Fig 16) Passenger/right side "L" Bracket attached to the back of the bumper. NOTE: Mount the "L" Bracket to the proper slot for the size of led light

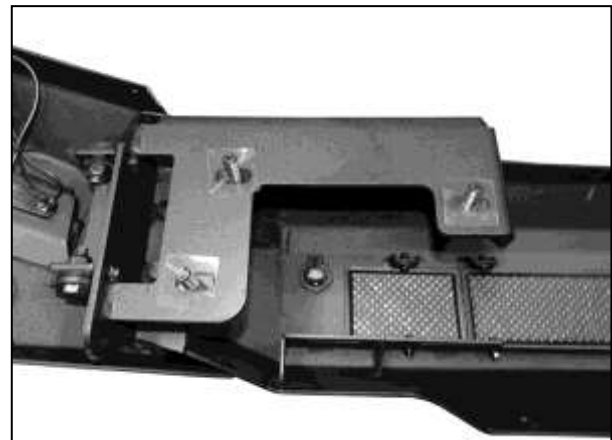
**(3) 12mm x 35mm Hex Bolts
 (3) 12mm Flat Washers**

(3) 12mm Plastic Retainers



(Fig 17) Insert 12mm Hex Bolts with Flat Washers through mounting plates. Thread 12mm Plastic Retainers onto the Hex Bolts to hold in place. Driver/left side illustrated

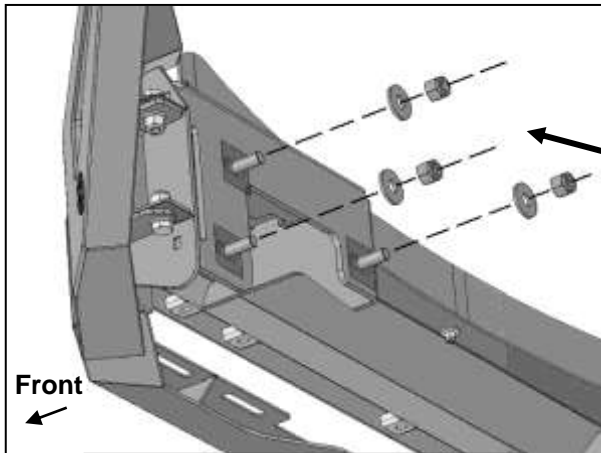
WARNING! Do not crawl under bumper unless it is properly supported on blocks or stands or the bumper may fall.



(Fig 18) Thread 12mm Plastic Retainers onto the Hex Bolts to hold in place. Driver/left side pictured

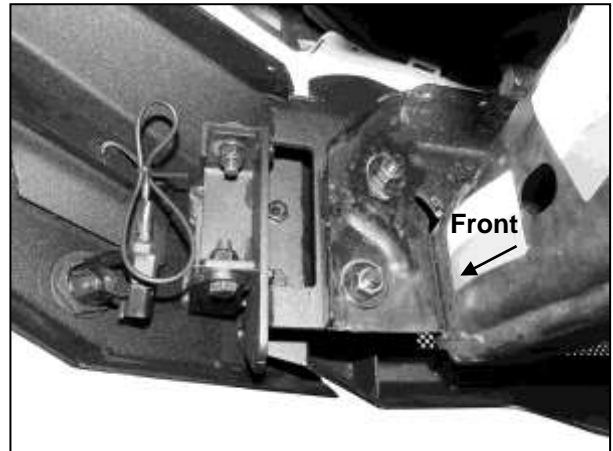
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WARNING! Do not crawl under bumper unless it is properly supported on blocks or stands or the bumper may fall.



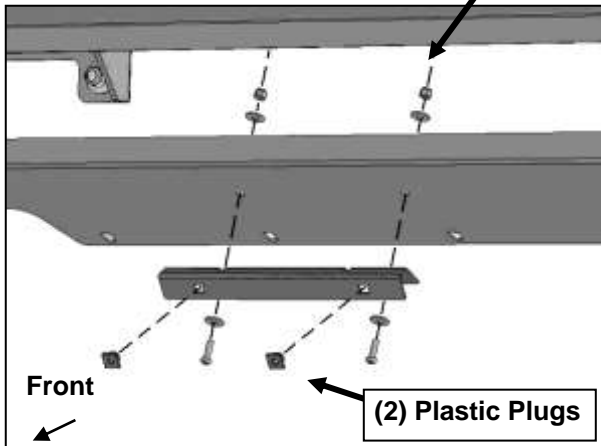
(Fig 19) Attach driver/left side of Bumper to end of frame

- (3) 12mm x 35mm Hex Bolts
- (6) 12mm Flat Washers
- (3) 12mm Nylon Lock Nuts
- (3) 12mm Plastic Retainers



(Fig 20) Driver/left side complete installation pictured from behind Bumper

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

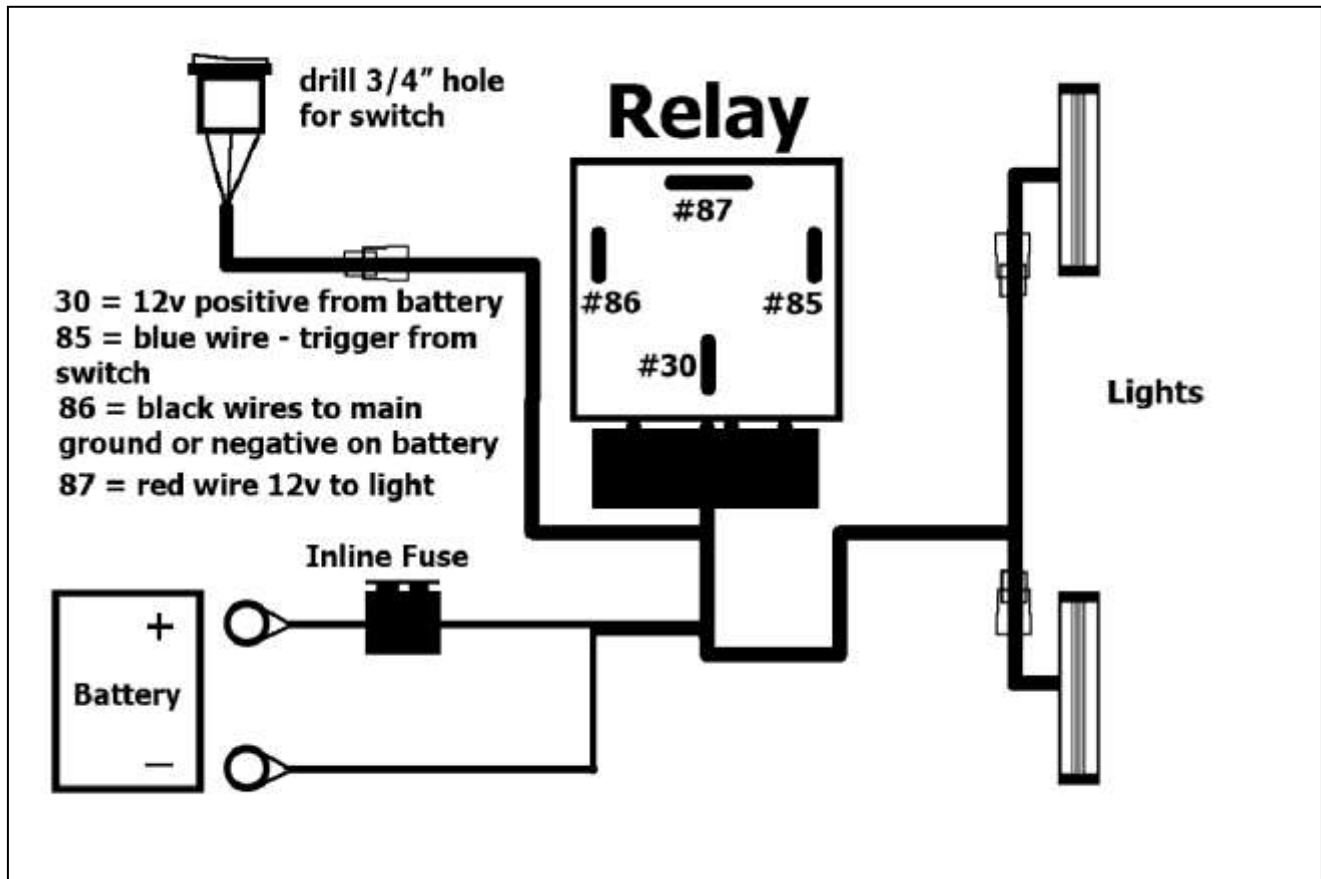


(Fig 21) Attach License Plate Bracket to Bumper



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Complete Bumper installation pictured with
Light Bar Hoop and light (not included)



GENERAL LIGHT WIRING PROCEDURE:

1. REMOVE CONTENTS FROM BOX. VERIFY ALL PARTS ARE PRESENT. READ INSTRUCTIONS CAREFULLY. DRILLING IS REQUIRED. ELECTRICAL KNOWLEDGE IS HIGHLY RECOMMENDED.
2. Open hood and disconnect battery.
3. Unwrap preassembled wiring harness. Disconnect the plug in the harness leading to the lighted switch. Locate suitable mounting location for switch. Drill 3/4" hole in panel to mount switch. **IMPORTANT:** Do not drill any holes in panel until back of location is properly checked for clearance. Use of safety goggles is required.
4. Run switch harness through firewall on vehicle. Drill hole through firewall as required for harness plug. Highly recommend use of rubber grommet (not included) to protect harness. Feed switch harness plug through hole in firewall. Seal firewall with silicone as necessary.
5. Attach Relay and main harness to suitable location near battery (firewall or inner fender for example). Do not connect to battery at this time.
6. Attach switch plug to switch harness and tie harness away from anything that could damage harness.

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7. Run the prewired light harness down to each light. Plug harness into prewired plug on each light. Tie wiring harness away from anything that could damage harness.
8. Attach the fused red positive and black negative wires on the main harness to the battery. **NOTE:** Attach black negative wire to negative terminal on battery or suitable chassis ground.
9. Reattach battery cables to battery. Installation is complete.
10. Do periodic inspections to the installation to make sure that all hardware is secure and tight and all wiring harnesses are properly secured and free from excessive movement.