



TEL: 1-866-XANATOS

INSTALLATION INSTRUCTIONS

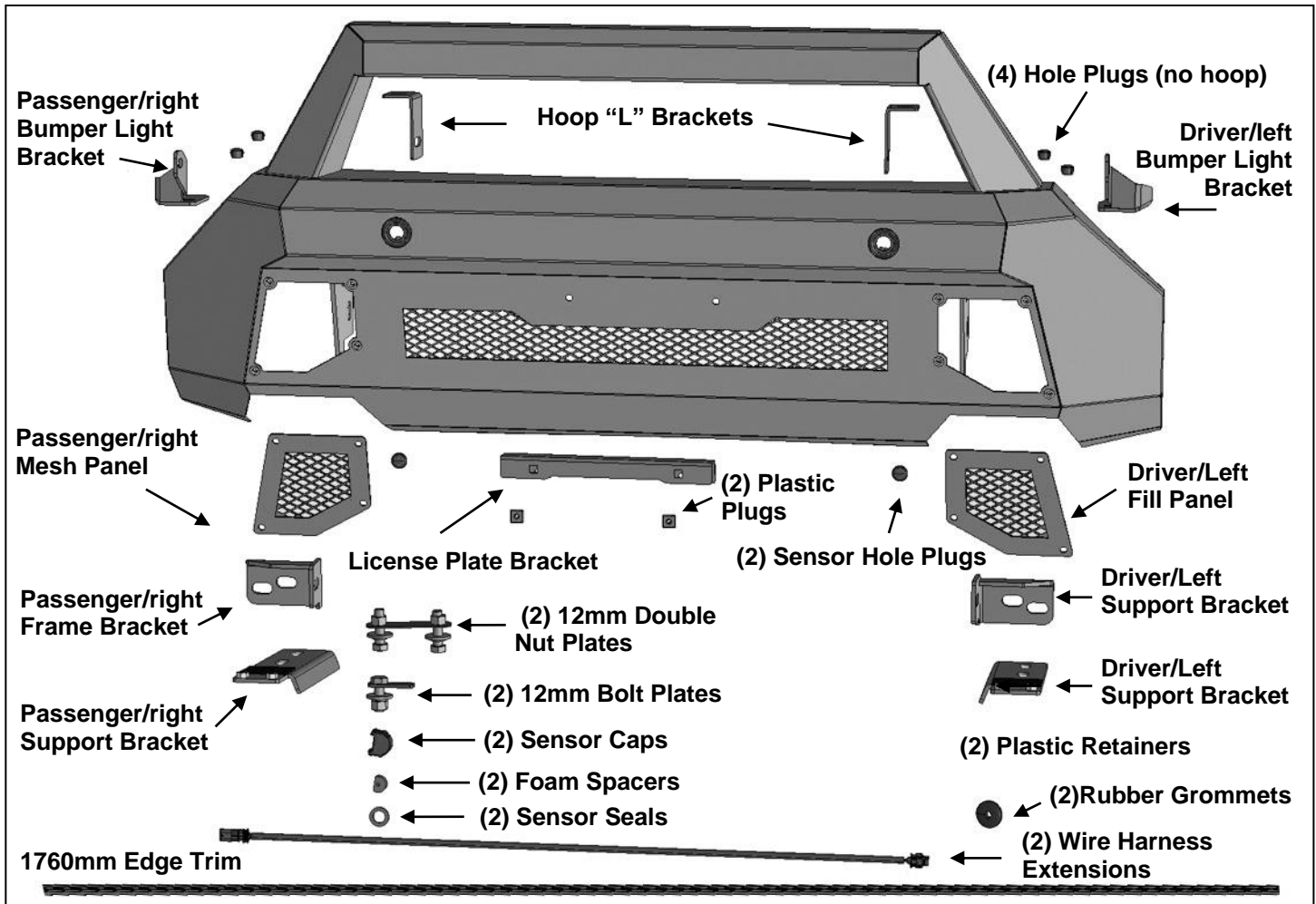
**ARMOUR III LD FRONT BUMPER
21-23 FORD F150 (Excl. 22-23 F150 Lightning EV)
PART# AR3LD42NL**

CS-1 LD FRONT BUMPER
21-23 FORD F150(EXCL. 22-23 F150 LIGHTNING)

PARTS LIST:

1	CS1 LD Front Bumper Assembly	4	12-1.75mm x 45mm Hex Bolts
1	Driver/left Mesh Fill Panel	8	12mm x 32mm x 3mm Flat Washers
1	Passenger/right Mesh Fill Panel	8	12mm Lock Washers
1	Driver/left Mounting Bracket	4	12mm Hex Nuts
1	Passenger/right Mounting Bracket	2	8-1.25mm x 25mm Hex Bolts (stainless)
1	Driver/left Support Bracket	4	8mm Lock Washers (stainless)
1	Passenger/right Support Bracket	4	8-1.25mm x 25mm Hex Bolts
1	Driver/left Bumper LED Bracket (no hoop)	2	8-1.25mm x 16mm Hex Bolts (LED light bar)
1	Passenger/right Bumper LED Bracket (no hoop)	6	8mm x 24mm x 2mm Flat Washers
2	LED "L" Brackets (attach to hoop)	4	8mm x 16mm x 1.6mm Flat Washers
1	License Plate Bracket	4	8mm Lock Washers
2	Plastic Plugs for license plate mount	2	8mm Hex Nuts
2	Sensor Retaining Caps	8	6mm x 20mm Button Head Combo Bolts
2	20mm x 10mm Foam Spacers	2	6mm x 20mm Button Head Bolts
2	15.5mm x 25mm x 2mm Foam Seals	4	6mm x 18mm x 1.6 Flat Washers
2	Plastic Sensor Hole Plugs	2	6mm Nylon Lock Nuts
2	Wire Harness Extensions	4	4mm Self Tapping Screws
2	Rubber Grommets (Wire Harness Extensions)	1	4mm Wrench
1	Sensor Cover Kit	10	Nylon Wire Ties
2	12mm Plastic Retainers	4	Hole Plugs (bumper top)
2	12-1.75mm Double Nut Plates	1	1760mm Bumper Edge Trim
4	12-1.75mm Bolt Plates		

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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. BUMPER IS NOT COMPATIBLE WITH ACC (ADAPTIVE CRUISE CONTROL). FUNCTION MUST BE DISABLED OR SENSOR RELOCATED. CUTTING MAY BE REQUIRED.

1. Remove the license plate and bracket.
2. Remove the driver/left side tow hook and seal, **(Figure 1)**. On models without tow hooks, insert the included 12mm Double Nut Plate into the end of the frame. Line up the Nut Plate with the holes in the bottom of the frame.
3. Attach the driver/left Support Bracket to the bottom of the frame, between the tow hook and the frame, with the included (2) 12mm x 45mm Hex Bolts, (2) 12mm Lock Washers and (2) 12mm Flat Washers, **(Figure 2 & 3)**. Do not fully tighten hardware at this time. **IMPORTANT:** Seal around tow hook must be cut to clear the Support Bracket, **(Figure 4)**. Reinstallation is optional.
4. Remove the driver/left side plastic cover from the center of the bumper, **(Figure 1)**. Insert (1) 12mm Bolt Plate into the hole in the inner bumper bracket. Thread (1) 12mm Plastic Retainer onto the Bolt Plate to help hold it in place, **(Figure 5)**. **NOTE:** Plastic Retainer is supplied to help with Bracket installation. Use is not mandatory for installation.
5. Select the driver/left Frame Mounting Bracket. Slide the Bracket over the Bolt Plate. **IMPORTANT:** Guide the "outer" hole in the Bracket over the Bolt Plate, **(Figure 6)**. Attach the Bracket to the Bolt Plate with the included (1) 12mm Flat Washer, (1) 12mm Lock Washer and (1) 12mm Hex Nut, **(Figure 7)**. Snug but do not fully tighten hardware at this time.

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6. Repeat **Steps 2—5** to attach the passenger/right Support and Frame Brackets, (**Figures 8—10**). **IMPORTANT:** Use the “inner” hole in the passenger/right Frame Mounting Bracket to attach the Bracket to the Bolt Plate.
7. Unwrap the CS1 Bumper. Apply the included Edge Trim to the edge of the Bumper, (**Figure 11**).
8. Determine if vehicle is equipped with parking sensors.

Models without bumper sensors:

- a. From the front of the CS1 Bumper, push the included Plastic Plugs into sensor holes, (**Figure 12**).

Models with bumper mounted parking sensors:

- a. Unplug and remove the (2) center sensors and holders from the plastic bumper cover.
 - b. Remove the silicone seal from the end of the sensor, (**Figure 13**).
 - c. Slide the included larger Foam Seal over front of sensor, (**Figure 13**).
 - d. Insert sensor with Seal into sensor mount on CS1 Bumper, (**Figure 14**).
 - e. Place Thick Foam Spacer over end of sensor. Push Sensor Retaining Cap onto sensor mount and snap into place, (**Figure 14**).
 - f. Repeat previous **Steps** to install remaining sensor.
 - g. Slide the Rubber Grommet onto (1) Wiring Harness Extension, (**Figure 15**).
 - h. Plug the Wiring Harness Extension into the bumper wiring harness. Push the Grommet into the hole in the plastic bumper cover. Repeat to install the remaining Harness with Grommet.
9. Determine if Bull Nose Hoop (preinstalled on Bumper) will be used. **NOTE:** Bull Nose Hoop may interfere with grille mounted camera if equipped and is not recommended with this option.

Top LED light installation with Bull Nose Hoop (light not included).

- a. Select the “L” Brackets, (**Figure 16**). Attach the Brackets to the bottom of the Bull Nose Hoop with the included (2) 8mm x 25mm Hex Bolts, (4) 8mm Large Flat Washers, (2) 8mm Lock Washers and (2) 8mm Hex Nuts. Leave loose at this time.
- b. Attach the LED light assembly to the “L” Brackets with the included (2) 8mm x 16mm Hex Bolts, (2) 8mm Lock Washers and (2) 8mm Large Flat Washers, (**Figure 16**). Do not fully tighten hardware at this time. **IMPORTANT:** “L” Brackets are designed for 8mm light mounting hardware only. Modify “L” Brackets if necessary or use brackets supplied by the light manufacturer to install hardware larger than 8mm.
- c. Follow light manufacturer’s instructions to properly wire the light.

LED Light installation on top of CS1 Bumper, Bull Nose Hoop Removed.

- a. Remove Bull Nose Hoop. Reuse the mounting hardware to attach the driver/left Light Bracket to the top of the CS1 Bumper, (**Figure 17**). Repeat to install the passenger/right Light Bracket.
 - b. Attach the LED light assembly to the Brackets with the included (2) 8mm x 16mm Hex Bolts, (2) 8mm Lock Washers and (2) 8mm Large Flat Washers, (**Figure 16**). Do not fully tighten hardware at this time. **IMPORTANT:** Brackets are designed for 8mm light mounting hardware only. Modify Brackets if necessary to install hardware larger than 8mm.
 - c. Follow light manufacturer’s instructions to properly wire the light to the vehicle.
 - d. **If light will not be installed**, use the included (4) Plugs to cover the mounting holes in the top of the Bumper, (**Figure 17**).
10. On models requiring front license plate, attach the License Plate Bracket to the front of the CS1 Bumper with the included (2) 6mm x 20mm Button Head Bolts, (4) 6mm Flat Washers and (2) 6mm Nylon Lock Nuts (**Figure 18**). Insert the (2) Plastic Plugs into the square holes in the Bracket. Reuse the factory hardware to attach the license plate to the Plugs in the Bracket.
 11. With assistance, position the Bumper Assembly up to the front of the vehicle. On models with parking sensors, plug the wiring harnesses into the parking sensors. Hold the Bumper up to the inside of the Frame Mounting Brackets. 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.
 12. Insert (1) 12mm Bolt Plate into the opening in the CS1 Bumper. Guide the Bolt Plate into and through the back of the mounting plate on the Bumper and through the Frame Bracket, (**Figure 19**). Attach the Bumper and Bracket to the Bolt Plate with (1) 12mm Flat Washer, (1) 12mm Lock Washer and (1) 12mm Hex Nut, (**Figure 20**). Repeat this **Step** to attach the passenger/right side of the CS1 Bumper.

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13. Attach the bottom of the CS1 Bumper to the driver/left Support Bracket with the included (2) 8mm x 25mm Hex Bolts, (2) 8mm Lock Washers and (2) 8mm x 16mm Small Flat Washers, **(Figures 21 & 22)**. Repeat this **Step** to attach the passenger/right side of the Bumper to the Support Bracket.
14. Level and adjust the bumper and fully tighten all hardware.
15. Select the driver/left Mesh Fill Panel. Attach the Panel to the front of the Bumper with (4) 6mm Button Head Combo Bolts, **(Figure 23)**. Repeat this Step to install the passenger/right Fill Panel.
16. 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.



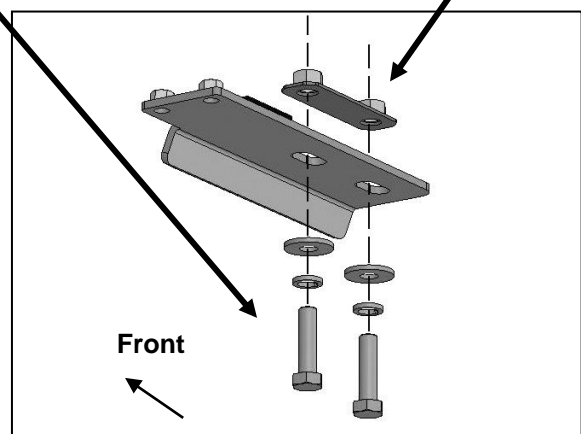
(Fig 1) Remove plastic cover from bumper. Remove tow hook and runner seal if equipped



(Fig 3) Attach driver/left Support Bracket to bottom of frame, between tow hook and frame.

**(2) 12mm x 45mm Hex Bolts
(2) 12mm Lock Washers
(2) 12mm Flat Washers**

**Models without tow hooks,
insert 12mm Double Nut
Plate into end of frame**



(Fig 2) Attach driver/left Support Bracket to bottom of frame, between tow hook and frame.

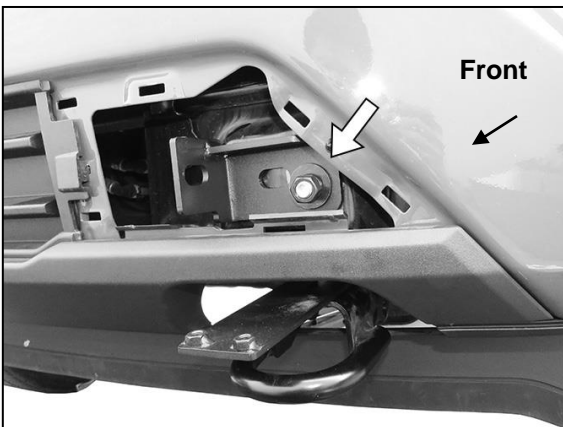


(Fig 4) Rubber seal must be cut to clear the Support Bracket, (arrow). Note, reinstallation optional

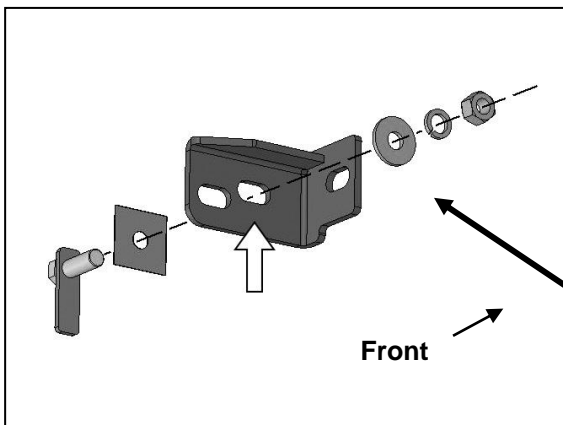
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(Fig 5) Insert Bolt Plate into hole in inner bumper bracket. Thread Plastic Retainer onto Bolt Plate to hold in place (optional)

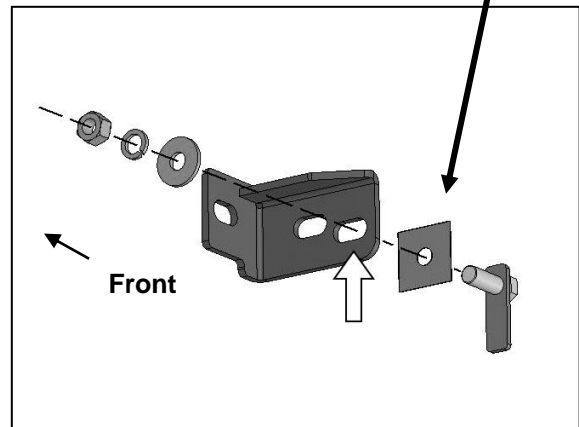


(Fig 7) Attach driver/left Frame Bracket to Bolt Plate (arrow)



(Fig 9) Attach passenger/right Frame Bracket to Bolt Plate (arrow).

**12mm Bolt Plate
Plastic Retainer
12mm Flat Washer
12mm Lock Washer
12mm Hex Nut**



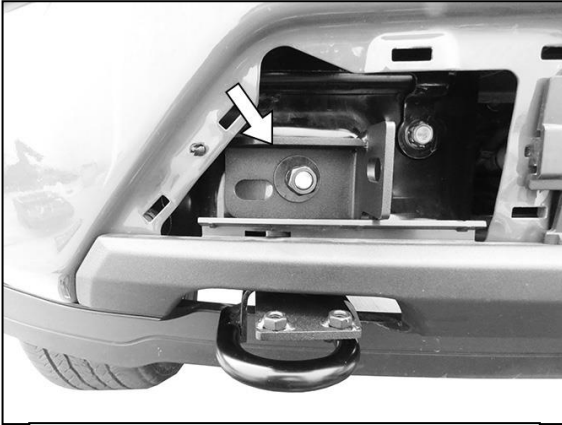
(Fig 6) Insert Bolt Plate into hole in inner bumper bracket. Thread Plastic Retainer onto Bolt Plate to hold in place (arrow)



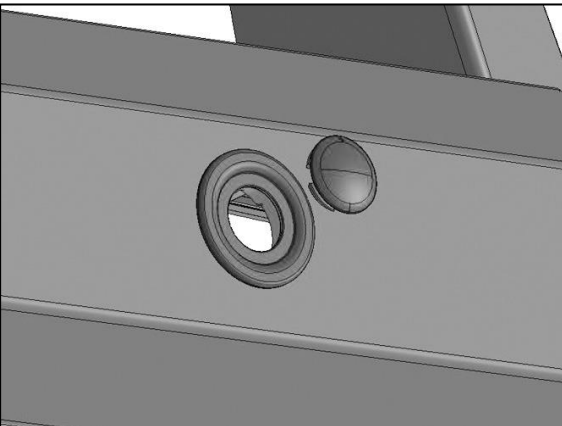
(Fig 8) Insert Bolt Plate into hole in inner bumper bracket (arrow)

**12mm Bolt Plate
Plastic Retainer
12mm Flat Washer
12mm Lock Washer
12mm Hex Nut**

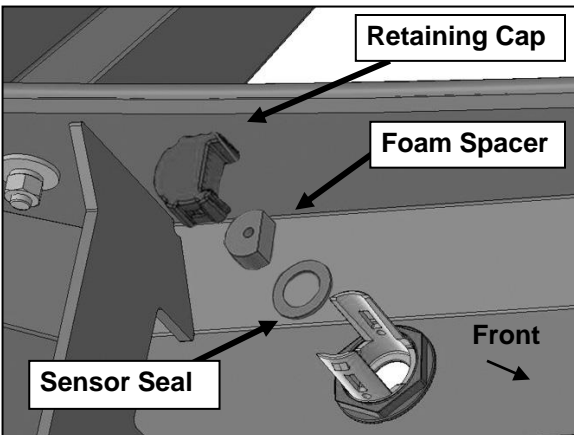
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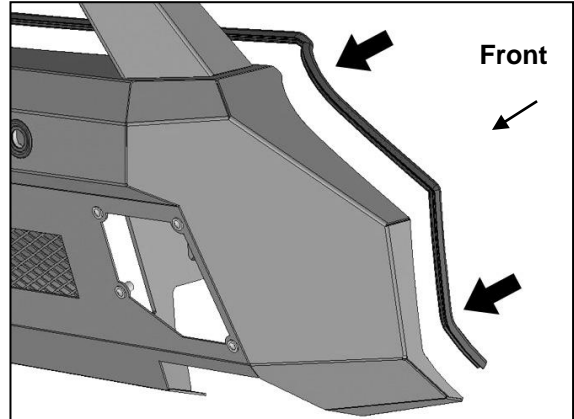
(Fig 10) Attach passenger/right Frame Bracket to Bolt Plate (arrow).



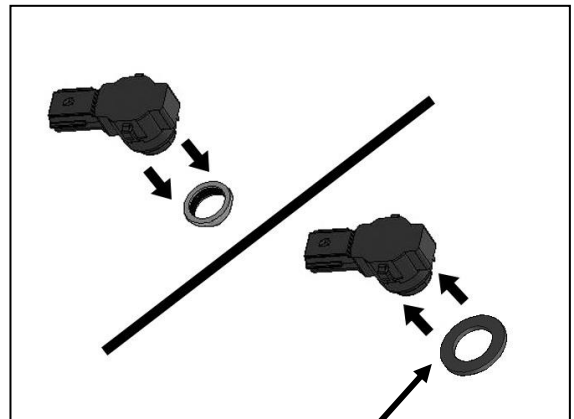
(Fig 12) Models without parking sensors, push the included Plugs into sensor mounts



(Fig 14) Insert sensor assembly into the sensor mount on back of Bumper



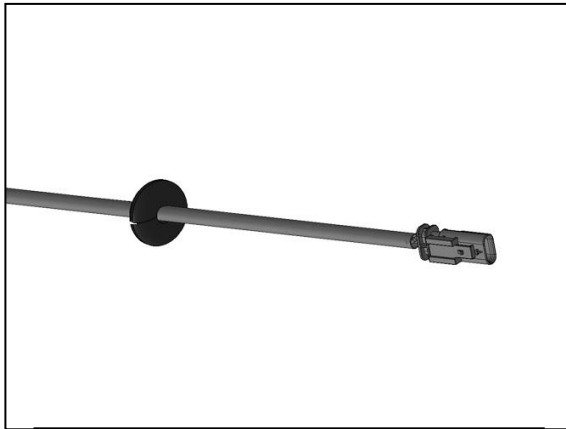
(Fig 11) Push Edge Trim onto edge of CS1 Bumper. Cut to fit Bumper



(Fig 13) Remove silicone seal from sensor. Slide large Seal over end of sensor (arrow)

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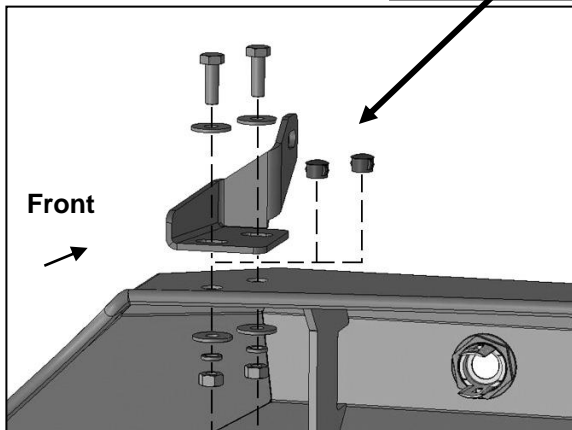
Driver/left Side Installation Pictured



(Fig 15) Slide Grommet onto Harness Extension. Plug Extension into factory wiring harness. Push Grommet into sensor hole in plastic bumper cover

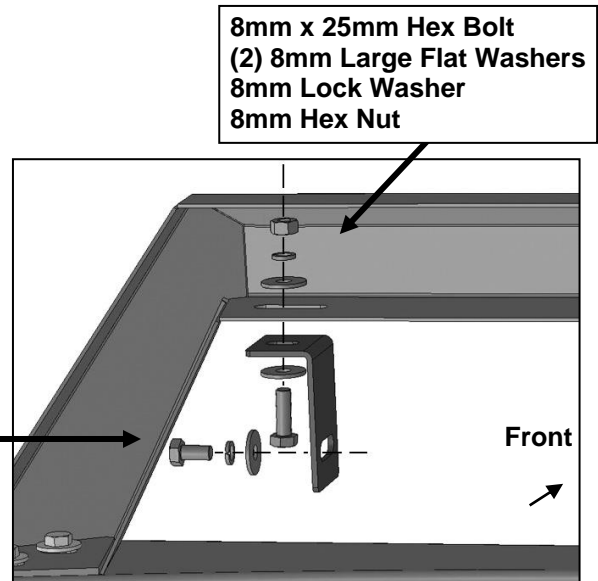
**8mm x 16mm Hex Bolt
 8mm Lock Washer
 8mm Large Flat Washer**

(2) Hole Plugs

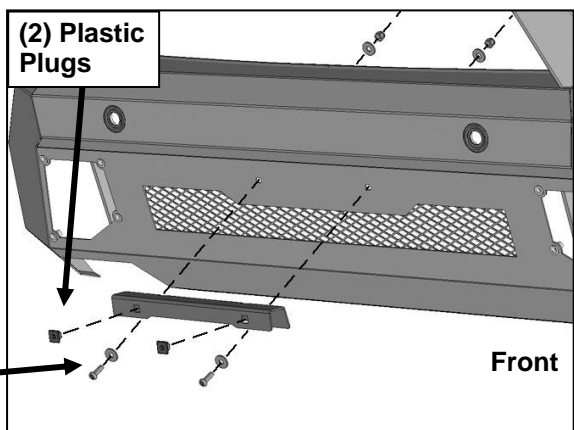


(Fig 17) If Bullnose Hoop will not be used, reuse the hardware to attach the LED Brackets to top of CS1 Bumper or fill holes with the included Hole Plugs. Driver/left side installation illustrated

**(2) 6mm x 20mm Button Head Bolts
 (4) 6mm Flat Washers
 (2) 6mm Nylon Lock Nuts**



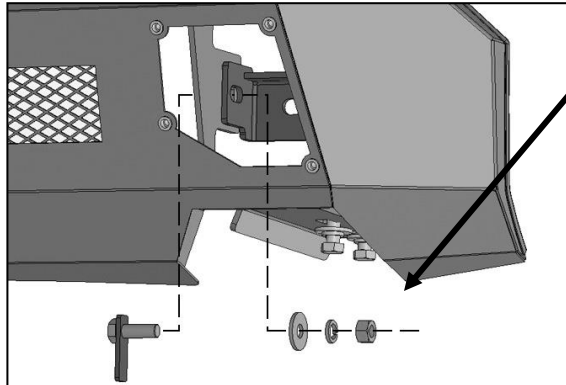
(Fig 16) Attach LED "L" Brackets to bottom of hoop



(Fig 18) Attach License Plate Bracket if required

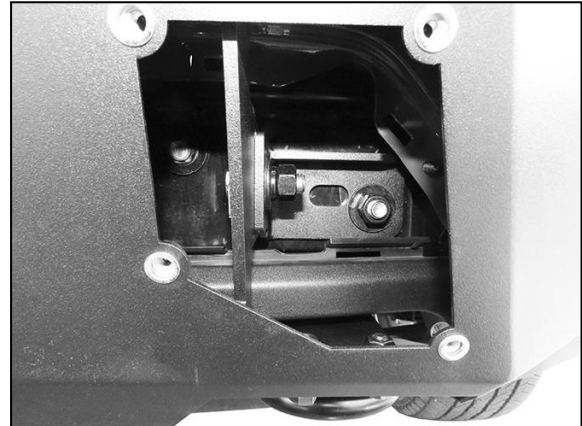
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Driver/left Side Installation Pictured

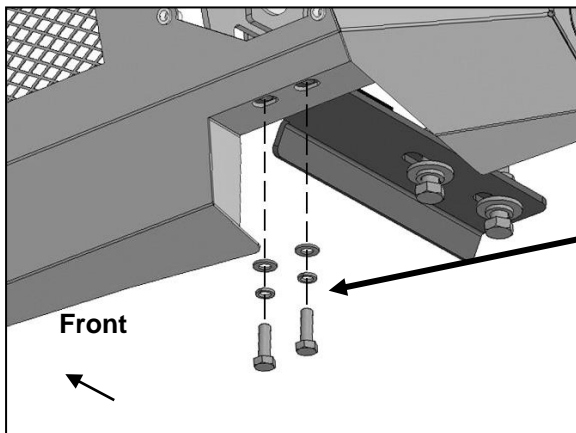


12mm Bolt Plate
12mm Flat Washer
12mm Lock Washer
12mm Hex Nut

(Fig 19) Insert Bolt Plate into and through the bracket on the back of the Bumper and out through the Frame Bracket



(Fig 20) Insert Bolt Plate into and through the bracket on the back of the Bumper and out through the Frame Bracket

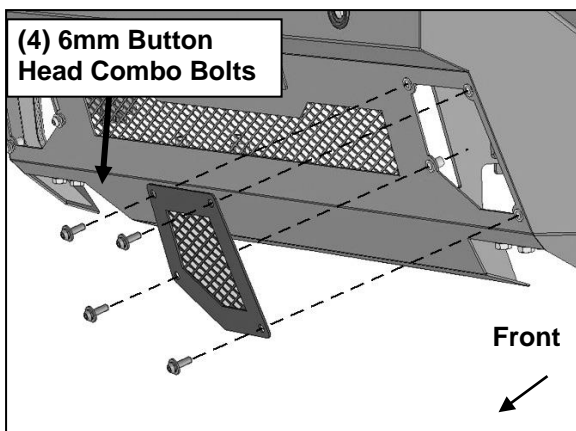


(2) 8mm x 25mm Hex Bolts
(2) 8mm Lock Washers
(2) 8mm x 16mm Small Flat Washers

(Fig 21) Attach Support Bracket to the back of the Bumper (driver/left side)



(Fig 22) Attach Support Bracket to the back of the Bumper (driver/left side)



(Fig 23) Attach Mesh Fill Panels to front of CS1 Bumper (driver/left side illustrated)