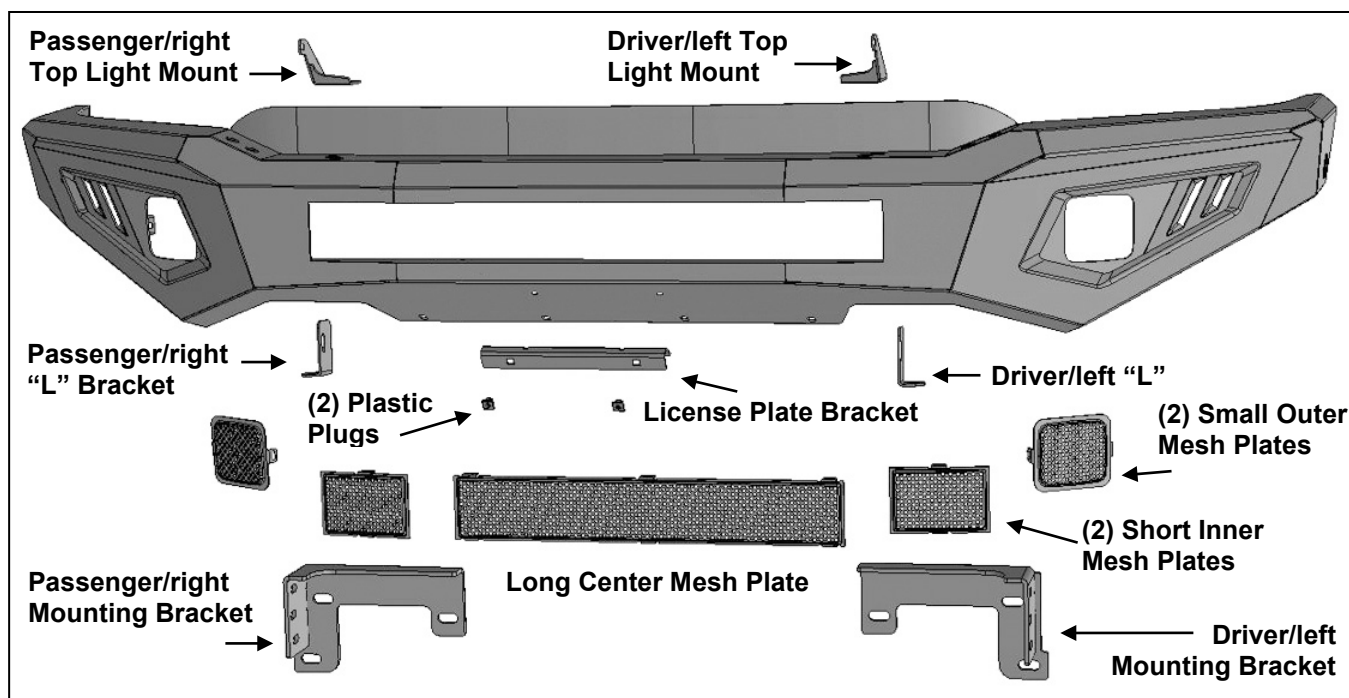


PARTS LIST:

1	LD2 Front Bumper	6	10mm Lock Washers
1	Long Center Mesh Plate	6	10mm Hex Nuts
2	Short Inner Mesh Plates	4	8-1.25mm x 25mm Button Head Bolts
2	Small Outer Mesh Plates	2	8-1.25mm x 25mm Hex Bolts
1	Driver/left Frame Mounting Bracket	2	8-1.25mm x 16mm Hex Bolts
1	Passenger/right Frame Mounting Bracket	14	8mm x 24mm x 2mm Flat Washers
1	Driver/Left Bumper Top Light Mount	8	8mm Lock Washers
1	Passenger/Right Bumper Top Light Mount	6	8mm Hex Nuts
1	Driver/left "L" Bracket (center LED light)	14	6-1.0mm x 20mm Combo Bolts
1	Passenger/right "L" Bracket (center LED light)	2	6-1.0mm x 20mm Button Head Bolts
1	License Plate Bracket	2	6-1.0mm x 16mm Hex Bolts
2	Plastic Plugs for license plate mount	6	6mm x 18mm x 1.6mm Flat Washers
6	12-1.75mm x 35mm Hex Bolts	2	6mm Lock Washers
12	12mm x 32mm x 3mm Flat Washers	14	6mm Flange Nuts
6	12mm Nylon Lock Nuts	2	6mm Nylon Lock Nuts
6	10-1.5mm x 35mm Hex Bolts	1	5mm Wrench
12	10mm x 27mm OD x 3mm Flat Washers	1	4mm Wrench



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 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 factory bolts to remove frame extensions, (removal is optional).
6. Select the driver/left Frame Mounting Bracket. Attach the Bracket to the end of the frame with the included (3) 12mm x 35mm Hex Bolts, (6) 12mm Flat Washers and (3) 12mm Nylon Lock Nuts, **(Figures 7 & 8)**. Do not fully tighten hardware at this time. Repeat this Step to install the passenger/right Frame Bracket.
7. Carefully unwrap the LD2 Bumper assembly. Determine if accessory lights, (not included), or Screen Fill Panels will be installed at this time. **NOTE:** It may be easier to install Center Fill Panels and/or lights before installing Bumper. **IMPORTANT:** On Ecoboost models, center LED light installation is not recommended. Blocking the Ecoboost intercooler may cause overheating.

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

- a. Select desired Screen Fill Panels. **NOTE:** Outer Panels are square with rounded corners, Inner panels are rectangular with sharp corners, **(Figure 9)**.
- b. Attach Screen Fill Panels as needed with the included 6mm Button Head Combo Bolts and 6mm Flange Nuts, **(Figure 9)**. 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 driver/left "L" Light Bar Bracket, **(Figure 10)**. **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 25mm Hex Bolt, (2) 8mm Flat Washers, (1) 8mm Lock Washer and (1) 8mm Hex Nut, **(Figure 10)**. Repeat this Step to install the remaining "L" Bracket on the passenger/right side of the Bumper. **IMPORTANT:** The Bumper features slots designed for 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 or (2) 6mm x 16mm Hex Bolts, (2) 6mm Lock Washers and (2) 6mm Flat Washers, **(Figure 10)**. Do not fully tighten hardware at this time.

Outer LED cube style light installation (lights not included).

- a. Attach lights to the mounting tabs at the outer-ends of the Bumper, **(Figure 9)**.
- b. Follow the light manufacturer's instruction to properly wire lights once Bumper is installed.

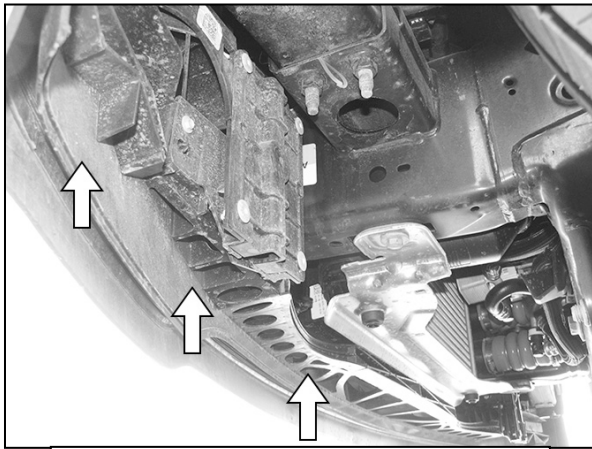
Top mounted 30" bar style LED light (light not included). **IMPORTANT:** If installing the Top Hoop, (sold separately), then the top 30" Light, (not included), cannot be installed.

- a. Remove the (2) rubber plugs from the driver/left side mounting holes, **(Figure 11)**.
- b. Select the driver/left Light Bracket. Attach the Bracket to the top of the Bumper with (2) 8mm x 25mm Button Head Bolts, (4) 8mm Flat Washers, (2) 8mm Lock Washers and (2) 8mm Hex Nuts, **(Figure 11)**. Do not tighten hardware at this time.
- c. Repeat previous Steps to attach the passenger/right Bracket.
- d. Select the 30" light, (not included). Attach light to Top Brackets with the hardware included with the light. Adjust the width of the Brackets to the light and fully tighten bracket hardware. **IMPORTANT:** Top Light Brackets are designed to install 30" bar style LED lights with outside length dimensions of 31.653" (804mm) to 32.44" (824mm) only, **(Figure 12)**. Fully tighten top light hardware.

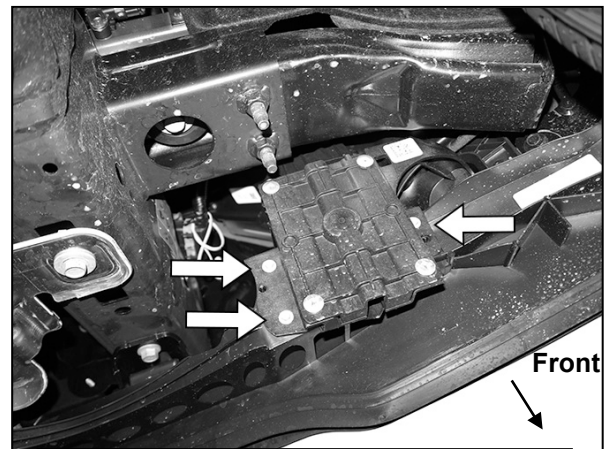
8. Attach the License Plate Bracket to the holes in the Bumper with the included (2) 6mm x 20mm Button Head Bolts, (4) 6mm Flat Washers and (2) 6mm Nylon Lock Nuts. Insert (2) Plastic Plugs into the square holes in the Bracket. Reuse the factory screws to attach the license plate, **(Figure 13)**.

9. With assistance, position the Bumper Assembly up to the outside of the Brackets, **(Figure 14)**. 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.
10. Attach the driver/left side of the Bumper to the Bracket with the included (3) 10mm x 35mm Hex Bolts, (6) 10mm Flat washers, (3) 10mm Lock Washers and (3) 10mm Hex Nuts, **(Figures 14 & 15)**. Do not fully tighten hardware at this time. Repeat this Step to attach the passenger/right side of the Bumper to the Bracket. Do not fully tighten.
11. Level and adjust the Bumper and fully tighten all hardware.
12. On hybrid models only, reinstall the audible alert speaker after the Bumper has been adjusted and all hardware fully tightened, (see **Step 3**).
13. Do periodic inspections to the installation to make sure that all hardware is secure and tight.

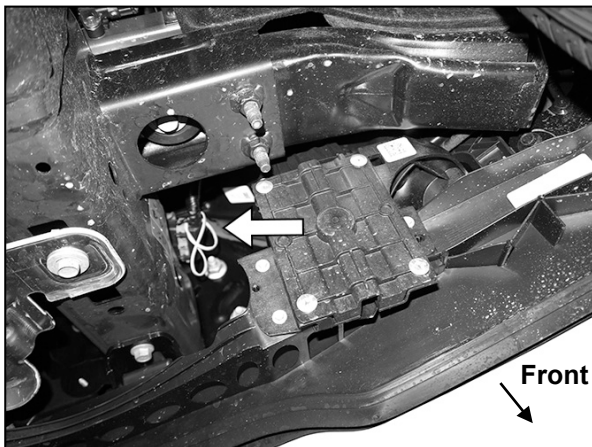
To protect your investment, Do not use any type of polish or wax that may contain abrasives that could damage the finish. Mild soap may be used to clean the Bumper assembly.



(Fig 1) Active air dam behind bumper

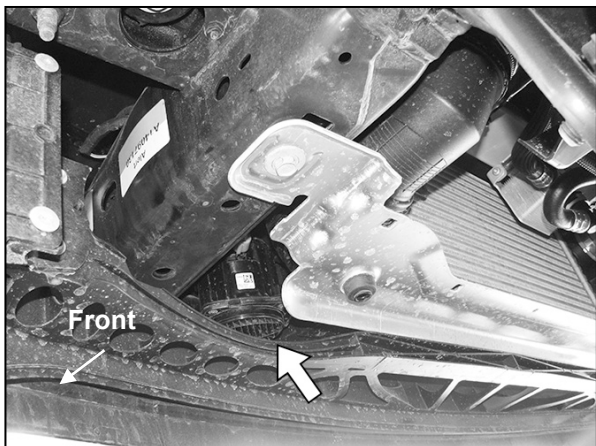


(Fig 2) Remove bolts (arrows) to remove active air dam from motors (passenger/right side pictured)



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

Driver/left Side Installation Pictured

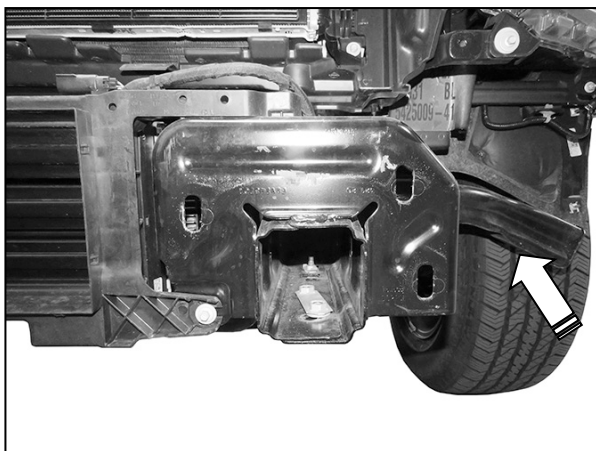


(Fig 4) Hybrid Models Only, locate alert speaker behind driver/left side of bumper

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

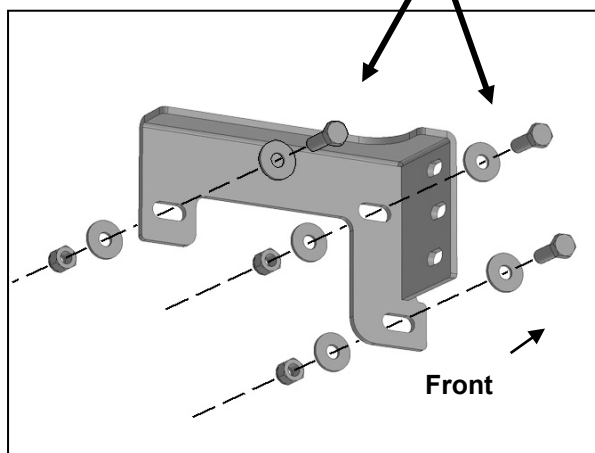


(Fig 5) Remove bolt (arrow) to temporarily remove audible alert speaker located behind driver/left side of bumper (hybrid models only-pictured from below)



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

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

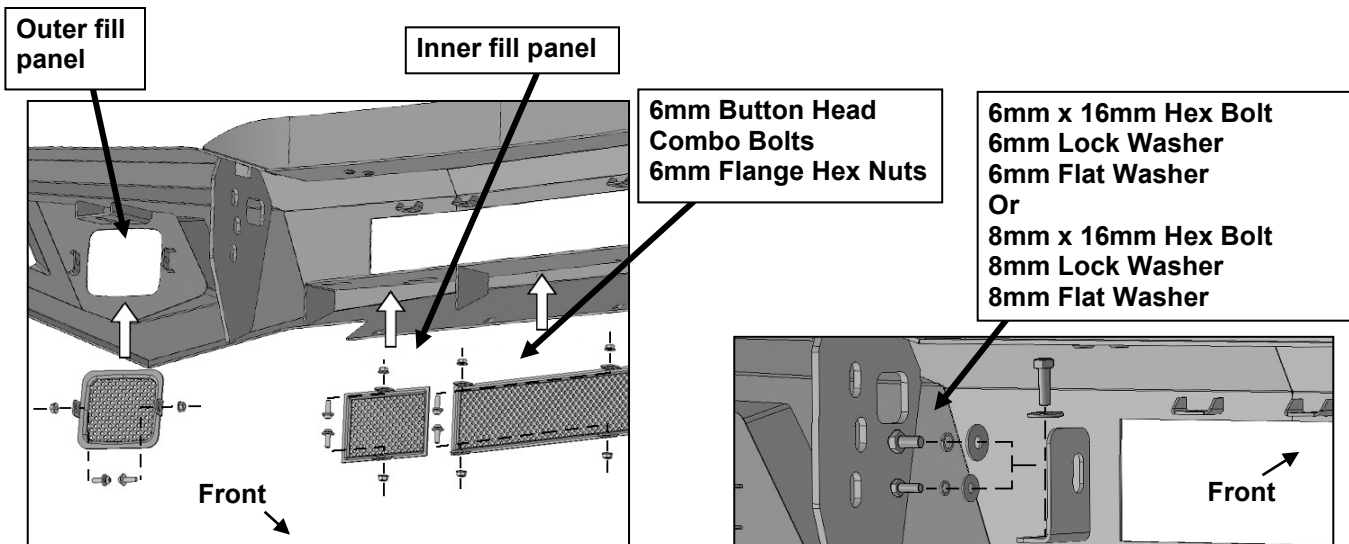


(Fig 7) Attach driver/left Frame Mounting Bracket to end of frame

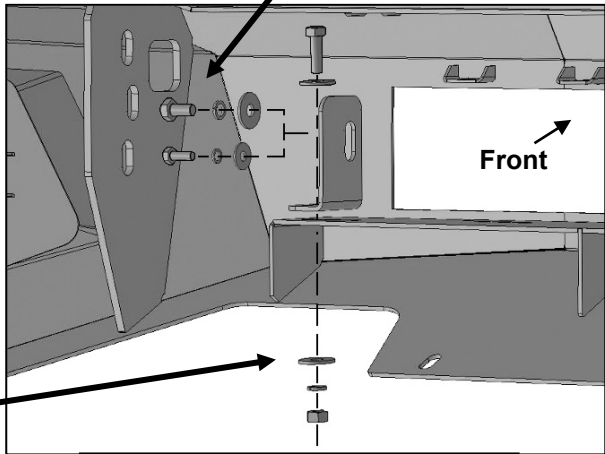


(Fig 8) Driver/left side Bracket installed

Driver Side Installation Pictured



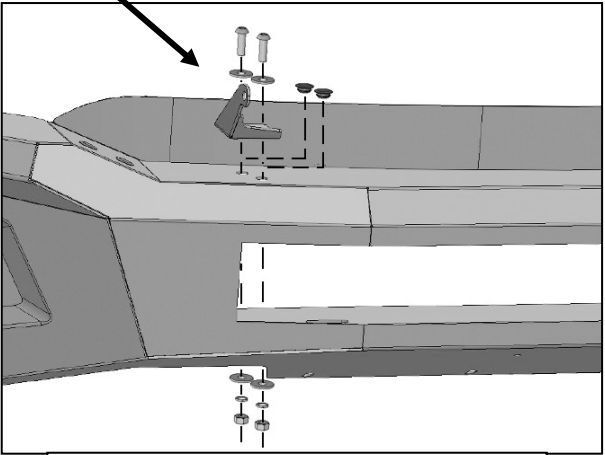
(Fig 9) Attach Mesh Fill Panels as desired to fill unused openings for lights (lights not included)



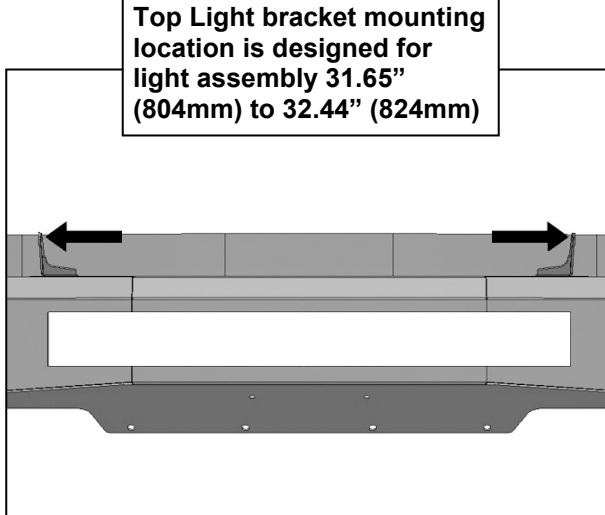
(Fig 10) Note multiple slots for different widths of lights (arrow)

- (2) 8mm x 25mm Button Head Bolts
- (4) 8mm Flat Washers
- (2) 8mm Lock Washers
- (2) 8mm Hex Nuts

- 8mm x 25mm Hex Bolt
- (2) 8mm Flat Washers
- 8mm Lock Washer
- 8mm Hex Nut



(Fig 11) Remove rubber plugs to attach Top Light Bracket to Bumper

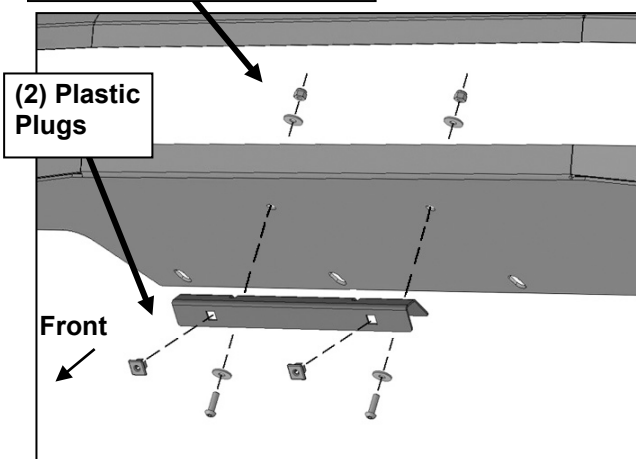


(Fig 12) Measure width of LED light (light only) before installation of Top Light Brackets

Top Light bracket mounting location is designed for light assembly 31.65" (804mm) to 32.44" (824mm)

Driver Side Installation Pictured

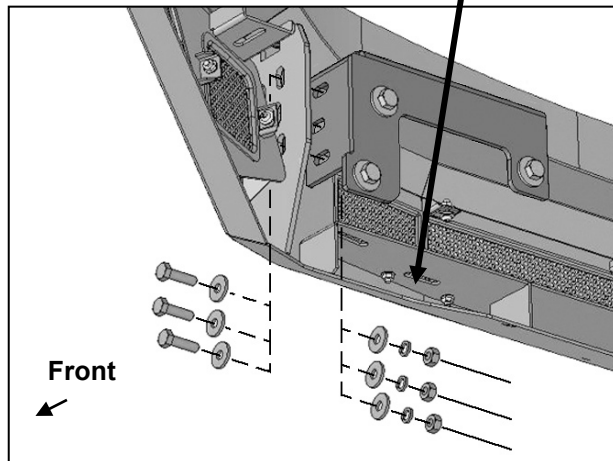
- (2) 6mm x 20mm Button Head Screws
- (4) 6mm Flat Washers
- (2) 6mm Nylon Lock Nuts



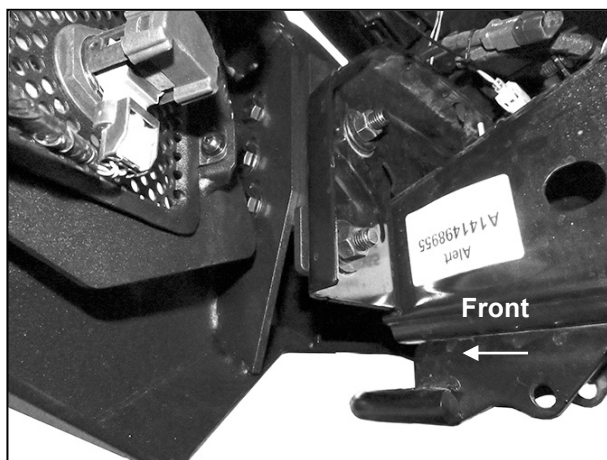
(Fig 13) Attach License Plate Bracket to Bumper

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

- (3) 10mm x 35mm Hex Bolts
- (6) 10mm Flat Washers
- (3) 10mm Lock Washers
- (3) 10mm Hex Nuts



(Fig 14) Attach driver/left side of Bumper to Mounting Bracket



(Fig 15) Driver/left side of Bumper pictured



Complete Installation (Hoop, sensor relocation kit & Light Sold Separately)