



**BLACK HORSE
OFF ROAD®**

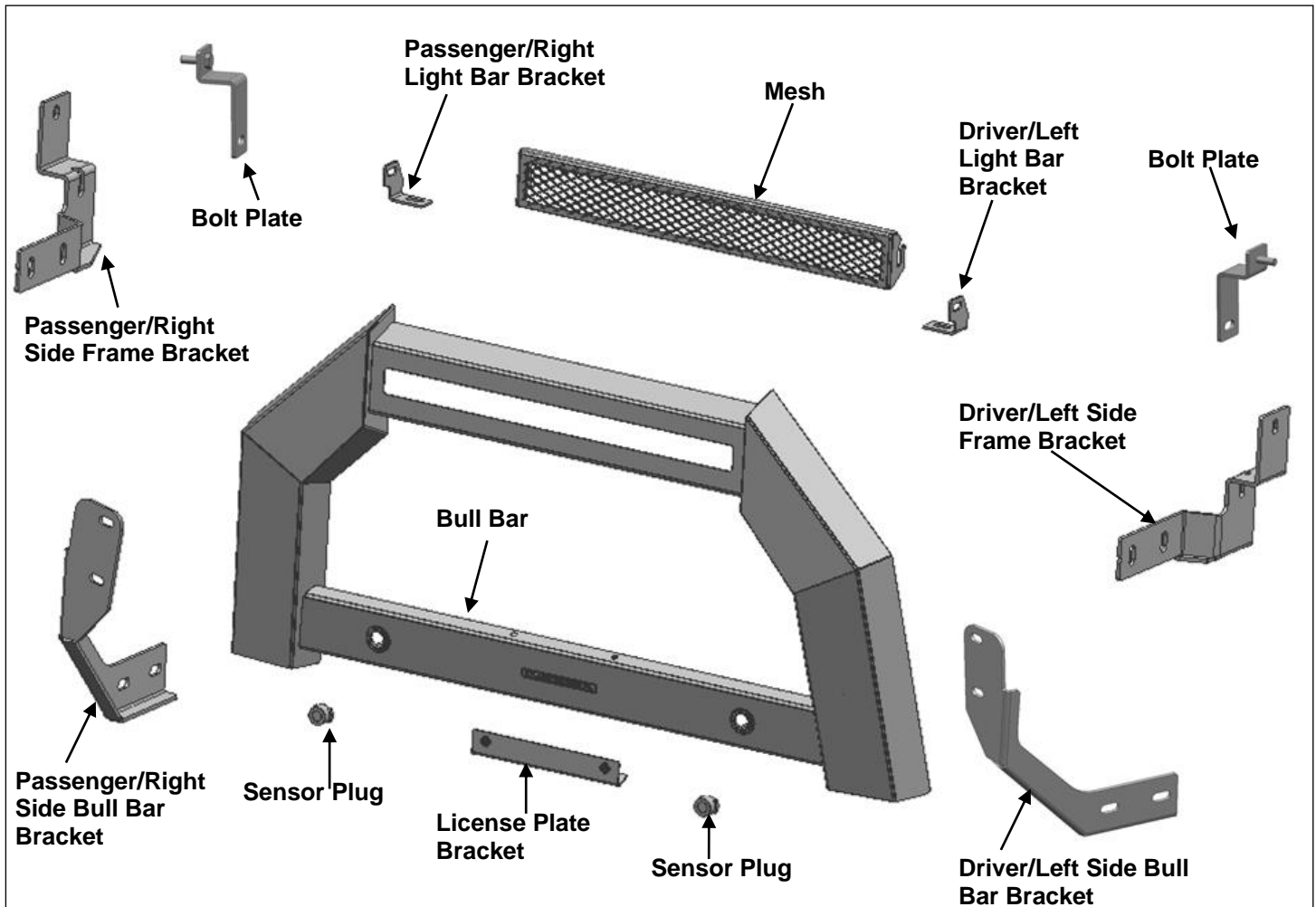
TEL: 1-866-XANATOS

INSTALLATION INSTRUCTIONS

**ARMOUR BULL BAR
FOR 19-24 TOYOTA RAV4
PART#TO48**

PARTS LIST:

1	Bull Bar	4	10mm Hex Nuts
1	Driver/Left Side Frame Bracket	8	10mm Lock Washers
1	Passenger/Right Side Frame Bracket	2	8mm Nylon Lock Nuts
1	Driver/Left Side Bull Bar Bracket	2	8-1.25mm x 20mm Hex Bolts
1	Passenger/Right Side Bull Bar Bracket	2	8-1.25mm x 16mm Hex Bolts
1	Driver/Left Side Light Bar Bracket	8	8mm x 24mm x 2mm Flat Washers
1	Passenger/Right Side Light Bar Bracket	4	8mm Lock Washers
1	Mesh	2	8mm Hex Nuts
1	License Plate Bracket	2	6-1.0mm x 20mm Combo Bolts
2	Rubber Sensor Plugs	2	6-1.0mm x 20mm Button Head Bolts
8	12mm x 32mm x 3mm Flat Washers	4	6mm x 18mm x 1.6mm Flat Washers
4	12-1.0mm x 30mm Hex Bolts	2	6mm Lock Washers
2	10-1.0mm x 35mm Hex Bolts	2	6mm Hex Nuts
4	10-1.0mm x 25mm Hex Bolts	4	4mm x 10mm Button Head Bolts (Backup Accessories)
4	12mm Nylon Lock Nuts	1	Wrench S=4 (Backup Accessories)
10	10mm x 30mm x 2.5mm Flat Washers	1	Wrench S=2.5
2	Bolt Plate		



PROCEDURE:

REMOVE CONTENTS FROM BOX. VERIFY ALL PARTS ARE PRESENT. READ INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION. INSTALLATION MAY INTERFERE WITH FRONT MOUNTED SENSORS.

1. Start installation at the driver front side of the vehicle. Remove the tow hook, **(Figures 1 & 2)**.
2. Select the driver side Frame Bracket, **(Figures 3 & 4)**. Check the fit between the tow hook and the Bracket for reinstallation over the Bracket. **NOTE:** Some factory tow hooks may not clear the Bracket and cannot be reinstalled. Check for fit before bolting tow hook and Bracket in place.
3. Attach the Bracket to the underside of the frame channel reusing the factory tow hook bolts, either with or without the tow hook, **(Figures 3 & 4)**. Do not fully tighten hardware at this time.
4. Select (1) driver/left side Bull Bar Bracket, **(Figure 4)**. Position the Bull Bar Bracket on the outside of the Frame Bracket. Attach the Bull Bar Bracket to the Frame Bracket with the included (2) 12mm x 30mm Hex Bolts, (4) 12mm Flat Washers and (2) 12mm Nylon Lock Nuts, **(Figures 4 & 5)**. Do not fully tighten hardware at this time.
5. Relocation of front license plate is not required, but strongly recommended.
 - a. Attach the License Plate Bracket to the Bull Bar with (2) 6mm Button Head Bolts, (4) 6mm Flat Washers, (2) 6mm Lock Washers and (2) 6mm Hex Nuts, **(Figure 6)**. Use (2) 6mm Combination Bolts to attach the front license plate to the Bracket, **(Figure 6)**.
6. **Mesh and LED Light installation, (LED light sold separately)**. Select the driver/left side Light Bar Bracket. Attach the Bracket to the back of the mounting plate on the Bull Bar with (1) 8mm x 20mm Hex Bolt, (2) 8mm Flat Washers, (1) 8mm Lock Washer and (1) 8mm Hex Nut, **(Figure 7)**. Repeat this step to attach the passenger/right side Light Bar Bracket to the back of the Bull Bar. Do not tighten hardware.

LED Light Installation

- a. Use (2) 8mm x 16mm Hex Bolts, (2) 8mm Lock Washers and (2) 8mm Flat Washers to attach the Light Bar Brackets to the Bull Bar, **(Figure 8)**.
- b. Follow the light manufacturer's instructions to attach the Bull Bar.
- c. Follow light manufacturer's instructions to properly wire the Bull Bar.

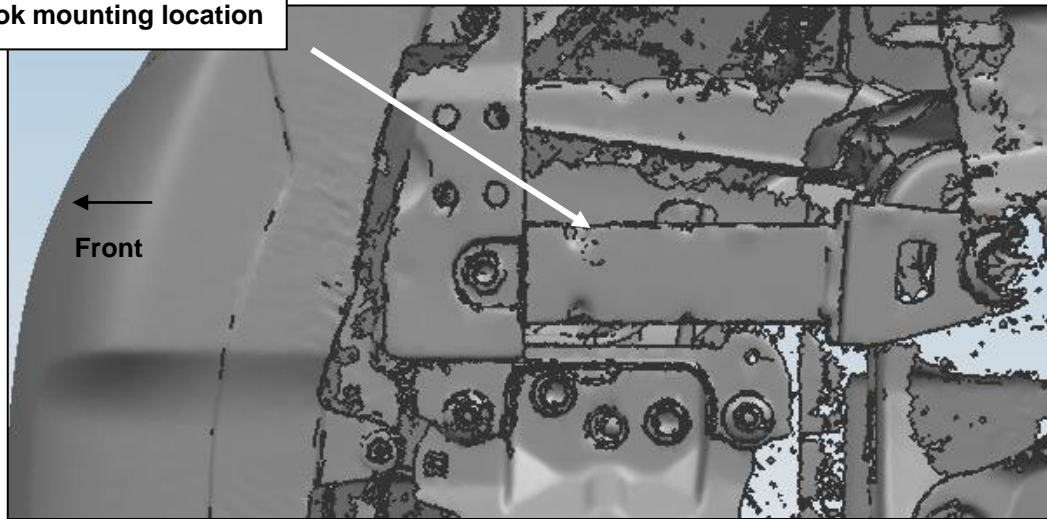
Mesh installation

- a. Use (2) 8mm x 16mm Hex Bolts, (4) 8mm Flat Washers, (2) 8mm Lock Washers and (2) 8mm Hex Nuts to attach the Mesh to the inside surface of the Light Bar Brackets, **(Figure 9)**.
- b. Level and adjust the Brackets to the Mesh Panel and fully tighten hardware.
7. With assistance, hold up the assembled Bull Bar to the Bull Bar Brackets. Align the (2) bottom holes on the Uprights with the Brackets. Bolt the assembled Bull Bar to the Brackets with (4) 10mm x 25mm Hex Bolts, (4) 10mm Lock Washers and (4) 10mm x 30mm Flat Washers, **(Figures 10 & 11)**.
8. Level and adjust the Bull Bar properly and tighten all hardware.
9. Select the (2) Sensor Plugs. Push the sensor plugs into the sensor sleeves behind the Bull Bar, **(Figure 12)**.
10. Level and adjust the Bull Bar properly and tighten all hardware. Reinstall the tow hook if removed.
11. Do periodic inspections to the installation to make sure that all hardware is secure and tight.

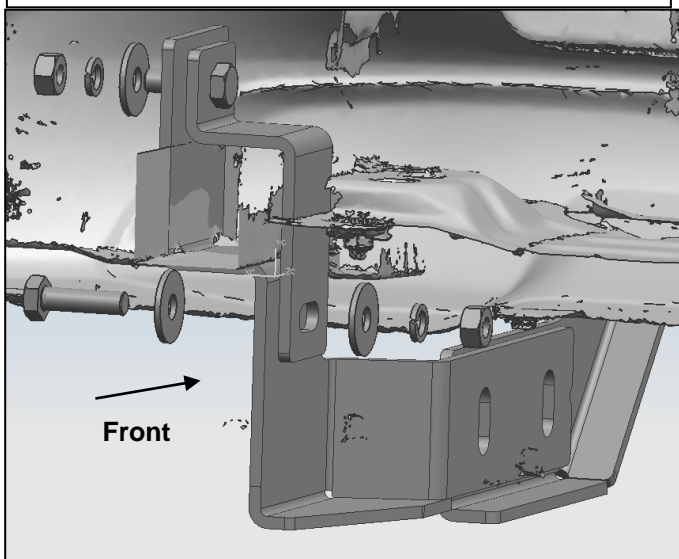
To protect your investment, wax this product after installing. Regular waxing is recommended to add a protective layer over the finish. Do not use any type of polish or wax that may contain abrasives that could damage the finish. Mild soap may be used to clean the Bull Bar.

Driver/Left Side Installation Pictured

(Fig 1) Driver side tow hook mounting location



(Fig 2) Reuse factory tow hook hex bolts



- (2) 12mm x 30mm Hex Bolts
- (4) 12mm Flat Washers
- (2) 12mm Nylon Lock Nuts

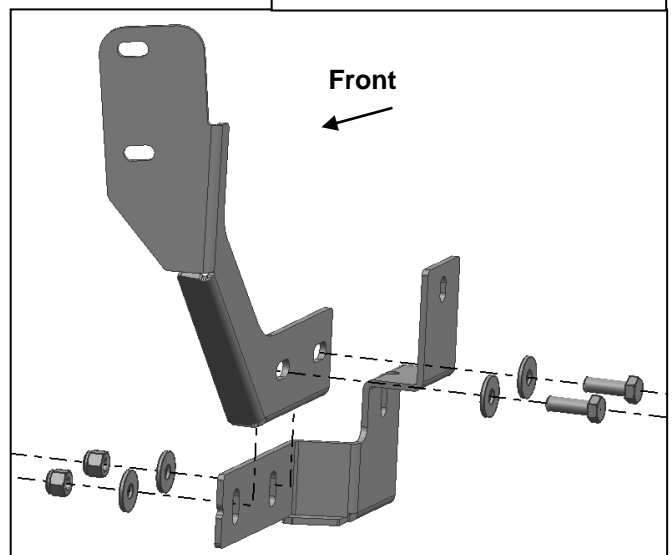
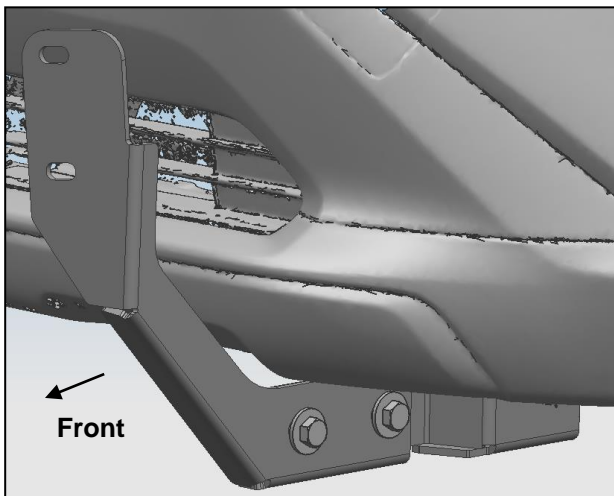
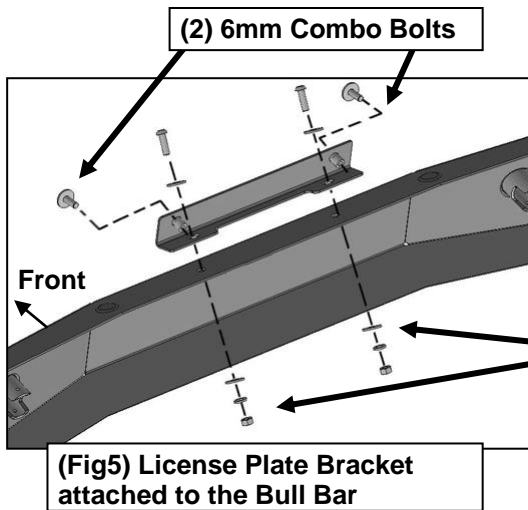


Fig 3



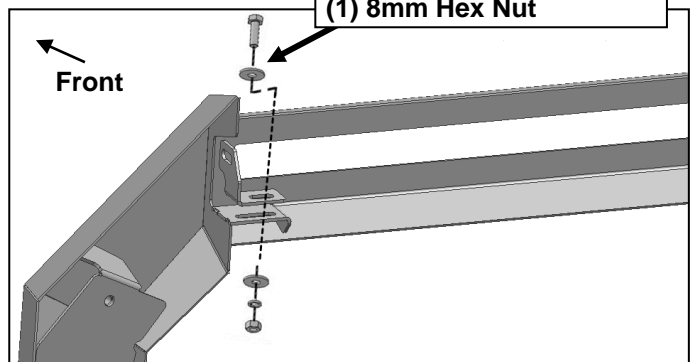
(Fig 4) Attach driver/left Bull Bar to Frame Bracket

Driver Side Installation Pictured

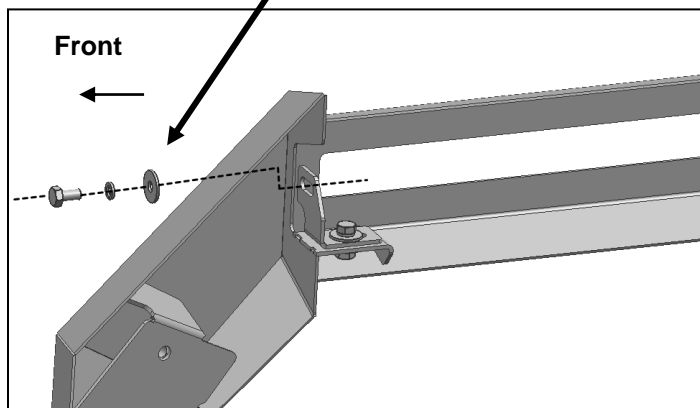


- (2) 6mm Button Head Bolts
- (4) 6mm Flat Washers
- (2) 6mm Lock Washers
- (2) 6mm Hex Nuts

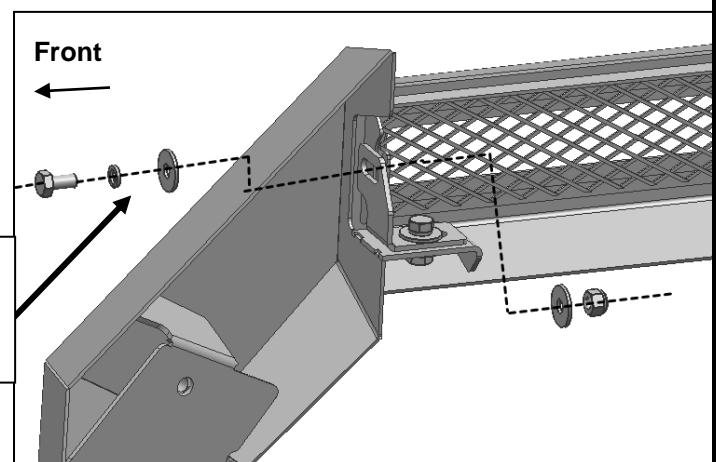
- (1) 8mm x 20mm Hex Bolt
- (2) 8mm Flat Washers
- (1) 8mm Lock Washer
- (1) 8mm Hex Nut



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



- (1) 8mm x 16mm Hex Bolt
- (2) 8mm Flat Washers
- (1) 8mm Lock Washer
- (1) 8mm Hex Nut



Passenger Side Installation Pictured

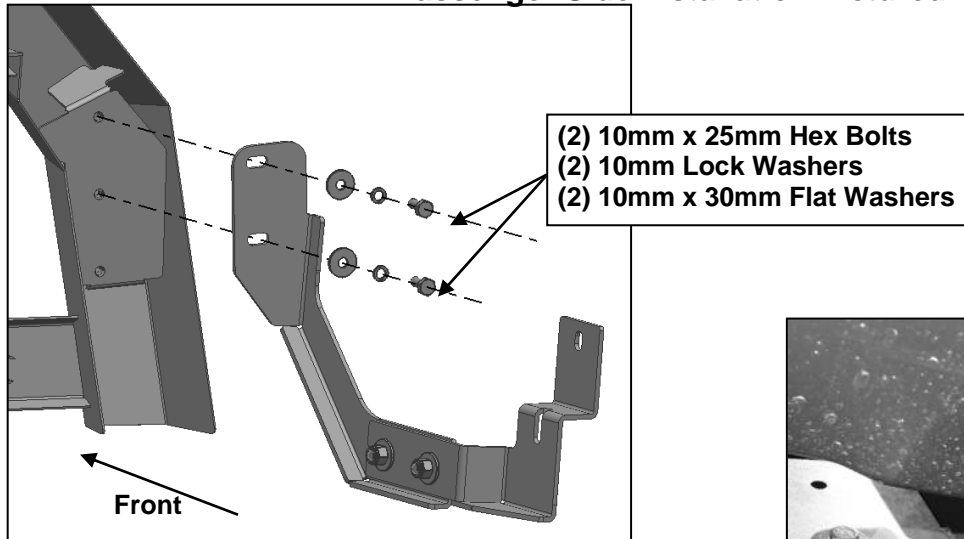
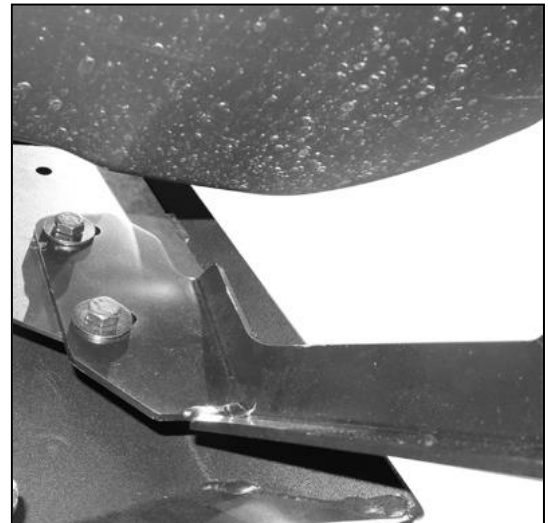
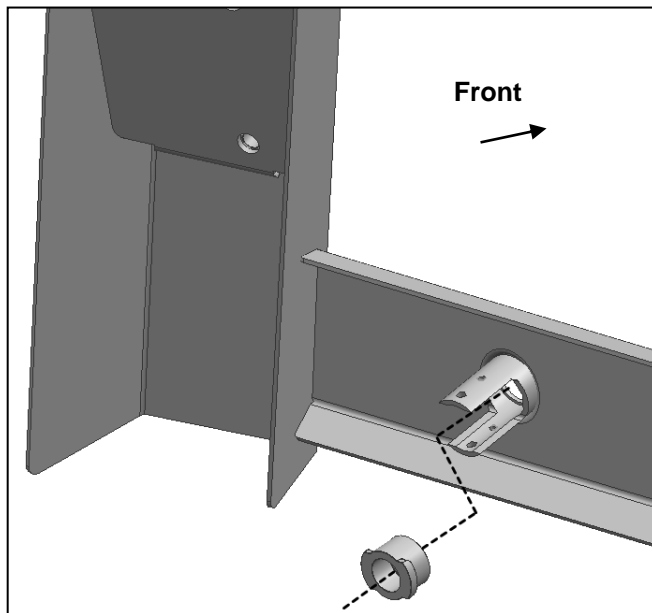


Fig 9



(Fig 10) Passenger/Right Side complete installation



(Fig 11) Attach Sensor Plug into Sensor Sleeve