

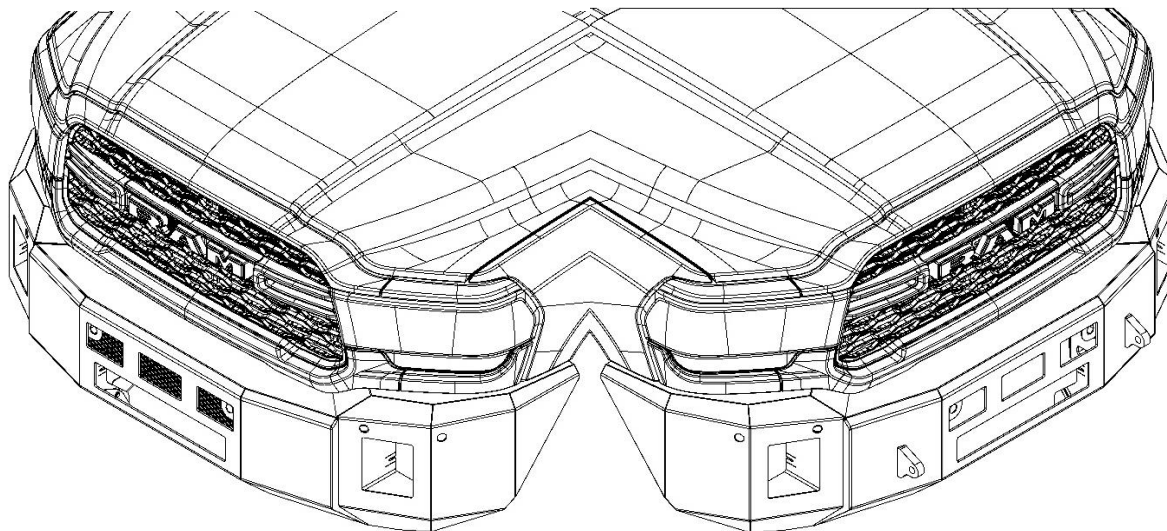


kelderman

Bravo Series Front Bumper Installation Manual

- 2019 Ram 2500-5500

Kelderman Bravo Series Front Bumper



Smooth Clevis Ear

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Kit Numbers

- This installation manual covers the following front bumpers.

Kit Number	Description
KLM-401041019-001030000	Ram 2500 – Bravo Smooth – Sensors – Stock Width
KLM-401042019-001030000	Ram 3500 – Bravo Smooth – Sensors – Stock Width
KLM-401041019-001030001	Ram 2500 – Bravo Clevis Ears – Sensors – Stock Width
KLM-401042019-001030001	Ram 3500 – Bravo Clevis Ears – Sensors – Stock Width
KLM-401041019-001031000	Ram 2500 – Bravo Smooth – Sensors – 1.0" End Caps – Wide Width
KLM-401042019-001031000	Ram 3500 – Bravo Smooth – Sensors – 1.0" End Caps – Wide Width
KLM-401041019-001031001	Ram 2500 – Bravo Clevis Ears – Sensors – 1.0" End Caps – Wide Width
KLM-401042019-001031001	Ram 3500 – Bravo Clevis Ears – Sensors – 1.0" End Caps – Wide Width
KLM-401043019-001032300	Ram 4500 – Bravo Smooth – Sensors – 2.375" End Caps – Super Wide Width
KLM-401044019-001032300	Ram 5500 – Bravo Smooth – Sensors – 2.375" End Caps – Super Wide Width
KLM-401043019-001032301	Ram 4500 – Bravo Clevis Ears – Sensors – 2.375" End Caps – Super Wide Width
KLM-401043019-001032301	Ram 5500 – Bravo Clevis Ears – Sensors – 2.375" End Caps – Super Wide Width

Introduction

- **Important**

It is important that the entire installation instructions be read thoroughly before proceeding with bumper installation.

- **Product Installer Responsibilities**

Installer is responsible for installing this product in accordance with Kelderman Mfg. Inc. specifications and installation instructions.

Installer is responsible for providing proper installation of vehicle components and attachments as well as required or necessary clearance for suspension components, axles, wheels, tires, and other vehicle components to ensure a safe and sound installation and operation of this product.

- **Product Owner Responsibilities**

Owner is solely responsible for pre-operation inspection, periodic inspections, maintenance, and use of the product as specified by Kelderman Mfg. Inc. Of particular importance is the re-torque of fasteners. This re-torque must be performed within 90 days or 1000 miles of this product being put into service.

- **Definition of Terms**

- **Warning:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- **Caution:** A potential hazardous situation may result in property damage.
- **Note:** Provide information or suggestions that help correctly perform a task.
- **Torque:** When italicized "*torque*" alerts the installer to tighten fasteners to a specified value.

Safety

- **Your Safety and the Safety of Others is Very Important.**
Read and understand all safety precautions and instructions before installing this product.

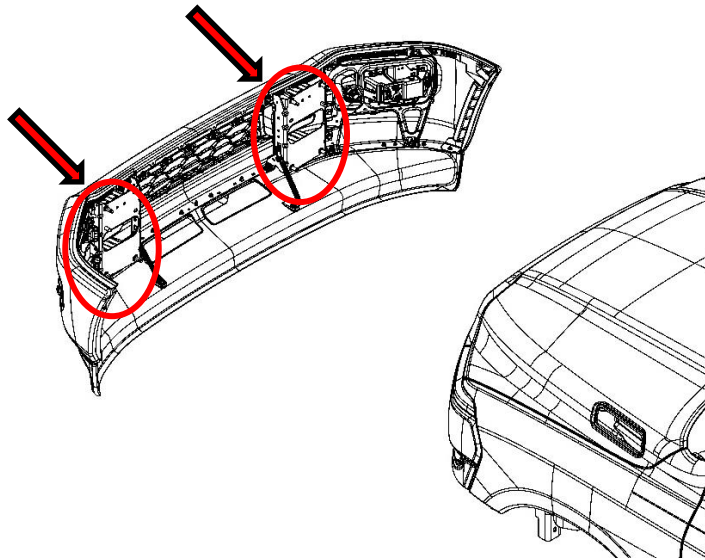
- **CAUTION: Trucks Equipped with Parking Sensors or Other Like Devices.**
Relocation of these devices will alter the field of view. It is the responsibility of the owner to understand how these changes affect the operation of these systems.

- **This Product is Intended for Off-Road Use**
All liability for installation and use rests with the owner.

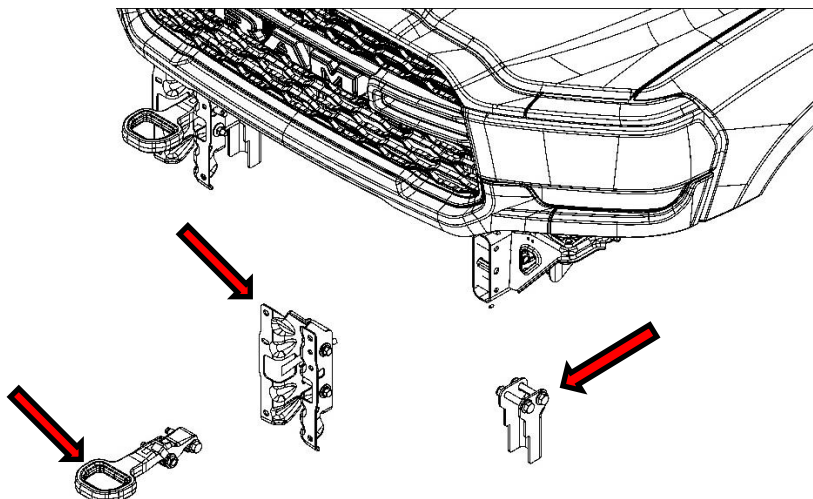
- **WARNING: Careless Installation Can Result in Serious Injury or Property Damage**
 - Wear eye protection.
 - Disconnect the battery before doing any work on the vehicle.
 - Work on flat level ground.
 - Ensure truck is properly supported by jack stands. Never work under a vehicle supported only by hydraulic jacks.
 - Take precautions when lifting product. Due to the size and weight of this product three people are recommended for installation.
 - Never work directly under the product until it has been securely fastened to the vehicle.
 - Avoid sharp, hot, and moving components when routing electrical cables.
 - If drilling inspect both sides of the surface and remove/relocate any objects located in the way.
 - Ensure all bolts are properly tightened before driving.

Bumper Removal

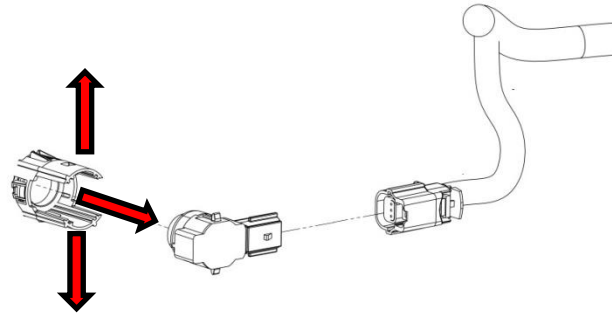
- 1:** Disconnect the wiring to any lights, sensors, or other accessories mounted to the stock bumper.
- 2:** Locate the four bolts on each side that attach the bumper to the frame horn bracket. With the bumper supported remove these bolts. The bumper is now free and can be removed.



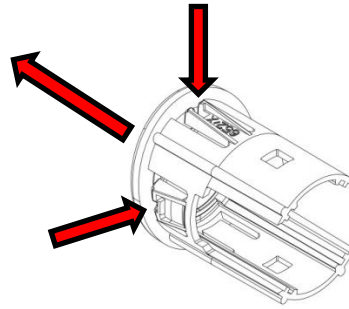
- 3:** If equipped unbolt and remove the plastic air duct from the intercooler. These bolts will be reused during the installation steps.
- 4:** Remove the tow hook, bumper bracket, and crash protector from each frame horn. The bumper bracket bolts will be reused during the installation steps.



5: If equipped remove the parking sensors from the stock bumper. Spread the ears on the sensor bezel and push the sensor thru the back of the bumper. **NOTE:** Keep track of each sensors location.

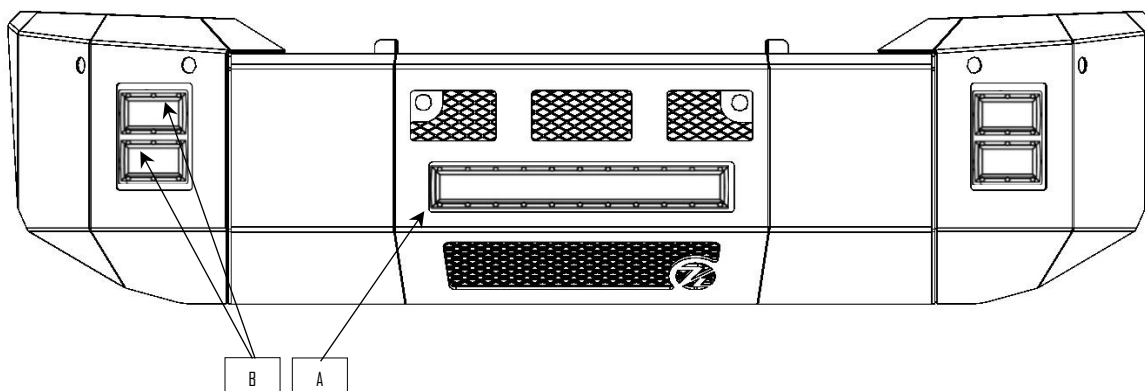


6: Depress the tabs on the sensor bezel and push it thru the front of bumper.



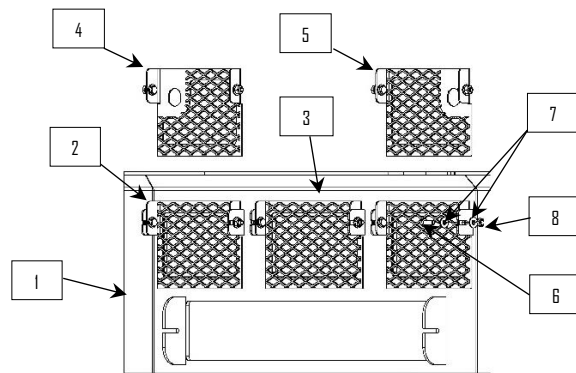
Bumper Preparation

- Before painting open every box and locate all parts. There are several smaller bushing pieces, screens, and bolt tabs that are packaged separately inside the main box.
- **CAUTION:** Kelderman Mfg. Inc. cannot guarantee correct out of the box fitment across all light brands and sizes. The installer is responsible for test fitting all lights into the bumper and making any required modifications before the bumper is sent to paint. This bumper has been designed to utilize the following Rigid Industries lights.
 - A) Rigid Industries E-Series 20 Inch Light (Center)
 - B) Rigid Industries E-Series 4 Inch Light (End Cap)

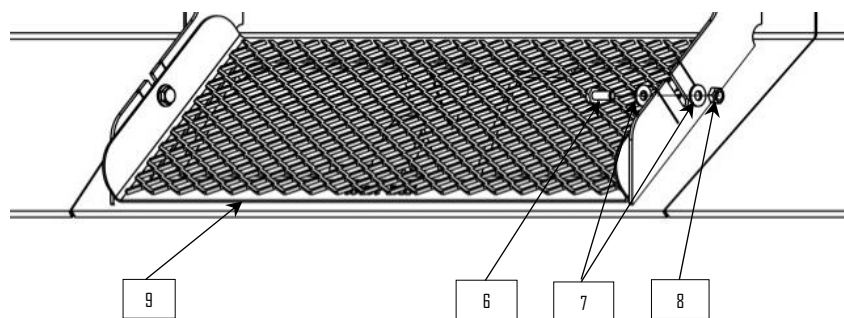


Bumper Assembly

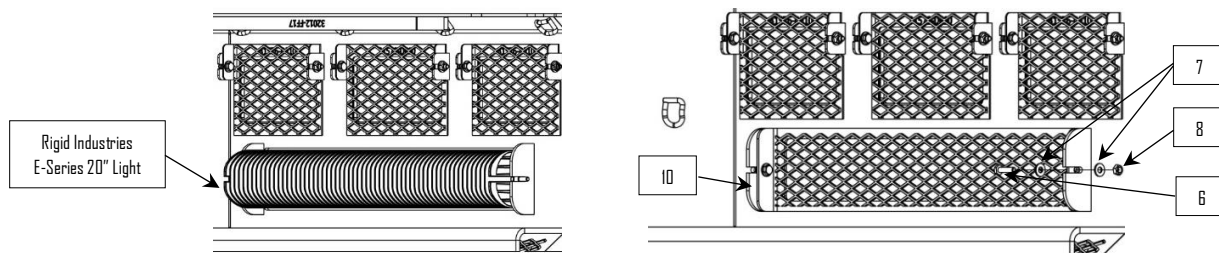
- On a clean flat non-scratching surface place the bumper center section (1) face down.
- Bolt the three upper screens (3, 4, & 5) into the center section, using the supplied 1/4" hardware (6, 7, & 8)



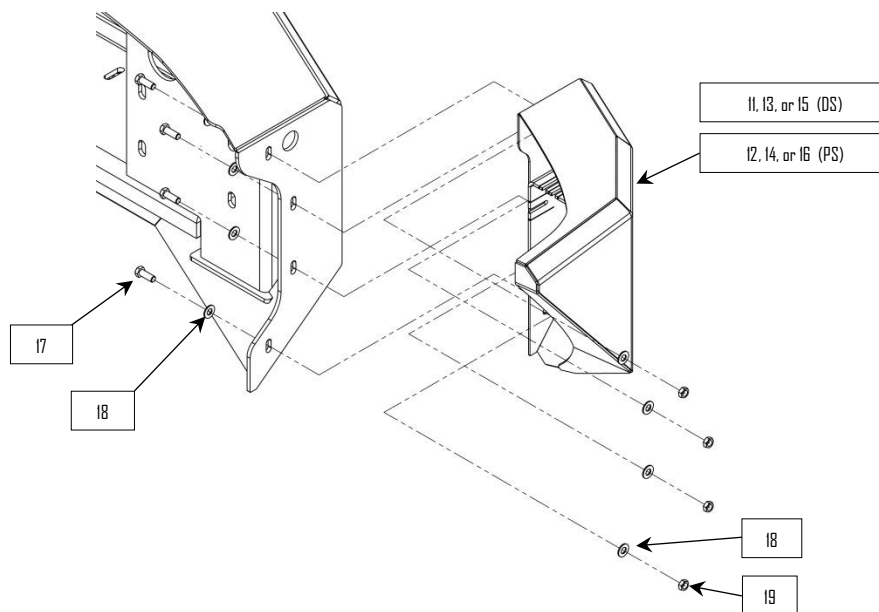
- Bolt the lower screen (9) into the center section, using the supplied 1/4" hardware (6, 7, & 8).



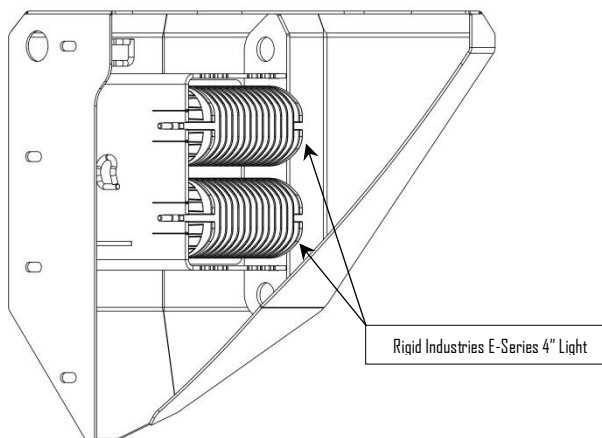
- Light Bumpers
 - Install the Rigid Industries E-Series 20 inch light bar (or similar light) into the center cut out using the hardware supplied with the light.
 - Or if optioned install the Kelderman center light delete screen (10) using the hardware supplied with the light delete kit.



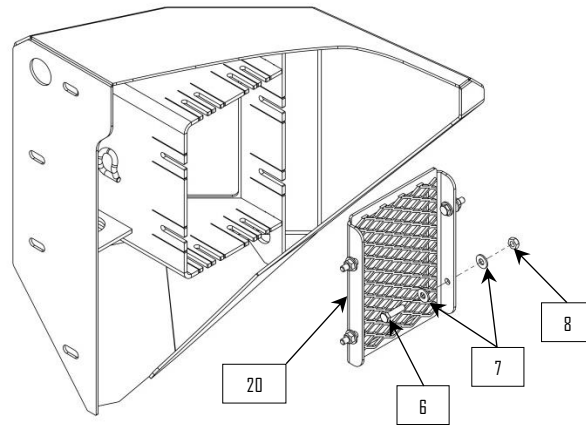
- Bolt the end caps onto the center section using the supplied hardware. Re-positioning may be required after bumper is installed onto truck. **NOTE:** While positioning use masking tape to protect painted surfaces that come into contact.



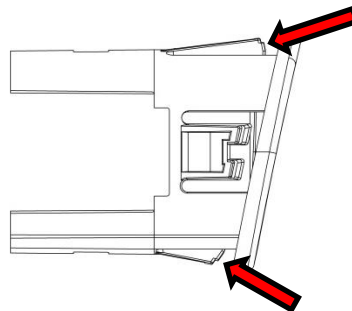
- Install the lights into each end cap.



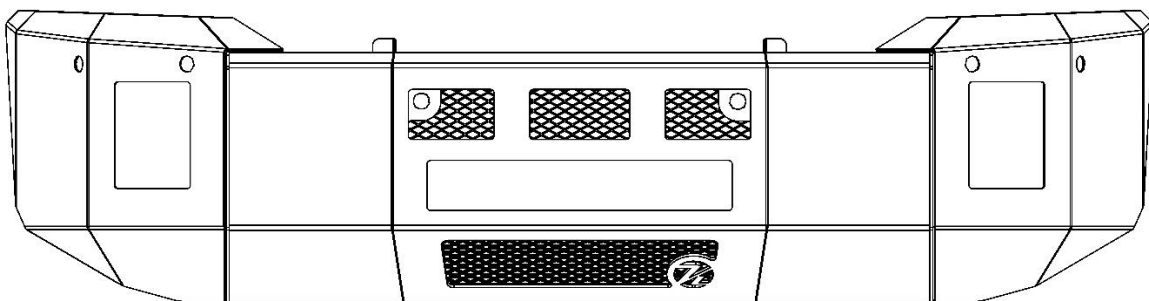
- Install two Rigid Industries 4 inch E-Series light (*or similar light*) into each end cap using the hardware supplied with the light.
 - **NOTE:** The light mounting ears will deform and draw up to the light as they are tightened.



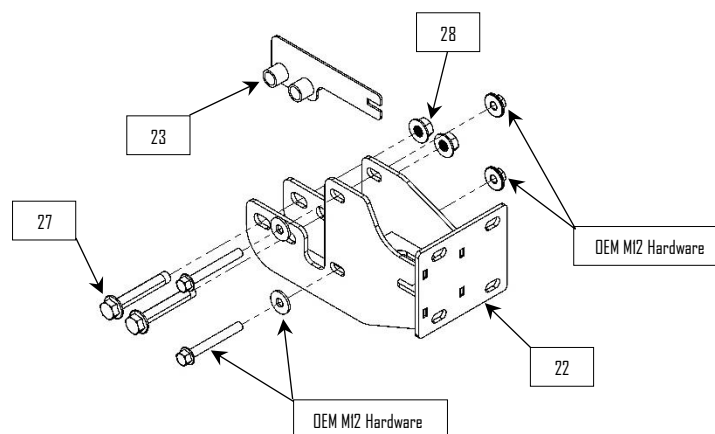
- Or if optional, install the Kelderman end cap light delete screen (20) using the 1/4" hardware supplied with the light delete kit.
- If equipped install the sensors into the end caps and center screens by reversing the process *from steps five and six*. Be sure to install them back in the correct location.
NOTE: If bezels will not snap into place file the tabs down a little at a time until they will catch.



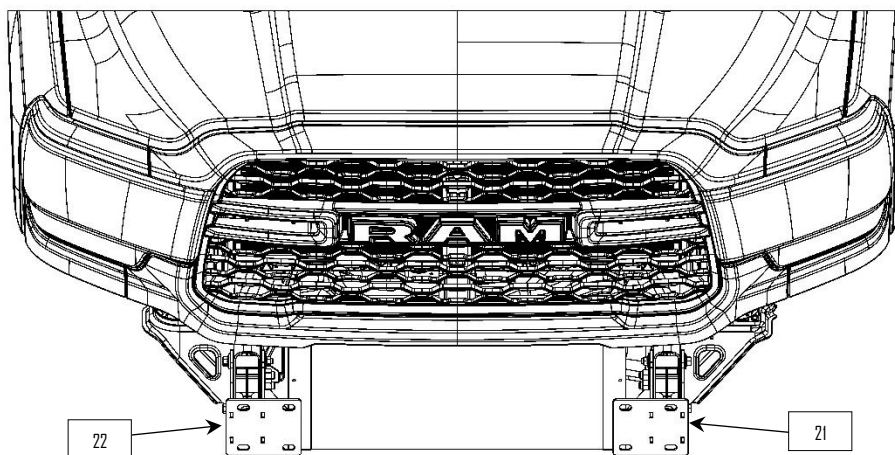
- Zip tie wiring to the tie downs welded inside the bumper.
- The bumper is now ready for installation.



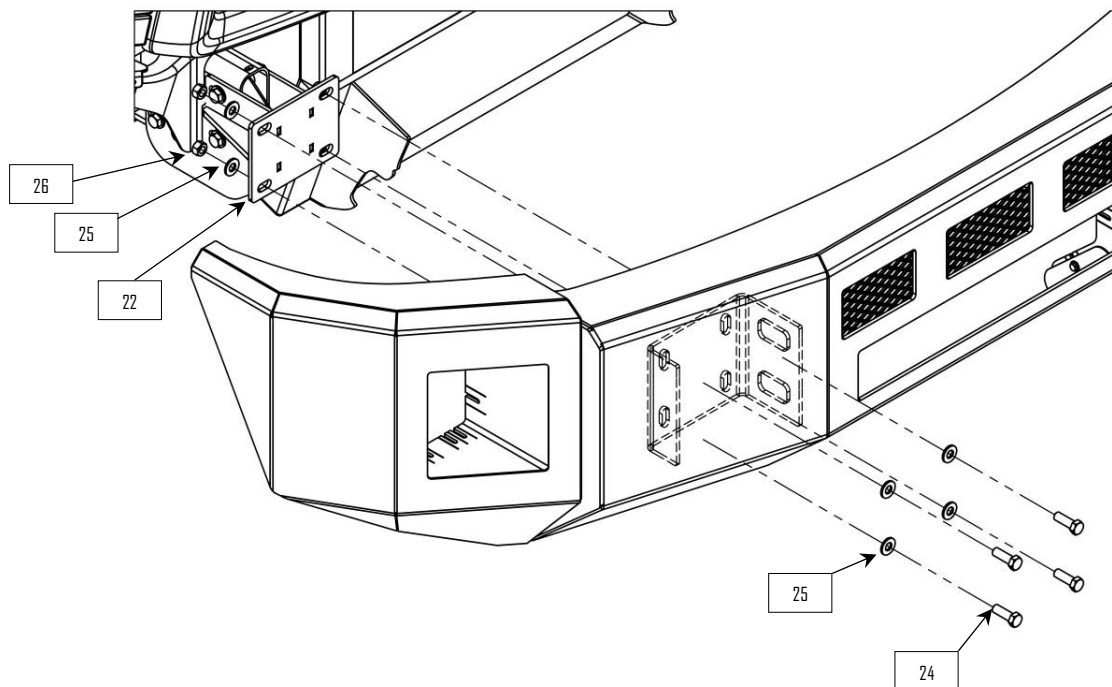
Bumper Installation



- 7:** Insert the anti-crush bracket (23) into the frame horn. Re-use the OEM hardware removed in *step four* to bolt thru bumper bracket (21 & 22) and the frame horn. **NOTE:** Some trucks may already have factory anti-crush bushings located where the crash protector was installed. These trucks do not require the installation of anti-crush bracket (23).

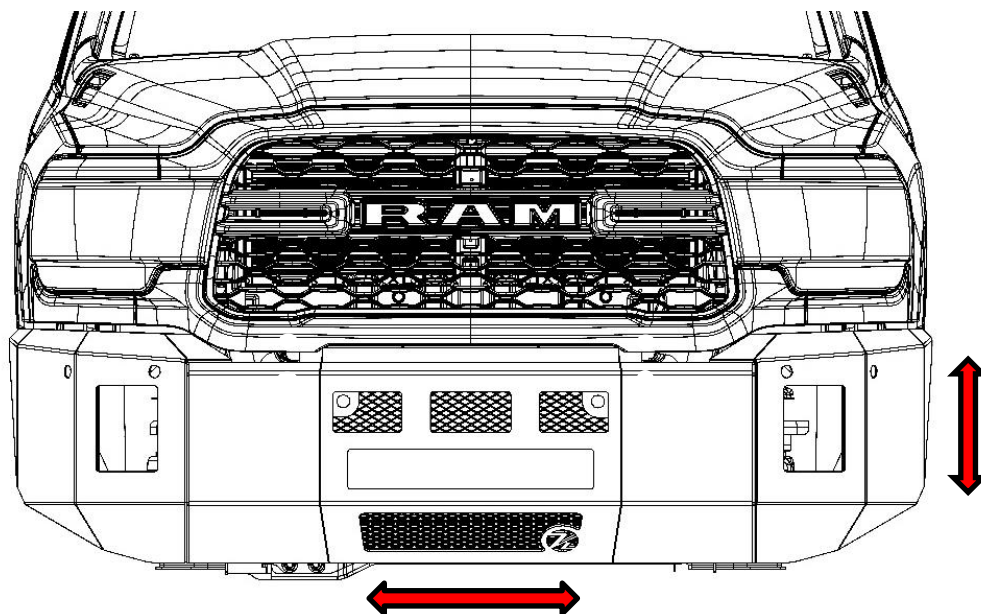


- 8:** Install bumper bracket (22) on the passenger side and bumper bracket (21) on the driver side.

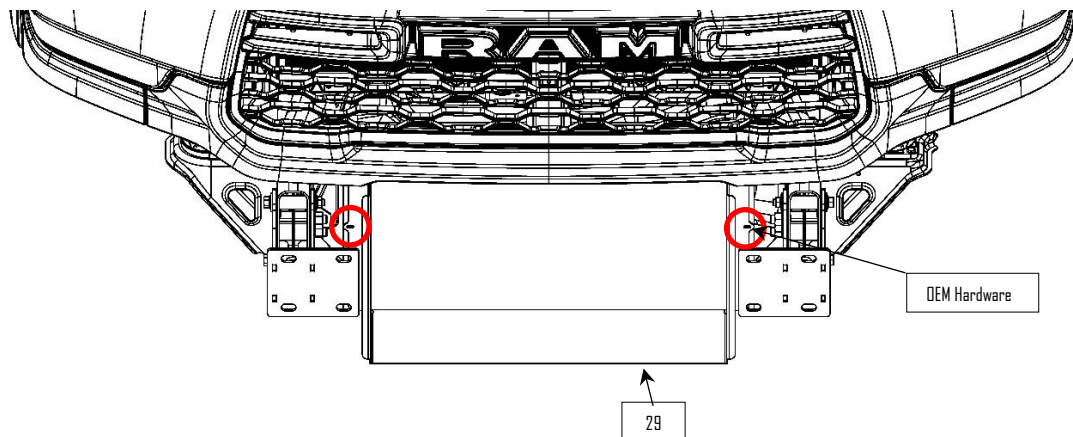


9: Insert the remaining 1/2" hardware thru the bumper and bracket.

10: Align the bumper on the truck and tighten the mounting hardware. **NOTE:** The end caps can be re-adjusted at this point if required.



11: On trucks equipped with an intercooler install the air duct (29) using the hardware removed in *step three*. The air duct (29) will slide up behind the installed bumper.



12: Torque all fasteners according to the chart below.

Bolt Size	Torque
1/4"-20	70 <i>in-lb</i>
3/8"-16	20 <i>ft-lb</i>
1/2"-20	50 <i>ft-lb</i>
9/16"-18	70 <i>ft-lb</i>
7/8"-9	250 <i>ft-lb</i>

13: Finish wiring accessories.

Parts Key

Item Number	Part Number	Description
1	10004925	Center Section - Bravo
2	31765	Outer Screen
3	31764	Inner Screen
4	10004817	DS Screen, Sensor
5	10004826	PS Screen, Sensor
6	12108	Bolt: ¼"-20 X ¾"
7	13000	Flat Washer: ¼"
8	13100	Lock Nut: ¼"-20
9	32059	Lower Screen
10	31569	Light Delete Screen Center <i>(Optional)</i>
11	10004976	End Cap (DS) Stock Sensor
12	10004965	End Cap (PS) Stock Sensor
13	10007167	End Cap (DS) 1.0" Wide Sensor
14	10007174	End Cap (PS) 1.0" Wide Sensor
15	10006889	End Cap (DS) 2.375" Super Wide
16	10006890	End Cap (PS) 2.375" Super Wide
17	12210	Bolt: 3/8"-24 X 1-1/4"
18	13002	Flat Washer: 3/8"
19	13102	Lock Nut: 3/8"-24
20	31566	Light Delete Screen End Cap <i>(Optional)</i>
21	10004947	Bumper Frame Mount (DS)
22	10004939	Bumper Frame Mount (PS)
23	10004848	Frame Anti Crush Insert
24	12007	Bolt: ½"-20 X 1-1/2"
25	13004	Flat Washer: ½"
26	13124	Lock Nut: ½"-20
27	13999	Flange Bolt: M16-2.0mm X 100mm
28	13913	Flange Nut: M16-2.0mm
29	10004856	Bravo Bumper Air Duct

Notes

Notes

Contact Information

- Kelderman Manufacturing appreciates your business. We strive to meet the needs of our customers by providing the highest quality products. If you have any questions concerning our products please call or email us at the following:

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