



# Bravo Series Front Bumper Installation Manual

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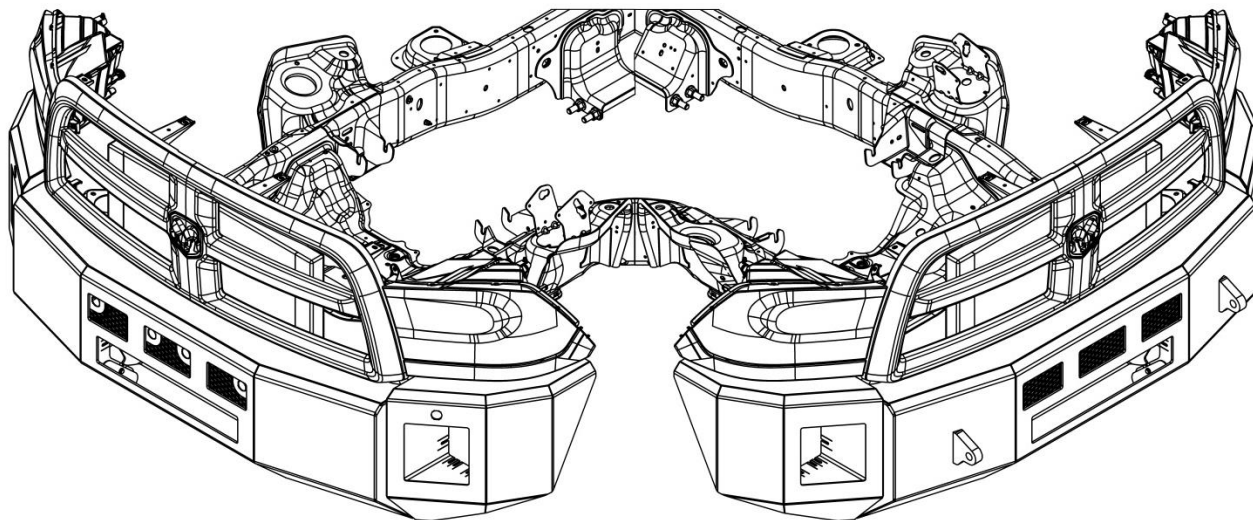
- 2010-2018 Dodge Ram 2500-5500

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# Kelderman Bravo Series Front Bumper

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## Smooth Hooks

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# Kit Numbers

- This installation manual covers the following front bumpers.

Kit Number	Description
KLM-401041010-001030000	Ram 2500 – Bravo – Sensors – Stock Width
KLM-401041010-001031700	Ram 2500 – Bravo – Sensors – Wide Width
KLM-401041010-002030000	Ram 2500 – Bravo – No Sensor – Stock Width
KLM-401041010-002031700	Ram 2500 – Bravo – No Sensor – Wide Width
KLM-401041010-001030001	Ram 2500 – Bravo – Sensors – Stock Width – Clevis Ears
KLM-401041010-001031701	Ram 2500 – Bravo – Sensors – Wide Width – Clevis Ears
KLM-401041010-002030001	Ram 2500 – Bravo – No Sensor – Stock Width – Clevis Ears
KLM-401041010-002031701	Ram 2500 – Bravo – No Sensor – Wide Width – Clevis Ears
KLM-401042010-001030000	Ram 3500 – Bravo – Sensors – Stock Width
KLM-401042010-001031700	Ram 3500 – Bravo – Sensors – Wide Width
KLM-401042010-002030000	Ram 3500 – Bravo – No Sensor – Stock Width
KLM-401042010-002031700	Ram 3500 – Bravo – No Sensor – Wide Width
KLM-401042010-001030001	Ram 3500 – Bravo – Sensors – Stock Width – Clevis Ears
KLM-401042010-001031701	Ram 3500 – Bravo – Sensors – Wide Width – Clevis Ears
KLM-401042010-002030001	Ram 3500 – Bravo – No Sensor – Stock Width – Clevis Ears
KLM-401042010-002031701	Ram 3500 – Bravo – No Sensor – Wide Width – Clevis Ears
KLM-401043010-002030000	Ram 4500 – Bravo – No Sensor – Stock Width
KLM-401043010-002031700	Ram 4500 – Bravo – No Sensor – Wide Width
KLM-401043010-002033500	Ram 4500 – Bravo – No Sensor – Cab Chassis
KLM-401043010-002030001	Ram 4500 – Bravo – No Sensor – Stock Width – Clevis Ears
KLM-401043010-002031701	Ram 4500 – Bravo – No Sensor – Wide Width – Clevis Ears
KLM-401043010-002033501	Ram 4500 – Bravo – No Sensor – Cab Chassis – Clevis Ears
KLM-401044010-002033500	Ram 5500 – Bravo – No Sensor – Cab Chassis
KLM-401044010-002033501	Ram 5500 – Bravo – No Sensor – Cab Chassis – Clevis Ears

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# Introduction

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- **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.

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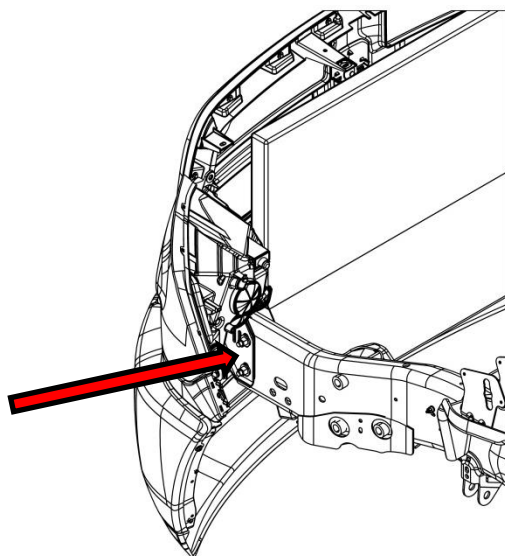
# Safety

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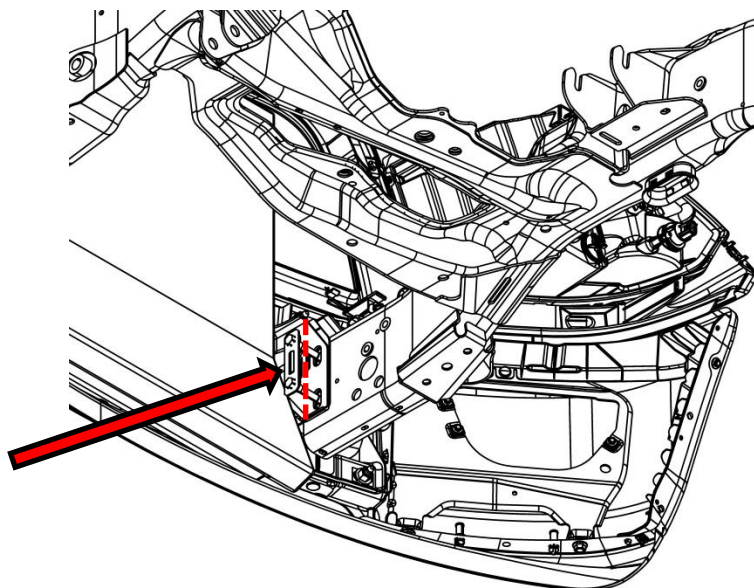
- **Your Safety and the Safety of Others is Very Important.**  
Read and understand all safety precautions and instructions before installing this product.
  
- **CAUTION: Trucks Equipped with Parking Sensors or Other Like Devices.**  
Relocation of these devices will alter the field of view. It is the 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

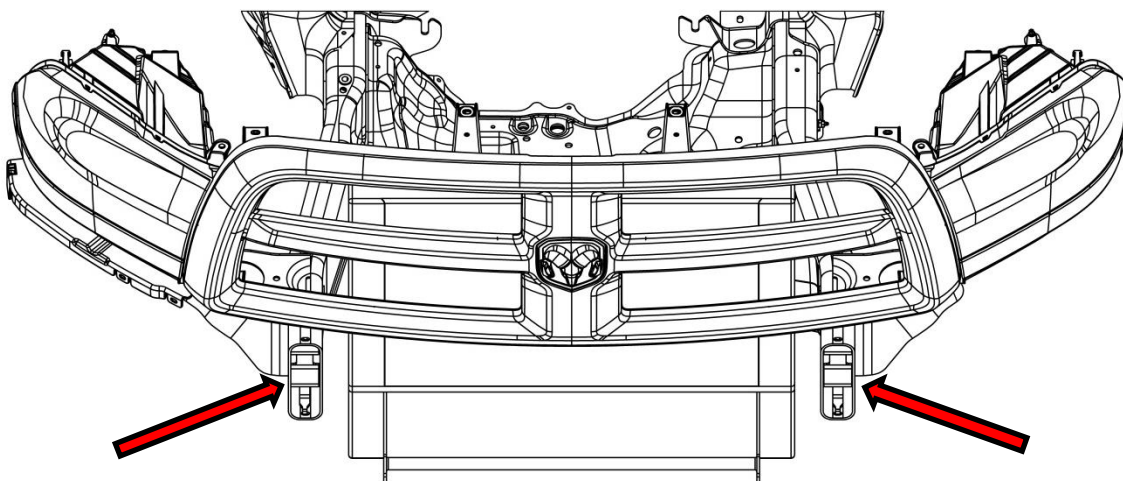
- 1: Disconnect the wiring to any lights, sensors, or other accessories mounted to the stock bumper.
- 2: Locate the two bolts that attach the bumper to each frame horn.



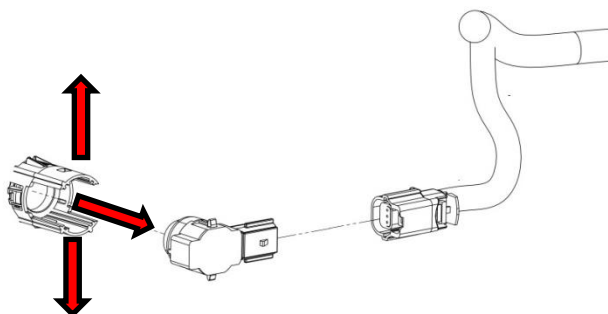
- 3: With the bumper supported loosen the nuts, but do not remove them. Push the bolt assembly inward toward the intercooler and cut the heads off. The bolts can now be removed. **NOTE:** Bolt assembly runs into the intercooler and will not come out unless the bolts are cut. *Optional: Uninstall the intercooler to gain access the bolts.*



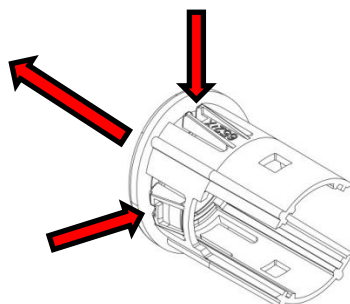
- 4:** Use a pneumatic chisel or reciprocating saw to remove the factory anti-crush bushings from the frame horns.



- 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.

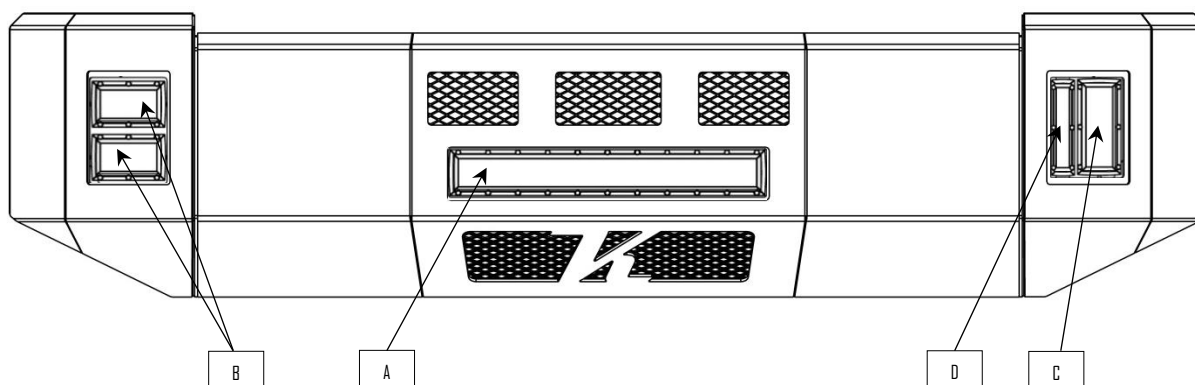


- 6:** Depress the tabs on the sensor bezel and push it thru the front of bumper.



# Bumper Preparation

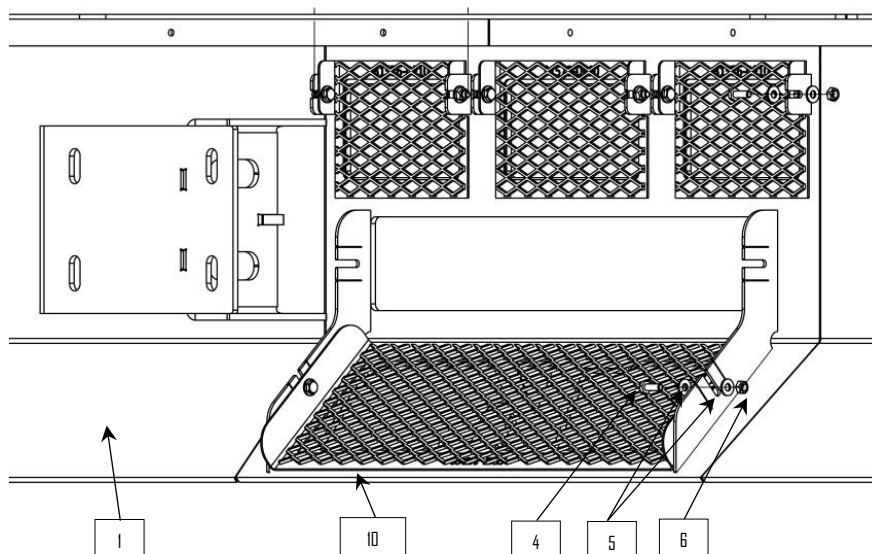
- Before painting open every box and locate all parts. There are several smaller bushing pieces, screens, and bolt tabs that are packaged separately inside the main box.
- **CAUTION:** Kelderman Mfg. Inc. cannot guarantee correct out of the box fitment across all light brands and sizes. The installer 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)
  - C) Rigid Industries E-Series 6 Inch Light (End Cap)
  - D) Rigid Industries SR-Series 6 Inch Light (End Cap)



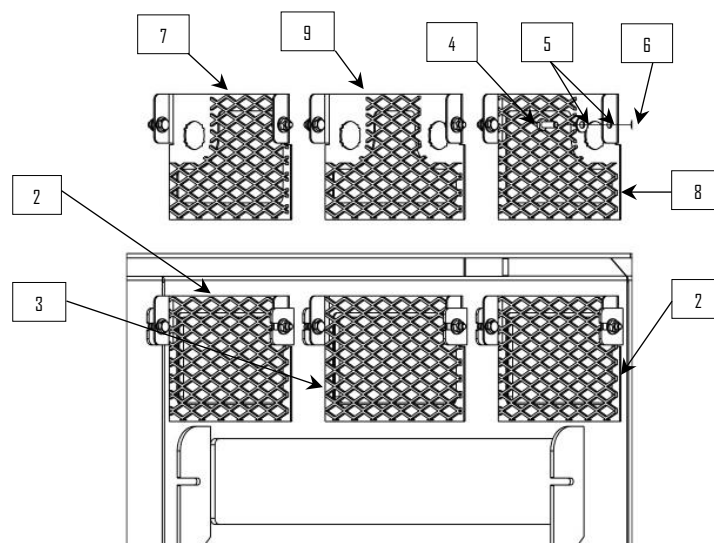


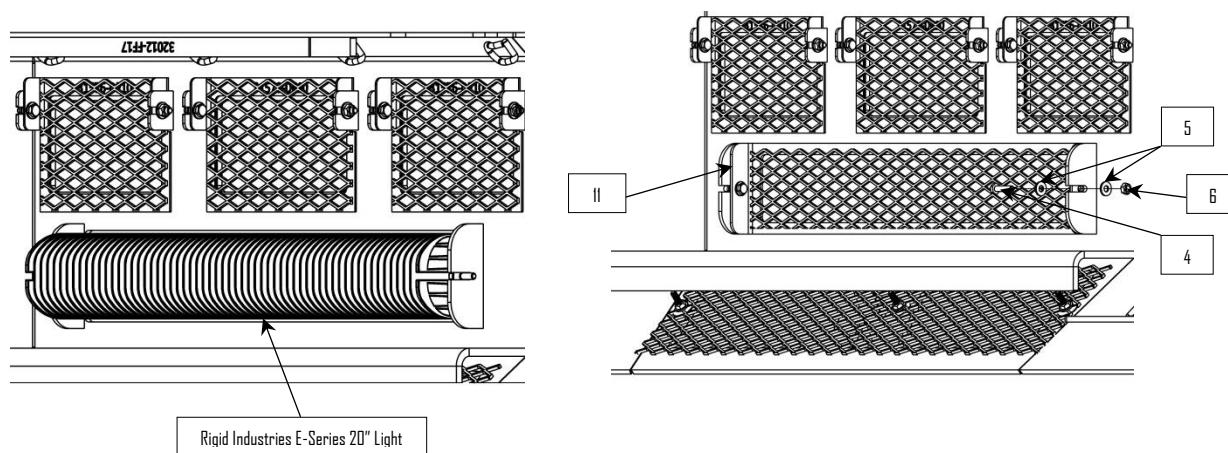
# Bumper Assembly

- On a clean flat non-scratching surface place the bumper center section (1) face down.

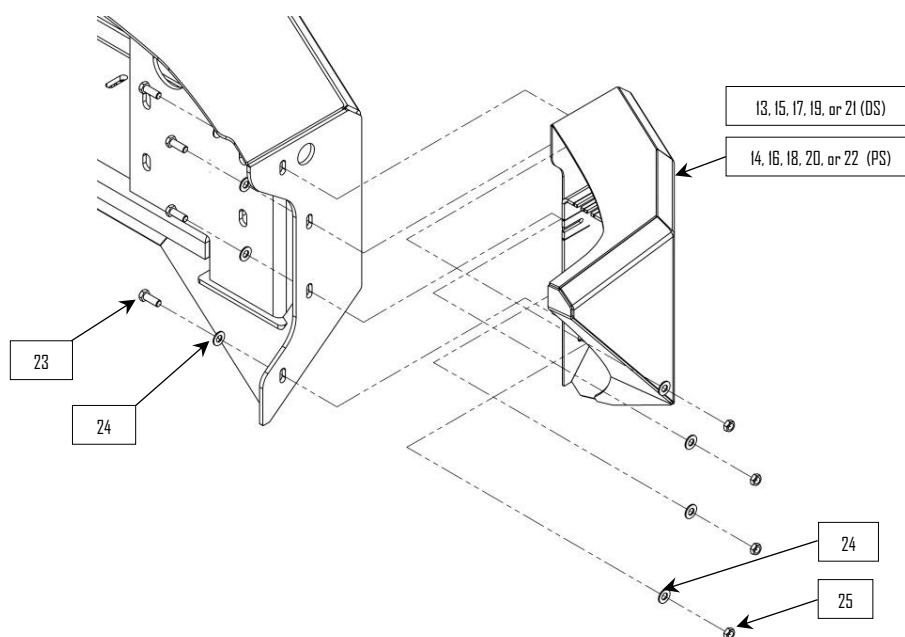


- Bolt the lower screen (10) into the center section, using the supplied  $\frac{1}{4}$ " hardware (4, 5, & 6).
- Bolt the three upper screens (2 & 3) into the center section.
  - If your truck has parking sensors install screens (7, 8, & 9).



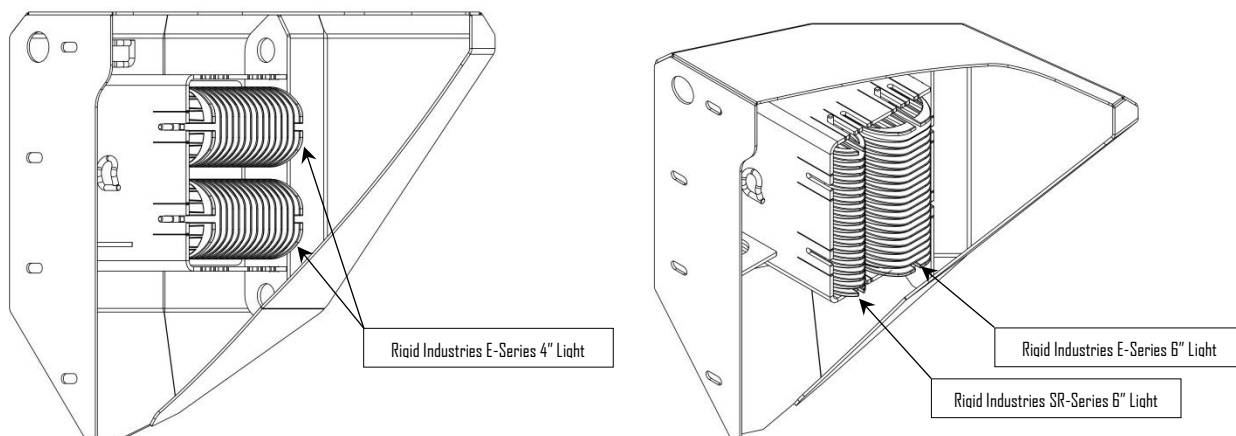


- Install the Rigid Industries E-Series 20 inch light bar (*or similar light*) into the center cut out using the hardware supplied with the light.
- Or if optioned install the Kelderman center light delete screen (11) using the hardware supplied with the light delete kit.

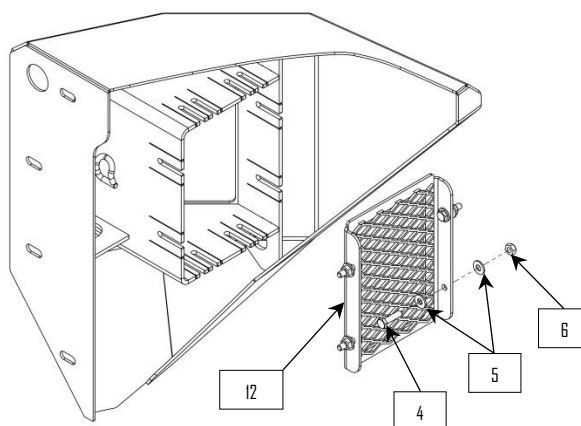


- Bolt the end caps onto the center section using the supplied hardware. Re-positioning may be required after bumper is installed onto truck. **NOTE:** While positioning use masking tape to protect painted surfaces that come into contact.

- Install the lights into each end cap.

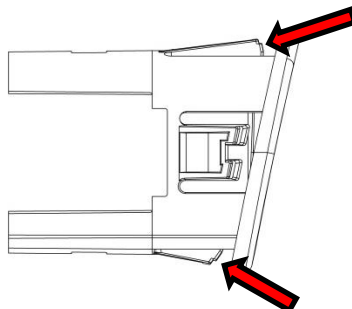


- Install horizontally two Rigid Industries 4 inch E-Series light (*or similar light*) into each end cap using the hardware supplied with the light.
- Or install vertically one Rigid Industries 6 inch E-Series (*or similar light*) and one Rigid Industries 6 inch SR-Series (*or similar light*) into each 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.

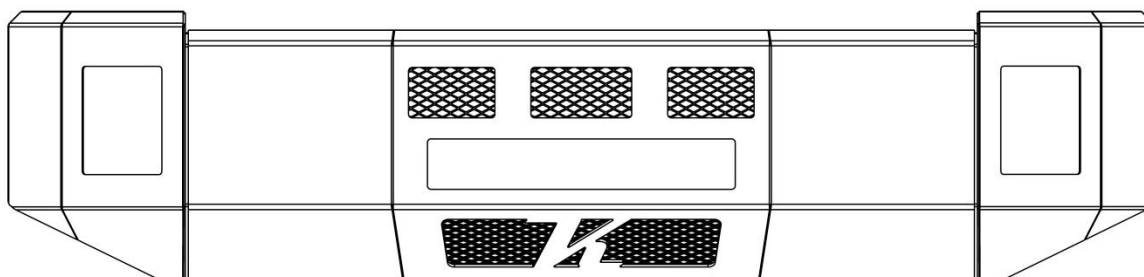
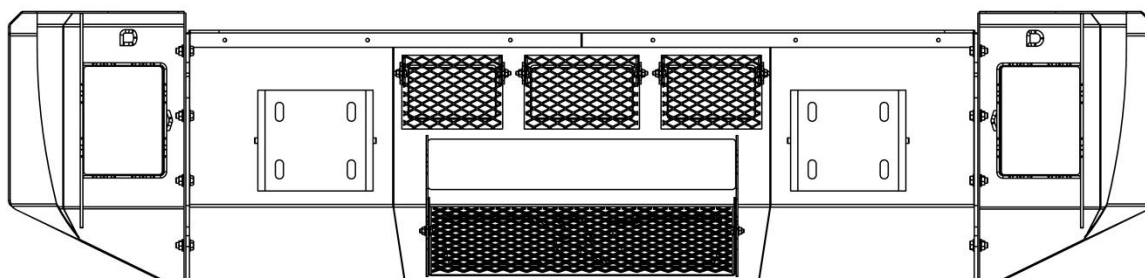


- Or if optioned, install the Kelderman end cap light delete screen (12) using the hardware supplied with the light delete kit.

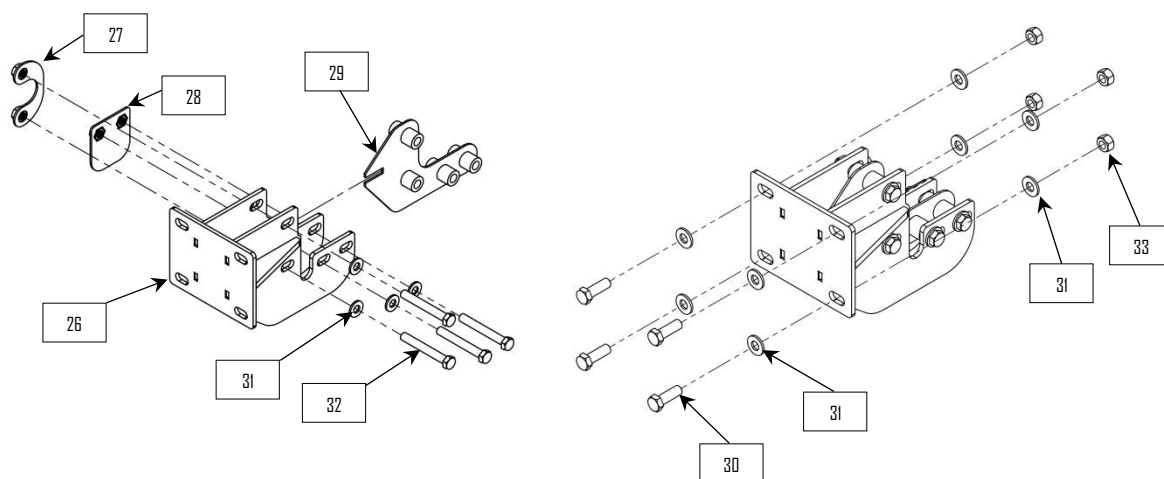
- If equipped install the sensors into the end caps and center screens by reversing the process from steps five and six. Be sure to install them back in the correct location.  
**NOTE:** If bezels will not snap into place file the tabs down a little at a time until they will catch.



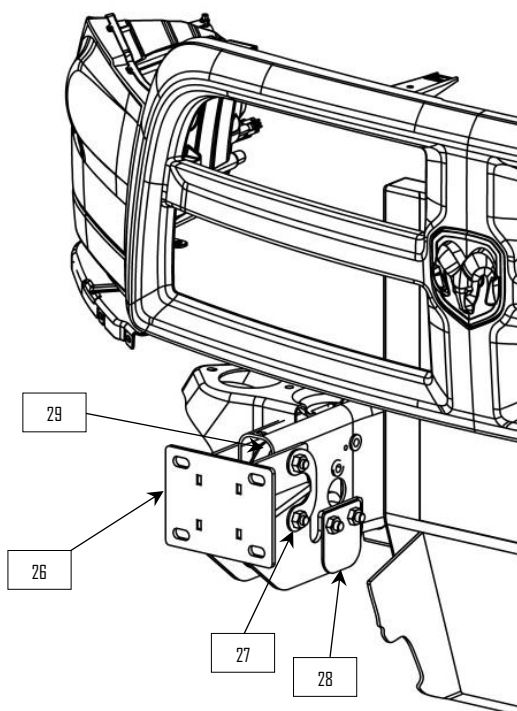
- Zip tie wiring to the tie downs welded inside the bumper.
- The bumper is now ready for installation.



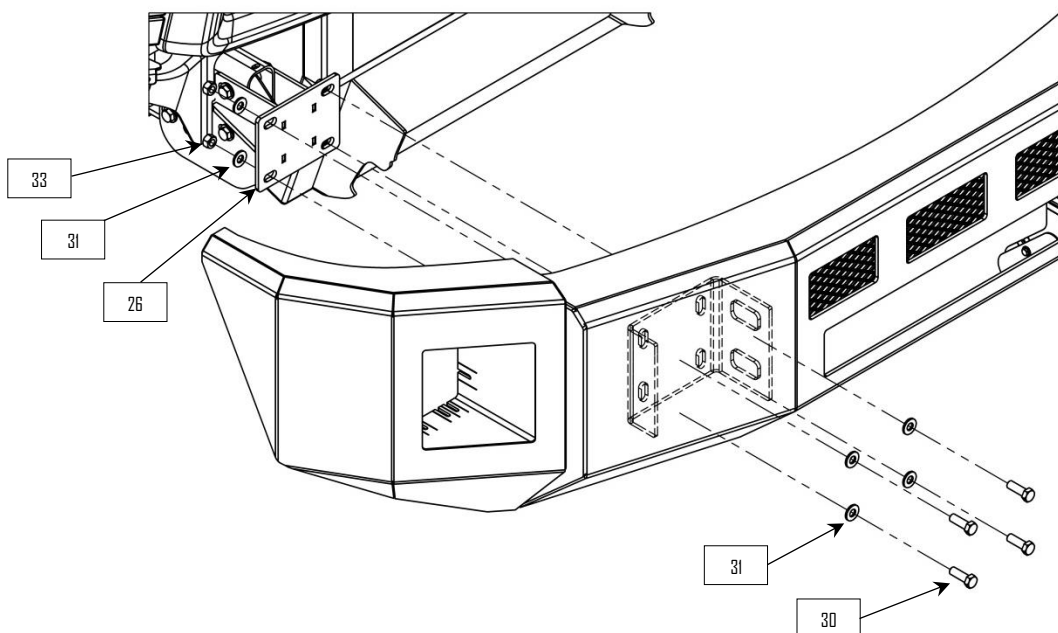
# Bumper Installation



- 7:** Insert the anti-crush bushing (29) into the frame horn. Use ½" hardware (32) to bolt thru bumper bracket (26), the frame horn, and anti-crush bushing (29). Insert bolt tabs (27 & 28) between the frame and intercooler. Use thread locker on bolts (32) and screw them into the bolt tabs.

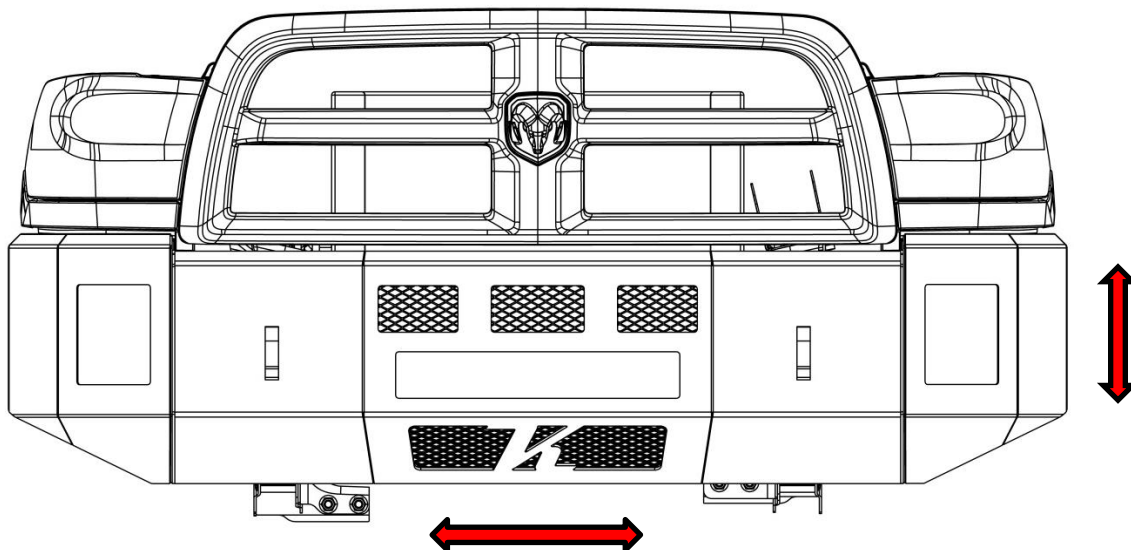


- 8:** Use ½" bolts (30) to position the bumper on the frame brackets (26). Use washer (31) and nut (33) to fasten the bumper to the mount.



- 9:** Align the air duct on the bumper with the plastic factory intercooler duct. Trim the plastic duct where required.

- 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:** 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>

**12:** Finish wiring accessories.

# Parts Key

Item Number	Part Number	Description
1	32351	Center Section - Bravo
2	10008104	Honeycomb Outer Screen – 7"
3	10008102	Honeycomb Inner Screen – 8"
4	12108	Bolt: ¼"-20 X ¾"
5	13000	Flat Washer: ¼"
6	13100	Lock Nut: ¼"-20
7	10010160	Honeycomb DS Screen, Sensor – 7"
8	10010161	Honeycomb PS Screen, Sensor – 7"
9	10010164	Honeycomb Center Screen, Sensor – 8"
10	10008106	Honeycomb Lower Screen
11	31569	Light Delete Screen Center ( <i>Optional</i> )
12	31566	Light Delete Screen End Cap ( <i>Optional</i> )
13	31516	End Cap (DS)
14	31517	End Cap (PS)
15	31629	End Cap (DS) Sensor
16	31630	End Cap (PS) Sensor
17	31527	End Cap (DS) Wide
18	31528	End Cap (PS) Wide
19	31631	End Cap (DS) Sensor Wide
20	31632	End Cap (PS) Sensor Wide
21	31541	End Cap (DS) Cab Chassis
22	31542	End Cap (PS) Cab Chassis
23	12210	Bolt: 3/8"-24 X 1-1/4"
24	13002	Flat Washer: 3/8"
25	13102	Lock Nut: 3/8"-24
26	31548	Bumper Frame Mount
27	31572	Bumper Bracket Nut Retainer (1)
28	31770	Bumper Bracket Nut Retainer (2)
29	31596	Frame Anti Crush Insert
30	12007	Bolt: ½"-20 X 1-1/2"
31	13004	Flat Washer: ½"
32	12026	Bolt ½"-13 X 3-3/4"
33	13124	Lock Nut: ½"-20



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# Notes

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## Contact Information

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- 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:

**2686 Highway 92**  
**Oskaloosa, Iowa 52577**

**Phone:** (641) 637-5396

**Fax:** (641) 673-4168

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