

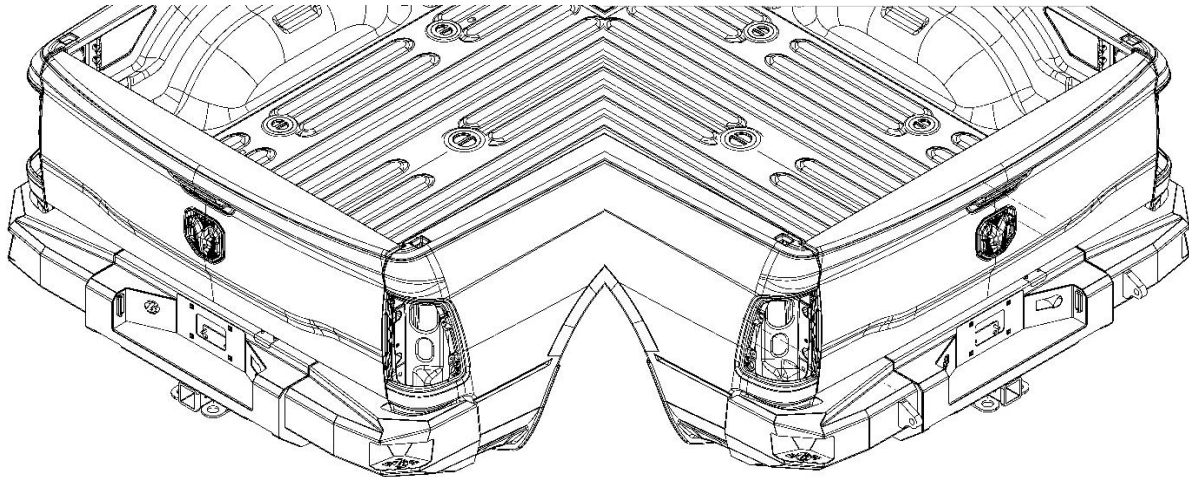


kelderman

Bravo Series Rear Bumper Installation Manual

- 2019 Ram 2500-3500

Kelderman Bravo Series Rear Bumper



SRW x4
Smooth

DRW x6
Hooks

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Kit Numbers

- This installation manual covers the following rear bumpers.

Kit Number	Description
KLM-401041019-104030000	Ram 2500 – Bravo Smooth – x4 Sensors - SRW
KLM-401041019-104030001	Ram 2500 – Bravo Clevis Ears – x4 Sensors - SRW
KLM-401042019-104030000	Ram 3500 – Bravo Smooth – x4 Sensors - SRW
KLM-401042019-104030001	Ram 3500 – Bravo Clevis Ears – x4 Sensors - SRW
KLM-401042019-106030000	Ram 3500 – Bravo Smooth – x6 Sensors - DRW
KLM-401042019-106030001	Ram 3500 – Bravo Clevis Ears – x6 Sensors - DRW

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.

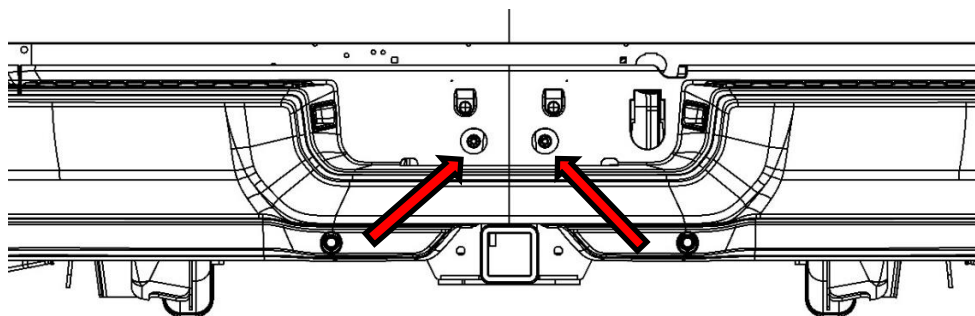
- **CAUTION: Trucks Equipped with Parking Sensors or Other Like Devices.**
Relocation of these devices will alter the field of view. It is the responsibility of the owner to understand how these changes affect the operation of these systems.

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

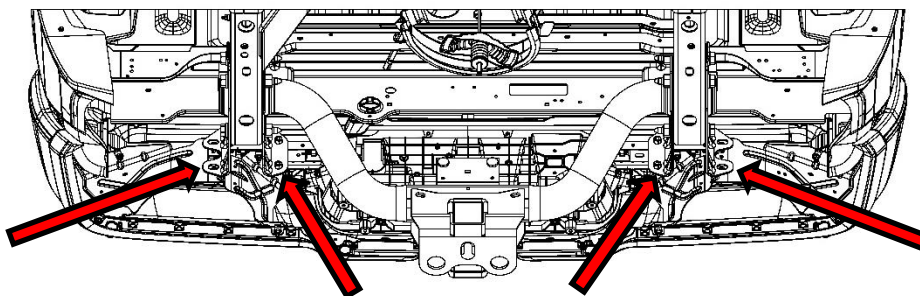
- **WARNING: Careless Installation Can Result in Serious Injury or Property Damage**
 - Wear eye protection.
 - Disconnect the battery before doing any work on the vehicle.
 - Work on flat level ground.
 - Ensure truck is properly supported by jack stands. Never work under a vehicle supported only by 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

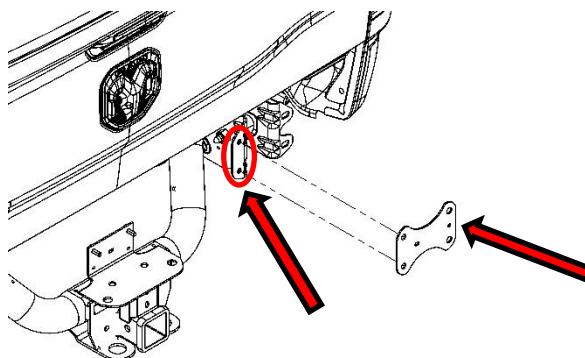
- 1:** Disconnect the wiring to any lights, sensors, or other accessories mounted to the stock bumper. **NOTE:** Lower the spare tire to make accessing electrical connectors easier.
- 2:** Remove the two bolts found under the license plate.



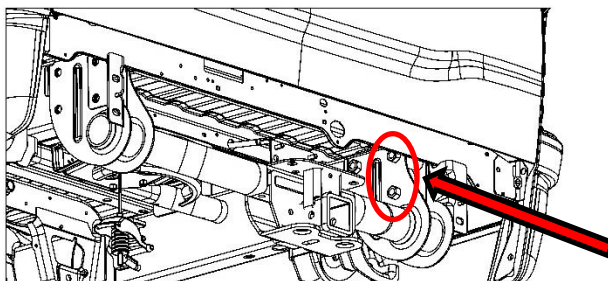
- 3:** With the bumper supported, remove the remaining bolts from each side that fasten the bumper to the receiver hitch. The bumper can now be removed. **NOTE:** Four bolts per side are used on 2500 models and two bolts per side on 3500 models.



- 4:** On 2500 models remove the plate that spans across the two brackets. Remove the nuts that are welded to the inner bracket. These can be cut off or twisted off with an impact gun.

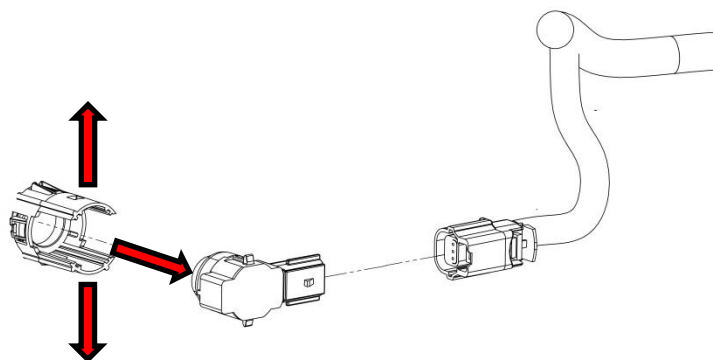


- 5:** On 3500 models remove the back two M16 bolts from each side that fasten the receiver hitch to the frame. Keep these bolts they will be reused during install. Remove the back two nuts that are welded to the frame. These can be cut or twisted off with an impact gun.

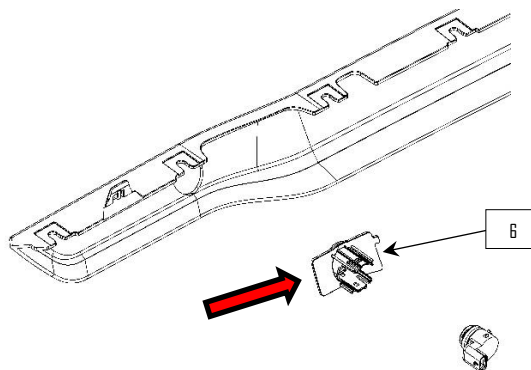


- 6:** If equipped remove the parking sensors from the stock bumper, these sensors will be reinstalled in the Kelderman bumper. **NOTE:** Keep track of each sensors location.

- 7:** To remove, spread the ears on the sensor bezel and push the sensor thru the back of the bumper.



- 8:** The sensor bezels (6) are heat staked into the plastic valance, carefully cut under the bezel flange to separate the bezel from the valance. **NOTE:** Do not damage the flange it is required to fasten the bezel into the Kelderman bumper.



- 9:** Remove the trailer light plug. It will be reinstalled in the Kelderman 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.

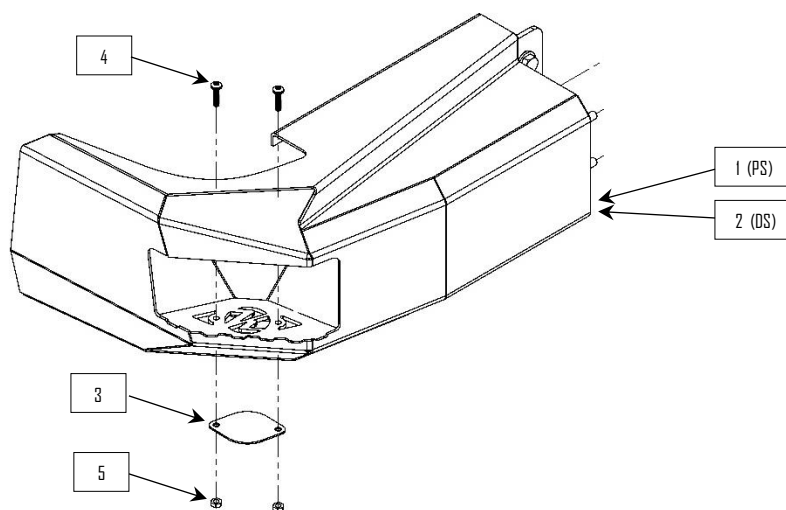
- **CAUTION:** This bumper has been designed to utilize a standard receiver pin. If you are using a locking pin or some other aftermarket pin check clearance with the bumper and make any necessary modifications before painting.

- **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 lights.
 - Rigid Industries E-Series 4 Inch Light
 - Hella 2KA-001-378-041 12V Incandescent License Plate Light
 - Hella 2KA-010-278-311 12V LED License Plate Light

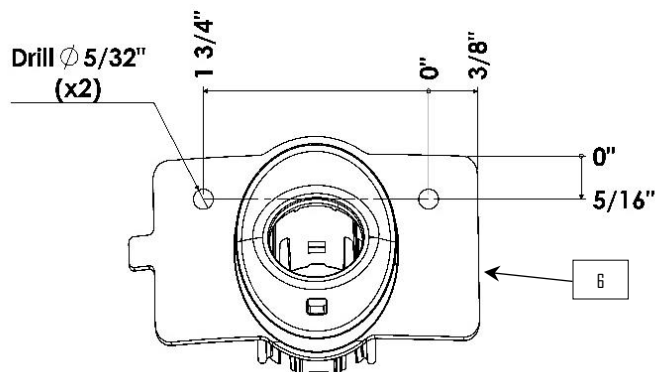
- **Painting**
 - If a heavily textured thick coating is being applied, take note that buildup does not hinder the installation of the spare tire access plates and blind spot sensor inserts.

Bumper Assembly

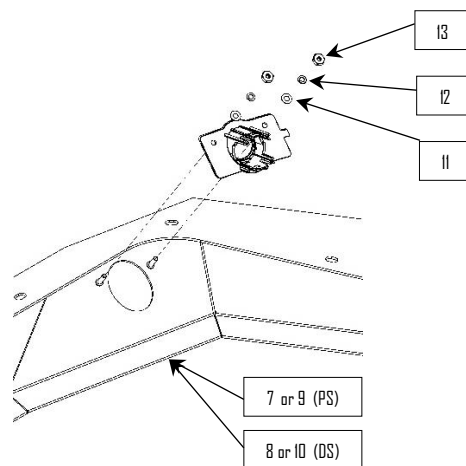
- On a clean flat non-scratching surface place the bumper end caps (1) and (2) face down.
- Use the $\frac{1}{4}$ " pan head torx bolts (4) and $\frac{1}{4}$ " nuts (5) to attach the step accent plate (3) to the underside of the corner step opening.



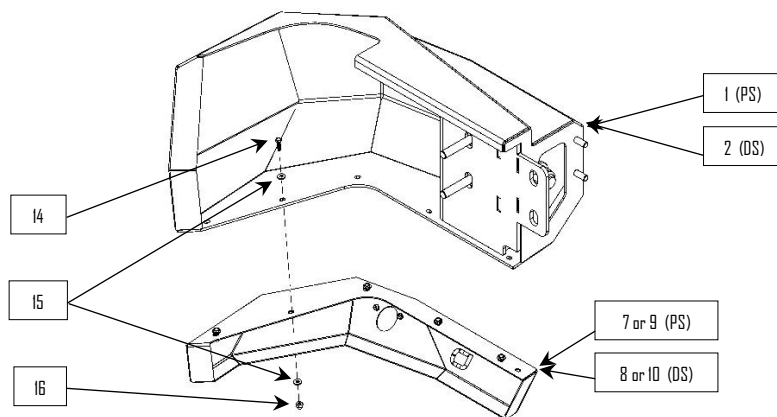
- Drill two $\frac{5}{32}$ " holes into each of the sensor bezels (6) removed in *step eight*.



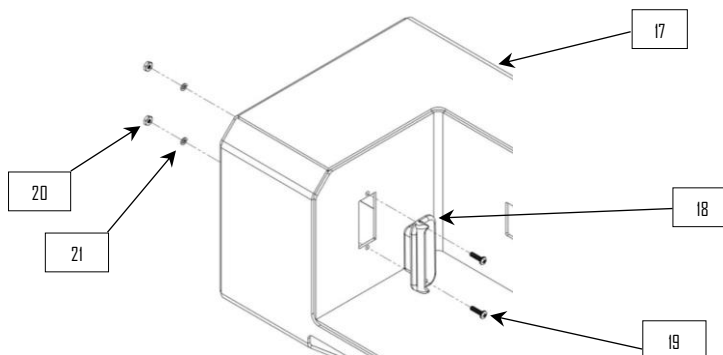
- Install the sensor bezels into the two lower valances (7 & 8 or 9 & 10). Use #6 hardware (11, 12, & 13) to fasten the bezels into the valance. Be sure to install them back in the correct location. **NOTE:** The drilled holes may need to be oversized for bezels to fit.



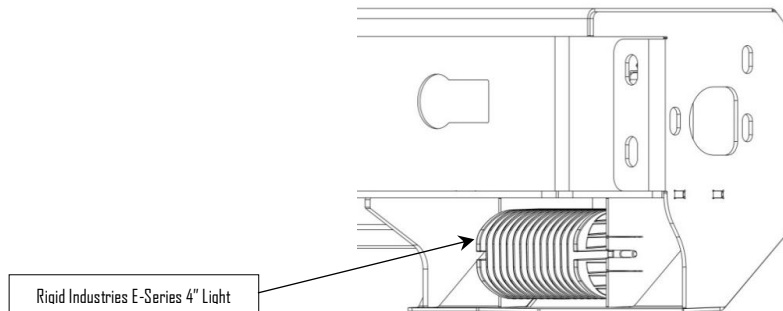
- Install the sensors back into the bezels by reversing the process from *step seven*. Be sure to install them back in the correct location.
- Fasten the lower valance (7 & 8 or 9 & 10) to the end cap (1 or 2) using the #10 hardware (14, 15, & 16). **NOTE:** While positioning use masking tape to protect painted surfaces that come into contact.



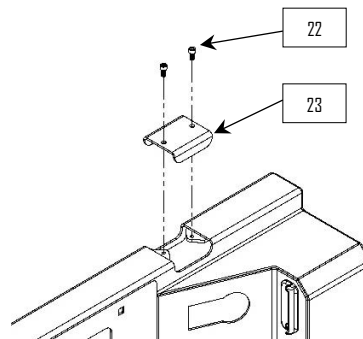
- On a clean flat non-scratching surface place the bumper center section (17) face down.
- Install the Hella license plate lights (18) using the provided #8 hardware.



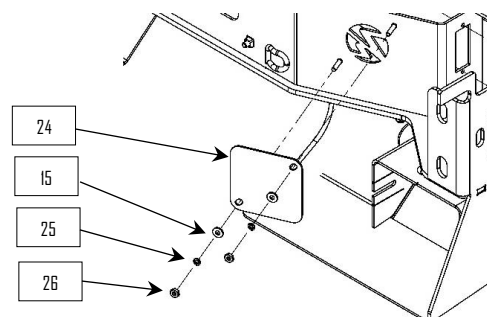
- If optional, install the reverse lights into the center section.



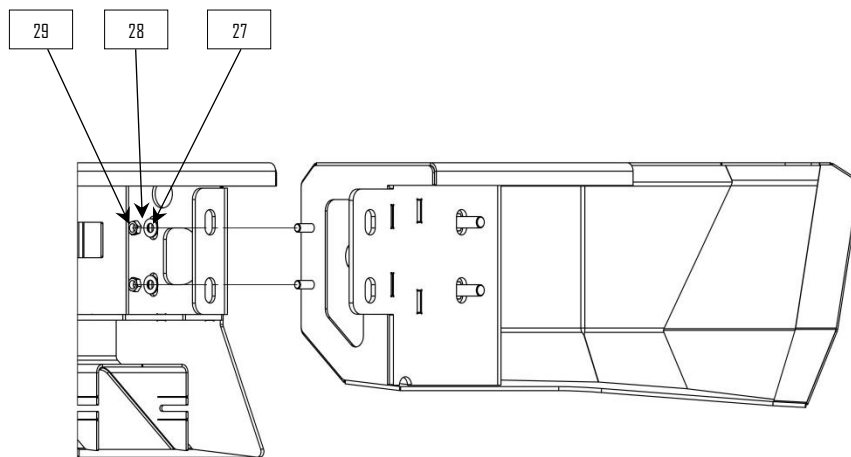
- Install two Rigid Industries 4 inch E-Series light (or similar light) using the hardware supplied with the light.
 - **NOTE:** The light mounting ears will deform and draw up tight to the light as they are tightened.
- Use the 1/4" socket head screws (22) to fasten the spare tire access cover plate (23) to the center section (17).



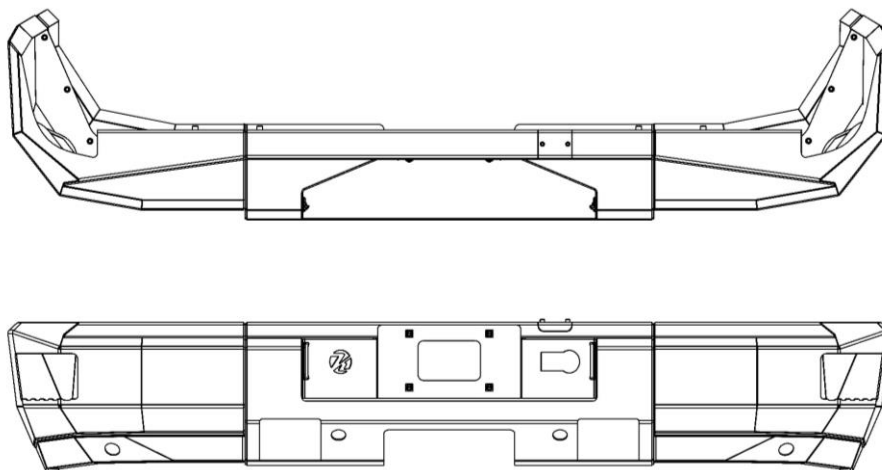
- Install trailer light plug from *step nine*.
- Install the sensor bezels (6) and sensors into center section (17) using the same process as the lower valance.
- Install the logo backing plate (24) using the #10 hardware.



- Bolt the end caps onto the center section using the supplied 3/8" hardware. Position the tops flush with the center section. **NOTE:** While positioning use masking tape to protect painted surfaces that come into contact.

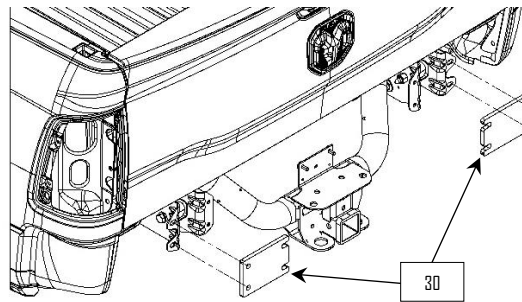


- Zip tie wiring to the tie downs welded inside the bumper.
- The Bumper is now ready for installation.

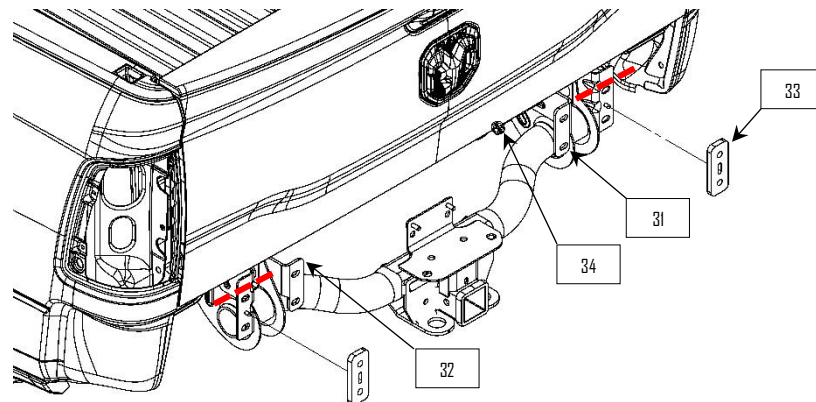


Bumper Installation

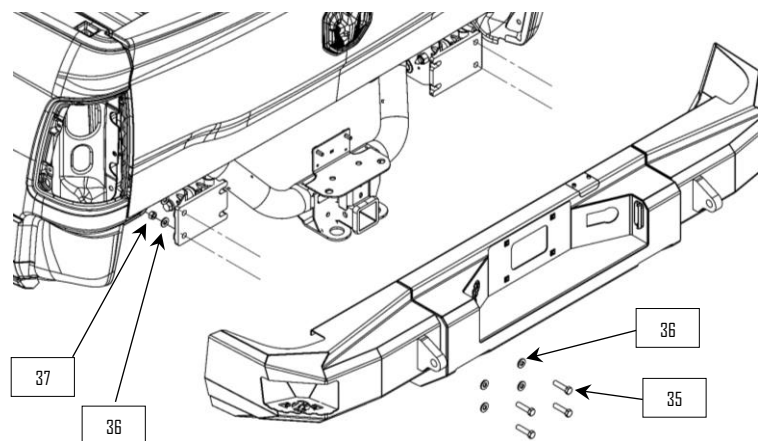
10: On 2500 models use spacer plate (30) between the factory mounts and the bumper.



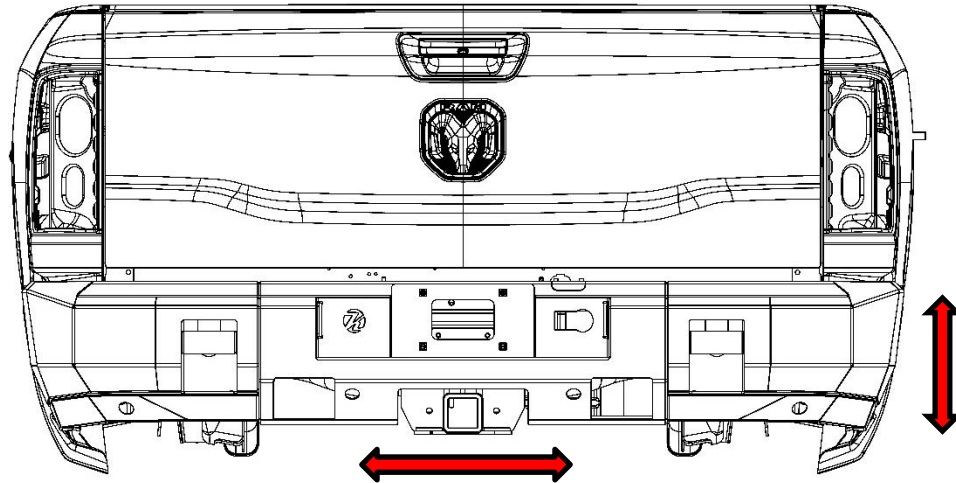
11: On 3500 models use the M16 bolts removed in *step five* too fasten the bumper brackets (31 & 32) to the receiver hitch. Trim the factory brackets to the same height as the Kelderman brackets. Spacer plate (33) goes between the factory mount and the bumper.



12: Use 1/2" hardware to fasten the bumper to the truck.



13: Align the bumper on the truck and tighten the mounting hardware.

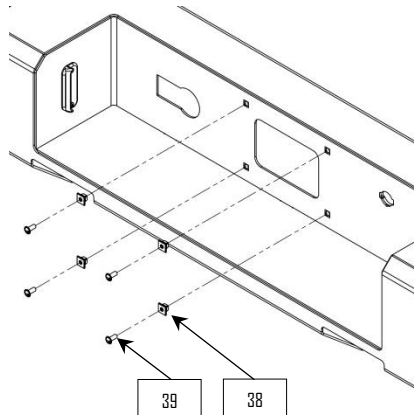


14: Torque all fasteners according to the chart below.

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>

15: Finish wiring accessories.

16: Press sq. nylon nuts (38) into bumper and install license plate using 1/4" screws (39).



Parts Key

Item Number	Part Number	Description
1	10004650	Weldment - Bravo End Cap (PS)
2	10004670	Weldment - Bravo End Cap (DS)
3	32088	Plate – Step Backing Plate
4	14023	Pan Head Torx: ¼"-20 x 1"
5	13100	Lock Nut: ¼"-20
6		OEM – Sensor Bezel
7	10004683	Weldment – Single Sensor Lower Valance (PS)
8	10004687	Weldment – Single Sensor Lower Valance (DS)
9	10004713	Weldment – Dual Sensor Lower Valance (PS)
10	10004717	Weldment – Dual Sensor Lower Valance (DS)
11	14038	Flat Washer: #6
12	14040	Split Lock Washer: #6
13	14042	Hex Nut: #6-32
14	14096	Hex Bolt: #10-24 x 3/4"
15	14062	Flat Washer: #10
16	14050	Lock Nut: #10-24
17	10004572	Weldment – Center Section w/Sensor
18	80042	Hella License Plate Light
19	14058	Phillips Screw: #8-32 X 5/8"
20	14052	Lock Nut: #8-32
21	14054	Flat Washer: #8
22	13503	Socket Head Cap Screw: 1/4"-20 X 1/2"
23	10004608	Spare Tire Access Cover
24	10004648	Logo Backing Plate
25	14086	Split Lock Washer: #10
26	14098	Hex Nut: #10-32
27	13002	Flat Washer: 3/8"
28	13046	Split Lock Washer: 3/8"
29	13142	Hex Nut: 3/8"-16
30	31772	2500 Bumper Spacer Plate
31	10004710	3500 Bumper Bracket (PS)
32	10004711	3500 Bumper Bracket (DS)
33	10004709	3500 Factory Bracket Spacer Plate
34	13913	Flange Hex Nut: M16-2.0mm
35	12011	Hex Bolt: ½"-20 x 2"
36	13004	Flat Washer: 1/2"
37	13124	Lock Nut: 1/2"-20
38	80054	Sq. Nylon Nut
39	14019	Slotted Screw: - 1/4"-20 X 5/8"

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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