

INSTALLATION OF R-450 FRONT MOUNTING KIT 2019-PRESENT RAM 4500/5500 CHASSIS CAB

INSTALLATION SAFETY PRECAUTIONS

If any installation/operation problems are encountered, please call G&B Specialties, Inc. for technical assistance before continuing with the installation process.



- Failure to heed to any of the following warnings could result in severe bodily injury and/or equipment damage.
- Read and understand this manual completely before attempting installation of the equipment.
- Installation instructions provided below only address the Rafna railgear equipment. Applicable railway company procedures and policies must be adhered to.
- Before performing any work under the vehicle or railgear, ensure the engine is turned off and the parking brake is set.
- Do not start the vehicle with the power steering hoses disconnected. Reconnect all hoses and secure the power steering cooler if the vehicle is started.
- Ensure all removed components are given to the vehicle owner after the installation of the railgear. These components must be re-installed if the railgear is removed from the vehicle.
- Always disconnect the vehicle's battery when welding on the vehicle or railgear to protect the vehicle's electrical system.
- Railway Company rules governing rail travel must be observed at all times.
- Never operate the vehicle if the Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating Front or Rear (GAWR), or the wheel or tire load ratings are exceeded.

INSTALLATION OF FRONT MOUNTING KIT

The following procedure details the installation of the front mounting kit. The hardware and parts required for this installation are listed in Table 1.

Table 1: Front Mounting Kit Installation Parts (K-M45VXDF001B)

Part Number	Description	Qty
R-14060D-B	Mounting Bracket, Driver's Side	
R-14060P-B	Mounting Bracket, Passenger's Side	
R-14061D-B	Side plate, Driver's Side	
R-14061P-B	Side plate, Passenger's Side	
R-18009	Spacer	4
R-14063D-B	Support Bracket, Driver's Side	1
R-14063P-B	Support Bracket, Passenger's Side	1
R-990KIT-441	1/2" UNC Gr. 8 Bolt x 4 1/4" Long	4
	1/2" UNC Gr. 8 Bolt x 4 1/2" Long	2
	1/2" UNC Gr. 8 Bolt x 4 3/4" Long	2
	1/2" Gr. 8 Washer	16
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	8
	5/8" UNC Gr. 8 Bolt x 5" Long	2
	5/8" Gr. 8 Washer	4
	5/8" UNC Gr. 8 Bolt x 4 1/2" Long	2

1. Remove the front bumper from the mounting brackets attached to the vehicle frame. Retain the front bumper and hardware for re-installation (if required).
2. Remove or reposition any additional hoses or shrouding that will hinder installation as needed. You should have easy access to the frame on both sides, as shown in in Figure 2. Repositioned hoses must be clear of sharp edges or potential pinch points when the bracket hardware is tightened.
3. Remove the tow hooks. The tow hooks will not be re-installed unless the railgear is removed.
4. Remove the bumper mounting brackets. If re-installing the vehicle's front bumper, retain the bumper mounting brackets. (See "Bumper Reinstallation and Modification".)
5. Place the driver's side support plate against the outside of the frame as shown. (Figures 1 and 5.)
6. Place the supplied hardware through the driver's side support plate, making sure each bolt faces toward the inside of the truck as shown. (Figures 1, and 5.) The frame holes may need to be reamed slightly to allow the bolts to pass without resistance. Note, the driver's side support plate will sit under the driver's side mounting plate, to be attached later (Figure 5) but for now, can simply hang freely on hardware.
7. Place each spacer on the front two bolts of the mounting brackets, and thread all bolts through the holes in the opposite side of the frame. (Figures 1 and 4.)

8. Place the driver's side mounting plate tight against the side of the vehicle frame, and thread hardware through. (Figures 1 and 3.)
9. Place the driver's side support bracket against the driver's side mounting plate, and loosely fasten together using the supplied hardware. Do not torque hardware. (Figure 1, 6, and 7.)
10. Apply and maintain upward pressure to the driver's side support plate, pressing it against the curled under flange of the driver's side mounting plate, as shown. (Figures 5 and 8.) Both plates should be firmly pressed against the bottom of the vehicle frame as shown, with no clearance in between them or the frame.
11. Apply upward pressure to the Driver's side Support Bracket. There should be no clearance between it and the frame. (Figures 6 and 7.)
12. Torque the 5/8" fasteners to 150 ft-lbs. dry. Torque 1/2" fasteners to 100 ft-lbs. dry. **Do not over torque any fasteners.** If the bumper is to be reinstalled, you may wish to reattach a modified bumper bracket as shown before torquing hardware (please see the "Bumper Reinstallation and Modification" section).
13. Repeat above steps for the passenger's side.

Note:

Make certain all brackets sit flush against the frame when tightening the fasteners.

If the vehicle's original front bumper is to be re-installed in its original position, it will need to be modified and reinforced as required by the installer. Recommended modifications are shown in the "Bumper Reinstallation and Modification" section of this manual.

Vehicle front bumper modifications are shown as reference only and are to be completed by the installer per the customer's requirements. They may also vary by vehicle model year.

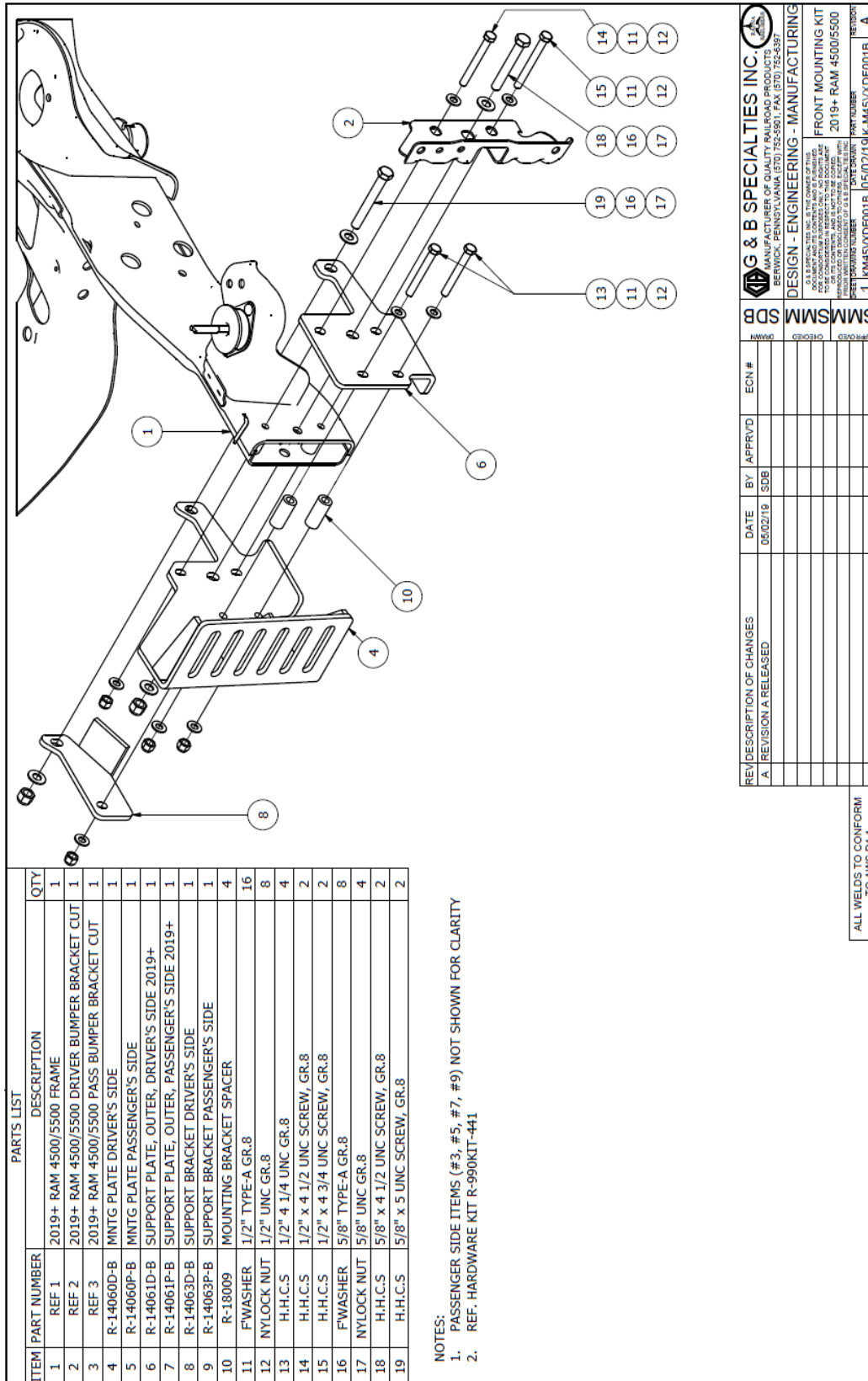


Figure 1

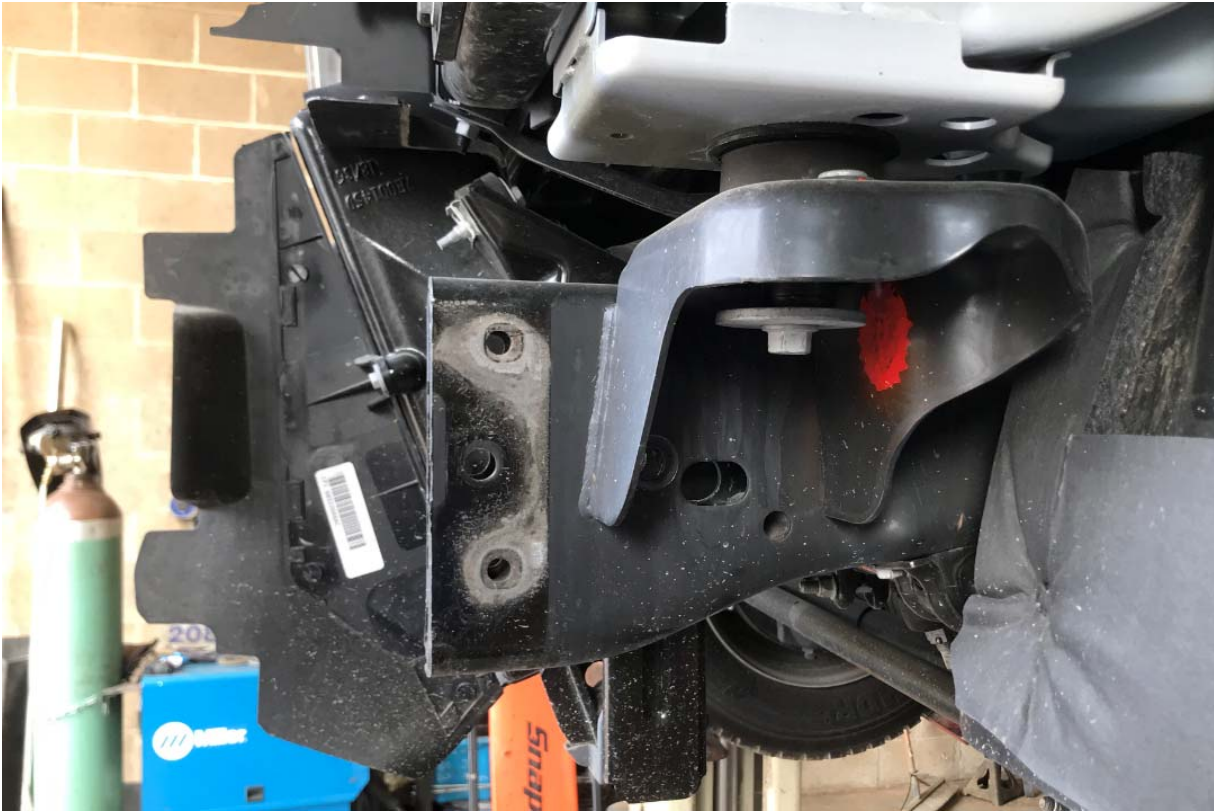


Figure 2

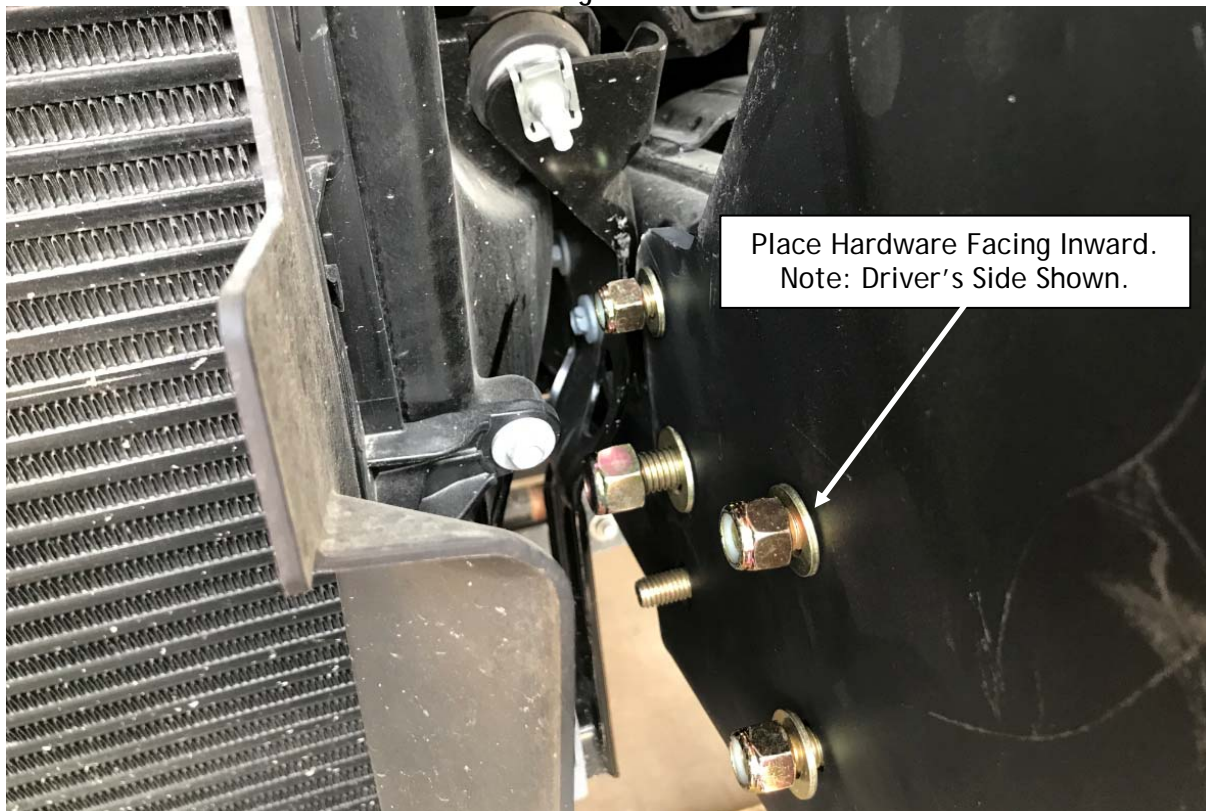


Figure 3



Figure 4

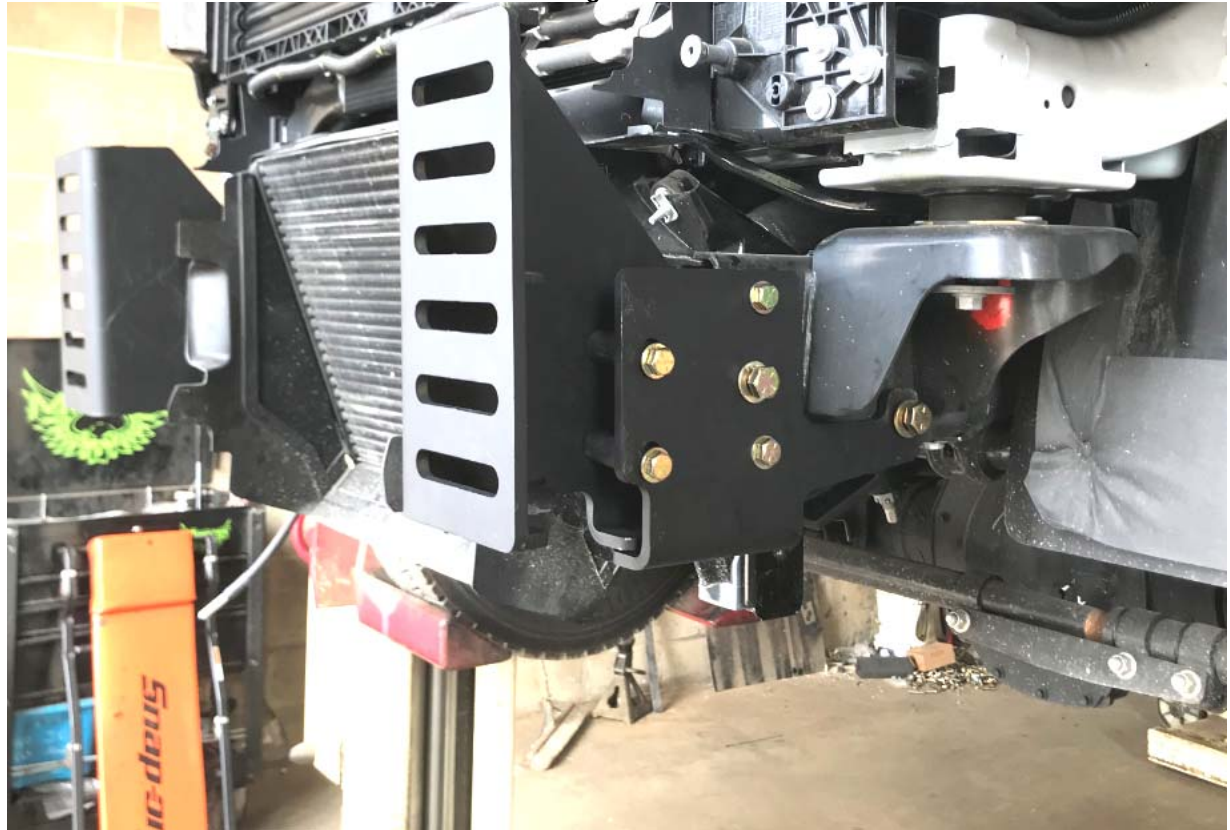


Figure 5

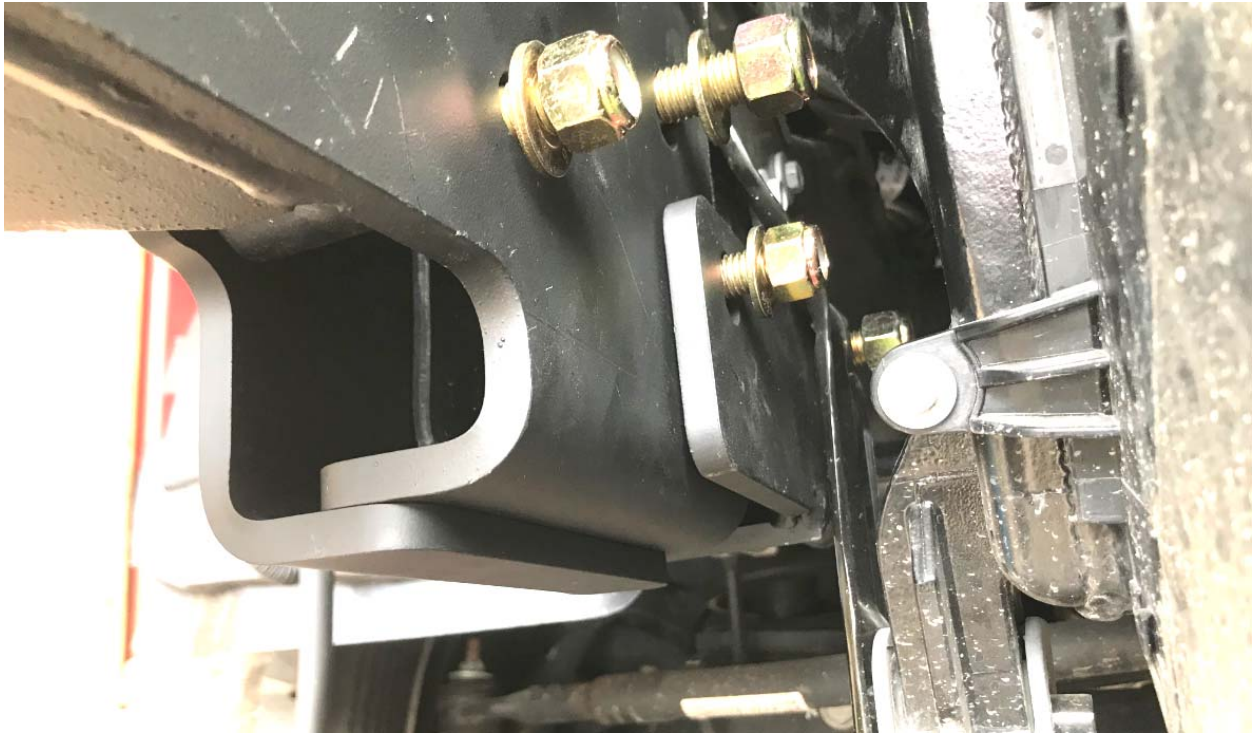


Figure 6



Figure 7



Figure 8

BUMPER RE-INSTALLATION AND MODIFICATION

If desired, the vehicle bumper can be modified and reinstalled after railgear installation is complete. It is the responsibility of the installer to determine the best way to accomplish this, however some examples are shown below.

Modified Bumper Brackets Installed with Supplied Hardware

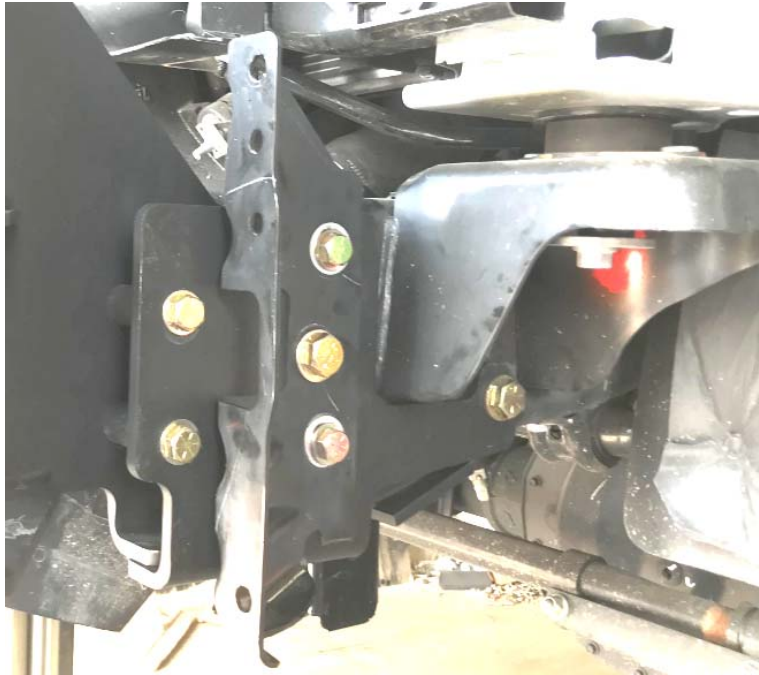


Figure 1 Driver Side Bumper Bracket

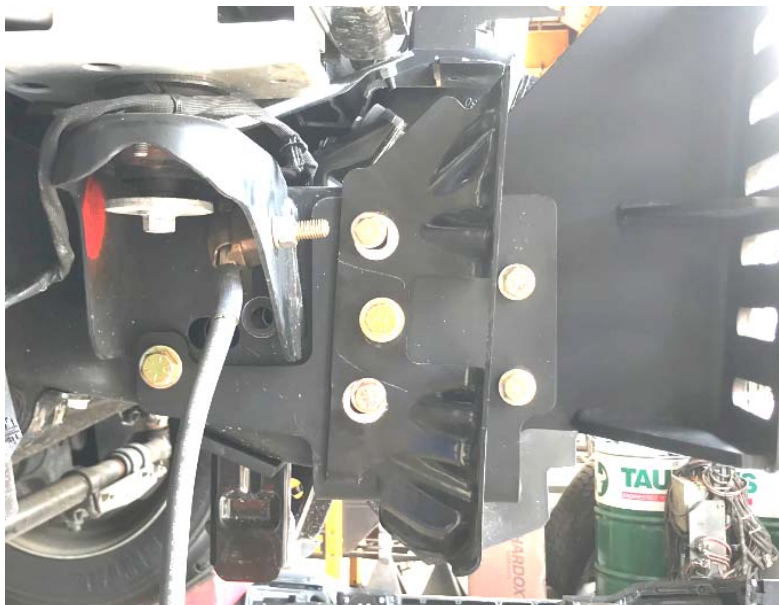


Figure 2 Passenger side bumper bracket

Bumper Modification



Figure 3 Bumper Cut to Size (2017 model)



Figure 4 Close Up View of Cut



Figure 5 Protecting sharp edges

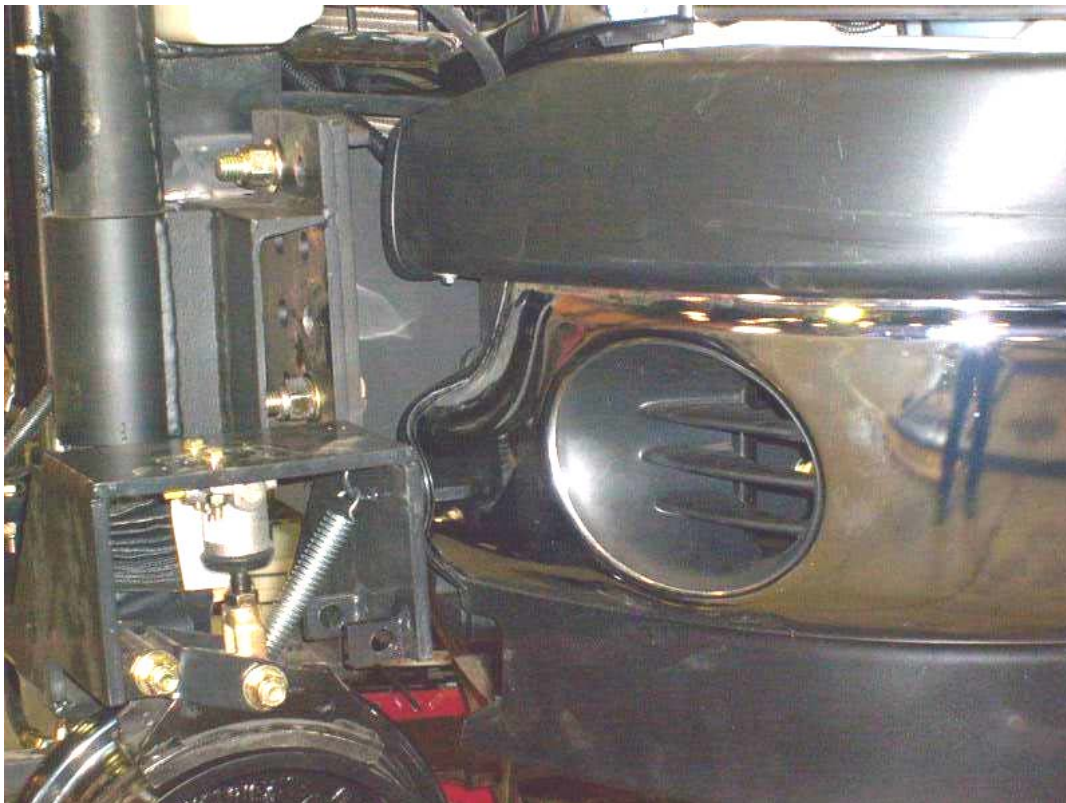


Figure 6 Modified Bumper Part 2- Installed (Drivers Side Corner) (2017 Model)

OPERATION OF R-450 FRONT MOUNTING KIT 2019-PRESENT RAM 4500/5500 CHASSIS CAB

OPERATION SAFETY PRECAUTIONS

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OPERATION AND SERVICE OF FRONT MOUNTING KIT

With the front mounting kit installed on this vehicle, it may be operated as normal, however the mounting plates are located further forward than the front bumper. Caution must be used when operating the vehicle.

Never operate the vehicle if the Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating Front or Rear (GAWR), or the wheel or tire load ratings are exceeded.

The front mounting kit must be serviced regularly to avoid damage to the equipment. Table 2 below provides the Recommended Service Schedule and Table 3 provides Standard Fastener Torque Values.

Table 2: Recommended Service Schedule

Service Required	Initial 100 km (62 Miles) of road and/or rail use	Daily	Weekly	Monthly
Inspect front mounting kit fasteners (re-torque if required)		✓	✓	✓

Table 2: Standard Fastener Torque Values

Fastener Size	Fastener Torque Value (ft.-lbs) Dry
1" UNC Gr. 8 Fasteners	250
7/8" UNC Gr. 8 Fasteners	200
3/4" UNC Gr. 8 Fasteners	175
5/8" UNC Gr. 8 Fasteners	150
1/2" UNC Gr. 8 Fasteners	100
3/8" UNC Gr. 8 Fasteners	40
1/4" UNC Gr. 8 Fasteners	12