

## INSTALLATION OF FRONT MOUNTING KIT 2019 - PRESENT RAM 2500/3500 4x2/4x4 (DIESEL)

### INSTALLATION SAFETY PRECAUTIONS

**If any installation 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 required for this installation is listed in Table 1.

**Table 1: Front Mounting Kit Installation Parts**

Part Number	Description	Qty
R-31282D	Mounting Bracket, Drivers Side	1
R-31282P	Mounting Bracket, Passengers Side	1
R-31285D	Outer Support Plate, Drivers Side	1
R-31285P	Outer Support Plate, Passengers Side	1
R-18009	Spacer	4
R-32101	Bumper Mtg Plate	4
R-2960	Railgear Mtg Shim, 0.5"	2
R-2960A	Railgear Mtg Shim, 1"	2
R-2631	Railgear Mtg Shim, 2"	2
R-32848	Orange Sight Wands (Pair), 0.75" x 36"	1
R-990KIT-460	1/2" UNC Gr. 8 Bolt x 4.00" Long	10
	1/2" UNC Gr. 8 Bolt x 1.75" Long	2
	1/2" UNC Gr. 8 Bolt x 1.50" Long	8
	5/8" UNC Gr. 8 Bolt x 4.00" Long	4
	1/2" Gr. 8 Washer	44
	5/8" Gr. 8 Washer	8
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	24
	5/8" UNC Gr. 8 Jam Nylon Insert Lock Nut	4
R-990KIT-304	3/4" UNC Gr. 8 Bolt x 3.50" Long	4
	3/4" UNC Gr. 8 Bolt x 4.50" Long	4
	3/4" UNC Gr. 8 Bolt x 5.50" Long	4
	3/4" UNC Gr. 8 Bolt x 6.50" Long	4
	3/4" Gr. 8 Washer	8
	3/4" UNC Gr. 8 Nylon Insert Lock Nut	4

1. Remove the front bumper and bumper mounting brackets attached to the vehicle frame. Retain the front bumper, brackets, and hardware for re-installation. (if required)
2. Remove tow hooks. Tow hooks will not be re-installed.
3. Place the driver's side mounting bracket against the bottom and inside of the frame and place the 1/2" supplied hardware through the brackets and frame at the existing bumper bracket mounting holes.
4. Place the driver's side outer support plate against the outside of the frame, making sure it wraps around the bottom of the frame and driver's side mounting bracket. Secure to frame with the hardware used in step #3. Making sure both brackets are tight against the inside outside and bottom of frame. Torque to 100 ft/lbs dry. Do not over torque.

5. Secure both brackets together at the overlap on the bottom of the frame with the supplied 1/2" hardware and 1 3/4" bolt. Torque to 100 ft/lbs dry. Do not over torque.
6. The rear holes in the outer support should line up with existing holes in the frame. Secure the bracket to frame using the supplied 5/8" hardware. Torque to 75 ft/lbs dry or the frame is observed to be deforming, whatever is reached first.
7. Place the bracket spacers between the mounting bracket and outer support plate and secure with the supplied 1/2" hardware. Torque to 100 ft/lbs dry. Do not over torque.
8. Repeat above steps for the passenger's side.

**Note:**

*Make certain everything sits flush against the frame when tightening the fasteners. Installer may be required to modify the frame, and/or relocate some OEM fasteners.*

9. 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. The recommended modifications are shown at the end of installation section of this manual.
10. Optional bumper mounting plates are supplied with this mounting kit and can be used at the installer's discretion. The mounting plates attach to the mounting bracket and outer support plate and are intended to reuse the OEM bumper mounting bracket and OEM hardware.

ITEM	PART NUMBER	DESCRIPTION	QTY
1	R-31282P	FRONT MTG BRKT PS RAM DIESEL	1
2	R-31285D	OUTER SUPPORT PLATE, DS, RAM DIESEL	1
3	R-31285P	OUTER SUPPORT PLATE, PS, RAM DIESEL	1
4	R-31282D	FRONT MTG BRKT DS RAM DIESEL	1
5	R-18009	MOUNTING BRACKET SPACER	6
6	R32101	BUMPER BRACKET	4
7	990727-150-22	SCREW, 1/2" X 1 1/2" UNC GR. 8	8
8	990727-175-22	SCREW, 1/2" X 1 3/4" UNC GR. 8	2
9	990727-400-22	SCREW, 1/2" X 4" UNC GR. 8	10
10	990729-400-22	SCREW, 5/8" X 4" UNC GR. 8	4
11	990600-050-002	WASHER, 1/2" TYPE A, GR. 8	44
12	990600-062-002	WASHER, 5/8" TYPE A, GR. 8	8
13	990316-050-22	NYLOCK NUT, 1/2" UNC GR. 8	24
14	990314-062-22	NYLOCK JAM NUT, 5/8" UNC GR. 8	4
15	R-32848	SIGHT WAND SET	1
16	R-2960	SHIM, RAILGEAR MTG, 1/2"	AS NEEDED
17	R-2960A	SHIM, RAILGEAR MTG, 1"	AS NEEDED
18	R-2631	SHIM, RAILGEAR MTG, 2"	AS NEEDED

NOTES

1. COOLER REMOVED FOR CLARITY.
2. SHIMS TO BE USED AS NEEDED TO ACHIEVE APPROPRIATE GROUND TO BRACKET SURFACE MEASUREMENT WHEN MOUNTING RAILGEAR.
3. REFERENCE HARDWARE KIT R-990KIT-460 FOR HARDWARE.

REV	DESCRIPTION OF CHANGES	DATE	BY	APPROVD	ECN #	QTY
A	REVISION A RELEASED	02/15/02	SMM	JMP		
B	UPDATED BUMPER MOUNTING BRKT VIEW	12/12/23	SMM	JMP		

19-PRESENT RAM R290 DIESEL FRNT MNTG KIT	1	K-402RDF001RD/02/15/22/K-402RDF001RD	REVISED
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ALL WELDS TO CONFORM TO SPECIFICATIONS

Figure 1

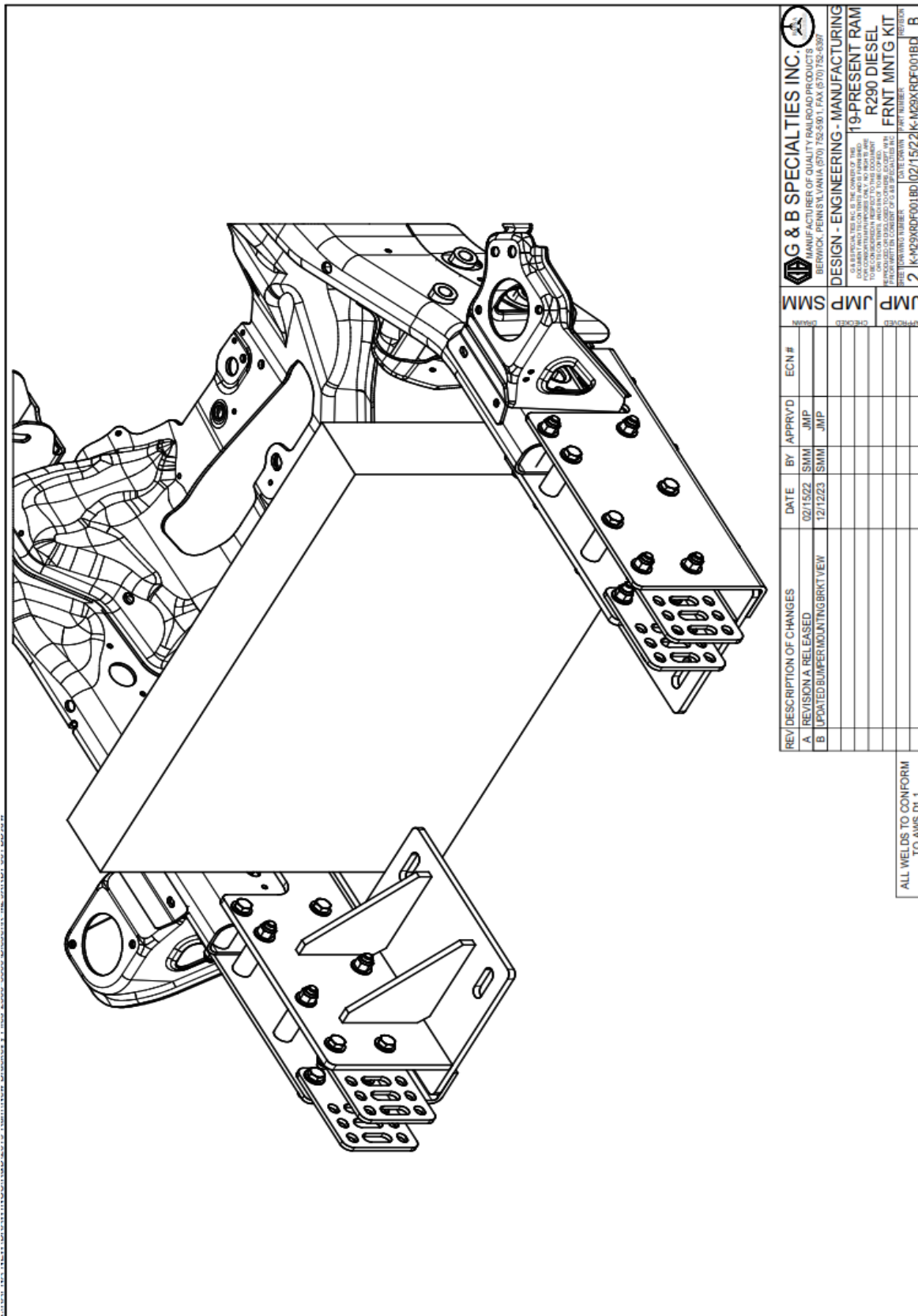


Figure 2



## OPERATION, SERVICE AND PARTS OF R-290 FRONT MOUNTING KIT 2019 - PRESENT RAM 2500/3500 4x2/4x4 (DIESEL)

### OPERATION SAFETY PRECAUTIONS

If any operating, service or parts problems are encountered, please call G&B Specialties, Inc. for technical assistance.



- 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 operation of the railgear equipped vehicle.
- Operating instructions provided below only address the RAFNA railgear equipment. Applicable railway company procedures and policies must be adhered to.
- Railway company rules governing rail travel must be observed at all times.
- Before performing any work under the vehicle or railgear, ensure the engine is turned off and the parking brake is set.
- 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.

## 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 3: Standard Fastener Torque Values**

Fastener Size	Fastener Torque Value (ft-lbs) Dry
1" UNC Gr. 8 Fasteners	250
¾" UNC Gr. 8 Fasteners	175
⅝" UNC Gr. 8 Fasteners	150
½" UNC Gr. 8 Fasteners	100
⅜" UNC Gr. 8 Fasteners	40
¼" UNC Gr. 8 Fasteners	12