

INSTALLATION OF FRONT MOUNTING KIT 2020 and Up GM 2500/3500HD 4x4

INSTALLATION SAFETY PRECAUTIONS

If any installation problems are encountered, please call G&B Specialties 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 K-M29RXGF020/K-M29RXGF024 Installation Parts		
Part Number	Description	Qty
R-21234D	Front Mounting Bracket, Drivers Side	1
R-21234P	Front Mounting Bracket, Passengers Side	1
R-21238	Fronting Mounting Frame Extension	2
R-2960	Railgear Mounting Shim - 1/2" Thick	4
R-21246D	Bumper Support Bracket, DS (2020-2023MY)	1
R-21246P	Bumper Support Bracket, PS (2020-2023MY)	1
R-21260D	Bumper Support Bracket, DS (2024MY-PRESENT)	1
R-21260P	Bumper Support Bracket, PS (2024MY-PRESENT)	1
R-21248D	Louver Support Bracket, DS	1
R-21248P	Louver Support Bracket, PS	1
R-2975	Bumper Spacer	8
R-051	Side Wand Set w/ Fasteners	1
R-990KIT-438	1/2" UNC Gr. 8 Bolt x 1 3/4" Long	4
	1/2" UNC Gr. 8 Bolt x 2" Long	4
	5/8" UNC Gr. 8 Bolt x 5 1/2" Long	2
	1/2" Gr. 8 Flat Washer	16
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	8
	5/8" Gr. 8 Flat Washer	4
	5/8" UNC Gr. 8 Nylon Insert Lock Nut	2
R-990KIT-439	3/4" UNC Gr. 8 Bolt x 2 1/4" Long	4
	3/4" UNC Gr. 8 Bolt x 2 3/4" Long	4
	3/4" UNC Gr. 8 Bolt x 3 1/4" Long	4
	3/4" Gr. 8 Flat Washer	8
	3/4" UNC Gr. 8 Nylon Insert Lock Nut	4
R-990KIT-455	1/2" UNC Gr. 8 Bolt X 1 1/2" Long	8
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	8
	1/2" Gr. 8 Narrow Flat Washer	8
	1/2" Gr. 8 Wide Flat Washer	8
R-990KIT-456	M6-1 Gr. 10.9 Bolt 20mm Long	4
	M6 Part 6 Washer	4
	1/4" UNC Gr. 8 Bolt X 3/4" Long	4
	1/4" Gr. 8 Washer	4

1. Remove the front bumper, bumper mounting brackets, bumper support brackets, and tow hooks. Retain the bumper and bumper mounting brackets for re-installation. The tow hooks and bumper support brackets will not be re-installed.
2. Remove the lower air cowling from under the radiator. The air cowling will not be re-installed.

3. Remove the skid plate from the front frame cross member. The skid plate will not be re-installed.
4. Remove and disconnect the lower louver and housing. This can be set aside as it will be modified and re-installed.
5. Insert the front frame extension (R-21238) into the frame and align with existing holes where the tow hooks were fastened. Align the correct bumper support (R-21246D or P for 20-23MY or R-21260D or P for 24MY-Present) and insert the 1/2" x 1 3/4" bolts and supplied hardware in the outside of the frame and frame extension to hold in place.
6. Bolt each front mounting bracket to the frame extension as shown using the remaining 1/2" x 2" bolts and hardware, along with the 5/8" x 5 1/2" bolt and hardware. Ensure the mounting plate lower surfaces are 0° to the horizontal with the vehicle in the typical road position and aligned with each other. Torque the fasteners to spec.
7. The supplied railgear mounting shims are to be used as required when mounting the railgear to the front mounting plates.
8. Following the installation of the front railgear, the louvers can now be removed from their original housing. Removing the two bolts holding the assembly together will accomplish this. The housing can be set aside as we will not be re-using it.
9. Locate the drilled and tapped 6mm holes in the lower radiator support. The relocation of the louvers will utilize these holes. Install R-21248D and P accordingly with the 6mm hardware provided in the kit. Do not tighten bolts at this time.
10. Install louvers on the relocating brackets with provided 1/4" hardware and adjust brackets so the louvers are centered on the truck and align with the air scoop behind them. Once adjusted, the 6mm bolts can now be tightened. Reconnect the connector for the louvers ensuring wiring is secure and will not rub.
11. Following the completion of the modification and installation of the louvers, install the bumper spacers (R-2975) between the bumper bracket and bumper with supplied 1/2" x 1 1/2" bolts and associated hardware re-using the original bolts to mount the brackets to the bumper mount.
12. Separate the lower plastic air dam section of the bumper from the steel section of the bumper. The lower plastic section will not be re-installed.
13. Modify the OEM bumper as required to create clearance for all railgear components to eliminate any interference during its full range of motion.
14. Once the front bumper has been modified and adjusted as required, install the bumper and ensure railgear encounters no interference through its full range of motion. If rubbing/hitting occurs, further modifications are needed to the bumper to ensure free range of motion.
15. Bumper support brackets will mount to the bumper in the OEM location using the OEM bolt.



Bumper, Brackets etc. Removed From Truck



Louvers and Housing Removed From Truck

PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY
1	R-21234D	BRKT ASSY DS, 2020 GM FRNT MNTG	1
2	R-21234P	BRKT ASSY PS, 2020 GM FRNT MNTG	1
3	R-21238	EXT ASSY, 2020 GM FRONT FRAME	2
4	R-21246D	FRNT BUMPER DS SUPPORT BRKT (20-23MY)	1
4A	R-21260D	FRNT BUMPER DS SUPPORT BRKT (24MY-PRESENT)	1
5	R-21246P	FRNT BUMPER PS SUPPORT BRKT (20-23MY)	1
5A	R-21260P	FRNT BUMPER PS SUPPORT BRKT (24MY-PRESENT)	1
6	990727-150-22	SCREW, 1/2" X 1 3/4" GR 8 HEX Z/Y	4
7	990727-200-22	SCREW, 1/2" X 2" GR 8 HEX Z/N	4
8	990600-050-002	WASHER, 1/2" SAE THRU HD FLAT Z/Y	16
9	990316-050-22	NUT, 1/2" GR 8 HEX NYLOCK Z/Y	8
10	990729-550-22	SCREW, 5/8" X 5 1/2" GR 8 HEX Z/Y	2
11	990600-062-002	WASHER, 5/8" SAE THRU HD FLAT Z/Y	4
12	990316-062-22	NUT, 5/8" GR 8 HEX NYLOCK Z/Y	2

**REFERENCE HARDWARE KIT
R-990KIT-438**

FRONT OF VEHICLE

REV	DESCRIPTION OF CHANGES	DATE	BY	APPRVD	ECN #
A	REVISION A RELEASED	04/24/19	SMM	JMP	
B	UPDATED MOUNTING - ADDED BHPF BRKTS	12/16/19	SMM	JMP	
C	ADDED 2MM PART # FOR SUPPORT BRKT	12/14/23	SMM	JMP	

G & B SPECIALTIES INC.
MANUFACTURER OF QUALITY RAILROAD PRODUCTS
BERWICK, PENNSYLVANIA (501) 752-9111 FAX (501) 752-6387

DESIGN - ENGINEERING - MANUFACTURING

2020 GM FRONT MOUNTING KIT INSTALLATION

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DATE SHOWN: 04/24/19
PART NUMBER: K-H29RGF020
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Figure 1 Front Mounting Installation



Location of 6mm Tapped Holes



Louvers Relocated

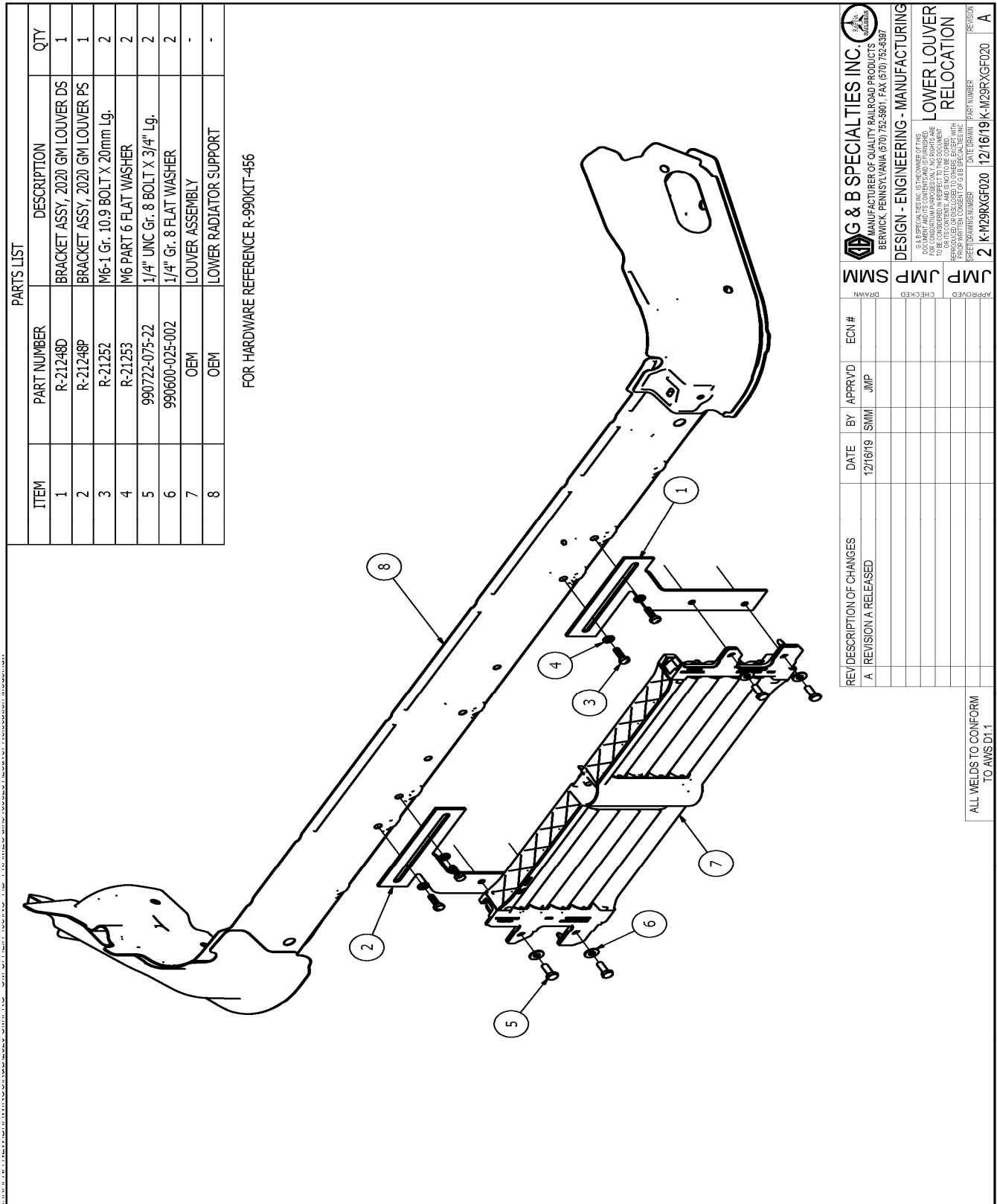


Figure 2 Louver Relocation/Installation



Bumper Extensions Installed



Bumper on Truck

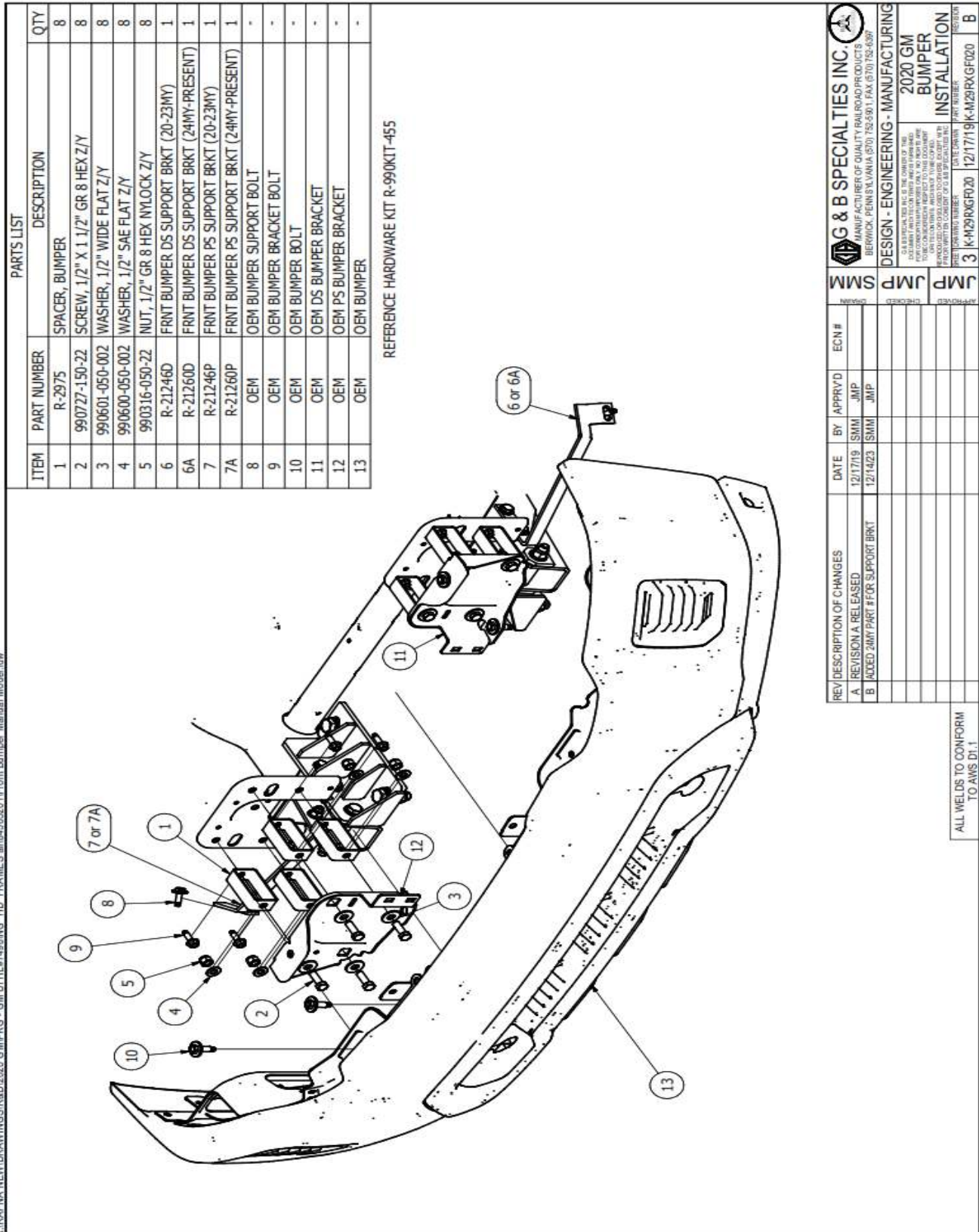


Figure 3 Bumper Installation

OPERATION, SERVICE AND PARTS OF FRONT MOUNTING KIT 2020 AND UP GM 2500/3500HD 4X2/4X4

OPERATION SAFETY PRECAUTIONS

If any operating, services 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 front bumper is located further forward than standard. Sight wands are located on the front bumper to aid in determining the length and width of the vehicle. 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/rear 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
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