

INSTALLATION OF R-307A FRONT MOUNTING KIT 2020 TO PRESENT GM 2500/3500HD

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.
- 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 in order 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 the table below.

Front Mounting Kit Installation Parts

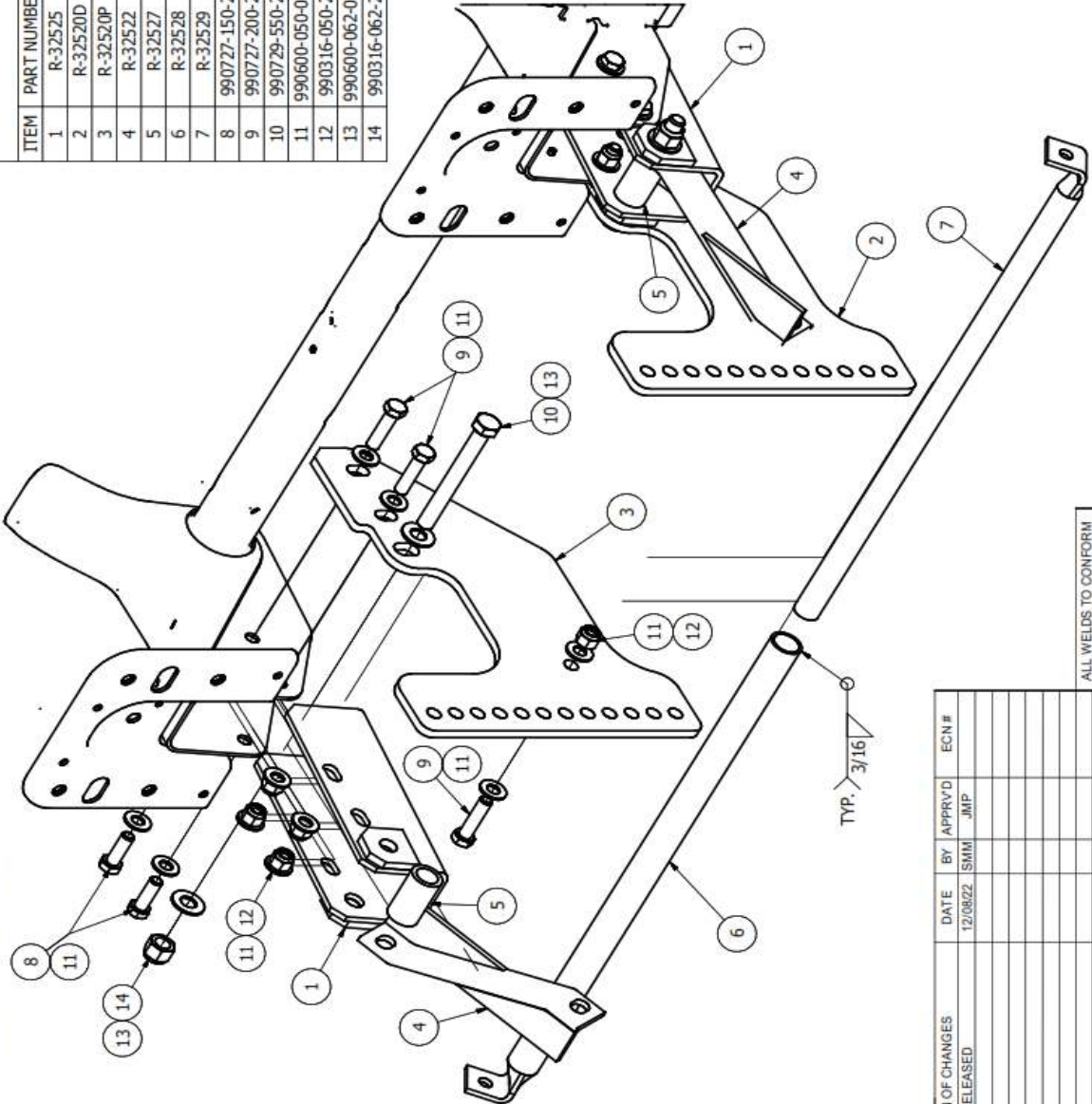
Part Number	Description	Qty
R-32520D	Front Mounting Bracket, Drivers Side	1
R-32520P	Front Mounting Bracket, Passengers Side	1
R-32525	Extension Assy., Front Frame	2
R-32527	Spacer, Frame Extension	2
R-32528	Adjustable Brace, Outer	1
R-32529	Adjustable Brace, Inner	1
R-32522	Brace Assy., Bracket Support	2
R-32848	Side Wand Set w/ Fasteners	1
R-990KIT-478	1/2" UNC Gr. 8 Bolt x 1.50" Long	4
	1/2" UNC Gr. 8 Bolt x 2.00" Long	6
	5/8" UNC Gr. 8 Bolt x 5.50" Long	2
	1/2" Gr. 8 Flat Washer	20
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	10
	5/8" Gr. 8 Flat Washer	4
	5/8" UNC Gr. 8 Nylon Insert Lock Nut	2
R-990KIT-391	1/2" UNC Gr. 8 Bolt x 1.75" Long	6
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	12
	1/2" Gr. 8 Flat Washer	6

1. Remove the front bumper, bumper mounting brackets, bumper support brackets, and tow hooks. Retain the bumper, bumper mounting brackets, and bumper support brackets for re-installation. The tow hooks 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. Insert the front frame extension (R-32525) into the frame and align with existing holes where the tow hooks were fastened. Install the 1/2" x 1 1/2" bolts and supplied hardware in the outside of the frame and frame extension to hold in place.
5. Bolt each front mounting bracket to the frame extension as shown using the remaining 1/2" x 2" bolts and hardware.
6. Install the frame spacer (R-32527) along with the bracket support (R-32522) in the front hole of the frame extension using the 5/8" x 5 1/2" bolt and hardware as shown. Ensure the mounting bracket is 0° to the horizontal with the vehicle in the typical road position and aligned with each other. Torque the 1/2" fasteners to spec.

7. After all mounting brackets have been installed, take the inner adjustable brace (R-32529) and place it inside the outer adjustable brace (R-32528) and mount it to the brackets as shown using the 1/2" x 2" bolts and hardware.
8. Confirm mounting bracket is parallel with ground and torque 5/8" bolts.
9. Ensure the adjustable braces are extended as far as possible and weld solid at telescoping intersection complete using minimally a 3/16" fillet weld.
10. Modify the OEM bumper as required to create clearance for all railgear components to eliminate any interference during its full range of motion.
11. 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.
12. If bumper supports were removed and could not be modified for any reason in trimming for function of railgear, fabricate and install new supports to ensure bumper does not rattle and remains rigid.

PARTS LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	R-32525	EXT. ASSY, 20+ GM R307 FRNT FRAME	2
2	R-32520D	20+ GM R-307A DS FRNT MNTG BRKT ASSY	1
3	R-32520P	20+ GM R-307A PS FRNT MNTG BRKT ASSY	1
4	R-32522	BRACE ASSEMBLY, 20+ GM 307 FRNT MNTG	2
5	R-32527	SPACER, FRAME	2
6	R-32528	ADJUSTABLE BRACE, OUTER	1
7	R-32529	ADJUSTABLE BRACE, INNER	1
8	990727-150-22	SCREW, 1/2" X 1.1/2" GR 8 HEX CAP Z/N	4
9	990727-200-22	SCREW, 1/2" X 2" GR 8 HEX CAP Z/N	6
10	990729-550-22	SCREW, 5/8" X 5 1/2" GR 8 HEX CAP Z/N	2
11	990600-050-002	WASHER, 1/2" SAE THRU HD FLAT Z/N	20
12	990316-050-22	NUT, 1/2" GR 8 HEX NYLOCK Z/N	10
13	990600-062-002	WASHER, 5/8" SAE THRU HD FLAT Z/N	4
14	990316-062-22	NUT, 0.625 GR 8 HEX NYLOCK Z/N	2

REFERENCE R-990KIT-478 FOR HARDWARE



SMM	JMP	SMM	JMP	SMM	JMP
DESIGNED	CHECKED	APPROVED	DESIGNED	CHECKED	APPROVED

G & B SPECIALTIES INC.
MANUFACTURER OF QUALITY RAILROAD PRODUCTS
BERWICK, PENNSYLVANIA (570) 752-5901, FAX (570) 752-6397

DESIGN - ENGINEERING - MANUFACTURING

20+ GM LB
R-307A FRNT
MNTG KIT

REVISED: 12/08/22
K-M37XRGF020

REV/DESCRIPTION OF CHANGES	DATE	BY	APPRVD	ECN #
A REVISION A RELEASED	12/08/22	SMM	JMP	

ALL WELDS TO CONFORM TO AWS D1.1

OPERATION AND SERVICE OF R-307A FRONT MOUNTING KIT FOR 2020 TO PRESENT GM 2500/3500HD

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. Side 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 1 below provides the Recommended Service Schedule and Table 2 provides Standard Fastener Torque Values.

Table 1: Recommended Service Schedule

Service Required	Initial 100 km (62 Miles) of road and/or rail use	6 Months
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
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