

## INSTALLATION OF R-307A REAR MOUNTING KIT 2020-PRESENT GM 2500/3500HD 4X4 LONG BED

### 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 REAR MOUNTING KIT**

The following procedure details the installation of the rear mounting kit. The hardware required for this installation is listed in the table below.

Rear Mounting Kit Installation Parts

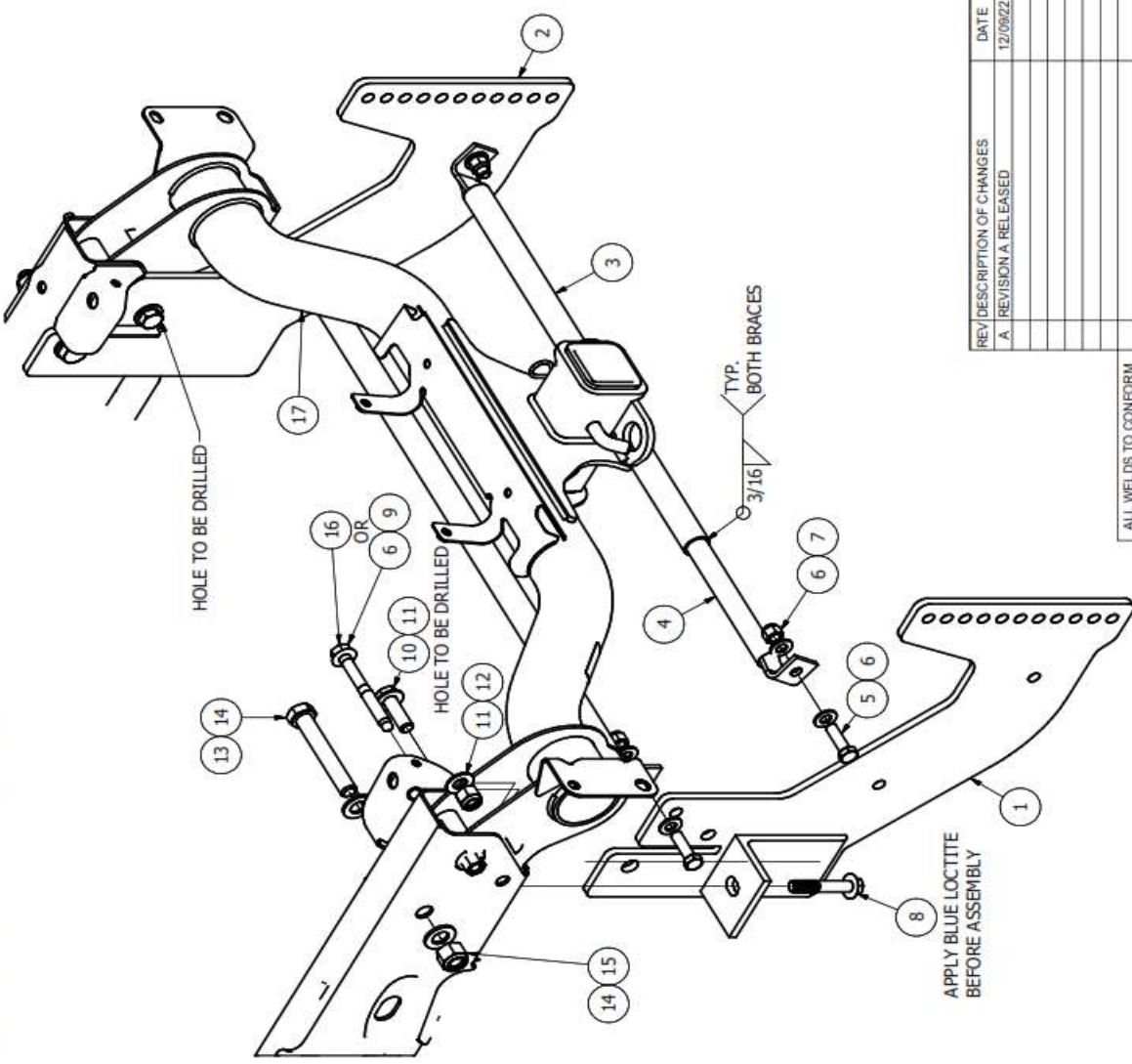
Part Number	Description	Qty
R-32530D	Rear Mounting Bracket, Drivers Side	1
R-32530P	Rear Mounting Bracket, Passengers Side	1
R-32528	Outer Brace	2
R-32529	Inner Brace	2
R-990KIT-391 (Railgear Mtg)	1/2" UNC Gr. 8 Bolt x 1.75" Long	6
	1/2" Gr. 8 Type-A Flat Washer	12
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	6
R-990KIT-479 (Mtg Brkts)	1/2" UNC Gr. 8 Bolt x 1.75" Long	4
	1/2" Gr. 8 Type-A Flat Washer	10
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	4
	M14-2.0 Flanged Hex Head Bolt x 80mm	2
	M14-2.0 Hex Head Bolt x 130mm	2
	5/8" UNC Gr. 8 Bolt x 2.00" Long	2
	5/8" Gr. 8 Type-A Flat Washer	4
	5/8" UNC Gr. 8 Nylon Insert Lock Nut	2
	3/4" UNC Gr. 8 Bolt x 5.00" Long	2
	3/4" Gr. 8 Type-A Flat Washer	4
3/4" UNC Gr. 8 Nylon Insert Lock Nut	2	

1. Remove the original spare tire from under the vehicle's cargo box if so equipped. The original spare tire will not be re-installed.
2. Remove the rear bumper and bumper supports. This should aide with the install. They will be re-installed at their original location.
3. Remove the rear most trailer hitch bolt on the underside of the frame. This will be replaced with a longer bolt during the install.
4. Remove the trailer hitch bolt on the inside of the frame that is under the body mount. This bolt will be attempted to be reused based off remaining thread after install.
5. Place each rear mounting bracket against the underside and inside of the frame rails as shown. Brackets are notched to slide up around the body mount.
6. Ensure bracket is tight against the underside and inside of the frame and secure as shown by applying Blue Loctite to the supplied M14 x 80mm flanged bolt on the underside along with the 3/4" bolt and hardware on the inside of frame. Note: Existing frame hole for the 3/4" bolt may need to be reamed for proper fit.

7. Using the bracket as a template, pick up hole in bracket and frame using a 41/64" drill bit or equivalent and drill through the inside leg of the tow hitch to install the 5/8" x 2" bolt and hardware. Note: This will be the hole on the bracket under the body mount below the long tow hitch bolt hole that was previously removed.
8. Insert factory tow hitch bolt that was previously removed from the inside of the frame. If inadequate thread is left after installing, remove the OEM bolt and replace with the M14 x 130mm bolt and 1/2" washer provided in the kit.
9. 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 1.75" bolts and hardware.
10. Ensure the adjustable braces are extended as far as possible and weld solid at telescoping intersection complete using minimally a 3/16" fillet weld. Note: If additional bracing is needed, fabricate and install per up fitters' discretion.
11. Modify the OEM bumper as required to create clearance for all railgear components to eliminate any interference during its full range of motion.
12. Once the 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.
13. 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.

PARTS LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	R-32530D	20+ GM R307 DS REAR MNTG BRKT ASSY	1
2	R-32530P	20+ GM R307 PS REAR MNTG BRKT ASSY	1
3	R-32528	ADJUSTABLE BRACE, OUTER	2
4	R-32529	ADJUSTABLE BRACE, INNER	2
5	990727-175-22	SCREW, 1/2" X 1 1/2" GR 8 HEX CAP Z/Y	4
6	990600-050-002	WASHER, 1/2" SAE THRU HD FLAT Z/Y	10
7	990316-050-22	NUT, 1/2" GR 8 HEX NYLOCK Z/Y	4
8	-	SCREW, M14-2.0 X 80MM FLANGED HEX CAP	2
9	-	SCREW, M14-2.0 X 130MM HEX CAP	2
10	990729-200-22	SCREW, 5/8" X 2" GR 8 HEX CAP 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
13	990731-500-22	SCREW, 3/4" X 5" GR 8 HEX Z/Y	2
14	990600-075-002	WASHER, 3/4" SAE THRU HARD FLAT Z/Y	4
15	990316-075-22	NUT, 3/4" GR 8 HEX NYLOCK Z/Y	2
16	-	OEM TOW HITCH BOLT	2
17	-	OEM TOW HITCH	1


REFERENCE R-990KIT-479 FOR HARDWARE



REV	DESCRIPTION OF CHANGES	DATE	BY	APPRVD	ECN #
A	REVISION A RELEASED	12/09/22	SMM	JMP	

APPROVED	CHECKED	DATE	BY	APPRVD	ECN #
JMP	SMM				

ALL WELDS TO CONFORM TO AWS D1.1



**G & B SPECIALTIES INC.**  
MANUFACTURER OF QUALITY RAILROAD PRODUCTS  
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DESIGN - ENGINEERING - MANUFACTURING

20+ GMLB  
R-307A REAR  
MNTG BRKT KIT

## OPERATION & SERVICE OF R-307A REAR MOUNTING KIT 2020-PRESENT GM 2500/3500HD LONG BED 4X4

### OPERATION & SERVICE 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 & SERVICE OF REAR MOUNTING KIT**

With the rear mounting kit installed on this vehicle, it may be operated as normal.

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 rear 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 rear 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