

INSTALLATION OF REAR MOUNTING KIT 2011 GM HD SHORT BED (GAS ONLY)

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.

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 table 1.

Table 1: Rear Mounting Kit Installation Parts

Part Number	Description	Qty
R-21140D	Rear Mounting Bracket, Drivers Side	1
R-21140P	Rear Mounting Bracket, Passengers Side	1
R-2960	Railgear Mounting Shim – ½” Thick	2
R-2960A	Railgear Mounting Shim – 1” Thick	2
R-2631	Railgear Mounting Shim – 2” Thick	2
H-00001	M18 Nylock Nut	2
H-00019	M16 Nylock Nut	2
H-00002	M14 Nylock Nut	2
R-990KIT-309 (Mtg. Brkts.)	1/2" UNC Gr. 8 Bolt x 1.50" Long	2
	1/2" Gr. 8 Type-A Flat Washer	4
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	2
	M18-2.5 Gr. 10.9 Bolt x 60mm Lg.	2
	M16-2 Gr. 10.9 Bolt x 50mm Lg.	2
	M14-2 Gr. 10.9 Bolt x 50mm Lg.	2
	M18 Gr. 200HV Flat Washer	4
	M16 Gr. 200HV Flat Washer	4
	M14 Gr. 200HV Flat Washer	4
R-990KIT-304 (Railgear Mtg.)	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 Type-A Flat Washer	8
	3/4" UNC Gr. 8 Nylon Insert Lock Nut	4

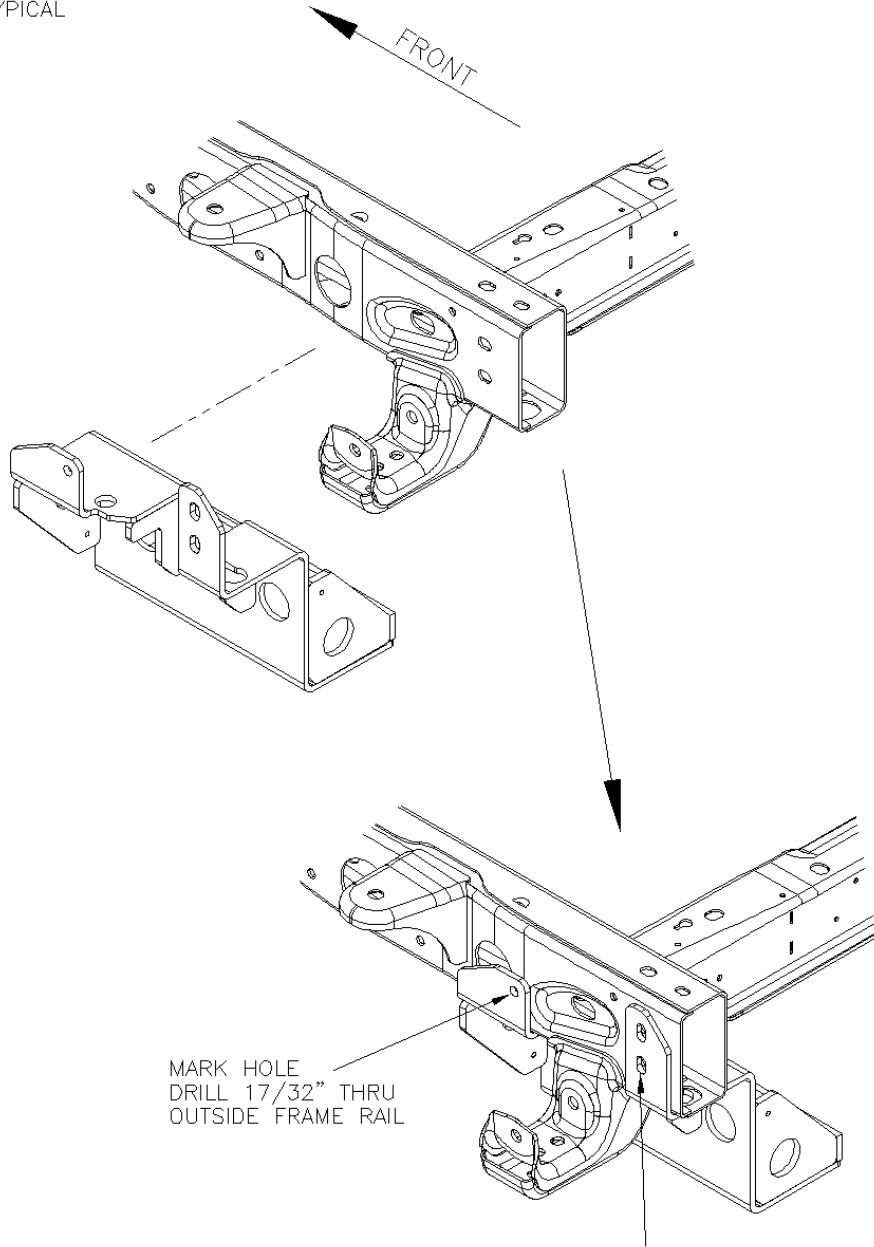
1. Remove the original spare tire from under the vehicle’s cargo box if so equipped. The original spare tire will not be re-installed.
2. Remove the rear bumper. The rear bumper will be reinstalled.
3. Remove the tow hitch. The tow hitch will be re-installed.
4. Place each rear mounting bracket against the underside and outside of the frame rails and as shown.
5. Mark the outside of the frame, using the mounting brackets as a guide, and drill a 17/32" thru the outside frame rail at each market location.

6. Install the rear mounting brackets as shown using the supplied 1/2" hardware. Ensure the rear mounting brackets are tight to the underside and outside of the frame and are aligned with each other.
7. Re-install the OEM tow hitch. The tow hitch will be installed in the factory location, below the railgear mounting brackets.
8. Place the tow hitch up against the bottom of the railgear mounting brackets as shown.
9. Using the supplied M14, M16 & M18 metric hardware, install the tow hitch as shown. The bolts will go thru/attach to the vehicle frame, railgear mounting brackets, OEM bumper bracket and tow hitch. The railgear mounting brackets have slots/holes to allow the mounting bolts to pass thru the brackets and allow the use of the OEM tow hitch mounting locations.
10. The rear most tow hitch mounting bolt also secures the bumper mounting bracket to the vehicle frame and will be attached using M16 metric hardware. It will be necessary to remove the nut attached to the OEM bumper mounting bracket at this location.
11. The two rear side mounting bolts also secure the OEM bumper mounting bracket to the vehicle frame.
12. Torque the 1/2" fasteners to 100 ft-lb dry. Torque the M18 bolts to 175 ft-lbs dry. Torque the M14 bolts to 110 ft-lbs dry. Torque the M16 bolts to 135 ft-lbs dry. Do not over torque.

NOTES:


1. DRIVERS SIDE SHOWN
PASSENGERS SIDE TYPICAL

REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	10/21/10	AML	



MARK HOLE
DRILL 17/32" THRU
OUTSIDE FRAME RAIL

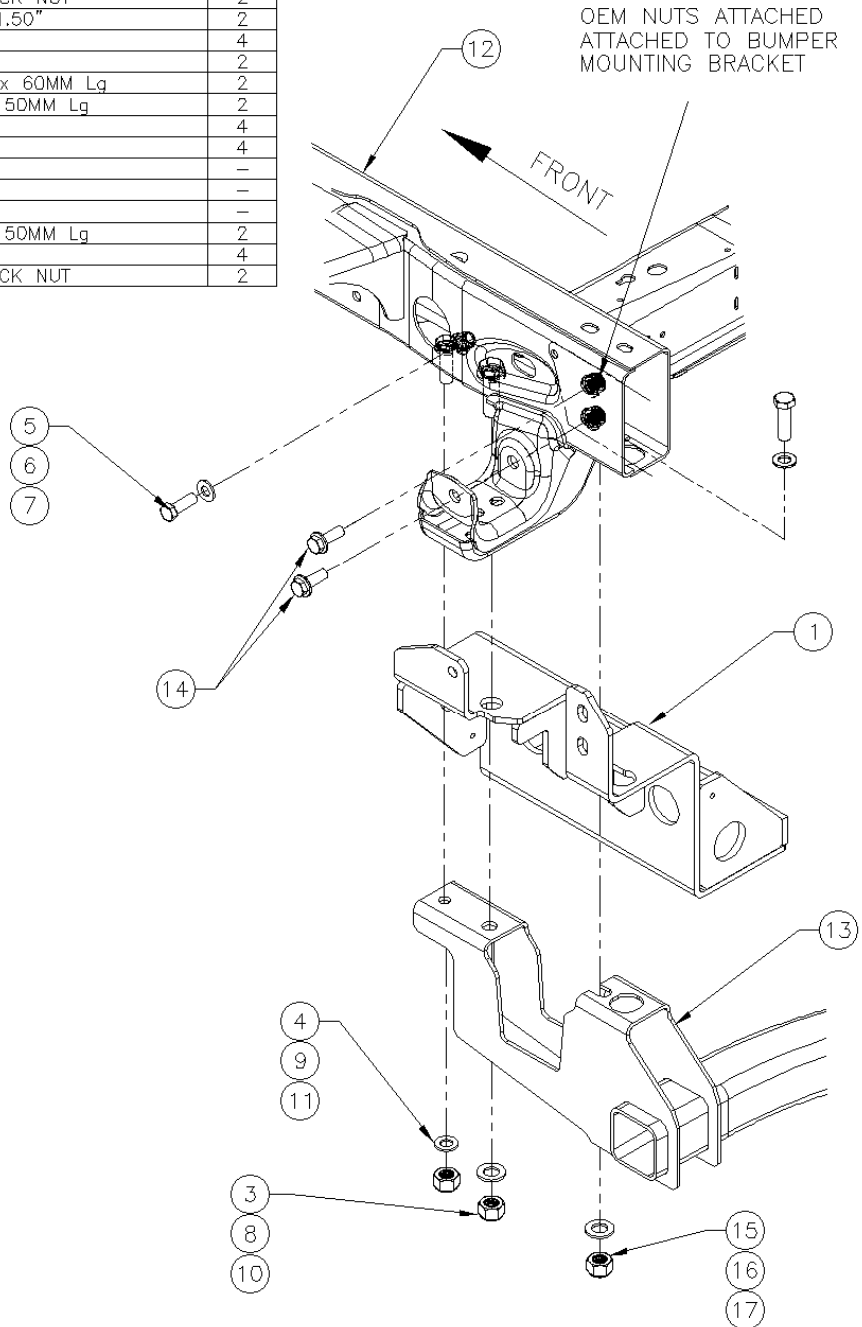
ALIGN WITH
EXISTING HOLES FOR
FOR REAR BUMPER

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED				R.M.S. FINISH MAX 125 μ EXCEPT AS NOTED	
BASIC DIMENSION	FRACTIONS	DECIMALS		DRAWN	AML
		2 PLACE	3 PLACE		
UP TO 6 INCHES	$\pm 1/64$	$\pm .02$	$\pm .005$	G & B SPECIALTIES INC. MANUFACTURER OF QUALITY RAILROAD PRODUCTS BERWICK PENNSYLVANIA (570) 752-5901 FAX (570) 752-6397	
ABOVE 6 TO 24	$\pm 1/32$	$\pm .03$	$\pm .010$		
ABOVE 24	$\pm 1/16$	$\pm .06$	$\pm .015$		
ANGULAR DIMENSIONS	$\pm 1/2^\circ$				

DESIGN ~ ENGINEERING ~ MANUFACTURING	DESCRIPTION: REAR MOUNTING KIT INSTALLATION
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DRAWING NUMBER: K-M29XRGR004A	DATE DRAWN: 10/21/10
SHEET: 1 OF 1	PART NUMBER: K-M29XRGR004A

ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY.
1	R-21140D	REAR MTG BRKT, DRIVERS SIDE	1
2	R-21140P	REAR MTG BRKT, PASSENGERS SIDE	1
3	H-00001	M18-2.5 GR.10 NYLOCK NUT	2
4	H-00002	M14-2 GR.10 NYLOCK NUT	2
5	H.H.C.S.	1/2" UNC GR.8 x 1.50"	2
6	F'WASHER	1/2" TYP-A GR.8	4
7	NYLOCK NUT	1/2" UNC GR.8	2
8	H.H.C.S.	M18-2.5 GR. 10.9 x 60MM Lg	2
9	H.H.C.S.	M14-2 GR. 10.9 x 50MM Lg	2
10	F'WASHER	M18 GR. 200HV	4
11	F'WASHER	M14 GR. 200HV	4
12	-	VEHICLE FRAME	-
13	-	OEM TOW HITCH	-
14	-	OEM FASTENER	-
15	H.H.C.S.	M16-2 GR. 10.9 x 50MM Lg	2
16	F'WASHER	M16 GR. 200HV	4
17	H-00019	M16-2 GR.10 NYLOCK NUT	2

REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	10/21/10	AML	
B	REVISED BOM	6/21/11	AML	



NOTES:

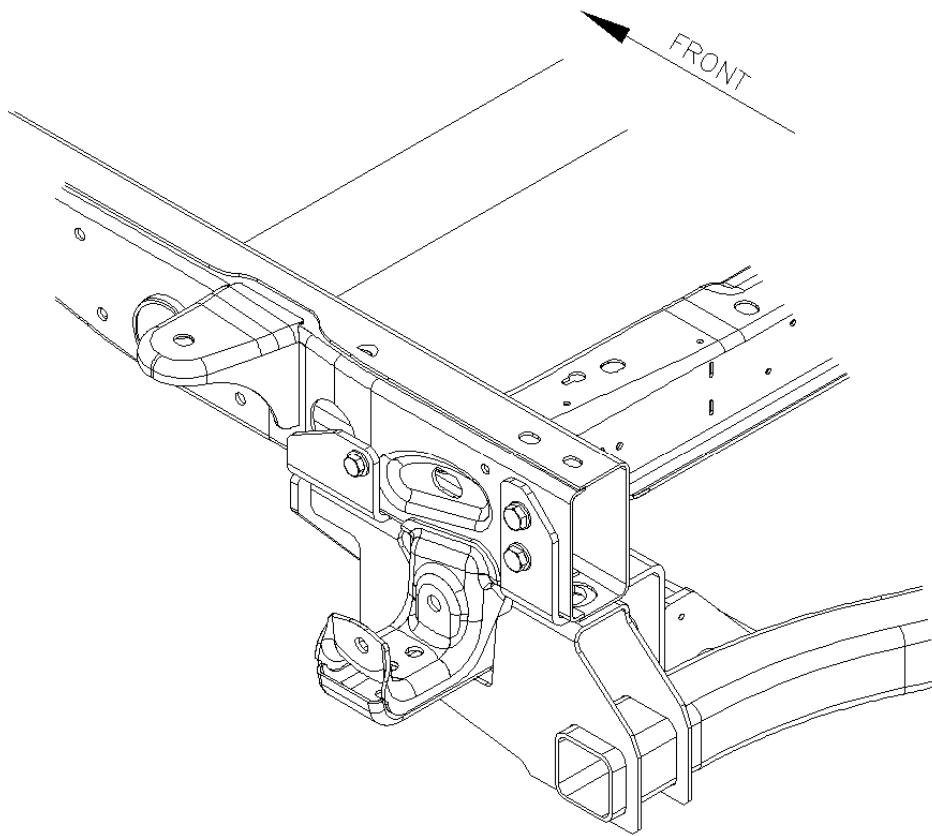
1. DRIVERS SIDE SHOWN
PASSENGERS SIDE TYPICAL

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED				R.M.S. FINISH MAX 125 μ EXCEPT AS NOTED	DRAWN	AML	G & B SPECIALTIES INC. MANUFACTURER OF QUALITY RAILROAD PRODUCTS BERWICK PENNSYLVANIA (570) 752-5901, FAX (570) 752-6397	
BASIC DIMENSION	FRACTIONS		DECIMALS		CHECKED	APPROVED	DESIGN ~ ENGINEERING ~ MANUFACTURING	
	2 PLACE	3 PLACE	2 PLACE	3 PLACE			DESCRIPTION: REAR MOUNTING KIT INSTALLATION	
UP TO 6 INCHES	± 1/64	± .02	± .005				REF: 20011 GM HD (SHORT BED)	
6 TO 24	± 1/32	± .03	± .010				DRAWING NUMBER: K-M29XRGR004A-1 DATE DRAWN: 10/21/10 SHEET: 1 of 1 PART NUMBER: K-M29XRGR004A-1 REVISION: B	
ABOVE 24	± 1/16	± .06	± .015					
ANGULAR DIMENSIONS				± 1/2°				



NOTES:

1. DRIVERS SIDE SHOWN
PASSENGERS SIDE TYPICAL

REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	10/21/10	AML	



TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED			R.M.S. FINISH MAX 125 μ EXCEPT AS NOTED	
BASIC DIMENSION	FRACTIONS	DECIMALS		
		2 PLACE	3 PLACE	
TIP TO 6 INCHES	± 1/64	± .02	± .005	
ABOVE 6 TO 24	± 1/32	± .03	± .010	
ABOVE 24	± 1/16	± .06	± .015	
ANGULAR DIMENSIONS		± 1/2°		

DRAWN AML	CHECKED	APPROVED	 G & B SPECIALTIES INC. MANUFACTURER OF QUALITY RAILROAD PRODUCTS BERWICK, PENNSYLVANIA (570) 752-5901 FAX (570) 752-6397		
			DESIGN ~ ENGINEERING ~ MANUFACTURING		
			DESCRIPTION: REAR MOUNTING KIT INSTALLATION		
			REF: 20011 GM HD (SHORT BED)		
DRAWING NUMBER		DATE DRAWN	SHEET	PART NUMBER	REVISION
K-M29XRGR004A-2		10/21/10	1 of 1	K-M29XRGR004A-2	A

OPERATION AND SERVICE OF REAR MOUNTING KIT

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 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.

SERVICE OF REAR MOUNTING KIT

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.

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
3/4" (M18) UNC Gr. 8 Fasteners	175
5/8" UNC Gr. 8 Fasteners	150
M14 Gr. 10.9	110
1/2" UNC Gr. 8 Fasteners	100
3/8" UNC Gr. 8 Fasteners	40
1/4" UNC Gr. 8 Fasteners	12