

INSTALLATION OF FRONT MOUNTING KIT

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.
- Always disconnect the vehicle's battery when welding on the vehicle or railgear in order to protect the vehicle's electrical system.
- 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.

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-2966D-B	Front Mounting Plate Left Side	1
R-2966P-B	Front Mounting Plate Right Side	1
R-2967D-B	Front Bumper Extension Left Side	1
R-2967P-B	Front Bumper Extension Right Side	1
R-2960A	Railgear Mounting Shim – 1” Thick	2
R-11128	Railgear Mounting Shim – 1/4” Thick	4
R-2960	Railgear Mounting Shim – 1/2” Thick	2
R-2687AL	Railgear Front Bumper	1
R-051	Side Wand Set w/ Fasteners	1
-	1/2” UNC Gr. 8 Bolt x 1.75” Long	22
-	1/2” Gr. 8 Type-A Flat Washer	44
-	1/2” UNC Gr. 8 Nylon Insert Lock Nut	22
-	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 2.50” Long	4
-	3/4” UNC Gr. 8 Bolt x 3.00” Long	4
-	3/4” UNC Gr. 8 Bolt x 4.00” Long	4
-	3/4” Gr. 8 Type-A Flat Washer	8
-	3/4” UNC Gr. 8 Nylon Insert Lock Nut	4

1. Remove the front bumper. The bumper will not be re-installed.
2. Position the front mounting plates on the underside of the vehicle frame as shown. The slot on the bottom of the frame should line up with the slot on the front mounting plates. Notice the second slot on the front mounting plates should line up with an existing undersized hole in the frame. This hole will be used for step 3.
3. Using a 17/32” drill bit, open up the hole on the bottom of the frame where the front mounting plate will bolt up to.

4. Ensure the front mounting plates are aligned with each other and then fasten the front mounting plates to the bottom of the frame and the front of the frame using two frame washers, two 5/8" x 2.00" long bolts, four 5/8" washers, two 5/8" nylock nuts, ten 1/2" x 1.75" long bolts, twenty 1/2" washers, and ten 1/2" nylock nuts making sure the plates are tight against the front, underside, and outside of the frame as illustrated in figure 1.
5. With the front mounting plates secured, use a 17/32" drill bit to drill the four holes on the outside of the frame (Figure 1) using the existing holes in the mounting plates as a template.
6. Using four 1/2" x 1.75" long bolts, eight 1/2" washers, and four 1/2" nylock nuts, fasten both front mounting plates to the sides of the frame.
7. Position each front bumper extension in front of each front mounting plate as shown and fasten in place with four 1/2" x 1.50" long bolts, eight 1/2" washers, and four 1/2" nuts.
8. Center the railgear front bumper on the front bumper extensions and fasten in place with four 1/2" x 1.5" long bolts, eight 1/2" washers, and four 1/2" nylock nuts.
9. Fasten the side wands to the railgear front bumper with the supplied fasteners. Bend the side wand mounting tabs and drill the bumper as required.
10. Refer to the hydraulic kit installation manual for mounting the pump spacer.

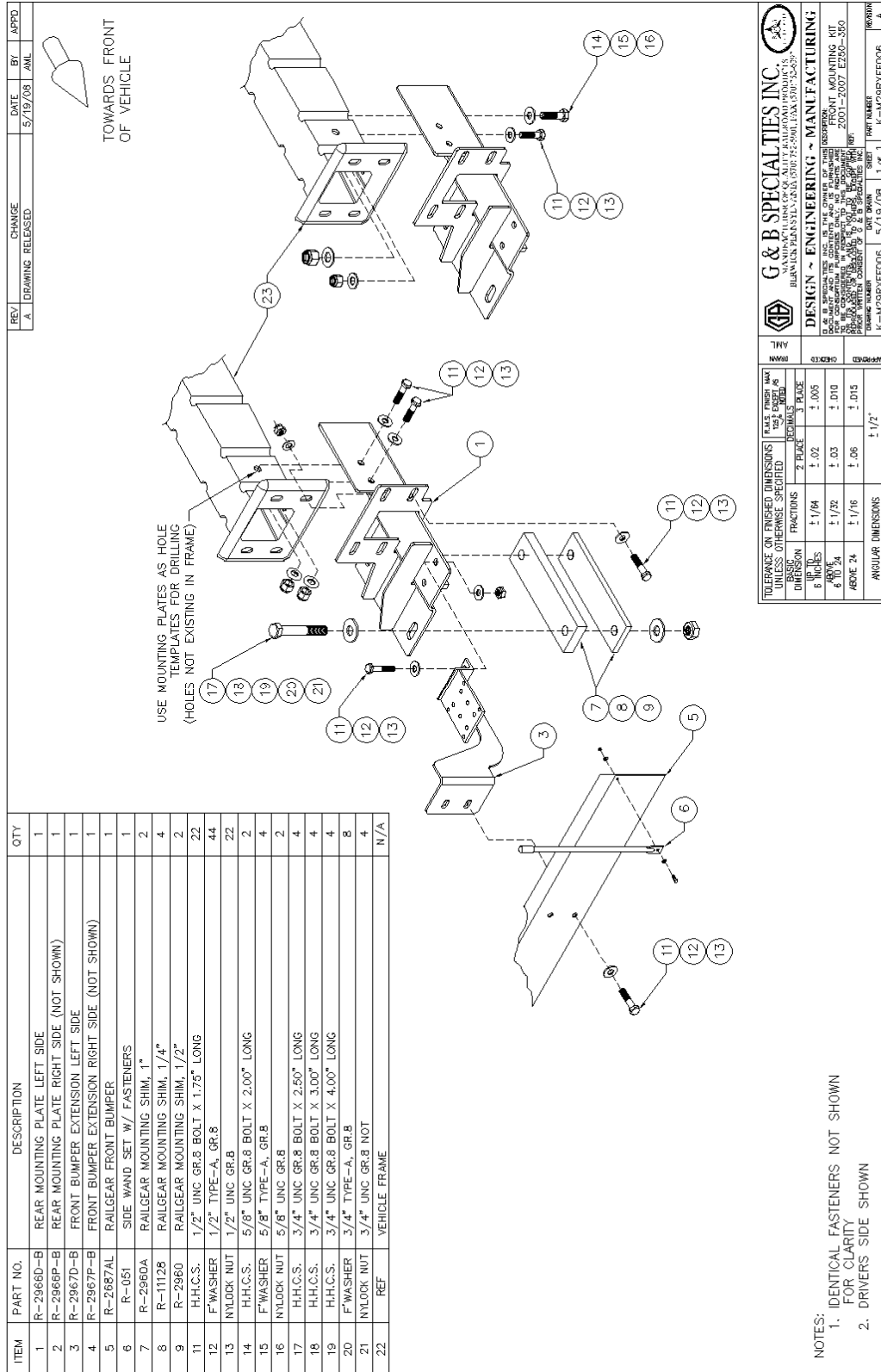


Figure 1

OPERATION, SERVICE AND PARTS OF FRONT 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 Industries 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 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. 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.

SERVICE OF FRONT MOUNTING KIT

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

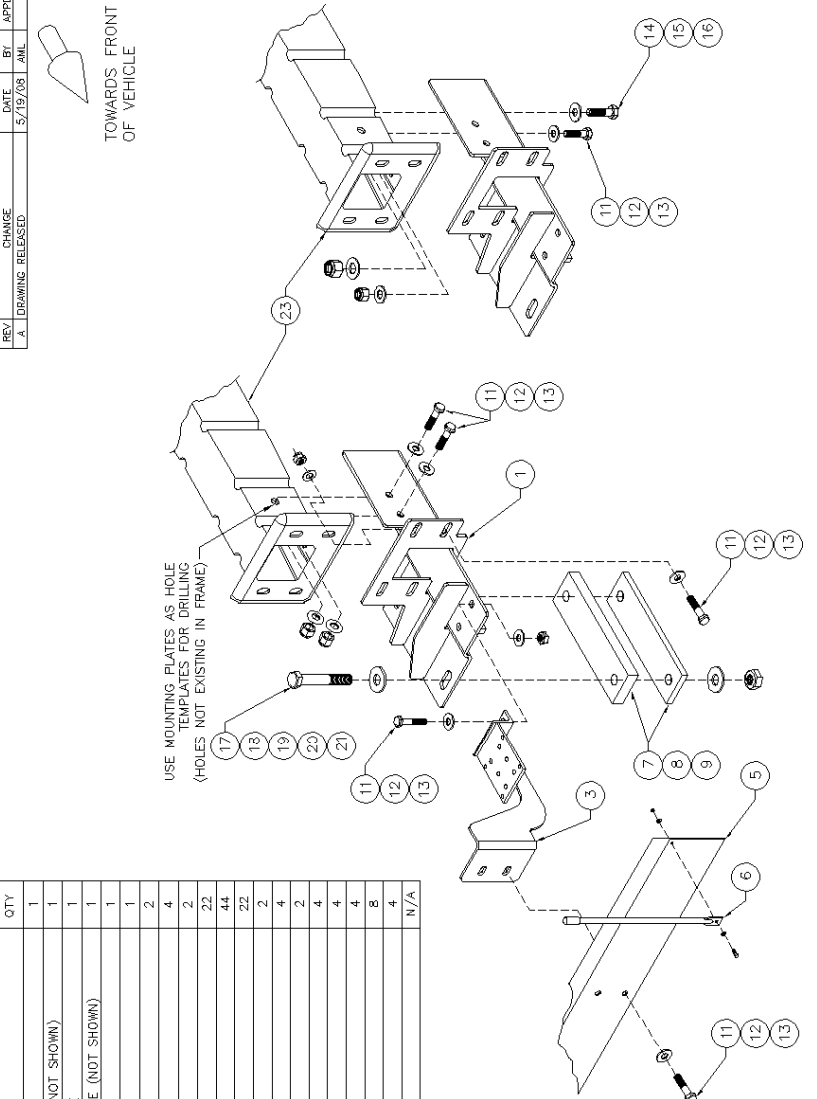
Service Required	Initial 100 km (62 Miles) of road and/or rail use	Daily	Weekly	Monthly
Inspect front mounting kit fasteners (re-torque if required)		✓	✓	✓

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
½" UNC Gr. 2 Fasteners	35
⅜" UNC Gr. 8 Fasteners	40
¼" UNC Gr. 8 Fasteners	12

PARTS OF FRONT MOUNTING KIT

ITEM	PART NO.	DESCRIPTION	QTY.
1	R-2966D-B	REAR MOUNTING PLATE LEFT SIDE	1
2	R-2966P-B	REAR MOUNTING PLATE RIGHT SIDE (NOT SHOWN)	1
3	R-2967D-B	FRONT BUMPER EXTENSION LEFT SIDE	1
4	R-2967P-B	FRONT BUMPER EXTENSION RIGHT SIDE (NOT SHOWN)	1
5	R-2987AL	RAILGEAR FRONT BUMPER	1
6	R-051	SIDE WAND SET W/ FASTENERS	1
7	R-2960A	RAILGEAR MOUNTING SHIM, 1"	2
8	R-11128	RAILGEAR MOUNTING SHIM, 1/4"	4
9	R-2960	RAILGEAR MOUNTING SHIM, 1/2"	2
11	H.H.C.S.	1/2" UNC GR.8 BOLT X 1.75" LONG	22
12	F*WASHER	1/2" TYPE-A, GR.8	44
13	NYLOCK NUT	1/2" UNC GR.8	22
14	H.H.C.S.	5/8" UNC GR.8 BOLT X 2.00" LONG	2
15	F*WASHER	5/8" TYPE-A, GR.8	4
16	NYLOCK NUT	5/8" UNC GR.8	2
17	H.H.C.S.	3/4" UNC GR.8 BOLT X 2.50" LONG	4
18	H.H.C.S.	3/4" UNC GR.8 BOLT X 3.00" LONG	4
19	H.H.C.S.	3/4" UNC GR.8 BOLT X 4.00" LONG	4
20	F*WASHER	3/4" TYPE-A, GR.8	8
21	NYLOCK NUT	3/4" UNC GR.8 NOT	4
22	REF	VEHICLE FRAME	N/A




TOWARDS FRONT OF VEHICLE

USE MOUNTING PLATES AS HOLE TEMPLATES FOR DRILLING (HOLES NOT EXISTING IN FRAME)

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED	FRACTIONS	DECIMALS
2 PLACE DIMENSIONS	± 1/64	± .002
3 PLACE DIMENSIONS	± 1/32	± .003
4 PLACE DIMENSIONS	± 1/16	± .006
5 PLACE DIMENSIONS	± 1/8	± .010
6 PLACE DIMENSIONS	± 1/4	± .015
ANGULAR DIMENSIONS	± 1/2°	

NOTES:

- IDENTICAL FASTENERS NOT SHOWN FOR CLARITY
- DRIVERS SIDE SHOWN



G & B SPECIALTIES INC.
 535 WEST 3RD STREET, BERWICK, PA, USA
 TEL: 1-570-752-5901 FAX: (570) 752-6397

DESIGN ~ ENGINEERING ~ MANUFACTURING

DATE: 5/19/08
 BY: ANL
 SHEET: 1 of 1
 PART NUMBER: K-M29RXFF006