

## INSTALLATION OF FRONT MOUNTING KIT 2011-2019 GM 2500/3500HD 4x2/4x4

### 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 Industries 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 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-21090D	Front Mounting Bracket, Drivers Side	1
R-21090P	Front Mounting Bracket, Passengers Side	1
R-21097	Spacer	2
R-21098	Shim	2
R-2960	Railgear Mounting Shim - ½" Thick	4
R-051	Side Wand Set w/ Fasteners	1
R-990KIT-301	1/2" UNC Gr. 8 Bolt x 1.75" Long	6
	1/2" UNC Gr. 8 Bolt x 5.00" Long	4
	1/2" UNC Gr. 8 Bolt x 5.50" Long	4
	1/2" Gr. 8 Flat Washer	24
	1/2" UNC Gr. 8 Nylon Insert Lock Nut	12
R-990KIT-303	3/4" UNC Gr. 8 Bolt x 2.50" Long	4
	3/4" UNC Gr. 8 Bolt x 3.50" Long	4
	3/4" Gr. 8 Flat Washer	8
	3/4" UNC Gr. 8 Nylon Insert Lock Nut	4

1. Remove the front bumper, bumper mounting brackets and tow hooks. Retain the bumper and bumper mounting brackets for re-installation. The tow hooks will not be re-installed.

\*THE BUMPER MOUNTING BRACKETS ARE NOT REMOVEABLE ON 2015 YEAR TRUCKS. THE RAILGEAR MOUNTING BRACKETS MOUNT OVER THE TOP OF THE BUMPER MOUNTING BRACKETS AS SHOWN\*

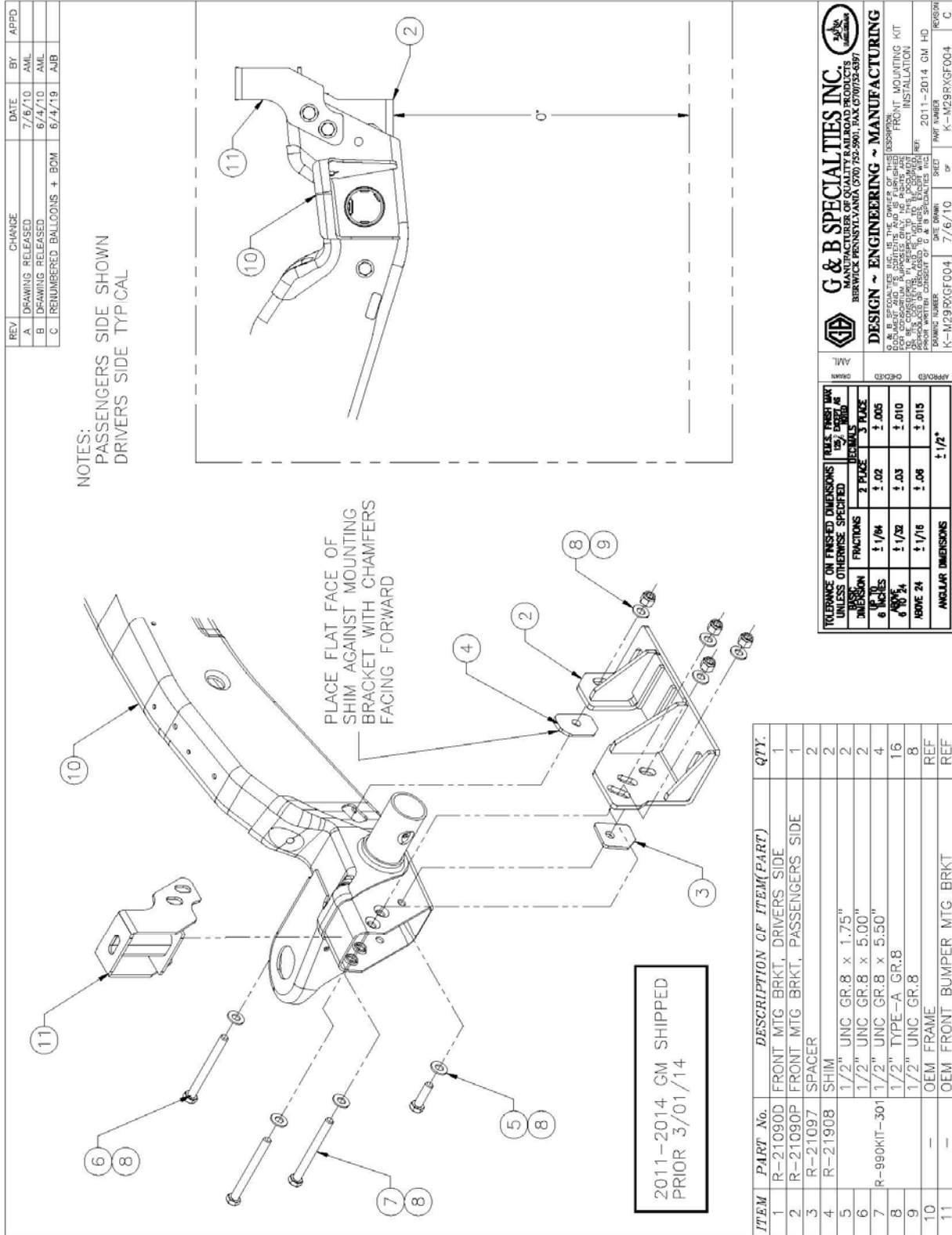
2. Remove the lower air cowling from under the radiator. The air cowling will not be re-installed.
3. Remove the skid plate from the front frame cross member. The skid plate will not be re-installed.
4. Position the front mounting plates on the inner side of the frame as shown so that the front frame cross member (round tube) is cradled tightly by the small square bars welded to the front mounting plates. Ensure that the front mounting plates are tight against the bottom of the front frame cross member.
5. Bolt each front mounting bracket to the frame as shown using the supplied 1/2" hardware, spacers and bumper mounting brackets. Ensure the mounting plate lower surfaces are 0° to the horizontal with the vehicle in the typical road position and aligned with each other. Tighten but do not torque the fasteners

6. Ensure the front mounting plates are tight against the inner side of the frame and the underside of the front frame cross member and that the mounting plate lower surfaces are 0° to the horizontal. Torque the rear and lower 1/2" fasteners, as shown. Do not over torque. Do not torque the fasteners securing the bumper mounting brackets as these fasteners need to remain loose to adjust the front bumper.
7. The supplied railgear mounting shims are to be used as required when mounting the railgear to the front mounting plates.

Following the installation of the front railgear, the front bumper will fit in its original position. The front bumper will need to be trimmed/modified as required.

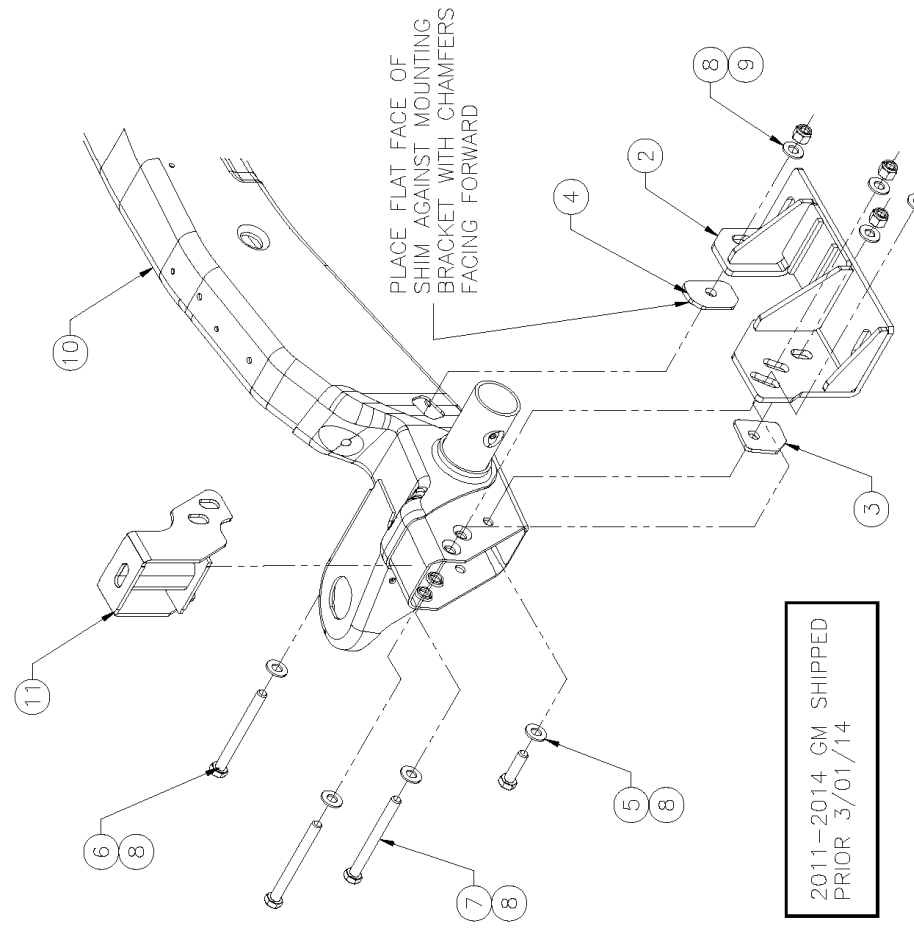
8. Separate the lower plastic air dam section of the bumper from the steel section of the bumper. The lower plastic section will not be re-installed.
9. Modify the OEM bumper as required to create clearance for all railgear components to eliminate any interference during its full range of motion.
10. Once the front bumper has been modified, installed and adjusted as required, tighten and torque the two remaining 1/2" fasteners to 100 ft-lbs dry. Do not over torque.

\*ON THE 2015 GM HD MODEL YEAR TRUCKS, THERE MAY BE ADDITIONAL MODIFICATIONS REQUIRED IN ORDER TO INSTALL THE FRONT RAILGEAR UNIT PROPERLY. REFER TO THE FRONT RAILGEAR INSTALLATION SUPPLEMENT FOR FURTHER INSTRUCTION\*



REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	7/16/10	AML	
B	DRAWING RELEASED	6/14/10	AML	
C	RENUMBERED BALLOONS + BOM	6/14/19	AJD	


NOTES:  
PASSENGERS SIDE SHOWN  
DRIVERS SIDE TYPICAL



2011-2014 GM SHIPPED  
PRIOR 3/01/14

ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY.
1	R-21090D	FRONT MTG BRKT, DRIVERS SIDE	1
2	R-21090P	FRONT MTG BRKT, PASSENGERS SIDE	1
3	R-21097	SPACER	2
4	R-21908	SHIM	2
5	1/2" UNC GR.8 x 1.75"		2
6	1/2" UNC GR.8 x 5.00"		2
7	R-990KIT-301	1/2" UNC GR.8 x 5.50"	4
8	1/2" TYPE-A GR.8		16
9	1/2" UNC GR.8		8
10	—	OEM FRAME	REF
11	—	OEM FRONT BUMPER MTG BRKT	REF

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED	FRACTIONS	DECIMALS	R.M.S. FINISH MAX 12% EXCEPT AS NOTED
BASIC DIMENSION	2 PLACE	3 PLACE	3 PLACE
6 UP TO 6"	± 1/64	± .02	± .005
6 TO 24"	± 1/32	± .03	± .010
ABOVE 24"	± 1/16	± .06	± .015
ANGULAR DIMENSIONS	± 1/2°		



**G & B SPECIALTIES INC.**  
MANUFACTURER OF QUALITY AIR ROAD PRODUCTS  
BERWICK PENNSYLVANIA (717) 752-5901 FAX (717) 752-6397

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REF: 2011-2014 GM HD FRONT MOUNTING KIT INSTALLATION

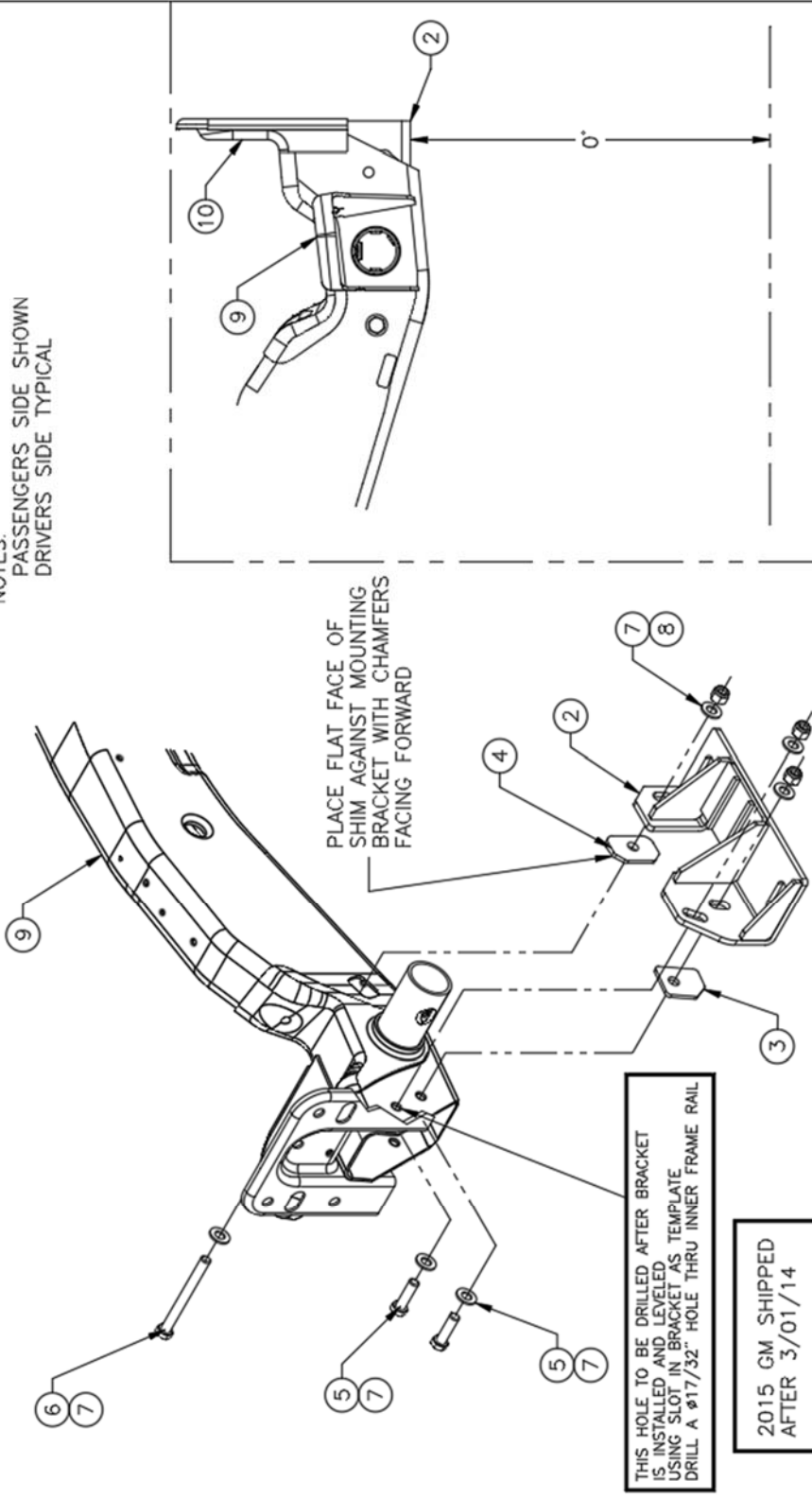
DRAWING NUMBER: K-M29RXGF004  
DATE DRAWN: 7/16/10  
SHEET: OF  
PART NUMBER: K-M29RXGF004  
REVISION: C

FOR 2011-2014 GM HD TRUCKS SHIPPED PRIOR TO 3/01/2014



REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	6/4/14	AML	
B	RENUMBERED BALLOONS + BOM	6/4/19	AJB	

NOTES:  
PASSENGERS SIDE SHOWN  
DRIVERS SIDE TYPICAL



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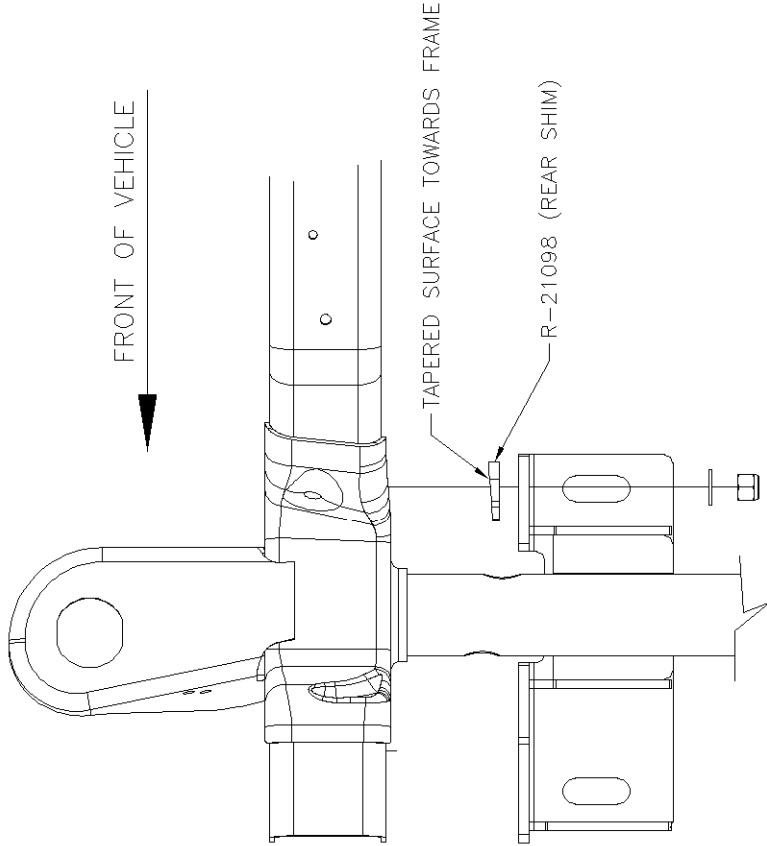
DATE: 2015 GM HD  
 DRAWING NUMBER: K-M29RXGF004  
 SHEET: 1 OF 1  
 PART NUMBER: K-M29RXGF004

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED	FRACTIONS	2 PLACE	3 PLACE	4 PLACE
UP TO 6 INCHES	± 1/64	± .02	± .005	
6 TO 24	± 1/32	± .03	± .010	
ABOVE 24	± 1/16	± .06	± .015	
ANGULAR DIMENSIONS				± 1/2°


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2	R-21090P	FRONT MTG BRKT, PASSENGERS SIDE	1
3	R-21097	SPACER	2
4	R-21098	SHIM	2
5	1/2" UNC GR 8 x 1.75"		4
6	1/2" UNC GR 8 x 5.00"		2
7	1/2" TYPE-A GR 8		16
8	1/2" UNC GR 8		8
9	OEM FRAME		REF
10	OEM FRONT BUMPER MTG BRKT		REF

FOR 2015-2019 GM HD TRUCKS

REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	7/6/10	AML	



TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED		EXCEPT AS NOTED	
DIMENSION	FRACTIONS	DECIMALS	ANGLES
6 INCHES	+1/64	±.02	±.005
6 TO 24	±1/32	±.03	±.010
ABOVE 24	±1/16	±.06	±.015
ANGULAR DIMENSIONS		±1/2°	



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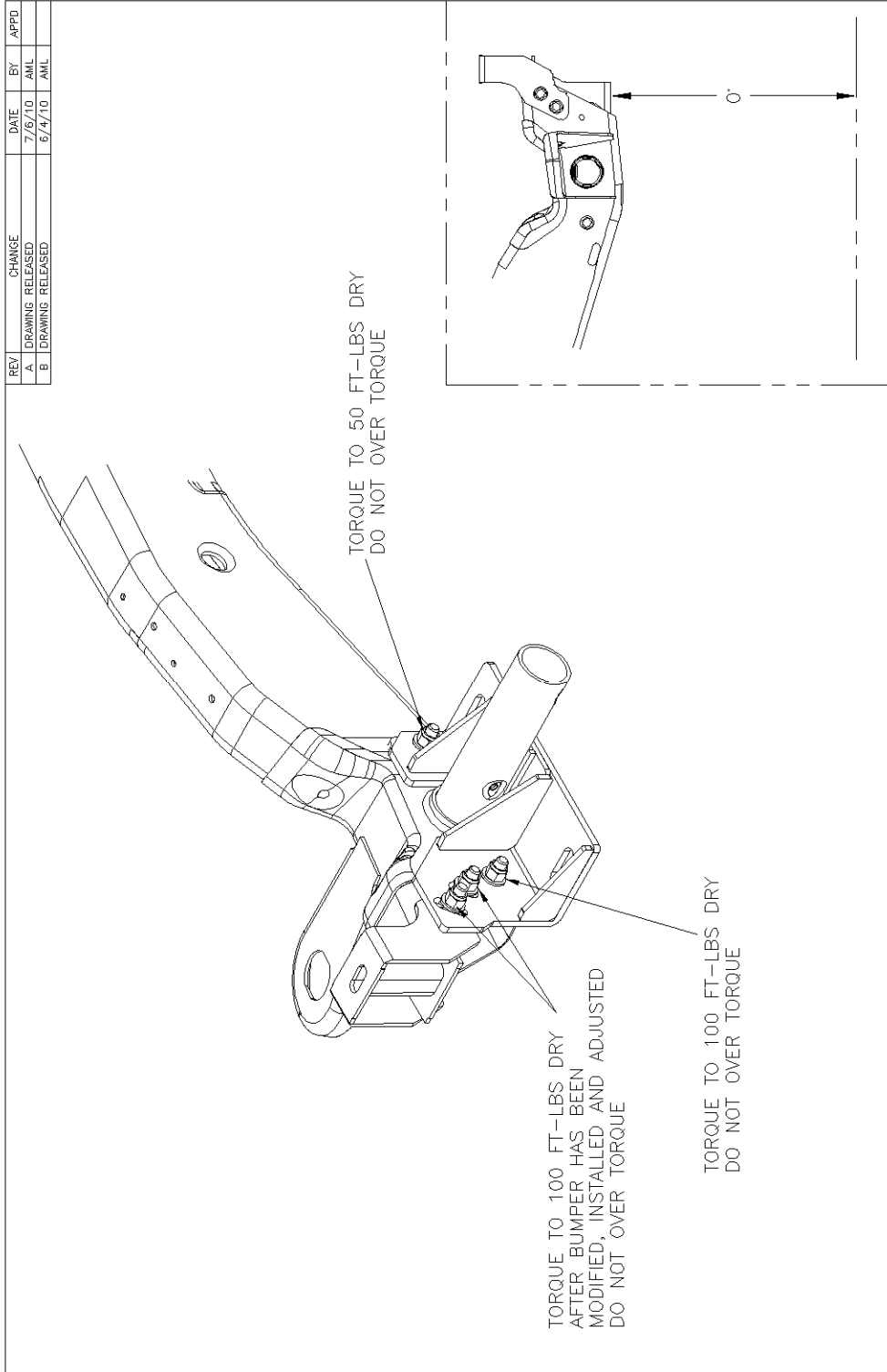
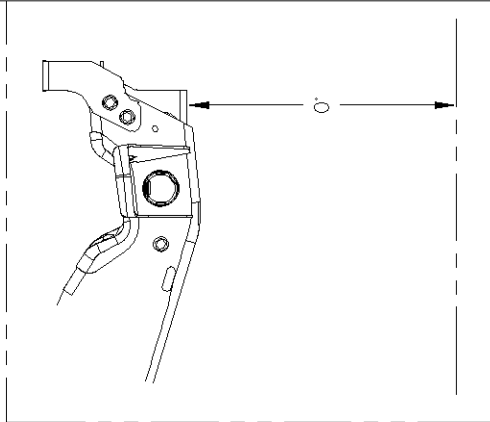
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REF: 2011 GM HD  
 K-M29RXGF004-2 | 7/6/10 | 2 OF 2 | K-M29RXGF004-2

ALL GM HD TRUCKS 2011-2019



REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	7/6/10	AML	
B	DRAWING RELEASED	6/4/10	AML	

**G & B SPECIALTIES INC.**  
 MANUFACTURING AND SERVICE DEPARTMENT  
 BURK WALK PHTHVA/PA/CA 5701752-5901 FAX 5706397

**DESIGN ~ ENGINEERING ~ MANUFACTURING**

REVISION: FRONT MOUNTING KIT INSTALLATION  
 2011-2014 GM HD

DRAWING NUMBER: K-M29RXGF004-1  
 SHEET: 1 OF 1  
 DATE PWA: 7/6/10

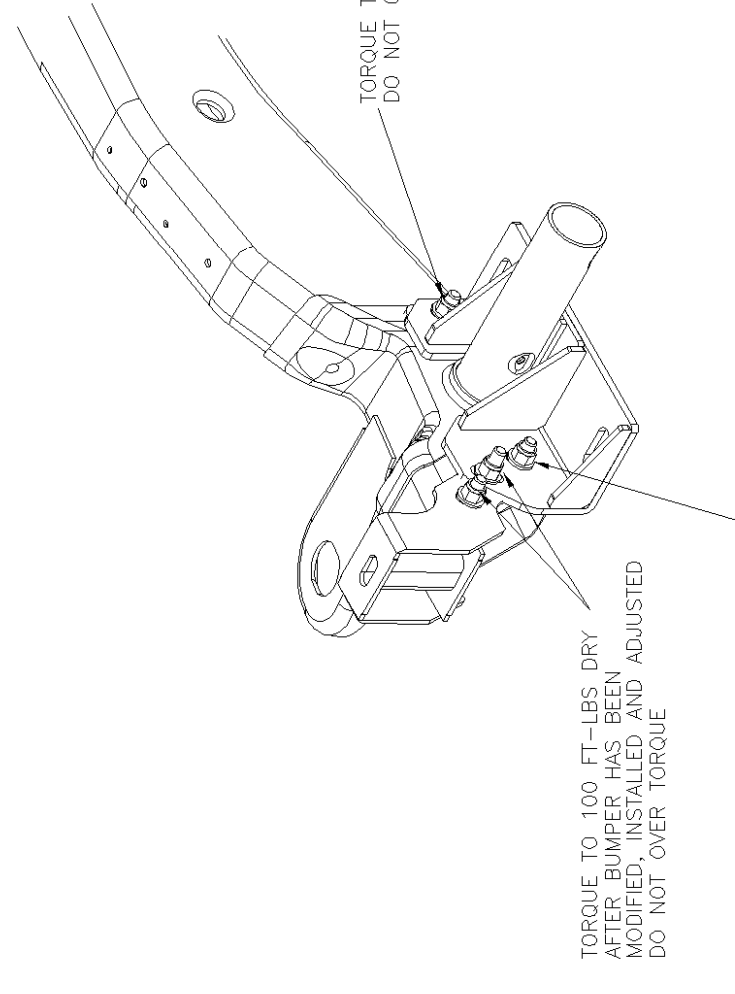
TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED	FRACTIONS	DECIMALS	ANGLES
1/16"	± 1/64	± .005	± .010
1/8"	± 1/32	± .010	± .015
3/16"	± 1/16	± .015	± 1/2°

2011-2014 GM SHIPPED  
 PRIOR 3/01/14

FOR 2011-2014 GM HD TRUCKS SHIPPED PRIOR TO 3/01/2014

REV A	CHANGE DRAWING RELEASED	DATE 6/4/10	BY AML	APPD
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TORQUE TO 50 FT-LBS DRY  
DO NOT OVER TORQUE

TORQUE TO 100 FT-LBS DRY  
AFTER BUMPER HAS BEEN  
MODIFIED, INSTALLED AND ADJUSTED  
DO NOT OVER TORQUE

TORQUE TO 100 FT-LBS DRY  
DO NOT OVER TORQUE

DRAWN AML	CHECKED	DATE 7/6/10	BY g	APPD K-M29RXGF004-1	REV g	DESCRIPTION K-M29RXGF004-1 A
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TOLERANCE ON FINISHED DIMENSIONS (UNLESS OTHERWISE SPECIFIED)		RAIS. FINISH WAY 1/2" DIA. AS 1/2" DIA. AS	
BASIC DIMENSION	FRACTIONS	DECIMALS	3. PLACE
0 TO 24	± 1/64	± .02	± .005
ABOVE 24	± 1/32	± .03	± .010
ABOVE 24	± 1/16	± .06	± .015
ANGULAR DIMENSIONS	± 1/2°		

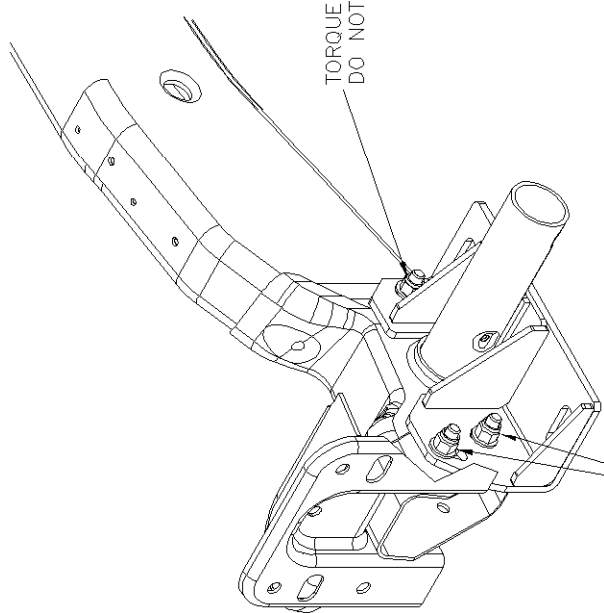
  

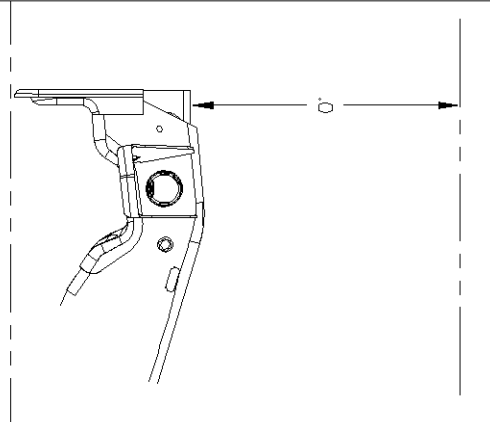
2011-2014 GM SHIPPED  
AFTER 3/01/14

**FOR 2011-2014 GM HD TRUCKS SHIPPED AFTER TO 3/01/2014**

REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	6/4/10	AML	





2015 GM SHIPPED  
AFTER 3/01/14

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED		PLACES	DECIMALS
DIMENSION	FRACTIONS	2 PLACE	± .005
		3 PLACE	± .010
± INCHES	± 1/64	± .02	± .015
± INCHES	± 1/32	± .03	± .015
± INCHES	± 1/16	± .06	± .015
ANGULAR DIMENSIONS		± 1/2°	

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DATE DRAWN: 2/26/14		
SHEET: 1 OF 1		
PART NUMBER: K-M29RXGF004-1		
REVISION: 2015 GM HD		

FOR 2015-2019 GM HD TRUCKS

## OPERATION, SERVICE AND PARTS OF FRONT MOUNTING KIT 2011-2019 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 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 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. 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
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