

**INSTALLATION OF REAR MOUNTING KIT FOR USE WITH
OR WITHOUT OEM TOW HITCH
2008-2016 FORD F-250/350 4X2/4X4**

INSTALLATION SAFETY PRECAUTIONS

If any installation problems are encountered, please call G&B Specialties 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 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
P-00084D	Rear Mounting Bracket, Drivers Side	1
P-00084P	Rear Mounting Bracket, Passengers Side	1
P-00083	Support Bracket	2
P-00085	Shim	2
R-2960	Railgear Mounting Shim - ½" Thick	4
R-2960A	Railgear Mounting Shim - 1" Thick	2
R-2631	Railgear Mounting Shim - 2" Thick	2
R-990KIT-299	5/8" UNC Gr. 8 Bolt x 2.25" Long	6
	5/8" UNC Gr. 8 Bolt x 2.50" Long	4
	5/8" Gr. 8 Washer	20
	5/8" UNC Gr. 8 Nylon Insert Lock Nut	10
	3/4" UNC Gr. 8 Bolt x 2.50" Long	8
	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 7.00" Long	4
	3/4" UNC Gr. 8 Washer	16
	3/4" UNC Gr. 8 Nylon Insert Locknut	8

1. Remove the original spare tire and spare tire heat shield from under the vehicle's cargo box if so equipped. The original spare tire will not be re-installed.
2. Remove the tow hitch from the rear of the frame if so equipped.
3. Remove bolts securing the vapor canister to the vapor canister bracket which is located on the driver's side rear of the truck frame at the spare tire carrier.
4. Remove the vapor canister bracket from the truck by removing the two bolts securing the bracket to the truck frame and the two bolts securing the bracket to the spare tire carrier. Use caution when removing the bracket, the vapor canister could fall from the truck causing injury.
5. Remove the two bolts from the inside of the truck frame that secure the ground wires for the vapor canister solenoids. An alternate grounding point will need to be located for the solenoids at the installer's discretion.
6. Modify the vapor canister bracket by cutting the frame clip flush with the bracket as shown in **Figure 1**.

7. Re-install the vapor canister & bracket using the OEM fasteners. Only the rear ward most truck frame mounting point will be used when re-installing the bracket. There is a slot in the driver's side mounting bracket to clear the head of the bolt for the rear mounting bolt on the truck frame. Re-ground vapor canister solenoids.
8. Place each rear mounting bracket against the underside and outside of the frame rails as shown, just ahead of the rear spring hangers. The three slots in the side of each rear mounting plate should align with the three slots in the side of the frame. The two slots in the bottom of each rear mounting plate should align with the two slots in the lower flange of the frame for the OEM tow hitch.
9. Fasten each rear mounting bracket to the side of the frame as shown.

For Install without OEM Tow Hitch (Figure 2)

1. Fasten each rear mounting plate to the underside of the frame with the support bracket as shown.
2. Tighten but do not torque the fasteners.
3. Ensure the mounting brackets are tight to the underside and outside of the frame and are aligned with each other and that the support bracket is sitting flush against the rear mounting bracket.
4. Torque the 5/8" fasteners to 150 ft-lb dry and the 3/4" fasteners to 175 ft-lb dry. Do not over torque.
5. Weld the support bracket to the rear mounting bracket as shown.
6. The supplied railgear mounting shims are to be used as required when mounting the railgear to the rear mounting plates.

For Install with OEM Tow Hitch (Figure 3)

1. Install the OEM tow hitch to the bottom of the rear mounting bracket using a shim and support bracket as shown.
2. Tighten but do not torque the fasteners.
3. Ensure the mounting brackets are tight to the underside and outside of the frame and are aligned with each other and that the support bracket is sitting flush against the rear mounting bracket.
4. Torque the 5/8" fasteners to 150 ft-lb dry and the 3/4" fasteners to 175 ft-lb dry. Do not over torque.
5. Weld the support bracket to the rear mounting bracket as shown.

6. The supplied railgear mounting shims are to be used as required when mounting the railgear to the rear mounting plates.

A minimum of 3" of shim is required when installing this unit in conjunction with the OEM tow hitch. If less than 3" of shim is used the railgear may come in contact with the tow hitch when stowed in the road position. If the recommended unit installation height, as specified in the railgear installation manual, cannot be achieved with a minimum of 3" of shim, the tow hitch must be removed from the vehicle or modified by the installer at their own discretion.

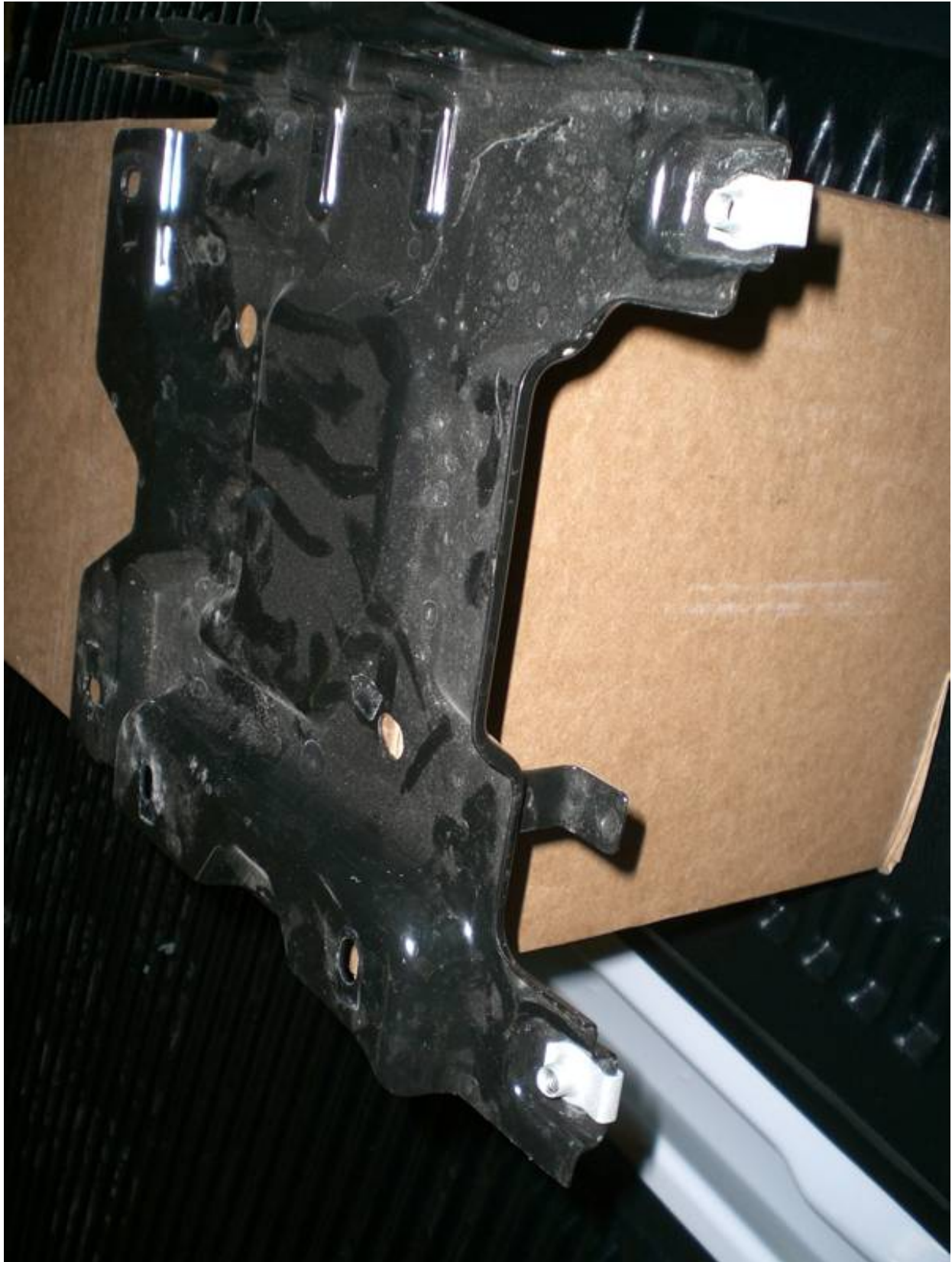


Figure 1 (Vapor Canister Bracket)

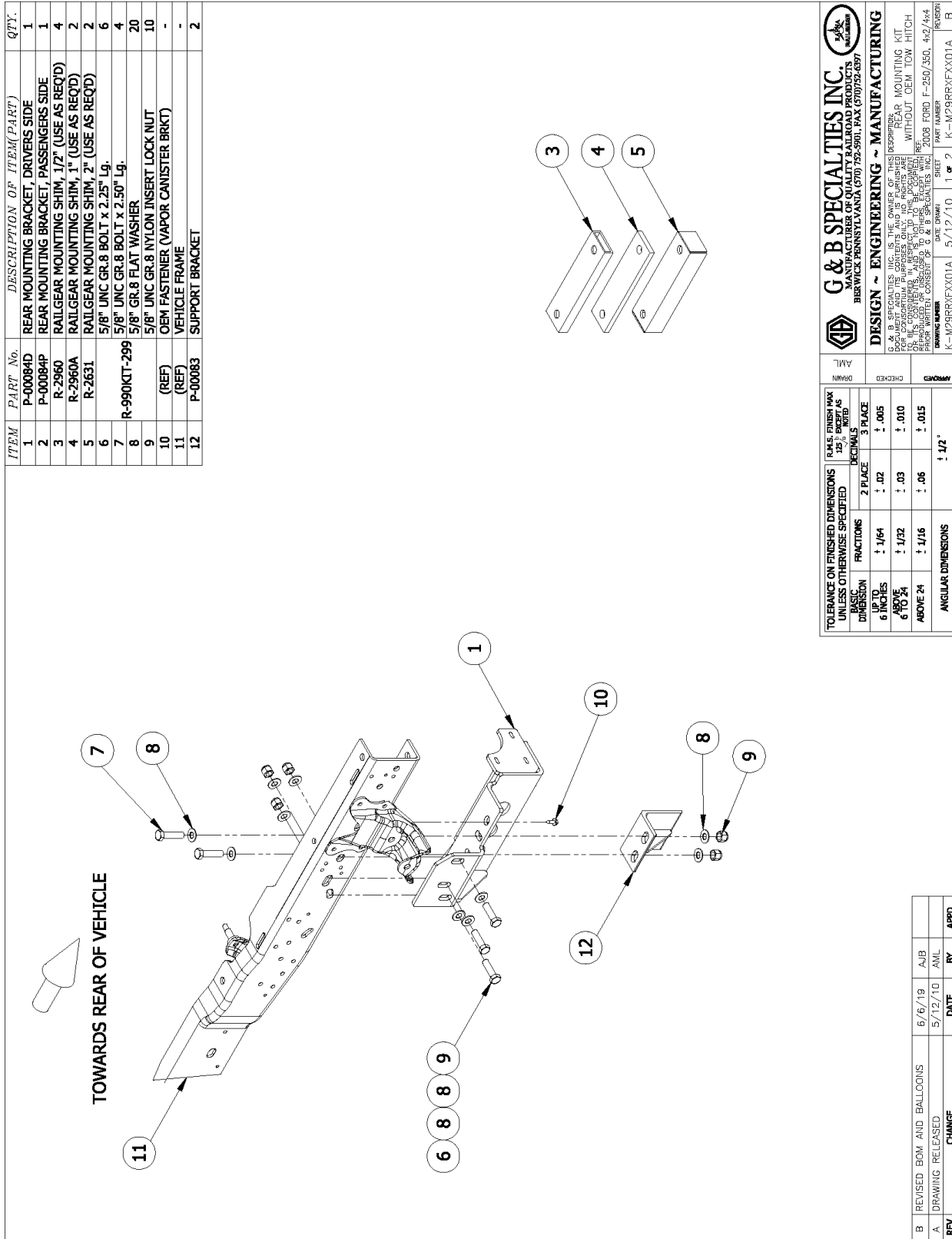


Figure 2

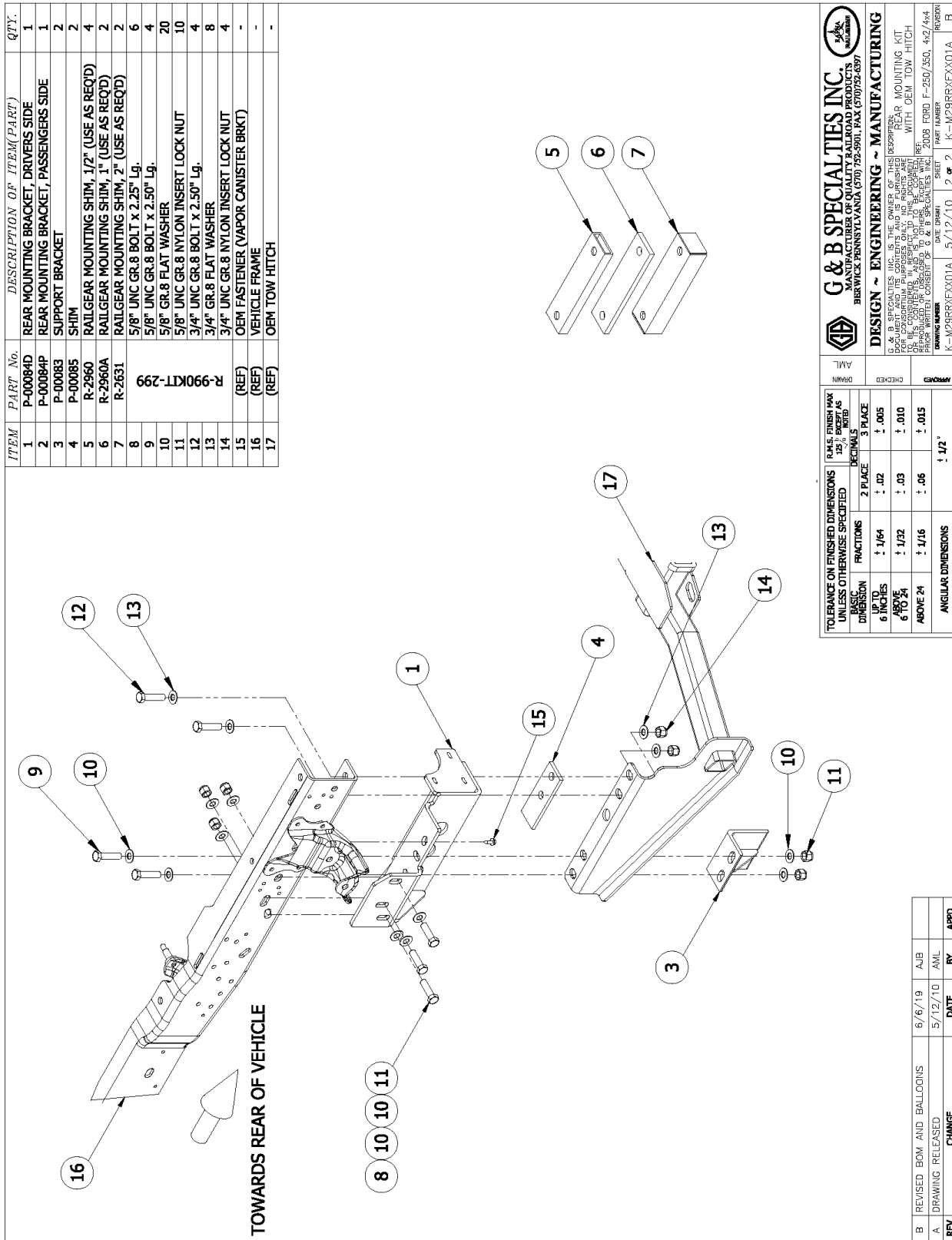
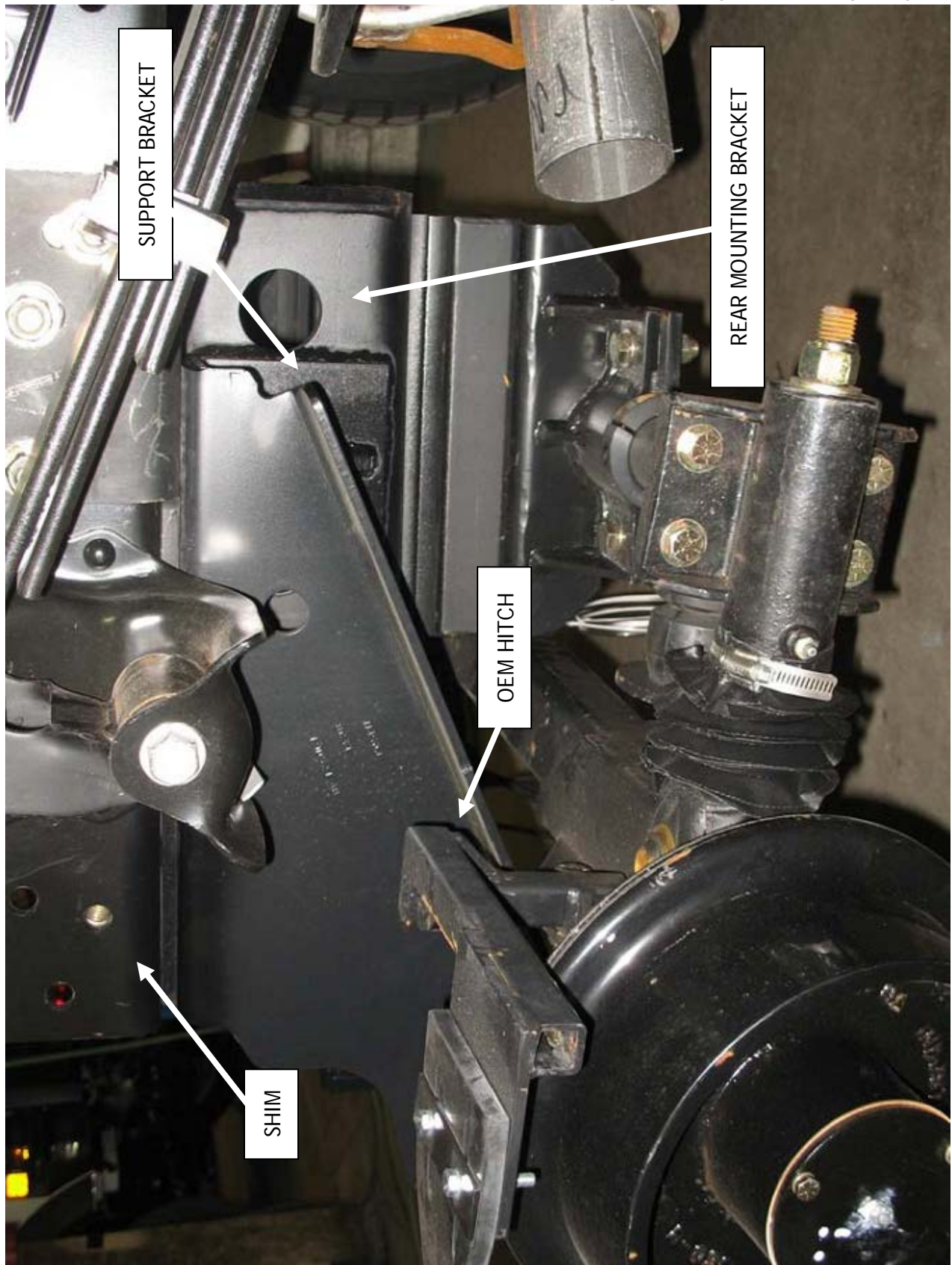
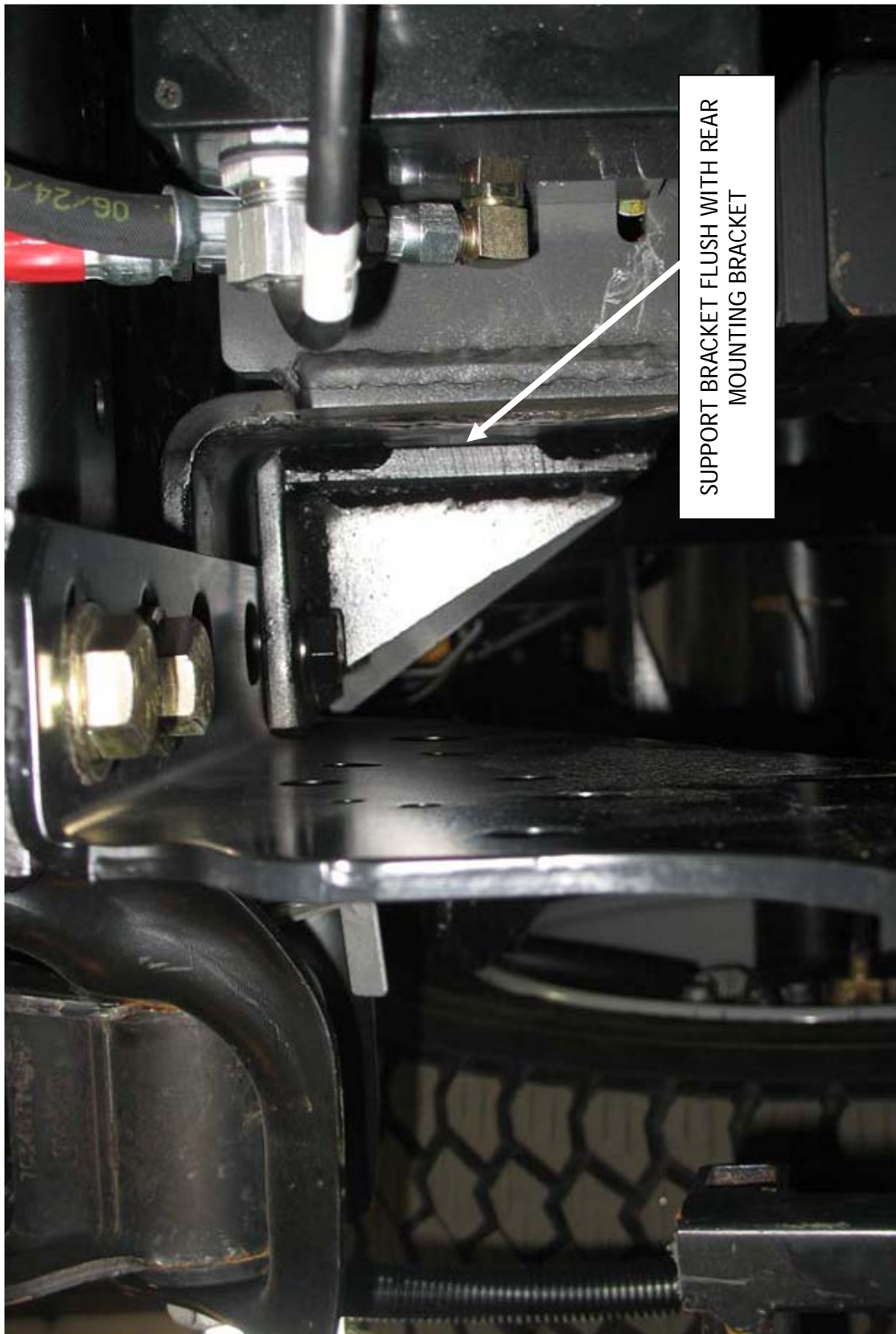
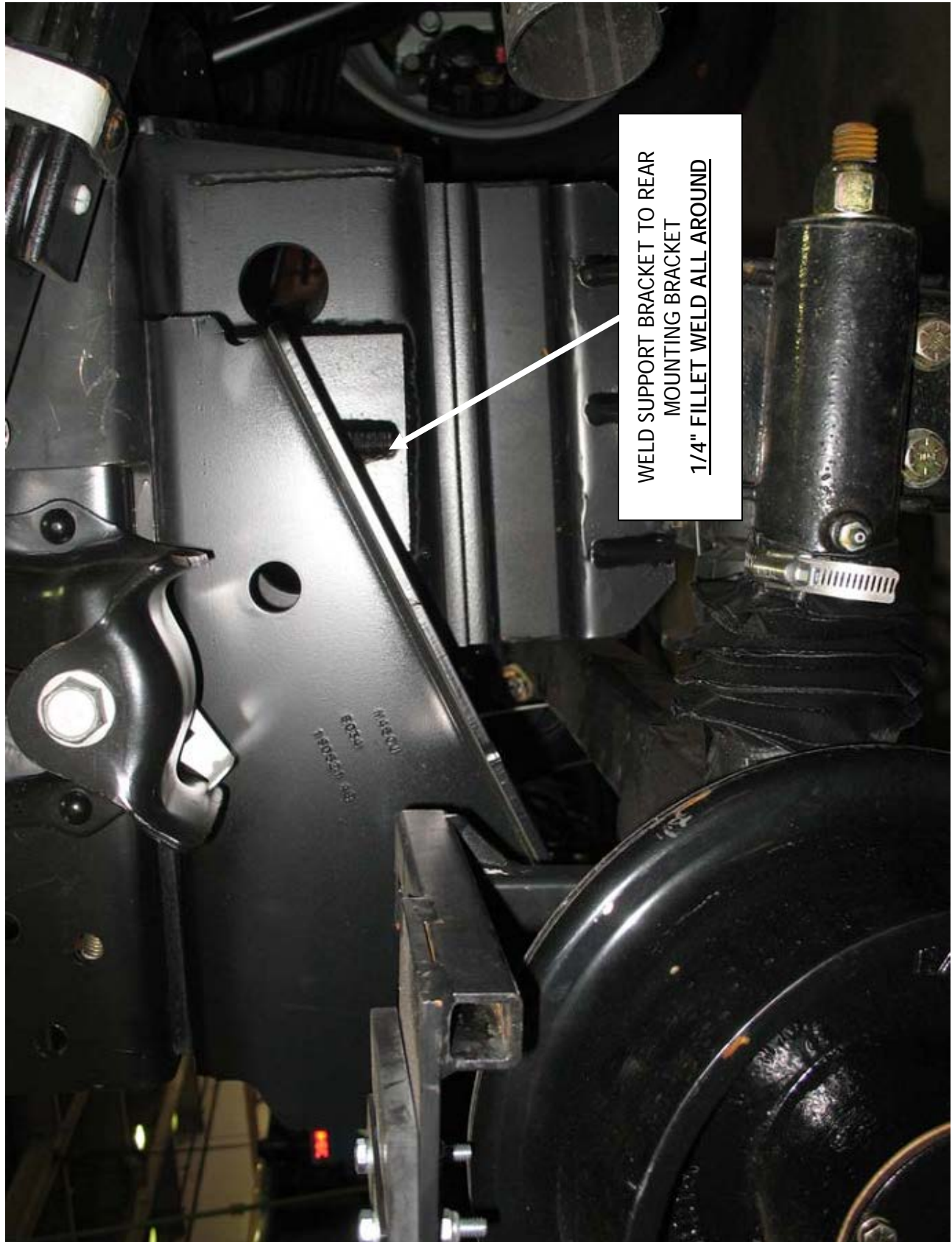


Figure 3









**OPERATION, SERVICE & PARTS OF REAR MOUNTING KIT
2008-2016 FORD F-250/350 4X2/4X4**

OPERATION SAFETY PRECAUTIONS

If any operating, services or parts problems are encountered, please call G&B Specialties 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 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

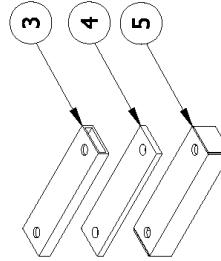
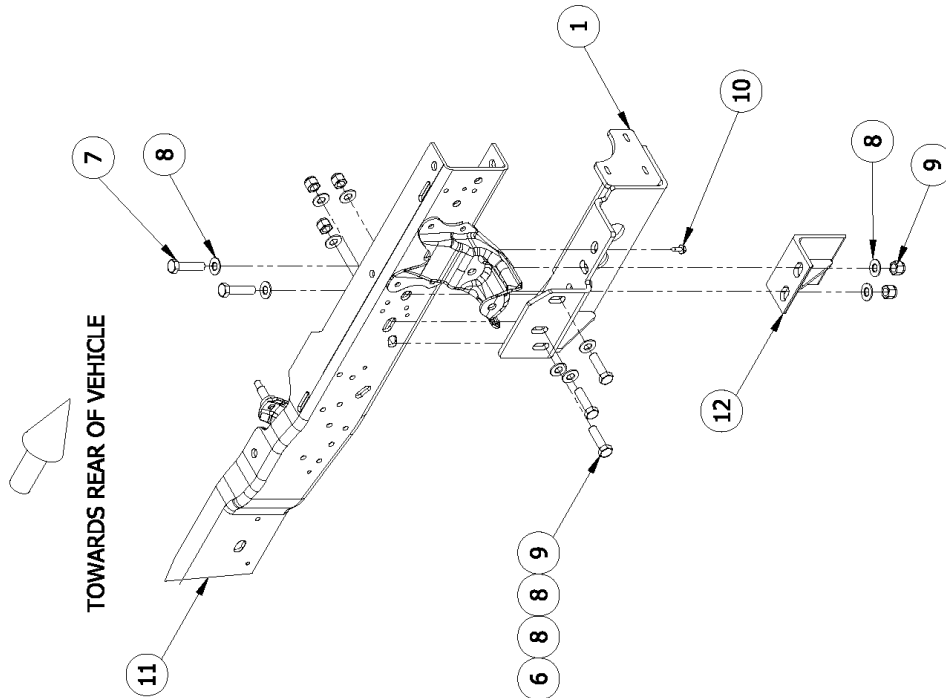
Service Required	Initial 100 km (62 Miles) of road and/or rail use	Daily	Weekly	Monthly
Inspect rear mounting kit fasteners (re-torque if required)		✓	✓	✓

Table 2: Standard Fastener Torque Values

Fastener Size	Fastener Torque Value (ft-lbs) Dry
1" UNC Gr. 8 Fasteners	250
3/4" 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

PARTS OF REAR MOUNTING KIT

ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY.
1	P-00084D	REAR MOUNTING BRACKET, DRIVERS SIDE	1
2	P-00084P	REAR MOUNTING BRACKET, PASSENGERS SIDE	1
3	R-2960	RAILGEAR MOUNTING SHIM, 1/2" (USE AS REQ'D)	4
4	R-2960A	RAILGEAR MOUNTING SHIM, 1" (USE AS REQ'D)	2
5	R-2631	RAILGEAR MOUNTING SHIM, 2" (USE AS REQ'D)	2
6	R-990KIT-299	5/8" UNC GR.8 BOLT x 2.25" Lg.	6
7		5/8" UNC GR.8 BOLT x 2.50" Lg.	4
8		5/8" GR.8 FLAT WASHER	20
9		5/8" UNC GR.8 NYLON INSERT LOCK NUT	10
10	(REF)	OEM FASTENER (VAPOR CANISTER BRKT)	-
11	(REF)	VEHICLE FRAME	-
12	P-00083	SUPPORT BRACKET	2

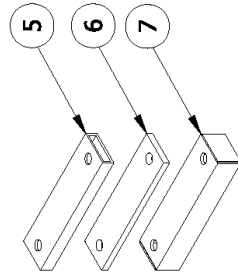
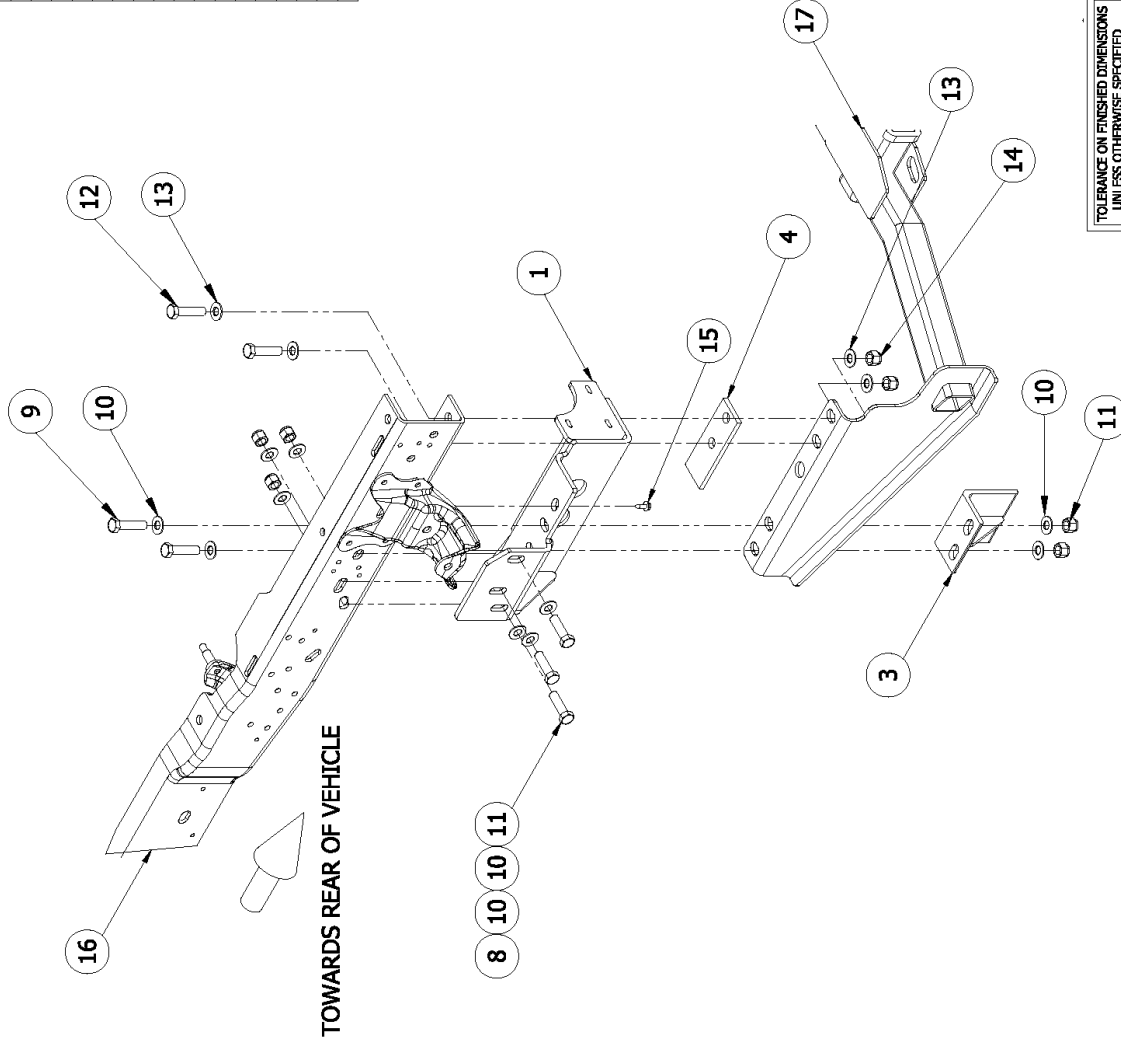


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SHEET 1 of 2	REVISION B

DIMENSION	TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED		
	FRACTIONS	DECIMALS	ANGLES
UP TO 6 INCHES	± 1/64	± .02	± .005
6 TO 24	± 1/32	± .03	± .010
ABOVE 24	± 1/16	± .06	± .015
ANGULAR DIMENSIONS	± .47°		

REV	CHANGE	DATE	BY	APPD
B	REVISED BOM AND BALLOONS	5/6/19	AJB	
A	DRAWING RELEASED	5/12/10	AML	

ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY.
1	P-00084D	REAR MOUNTING BRACKET, DRIVERS SIDE	1
2	P-00084P	REAR MOUNTING BRACKET, PASSENGERS SIDE	1
3	P-00083	SUPPORT BRACKET	2
4	P-00085	SHIM	2
5	R-2960	RAILGEAR MOUNTING SHIM, 1/2" (USE AS REQ'D)	4
6	R-2960A	RAILGEAR MOUNTING SHIM, 1" (USE AS REQ'D)	2
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10		5/8" GR.8 FLAT WASHER	20
11		5/8" UNC GR.8 NYLON INSERT LOCK NUT	10
12		3/4" UNC GR.8 BOLT x 2.50" Lg.	4
13		3/4" GR.8 FLAT WASHER	8
14		3/4" UNC GR.8 NYLON INSERT LOCK NUT	4
15	(REF)	OEM FASTENER (VAPOR CANISTER BRKT)	-
16	(REF)	VEHICLE FRAME	-
17	(REF)	OEM TOW HITCH	-



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

REV	DATE	BY	APPD
B	6/6/19	AJB	
A	5/12/10	AML	
CHANGE			

DRWING NUMBER	DATE DRAWN	SHEET	PART NUMBER	REVISION
K-M29RRXFFX01A	5/12/10	2 of 2	K-M29RRXFFX01A	B

AML	CHECKED	APPD
DRWN		

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