

FIELD REPAIR
LEVER LOCK CONVERSION NON-ADJUSTABLE
ROTARY FRONT R-460 RAILGEAR

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

RAFNA R-460 FRONT RAILGEAR LEVER LOCK CONVERSION PROCEDURE

The following outlines the procedure to convert the front railgear lock from cable or pull rod activation with adjustable support beam to lever activation with non-adjustable support beam. This procedure applies to the RAFNA R-460 front railgear unit only.

All required parts, hardware and components required for this conversion will be supplied with the conversion field repair kit.

KIT: K-H46RXFIELD005

PART NUMBER	DESCRIPTION	QTY.
R-23036B	NON-ADJUSTABLE SUPPORT BEAM - LEVER LOCK	1
R-23105A	CLEVIS ASSY	1
R-23100-1	PULL ROD	1
R-20101	LOCK PIN	1
R-23107	SPRING	1
P-00029B	LEVER	1
R-20208A	CLEVIS CLIP	1
R-24012	OPERATION DECAL	1
R-24013	HANDLE	1
R-23108	INSULATING WASHER	2
R-22162-SA	SHIM, 1/8"	2
R-22162-SB	SHIM, 1/16"	4
K-R46RXFCAM001A	LOCK CAM KIT	1
R-990KIT-332	HEX JAM NUT, 3/8" UNC, GR.8	2
	FLAT WASHER, 1/2", TYPE-B, GR.8	2
	FLAT WASHER, 1/4", TYPE-A, GR.8	1
	NYLOCK HEX JAM, 1/4" UNC, GR.8	1
	SLOTTED HEX NUT, 1/2" UNC, GR.8	1
	COTTER PIN, 1/8" X 1"	1
R-990KIT-334	HEX CAP SCREW, 3/8" UNC GR.8 x 2"	8
	FLAT WASHER, 3/8" GR.8 TYPE-A	16
	NYLOCK HEX NUT, 3/8" UNC GR.8	8

There should be no load on the front railgear unit when performing this procedure

1. Remove the existing support beam from vehicle along with all remaining lock components; spring, lock pin, pull rod/pull cable, hardware etc..and discard. None of the existing components will be reused. (Figure 1)

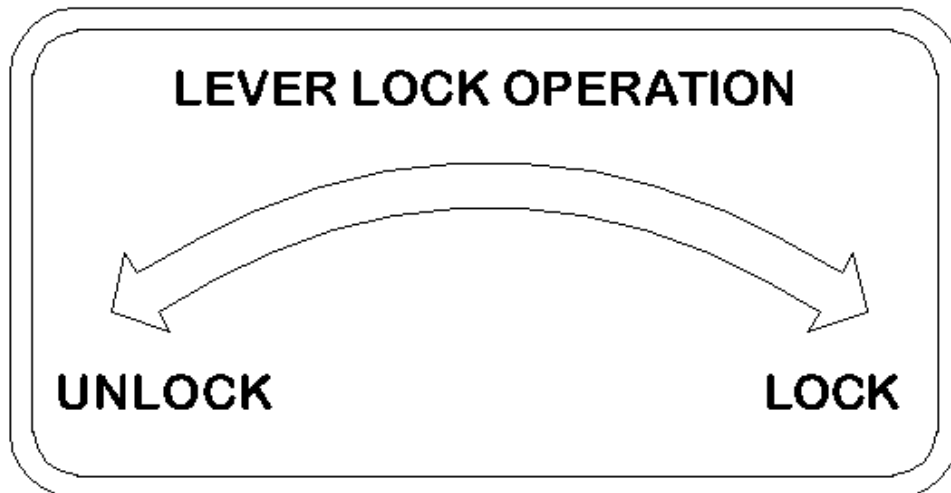
G&B Specialties Inc. 535 West 3rd Street, Berwick, PA, USA Tel: (570) 752-5901 Fax: (570) 752-6397
 US Field Service: 570-441-6988; CAN Field Service 570-854-0482; www.rafna.com

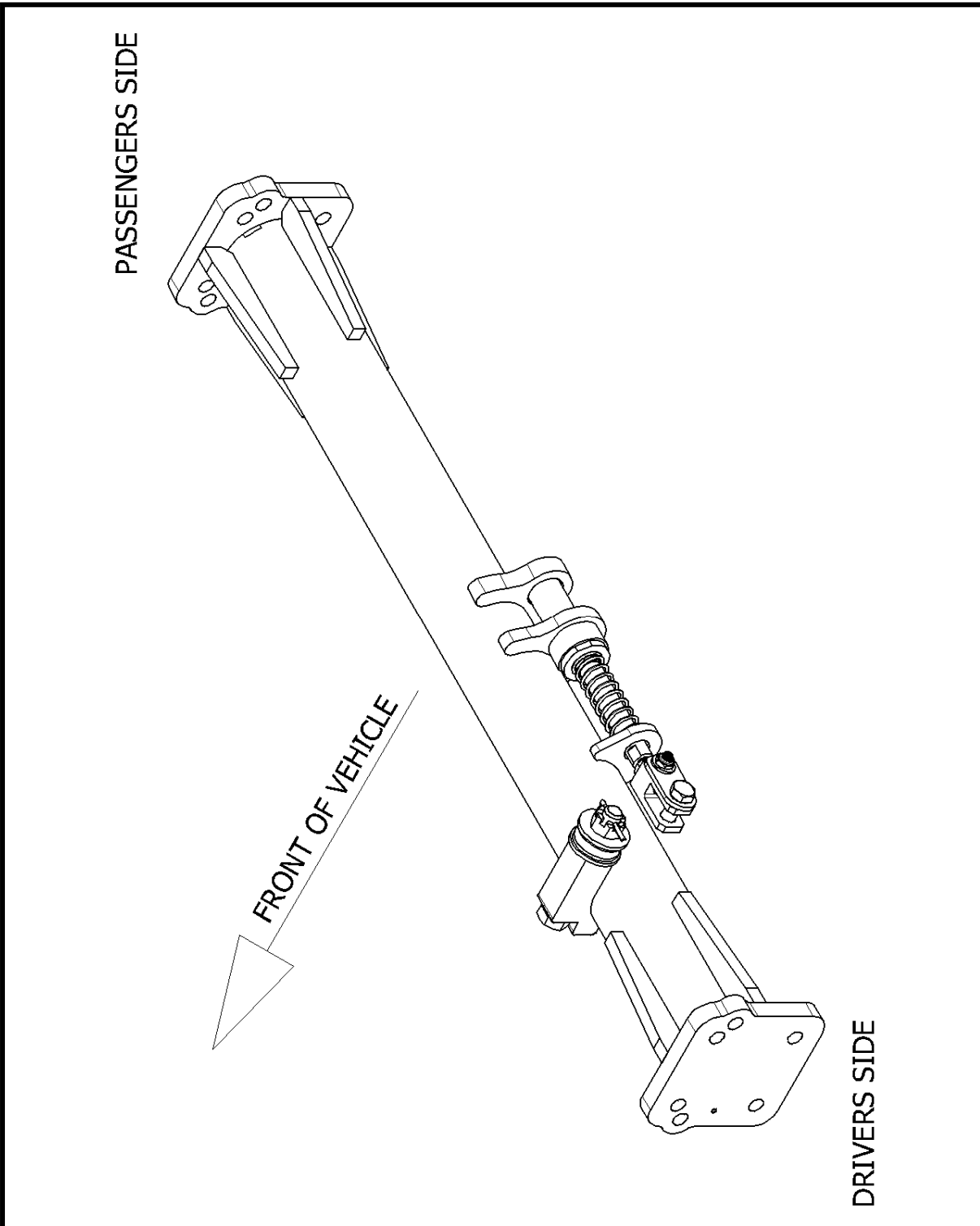
2. Remove existing lock cam from the vehicle. This conversion will not work with the existing lock cam. (Figure 1)
3. Install new support beam assembly using the 3/8" hardware and shims supplied with this kit, torque 3/8" mounting bolts 40-45 ft-lbs. (Figure 2)
4. The support beam must be centered between the railgear mounting brackets and should be equally shimmed on each side.
5. Assemble the lever to the pivot block as shown. (The lever will need to be bent to suit during installation) (Figure 3)
6. Assemble the lever to the clevis on the pull rod as shown (Figure 3)
7. Test to ensure the lever lock is functioning properly and operating smoothly and that the full travel of the lever does not interfere with any components on the vehicle.
8. Install and adjust new lock cam:

Lock Cam Adjustment

- a. The lock cam base is slotted to allow for easier adjustment of the lock pin/lock cam engagement.
- b. With the railgear in the fully locked rail or road position, and the lock pin engaged, adjust the cam towards the lock pin. The cam should not be touching the lock pin. There should be approximately 1/8" clearance between the lock pin and the lock cam.
- c. Tighten but do not torque the 3/8" fasteners.
- d. Disengage the railgear lock pin.
- e. Proceed to rotate the railgear to the fully locked rail or road position. Once the gear is past the locked position, release the locking pin handle. The lock pin should ride against the side of the cam.
- f. Once the gear reaches the full locked position, the pin should automatically engage the cam.
- g. If the lock pin does not engage automatically, adjust the cam as necessary to allow for automatic engagement in both the road and rail position. It may be necessary to grind the cam slightly to allow for proper engagement of the lock pin.

- h. Once the proper adjustment has been made, torque the 3/8" fasteners to 40 ft-lbs dry then weld the cam to the cam base as shown.
9. Visually inspect and verify that that the lock pin fully retracts inside of the pin support housing when the lever is actuated to its full travel for the unlock position.
10. Visually inspect and verify that that the lock pin fully extends thru the pin support when the lever is actuated to its full travel for the lock position.
11. If necessary, relocate the front railgear controls to a close proximity to the front lever lock to allow for a one-man operation of the railgear unit.





Support Beam Assembly (as shipped)
(Lever not Shown)

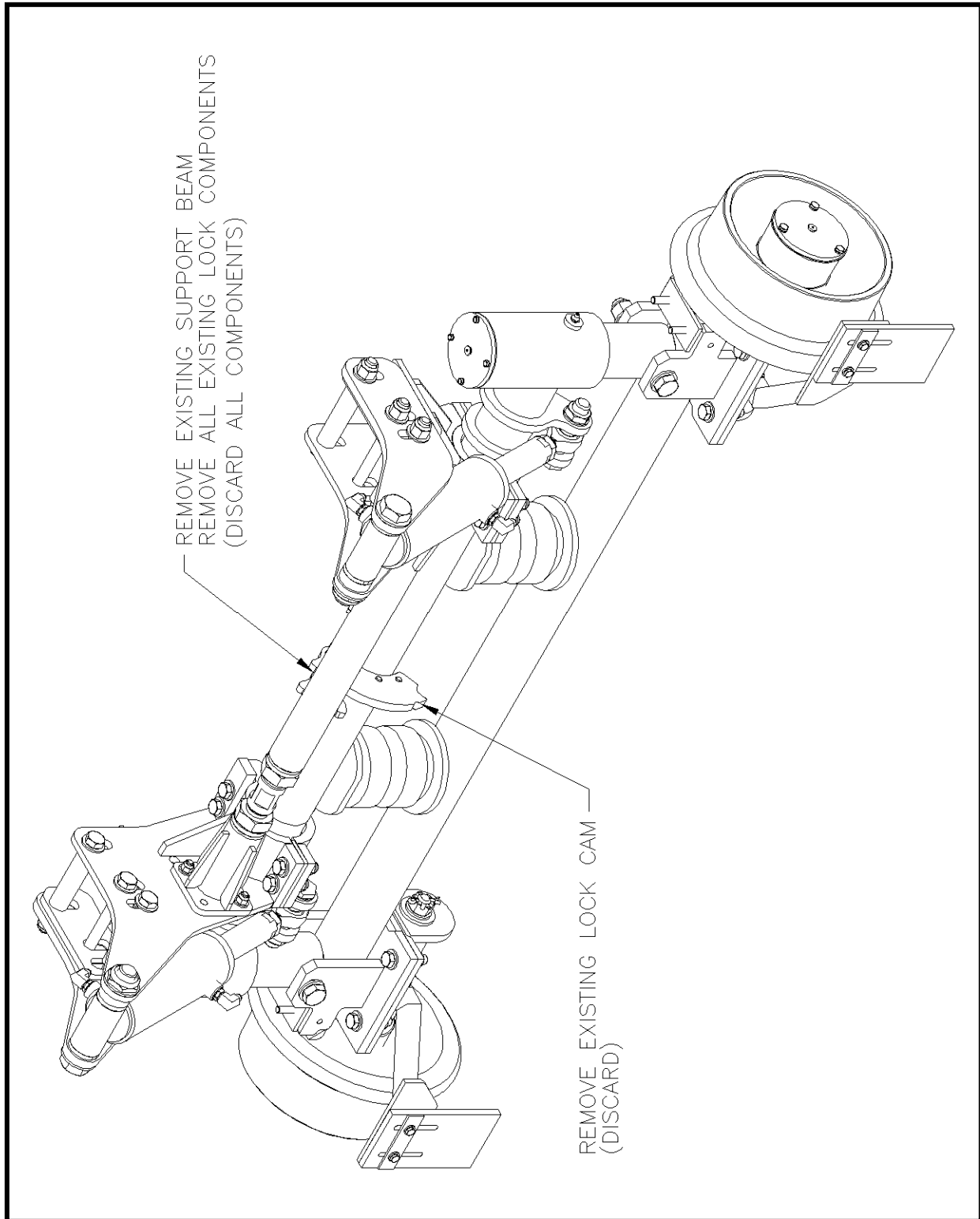


Figure 1

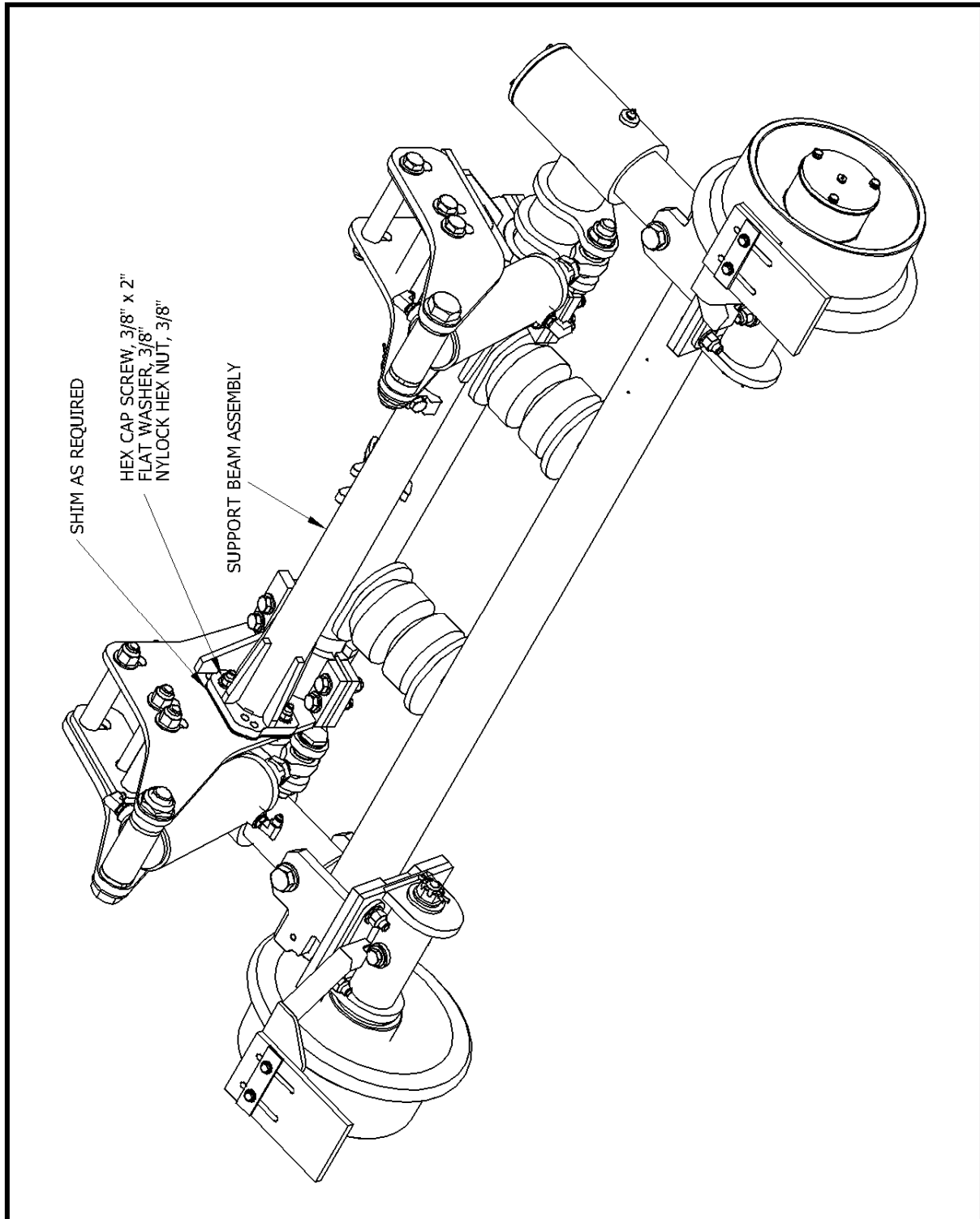


Figure 2

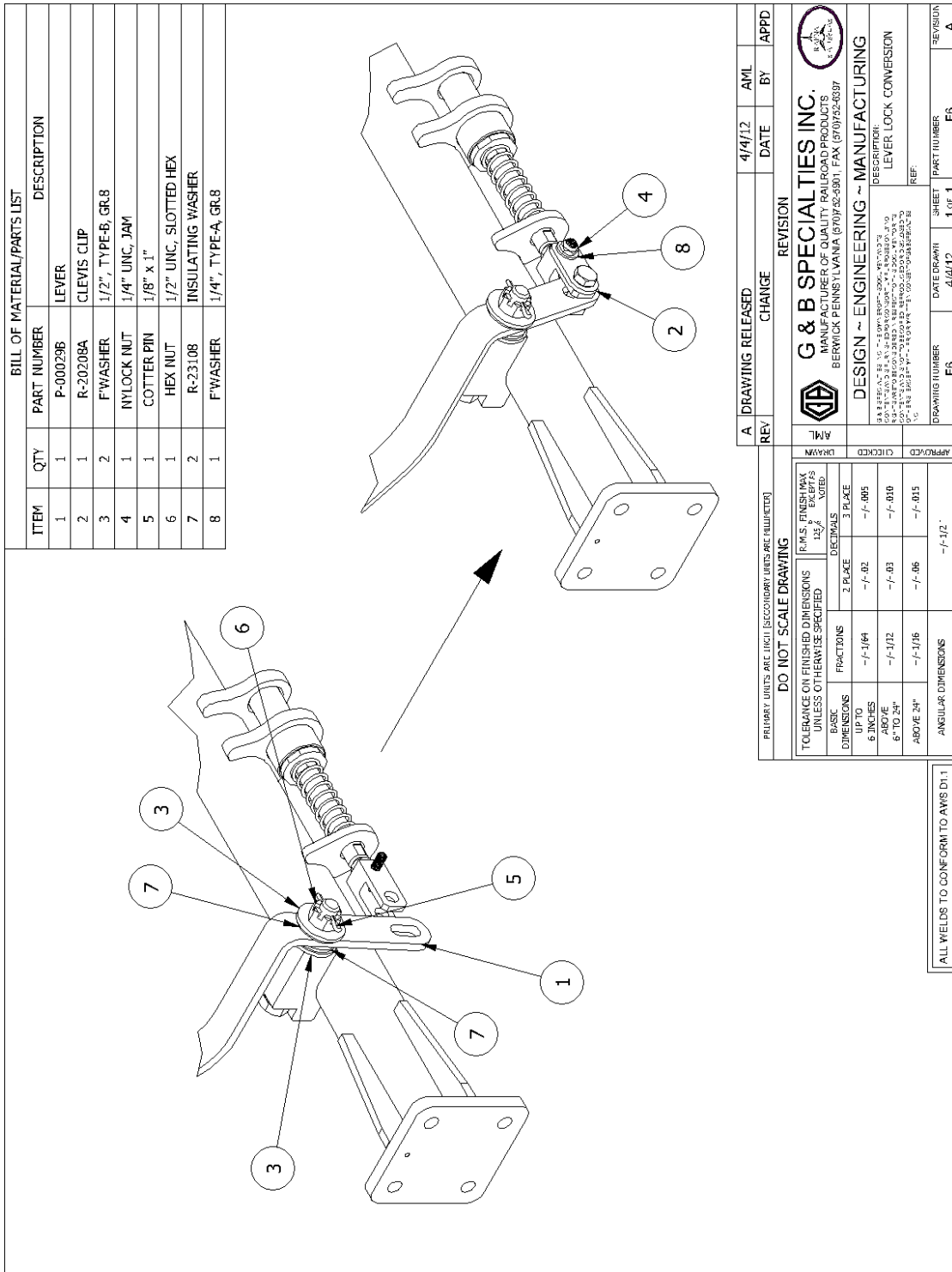


Figure 3

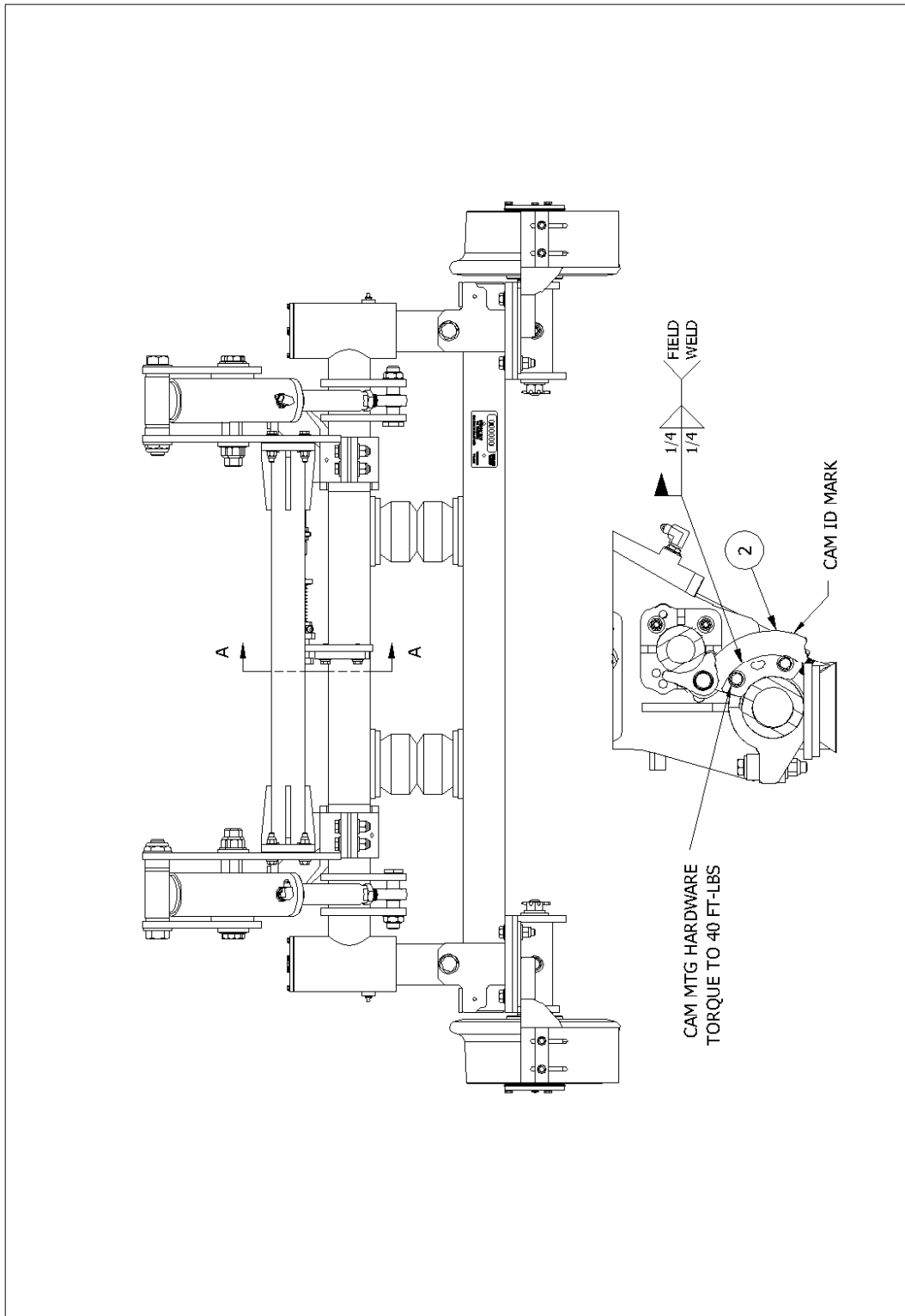
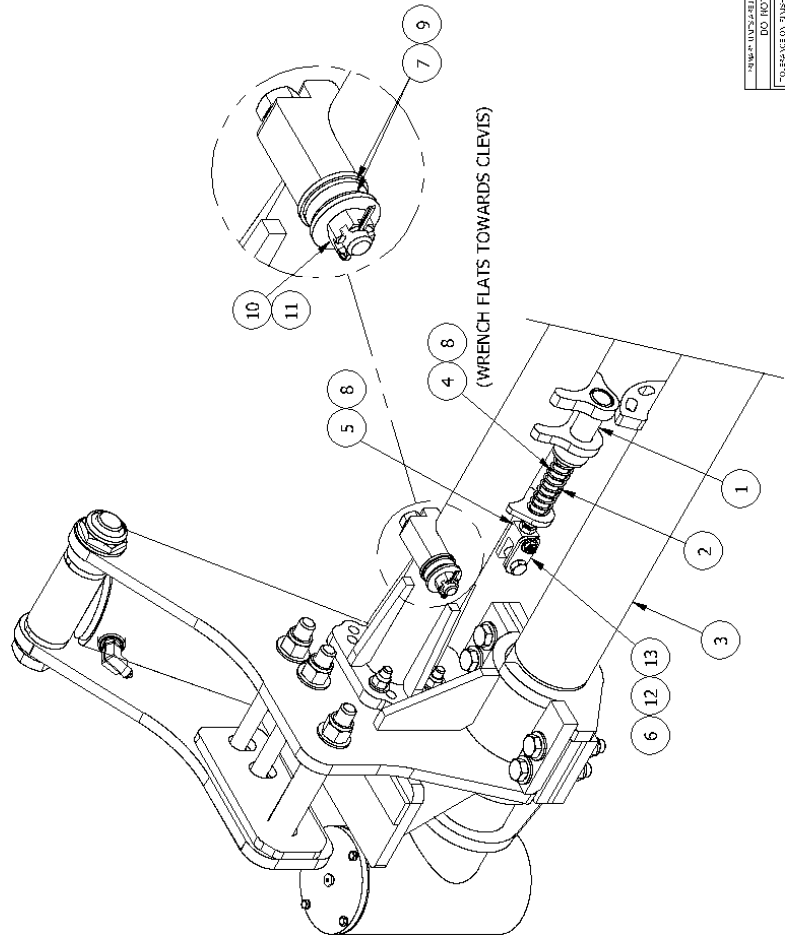


Figure 4

BILL OF MATERIAL/PARTS LIST		
LTCH	QTY	PART NUMBER DESCRIPTION
1	RET	R-2310L LOCK PIN
2	RET	R-2310T COMPRESSION SPRING
3	RET	R-23A08B SUPPORT BEAM
4	1	R-23100-1 BULL ROD
5	1	R-23105A CLEVIS ASSEMBLY
6	1	R-20209A CLEVIS CUP
7	2	R-2310B INSULATING WASHER
8	2	1/2" X 1/4" 304 UIC-2H
9	2	T WASHER 1/2" TUBES
10	1	1/2" X 1/4" UIC, SLOTTED UIC
11	1	COTTER PIN 1/8" X 1"
12	1	T WASHER 1/4" TUBES
13	1	HYDLOCK BUT 1/4" UIC, UIC-2H

1. LEVER IS TO BE TEST FIT AT ASSEMBLY.
2. LEVER IS TO SHIP LOOSE WITH UNIT. ALL REMAINING LOCKUP PARTS SHOULD BE ASSEMBLED TO UNIT PRIOR TO SHIPPING.



A	DRAWINGS REQUIRED	4/27/12	REV	BY	APPRO
REV	CHANGE	DATE	BY	BY	APPRO
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