



## INSTALLATION OF HYDRAULIC MANIFOLD STEEL BOX W/INSULATOR SPACER 2007-2008 CHEVY SUBURBAN

### 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 G&B Specialties railgear equipment. Applicable railway company procedures and policies must be adhered to.
- Always disconnect the vehicle's battery when working with any electrical system.
- Before performing any work under the vehicle or railgear, ensure the engine is turned off and the parking brake is set.
- Beware of all pinch points on the railgear and keep all parts of the body clear.
- When routing hydraulic hoses, ensure that the hoses do not contact any sharp edges or hot surfaces.
- When routing electrical wires, ensure that the wires do not contact any sharp edges or hot surfaces.
- All wire connections are to be soldered and heat shrink sealed to prevent future corrosion related problems.



The following procedure details the installation of the hydraulic manifold steel box w/insulator spacer.

Table 1: Hydraulic Kit Installation Parts

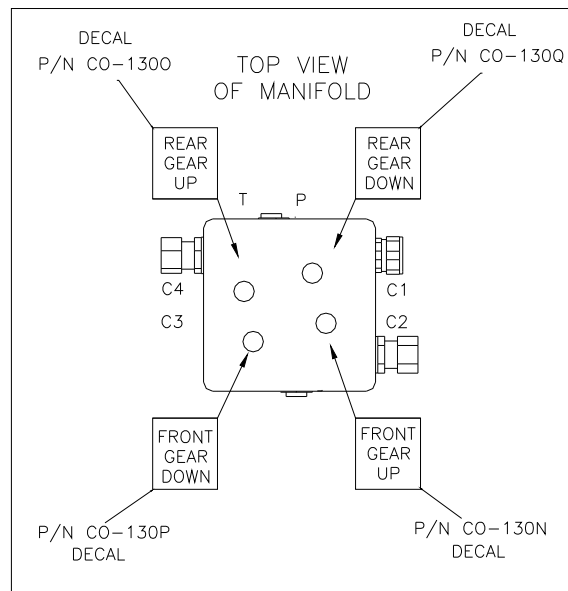
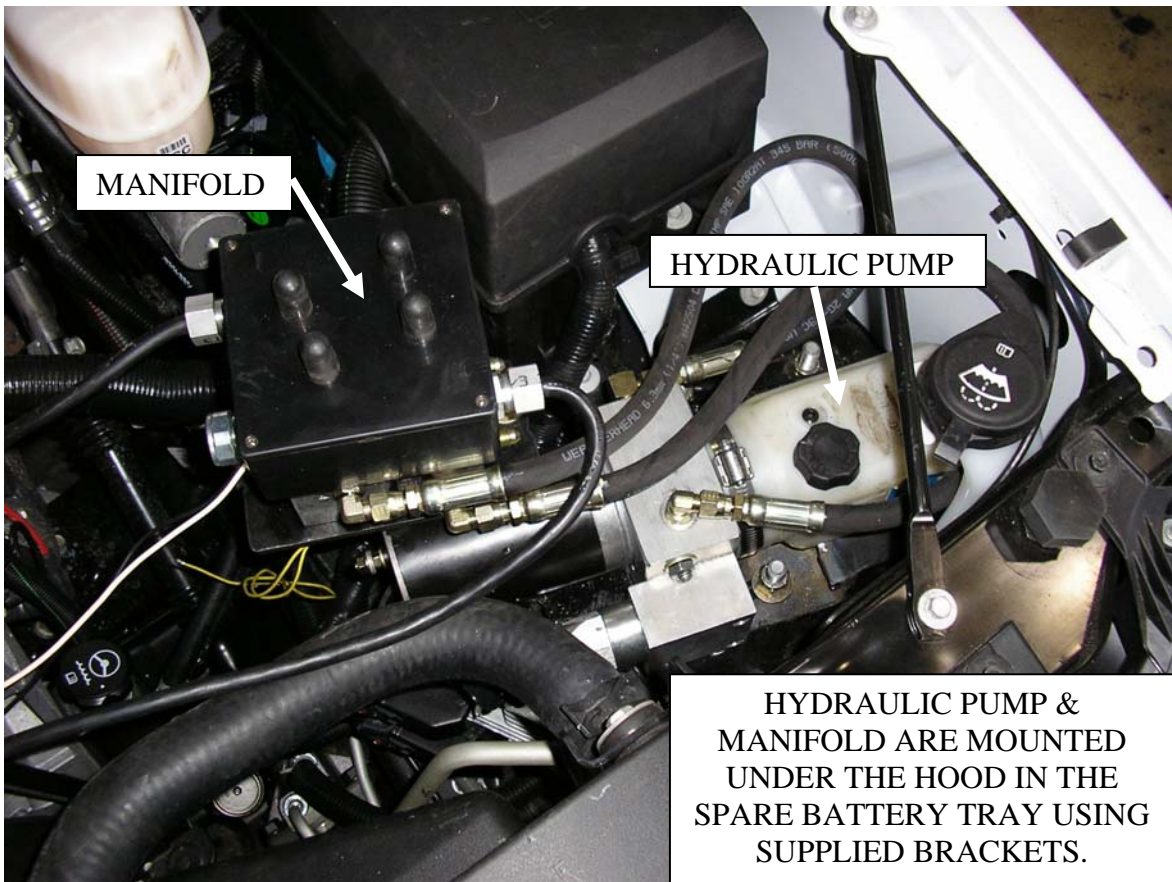
<b>Part Number</b>	<b>Description</b>	<b>Qty</b>
R-13124	Pump Manifold Box	1
R-13127	Top Plate	1
R-10540	Manifold Insulator Plate	1
-	¼" UNC Gr.8 Bolt x 1" Long	4
-	¼" Gr.8 Locking Washer	4
-	¼" Gr.8 Washer	4
CO-130N	Decal Plate, Front Gear Up	1
CO-130O	Decal Plate, Rear Gear Up	1
CO-130P	Decal Plate, Front Gear Down	1
CO-130Q	Decal Plate, Rear Gear Down	1



1. The pump is shipped with a manifold, a hand pump handle, a solenoid, and a rubber terminal boot.
2. Make sure the battery is disconnected before working on the manifold.
3. Locate the pump manifold underneath the hood as shown in figure 1.
4. Mark each harness for reference in later assembly. (Figure 2)
5. Remove the four screws that hold the cover and place the cover aside.
6. Remove the black solder covers and separate all the soldered wires. Do not cut the wires. (Mark each wire according to how they were soldered for reference in later assembly)
7. Mark and disconnect the two wire connectors located on the side of the pump.
8. Remove each nut located on top of the coils and place each coil aside for later assembly. (Keep in mind which way the pump manifold is oriented or label the manifold according to the location of the coils before removal)
9. Disconnect the three wiring harnesses on the manifold box by removing the nuts on the inside of the box and pulling the harnesses out from the box.
10. Remove the four flathead screws inside the bottom of the manifold box and place the four screws aside to use for later use.
11. Mark each hydraulic line and disconnect all the hydraulic lines on the pump manifold and the pump. Figure 4 can also be used for reference when reconnecting the hydraulic lines.
12. Locate the pump mounting bracket (Item 2, Fig 5) and remove the two 5/16" bolts (Item 4, Fig 4).
13. Remove the pump assembly with the mounting bracket still attached to the pump.
14. Remove the four bolts on the bottom of the mounting bracket and slide the pump out from the bracket.
15. Remove the remaining four bolts that attach the manifold and the mounting bracket. (Item 6, Fig 5)
16. Insert the manifold insulator spacer (Item 5) between the manifold and the mounting bracket as shown in Fig 6.

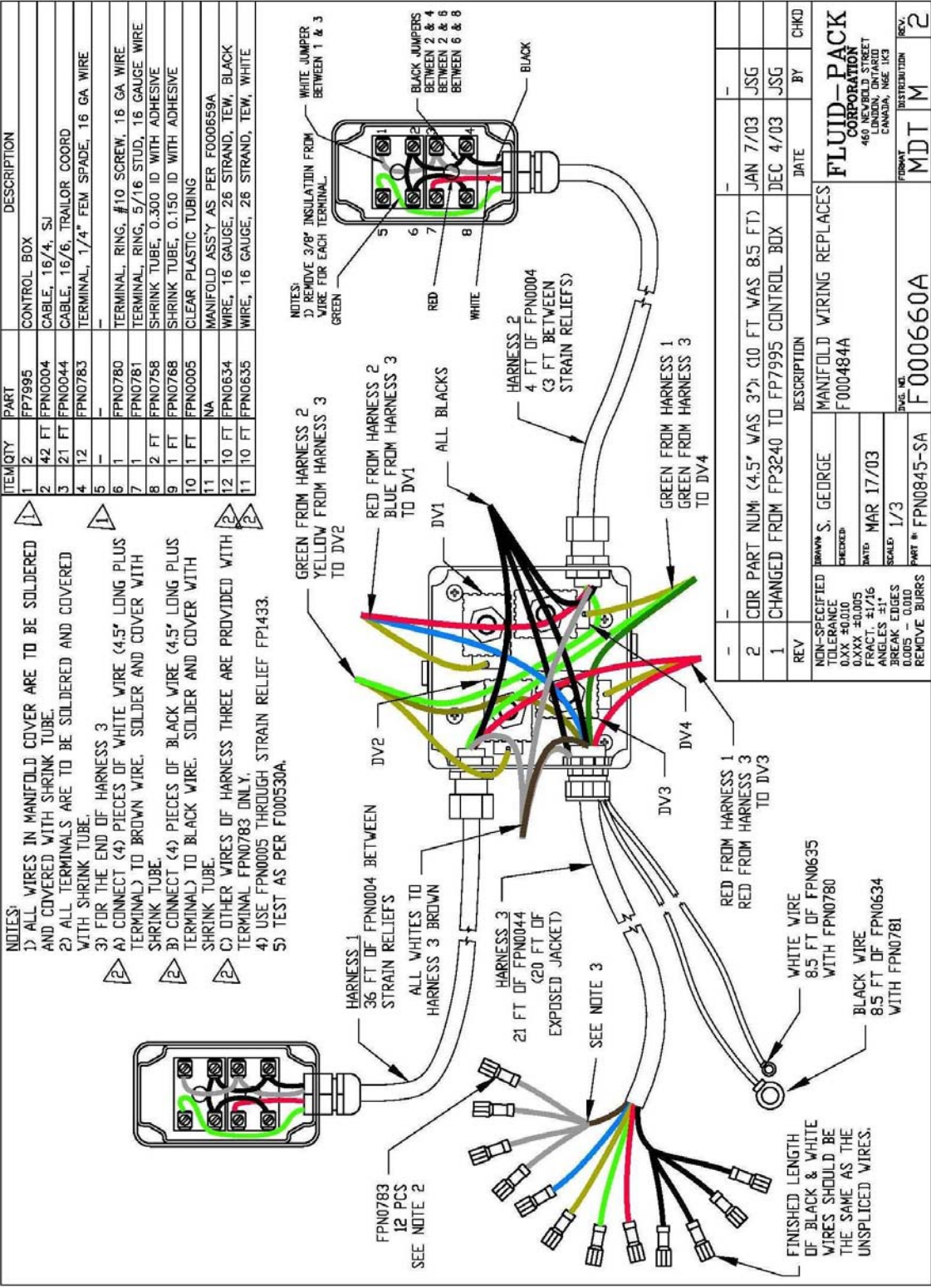


17. Fasten the manifold, spacer, and mounting bracket together with four ¼” x 1” long bolts (Items 6, 8, 9, Fig 6) and four ¼” washers and four ¼” locking washers.
18. Orient the steel pump manifold box and use the same screws that were already provided in the old manifold box to fasten the steel box to the manifold body.
19. Fasten the pump back on to the mounting bracket using the same hardware that was fastened to the pump originally.
20. Use Fig 3 as a guide to mount the pump assembly bracket with the pump assembly back to the designated position. Use the same hardware to re-mount the mounting bracket.
21. Attach the marked hydraulic hoses to the pump. (Use Fig 4 as a reference)
22. Attach the wiring harnesses and coils using Fig 2 as a guide for orientation and location.
23. Re-connect the two wire connectors to the side of the pump.
24. Solder the wires as they were before the installation using Fig 2 as a reference and encase with heat shrink wrap.
25. Fasten the coils with the nuts that were originally used.
26. Ensure all wires are soldered, heat shrink sealed, enclosed in protective cable loom and secured with tie-wraps.
27. Fasten the top plate (Item 3) with the four ¼” x ¾” bolts, ¼” washers, and ¼” locking washers previously used to connect the manifold to the support bracket as shown in Fig 6.
28. Affix the supplied railgear operation decals in a suitable location adjacent to the front and rear control boxes.



**Fig 1**





**Fig 2**



FOR REFERENCE ONLY

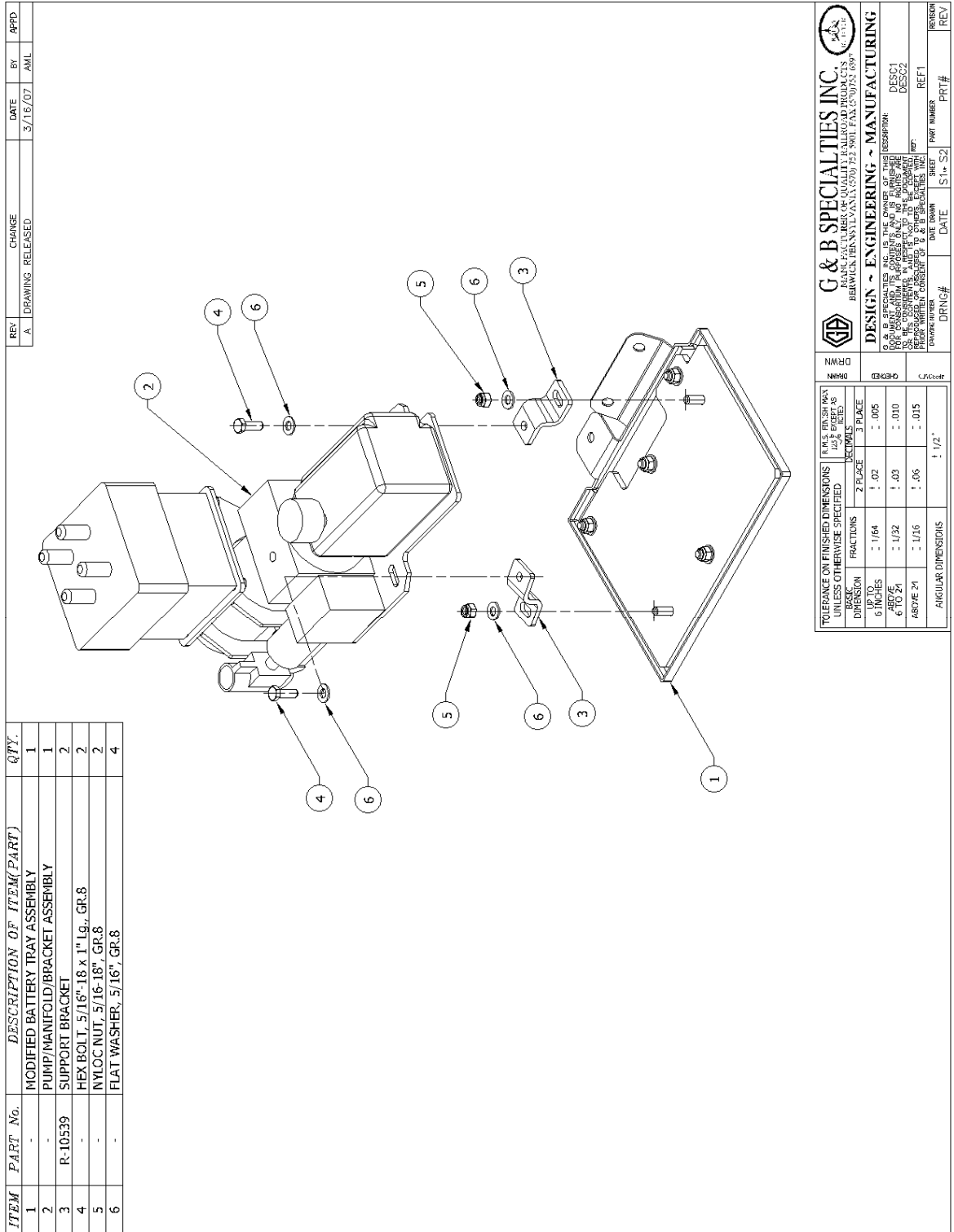
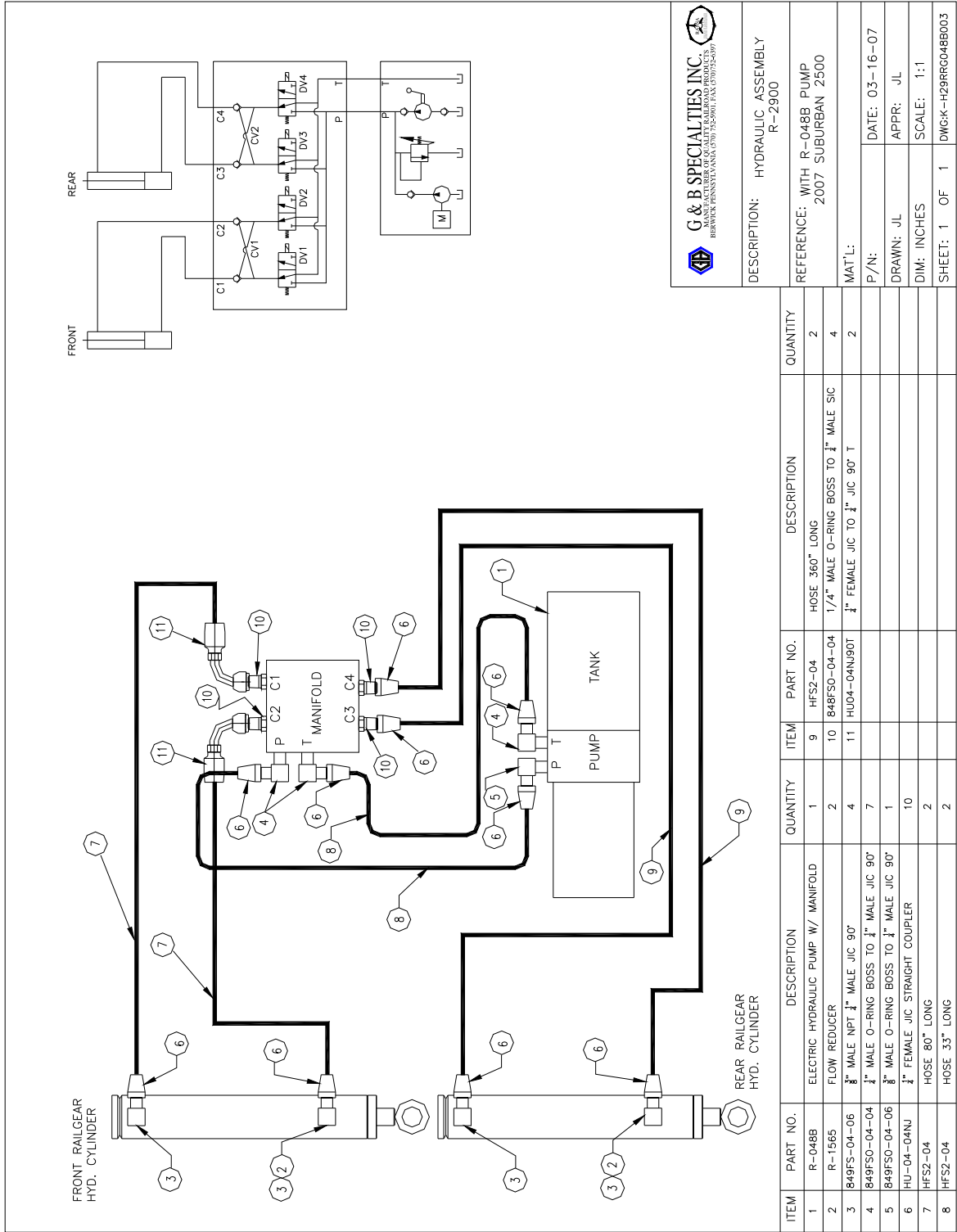


Fig 3



**G & B SPECIALTIES INC.**  
 BERWICK, PENNSYLVANIA (717) 752-5901 FAX (717) 752-6397

DESCRIPTION: HYDRAULIC ASSEMBLY R-2900  
 REFERENCE: WITH R-048B PUMP 2007 SUBURBAN 2500  
 MAT'L:  
 P/N:  
 DATE: 03-16-07  
 DRAWN: JL APPR: JL  
 DIM: INCHES SCALE: 1:1  
 SHEET: 1 OF 1 DWG#-H29RRG048B003

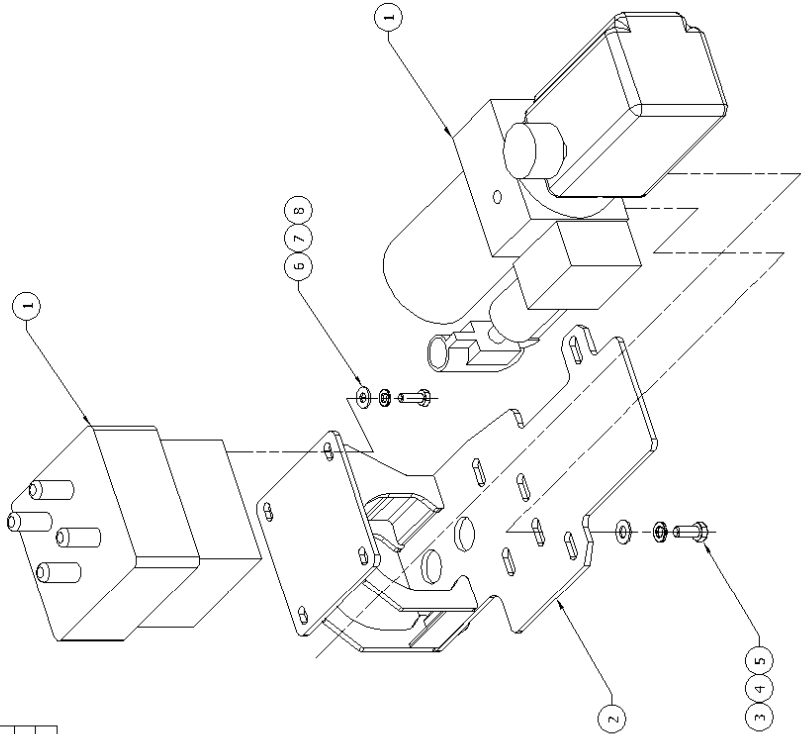
**Fig 4**





REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	3/16/07	AML	

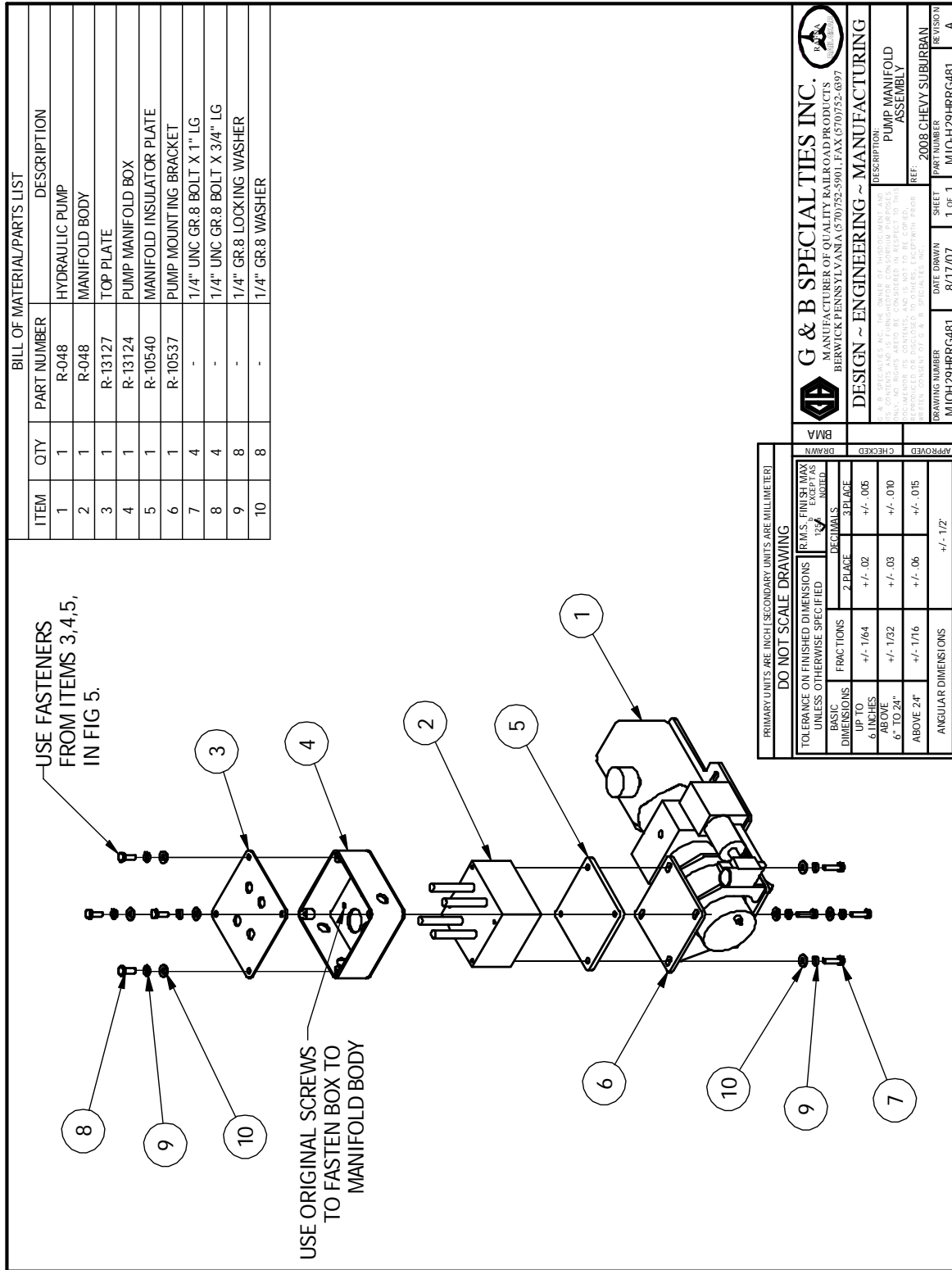
ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY.
1	R-048	HYDRAULIC PUMP & MANIFOLD	1
2	R-10537	PUMP MOUNTING BRACKET	1
3	-	HEX BOLT, 5/16" x 3/4" Lg., GR.8	4
4	-	LOCK WASHER, 5/16", GR.8	4
5	-	FLAT WASHER, 5/16", GR.8	4
6	-	HEX BOLT, 1/4" x 3/4" Lg., GR.8	4
7	-	LOCK WASHER, 1/4", GR.8	4
8	-	FLAT WASHER, 1/4", GR.8	4



NOTES:  
1. IDENTICAL FASTENERS FOR PUMP AND MANIFOLD ARE NOT SHOWN FOR CLARITY.

		<b>G &amp; B SPECIALTIES INC.</b> MANUFACTURING QUALITY ASSURED PRODUCTS BERWICK, PENNSYLVANIA (570) 752-5901 FAX (570) 752-6397	
<b>DESIGN ~ ENGINEERING ~ MANUFACTURING</b>		DRAWING NO. C-103040 C.P. Code	
TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED SURFACE FINISH PER 12.9 & 12.13 DIMENSION 6 INCHES - 1/64 ABOVE 6 TO 24 - 1/32 ABOVE 24 - 1/16 ANGULAR DIMENSIONS - 1/2°		INSPECTION: DESC01 REF: REF1 PART NUMBER: S 14 S2 DATE: 3/16/07 PRT#:	

**Fig 5**



BILL OF MATERIAL/PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	HYDRAULIC PUMP
2	1	MANIFOLD BODY
3	1	TOP PLATE
4	1	PUMP MANIFOLD BOX
5	1	MANIFOLD INSULATOR PLATE
6	1	PUMP MOUNTING BRACKET
7	4	1/4" UNC GR.8 BOLT X 1" LG
8	4	1/4" UNC GR.8 BOLT X 3/4" LG
9	8	1/4" GR.8 LOCKING WASHER
10	8	1/4" GR.8 WASHER

**DO NOT SCALE DRAWING**

PRIMARY UNITS ARE INCH (SECONDARY UNITS ARE MILLIMETER)

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED	R.M.S. FINISH MAX DEVIATION UNLESS OTHERWISE SPECIFIED	DECIMALS	FRACTIONS	UP TO 6 INCHES	ABOVE 6" TO 24"	ABOVE 24"	ANGULAR DIMENSIONS
		2 PLACE	3 PLACE	+/- .02	+/- .005	+/- .010	+/- .015
				+/- 1/64	+/- .03	+/- .06	+/- 1/2°
				+/- 1/32			
				+/- .06			
				+/- 1/16			

**G & B SPECIALTIES INC.**  
MANUFACTURER OF QUALITY RAILROAD PRODUCTS  
BERWICK, PENNSYLVANIA (717) 752-5901 FAX (717) 752-6697

**DESIGN ~ ENGINEERING ~ MANUFACTURING**

DESCRIPTION: PUMP MANIFOLD ASSEMBLY  
REF: 2008 CHEVY SUBURBAN

DRAWING NUMBER	SHEET	DATE DRAWN	REVISION
MIOH29HRRG481	1 OF 1	8/17/07	MIO-H29HRRG481 A

**Fig 6**