

## Installation, Operations & Service Manual R-1130 Cobra Front Brake Kit W/ 12" Wheels

### 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 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.
- Beware of all pinch points on the railgear and keep all parts of the body clear.
- Always disconnect the vehicle's battery when welding on the vehicle or railgear in order to protect the vehicle's electrical system.

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Kit Components

K-R13BXVX012 AIR BRAKE KIT, FRONT (R1130 W/ 12" WHEELS)		
Part #	Description	Qty
R-11076A	Operating Valve Assembly	1
R-19035	Air Brake Hose	1
R-19039	Air Brake Hose	1
R-19033	90 Degree Elbow, Male Flare X 3/8 NPT	2
R-32346D	Brake Assembly, Drivers Side	1
R-32346P	Brake Assembly, Passengers Side	1
R-32352D	Rail Sweep Assembly, Drivers Side	1
R-32352P	Rail Sweep Assembly, Passengers Side	1
R-32052C	MTG BLOCK	2
R-990KIT-396	MTG HARDWARE KIT	1
K-R11BXVX002B	Air Brake Control Kit	1

**1.0**
**General Information**

An Air Toggle Valve will need to be installed in the instrument panel of the vehicle. This valve disconnects the railgear brake system when not in use.

On the Front Valve plate assembly and rear frame bracket, a relay valve will be located. The control line feeding this relay valve comes from the control valve described above. The supply line to this relay valve comes from the check valve screwed into the air reservoir. There is a ball valve and a pressure regulator inline between the check valve and relay valve. The ball valve will disconnect the railgear brake system from the vehicle air system regardless of the position of the air toggle valve. The pressure regulator will allow adjustment of the front to rear bias, so that both axles will brake evenly and not allow one axle to lock and slide.

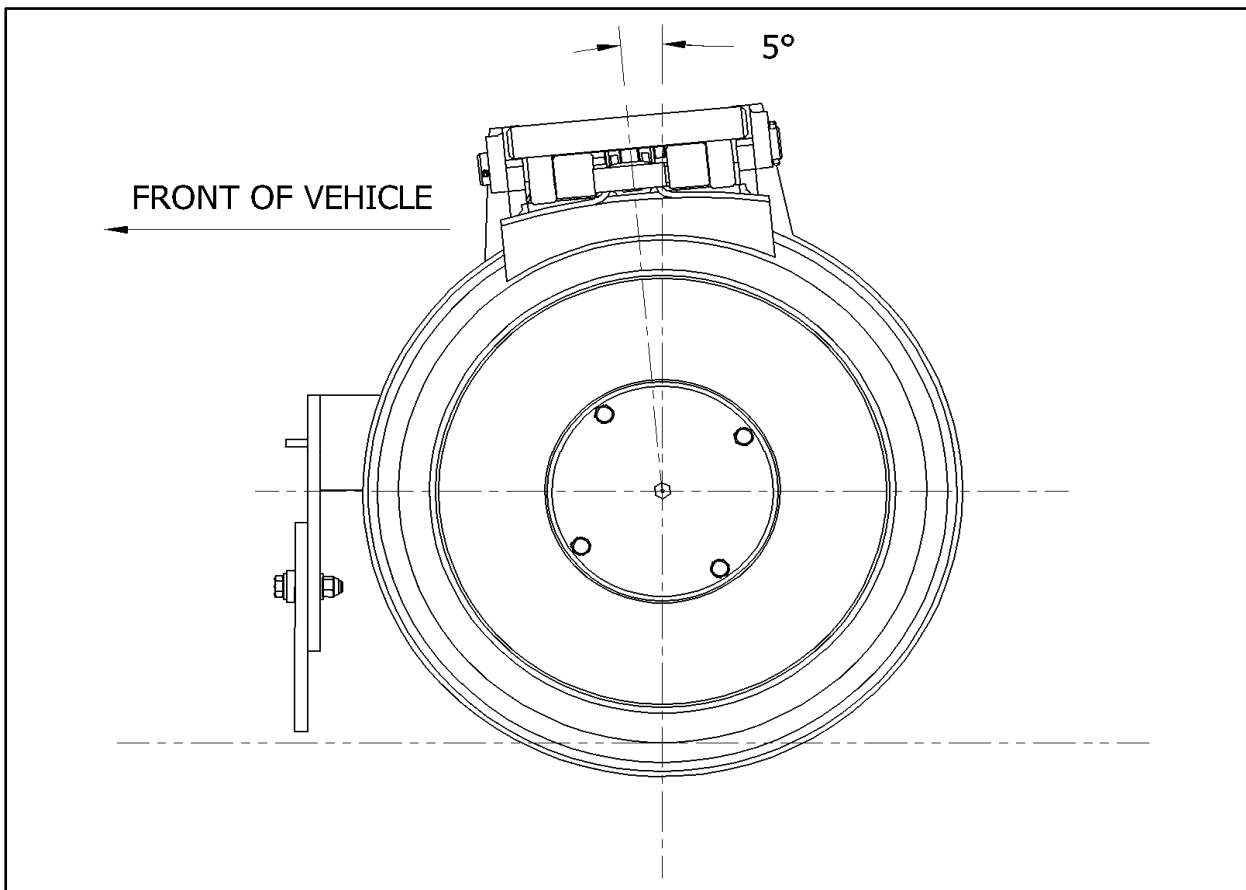
The railgear Cobra Brake Assembly brake chambers are connected to the delivery ports on the railgear air relay valve.

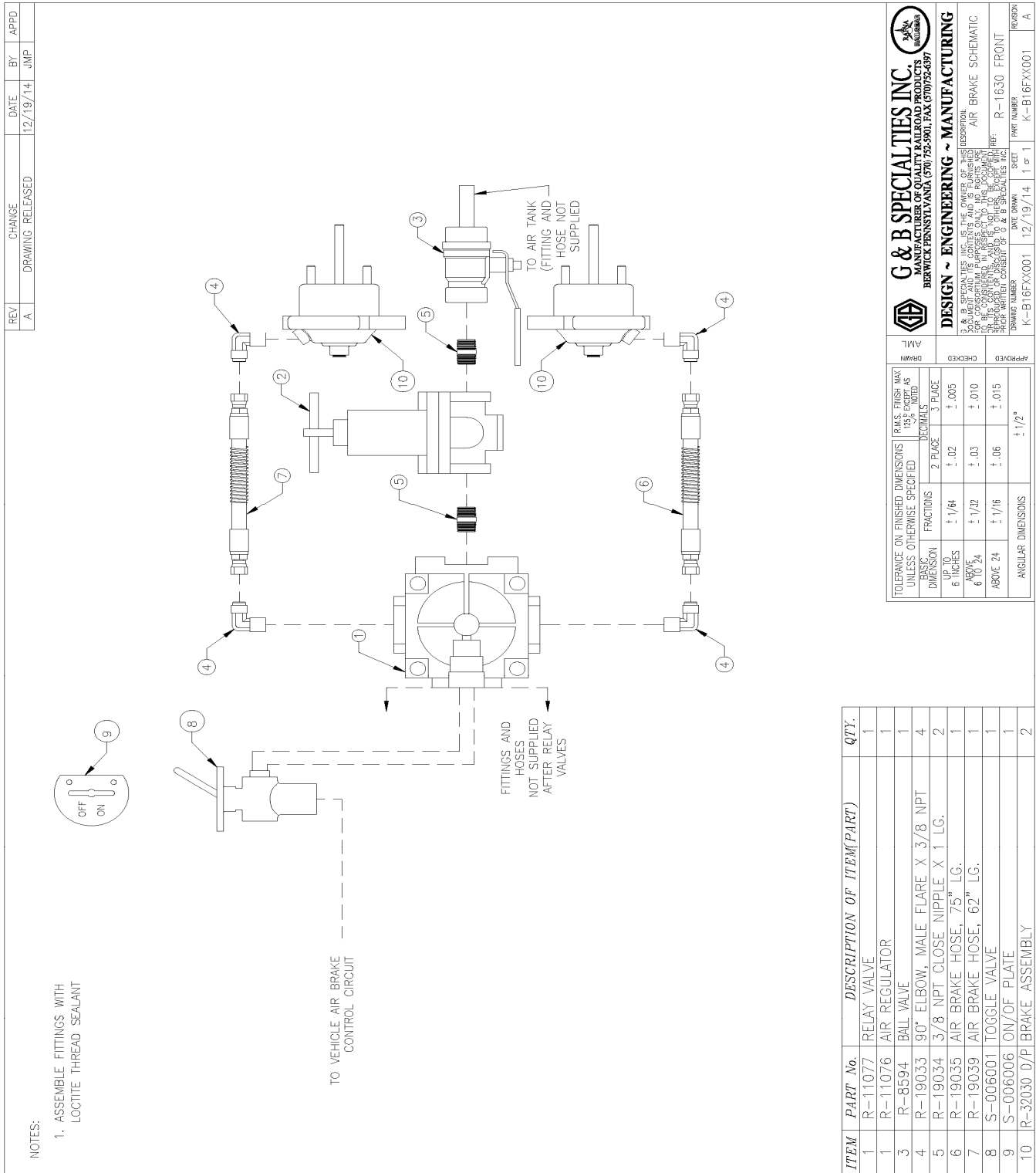
Install airlines and valves as shown in Air Brake Schematic. Make certain that the front air brake pressure regulator is set to 75 PSI.

It is the responsibility of the installer to supply the required air to the in-cab control valve and from the in-cab control valve to the relay valve. The hoses, fittings etc... required for this connection are not included in this kit.

**Note: The brakes should not be installed until the front railgear unit has been installed.**

1. Clean and prep the axle stubs, in the area indicated, for welding.
2. Place brake assembly on stub axle and adjust as shown. Tack weld mounting block to stub axle.
3. Remove brake assembly from mounting block. Weld complete, the mounting block to the stub axle.
4. Re assemble brake housing to mounting block.
5. Repeat steps 1 thru 4 for other brake assembly.
6. Proceed to plumb brakes as shown.
7. Adjust and test brakes as outlined.





Front Brake Pneumatic Schematic

### 3.0 Brake Shoe Adjustment

1. There is a jam nut and clevis located on the threaded rod attached to the air brake chamber. This is used to adjust the gap between the wheel and brake shoe.

#### 3.1.1 Brake Testing

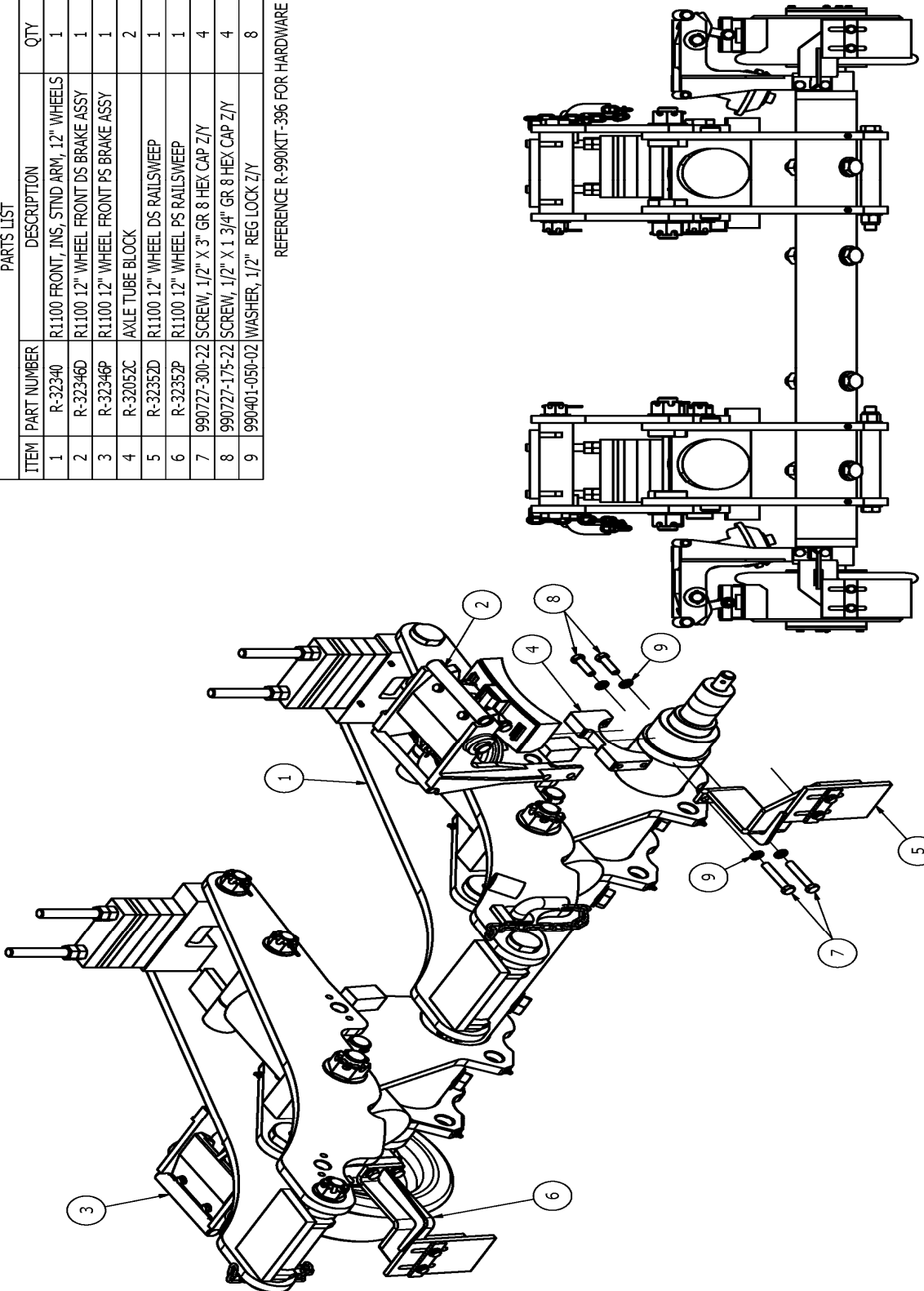
Operate the vehicle on a test track. With the air toggle valve in the “on” position and the ball valves open, check that:

1. When the vehicle brake pedal is depressed, the railgear brake clamps the rail wheel enough to slow its rotation but not enough to stop its rotation. The rail wheels should not be allowed to lock up.
2. That the brakes release properly when the pedal is released.

**If the brakes do not function properly, contact a service representative at G&B Specialties.**

PARTS LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	R-32340	R1100 FRONT, INS, STND ARM, 12" WHEELS	1
2	R-32346D	R1100 12" WHEEL FRONT DS BRAKE ASSY	1
3	R-32346P	R1100 12" WHEEL FRONT PS BRAKE ASSY	1
4	R-32052C	AXLE TUBE BLOCK	2
5	R-32352D	R1100 12" WHEEL DS RAILSWEEP	1
6	R-32352P	R1100 12" WHEEL PS RAILSWEEP	1
7	990727-300-22	SCREW, 1/2" X 3" GR 8 HEX CAP Z/Y	4
8	990727-175-22	SCREW, 1/2" X 1 3/4" GR 8 HEX CAP Z/Y	4
9	990401-050-02	WASHER, 1/2" REG LOCK Z/Y	8

REFERENCE R-990KIT-396 FOR HARDWARE



REV/DESCRIPTION OF CHANGES	DATE	BY	APPRVD	ECON #	DRWN
A REVISION A RELEASED	12/11/20	SMM	JMP		SMM

DRWN	CHECKED	APPROVED	SHEET DRAWING NUMBER	DATE DRAWN	PART NUMBER	REVISION
SMM	JMP	JMP	1	12/11/20	K-R13BXVX012	A

**NOTES**

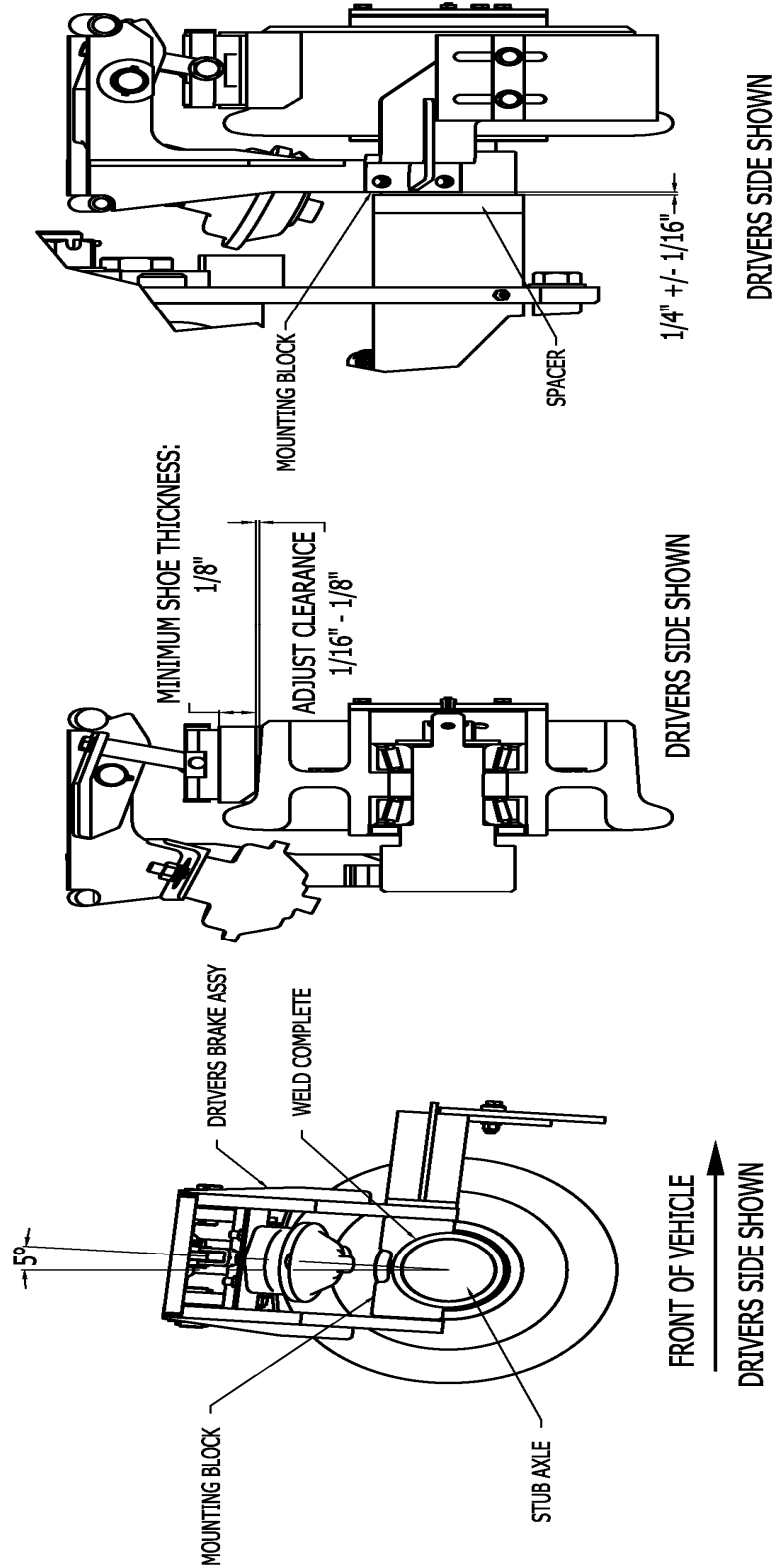
- DRIVER'S SIDE WHEEL REMOVED FOR CLARITY
- ITEM 4 TO BE WELDED SO BRAKE SHOE STTS COMPLETE ON WHEEL SURFACE

ALL WELDS TO CONFORM TO AWS D1.1

**G & B SPECIALTIES INC.**  
MANUFACTURER OF QUALITY RAILROAD PRODUCTS  
BERWICK, PENNSYLVANIA (570) 752-5901, FAX (570) 752-6397

**DESIGN - ENGINEERING - MANUFACTURING**

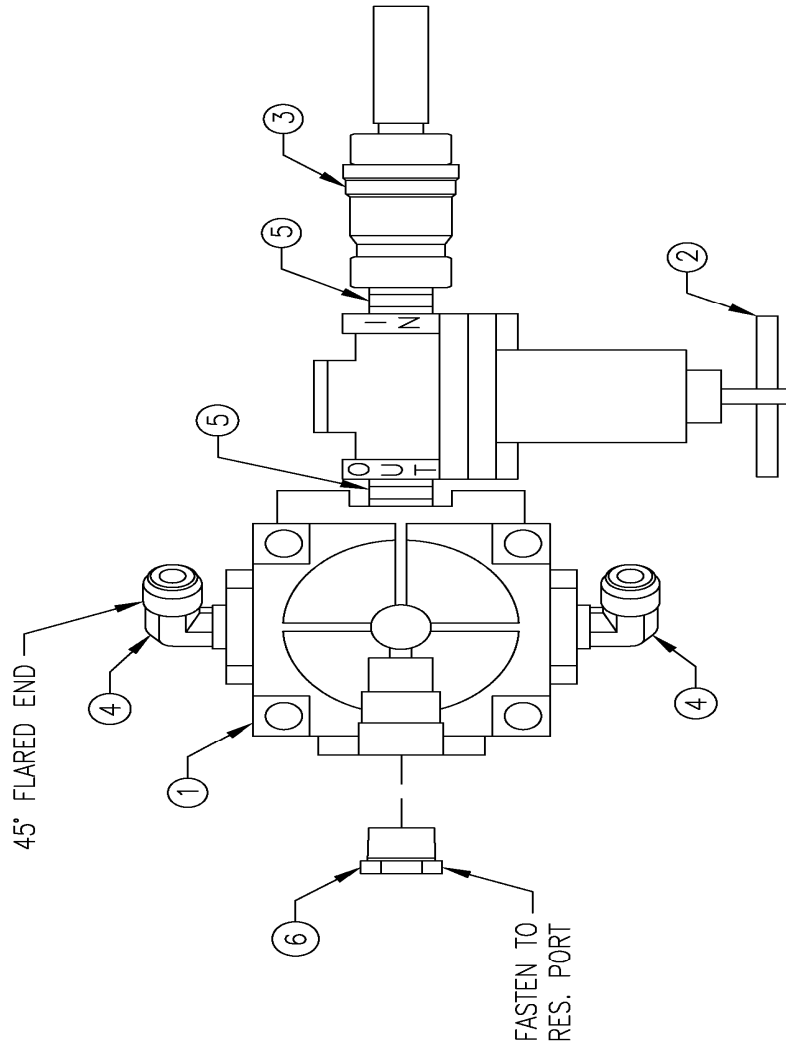
R1100 W/12" WHL FRNT BRAKE KIT





### 4.0 Parts

ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY.
1	R-11077	RELAY VALVE	1
2	R-11076	AIR BRAKE VALVE	1
3	R-8594	BALL VALVE	1
4	R-19033	90° ELBOW, MALE FLARE X 3/8 NPT	2
5	R-19034	3/8 NPT CLOSE NIPPLE X 1 LG.	2
6	R-19037	PLUG, 1/2 NPT	1



- NOTES:
- ASSEMBLE FITTINGS WITH LOCTITE THREAD SEALANT
  - ITEM 4 TO BE ANGLED 45° FROM CURRENT VIEW SHOWN
  - PRESET AND LABEL/TAG REGULATOR TO THE FOLLOWING:  
FRONT: 75 PSI  
REAR: 30 PSI

REV	DESCRIPTION OF CHANGES	DATE	BY	APPRVD	ECN #
A	REVISION A RELEASED	09/22/08	BMA	JMP	ECN-16-819
B	REVISED DRAWING	10/17/18	JEV	JMP	ECN-19-080
C	ROTATED BALL VALVE & AIR BRAKE VALVE	02/27/19	SDR	JMP	ECN-20-750
D	CORRECTED REAR PSI SETTING	12/11/20	SMMI	JMP	

APPROVED	CHECKED	DESIGNED	DRAWN
			BMA

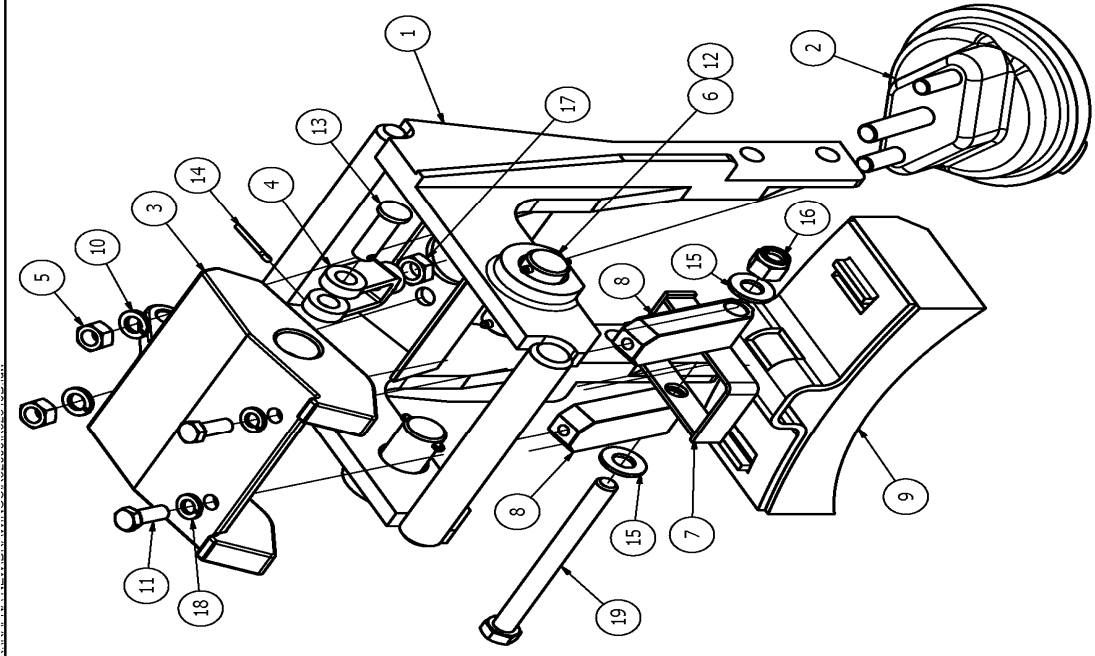
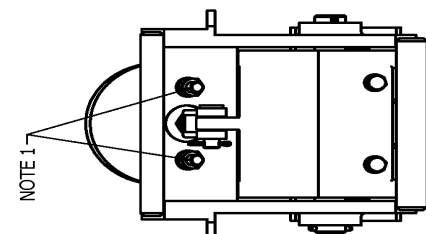
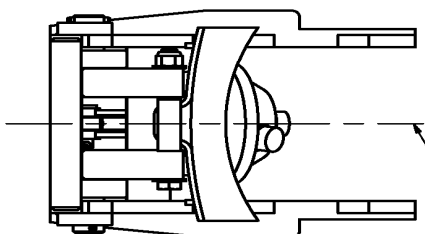
REPORT NUMBER	DATE DRAWN	PART NUMBER	REVISION
1	R11076A	09/22/08	R-11076A
			D

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PARTS LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	R-32347	BRKT ASSY	1
2	R-32029	BRAKE ACTUATOR ASSY	1
3	R-32040	ACTUATOR ARM	1
4	R-5601	CLEVIS ASSY	1
5	990331-043-02	NUT, 7/16" Hvy HEX (INCLD W/ ITEM 2)	2
6	R-32027	PIVOT SHAFT	2
7	R-32035	RETAINER CLIP	1
8	R32349	RETAINER BLOCK	2
9	R-55998	BRAKE SHOE - COBRA V-265	1
10	990401-043-02	WASHER, 7/16" REG LOCK (INCLD W/ ITEM 2)	2
11	990725-100-22	SCREW, 3/8" X 1" GR 8 HEX CAP Z/Y	2
12	990556-137-70	PIN, SLOTTED SPRING 3/16" X 1 3/8"	4
13	R-20143	CLEVIS PIN (INCLD WITH ITEM 4)	1
14	990506-100-02	COTTER PIN, 1/8" X 1" Z/Y (INCLD W/ ITEM 4)	1
15	990600-050-002	WASHER, 1/2" SAE FLAT Z/Y	2
16	990316-050-22	NUT, 1/2" GR 8 HEX NYLOCK Z/Y	1
17	990311-050-02F	NUT, 1/2" UNF REG HEX (INCLD W/ ITEM 2)	1
18	990401-037-02	WASHER, 3/8" REG LOCK Z/Y	1
19	990727-550-22	SCREW, 0.500 X 5.500 GR 8 HEX CAP Z/Y	1

REFERENCE HARDWARE KIT R-990KIT-383

NOTE 1

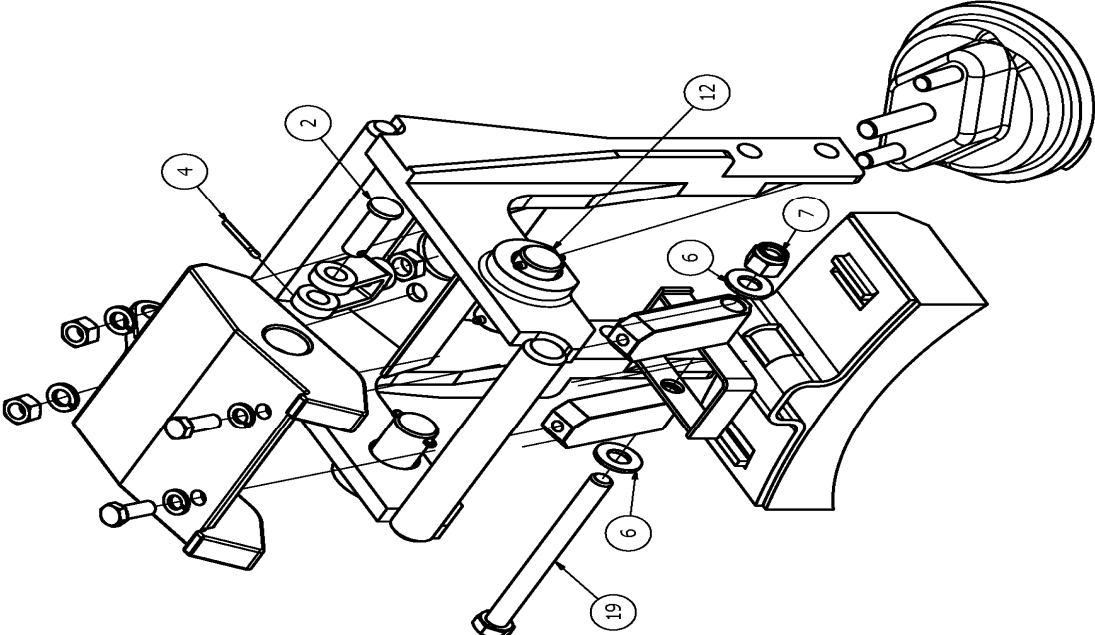
NOTE 2

REV/DESCRIPTION OF CHANGES	DATE	BY	APPRVD	ECN #
A REVISION A RELEASED	11/20/20	SMM	JMP	

G & B SPECIALTIES INC.	G & B SPECIALTIES INC.	DESIGN - ENGINEERING - MANUFACTURING	R1100 12"
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BERWICK, PENNSYLVANIA (570) 752-5901, FAX (570) 752-6397	BERWICK, PENNSYLVANIA (570) 752-5901, FAX (570) 752-6397		DS BRK ASSY
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SHEET/DRAWING NUMBER	1 R32346D	PART NUMBER	11/20/20 R-32346D
APPROVED	JMP	CHECKED	JMP
DATE	11/20/20	BY	SMM
DATE	11/20/20	BY	JMP

NOTES  
 1. COAT THREADS WITH RUST PREVENTATIVE  
 2. ORIENT PORT OF BRAKE ACTUATOR APPROX. 45° OFF CENTERLINE

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NOTE 1 -

NOTE 2 -

REFERENCE HARDWARE KIT R-990KIT-383

REV/DESCRIPTION OF CHANGES  
 A REVISION A RELEASED

DATE 11/20/20

BY SWM

APPRVD JMP

ECN #

DESMN

QTY

DATE FORW

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REVISOR

REV

1 R32346P

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R1100 12" WHEEL FRNT PS BRK ASSY

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SHEET NUMBER 1

DATE FORW

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REVISOR

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**NOTES**

1. COAT THREADS WITH RUST PREVENTATIVE
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