

## Installation, Operations & Service Manual R-1130 Cobra Front Brake Kit

### Installation Safety Precautions

If any installation problems are encountered, please call G&B Specialties for technical assistance before continuing with the installation process.



- 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-B13FXX001 AIR BRAKE KIT, FRONT (R1130)		
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-32030D	Brake Assembly, Drivers Side	1
R-32030P	Brake Assembly, Passengers Side	1
R-32075D	Rail Sweep Assembly, Drivers Side	1
R-32075P	Rail Sweep Assembly, Passengers Side	1
R-32078	SPACER	2
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.

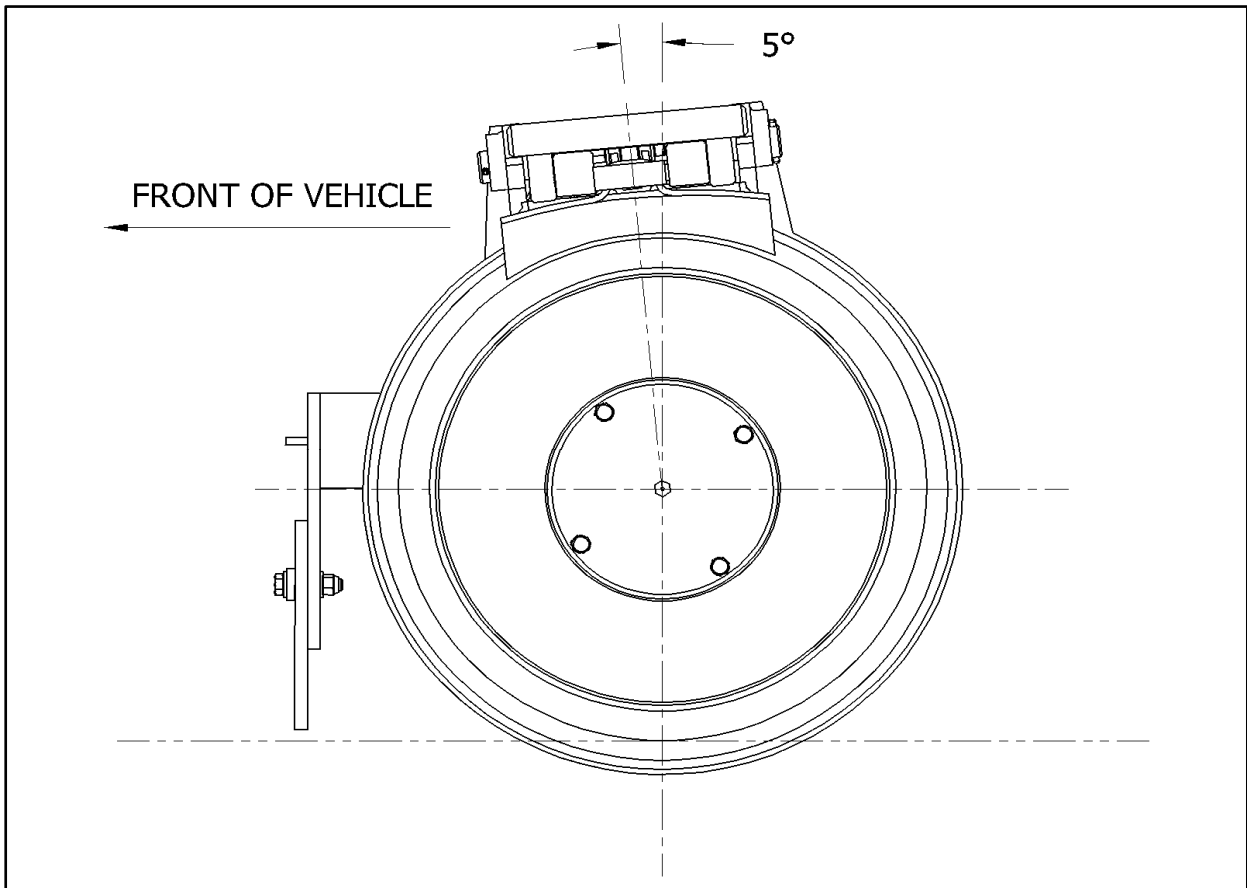
The railgear Cobra Brake Assembly brake chambers are connected to the delivery ports on the railgear air relay valve.

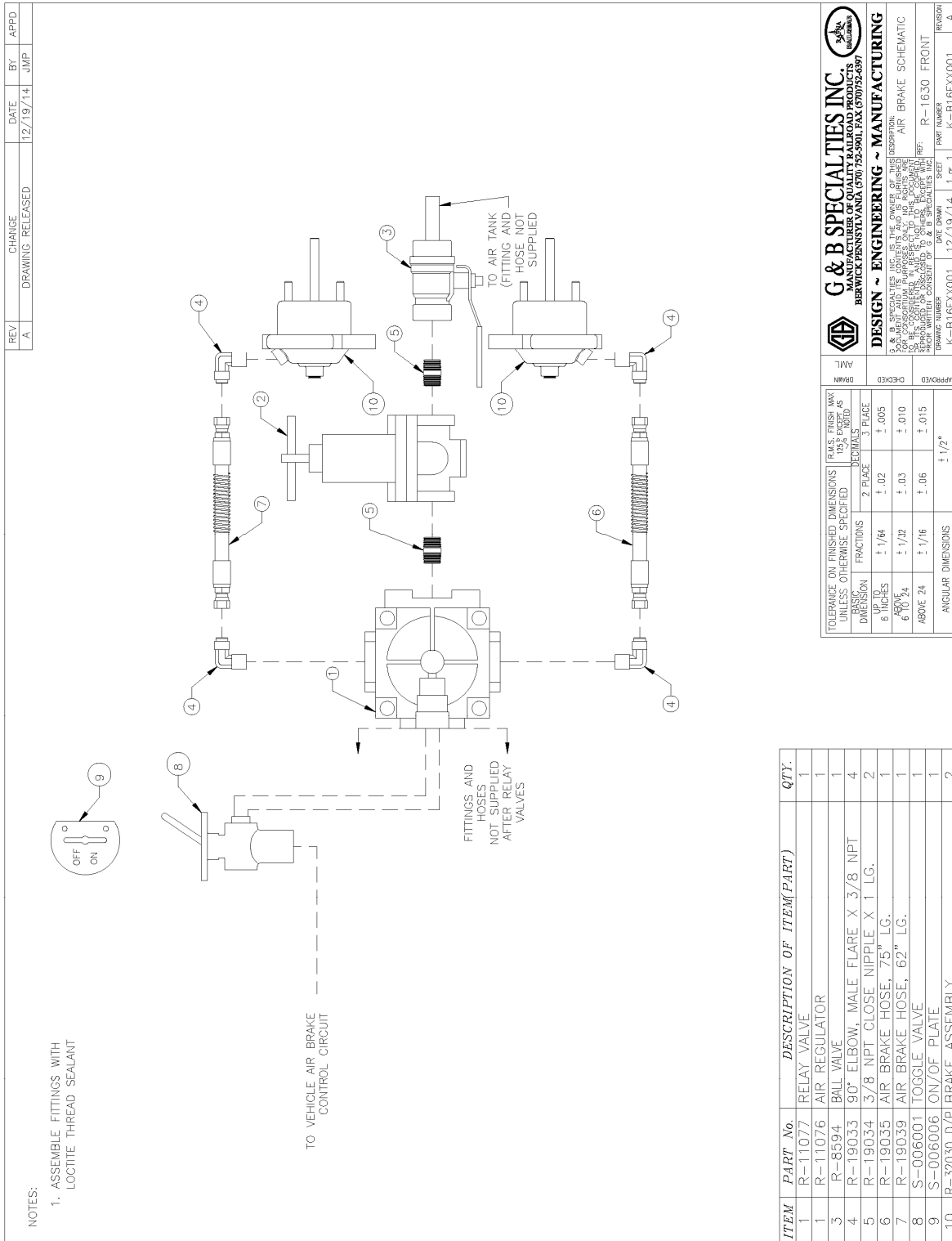
Install airlines and valves as shown in Air Brake Schematic. Make certain that the front air brake pressure regulator is set to 75 PSI.

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

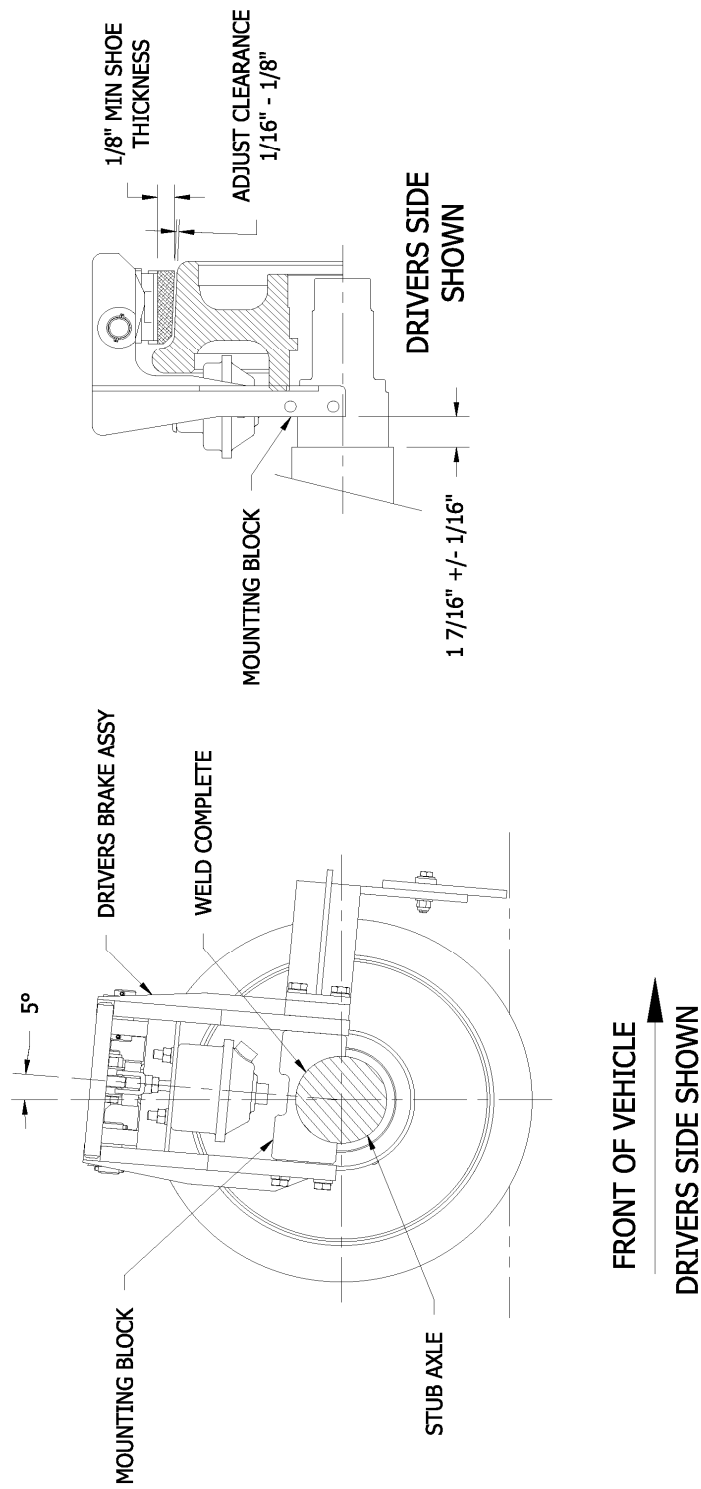
1. There is a jam nut and clevis located on the threaded rod attached to the air brake chamber. This is used to adjust the gap between the wheel and brake shoe.

#### 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:

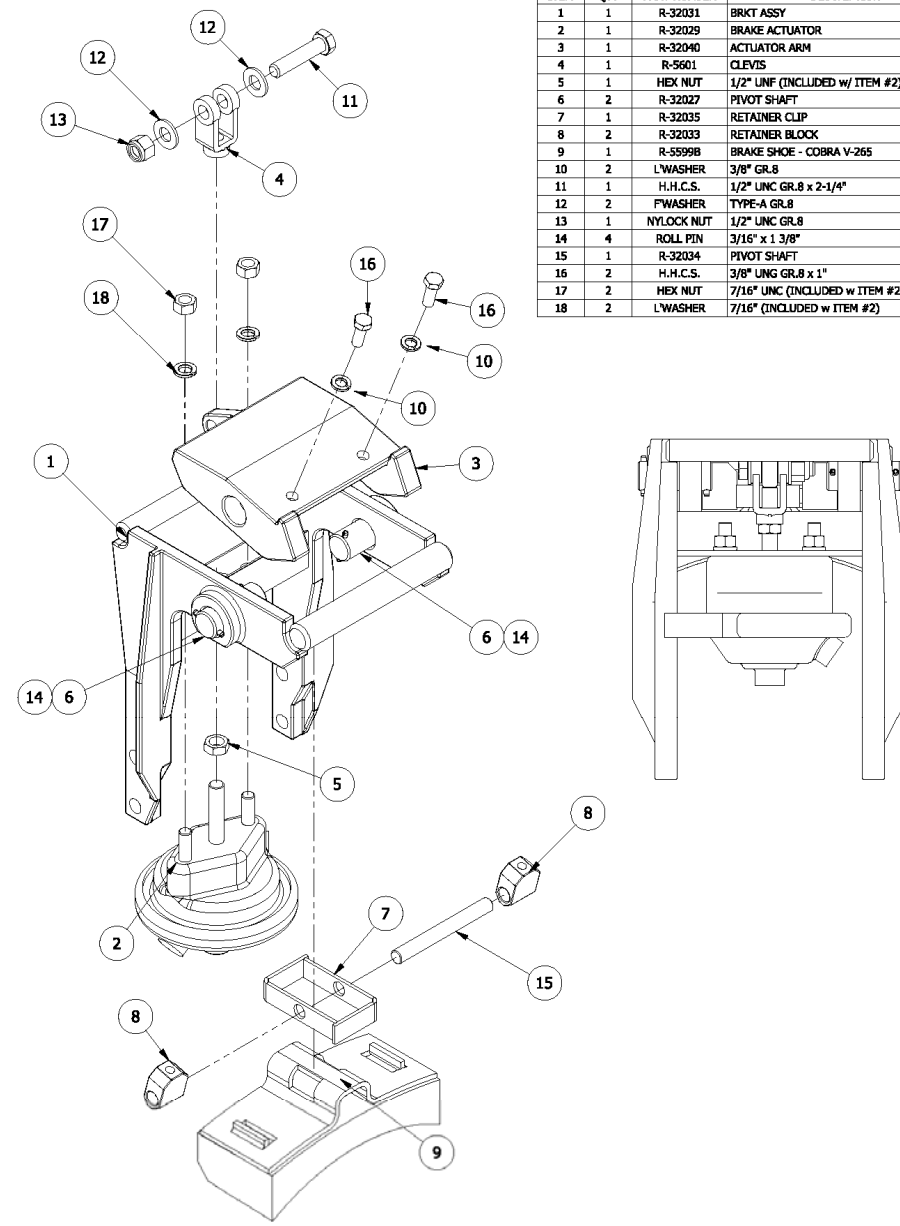
1. When the vehicle brake pedal is depressed, the railgear brake clamps the rail wheel enough to slow its rotation but not enough to stop its rotation. The rail wheels should not be allowed to lock up.
2. That the brakes release properly when the pedal is released.

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



## 4.0

## Parts



BILL OF MATERIAL/PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	R-32031	BRKT ASSY
2	1	R-32029	BRAKE ACTUATOR
3	1	R-32040	ACTUATOR ARM
4	1	R-5601	CLEVIS
5	1	HEX NUT	1/2" UNF (INCLUDED w/ ITEM #2)
6	2	R-32027	PIVOT SHAFT
7	1	R-32035	RETAINER CLIP
8	2	R-32033	RETAINER BLOCK
9	1	R-5599B	BRAKE SHOE - COBRA V-265
10	2	L'WASHER	3/8" GR.8
11	1	H.H.C.S.	1/2" UNC GR.8 x 2-1/4"
12	2	F'WASHER	TYPE-A GR.8
13	1	NYLOCK NUT	1/2" UNC GR.8
14	4	ROLL PIN	3/16" x 1 3/8"
15	1	R-32034	PIVOT SHAFT
16	2	H.H.C.S.	3/8" UNC GR.8 x 1"
17	2	HEX NUT	7/16" UNC (INCLUDED w ITEM #2)
18	2	L'WASHER	7/16" (INCLUDED w ITEM #2)

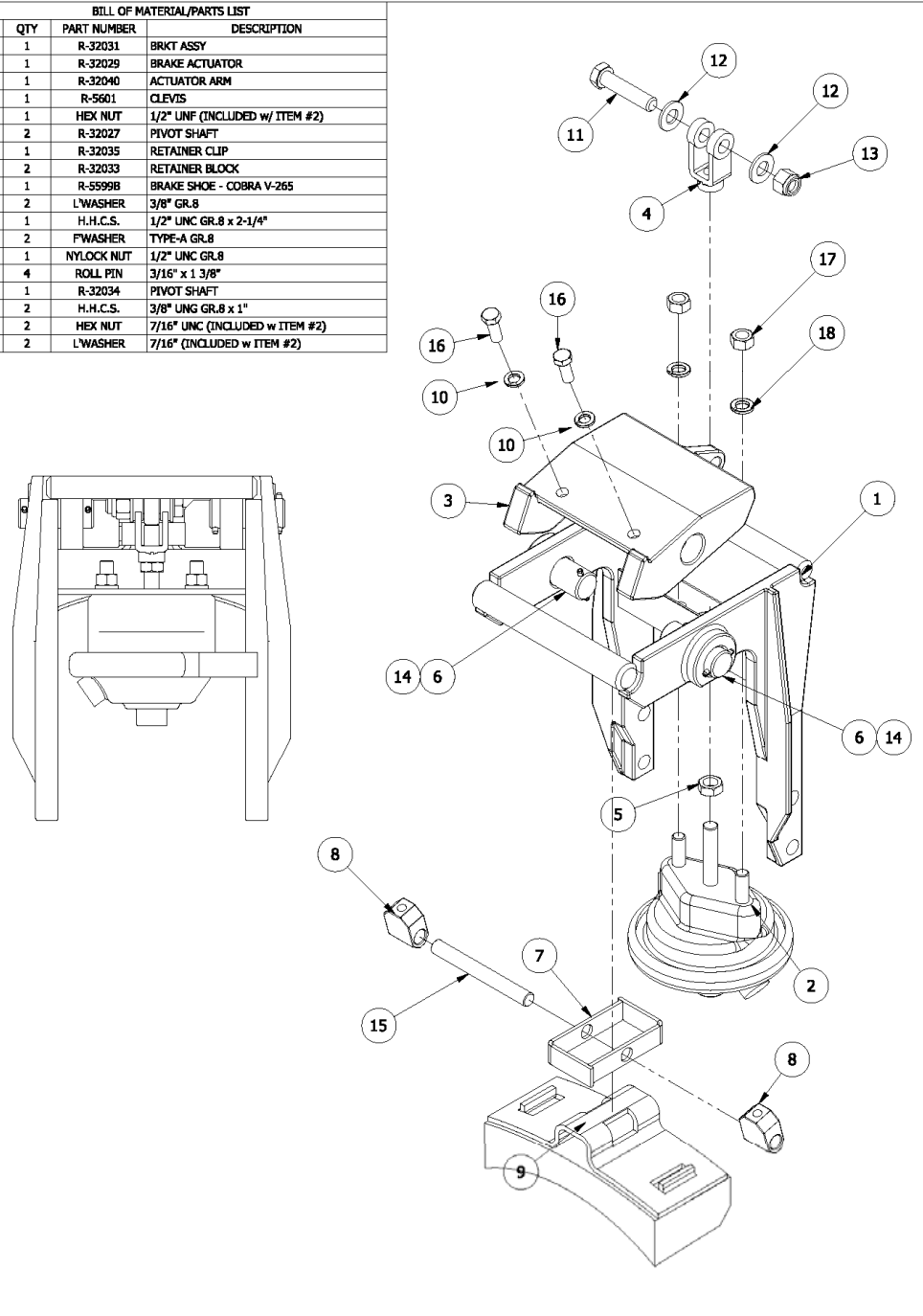
TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED			
DIMENSIONS	FRACTIONS	DECIMALS	
		2 PLACE	3 PLACE
UP TO 6 INCHES	+/- .124	+/- .02	+/- .005
ABOVE 6" TO 24"	+/- .152	+/- .03	+/- .010
ABOVE 24"	+/- .176	+/- .06	+/- .015
ANGULAR DIMENSIONS		+/- 1/2°	

DRAWING RELEASED		7/24/14	AML	JL
REV	CHANGE	DATE	BY	APPO

G & B SPECIALTIES INC.  
 MANUFACTURER OF QUALITY RAILROAD PRODUCTS  
 BERWICK, PENNSYLVANIA (610) 752-5901, FAX (610) 752-6397  
 DESIGN - ENGINEERING - MANUFACTURING  
 BRAKE ASSY  
 DRIVERS SIDE  
 DRAWING NUMBER: R320300 DATE DRAWN: 7/24/14 SHEET: 1 OF 1 PART NUMBER: R-320300 REVISION: A



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PRIMARY UNITS ARE INCH (SECONDARY UNITS ARE MILLIMETER)		A DRAWING RELEASED		7/24/14	AML	JL
DO NOT SCALE DRAWING		REV CHANGE		DATE	BY	APPRO
TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED		R.U.S. FINISH MAX EXCEPT AS NOTED		REVISION		
BASIC DIMENSIONS	FRACTIONS	2 PLACE DECIMALS	3 PLACE DECIMALS	G & B SPECIALTIES INC.		
UP TO 6 INCHES	+/- 1/64	+/- .02	+/- .005	MANUFACTURER OF QUALITY RAILROAD PRODUCTS		
ABOVE 6" TO 24"	+/- 1/32	+/- .03	+/- .010	BERWICK PENNSYLVANIA (P) 717-528-4101, FAX (717) 752-6397		
ABOVE 24"	+/- 1/16	+/- .06	+/- .015	DESIGN - ENGINEERING - MANUFACTURING		
ANGULAR DIMENSIONS	+/- 1/2°			G & B SPECIALTIES INC. (DESCRIPTION) BRKE ASSY PASSENGERS SIDE		
ALL WELDS TO CONFORM TO AWS D1.1		DRAWING NUMBER R32030P		DATE DRAWN 7/24/14	SHEET 1 OF 1	PART NUMBER 1630
		DRAWN BY		DATE	BY	APPRO