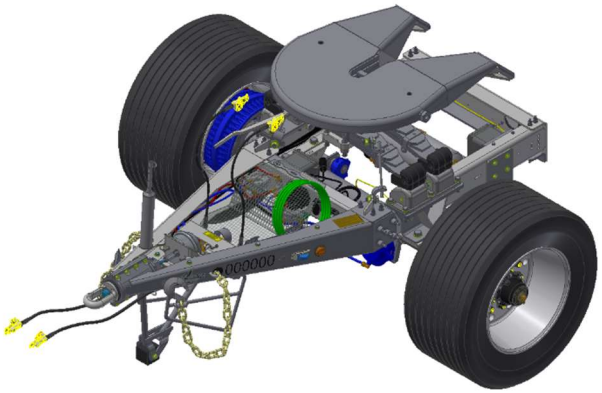
OPERATION PROCEDURES
PARTS & SERVICE MANUAL

As built for

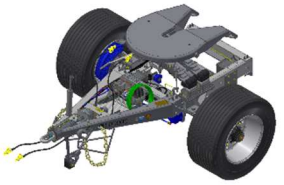
AAA COOPER



SILVER EAGLE MODEL VAST20W
PART #30144

5825 NE Skyport Way - Portland, OR 97218
(503) 281-0727 - (800) 547-6792 - (503) 335-2171 Fax
www.silvereaglemfg.com

Table of Contents



MAINTENANCE PROCEDURES

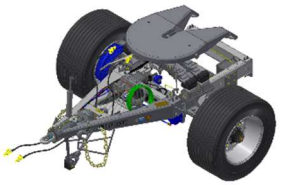
Specifications 3
Operating Silver Eagle Fifth Wheel 4
Fifth Wheel Maintenance 5
Silver Eagle Fifth Wheel – Jaw Removal ..... 6 – 7
Trip Block Spring Removal / Installation 8
Drawbar Eye Removal / Installation 9

PARTS LISTING

Master Assembly..... 10
Major Assembly..... 11
Air Assembly..... 12 – 13
Electrical Assembly..... 14

Silver Eagle Manufacturing Company
5825 NE Skyport Way
Portland, OR 97218-1249
TF PH: 800-547-6792| D PH: 503-281-0727
FX: 503-335-2171
www.silvereaglemfg.com

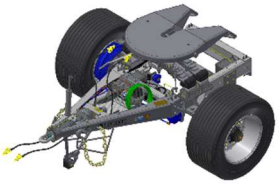
Date: 04/11/13
Quotation: A11066 REV B
VAST20W Eagle Series
Single Axle Converter Dolly, 102"

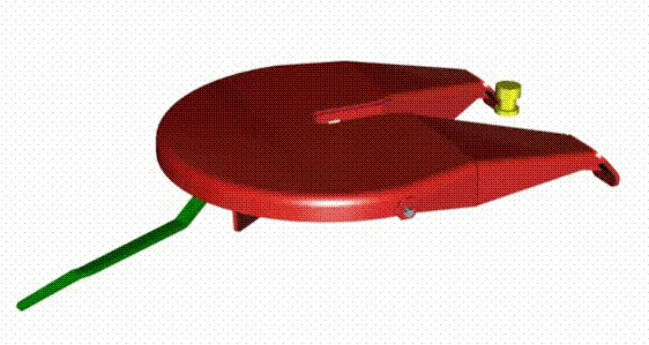


Customer: AAA Cooper Transportation
Attention: Steven Aronhalt

1 FRAME	
1-001 50,000 psi yield strength steel channel drawbar, counter-balanced Huck-bolted frame	STD
1-005 Lunette eye rubber-mounted in steel shock housing, air jam eye w/ 3/8" thick wall welded shank.	STD
1-011 Induction hardened steel eye, 2-3/8" I.D. X 1-5/8" thick with 3/8" thick wall welded shank	STD
1-034 Lunette eye height 33"	STD
1-072 Drawbar length, center of eye to centerline of axle 74"	STD
1-220 Two hinged drawbar lifting Power Zone handles	STD
1-348 Unladen 5th wheel height 47"	STD
1-360 Steel stiff leg with replaceable rubber foot pad	STD
1-370 Frame-mounted watertight lexan document holder	STD
2 FIFTH WHEEL	
2-020 36" fabricated steel table 5th wheel w/ cast steel center, mounted directly above axle, with travel limit cables--ROADSIDE (LH) FRONT PULL HANDLE	STD
3 AXLE	
3-003 Direct drawbar pull on cambered axle w/ 1/16" toe-in– 77-1/2" track for 102" wide trailer	STD
3-115 Meritor TP-4671 Axle w/ 16-1/2" X 7" s-cam "Q" Plus Brakes w/ non-asbestos linings	STD
3-211 Meritor 6" Automatic Slack Adjusters and 30 sq in service chambers.	STD
3-XXX 10-stud cast steel hubs & Webb Vortex drums for dual hub pilot mount steel disc wheels	STD
3-416 Stemco "Guardian" oil seals and hubcaps	STD
3-510 SAE 80W-90 wheel bearing lubricant	STD
3-512 Meritor PSI Tire Inflation System	$495
4 SUSPENSION	
4-005 Spring eyes mounted in shock-absorbing rubber boots	STD
4-010 4" wide 7-leaf (plus rebound leaf) 2-stage transverse-mounted leaf springs, 20,000 lb capacity	STD
5 PAINT	
5-001 Steel grit blast, 8-stage pretreatment, epoxy primer (E-Coat) for u-bolts & 5th wheel, air reservoir and axle	STD
5-002 Hot Dipped Galvanizing as separate frame pieces prior to assembly	STD
6 SAFETY CHAINS	
6-010 Two 1/2" X 32" grade 70 chains w/ 5 ton hooks	STD
7 AIR SYSTEM	
7-110 Meritor/WABCO 2S-1M anti-lock brake system (ABS) w/ Sealco emergency valve	STD
7-210 Sealco relay valve, pressure protection valve, emergency valve & check valve	STD
7-218 Sealco Hostling Valve	INC
7-221 Anti-Back (False) Charge Valve	STD
7-299 Steel air tank, rubber isolated	STD
7-305 Black rubber air lines for connection to lead trailer	STD
7-309 Black rubber air lines for connection to 2nd trailer.	STD
7-416 Two pair of service/emergency Tramac gladhands w/ full face seals	STD
7-410 Two frame-mounted dummy gladhand holders	STD
8 ELECTRICAL	
8-117 Sealed modular harness with 3' extension on lead to front trailer and frame-mounted replaceable 7-way	STD
8-210 12' SAE J2222 coiled green-jacketed IV cable for connection to 2nd trailer	STD
Only ABS light	STD
9 TIRES & WHEELS	
9-141 (2) 445/50R22.5 Goodyear G394 DuraSeal steel belted radial tires	INC
9-747 (2) 22.5" X 14" Accuride hub pilot mount steel disc wheels (10 stud), pre-painted white	NC
X MUDFLAPS	
OMIT MUDFLAPS	STD
OMIT MUDFLAP HANGERS	STD

SILVER EAGLE FIFTH WHEEL
OPERATING INSTRUCTIONS





Coupling

1. Make sure jaw is locked open and trailer is at proper height.

2. Back dolly slowly under trailer until jaw locks kingpin and handle moves to the center of the dolly.

Uncoupling

1. With vehicle at rest in a relaxed condition and landing gear down, (not being pushed together or pulled apart), pull fifth wheel handle upward and outward to lock the fifth wheel open.

2. Pull dolly slowly out from under the trailer.

Note

If the handle will not pull outward when the vehicle is in a relaxed condition, use landing gear to raise trailer and unload the dolly fifth wheel.

Contact Silver Eagle Customer Service

for a video tape on coupling and uncoupling twin/double trailers

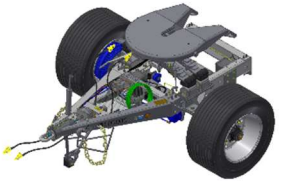
PERFORMANCE TESTING/ADJUSTMENTS

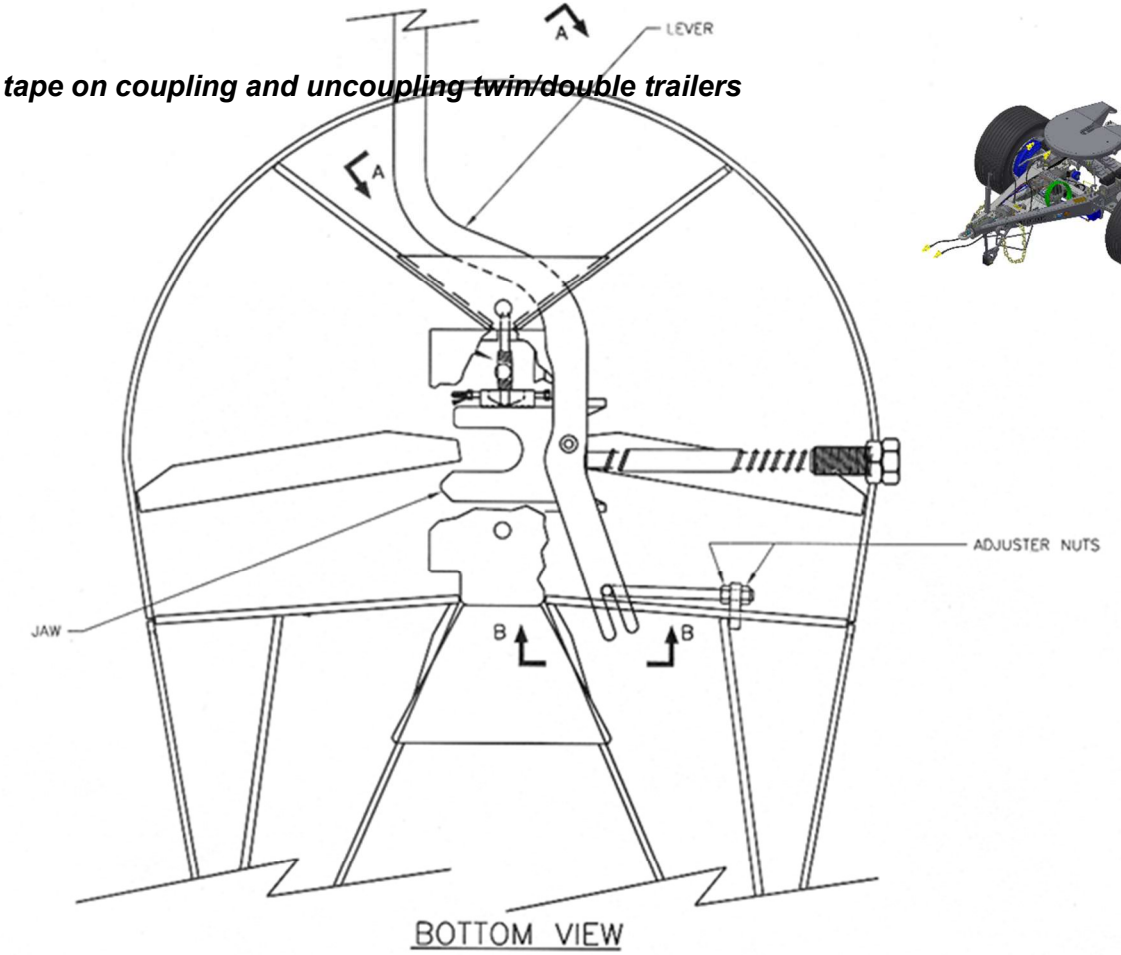
1. Pull the lever into the uncoupling position. This is where the lever is pulled out and held up by the “Catch Point” indicated in view A-A. If the lever won’t stay up, the adjuster nuts on the adjuster at the back end of the lever are probably screwed in too far. Back them off until lever will stay on the catch point.

2. Test the 5th wheel for proper coupling with a test kingpin. Test with the lever in the uncoupling position. If it doesn’t release from the “catch point”, then the adjuster nuts probably need to be screwed in further.

3. With the jaw closed or in the coupled position, pick the lever up and out of the locked position. Hold the lever just shy of falling back into the locked position. Release the lever to ensure that it passes freely into the locked position.

4. When 5th Wheel functions properly, tighten the lever adjuster locknut securely.

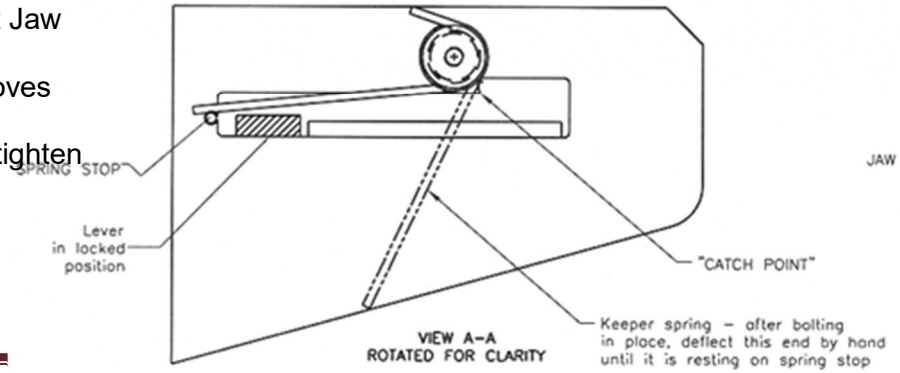


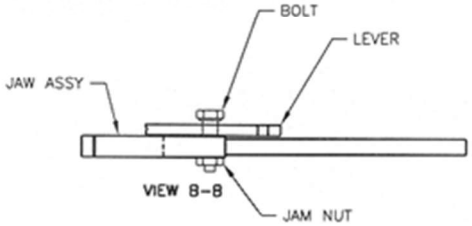


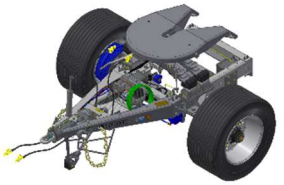
BOTTOM VIEW

ADJUSTMENT OF LEVER & JAW ASSEMBLY

1. Release Jam Nut (refer to View B-B)
2. Tighten bolt until lever is secure against Jaw assembly.
3. Loosen bolt ¼ turn or until assembly moves freely.
4. While holding bolt secure from turning, tighten jam nut.





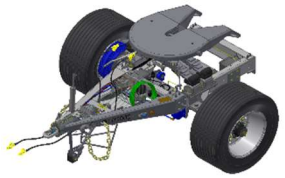


SILVER EAGLE FIFTH WHEEL MAINTENANCE

Jaw Removal (Refer to Diagram D)

1. Make sure the jaw is closed. If not, it can be closed by pushing the trip block (24) forward with a rod or bar. The jaw should be all the way across the center casting (the handle will be in). **Caution: Keep your hands clear of the jaw, it is spring-loaded.**
2. Using a pair of vise grips, clamp the trip lock rod in front of the guide hole on 5th wheel center casting (24) so as to prevent it from moving aft when jaw is removed.
3. When removing the guide bolt (11), applying an anti-seizing compound to the exposed threads often makes the removal process easier.
4. Remove the jaw spring (21) by pulling it through the push rod guide nut.
5. Pull the fifth wheel lever (18) all the way out.
6. Disconnect the fifth wheel lever (18) from the jaw/pushrod assy (23).
7. Remove the jaw/pushrod assy (23) from the 5th wheel table.
8. Lubricate and install the replacement jaw/pushrod assy (23) in the table making sure the pointed tine on the jaw is to aft end of the dolly
9. Slide jaw/pushrod assy in place without spring. Align hole in jaw with mating hole in lever.
10. Apply loctite 242 medium strength thread adhesive or equivalent to cleaned threads of capscrew (17) and jam nut.
11. Thread capscrew (17) into jaw/pushrod assy (23) with two washers (7) between the capscrew head & the lever. Torque the jaw bolt to approximately 70 ft-lbs. The lever should have minimum clearance to allow free rotation against the jaw without binding through its full travel.
12. Tighten the jam nut (1/6-1/4) turn – after contacting the jaw while ensuring the capscrew does not turn.
13. Slide pushrod spring (21) on push rod of the jaw.
14. While holding lever back far enough so the jaw pushrod protrudes into the guide nut, tighten the guide nut (11) securely

15. Remove the vise grips from the trip block rod.
16. Test the table to ensure the jaw opens and closes properly.



Jaw Spring Removal/ Reassembly (item 22)

- Complete steps 1 through 4 of Jaw Removal.
- Completes steps 13 through 17.

Lever Removal/ Reassembly (item 17)

- Remove lever (17)
- During Reassembly make sure the 2” jam nut is jammed to the 2” standard nut.
- Test the table to ensure the jaw opens and closes properly.

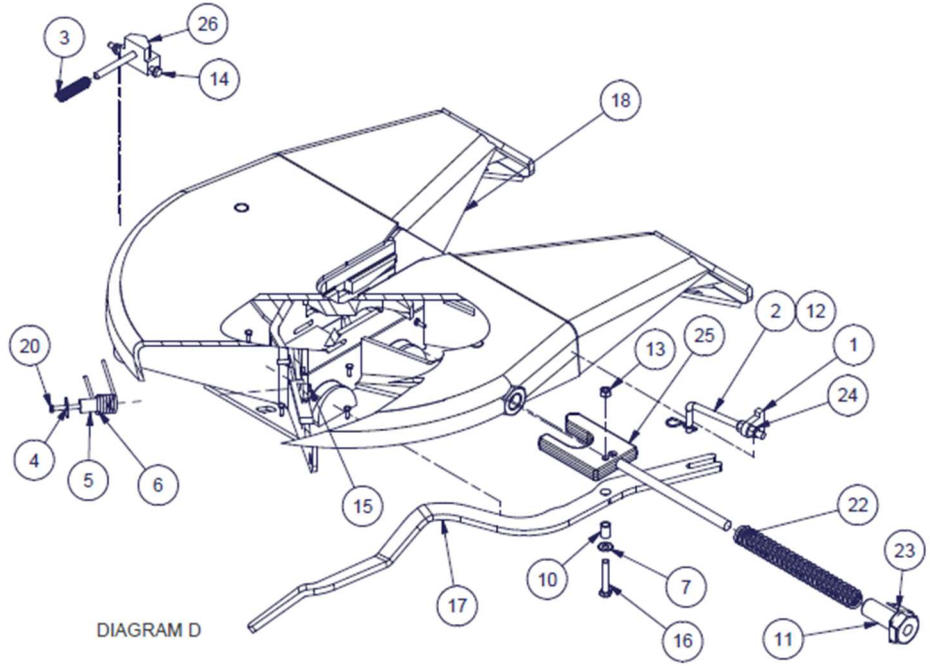
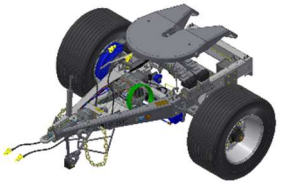


DIAGRAM D

Lever Removal/ Reassembly

- Complete step 1 & 6 of jaw removal
- Install new lever
- Complete steps 10 thru 12 of jaw removal.
- Test the table to ensure the jaw opens and closes properly.

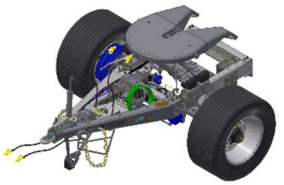


TRIP BLOCK / TRIP BLOCK SPRING REMOVAL / REASSEMBLY

- Complete steps 1 through 5
- Remove the 3/8 bolt, 3/8 lock nut and the two 3/8 washers
- Release the vise grips. **Caution: The trip block is under spring Pressure. Keep hands clear of it when releasing vise grips.**
- Remove the trip block (24) and the trip block spring through the throat of the 5th wheel table. **Caution: The jaw is under spring pressure. Use pliers or another suitable devise to remove old trip block and spring.**
- Install the new trip block and / or trip block spring in the throat of the 5th wheel table. Caution: The jaw is under spring pressure. Use pliers or another suitable devise to install new trip block and spring.
- Push the trip block (24) as far forward as possible, with a rod or bar and reinstall vise grips to the trip block rod of item (24) in front of 5th wheel center casting.
- With anti-seize applied to the 3/8 bolt, reinstall the bolt, two washers and lock nut making sure the trip block can freely move fore and aft when pushing on it with a rod or bar (leaving the lock nut 1/6”-3/32” from being fully tightened should work well).

- Release the vise grips. **Caution: The trip block is under spring pressure. Keep hands clear of it when releasing vice grips.**

- Test the table to ensure the jaw opens and closes properly.



DRAWBAR EYE REMOVAL & INSTALLATION INSTRUCTIONS

1. Place dolly under a trailer. Set brakes on trailer and dolly.
2. Remove safety wire if present, on 1283 nut.
3. Remove 1283 nut and 1193 washer or 15315 and 15660
4. Use forklift or eye removal tool (Silver Eagle part no. 15314) to pull against drawbar eye and remove it from the shock housing.
5. Clean any debris from inside of shock absorber bushing and lubricate with rubber lubricant or soapy water

6. Lubricate the shock absorber bushing with rubber lubricant or soapy water and install into the shock housing.
7. Lubricate the shank of the new drawbar eye with rubber lubricant or soapy water and install into the shock housing.

   NOTE: The shank of the drawbar eye will only be able to be pushed into the shock absorber bushings a little way by hand. There are three methods of pushing it in the final amount:

   (1) Place the dolly under a trailer or up against a sold wall. Set the brakes on the trailer and dolly. Use a forklift or hostler to push against the drawbar eye until it is seated on the shock absorber bushing.
   (2) Use a sledge hammer to hammer on the end of the drawbar eye until it is seated in the shock absorber bushing.
   (3) Use the eye removal tool as #4 above.

8. After the drawbar eye is in place, clean the threads on the shank. **VERY IMPORTANT:** Coat the threads with Never-SeeZ, pipe compound, or some other similar product. to prevent corrosion and keep the nut from seizing.

9. Install a new washer and thread the nut onto the shank.

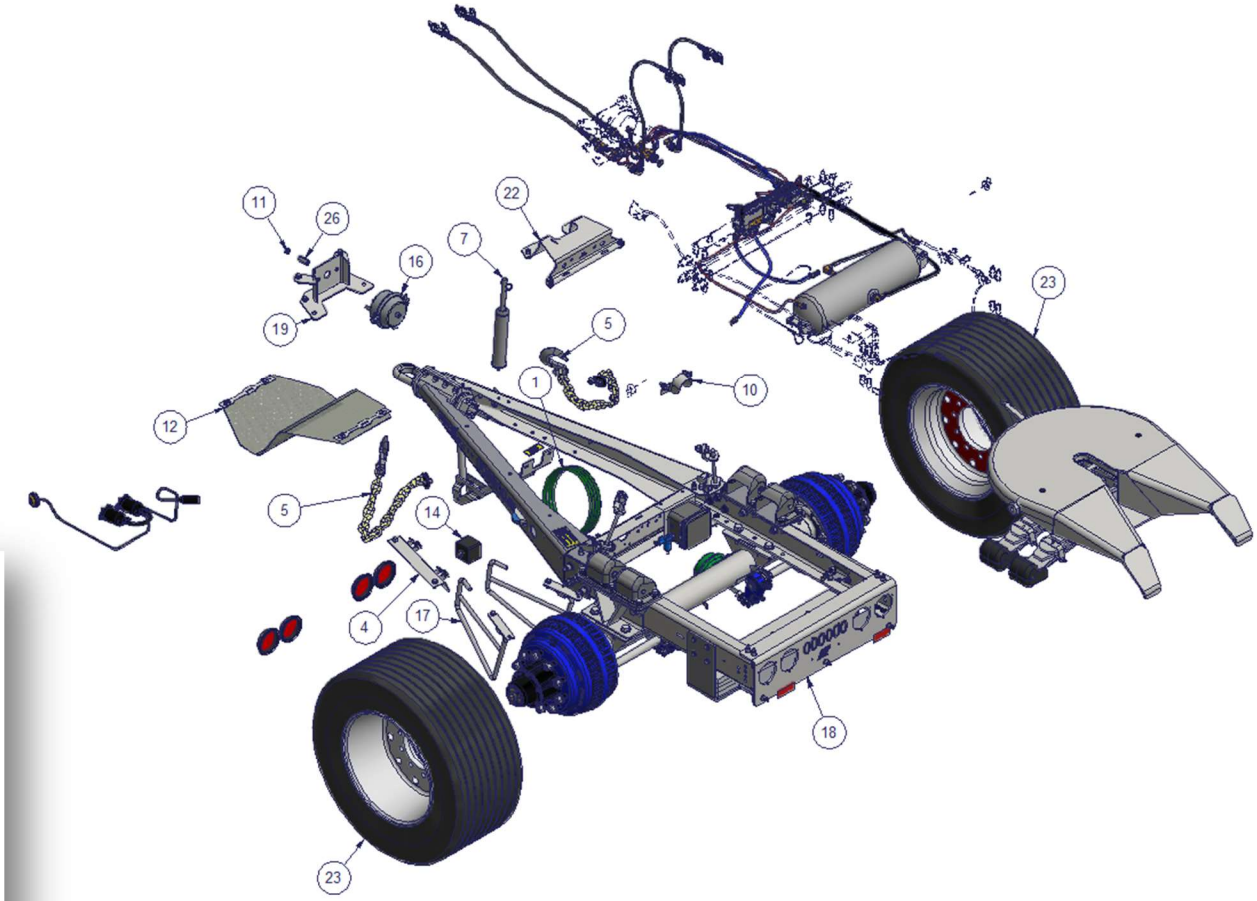
10. Tighten the nut until the rubber shock absorber bushing bulges toward the outer edge of the shock housing at the corners – this is approximately 400-500 ft/lbs of torque.

NOTE: Shock absorber bushing may split if tightened excessively.

11. Install the safety/ground wire through one side of the nut and shank. This is accomplished by drilling through one side of the nut and shank providing a hole for the bolt and nut securing the safety wire. This completes the ground circuit and prevents the nut from backing off.

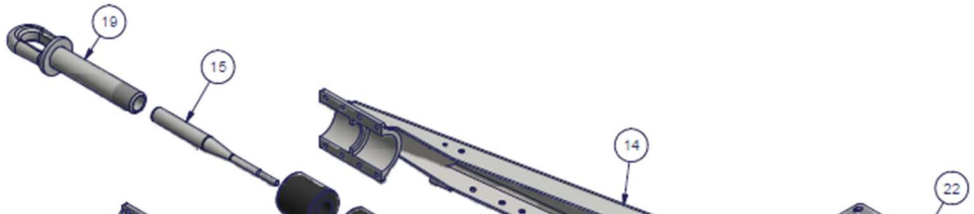
12. Periodically check the tightness of the nut and adjust as necessary. You should not be able to turn the lunette eye by hand at any time.

Master Assembly: 30144



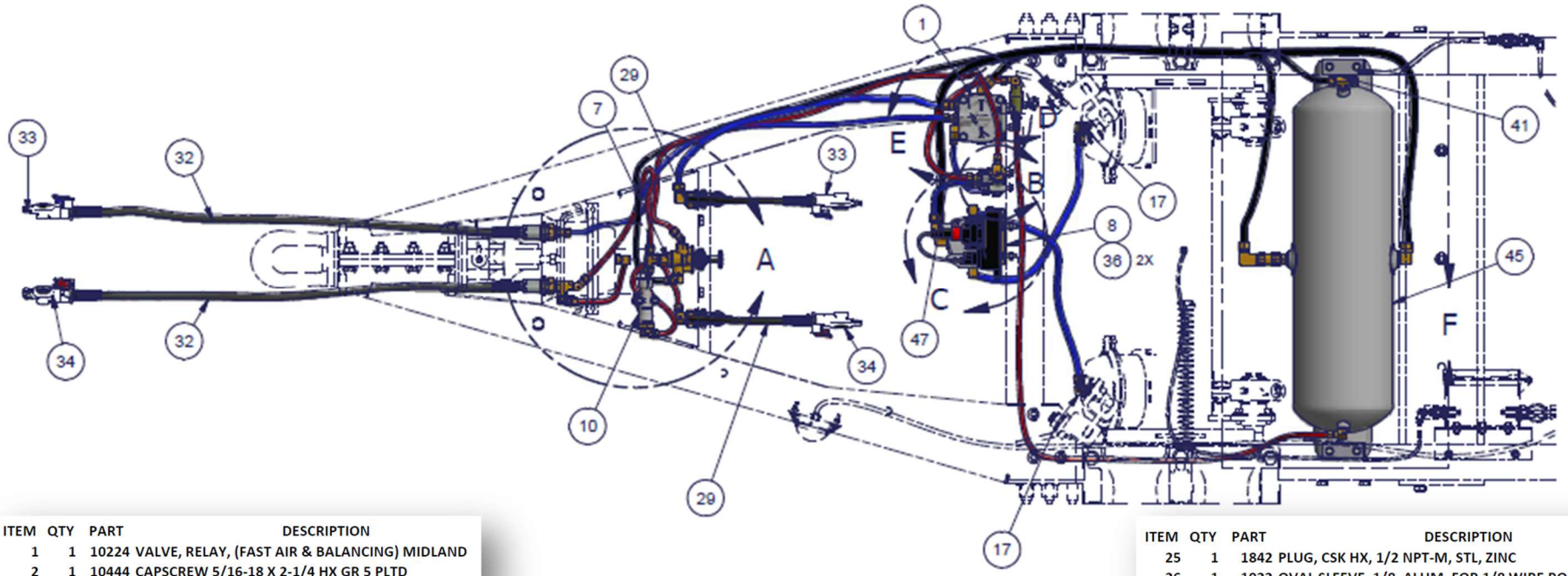
ITEM	QTY	PART	DESCRIPTION
1	1	10318	CABLE 7-WAY STRAIGHT 12'W/PLUGS GREEN ABS
4	1	11521G	GLADHAND HOLDER INSTALLATION, RS VA GALV
5	2	12710	SAFETY CHAIN ASSY 1/2 RT U-BOLT W/5T HK 35.6
7	1	14002	FLEXASTICK 20" (POGO), W/SPRINGS, 4 HOSE HOLD
10	1	17716G	GUARD, PUSH-PULL VALVE, 10 GA., GALV
11	1	1851	NUT 5/8-18 JAM HX GR 2 PLTD
12	1	21030	Z-BASKET INSTALLATION, VAII
14	1	24563	INSTALL, RUBBER PAD STIFF LEG
16	1	2861	AIR CHAMBER TYPE 24, UNIV. MGM
17	1	29997	INSTAL P/Z HANDLE, W/ CSXX BRACKETS GALV
18	1	30147	MAJOR ASSY VAST20W 13X27.5X74, GALV, JAM EYE
19	1	30151G	INSTAL, JAM EYE AIR CHAMBER MNT, VAII, GALV
20	1	30152	ELEC ASSY, 2-SOCKET, W/ABS, VAII
21	1	30435	AIR SYS ASSY HALDEX ABS A/B PP PSI JAM EYE
22	1	30511G	INSTAL, VALVE PLATE, REAR HOSE MNT, GALV,VAII
23	2	30547	TIRE/WHL 445/50R22.5 GY G394 PPW "CUST. SUPL"
26	1	3529	NUT 5/8-18 X 2-1/8 COUPLER HX PLTD

Frame Assembly: 30146



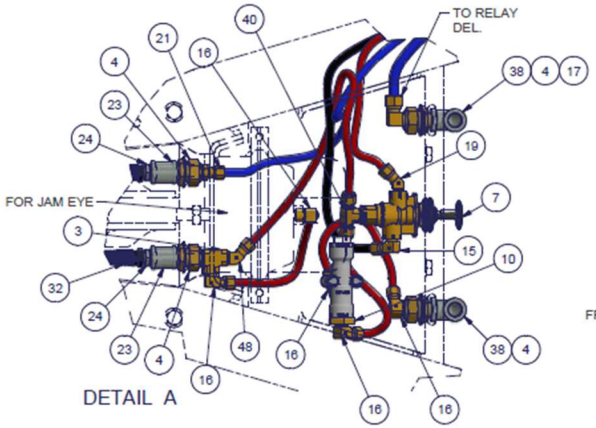
ITEM	QTY	PART	DESCRIPTION
1	1	10970	INSTALLATION, SAFETY WIRE ASSEMBLY, VA
2	2	1157	BUSHING, SHOCK ABSORBER, EYE & SHANK, RUBBER
3	1	15315	NUT, SHANK, HEX
4	1	15660	WASHER, SHANK, DRAWBAR EYE, 1/2", HEX NUT
5	1	18779G	TAILPLATE WELDMENT, 4-LT, VAII, PUR
6	1	18780G	ADAPTER, TAILPLATE, VAII, GALV
7	1	18781G	HANGER, BALLAST, 61#, UNDER TANK, VAII, GALV
8	1	18782G	CROSSMEMBER, FRONT, VAII, GALV
9	2	18785G	SIDE SUPPORT WELDMENT, VAII, GALV
10	2	18788G	BRACKET, AIR TANK MOUNT, VAII, GALV
13	1	30440	DWB 1-PC, WLD VAII RS +5.5 W/PZ, PSI, SHORT
14	1	30441	DWB 1-PC, WLD VAII CS +5.5 W/PZ, SHORT
15	1	30879	PUSHROD, AIR JAM EYE, 1-11/16"
19	1	4529	EYE & SHANK, 3/8", JAM EYE, HRDN
22	2	9439G	SPRING PLATE, SIDE SUPPORT ASSY, VA-DOLLY
16	1	32501	INSTAL, HUCK, BOBTAIL, VAII
12	2	24358G	SIDE CHANNEL, 72" DL, VAII, GALV

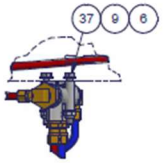
Air Assembly: 30435

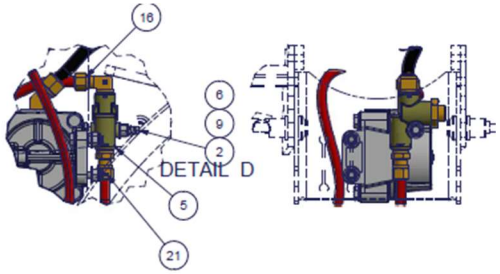


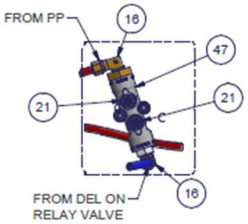
ITEM	QTY	PART	DESCRIPTION
1	1	10224	VALVE, RELAY, (FAST AIR & BALANCING) MIDLAND
2	1	10444	CAPSCREW 5/16-18 X 2-1/4 HX GR 5 PLTD
3	1	10725	TEE, STREET, 3/8 NPT, BRASS
4	4	1181	FITTING, BULKHEAD, 3/8 NPT-F X 1/2 NPT-M, BR
5	1	12582	VALVE, PRESSURE PROTECTION v2 110257, SEALCO
6	22	1454	WASHER 5/16 SAE PLTD
7	1	16199	VALVE, PUSH-PULL, SNGL HOLE, BOOT, SEALCO
8	1	16423	VALVE, ABS ECU, PLC SELECT, HALDEX, SNGL AXLE
9	11	1646	NUT 5/16-18 NYL INS HX PLTD
10	1	16893	VALVE, SEALCO ANTI BACK CHARGE
11	1	1771	VALVE, CABLE DRAIN, W/1/4" NPT-M
12	1	1772	VALVE, CHECK, SC-3, 1/2" NPT, BENDIX
13	100	1785	TUBING, NYLON, AIRBRAKE, 3/8", BLACK
14	123	1786	TUBING, NYLON, AIRBRAKE, 1/2", BLACK
15	1	1804	ELBOW, 90, 3/8T X 1/4 NPT-M, BR
16	10	1805	ELBOW, 90, 3/8T X 3/8 NPT-M, BR
17	5	1806	ELBOW, 90, 1/2T X 3/8 NPT-M, BR
18	2	1807	ELBOW, 90, 1/2T X 1/2 NPT-M, BR
19	1	1809	ELBOW, 45, 3/8T X 1/4 NPT-M, BR
20	1	1812	ELBOW, 45, 1/2T X 1/2 NPT-M, BR
21	5	1817	CONNECTOR, 3/8T X 3/8 NPT-M, BR
22	1	1820	CONNECTOR, 1/2T X 1/2 NPT-M, BR
23	2	1832	COUPLING, 1/2 NPT-F, TAPERED, MI, GALV
24	2	1837	BUSHING, 1/2 NPT-M X 3/8 NPT-F, HX, STL,PLTD

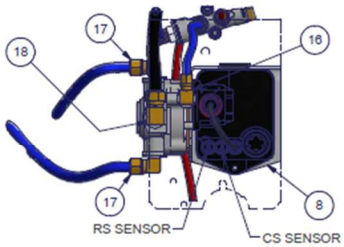
ITEM	QTY	PART	DESCRIPTION
25	1	1842	PLUG, CSK HX, 1/2 NPT-M, STL, ZINC
26	1	1922	OVAL SLEEVE, 1/8, ALUM, FOR 1/8 WIRE ROPE
27	120	2393	TUBING, NYLON, AIRBRAKE, 3/8", RED
28	62	2394	TUBING, NYLON, AIRBRAKE, 1/2", BLUE
29	2	24983	HOSE AIR, 3/8X86, RUBBER, 1/2 X 1/2 CONN
30	2	2652	CAPSCREW 5/16-18 X 1-1/4 HX GR 5 PLTD
31	1	2858	NIPPLE, HX, 1/2 X 1/2 NPT-M, BR
32	2	31685	HOSE AIR, 3/8x36, RUBBER, 3/8 X 1/2 CONN
33	2	31769	GLADHAND, SERV., W/FILTER STD SEAL
34	2	31771	GLADHAND, EMER., W/FILTER STD SEAL
35	60	3276	TUBING, NYLON, AIRBRAKE, 3/8", BLUE
36	2	3509	NUT 3/8-24 METAL LOCK HX GR C PLTD
37	4	3538	CAPSCREW 5/16-18 X 2-1/2 HX GR 5 PLTD
38	2	4495	ELBOW, 90, 1/2 NPT-F, GALV
39	1	4713	ELBOW, 90, 3/8T X 1/2 NPT-M, BR
40	1	5856	TEE, MALE BRANCH, 3/8T X 1/4 NPT-M, BR
41	1	5894	TEE, MALE BRANCH, 3/8T X 3/8 NPT-M, BR
42	4	7419	ISO-PAD, AIR RESERVOIR
43	2	7420	RETAINING PLATE, ISO-PAD, AIR RESERVOIR, GALV
44	4	7901	CAPSCREW 5/16-18 X 1-3/4 HX GR 8 PLTD
45	1	8913	AIR RES, SIDE DRN 1425 CI
46	1	9145	ELBOW, 90, 1/2T X 1/2 NPT-F, BR.
47	1	9858	VALVE, EMERGENCY CONTROL 110376 SEALCO
48	1	1810	ELBOW, 45, 3/8T X 3/8 NPT-M, BR

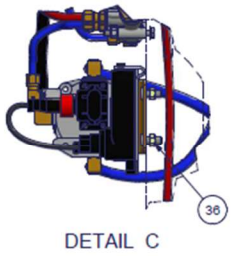

TO RELAY DEL
FOR JAM EYE
DETAIL A

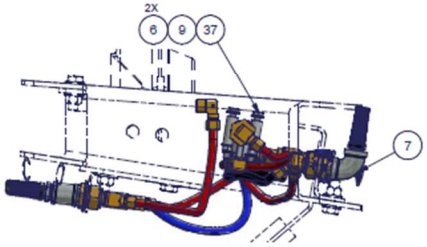

DETAIL B
VIEW ROTATED

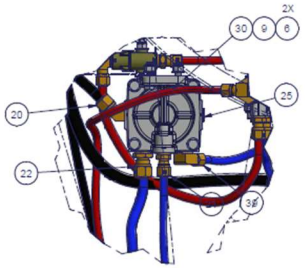

DETAIL D

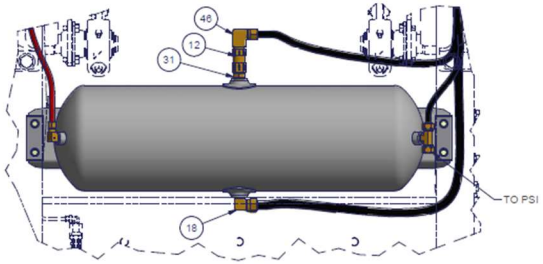

FROM PP
FROM DEL ON RELAY VALVE

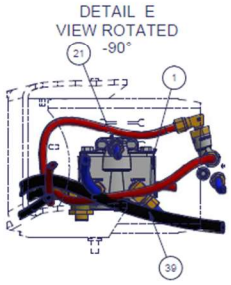

RS SENSOR
CS SENSOR

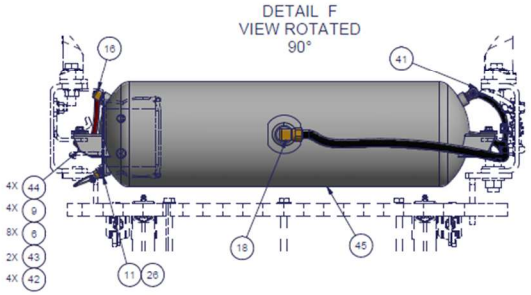

DETAIL C



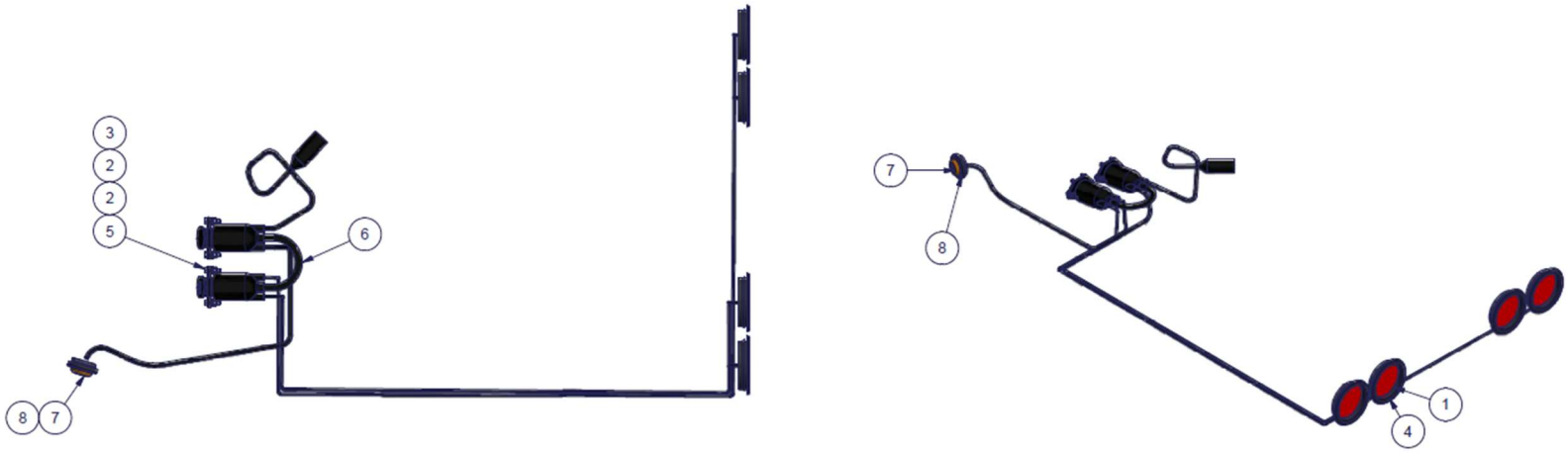



TO PSI


DETAIL E
VIEW ROTATED
-90°


DETAIL F
VIEW ROTATED
90°

Electrical Assembly: 30152



ITEM	QTY	PART	DESCRIPTION
1	4	10831	REFLECTOR 4-1/4" ROUND, RED, FIT 2509 GROMMET
2	8	1454	WASHER 5/16 SAE PLTD
3	4	1646	NUT 5/16-18 NYL INS HX PLTD
4	4	2509	GROMMET, LAMP, GROTE
5	4	2652	CAPSCREW 5/16-18 X 1-1/4 HX GR 5 PLTD
6	1	31690	HARNESS ABS 2-SOCKET NO TAIL LIGHTS
7	1	9562	LENS, AMBER, TRUCKLITE, ABS
8	1	9563	GROMMET, LAMP, TRUCKLITE, MODEL 30