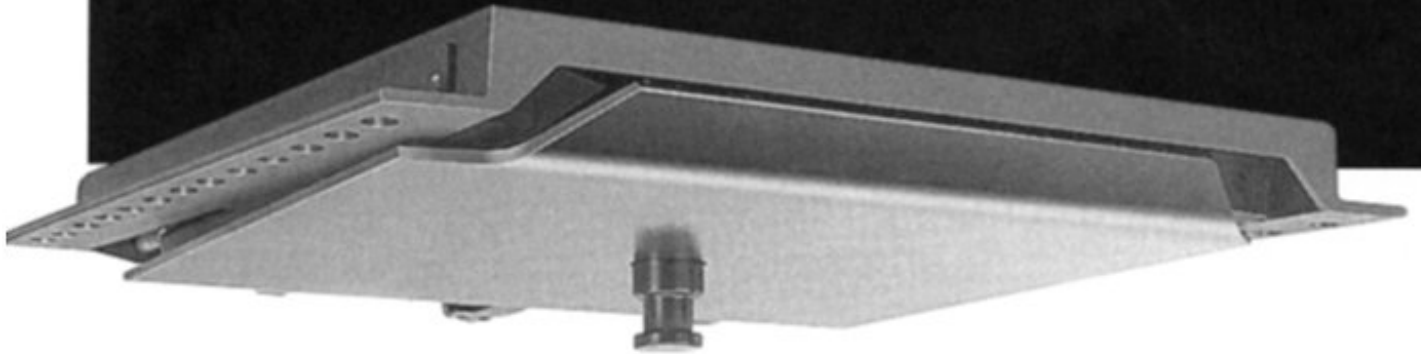
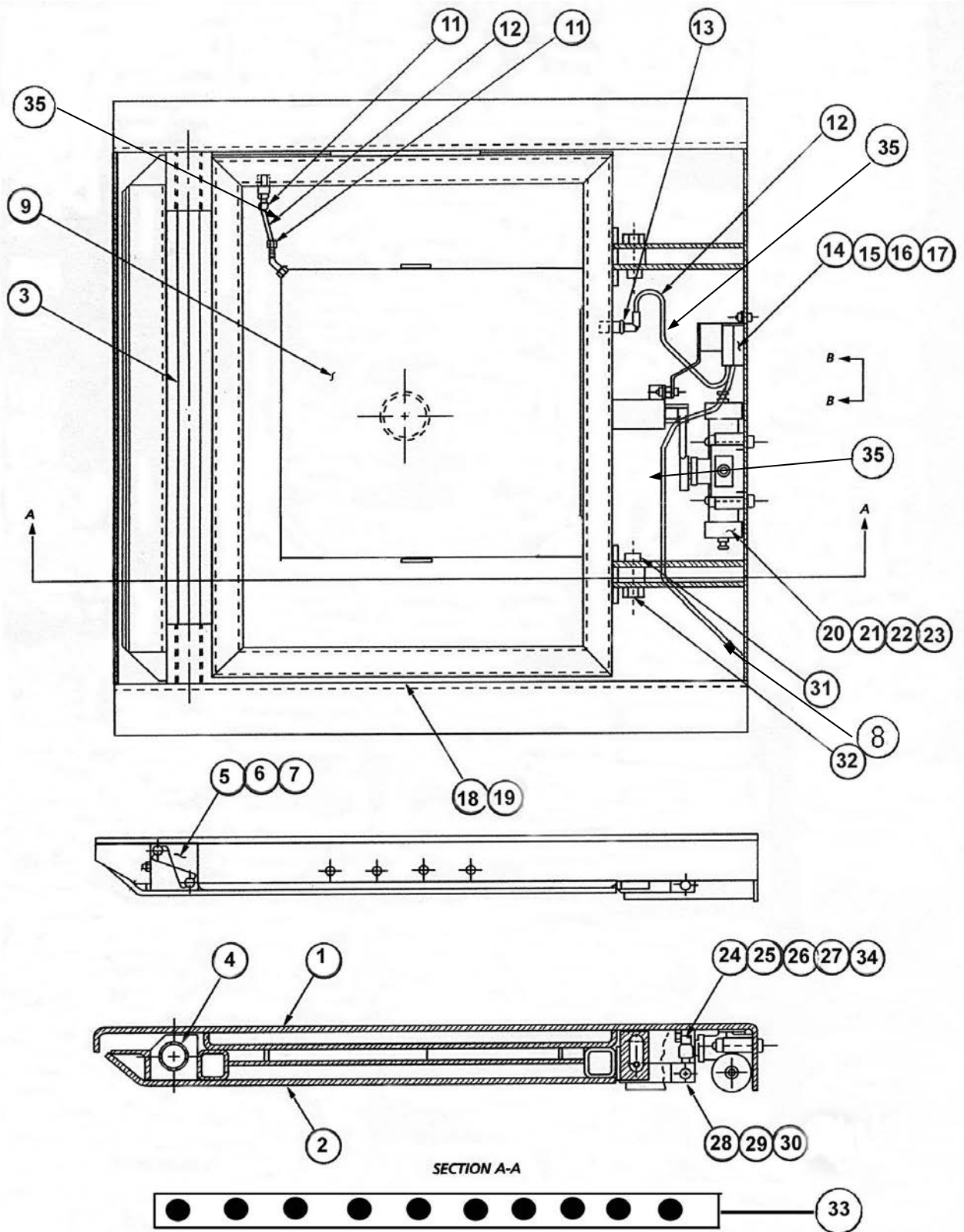




MAINTENANCE PROCEDURES

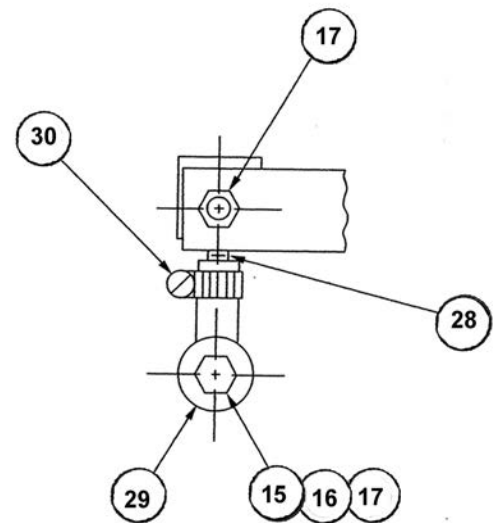


CRK 20_{SERIES} AIR RIDE UPPER COUPLER



CRK20 PARTS DRAWING

ITEM	QTY	PART NO.	DESCRIPTION
1	1	A-N/A	WELDMENT TOP
2	1	B-N/A	WELDMENT BOTTOM
3	1	680-0021	PIN HINGE FOR DVI 34 1/4
3	1	680-0023	PIN HINGE FOR DV 42 1/4
4	4	680-0003	BEARING STANDARD 1-3/4X1-1/2X3
5	2	660-0023	COVER HINGE
6	4	660-0004	BOLT GR 5 HEX DRLD H
7	1 FT	680-0065	WIRE SAFETY 8860K64
8	1	680-0062	VALVE PR PROT1234761B000
9	1	680-0001	AIRSPRING T22 PNEUMATIC
10	1	660-0006	FITTING 45 DEGREE
11	1	660-0007	FITTING STRAIGHT
12	4 FT	680-0056	TUBING 1/4 PLASTIC
13	1	660-0026	FITTING PUSH TO CONNECT
14	1	680-0063	VALVE LEVEL #90054007
15	3	660-0005	BOLT HEX HD 1/4 X 1 X 20
16	1	660-0027	WASHER 1/4 USS FLAT
17	12	660-0008	NUT 1/4 20 NYLOCK
18	2	680-0048	BEARING SIDE .375 NAT UHMW
19	8	660-0013	SCREW 1/4 20X1 FHSCS
20	1	680-0046	SHOCK ABSORBER
21	2	660-0001	BOLT 3X1/2 HEX BOLT
22	4	660-0016	WASHER 1/2 SAE THRU HARD
23	2	660-0011	NUT 1/2-13 UNITORQUE
24	1	680-0042	ROD END FM CW-8
25	1	680-0043	ROD END M CM-8
26	2	660-0003	BOLT 1-1/4 SHOULDER BOLT
27	2	660-0009	NUT 3/8 -16 NYLOCK
28	1	660-0044	ROD END CM-4S
29	1	680-0020	LINK DAMPER 1/4 ID X 3 LONG
30	1	660-0019	CLAMP HOSE 5/8 OD
31	2	660-0015	SCREW SHOLDER 2-1/4X3/4
32	2	660-0010	NUT 5/8-11 GR 8 NYLOCK
33	2	680-0022	PLATE ATTACHMENT
34	1	660-0002	BOLT 1-1/2 SHOULDER
35	4 ft	680-0080	CLEAR TUBING



VIEW B-B
SCALE 1/1

CRK20SERIES

I. MAINTENANCE INSTRUCTIONS

1. The $\frac{3}{4}$ -inch gap between the top and bottom plates must be checked during the normal maintenance cycle of the trailer. The spacing must be maintained for the unit to operate correctly. Refer to Figure 1, for the instructions to set that gap.
2. Check the unit for any loose bolts, clamps, ect.

II. SETTING THE LEVELING VALVE FOR NORMAL RIDE HEIGHT

THE $\frac{3}{4}$ INCH ADJUSTMENT IS NECESSARY FOR THE CRK20 TO WORK PROPERLY. THIS ADJUSTMENT SHOULD BE CHECKED AT REGULAR INTERVALS

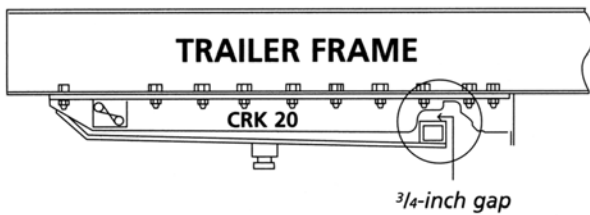


FIGURE 1

The $\frac{3}{4}$ -inch gap between the top and the bottom plates may easily be checked by inserting a $\frac{3}{4}$ -inch diameter bolt between the plates at the location circled (Figure 1). This must be done with the tractor trailer connected and the air supply to the trailer activated. If the gap is not $\frac{3}{4}$ -inch, it must be set by adjusting the height control valve, (Figure 2).

III. ADJUSTING THE HEIGHT CONTROL VALVE

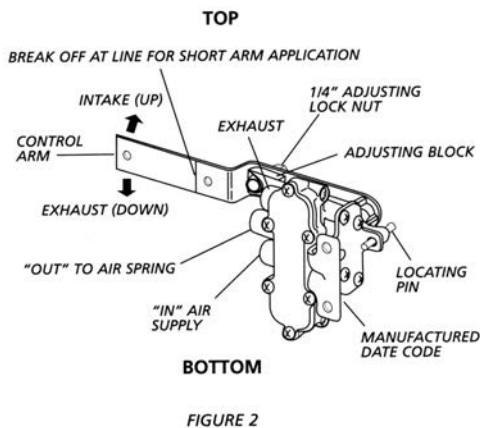


FIGURE 2

1. Loosen the $\frac{1}{4}$ -inch adjusting lock nut located on the adjusting block of the height control valve (Figure 2). This will allow the adjusting block to oscillate.
2. Move the adjusting block in the direction necessary for the proper gap. (Up for more gap, down for less gap.)
3. Once the proper gap is set, re-tighten the $\frac{1}{4}$ -inch adjusting lock nut to 2-4 ft. lbs. Be sure to tighten the $\frac{1}{4}$ -inch adjusting nut properly so the control arm is clamped tightly to the adjusting block.

IV. REPLACING HINGE BUSHINGS

1. Remove CRK20 unit from the trailer
2. Disconnect rod arm linkage (Part no. 25) from bottom plate (Part no. 2)
3. Disconnect the height control valve linkage clamp (Part no. 30) from bottom plate (Part no. 2).
4. Disconnect air supply line (Part no. 12) from fitting (Part no. 13)
5. Remove the two shoulder screws (Part nos. 31 and 32) from the unit.
6. The hinge pin (Part no. 3) must be removed. This is done by removing the hinge covers (Part no. 5). To do so, remove safety wires (Part no. 7) and bolts (Part no. 6) to allow the hinge pin (Part no. 3) to be pushed out. When pushing hinge pin out, be careful not to damage the bushings in the upper and lower hinge blocks. The top and bottom plates may then be separated to expose the hinge area of each plate.
7. Remove the old bushings in each of the 4 hinge blocks. (2 top plate, 2 bottom plate.)
8. Install the new spring bushings.
9. After the new steel spring bushings are installed, the hinge pin must be returned to its original location. When doing this, a thin coat of anti-seize should be applied to the pin, and the hinge block bushings cleaned and a coat of anti-seize wiped into them. It may be necessary to tap the hinge pin into position. If it is, be careful not to damage the pin. This could cause excessive wear in the hinge bushings. Bolt the hinge covers (Part no. 5) to the blocks using "Loctite" or equivalent on the threads, and the stainless steel wire between the bolts.
10. Install the two shoulder screws. (Part nos. 31 and 32.)
11. Reconnect the air supply line (Part no. 12) to fitting (Part no. 13).
12. Reconnect the height control valve linkage clamp (Part no. 30) in the same location as it was before removing.
13. Reconnect the rod arm linkage (Part no. 25) to bottom plate (Part no. 2).
14. Bolt the CRK20 unit in place using Grade 8 bolts with Grade 8 self-locking nuts and hardened washers. Tighten to:

½ - inch bolts	non-plated (plain)	106 ft. lbs.
	Plated or lubricated	80 ft. lbs.
⅝ - inch bolts	non-plated (plain)	212 ft. lbs.
	Plated or lubricated	159 ft. lbs.
15. Connect the trailer air supply to the ¼ -inch female pipe fitting marked "AIR IN" at the rear of the CRK20.
16. Before connecting the tractor to the trailer be sure there is sufficient lubrication on both the fifth wheel and the CRK20 bottom plate.
17. The ride height adjustment must be checked again.
 - a. Prior to checking the adjustment, the trailer must be coupled to a tractor. If the trailer is a tank trailer, it should be empty for this procedure. Because of the brake protection valve, the trailer air system pressure must be at least 65 p.s.i. before the CRK20 will begin to inflate. Allow 5 to 6 minutes after connection of the air to the trailer for the unit to inflate.
 - b. The ride height must be ¾ -inch between the top and bottom plates at the rear of the unit. The location for this measurement is circled in Section 1, Figure 1.

FOLLOW INSTRUCTIONS IN SECTION III
FOR REMAINDER OF HEIGHT ADJUSTMENT PROCEDURES

V. REPLACING THE AIR SPRING

(Refer to parts drawing)

1. Support the bottom plate of the CRK20 with a forklift, jackstand (or similar) to prevent it from dropping unexpectedly when shoulder screws (Part nos. 31 and 32) are removed.

CRK20SERIES

2. Disconnect rod arm linkage (Part no. 25) from bottom plate (Part no. 2)
3. Disconnect the height control valve linkage clamp (Part no. 30) from bottom plate (Part no. 2)
4. Disconnect air supply line (Part no. 12) from fitting (Part no. 13).
5. Remove the two shoulder screws (Part nos. 31 and 32) from the unit.
6. Open plates (Part nos. 1 and 2) as far as possible to determine if air spring (Part no. 9) can be replaced without going further. If either fitting nut on air spring or tank (Part no. 11) can be removed, then the air spring can be taken out for replacement.
If no, continue on to step 7.
7. If it is necessary to separate the two plates so the air spring can be removed, the hinge pin (Part no. 3) must be removed. The first step is to remove the hinge covers (Part no. 5). To do so, remove safety wires (Part no. 7) and bolts (Part no. 6) to allow the hinge pin (Part no. 3) to be pushed out. If pin is tight, anti-seize the hinge blocks. When pushing hinge pin out, be careful not to damage the bushings in the upper and lower hinge blocks. The top and bottom plates may then be separated to expose the air spring.
8. The new air spring (Part no. 9) should then be put back into unit, making sure fittings (Part no. 11) do not leak
9. After the new air spring is installed, if step 7 was needed, the hinge pin must be returned to its original location. When doing this, a thin coat of anti-seize should be applied to the pin, and the hinge block bushings cleaned and a coat of anti-seize wiped into them. It may be necessary to tap the hinge pin into position. If it is, be careful not to damage the pin. This could cause excessive wear in the hinge bushings. Bolt the hinge covers (Part no. 5) to the blocks using "Loctite" or equal on the threads, and the stainless steel wire (Part no. 7) between the bolts.
10. Install the two shoulder screws (Part nos. 31 and 32).
11. Reconnect the air supply line (Part no. 13)
12. Reconnect the height control valve linkage clamp (Part no. 30) in the same location as it was before removing.
13. Reconnect the rod arm linkage (Part no. 25) to bottom plate (Part no. 2)
14. Before connecting the tractor to the trailer be sure there is sufficient lubrication on both the fifth wheel and the CRK20 bottom plate.
15. The ride height adjustment must be checked again. Refer to Section IV, 17 for details.

NOTE: STEP 7 ONLY IF NEEDED

** Before putting air spring back into unit, a ring of urethane caulk 3" in diameter must be applied to bottom plate where center of air spring makes contact. This will keep the air spring in the proper location*

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4,580,806



Tartan Transportation Systems, LLC
7032 Pansy Ringgold Road
Brookville PA 15825 USA
Telephone (814) 849-1919
Fax (814) 849-6265