



ASSEMBLY INSTRUCTION MANUAL

Loader

MTZ 952/1220 Hose Kit "A"
X3944 Instructions



CAUTION

Only qualified personnel should perform these procedures. Damage to the hydraulic system may occur unless properly installed.



WARNING

Read the following safety information

Hydraulic Safety

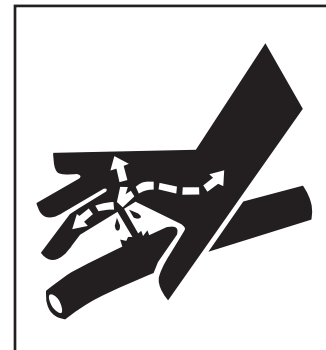
Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before repairing, adjusting, or disconnecting lines, be sure to relieve all pressure.

Before applying pressure to the system, be sure all connections are tight and the lines, pipes and hoses are not damaged.

Wear proper hand and eye protection when searching for leaks. Use a piece of wood or cardboard instead of hand to check for leaks.

Maintain all components in good working order.

If injured by escaping fluid, see a doctor at once. Serious infection or toxic reaction can develop if proper medical treatment is not administered immediately.

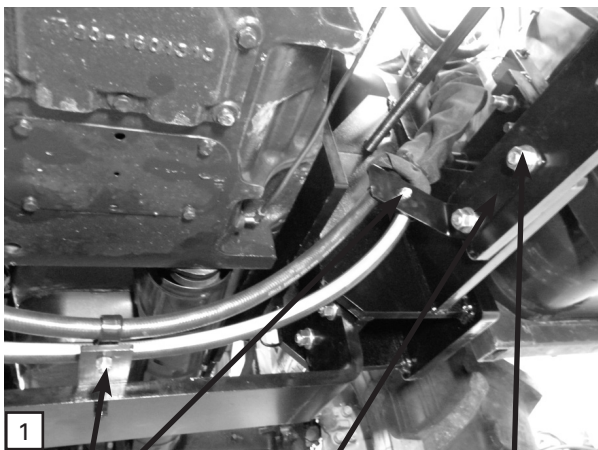


WARNING

Tractor power steering must work normally when operating the loader.

Instructions

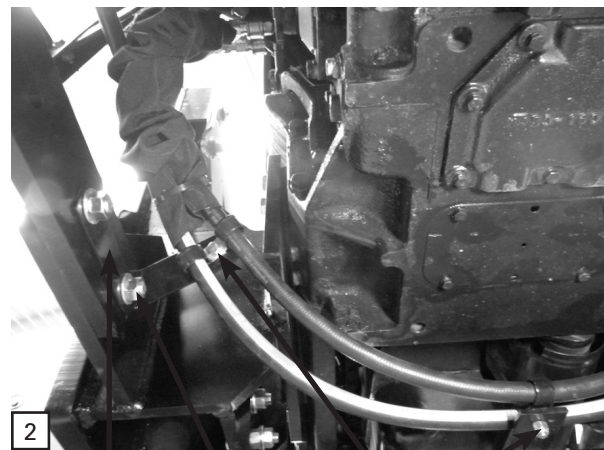
1. If the right and left hand brackets (13 & 14) weren't placed on the axle mounts when the mount kit was installed, do so now. **See Graphics 1 & 2.**
2. Assemble the bulkhead plate (1) to the plate on the RH mount as shown in **Graphic 3**, using the M10 nuts and bolts provided (2 & 4).
3. Place one snap ring (6) in the second slot on each of the four female quick couplers (10). Place the quick couplers in the bulkhead facing forward. Place another snap ring on each of the four quick couplers to secure them in the bulkhead. **See Graphics 3 & 4.**
4. Place one of the colored caps on each of the female quick couplers.



15, 16, 17

13

Hardware
included in
mount kit

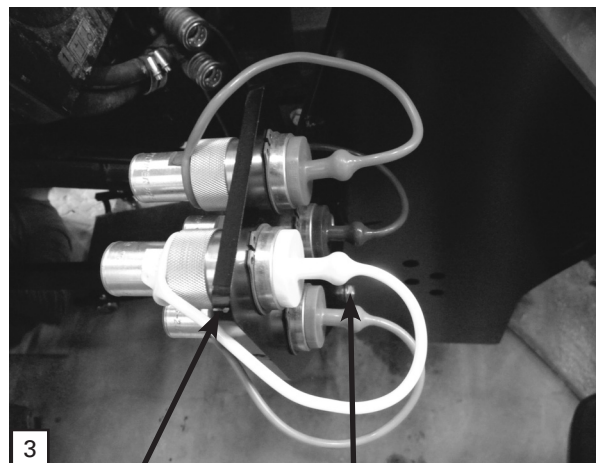


2

14

Hardware
included in
mount kit

15, 16, 17



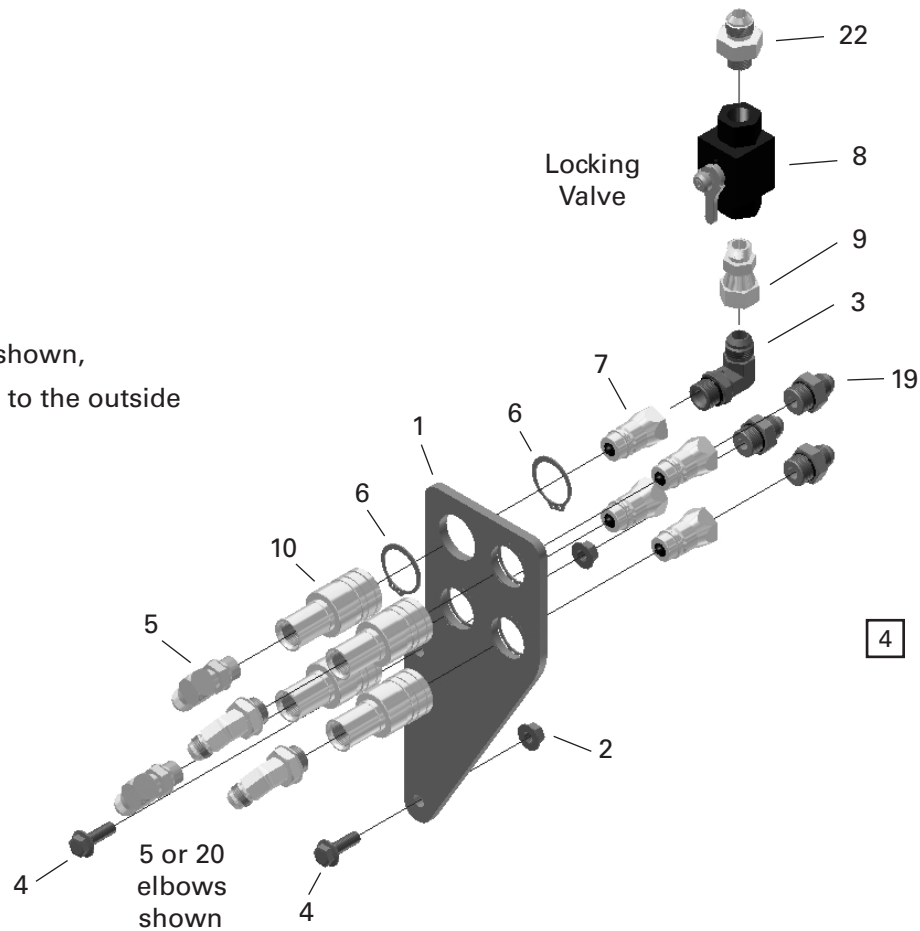
3

1

2, 4

NOTE:

952 placement is shown,
1220 placement is to the outside



5. Place two 90° elbows (5) in the two inside quick connectors. For a 952, place two more 90° elbows on the outside quick connectors also. For a 1220, place the two 45° elbows (20) on the outside two quick couplers.
6. Starting at the right hand side of the tractor, feed the 80" hoses (12) down the inside of the mount between the axle bar and tension rod, then cross under the tractor and up through the left hand mount to the quick couplers under the step.
7. Place one piece of the 2.88" diameter nylon sleeves (25) over the two 80" hoses on the right hand side. Then assemble both hoses to inner elbows of the bulkhead plate assembly.
8. Loosely assemble two P-clamps (15) on the hoses and bolt to the bracket on the right hand side using the one of the bolts and nuts provided (16 & 17). **See Graphic 1.** Repeat on the left hand side. **See Graphic 2.**
9. Loosely assemble two P-clamps (15) on the bracket extending from the underslung using one of the bolts and nuts provided (16 & 17). **See Graphic 1**
10. On the left hand end of each of the two 80" long hoses, place a 90° elbow (5) and then place a male quick coupler (11) on the Morb end of the elbow. (Note that there are two styles of male quick couplers in the hose kit. The Pioneer couplers (7) are used with the female quick couplers on the bulkhead plate.)
11. Place the remaining 2.88" diameter nylon sleeve (25) over this end of the hoses. Then connect the male quick couplers to the quick couplers underneath the step.

12. Check the hose routing to make sure it is clear of any sharp edges and the threaded tension rods. If necessary, the P-clips on the two brackets can be moved to either hole or either side of the bracket to get the required clearance. Tighten the hardware on the P-clips.
13. On each of the 24" hoses (18) place a 90° elbow (5) and then place a male quick connect coupler (11) on the Morb end of the elbow. Connect the female JIC end of the hose to the remaining fittings in the outside quick couplers in the bulkhead plate. Connect the male quick couplers to right hand quick couplers under the cab.
14. Build the assembly of components around the locking valve as shown in **Graphic 4**. When completed the assembly is placed in the top inside quick connector for 1220 (the top outside for 952).
15. Place a straight male adaptor (19) on the remaining three male Pioneer quick couplers (7) and connect to the end of the 90° end of the 51" hoses (21) on each of the couplers.
16. Place the 3.88" diameter nylon sleeve (26) over the MJIC end of hoses and slide to the 90° fittings.
17. Slide the 43" hose (23) into the nylon sleeve making sure all the MJIC fittings are on the same end.
18. Feed the hoses through the loop on the bottom of the liftarm and route to the tubelines on the inside of the liftarm. (If the loader is not yet installed, do so now - consult loader manual for further instruction.)
19. Connect the female JIC end of the 43" hose to the fitting on the top of ball valve and the MJIC end of the hose to the lower of the four tubelines on the inside of the liftarms.
20. Connect the MJIC ends of the remaining hoses to the tubelines..The hose that is connected to the fitting below the ball valve should be connected to the tubeline that is second from the bottom. The remaining two hoses get connected to the top two tubelines. Leave the quick couplers unconnected at this time..
21. All the hoses are now in place. Adjust the fit of the hoses in nylon sleeves and secure the sleeves with ty-wraps provided.
22. Connect the quick couplers at this time. On the 1220 the quick couplers for the lift cylinders are on the left hand side. On the 952 they are on the right hand side. Move the quick couplers (either at the bulkhead plate or at the tractor quick couplers) up or down to get the correct loader operation.
23. Tighten any remaining hardware or connections once suitable routing for all hoses is found. Loader is now ready for operation.

X3944 Parts List

Item #	Part Number	Description	Quantity
1	816603	Plate Bulkhead	1
2	00043435	Nut Hex Flg Usr M10 (PI)	2
3	812734	Elbow 90 7/8 Mjic x 7/8 Orb	1
4	09840672	Bolt Hex Flg M10 x 30 8.8 (PI)	2
5	811416	Elbow 90 7/8 Morb x 3/4 Mjic	8
6	812924	Snap Ring N1400 0150 86018680	8
7	813308	Male Tip Coupler 0.5 86025322	4
8	813852	Ball Valve 3/4 Forb	1
9	814660	Adaptor Str 3/4 Morb x 7/8 Swfjic	1
10	86033813	Coupler .5 Push Pull 7/8-14 Forb	4
11	813292	Quick Connect M Tip	4
12	816610	Hose 1/2 x 80" - 3/4 Swfjic x 3/4 Swfjic	2
13	816611	Bracket LH	1
14	816613	Bracket RH	1
15	815431	P Clamps	6
16	86170	Bolt	3
17	81344	Nut	3
18	816614	Hose 1/2 x 24 - 3/4 Swfjic x 3/4 Swfjic	2
19	886897	Adaptor Str 7/8 Morb x 3/4 Mjic S	5
20	816617	Elbow 45° 7/8 Morb 3/4 Mjic	2
21	816615	Hose 1/2 x 51.4" - 3/4 Swfjic-90 x 3/4 Mjic	3
22	812080	Adaptor Str 3/4 Morb x 3/4 Mjic	1
23	816616	Hose 1/2 x 42.86 - 3/4 Swfjic x 3/4 Mjic	1
24	812075	Ty-Rap 13-5/8" Lg (Ty-27m)	6
25	116298	Nylon Sleeve 36.00" 2.88 Dia	2
26	117922	Nylon Sleeve 36.00" 3.66 Dia	1
27	813295	Dust Plug 0.5 Blue	1
28	813296	Dust Plug 0.5 Yellow	1
29	813297	Dust Plug 0.5 Red	1
30	813298	Dust Plug 0.5 Green	1
31	813301	Dust Cap 0.5 Blue	1
32	813302	Dust Cap 0.5 Yellow	1
33	813303	Dust Cap 0.5 Red	1
34	813304	Dust Cap 0.5 Green	1
35	813305	Dust Cap 0.5 Black	2
36	813306	Dust Cap 0.5 Orange	2

Bolt Torque Chart

Standard						
Bolt Size (in)	Grade 2		Grade 5		Grade 8	
	Torque		Torque		Torque	
	ft-lb	NM	ft-lb	NM	ft-lb	NM
0.25	6	7	8	11	12	16
0.313	11	15	17	23	25	33
0.375	20	27	31	41	44	60
0.438	32	43	49	66	70	95
0.5	49	66	76	103	106	144
0.563	70	95	109	148	153	207
0.625	97	131	150	203	212	287
0.75	144	195	266	360	376	509
0.875	166	225	430	583	606	821
1	250	339	644	873	909	1232
1.125	354	480	795	1077	1288	1745
1.25	500	678	1120	1518	1817	2462
1.375	655	887	1470	1992	2382	3228
1.5	870	1179	1950	2642	3161	4283

Metric								
Bolt Size (mm)	Class 5.6		Grade 8.8		Grade 10.9		Grade 12.9	
	Torque		Torque		Torque		Torque	
	ft-lb	NM	ft-lb	NM	ft-lb	NM	ft-lb	NM
6	3.1	4.3	7.3	9.9	10.3	14	12.1	16.5
8	7.7	10.5	17.7	24	25	34	29	40
10	15	21	35	48	49	67	59	81
12	26	36	61	83	86.2	117	103	140
14	42	58	97	132	136	185	162	220
16	64	88	147	200	210	285	250	340
18	89	121	202	275	287	390	346	470
20	126	171	287	390	405	550	486	660
22	169	230	390	530	549	745	656	890
24	217	295	497	675	708	960	840	1140
27	320	435	733	995	1032	1400	1239	1680
30	435	590	995	1350	1401	1900	1681	2280
33	590	800	1349	1830	1902	2580	2278	3090
36	759	1030	1740	2360	2441	3310	2935	3980
39	988	1340	2249	3050	3163	4290	3798	5150

Dash Size	Thread Size	Jam Nut or Straight		SAE 37° (JIC)	
		ORB Fitting Torque		Swivel Nut Torque	
		ft-lb	NM	ft-lb	NM
-04	7/16-20	14-16	20-22	10-11	13-15
-05	1/2-20	18-20	24-27	13-15	18-20
-06	9/16-18	24-26	33-35	17-19	23-26
-08	3/4-16	50-60	68-78	34-38	47-52
-10	7/8-14	72-80	98-110	50-56	69-76
-12	1-1/16-12	125-135	170-183	70-78	96-106
-14	1-3/16-12	160-180	215-245	80-90	110-122
-16	1-5/16-12	200-220	270-300	94-104	127-141
-20	1-5/8-12	210-280	285-380	124-138	169-188
-24	1-7/8-12	270-360	370-490	156-173	212-235



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