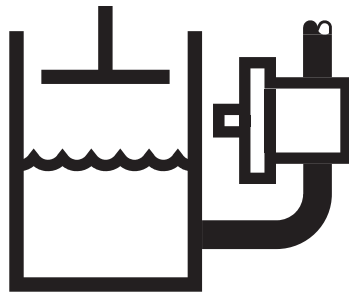
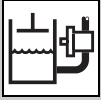


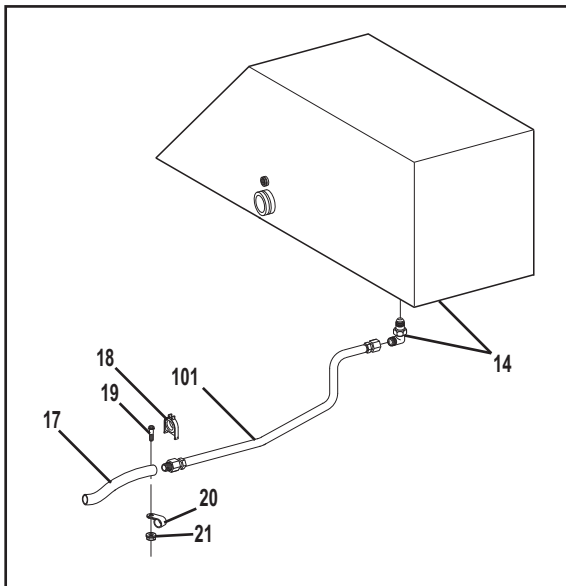
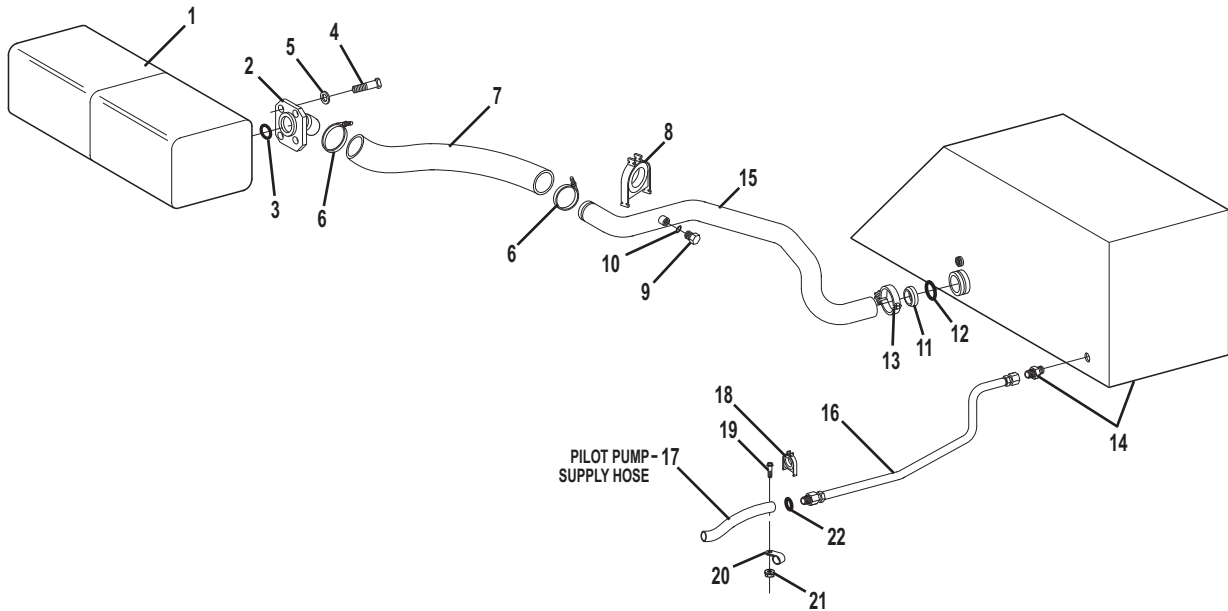
## SECTION 8 - HYDRAULIC CIRCUITS



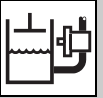


# HYDRAULIC CIRCUITS

## Hydraulic Oil Supply to Main Pump

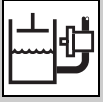


BEFORE S/N'S:  
XL3100III - 3120000182 (4X2) & 3140000280 (4X4)  
XL4100III - 4100000373 (6X4) & 4160000040 (6X6)  
XL5100III - 5100000575 (6X4 & 6X6)



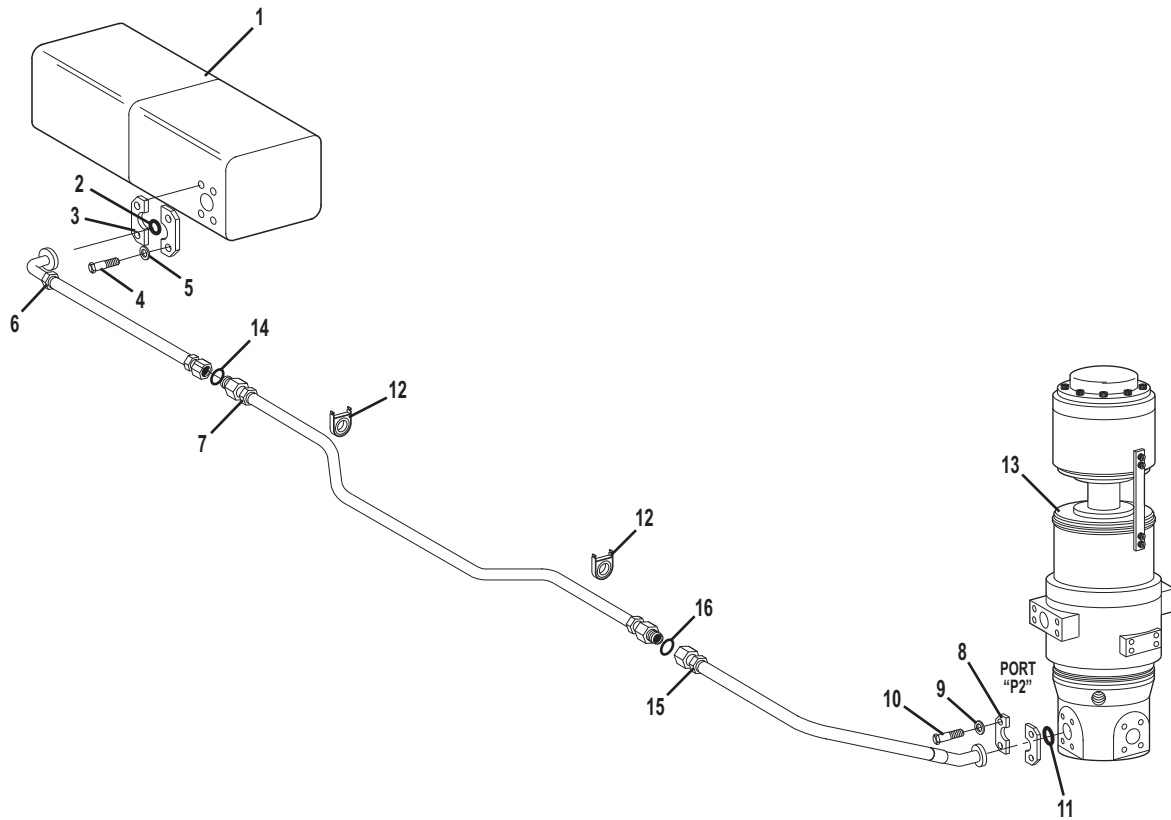
## Hydraulic Oil Supply to Main Pump

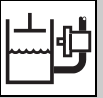
Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC PUMP, (see page 9-42 for details)	
2		Ref	SUCTION ELBOW, (see page 4-2, item 54, for details)	
3		Ref	O-RING, (see page 4-2, item 137, for details)	
4		Ref	HEX HD CAPSCREW, 5/8-11X1-3/4, GR5, (hand torque to 140-155 lb-ft), (see page 4-2, item 122, for details)	
5		Ref	LOCKWASHER, 5/8, (see page 4-2, item 132, for details)	
6	91163129	2	BAND CLAMP	
7	80433109	1	SUCTION HOSE	
8	80483031	1	CLAMP	
9	88662172	1	HEX PLUG, 1/4	
10	88591202	1	O-RING	
11	86961092	1	COUPLING	
12	86961093	1	GASKET	
13	86961091	1	RETAINER, (see page 9-72 for details)	
14		Ref	HYDRAULIC RESERVOIR INSTALLATION & ASSY, (see page 9-70 for details)	
15	80483015	1	SUCTION HOSE	
16	80783052	1	TUBE ASSY, (After & including S/N's XL3100III - 3120000182 (4x2) & 3140000280 (4x4); XL4100III - 4100000373 (6x4) & 4160000040 (6x6); XL5100III - 5100000575)	
17	2754868	1	SUCTION PILOT PUMP HOSE ASSY	
18	91053413	1	CUSHION CLAMP, 1"	
19		Ref	WHIZ-LOK SCREW, 5/16-18X1, (see page 4-2, item 161, for details)	
20		Ref	SUPPORT CLAMP, 1-1/2, (see page 4-2, item 108, for details)	
21		Ref	WHIZ-LOK NUT, 5/16-18, (see page 4-2, item 31, for details)	
22	88591509	1	O-RING, (After & including S/N's XL3100III - 3120000182 (4x2) & 3140000280 (4x4); XL4100III - 4100000373 (6x4) & 4160000040 (6x6); XL5100III - 5100000575)	
101	3460514	1	TUBE ASSY, (Before S/N's XL3100III - 3120000182 (4x2) & 3140000280 (4x4); XL4100III - 4100000373 (6x4) & 4160000040 (6x6); XL5100III - 5100000575)	



# HYDRAULIC CIRCUITS

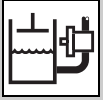
## Main Hydraulic Pump to Center Pin





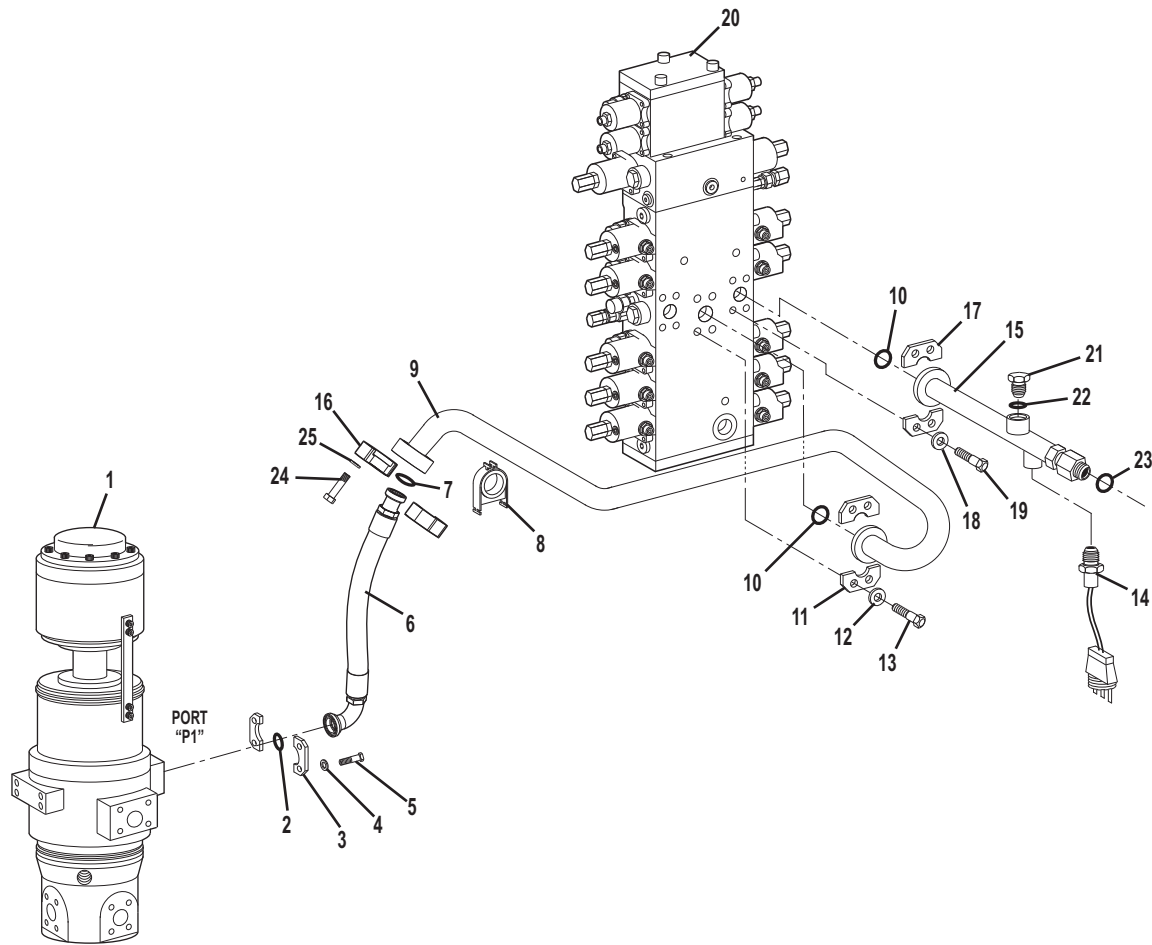
## Main Hydraulic Pump to Center Pin

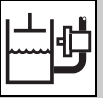
Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC PUMP, (see page 9-42 for details)	
2	91083339	1	O-RING	
3	84712738	2	FLANGE HALF, (XL3100III)	
	84712739	2	FLANGE HALF, (XL4100III & XL5100III)	
4	83201053	4	HEX HD CAPSCREW, 7/16-14X1-3/4, GR8, (XL3100III)	
	83201120	4	HEX HD CAPSCREW, 1/2-13X1-3/4, GR8, (XL4100III & XL5100III)	
5	88551012	4	LOCKWASHER, 7/16, (XL3100III)	
	88551013	4	LOCKWASHER, 1/2, (XL4100III & XL5100III)	
6	84719853	1	HOSE ASSY, (XL3100III)	
	84721027	1	HOSE ASSY, (XL4100III & XL5100III)	
7	80883008	1	TUBE ASSY, (XL3100III)	
	3460512	1	TUBE ASSY, (XL4100III & XL5100III)	
8	84711333	2	FLANGE HALF, (XL4100III & XL5100III)	
9	88551011	4	LOCKWASHER, 3/8	
10	88201036	4	HEX HD CAPSCREW, 3/8-16X1-1/4, GR5	
11	91083106	1	O-RING	
12	90205792	2	CUSHION CLAMP, 1-1/4	
13		Ref	CENTER PIN INSTALLATION & ASSY, (see page 9-102 for details)	
14	88591510	1	O-RING	
15	84721247	1	HOSE ASSY, (XL3100III)	
	84721174	1	HOSE ASSY, (XL4100III & XL5100III)	
16	88591509	1	O-RING	



# HYDRAULIC CIRCUITS

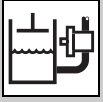
## Hydraulic Pressure from Center Pin to Control Valve



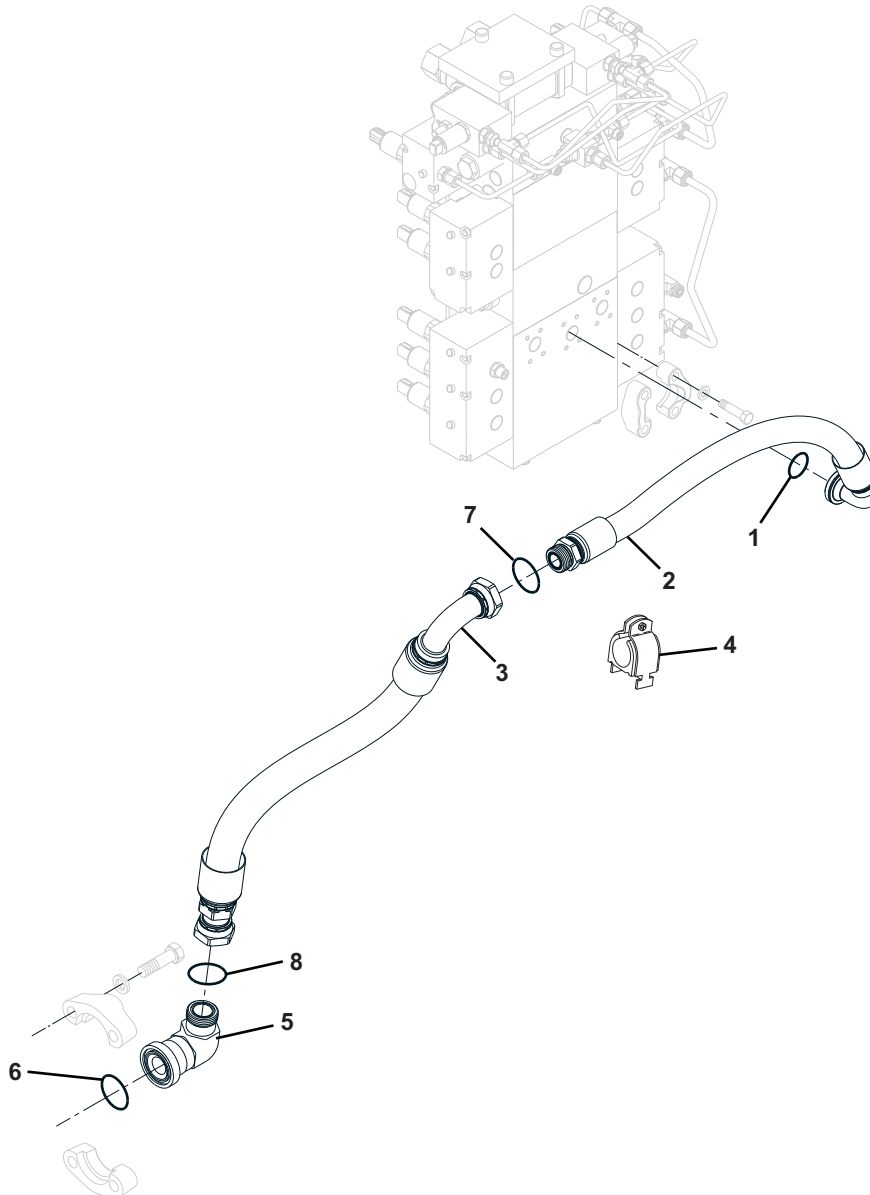


## Hydraulic Pressure from Center Pin to Control Valve

Item	Part Number	Qty.	Description	Rev.
1		Ref	CENTER PIN INSTALLATION & ASSY, (see page 9-102 for details)	
2	83783043	1	O-RING	
3	84712740	2	FLANGE HALF	
4	88551015	4	LOCKWASHER, 5/8	
5	88201098	4	HEX HD CAPSCREW, 5/8-11X2-1/4, GR5	
6	84719946	1	HOSE ASSY	
7	91083339	1	O-RING	
8	90205792	1	CUSHION CLAMP, 1-1/4	
9		1	TUBE ASSY, (supply), (no longer available; order 80433193S Supply Tube Replacement Kit located on 8-8 for tube replacement)	
10	91083106	2	O-RING	
11	84712738	2	FLANGE HALF	
12	88551012	4	LOCKWASHER, 7/16	
13	88201053	4	HEX HD CAPSCREW, 7/16-14X1-3/4, GR5	
14		Ref	TEMPERATURE SENSOR, (see page 10-2 for details)	
15	3460545	1	TUBE ASSY	
16	84712739	2	FLANGE HALF	
17	84711333	2	FLANGE HALF	
18	88551011	4	LOCKWASHER, 3/8	
19	88201036	4	HEX HD CAPSCREW, 3/8-16X1-1/4, GR5	
20		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
21	88662193	1	PLUG, (includes item 22)	
22	88591205	1	O-RING	
23	88591510	1	O-RING	
24	88201069	4	HEX HD CAPSCREW, 1/2-13X2, GR5	
25	88551013	4	LOCKWASHER, 1/2	

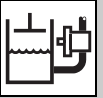


Supply Tube Replacement Kit



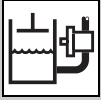
NOTE: EXISTING MOUNTING HARDWARE WILL BE RE-USED FOR THE INSTALLATION OF THIS KIT





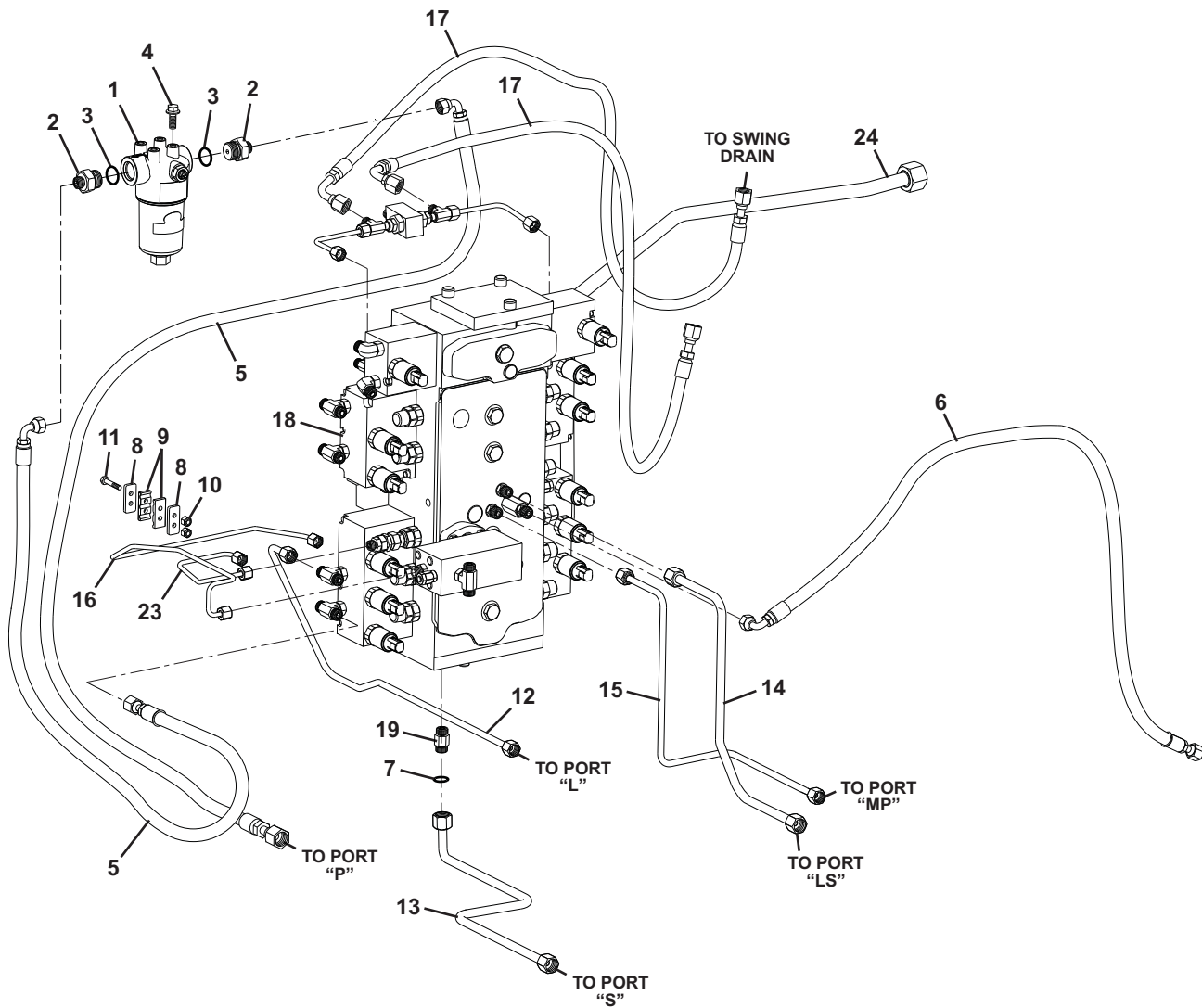
## Supply Tube Replacement Kit

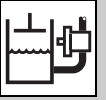
Item	Part Number	Qty.	Description	Rev.
	80433193S	Ref	SUPPLY TUBE REPLACEMENT KIT, (includes all items)	-
1	91083106	1	O-RING	
2	84722280	1	HOSE ASSY, (includes item 7)	
3	84722281	1	HOSE ASSY	
4	80783141	1	CUSHION CLAMP, 1-3/8"	
5	88662535	1	FLANGE ELBOW, 90 DEGREES, (includes item 8)	
6	83783043	1	O-RING	
7	88591509	1	O-RING	
8	88591510	1	O-RING	



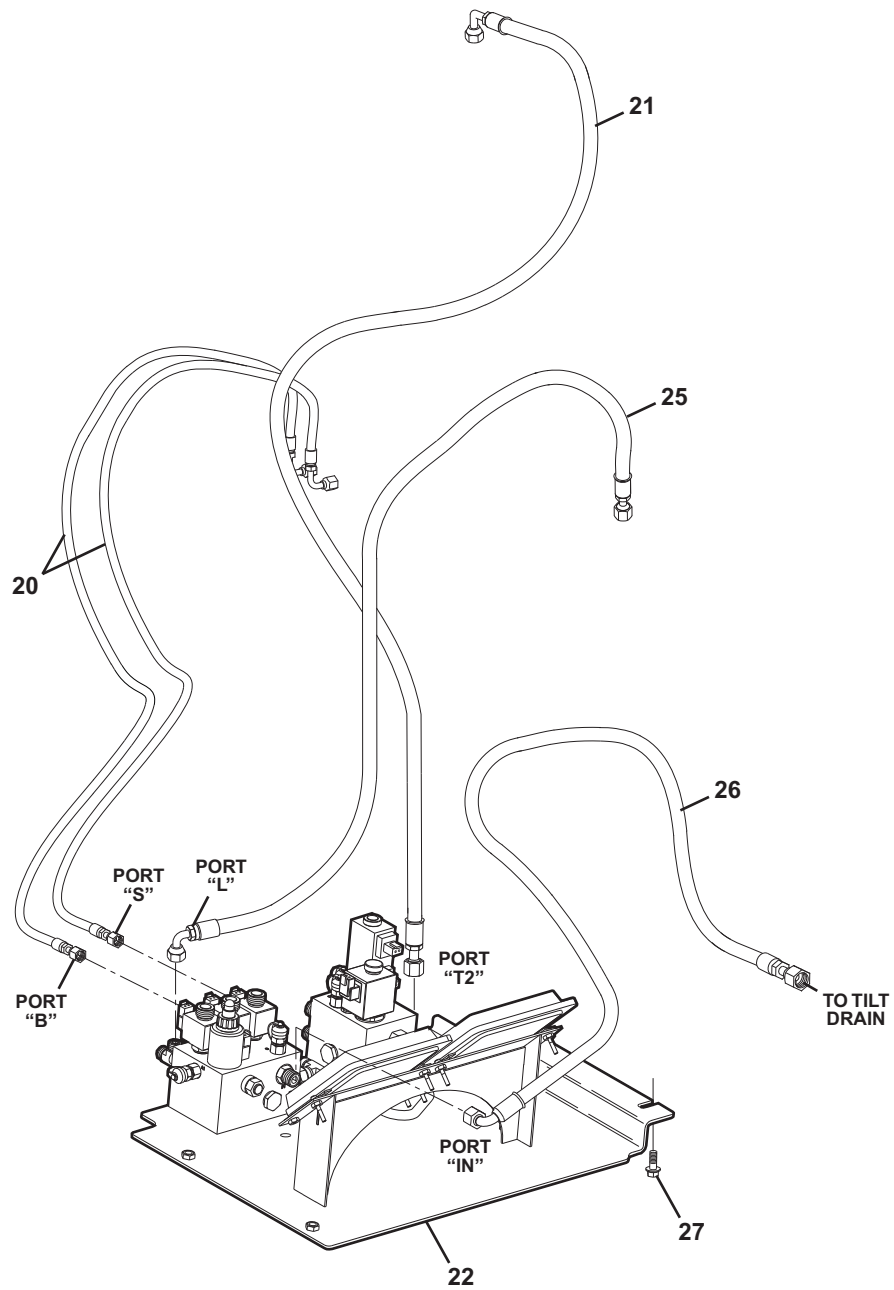
# HYDRAULIC CIRCUITS

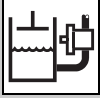
## Main Valve to Pilot Manifold





## Main Valve to Pilot Manifold



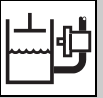


# HYDRAULIC CIRCUITS

## Main Valve to Pilot Manifold

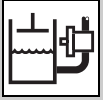
Item	Part Number	Qty.	Description	Rev.
1	2120220	1	PILOT FILTER, (includes element, sight glass, indicator & o-ring)	
	80533001	1	PILOT FILTER ELEMENT	
	80514206	1	SIGHT GLASS	
	80514207	1	INDICATOR	
	80534053	1	O-RING, (between filter bowl and head of housing)	
2	88662448	2	CONNECTOR, (includes item 3)	
3	88591207	2	O-RING	
4	80303094	4	WHIZ-LOCK SCREW, 3/8-16X3/4	
5	84718992	2	HOSE ASSY	
6	84719716	1	HOSE ASSY	
7	88591204	1	O-RING	
8	80931020	2	COVER PLATE	
9	80933097	2	CLAMP	
10	88521204	2	HEX LOCKNUT, 1/4-20	
11	88201007	2	HEX HD CAPSCREW, 1/4-20X1-1/2, GR5	
12	80533008	1	TUBE ASSY	
13	80533009	1	TUBE ASSY	
14	84721398	1	HOSE ASSY	
15	84721399	1	HOSE ASSY	
16	3460523	1	TUBE ASSY	
17	84719270	2	HOSE ASSY	
18		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
19	80333184	1	CHECK VALVE, (includes item 7)	
20	84719295	1	HOSE ASSY	
21		Ref	HOSE ASSY, (see page 8-34 for details)	
22		Ref	PILOT MANIFOLD VALVE TRAY ASSY, (see page 9-62 for details)	
23	3460524	1	TUBE ASSY	
24		Ref	TUBE ASSY, (see page 8-14 for details)	
25	84721180	1	HOSE ASSY	
26	84721075	1	HOSE ASSY	
27	80973025	4	WHIZ-LOK SCREW, 3/8-16X1	

**NOTE:** Items 14 & 15 may be a tube or a hose depending on your machine. In either instance, the hoses listed are to be used for service.



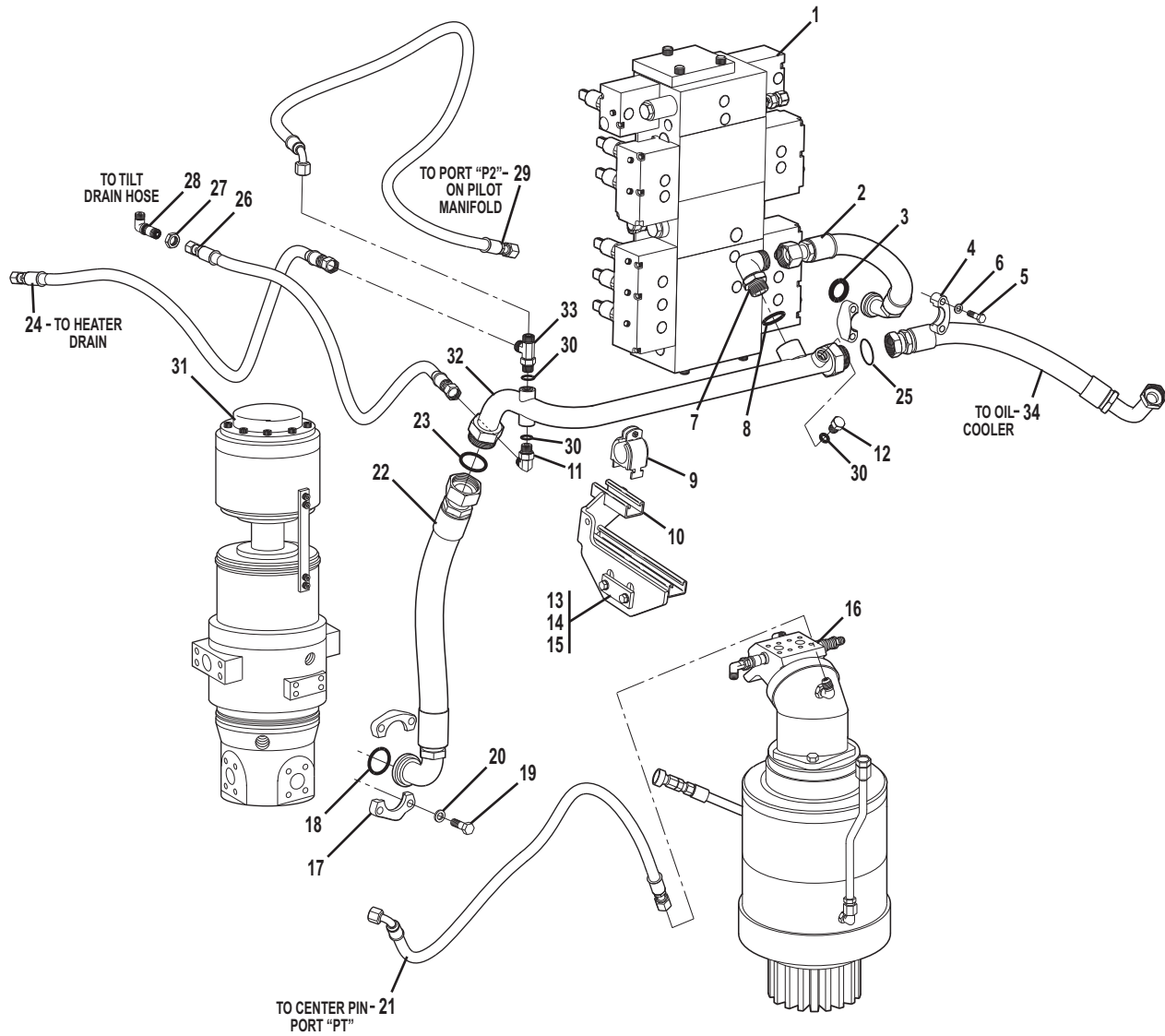
## Main Valve to Pilot Manifold

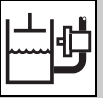
Item	Part Number	Qty.	Description	Rev.



# HYDRAULIC CIRCUITS

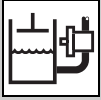
## Upperstructure Dump Circuit





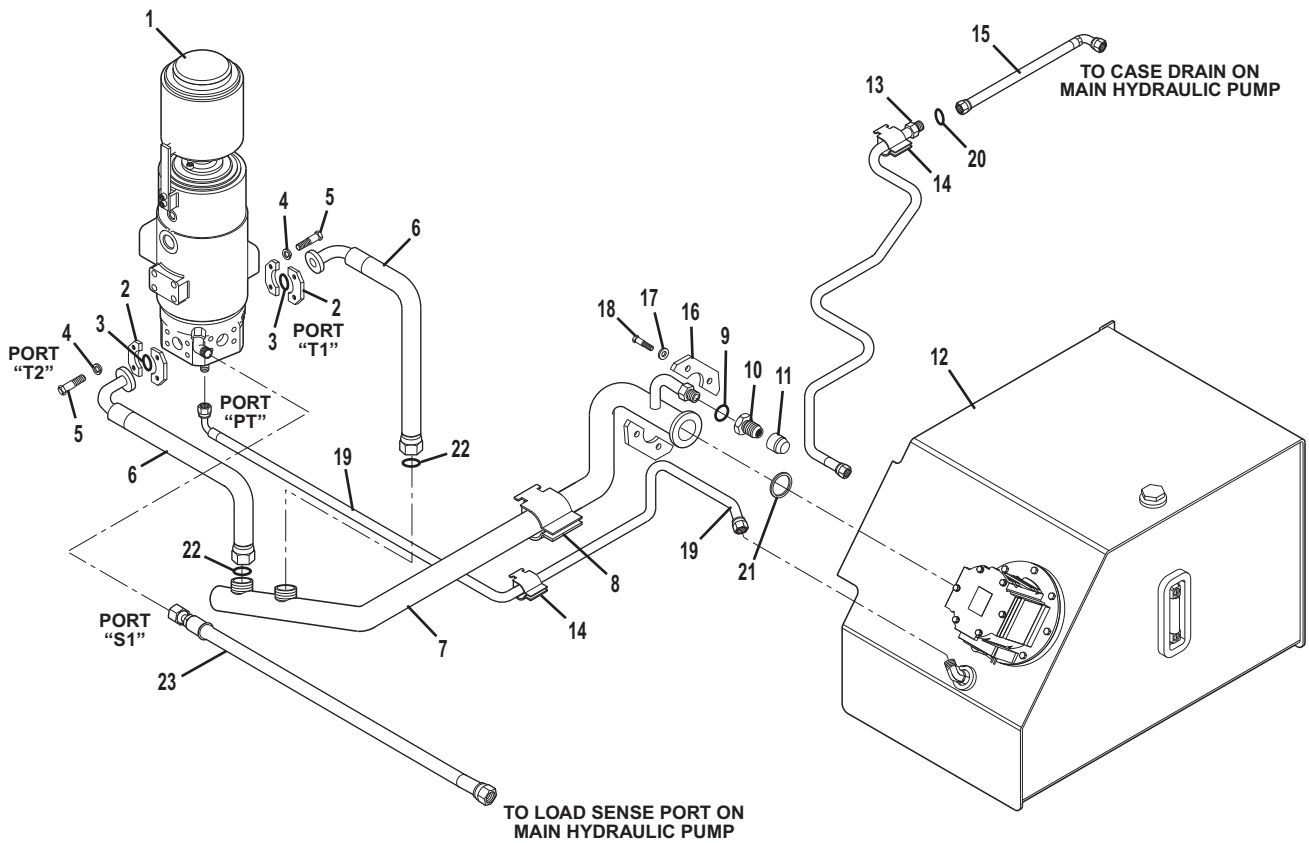
## Upperstructure Dump Circuit

Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	84719395	1	HOSE ASSY	
3	91083106	1	O-RING	
4	84711333	2	FLANGE HALF	
5	88201036	4	HEX HD CAPSCREW, 3/8-16X1-1/4, GR5	
6	88551011	4	LOCKWASHER, 3/8	
7	88662333	1	ELBOW, 90 DEGREES, (includes item 8)	
8	88591209	1	O-RING	
9	90205793	1	CLAMP	
10	80446012	1	CHANNEL	
11	88662330	1	ELBOW, 90 DEGREES, (includes item 30)	
12	88662175	1	HEX HD PLUG, (includes item 30)	
13	83251291	1	COVER PLATE	
14	88201034	2	HEX HD CAPSCREW, 3/8-16X7/8, GR5	
15	88551011	2	LOCKWASHER, 3/8	
16		Ref	SWING TRANSMISSION ASSY, (see page 9-72 for details)	
17	84711342	2	FLANGE HALF	
18	83783043	1	O-RING	
19	88201067	4	HEX HD CAPSCREW, 1/2-13X1-1/2, GR5	
20	88551013	2	LOCKWASHER, 1/2	
21	84719567	1	HOSE ASSY	
22	84719502	1	HOSE ASSY, (return)	
23	88591511	1	O-RING	
24		Ref	HOSE ASSY, (see page 6-26 for details)	
25	88591510	1	O-RING	
26	84721044	1	HOSE ASSY	
27	88662483	1	HEX NUT	
28	80333046	1	BULKHEAD ELBOW	
29	84718809	1	HOSE ASSY	
30	88591205	3	O-RING	
31		Ref	CENTER PIN INSTALLATION & ASSY, (see page 9-102 for details)	
32	3460506	1	DUMP TUBE ASSY	
33	88662347	1	RUN TEE, (includes item 30)	
34		Ref	HOSE ASSY, (see page 9-110 for details)	

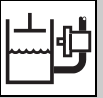


# HYDRAULIC CIRCUITS

## Undercarriage Dump Circuit

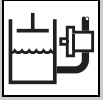






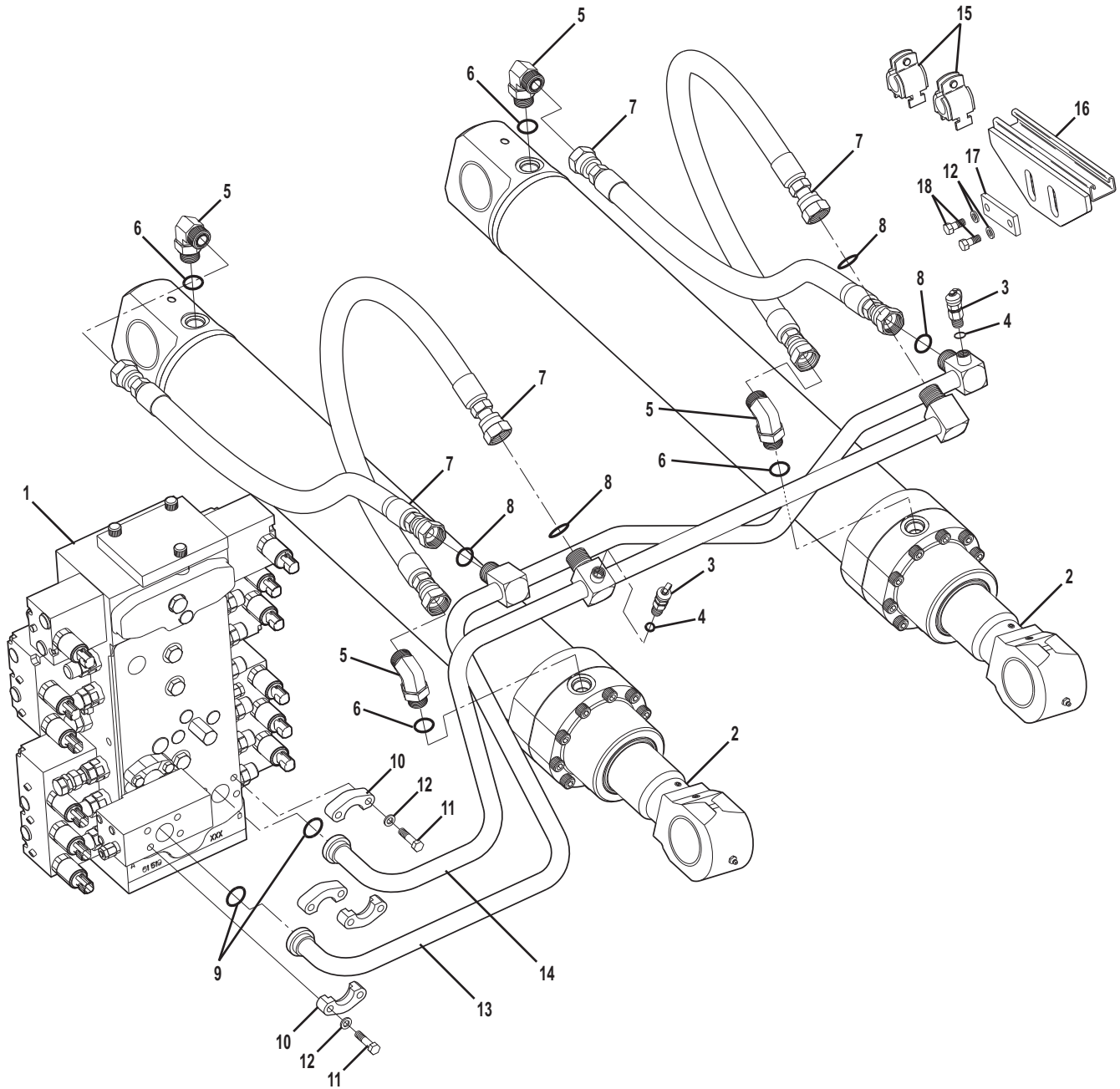
## Undercarriage Dump Circuit

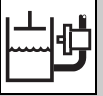
Item	Part Number	Qty.	Description	Rev.
1		Ref	CENTER PIN INSTALLATION & ASSY, (see page 9-102 for details)	
2	84711333	4	FLANGE HALF	
3	91083106	2	O-RING	
4	88551011	8	LOCKWASHER, 3/8	
5	88201036	8	HEX HD CAPSCREW, 3/8-16X1-1/4, GR5	
6	84719528	2	HOSE ASSY	
7	80783009	1	DUMP TUBE ASSY	
8	83863005	1	CLAMP ASSY, 2"	
9	88591207	1	O-RING	
10	83451129	1	MALE QUICK-DISCONNECT COUPLING	
	83451128	1	FEMALE QUICK-DISCONNECT COUPLING, (supplied with tool kit)	
11	83623026	1	DUST CAP, (male)	
	83623027	1	DUST CAP, (female), (supplied with tool kit)	
12		Ref	HYDRAULIC RESERVOIR INSTALLATION & ASSY, (see page 9-70 for details)	
13	80783056	1	CASE DRAIN TUBE	
14	90207463	2	CUSHION CLAMP, 3/4"	
15	84719854	1	HOSE ASSY	
16	84711427	2	FLANGE HALF	
17	88551013	4	LOCKWASHER, 1/2	
18	88201067	4	HEX HD CAPSCREW, 1/2-13X1-1/2, GR5	
19	84719026	1	HOSE ASSY	
20	88591508	1	O-RING	
21	77363038	1	O-RING	
22	88591509	2	O-RING	
23	84719855	1	HOSE ASSY	



# HYDRAULIC CIRCUITS

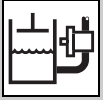
## Hoist Cylinder Hydraulic Circuit



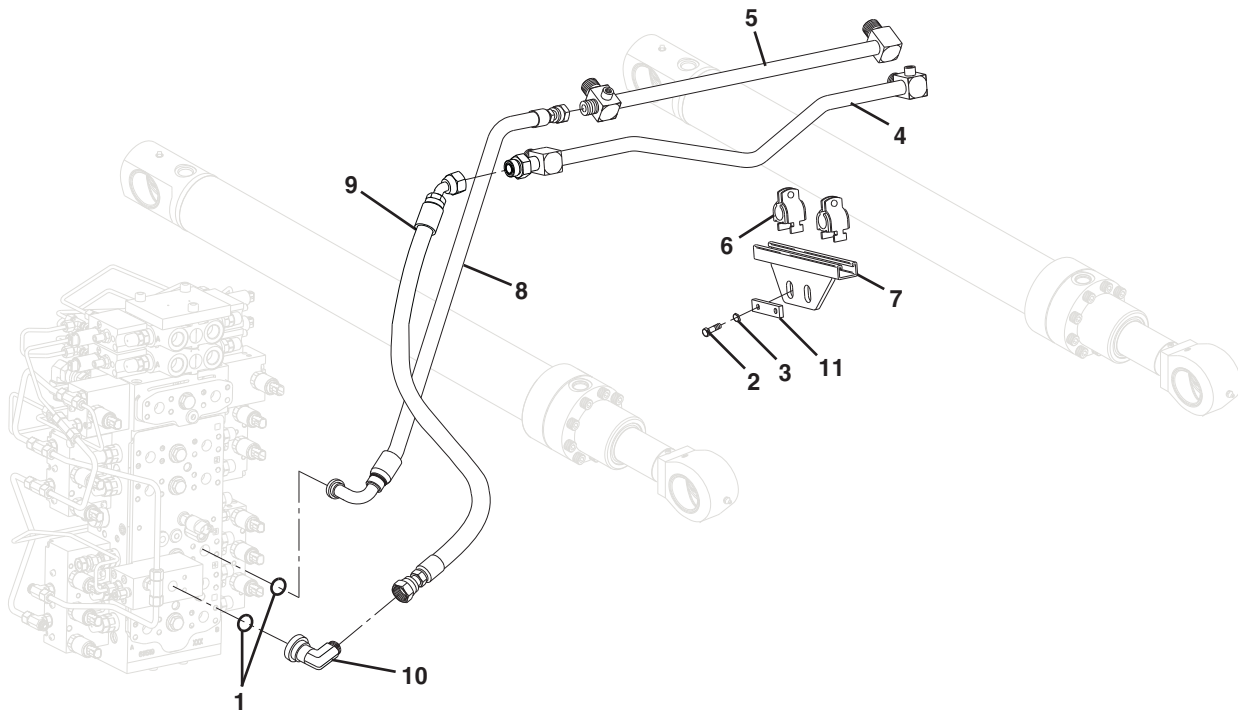


## Hoist Cylinder Hydraulic Circuit

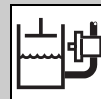
Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2		Ref	HOIST CYLINDER ASSY, (See page 9-2 for details)	
3	77133089	2	MINI-CHECK COUPLING, (includes item 4)	
4	83763056	2	VITON O-RING, (lubricate lightly)	
5	88662332	4	ELBOW, 90 DEGREES. (includes item 6)	
6	88501207	4	O-RING	
7	84719882	4	HOSE ASSY	
8	88591508	4	O-RING	
9	80933066	2	O-RING	
10	84712737	4	FLANGE HALF	
11	88201037	8	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
12	88551011	10	LOCKWASHER, 3/8	
13	80433023	1	TUBE ASSY, (hoist up), (this item is no longer available; order Hoist Tube Replacement Kit 80735055 located on page 8-20 for replacement)	
14	80433022	1	TUBE ASSY, (hoist down), (this item is no longer available; order Hoist Tube Replacement Kit 80735055 located on page 8-20 for replacement)	
15	91053413	2	CUSHION CLAMP, 1"	
16	80446007	1	CLAMP & CHANNEL WELDMENT	
17	83251291	1	COVER PLATE	
18	88201034	2	HEX HD CAPSCREW, 3/8-16X7/8, GR5	



## Hoist Tubes Replacement Kit

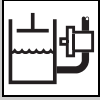


**NOTE: EXISTING MOUNTING HARDWARE WILL BE RE-USED FOR THE INSTALLATION OF THIS KIT**



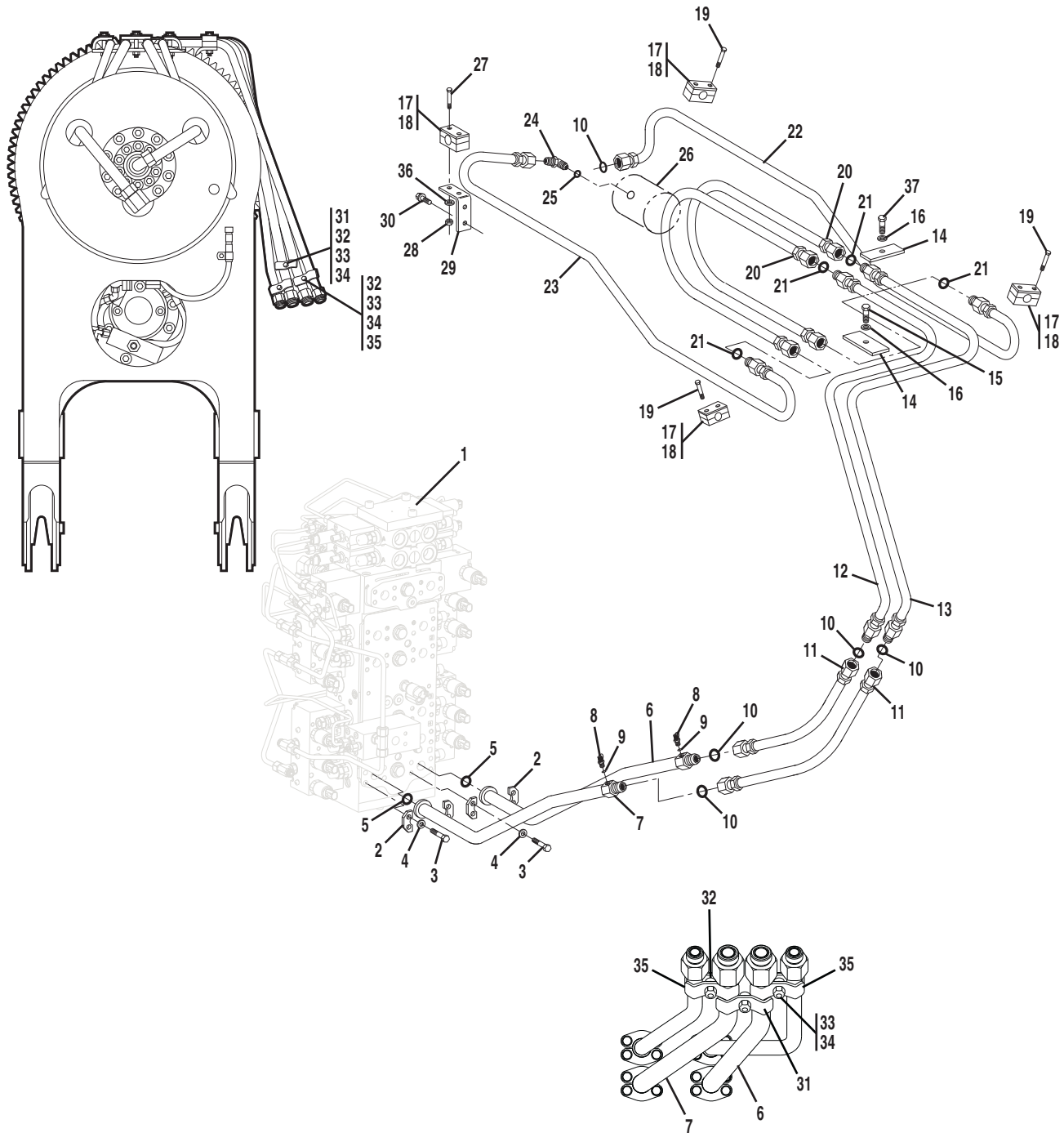
## Hoist Tubes Replacement Kit

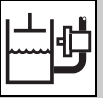
Item	Part Number	Qty.	Description	Rev.
	80735055	Ref	HOIST TUBES REPLACEMENT KIT, (includes all items)	-
1	80933066	2	O-RING	
2	88201037	2	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
3	88551011	2	LOCKWASHER, 1/2	
4	80733120	1	TUBE ASSY, (hoist up)	
5	80733119	1	TUBE ASSY, (hoist down)	
6	91053413	2	CUSHION CLAMP	
7	80736004	1	TUBE SUPPORT BRACKET	
8	84722489	1	HOSE ASSY	
9	84721992	1	HOSE ASSY	
10	88662866	1	ELBOW, 90 DEGREES	
11	83251291	1	COVER PLATE	



# HYDRAULIC CIRCUITS

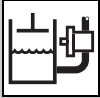
## Boom Cylinder Hydraulic Circuit





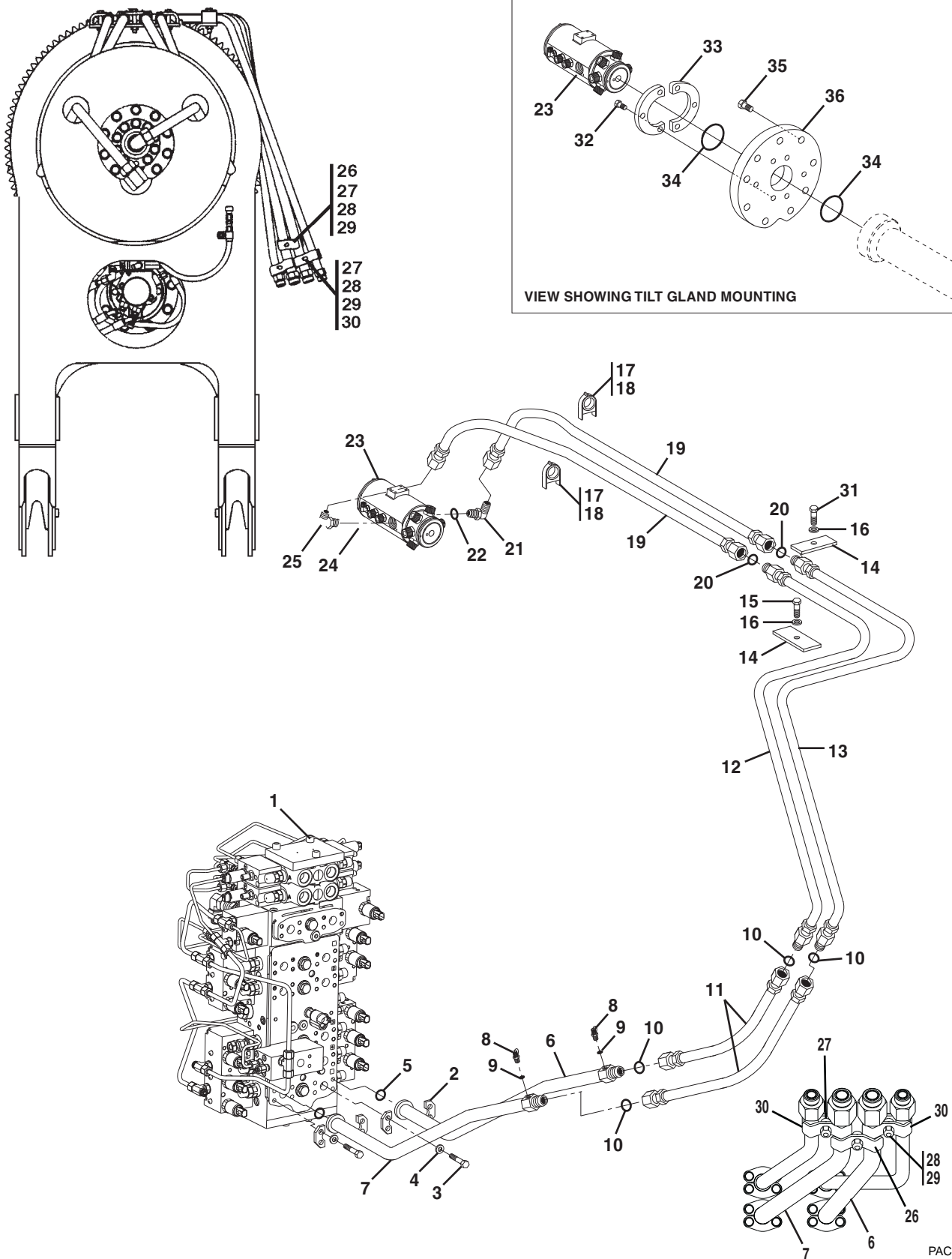
## Boom Cylinder Hydraulic Circuit

Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	84712737	4	FLANGE HALF	
3	88201037	8	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
4	88551011	8	LOCKWASHER, 3/8	
5	80933066	2	O-RING	
6	80433203	1	TUBE ASSY, (boom in)	
7	80433204	1	TUBE ASSY, (boom out)	
8	77133089	2	MINI-CHECK COUPLING, (includes item 9)	
9	83763056	2	VITON O-RING, (lubricate lightly)	
10	88591509	5	O-RING	
11	84719452	2	HOSE ASSY	
12	80423020	1	TUBE ASSY, (boom out)	
13	80423019	1	TUBE ASSY, (boom in)	
14	80321083	2	TUBE CLAMP	
15	88201071	1	HEX HD CAPSCREW, 1/2-13X2-1/2, GR5	
16	88551013	2	LOCKWASHER, 1/2	
17	83251291	4	COVER PLATE	
18	83251289	4	CLAMP SET	
19	88201042	6	HEX HD CAPSCREW, 3/8-16X2-3/4, GR5	
20	84719401	2	HOSE ASSY	
21	88591510	4	O-RING	
22	80423017	1	TUBE ASSY, (boom in)	
23	80423018	1	TUBE ASSY, (boom out)	
24	88662334	1	ELBOW, 90 DEGREES, (includes item 25)	
25	88591210	1	O-RING	
26		Ref	BOOM CYLINDER ASSY, (see page 9-12 for details)	
27	88201046	2	HEX HD CAPSCREW, 3/8-16X3-3/4, GR5	
28	88521206	2	HEX LOCKNUT, 3/8-16	
29	80421130	1	CLAMP BRACKET	
30	80973025	2	WHIZ-LOK SCREW, 3/8-16X1	
31	80321085	4	CLAMP	
32	80221281	6	SPACER	
33	88211073	6	SOCKET HD CAPSCREW, 3/8-16X1-1/2, GR8	
34	88521206	6	HEX LOCKNUT, 3/8-16	
35	80221277	8	CLAMP	
36	88561004	2	FLAT WASHER, 3/8	
37	88201073	1	HEX HD CAPSCREW, 1/2-13X3, GR5	
	80454036	A/R	TUBE CLAMP KIT, (includes qty. 2 of item 31; qty. 3 of items 32, 33 & 34 & qty. 4 of item 35)	



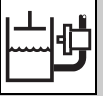
# HYDRAULIC CIRCUITS

## Boom Cylinder Hydraulic Circuit, (w/360° Boom Tilt)



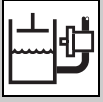
PAC14080





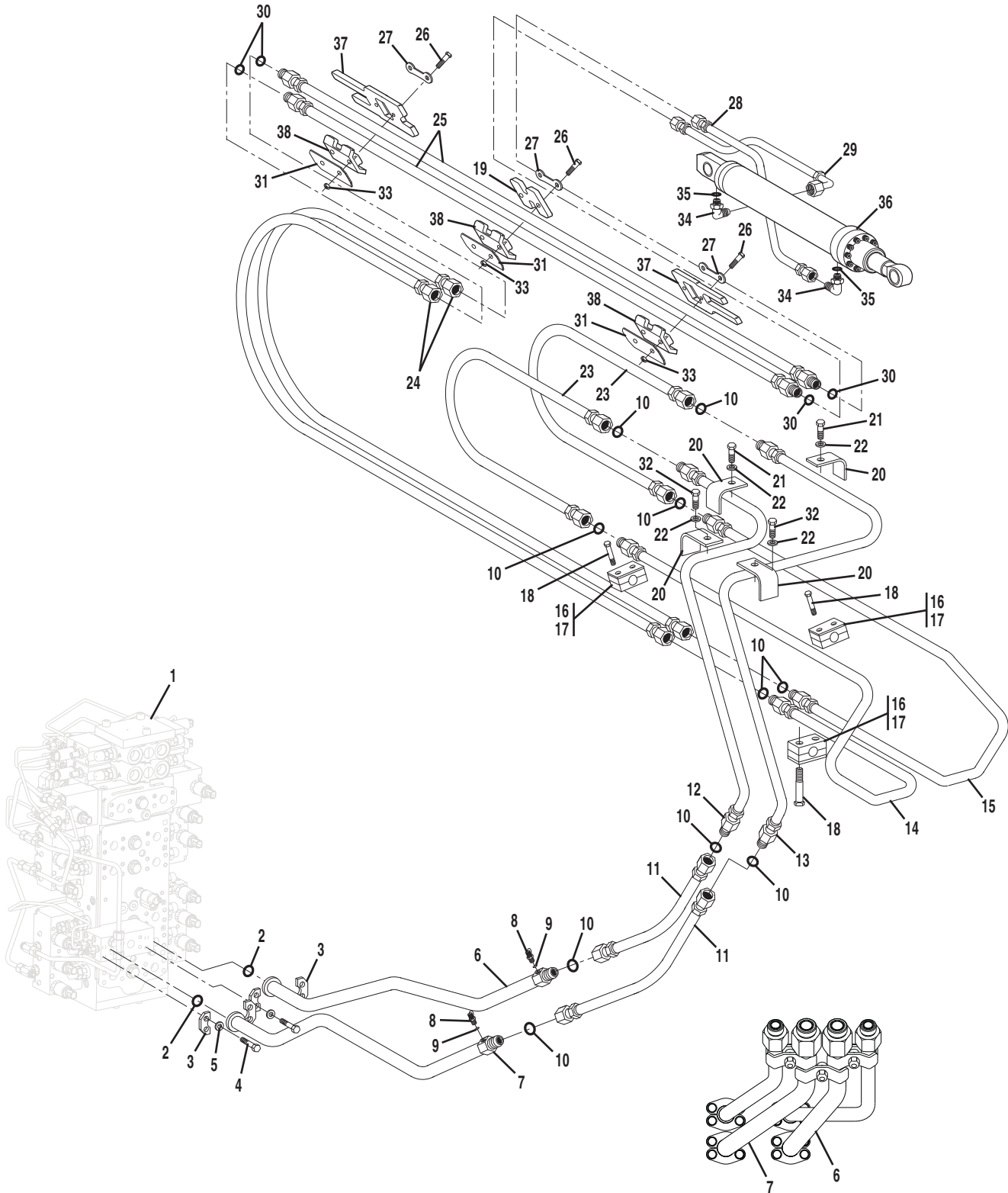
## Boom Cylinder Hydraulic Circuit, (w/360° Boom Tilt)

Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	84712737	4	FLANGE HALF	
3	88201037	8	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
4	88551011	8	LOCKWASHER, 3/8	
5	80933066	2	O-RING	
6	80433203	1	TUBE ASSY, (boom in)	
7	80433204	1	TUBE ASSY, (boom out)	
8	77133089	2	MINI-CHECK COUPLING, (includes item 9)	
9	83763056	2	VITON O-RING, (lubricate lightly)	
10	88591509	4	O-RING	
11	84719452	2	HOSE ASSY,	
12	80423020	1	TUBE ASSY, (boom out)	
13	80423019	1	TUBE ASSY, (boom in)	
14	80321083	2	TUBE CLAMP	
15	88201071	1	HEX HD CAPSCREW, 1/2-13X2-1/2, GR5	
16	88551013	2	LOCKWASHER, 1/2	
17	90205793	2	HYDRA-ZORB CLAMP, 1-1/2	
18	80991124	4	INSERT	
19	84721362	2	HOSE ASSY	
20	88591510	2	O-RING	
21	88662336	1	ELBOW, 90 DEGREES, (includes item 22)	
22	88591207	1	O-RING	
23	80423033	1	TILT GLAND	
24	88591209	1	O-RING	
25	88662333	1	ELBOW, 90 DEGREES, (includes item 24)	
26	80321085	4	CLAMP	
27	80221281	6	SPACER	
28	88211073	6	SOCKET HD CAPSCREW, 3/8-16X1-1/2, GR8	
29	88521206	6	HEX LOCKNUT, 3/8-16	
30	80221277	8	CLAMP	
31	88201073	1	HEX HD CAPSCREW, 1/2-13X3, GR5	
32	88212257	6	SOCKET HD CAPSCREW, 5/8-11X1-3/4	
33	80321201	2	GLAND CLAMP PLATE	
34	88591115	2	O-RING	
35	88212256	9	SOCKET HD CAPSCREW, 5/8-11X1-1/2	
36	80321202	1	GLAND MOUNTING PLATE	
	80424034	1	TILT GLAND SEAL KIT	
	80454036	A/R	TUBE CLAMP KIT, (includes qty. 2 of item 26, qty. 3 of items 27, 28 & 29 & qty. 4 of item 30)	



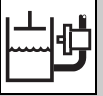
# HYDRAULIC CIRCUITS

## Tool Cylinder Hydraulic Circuit



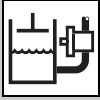
SEE PAGE 8-22 FOR  
CLAMP INFORMATION

PAC1374



## Tool Cylinder Hydraulic Circuit

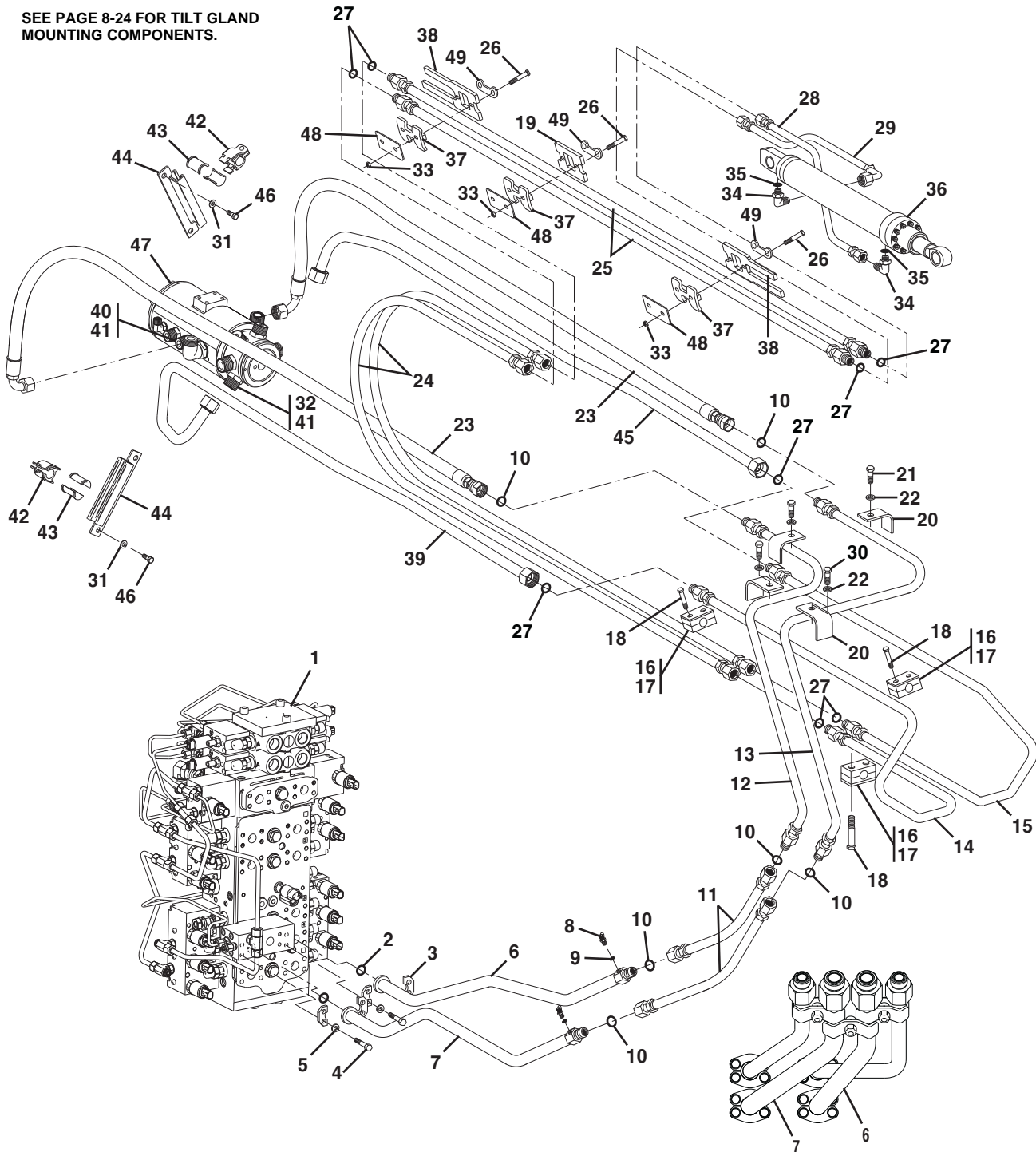
Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	80933066	2	O-RING	
3	84712737	4	FLANGE HALF	
4	88201037	8	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
5	88551011	8	LOCKWASHER, 3/8	
6	80433027	1	TUBE ASSY, (tool open)	
7	80433026	1	TUBE ASSY, (tool close)	
8	77133089	2	MINI-CHECK COUPLING, (includes item 9)	
9	83763056	2	VITON O-RING, (lubricate lightly)	
10	88591508	10	O-RING	
11	84719337	2	HOSE ASSY	
12	80423022	1	TUBE ASSY, (tool open)	
13	80423021	1	TUBE ASSY, (tool close)	
14	3460463	1	TUBE ASSY	
15	3460464	1	TUBE ASSY	
16	83253009	6	CLAMP SET	
17	83253010	6	COVER PLATE	
18	88201042	4	HEX HD CAPSCREW, 3/8-16X2-3/4, GR5	
19	80321137	1	CENTER CLAMP BOTTOM PLATE	
20	80321084	4	TUBE CLAMP	
21	88201073	2	HEX HD CAPSCREW, 1/2-13X3, GR5	
22	88551013	4	LOCKWASHER, 1/2	
23	84718116	2	HOSE ASSY	
24	2754405	2	HOSE ASSY	
25	80823001	2	STRAIGHT TUBE ASSY, (XL3100III)	
	3460577	2	STRAIGHT TUBE ASSY, (XL4100III)	
	80523002	2	STRAIGHT TUBE ASSY, (XL5100III)	
26	88201068	6	HEX HD CAPSCREW, 1/2-13X1-3/4, GR5	
27	80221278	3	KEEPER, (old-style)	
	88561111	6	FLAT WASHER, 1/2, (new-style)	
28	2754396	1	HOSE ASSY	
29	84721544	1	HOSE ASSY	
30	88591509	4	O-RING	
31	80421121	3	KEEPER PLATE	
32	88201071	2	HEX HD CAPSCREW, 1/2-13X2-1/2, GR5	
33	88521008	6	HEX LOCKNUT, 1/2-13	
34	88662332	2	ELBOW, 90 DEGREES, (includes item 35)	
35	88591207	2	O-RING	
36		Ref	TOOL CYLINDER ASSY, (see page 9-28 for details)	
37	80321136	2	BOTTOM PLATE	
38	80423038	3	TUBE CLAMP CAST	



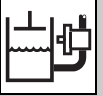
# HYDRAULIC CIRCUITS

## Tool Cylinder Hydraulic Circuit, (w/360° Boom Tilt)

SEE PAGE 8-24 FOR TILT GLAND MOUNTING COMPONENTS.

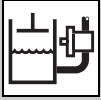


SEE PAGE 8-24 FOR CLAMP INFORMATION



## Tool Cylinder Hydraulic Circuit, (w/360° Boom Tilt)

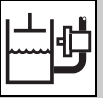
Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	80933066	2	O-RING	
3	84712737	4	FLANGE HALF	
4	88201037	8	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
5	88551011	8	LOCKWASHER, 3/8	
6	80433027	1	TUBE ASSY, (tool open)	
7	80433026	1	TUBE ASSY, (tool close)	
8	77133089	2	MINI-CHECK COUPLING, (includes item 9)	
9	83763056	2	VITON O-RING, (lubricate lightly)	
10	88591508	6	O-RING	
11	84719337	2	HOSE ASSY	
12	80423022	1	TUBE ASSY, (tool open)	
13	80423021	1	TUBE ASSY, (tool close)	
14	80523008	1	TUBE ASSY	
15	80523009	1	TUBE ASSY	
16	83253009	4	CLAMP SET	
17	83253010	4	COVER PLATE	
18	88201042	12	HEX HD CAPSCREW, 3/8-16X2-3/4, GR5	
19	80321137	1	CENTER CLAMP PLATE	
20	80321084	4	TUBE CLAMP	
21	88201073	2	HEX HD CAPSCREW, 1/2-13X3, GR5	
22	88551013	4	LOCKWASHER, 1/2	
23	84721361	2	HOSE ASSY	
24	84721313	2	HOSE ASSY	
25	80823001	2	STRAIGHT TUBE ASSY, (XL3100III)	
	3460577	2	STRAIGHT TUBE ASSY, (XL4100III)	
	80523002	2	STRAIGHT TUBE ASSY, (XL5100III)	
26	88201068	6	HEX HD CAPSCREW, 1/2-13X1-3/4, GR5	
27	88591509	8	O-RING	
28	2754396	1	HOSE ASSY	
29	84721544	1	HOSE ASSY	
30	88201071	2	HEX HD CAPSCREW, 1/2-13X2-1/2, GR5	
31	90027470	4	HARDENED WASHER	
32	88662566	2	CONNECTOR, (includes item 41)	
33	88521008	6	HEX NUT, 1/2-13	
34	88662332	2	ELBOW, 90 DEGREES, (includes item 35)	
35	88591207	2	O-RING	
36		Ref	TOOL CYLINDER ASSY, (see page 9-28 for details)	
37	80423038	3	TOP CLAMP WELDMENT	
38	80321136	2	BOTTOM PLATE	
39	80523005	1	TUBE ASSY	
40	88662311	2	ADAPTER, (includes item 41)	
41	88591206	6	O-RING	
42	91053413	2	HYDRA-ZORB CLAMP, 1-1/4	
43	80521042	4	INSERT	
44	80526012	2	CLAMP WELDMENT	
45	80523006	1	TUBE ASSY	
46	88201035	4	HEX HD CAPSCREW, 3/8-16X1, GR5	
47		Ref	TILT GLAND, (see page 8-24 for details)	



# HYDRAULIC CIRCUITS

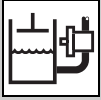
## Tool Cylinder Hydraulic Circuit, (w/360° Boom Tilt)

Item	Part Number	Qty.	Description	Rev.
48	80421121	3	KEEPER PLATE	
49	80221278	3	KEEPER, (old-style)	
	88561111	6	FLAT WASHER, 1/2, (new-style)	



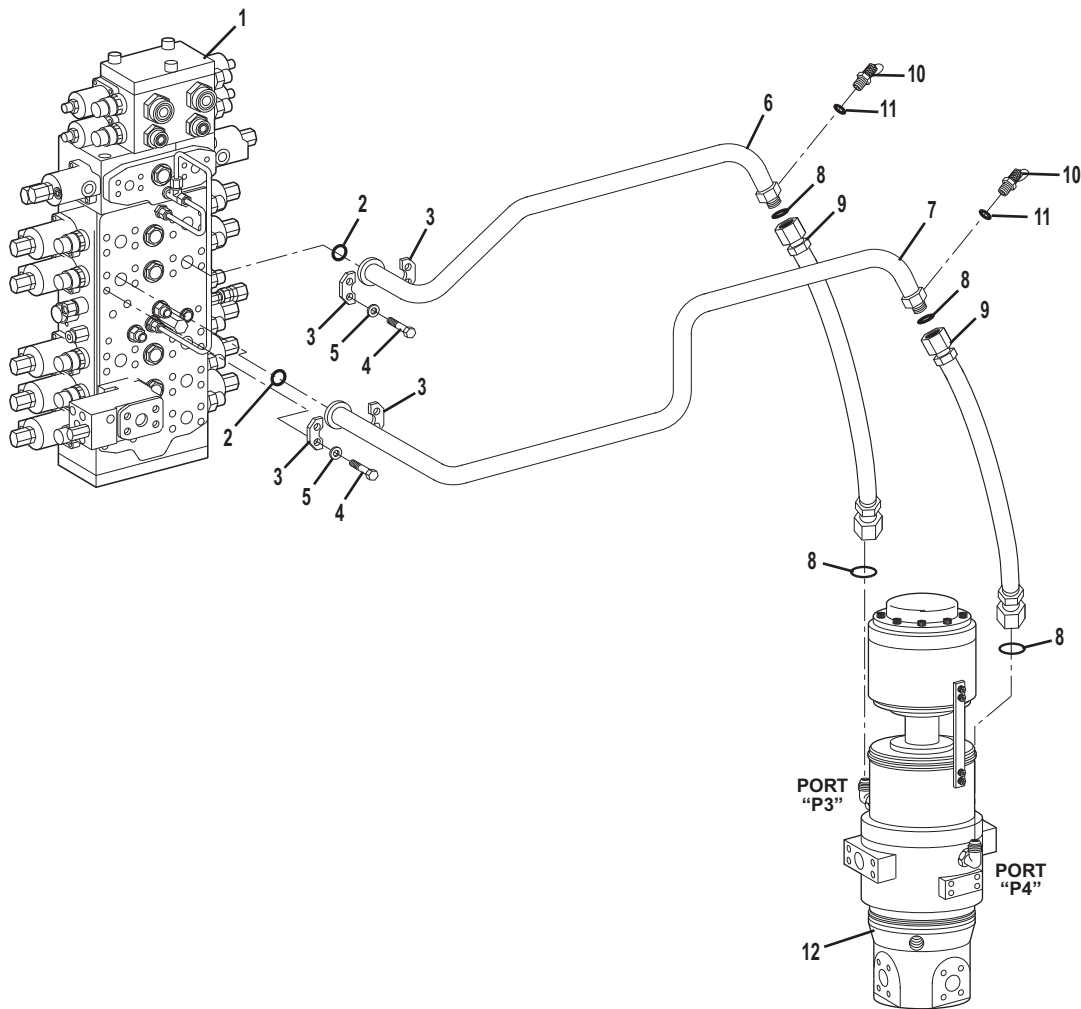
## Tool Cylinder Hydraulic Circuit, (w/360° Boom Tilt)

Item	Part Number	Qty.	Description	Rev.

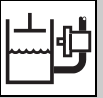


# HYDRAULIC CIRCUITS

## Propel Hydraulic Circuit

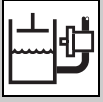






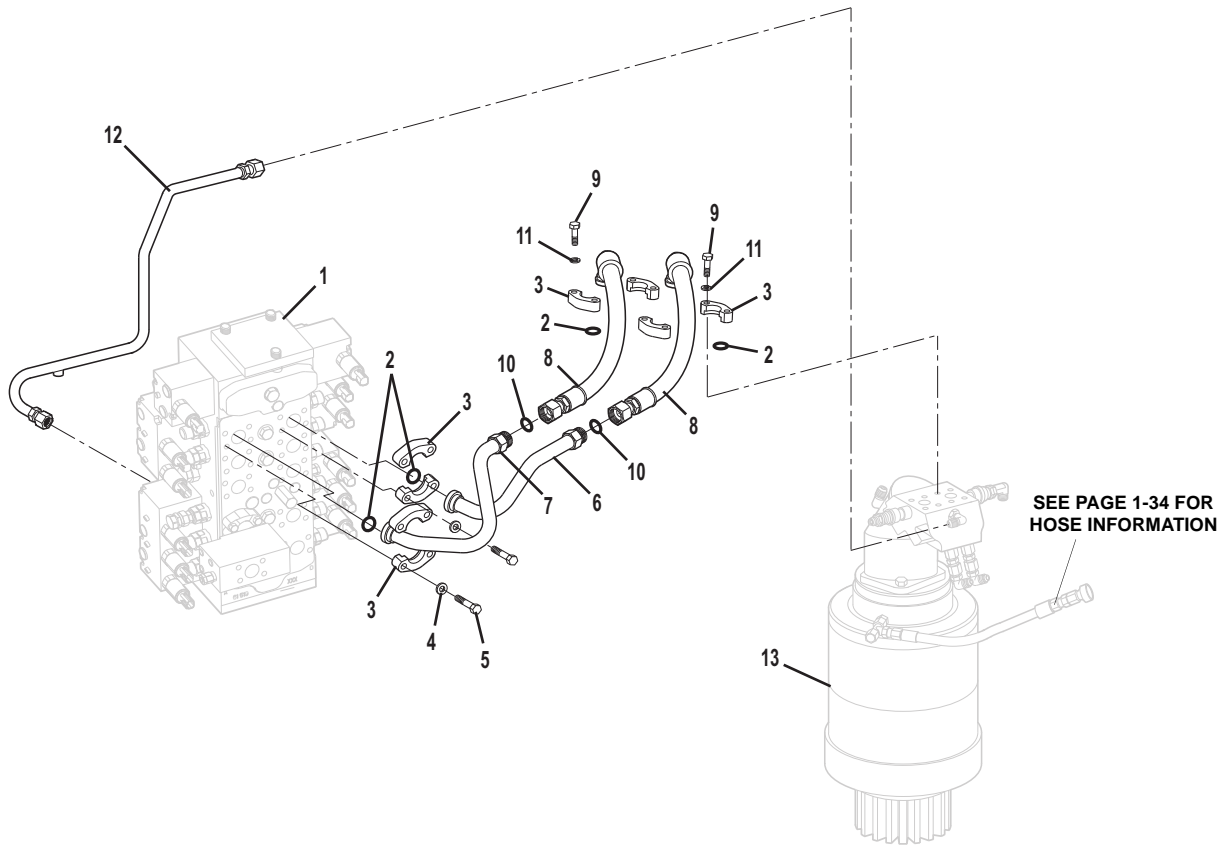
## Propel Hydraulic Circuit

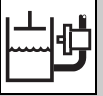
Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	80933066	2	O-RING	
3	84712737	4	FLANGE HALF	
4	88201037	8	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
5	88551011	8	LOCKWASHER, 3/8	
6	80433093	1	TUBE ASSY, (propel B)	
7	80433092	1	TUBE ASSY, (propel A)	
8	88591509	4	O-RING	
9	84719500	2	HOSE ASSY	
10	77133089	2	MINI-CHECK COUPLING, (includes item 11)	
11	83763056	2	VITON O-RING, (lubricate lightly)	
12		Ref	CENTER PIN INSTALLATION & ASSY, (see page 9-102 for details)	



# HYDRAULIC CIRCUITS

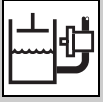
## Swing Motor Hydraulic Circuit



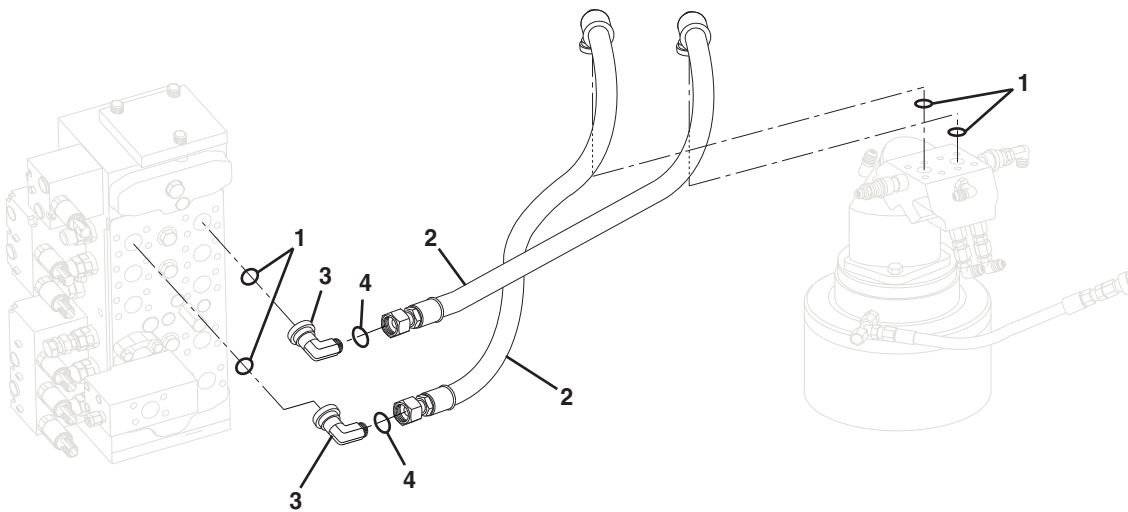


## Swing Motor Hydraulic Circuit

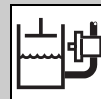
Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	80933066	4	O-RING	
3	84712737	8	FLANGE HALF	
4	88551011	8	LOCKWASHER, 3/8	
5	88201037	4	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
6	80433031	1	TUBE ASSY, (swing B), (this item is no longer available; order Swing Tube Replacement Kit 84719758S located on page 8-36 for replacement)	
7	80433135	1	TUBE ASSY, (swing A), (this item is no longer available; order Swing Tube Replacement Kit 84719758S located on page 8-36 for replacement)	
8	84719881	2	HOSE ASSY	
9	83191027	8	HEX HD CAPSCREW, M10-1.5x35, GR8.8	
10	88591508	2	O-RING	
11	83191013	8	LOCKWASHER, M10	
12	3460513	1	TUBE ASSY	
13		Ref	SWING TRANSMISSION ASSY, (see page 9-72 for details)	



**Swing Tubes Replacement Kit**

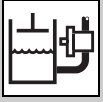


**NOTE: EXISTING MOUNTING HARDWARE WILL BE RE-USED FOR THE INSTALLATION OF THIS KIT**



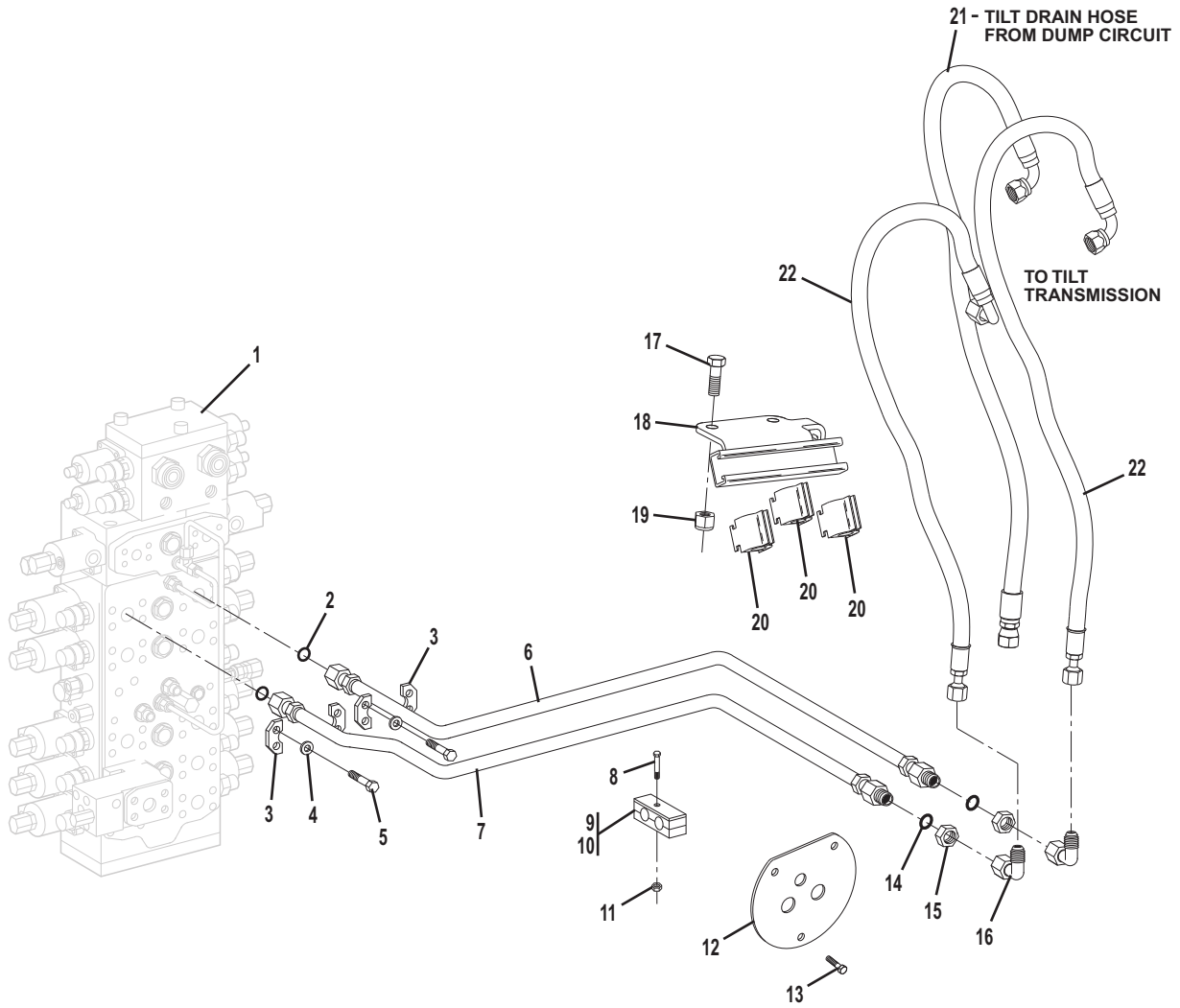
## Swing Tubes Replacement Kit

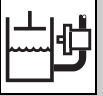
Item	Part Number	Qty.	Description	Rev.
	84719758S	Ref	SWING TUBES REPLACEMENT KIT, (includes all items)	D
1	80933066	4	O-RING	
2	84719758	2	HOSE ASSY	
3	88662866	2	ELBOW, 90 DEGREES	
4	88591508	2	O-RING	



# HYDRAULIC CIRCUITS

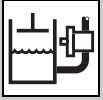
## Tilt Motor Hydraulic Circuit





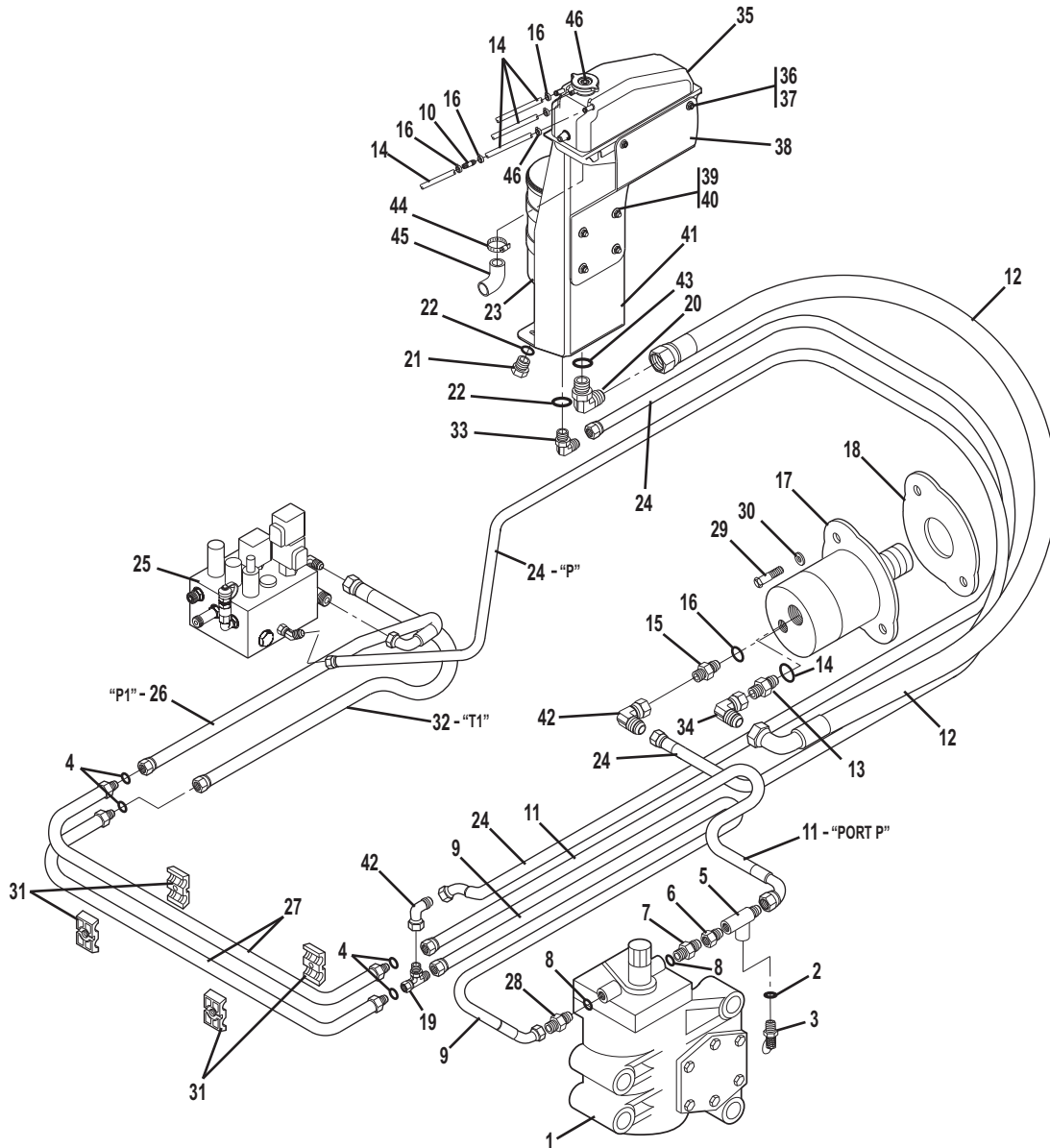
## Tilt Motor Hydraulic Circuit

Item	Part Number	Qty.	Description	Rev.
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY, (see page 9-48 for details)	
2	80933066	2	O-RING	
3	84712737	4	FLANGE HALF	
4	88551011	8	LOCKWASHER, 3/8	
5	88201037	8	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
6	80433091	1	TUBE ASSY, (tilt A)	
7	80433090	1	TUBE ASSY, (tilt B)	
8	88201024	1	HEX HD CAPSCREW, 5/16-18X2, GR5	
9	77133139	1	CLAMP SET	
10	77143140	2	COVER PLATE	
11	88521205	1	HEX LOCKNUT, 5/16-18	
12	80731001	1	BULKHEAD PLATE	
13	80303094	3	WHIZ-LOK SCREW, 3/8-16X3/4	
14	88591506	2	O-RING	
15	88662503	2	BULKHEAD LOCKNUT	
16	88662372	2	ELBOW, 90 DEGREES, (swivel nut)	
17	88201067	2	HEX HD CAPSCREW, 1/2-13X1-1/2, GR5	
18	80421120	1	PLATE	
19	88521208	2	HEX LOCKNUT, 1/2-13	
20	90207463	3	CUSHION CLAMP	
21	84721042	1	HOSE ASSY	
22	84719955	2	HOSE ASSY	

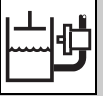


# HYDRAULIC CIRCUITS

## Steering Gear Hydraulic Circuit

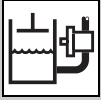






## Steering Gear Hydraulic Circuit

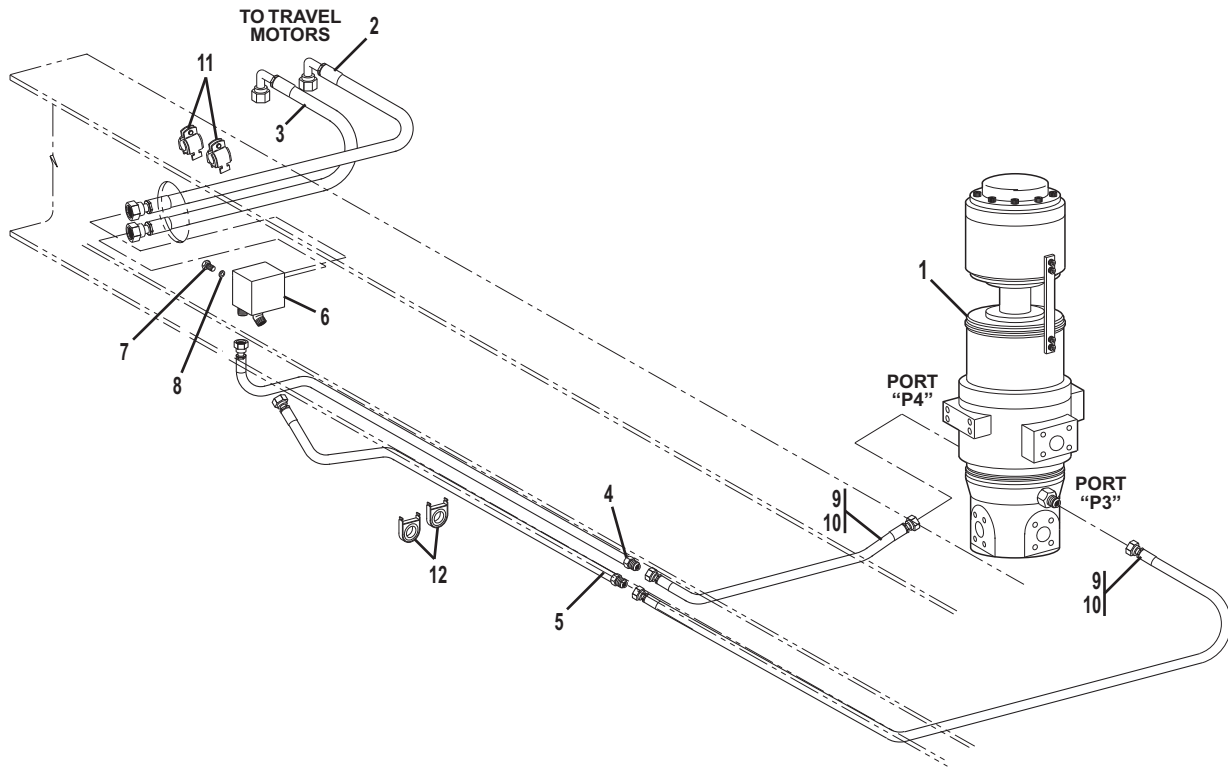
Item	Part Number	Qty.	Description	Rev.
1		Ref	STEERING GEAR ASSY, (see page 9-120 for details)	
2	83763056	1	VITON O-RING, (lubricate lightly)	
3	77133089	1	MINI-CHECK COUPLING, (includes item 2)	
4	88591506	4	O-RING	
5	80633113	1	SPECIAL RUN TEE	
6	77363082	1	REDUCING BUSHING	
7	88662440	1	CONNECTOR, (includes item 8)	
8	88591204	2	O-RING	
9	84721019	1	HOSE ASSY	
10	80481144	1	VENT LINE REDUCER	
11	84719943	1	HOSE ASSY	
12		Ref	HOSE ASSY, (see page 4-2, item 104, for details)	
13		Ref	CONNECTOR, (see page 4-2, item 141, for details)	
14		AR	HOSE ASSY	
15		Ref	CONNECTOR, (see page 4-2, item 146, for details)	
16	86883106	7	HOSE CLAMP	
17		Ref	POWER STEERING PUMP, (see page 4-2 for details)	
18		Ref	POWER STEERING PUMP GASKET, (see page 4-2 for details)	
19	88662438	1	RUN TEE	
20	88662422	1	ELBOW, 45 DEGREES, (includes item 43)	
21	88662175	1	HEX HD PLUG, (includes item 22)	
22	88591205	2	O-RING	
23		Ref	POWER STEERING RESERVOIR ASSY, (see page 4-14 for details)	
24	84721017	2	HOSE ASSY	
25		Ref	STEERING VALVE ASSY, (see page 9-124 for details)	
26	84719932	1	HOSE ASSY	
27	80483051	2	TUBE ASSY	
28	88662301	1	CONNECTOR, (includes item 8)	
29		Ref	SOCKET HD CAPSCREW, (see page 4-2, item 91, for details)	
30		2	LOCKWASHER, M10, (see page 4-2, item 89, for details)	
31	91083217	4	CLAMP	
32	84719942	1	HOSE ASSY	
33	88662330	1	ELBOW, 90 DEGREES, (includes item 22)	
34		Ref	ELBOW, 90 DEGREES, (see page 4-2, item 145, for details)	
35	80483230	1	DEAERATION TANK, (includes item 46)	
36	77143006	4	WHIZ-LOK NUT, 5/16-18	
37	77143003	4	WHIZ-LOK SCREW, 5/16-18X5/8	
38	80481134	1	SURGE TANK PLATE	
39	77143015	4	WHIZ-LOCK NUT, 3/8-16	
40	80973025	4	WHIZ-LOK SCREW, 3/8-16X1	
41	80481096	1	RESERVOIR BRACKET	
42	88662372	2	ELBOW, 90 DEGREES, (swivel nut)	
43	88591209	1	O-RING	
44	86971172	1	HOSE CLAMP	
45	80483228	1	FORMED ELBOW	
46	80484259	1	DEAERATION TANK CAP	



# HYDRAULIC CIRCUITS

Before S/N's  
XL3100III 3120000191 (4X2) & 3140000295 (4X4);  
XL4100III 4100000392 (6X4) & 4160000043 (6X6);  
XL5100III 5100000577 (6X4 & 6X6)

## Remote Propelling Hydraulic Circuit



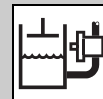
Before S/N's

XL3100III 3120000191 (4X2) & 3140000295 (4X4);

XL4100III 4100000392 (6X4) & 4160000043 (6X6);

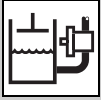
XL5100III 5100000577 (6X4 & 6X6)

## HYDRAULIC CIRCUITS



### Remote Propelling Hydraulic Circuit

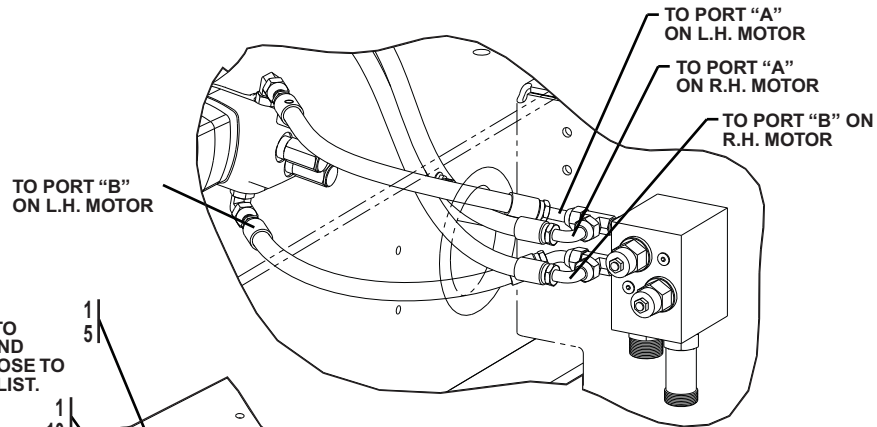
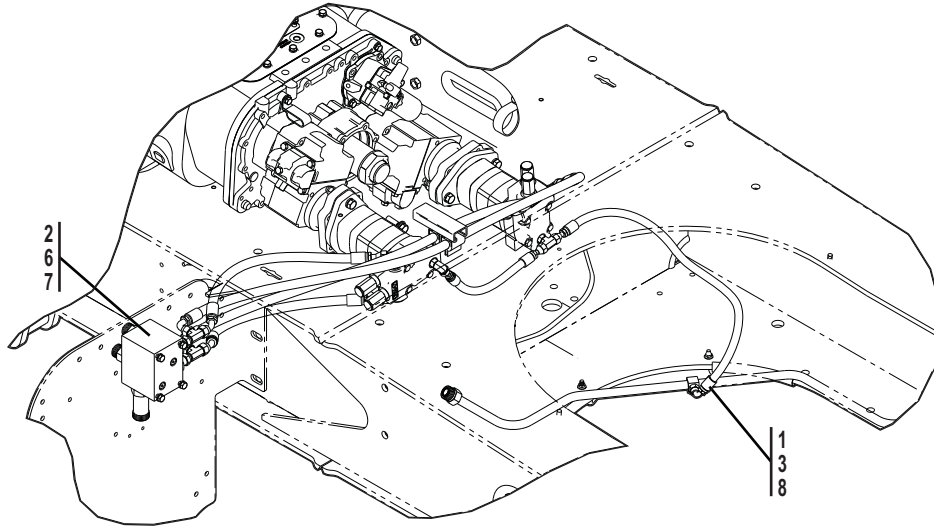
Item	Part Number	Qty.	Description	Rev.
1		Ref	CENTER PIN INSTALLATION & ASSY, (see page 9-102 for details)	
2	84721121	1	HOSE ASSY	
3	84721120	1	HOSE ASSY	
4	80883006	1	TUBE ASSY, (XL3100III)	
	3460511	1	TUBE ASSY, (XL4100III & XL5100III)	
5	80883007	1	TUBE ASSY, (XL3100III)	
	3460510	1	TUBE ASSY, (XL4100III & XL5100III)	
6		Ref	COUNTERBALANCE VALVE ASSY, (see page 9-126 for details)	
7	88201035	2	HEX HD CAPSCREW, 3/8-16X1, GR5, (torque to 68-78 lb-ft)	
8	88551011	2	LOCKWASHER, 3/8	
9	84719954	2	HOSE ASSY	
10	88591509	2	O-RING	
11	90205792	2	CUSHION CLAMP, 1-1/4	
12	91053413	2	CUSHION CLAMP, 1"	



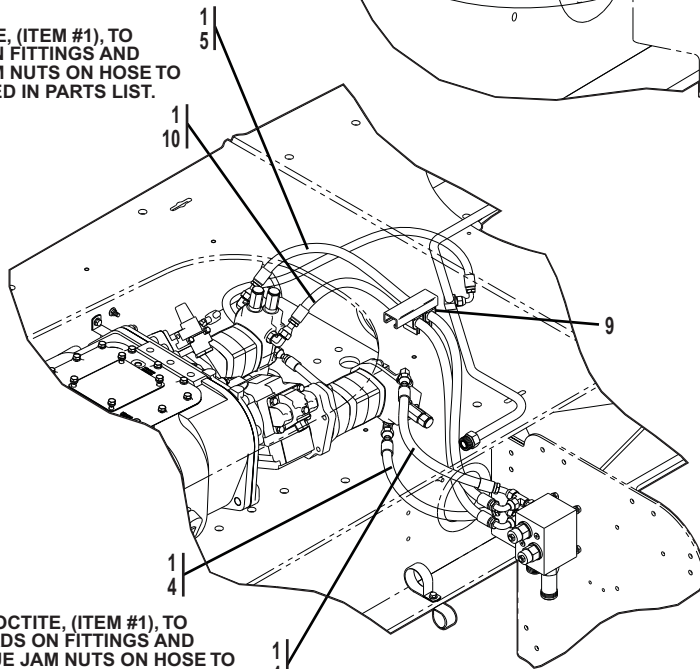
# HYDRAULIC CIRCUITS

After (& including) S/N's  
XL3100III 3120000191 (4X2) & 3140000295 (4X4);  
XL4100III 4100000392 (6X4) & 4160000043 (6X6);  
XL5100III 5100000577 (6X4 & 6X6)

## Remote Propelling Hydraulic Circuit



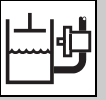
ADD LOCTITE, (ITEM #1), TO  
THREADS ON FITTINGS AND  
TORQUE JAM NUTS ON HOSE TO  
SPECS LISTED IN PARTS LIST.



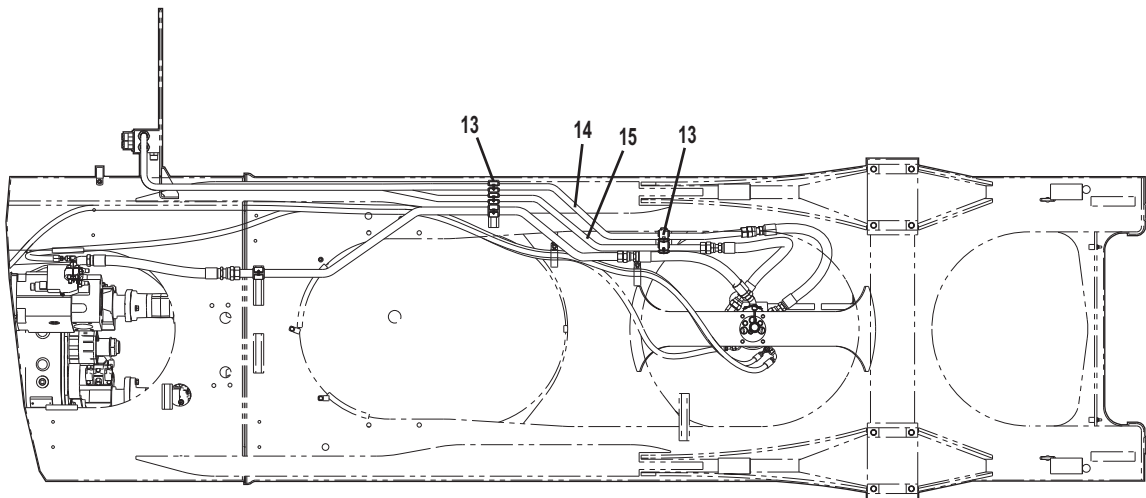
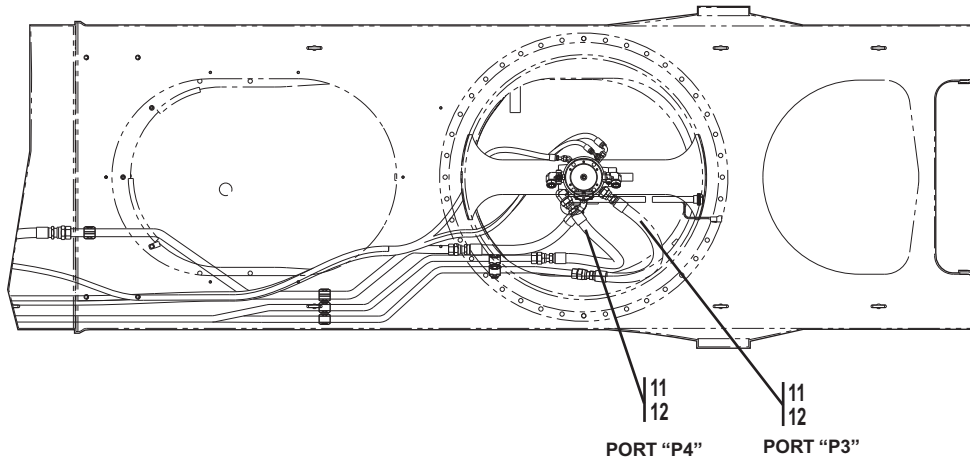
ADD LOCTITE, (ITEM #1), TO  
THREADS ON FITTINGS AND  
TORQUE JAM NUTS ON HOSE TO  
SPECS LISTED IN PARTS LIST.

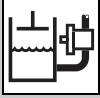
After (& including) S/N's  
XL3100III 3120000191 (4X2) & 3140000295 (4X4);  
XL4100III 4100000392 (6X4) & 4160000043 (6X6);  
XL5100III 5100000577 (6X4 & 6X6)

## HYDRAULIC CIRCUITS



### Remote Propelling Hydraulic Circuit





# HYDRAULIC CIRCUITS

After (& including) S/N's  
 XL3100III 3120000191 (4X2) & 3140000295 (4X4);  
 XL4100III 4100000392 (6X4) & 4160000043 (6X6);  
 XL5100III 5100000577 (6X4 & 6X6)

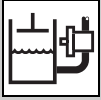
## Remote Propelling Hydraulic Circuit

Item	Part Number	Qty.	Description	Rev.
1	14404043	AR	LOCTITE, (#545 purple)	
2		Ref	COUNTERBALANCE VALVE ASSY, (see page 9-126 for details)	
3	84721175	1	HOSE ASSY	
4	84719640	2	HOSE ASSY, (torque hose nuts to 40-42 lb-ft)	
5	84721118	1	HOSE ASSY, (torque hose nuts to 40-42 lb-ft)	
6	88201035	4	HEX HD CAPSCREW, 3/8-16X1, GR5, (lubricate & torque to 68-78 lb-ft)	
7	88551011	4	LOCKWASHER, 3/8	
8	88501505	1	O-RING	
9	90207463	2	CUSHION CLAMP, 3/4	
10	84721618	1	HOSE ASSY, (torque hose nuts to 40-42 lb-ft)	
11	84719954	2	HOSE ASSY	
12	88591509	2	O-RING	
13	91053413	4	CUSHION CLAMP, 1"	
14	80883006	1	TUBE ASSY, (XL3100III)	
	3460511	1	TUBE ASSY, (XL4100III & XL5100III)	
15	80883007	1	TUBE ASSY, (XL3100III)	
	3460510	1	TUBE ASSY, (XL4100III & XL5100III)	

After (& including) S/N's  
XL3100III 3120000191 (4X2) & 3140000295 (4X4);  
XL4100III 4100000392 (6X4) & 4160000043 (6X6);  
XL5100III 5100000577 (6X4 & 6X6)

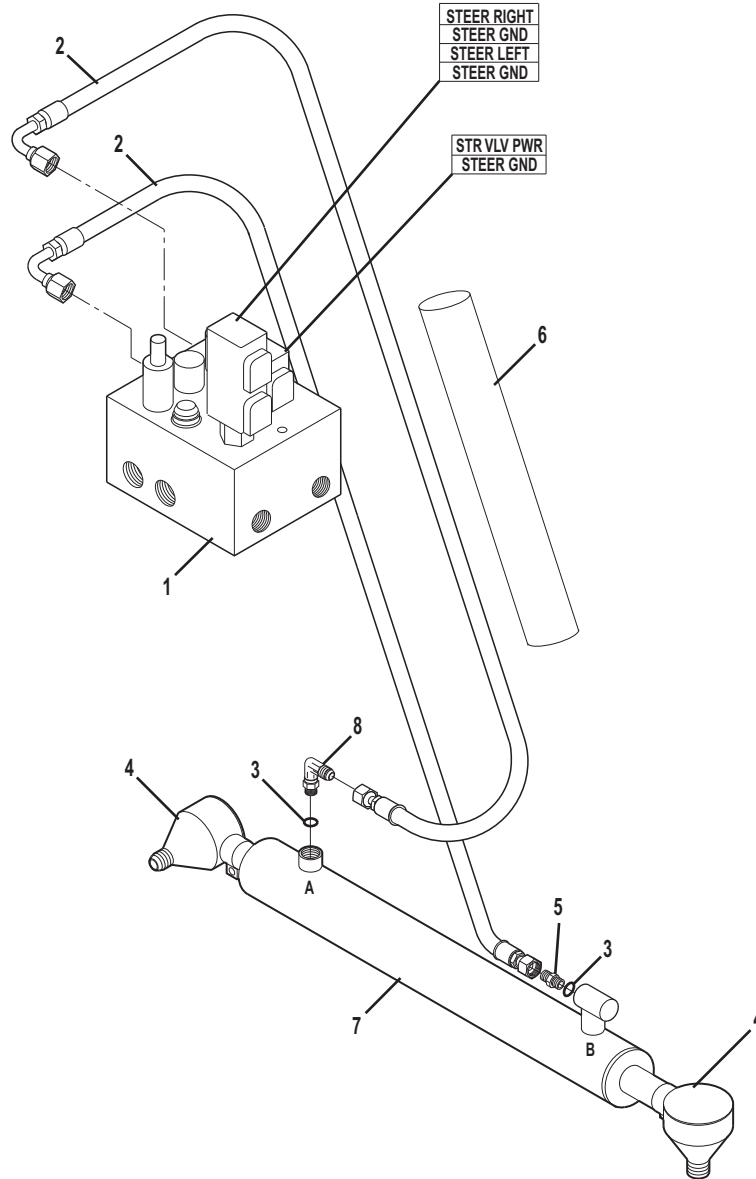
**Remote Propelling Hydraulic Circuit**

Item	Part Number	Qty.	Description	Rev.

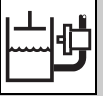


# HYDRAULIC CIRCUITS

## Remote Steering Hydraulic Circuit

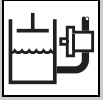






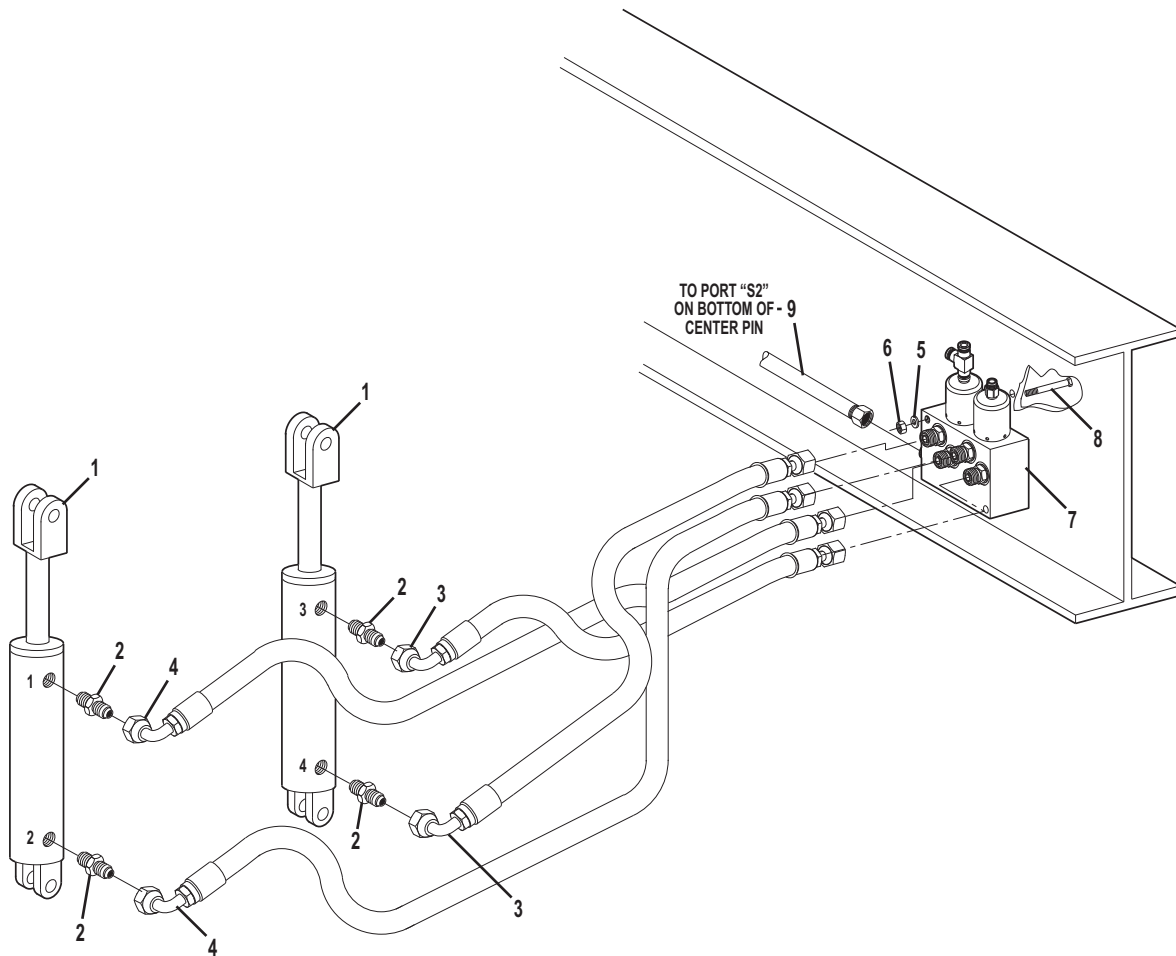
## Remote Steering Hydraulic Circuit

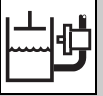
Item	Part Number	Qty.	Description	Rev.
1		Ref	STEERING VALVE ASSY, (see page 9-124 for details)	
2	84719941	2	HOSE ASSY	
3	88591204	2	O-RING	
4	80983161	2	VERTICAL SOCKET ASSY, (includes all hardware)	
5	88662301	1	CONNECTOR, (includes item 3)	
6	83953053	1	HOSE COVER	
7	80483120	1	REMOTE STEERING HYDRAULIC CYLINDER ASSY	
8	88662329	1	ELBOW, 90 DEGREES, (includes item 3)	



# HYDRAULIC CIRCUITS

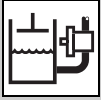
## Stabilizer Cylinder Hydraulic Circuit



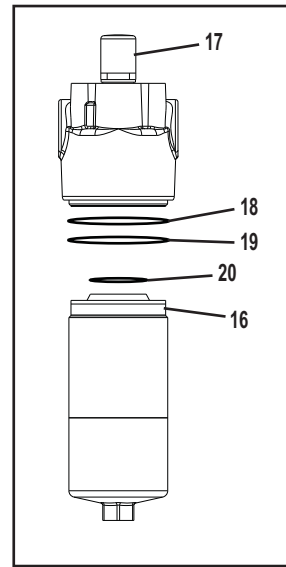
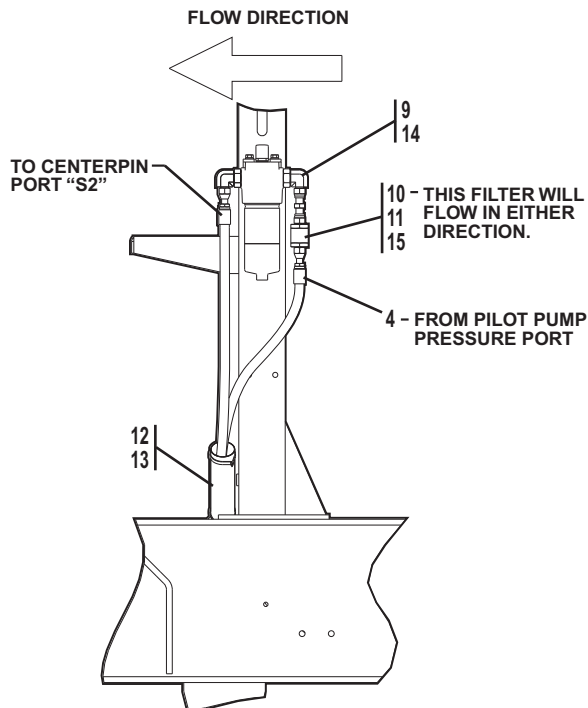
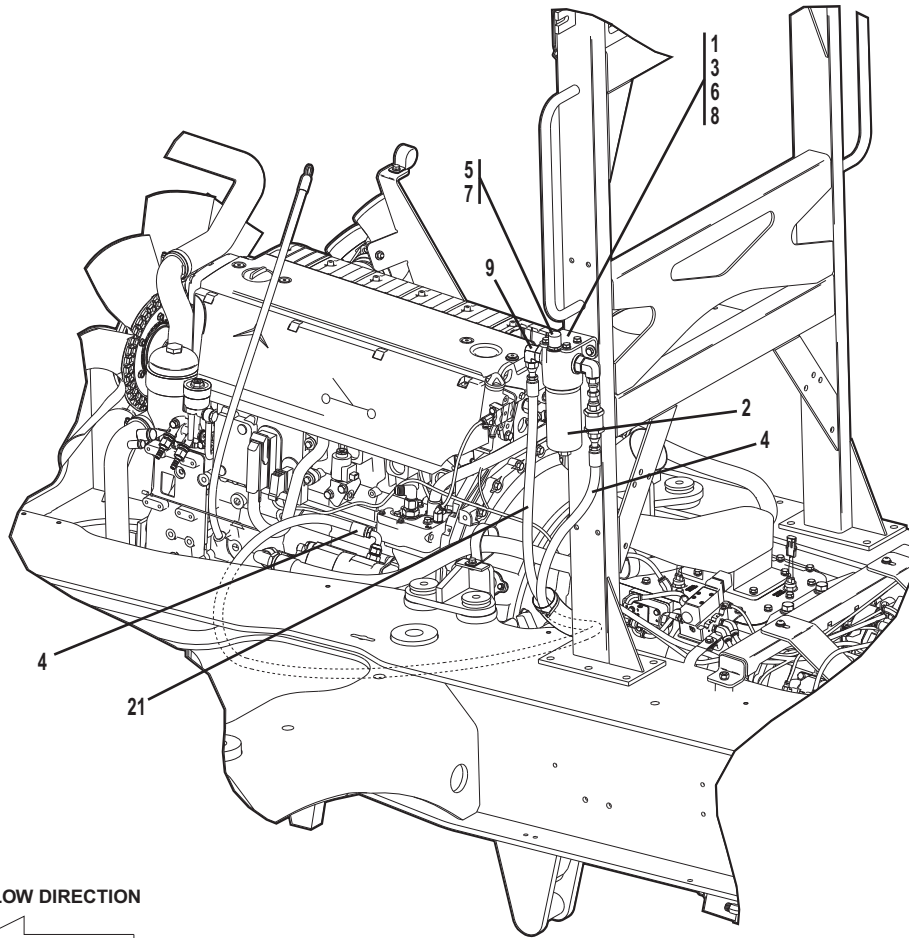


## Stabilizer Cylinder Hydraulic Circuit

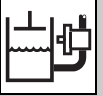
Item	Part Number	Qty.	Description	Rev.
1	80383097	2	STABILIZER CYLINDER ASSY, (no service parts available for this component)	
	77364083	4	STABILIZER CYLINDER PIN CLIP	
2	88662401	4	CONNECTOR	
3	84721176	2	HOSE ASSY	
4	84721175	2	HOSE ASSY	
5	88551009	2	LOCKWASHER, 1/4	
6	88501004	2	HEX NUT, 1/4-20	
7		Ref	STABILIZER VALVE ASSY, (see page 9-34 for details)	
8	88201012	2	HEX HD CAPSCREW, 1/4-20X2-3/4, GR5	
9	84721177	1	HOSE ASSY, (XL3100III)	
	84719750	1	HOSE ASSY, (XL4100III & XL5100III)	



## In-line Pilot Filter Installation

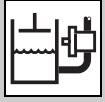


EXPLODED VIEW OF ITEM 2



## In-line Pilot Filter Installation

Item	Part Number	Qty.	Description	Rev.
1	77143015	2	WHIZ-LOCK NUT, 3/8-16	
2	80533019	1	IN-LINE PILOT FILTER, (includes items 16 thru 20)	
3	80781060	1	IN-LINE FILTER MOUNT	
4	84719597	1	HOSE ASSY	
5	88201033	4	HEX HD CAPSCREW, 3/8-16X3/4, GR5	
6	88201043	2	HEX HD CAPSCREW, 3/8-16X3, GR5	
7	88551011	4	LOCKWASHER, 3/8	
8	88561004	2	FLAT WASHER, 3/8	
9	88662436	2	ELBOW, 90 DEGREES, (includes item 14)	
10	80533021	1	IN-LINE HIGH PRESSURE FILTER, (120 micron), (includes item 15)	
11	88662589	1	CONNECTOR, (swivel nut)	
12	83953053	1	HOSE COVER	
13	90027187	AR	TY-RAP	
14	88591207	2	O-RING	
15	80534023	1	FILTER ELEMENT	
16	80534024	1	FILTER ELEMENT	
17	80534025	1	POP-UP INDICATOR, (torque to 75 lb-ft)	
18		1	O-RING	
19		1	BACK-UP RING	
20		1	O-RING	
21	84721178	1	HOSE ASSY, (XL3100III)	
	84721179	1	HOSE ASSY, (XL4100III & XL5100III)	
	80534066	A/R	PILOT FILTER SEAL KIT, (includes items 18 thru 20)	



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