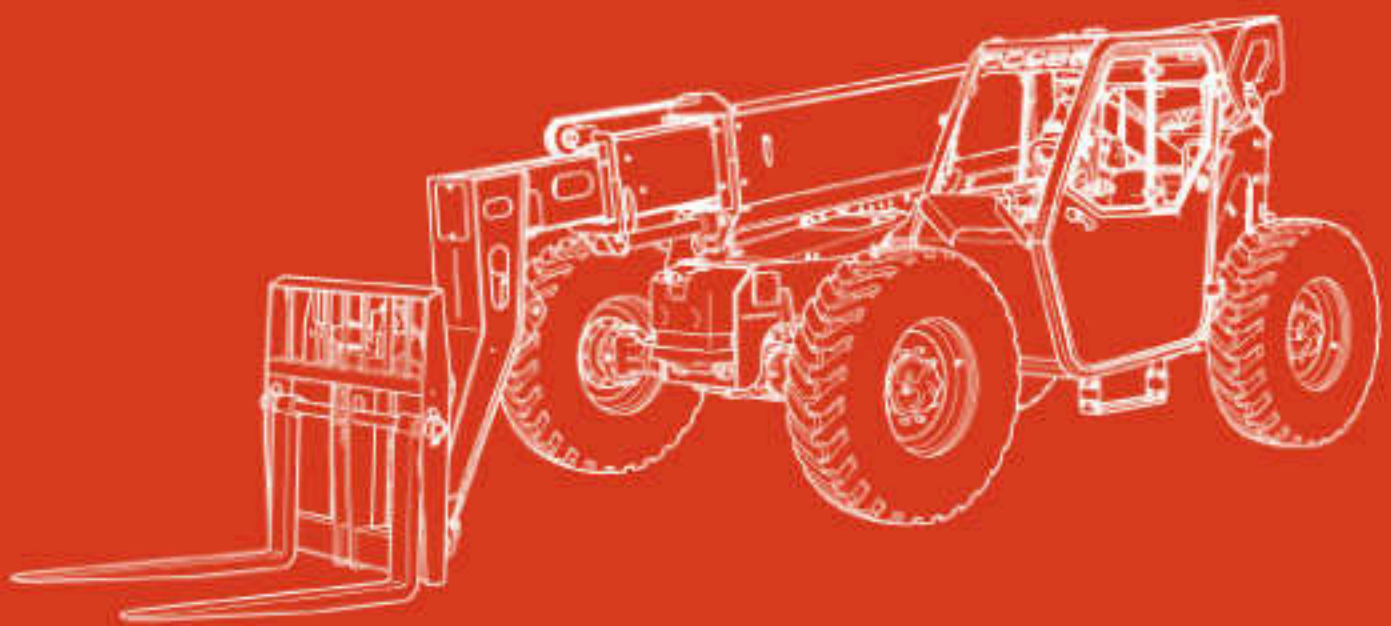
SKYJACK

SERVICE MANUAL

SJ643 TH, SJ843 TH

TELEHANDLERS



230791ACA
August 19 2026
ANSI

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Table 2.3 Torque Specifications for Fasteners (US)

Size	Torque Type	SAE 2		SAE 5		SAE 8	
		Dry	Lubed	Dry	Lubed	Dry	Lubed
4-40	(in-lb)	(5)	(4)	(8)	(6)	(12)	(9)
	Nm	0.6	0.5	0.9	0.7	1.4	1.0
4-48	(in-lb)	(6)	(5)	(9)	(7)	(13)	(10)
	Nm	0.7	0.6	1.0	0.8	1.5	1.1
6-32	(in-lb)	(10)	(8)	(16)	(12)	(23)	(17)
	Nm	1.1	0.9	1.8	1.4	2.6	1.9
6-40	(in-lb)	(12)	(9)	(18)	(13)	(25)	(19)
	Nm	1.4	1.0	2.0	1.5	2.8	2.1
8-32	(in-lb)	(19)	(14)	(30)	(22)	(41)	(31)
	Nm	2.1	1.6	3.4	2.5	4.6	3.5
8-36	(in-lb)	(20)	(15)	(31)	(23)	(43)	(32)
	Nm	2.3	1.7	3.5	2.6	4.9	3.6
10-24	(in-lb)	(27)	(21)	(43)	(32)	(60)	(45)
	Nm	3.1	2.4	4.9	3.6	6.8	5.1
10-32	(in-lb)	(31)	(23)	(49)	(36)	(68)	(51)
	Nm	3.5	2.6	5.5	4.1	7.7	5.8
1/4-20	(in-lb) ft-lb	(66)	(50)	8	(75)	12	9
	Nm	7.5	5.6	11	8.5	16	12
1/4-28	(in-lb) ft-lb	(76)	(56)	10	(86)	14	10
	Nm	8.6	6.3	14	9.7	19	14
5/16-18	ft-lb	11	8	17	13	25	18
	Nm	15	11	23	18	34	24
5/16-24	ft-lb	12	9	19	14	25	20
	Nm	16	12	26	19	34	27
3/8-16	ft-lb	20	15	30	23	45	35
	Nm	27	20	41	31	61	47
3/8-24	ft-lb	23	17	35	25	50	35
	Nm	31	23	47	34	68	47
7/16-14	ft-lb	32	24	50	35	70	55
	Nm	43	33	68	47	95	75
7/16-20	ft-lb	36	27	55	40	80	60
	Nm	49	37	75	54	108	81
1/2-13	ft-lb	50	35	75	55	110	80
	Nm	68	47	102	75	149	108
1/2-20	ft-lb	55	40	90	65	120	90
	Nm	75	54	122	88	163	122

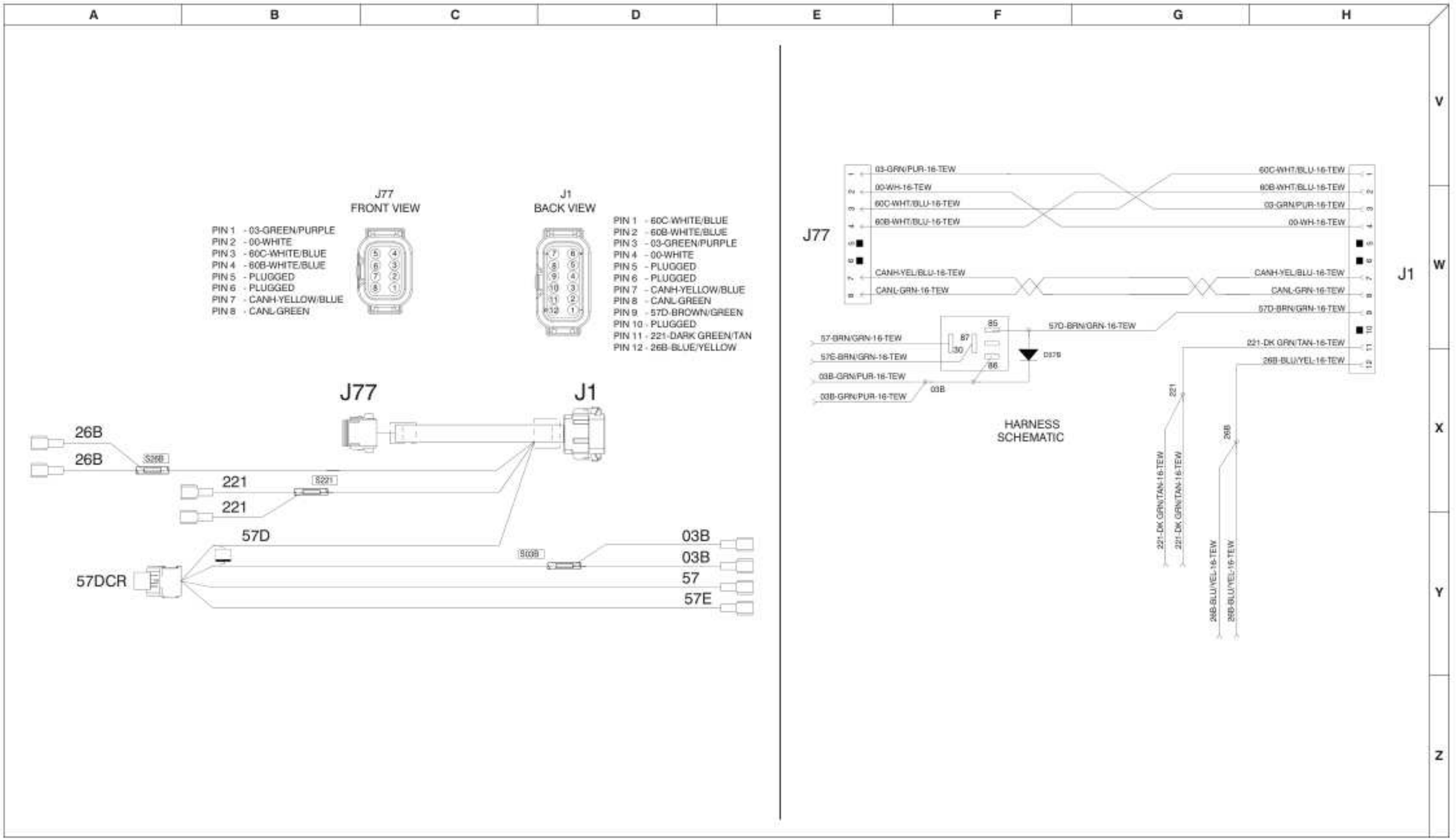
Size	Torque Type	SAE 2		SAE 5		SAE 8	
		Dry	Lubed	Dry	Lubed	Dry	Lubed
9/16-12	ft-lb	70	55	110	80	150	110
	Nm	95	75	149	108	203	149
9/16-18	ft-lb	80	60	120	90	170	130
	Nm	108	81	163	122	230	176
5/8-11	ft-lb	100	75	150	110	220	170
	Nm	136	102	203	149	298	230
5/8-18	ft-lb	110	85	180	130	240	180
	Nm	149	115	244	176	325	244
3/4-10	ft-lb	175	130	260	200	380	280
	Nm	237	176	353	271	515	380
3/4-16	ft-lb	200	150	300	220	420	320
	Nm	271	203	407	298	569	434
7/8-9	ft-lb	170	125	430	320	600	460
	Nm	230	169	583	434	813	624
7/8-14	ft-lb	180	140	470	360	660	500
	Nm	244	190	637	488	895	678
1-8	ft-lb	250	190	640	480	900	680
	Nm	339	258	868	651	1220	922
1-12	ft-lb	270	210	710	530	1000	740
	Nm	366	285	963	719	1356	1003
1-14	ft-lb	280	210	730	540	1020	760
	Nm	380	285	990	732	1383	1030
1 1/8-7	ft-lb	350	270	800	600	1280	960
	Nm	475	366	1085	813	1735	1302
1 1/8-12	ft-lb	400	300	880	660	1440	1080
	Nm	542	407	1193	895	1952	1464
1 1/4-7	ft-lb	500	380	1120	840	1820	1360
	Nm	678	515	1519	1139	2468	1844
1 1/4-12	ft-lb	550	420	1240	920	2000	1500
	Nm	746	569	1681	1247	2712	2034
1 3/8-6	ft-lb	670	490	1460	1100	2380	1780
	Nm	908	664	1979	1491	3227	2413
1 3/8-12	ft-lb	750	560	1680	1260	2720	2040
	Nm	1017	759	2278	1708	3688	2766
1 1/2-6	ft-lb	870	650	1940	1460	3160	2360
	Nm	1180	881	2630	1979	4284	3200
1 1/2-12	ft-lb	980	730	2200	1640	3560	2660
	Nm	1329	990	2983	2224	4827	3606

NOTE: *Lubed includes lubricants such as lubrizing, oil, grease, and some uncured thread lockers. Refer to the specific thread locker manufacturer's instructions for specific torque adjustments.*

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3.21 Elevate Telematics Harness



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5.6-11 Deutz Fault Codes for EMR5, serial number 87 113 570 and above

DTC #	FTB	SPN	FMI	Fault description
P1142, P1144, P1146, P1148, P114A, P114C, P114E	11	1485	4	ECU main relay: voltage is below the normal range or is shorted to a low source
P115A	01	3513	14	ECU sensor supply voltage 5: special instructions
P115A	4B	3513	11	ECU sensor supply voltage 5: the root cause is not known
P115B	17	3513	0	ECU sensor supply voltage 5: data is above the normal operational range (most severe level)
P115C	11	3513	6	ECU sensor supply voltage 5: current is above the normal range or grounded circuit
P115C	16	3513	1	ECU sensor supply voltage 5: data is below the normal operational range (most severe level)
P115D	01	3514	14	ECU sensor supply voltage 6: special instructions
P115D	4B	3514	11	ECU sensor supply voltage 6: the root cause is not known
P115E	17	3514	0	ECU sensor supply voltage 6: data is above the normal operational range (most severe level)
P115F	11	3514	6	ECU sensor supply voltage 6: current is above the normal range or grounded circuit
P115F	16	3514	1	ECU sensor supply voltage 6: data is below the normal operational range (most severe level)
P1168	00	520378	11	MCAN not enough memory: the root cause is not known
P1169	00	520379	11	MCANR not enough memory: the root cause is not known
P116A	11	520425	4	Powerstage on CJ945: voltage is below the normal range or is shorted to a low source
P116A	12	520425	3	Powerstage on CJ945: voltage is above the normal range or is shorted to a high source
P116A	13	520425	5	Powerstage on CJ945: current is below the normal range or open circuit
P116A	4B	520425	12	Powerstage on CJ945: bad intelligent device or component
P1173	00	520437	31	Replacement fault code triggered by FID UVMDSM04/V-engine: main secondary ECU swapped - condition exists
P1174	00	520438	31	Replacement fault code triggered by FID UVMDSM04 - condition exists
P1175	00	520439	31	Replacement fault code triggered by FID UVMDSM10 - condition exists
P1176	00	520439	31	Replacement fault code triggered by FID UVMDSM12 - condition exists
P1177	00	520441	31	Replacement fault code triggered by FID UVMDSM13 - condition exists
P119A, P119B, P119C,	00	629	12	ECU: bad intelligent device or component
P119D	00	91	14	Position accelerator pedal: special instructions
P119E	00	190	2	Rotation speed: data erratic, intermittent or incorrect
P119F, P11A2	00	5357	2	Fuel injection quantity multiple cylinders: data erratic, intermittent or incorrect
P11A0	00	5441	2	Fuel injection timing error multiple cylinders: data erratic, intermittent or incorrect
P11A1	00	520281	2	Injection temperature compensation: data erratic, intermittent or incorrect

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Remove Boom Hoses

1. Start engine and extend the boom approximately 3 feet to gain acces to side acces hole on fly boom section.



Figure 66 *Boom Side Access Hole*

2. Shutdown engine and remove key from ignition switch.
3. Disconnect hoses at the rear of bulkhead as shown below.

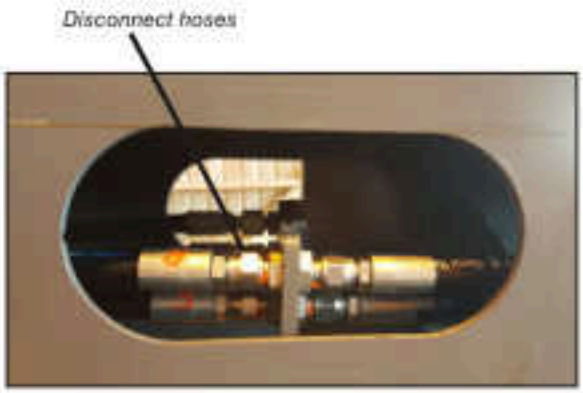


Figure 67 *Fork Tilt Hoses Removal*

4. Cap/plug all open lines and fittings.
5. Remove the hoses at the rear of bulkhead fittings on the other side of the boom.
6. Cap/plug all open lines and fittings.
7. Start the engine and fully retract the boom.
8. Shutdown engine and remove key from ignition switch.
9. Remove end of Fork Tilt hoses at front bulkheads on main boom assembly.

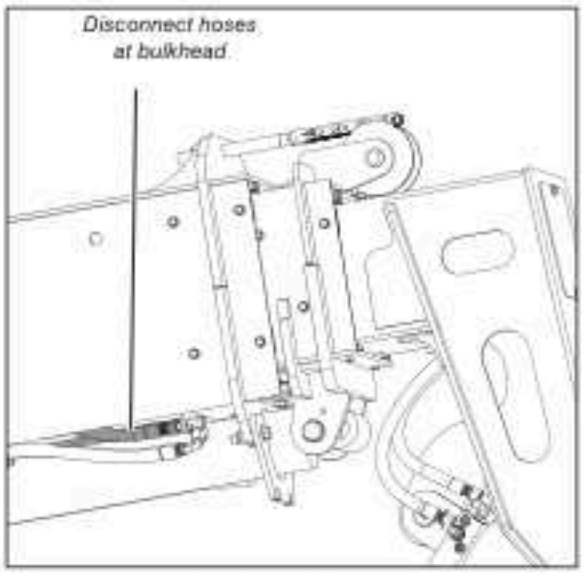


Figure 68 *Fork Tilt Hoses Removal at Bulkhead*

10. Cap/plug all open lines and fittings.
11. Remove other end of Auxilliary Hydraulics hoses at front bulkheads on main boom assembly.

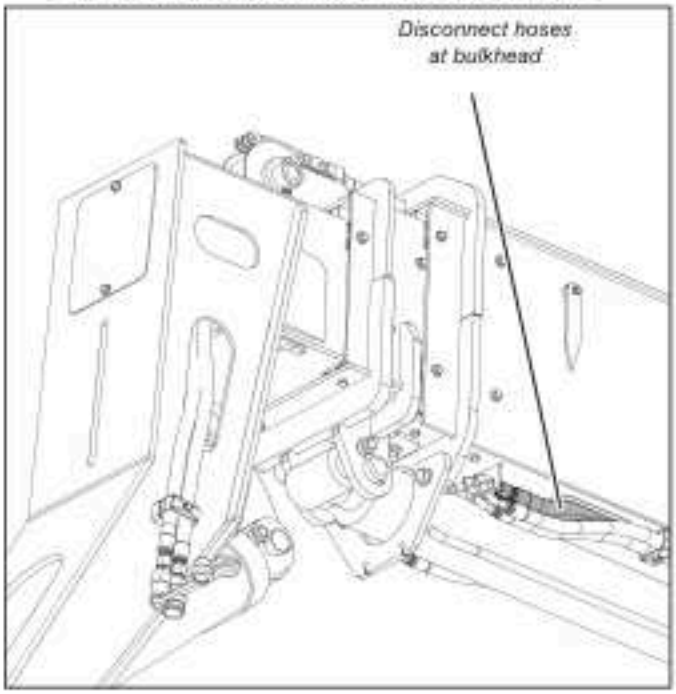


Figure 69 *Aux. Hydraulics Hoses Removal at Bulkhead*

12. Cap/plug all open lines and fittings.
13. With rear access cover plate removed, pull the hoses out of boom assembly and thoroughly inspect all hoses. Replace hoses if needed.

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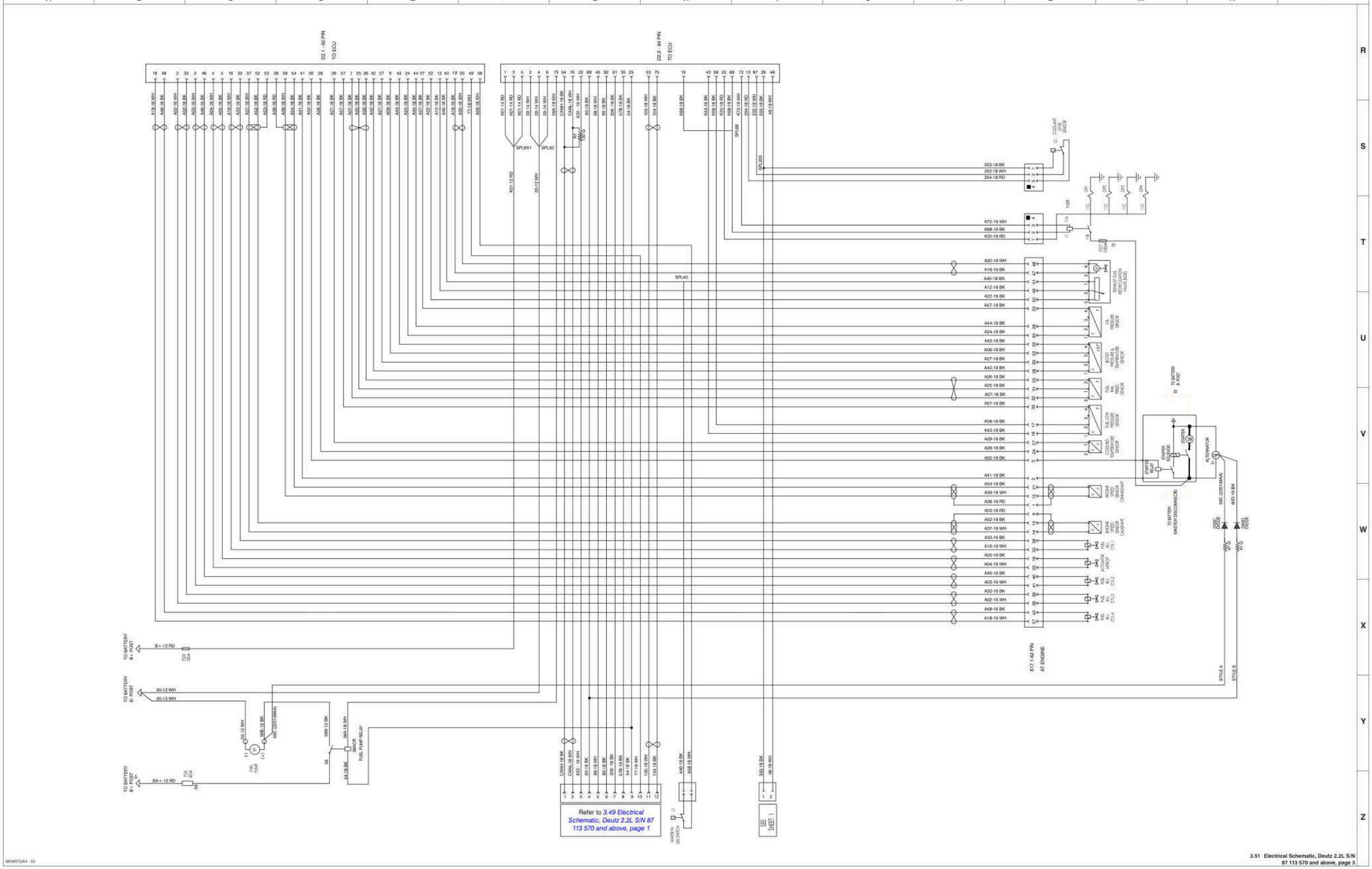
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