

SERVICE MANUAL

ARTICULATING BOOMS

MODELS SJ46AJ SJ51AJ

166876AH August 2022

SKYJACK

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Section 1
SCHEDULED MAINTENANCE

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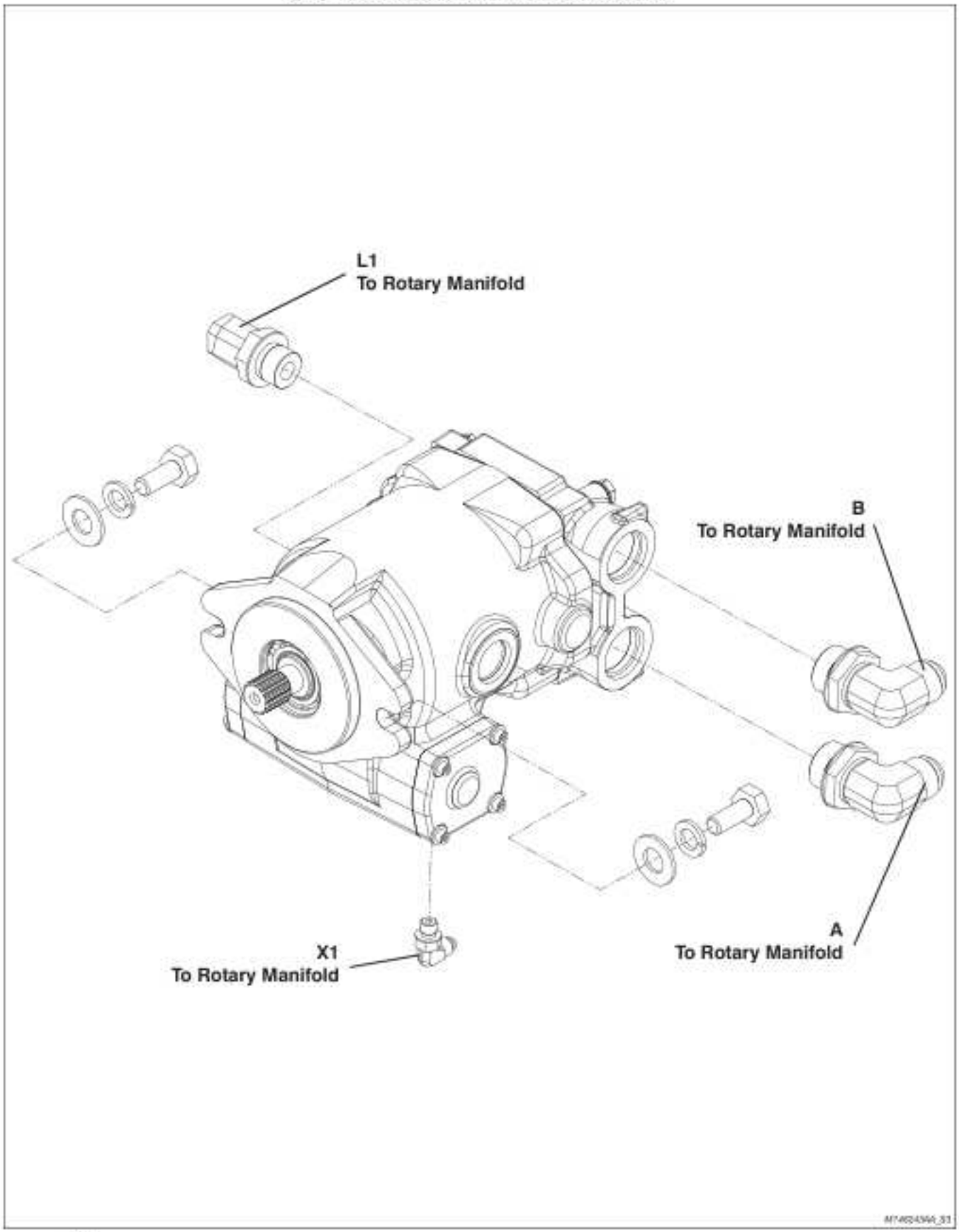
Table 2.12 Specifications and Features

MODEL			SJ 46AJ (ANSI/CSA)	SJ 46AJ (CE & AS)	SJ 51AJ (CE & AS)
Maximum Load Capacity			500 lb. (227 kg)	500 lb. (227 kg)	500 lb. (227 kg)
Platform Size	Total Platform Length (Outside)		60 in. (152.4 cm) 72 in. (182.9 cm)	60 in. (152.4 cm) 72 in. (182.9 cm)	60 in. (152.4 cm) 72 in. (182.9 cm)
	Total Platform Depth (Outside)		30 in. (76.2 cm)	30 in. (76.2 cm)	30 in. (76.2 cm)
Height	Working		50 ft. 5 in. (15.37 m)	50 ft. 5 in. (15.37 m)	55 ft. 1 in. (16.8 m)
	Platform Elevated		46 ft. 5 in. (14.15 m)	46 ft. 5 in. (14.15 m)	51 ft. 1 in. (15.6 m)
	Drive		Driveable at all heights	Driveable at all heights	Driveable at all heights
	Turret		8 ft. 10 in. (2.08 m)	6 ft. 10 in. (2.08 m)	6 ft. 10 in. (2.08 m)
Length	Overall with platform		21 ft. 4 in. (6.5 m)	21 ft. 4 in. (6.5 m)	23 ft. 9 in. (7.25 m)
	Base and tires		9 ft. 6 in. (2.9 m)	9 ft. 6 in. (2.9 m)	9 ft. 6 in. (2.9 m)
Width	Outside std. tires		7 ft. 4 in. (2.2 m)	7 ft. 4 in. (2.2 m)	7 ft. 4 in. (2.2 m)
	Turret		6 ft. (1.8 m)	6 ft. (1.8 m)	6 ft. (1.8 m)
Weight	Weight (with air tires)		14,730 lb. (6,681 kg)	-	-
	Weight (with foam-filled tires)		15,330 lb. (6,954 kg)	15,390 lb. (6,981 kg)	16,130 lb. (7,316 kg)
Platform Rotation			180 degrees	180 degrees	180 degrees
Horizontal Reach			25 ft. 2 in. (7.68 m)	25 ft. 2 in. (7.68 m)	30 ft. 1 in. (9.16 m)
Horizontal Reach @ maximum height			8 ft. 6 in. (2.58 m)	8 ft. 6 in. (2.58 m)	9 ft. 9 in. (2.96 m)
Wheelbase			6 ft. 8 in. (2.03 m)	6 ft. 8 in. (2.03 m)	6 ft. 8 in. (2.03 m)
Turret Rotation			360 degrees continuous	360 degrees continuous	360 degrees continuous
Turret Tailswing			-5 in. (-12.7 cm)	-5 in. (-12.7 cm)	0
Gradeability (torque equivalent to)			45%	45%	45%
Ground Clearance Between Wheels			16 in. (40.6 cm)	16 in. (40.6 cm)	16 in. (40.6 cm)
Turning Radius	Inside	Differential lock engaged	12 ft. 6 in. (3.83 m)	12 ft. 6 in. (3.83 m)	12 ft. 6 in. (3.83 m)
		Differential lock disengaged	8 ft. 2 in. (2.48 m)	8 ft. 2 in. (2.48 m)	8 ft. 2 in. (2.48 m)
	Outside	Differential lock engaged	21 ft. 2 in. (6.45 m)	21 ft. 2 in. (6.45 m)	21 ft. 2 in. (6.45 m)
		Differential lock disengaged	16 ft. 11 in. (5.15 m)	16 ft. 11 in. (5.15 m)	16 ft. 11 in. (5.15 m)
System Voltage			12 VDC	12 VDC	12 VDC
Battery	Type		Lead Acid	Lead Acid	Lead Acid
	Cold Cranking Amperes		950 A	CE: 950 A AS: 800 A	CE: 950 A AS: 800 A
Operating Times	Main boom up		26 seconds	26 seconds	26 seconds
	Main boom down		26 seconds	26 seconds	26 seconds
	Riser boom up		26 seconds	26 seconds	26 seconds
	Riser boom down		26 seconds	26 seconds	26 seconds
	Fly boom extend		11 seconds	11 seconds	15 seconds
	Fly boom retract		19 seconds	19 seconds	26 seconds
	Jib up		39 seconds	39 seconds	39 seconds
	Jib down		23 seconds	23 seconds	23 seconds
	Turret rotate - counterclockwise 360° (fully stowed)		90 seconds	90 seconds	90 seconds
	Platform rotate - full		20 seconds	20 seconds	20 seconds
Driving Speeds	Drive Speed (maximum-stowed)		4.8 mph (7.7 km/h)	4.8 mph (7.7 km/h)	4.8 mph (7.7 km/h)
	Drive Speed (maximum-elevated)		0.5 mph (0.8 km/h)	0.5 mph (0.8 km/h)	0.5 mph (0.8 km/h)

1084 ALL Standards

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3.10 Drive Motors and Port Identifications



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5.4-6 Deutz D2.9L Fault Codes

Code	SPN	FMI	Blink Code	Error Identification
1759	2791	4	4-1-5	EGR actuator supply voltage is below minimum threshold.
1760	2791	13	4-1-5	EGR actuator, learning process out of range.
1761	2791	7	4-1-5	EGR actuator, broken spring detected.
1762	2791	16	4-1-5	EGR actuator, temperature high.
1763	2791	0	4-1-5	EGR actuator, temperature critical high.
1788	1188	7	8-1-4	Turbocharger wastegate, mechanical blocking detected.
1789	1188	2	8-1-4	Turbocharger wastegate, CAN Error.
1790	1188	13	8-1-4	Turbocharger wastegate, EOL calibration error.
1791	1188	12	8-1-4	Turbocharger wastegate, internal electrical error.
1792	1188	13	8-1-4	Turbocharger wastegate, learning process aborted.
1793	1188	6	8-1-4	Turbocharger wastegate, current above maximum threshold.
1794	1188	3	8-1-4	Turbocharger wastegate, supply voltage above maximum threshold.
1795	1188	4	8-1-4	Turbocharger wastegate, supply voltage below minimum threshold.
1796	1188	13	8-1-4	Turbocharger wastegate, learning process out of range.
1797	1188	7	8-1-4	Turbocharger wastegate, broken spring detected.
1799	1188	0	8-1-4	Turbocharger wastegate, temperature critical high.
1827	524141	7	1-9-2	DEF dosing valve, dosing valve blocked.
1857	523612	12	5-5-5	Engine starter, plausibility error of starter release condition.
1858	524147	7	9-6-6	SCR-System, reverting valve blocked.

1513AA-20

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TROUBLESHOOTING INFORMATION

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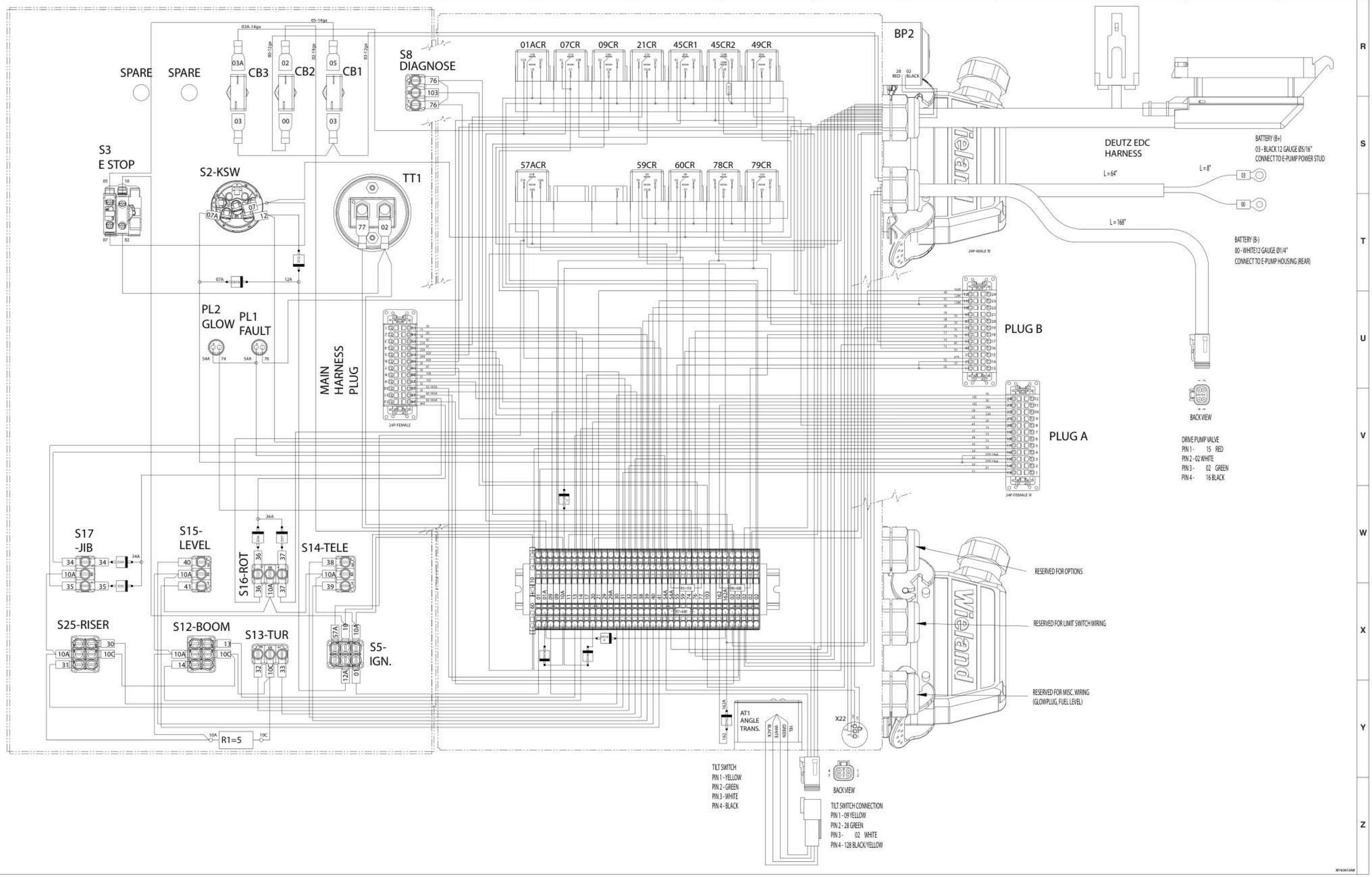
Table 2.6 Torque Specifications for Hydraulic Couplings & Hoses

HYDRAULIC COUPLING TORQUE CHART O-Ring Port Connectors				
SAE Size	Steel Ports		Non-ferrous Ports	
	ft-lb	Nm	ft-lb	Nm
4	14-16	20-22	9-10	12-13
6	24-26	33-35	15-16	20-21
8	50-60	68-78	30-36	41-47
10	72-80	98-110	43-48	60-66
12	125-135	170-183	75-81	102-110
16	200-220	270-300	120-132	162-180
20	210-280	285-380	126-168	171-228
24	270-360	370-490	162-216	222-294
32	-	-	-	-

HOSE END TORQUE CHART for JIC									
Size		Steel				Brass			
Dash	Frac.	ft-lb		Nm		ft-lb		Nm	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
-4	1/4"	10	11	13	15	5	6	6.75	9
-6	3/8"	17	19	23	26	12	15	17	20
-8	1/2"	34	38	47	52	20	24	27.66	33
-10	5/8"	50	56	69	76	34	40	46.33	55
-12	3/4"	70	78	96	106	53	60	72.33	82
-16	1"	94	104	127	141	74	82	100.5	111
-20	1 1/4"	124	138	169	188	75	83	101.5	113
-24	1 1/2	156	173	212	235	79	87	107	118
-32	2"	219	243	296	329	158	175	214	237

HOSE END TORQUE CHART for Flat-Face O-Ring Seal (Steel)					
Size		Torque Specification			
Dash	Frac.	ft-lb		Nm	
		Min.	Max.	Min.	Max.
-4	1/4"	10	12	14	16
-6	3/8"	18	20	24	27
-8	1/2"	32	40	43	54
-10	5/8"	46	56	60	75
-12	3/4"	65	80	90	110
-14	1"	65	80	90	110
-16	1 1/4"	92	105	125	240
-20	1 1/2	125	140	170	190
-24	2"	150	180	200	245

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