

SERVICE MANUAL

TELESCOPIC BOOMS

MODELS SJ40T SJ45T

168894AJ September 2025

SKYJACK

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Section 1
SCHEDULED MAINTENANCE

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Table 2.11 Specifications and Features

	MODEL	SJ 40T ANSI/CSA	SJ 45T ANSI/CSA	SJ 45T CE	SJ 45T AS
	Maximum Lift Capacity - to Maximum Gradeability	500 lb. (227 kg)	500 lb. (227 kg)	227 kg	227 kg
Height & Reach	Working Height	46 ft. 6-1/2 in. (14.12 m)	51 ft. 1-1/2 in. (15.58 m)	15.75 m	15.75 m
	Platform Elevated Height	40 ft. 6-1/2 in. (12.36 m)	45 ft. 1-1/2 in. (13.75 m)	13.75 m	13.75 m
	Horizontal Reach - Maximum	33 ft. 11 in. (10.34 m)	39 ft. 8-1/4 in. (12.10 m)	12.10 m	12.10 m
	Horizontal Reach at Maximum Height	8 ft. 9-3/4 in. (2.69 m)	11 ft. 10-1/4 in. (3.61 m)	3.62 m	3.62 m
	Tailswing	44 in. (1.16 m)	44 in. (1.16 m)	1.12 m	1.12 m
Platform	Platform Size	36 x 72 in. (0.91 x 1.83 m) 36 x 96 in. (0.91 x 2.44 m)	36 x 72 in. (0.91 x 1.83 m) 36 x 96 in. (0.91 x 2.44 m)	0.91 x 2.44 m 0.91 x 1.83 m	0.91 x 2.44 m 0.91 x 1.83 m
	Platform Rotation	170 degrees	175 degrees	175 degrees	175 degrees
	Platform Height - Stowed	22-1/2 in. (0.57 m)	10-3/4 in. (0.27 m)	0.27 m	0.27 m
	Platform Height - Overall	52-3/4 in. (1.34 m)	52-3/4 in. (1.34 m)	1.34 m	1.34 m
	Railing Height - Platform	43-3/4 in. (1.09 m)	43-3/4 in. (1.09 m)	1.09 m	1.09 m
Dimensional Data	Height - Stowed	7 ft. 10-1/2 in. (2.40 m)	7 ft. 10-1/2 in. (2.40 m)	2.40 m	2.40 m
	Length - Stowed	25 ft. 4-1/4 in. (7.73)	29 ft. 11-1/2 in. (8.83 m)	8.83 m	8.83 m
	Width - Outside of Wheels	7 ft. 6 in. (2.22 m)	7 ft. 6 in. (2.22 m)	2.29 m	2.29 m
	Wheelbase	8 ft. (2.44 m)	8 ft. (2.44 m)	2.44 m	2.44 m
	Ground Clearance - Chassis	13-3/4 in. (0.35 m)	13-3/4 in. (0.35 m)	0.35 m	0.35 m
	Ground Clearance - Rear Axle	10-3/4 in. (0.27 m)	10-3/4 in. (0.27 m)	0.27 m	0.27 m
	Axle Oscillation	6 degrees	6 degrees	6 degrees	6 degrees
	Turning Radius - Inside	7 ft. 4in. (2.24 m)	7 ft. 4in. (2.24 m)	2.24 m	2.24 m
	Turning Radius - Outside	17 ft. (5.18 m)	17 ft. (5.18 m)	5.18 m	5.18 m
	Turning Angle	45 degrees	45 degrees	45 degrees	45 degrees
	Turret Rotation	360 degrees continuous	360 degrees continuous	360 degrees continuous	360 degrees continuous
Jib	Jib Length	N/A	63 in. (1.60 m)	1.60 m	
	Travel - Down	N/A	63 degrees	63 degrees	63 degrees
	Travel - Up	N/A	61 degrees	61 degrees	61 degrees
Performance & Speeds	Gradeability - Maximum	50%	50%	50%	50%
	Drive Speed - Stowed/Low Torque	4.5 mph (7.2 km/h)	4.5 mph (7.2 km/h)	7.2 km/h	7.2 km/h
	Drive Speed - Stowed/High Torque	1.4 mph (2.2 km/h)	1.4 mph (2.2 km/h)	2.2 km/h	2.2 km/h
	Drive Speed - Elevated	0.5 mph (0.8 km/h)	0.5 mph (0.8 km/h)	0.8 km/h	0.8 km/h
	Turret Rotation	90 seconds	90 seconds	120 seconds	120 seconds
	Platform Rotation	11 seconds	11 seconds	11 seconds	11 seconds
	Main Boom Elevation - Up	30 seconds	30 seconds	56 seconds	56 seconds
	Main Boom Elevation - Down	30 seconds	30 seconds	56 seconds	56 seconds
	Fly Boom Extend	30 seconds	30 seconds	30 seconds	30 seconds
	Fly Boom Retract	30 seconds	30 seconds	30 seconds	30 seconds
	Jib Elevation - Up	N/A	20 seconds	23 seconds	41 seconds
	Jib Elevation - Down	N/A	13 seconds	13 seconds	23 seconds
Tire	Size	12 x 61.5 in. (0.31 x 0.42 m)	12 x 61.5 in. (0.31 x 0.42 m)	0.31 x 0.42 m	0.31 x 0.42 m
	Wheel Assembly Weight - Air	115 lbs. (52 kg)	115 lbs. (52 kg)	N/A	N/A
	Wheel Assembly Weight - Foam	315 lbs. (143 kg)	315 lbs. (143 kg)	143 kg	143 kg
Electrical	System Voltage	12 volt DC	12 volt DC	12 volt DC	12 volt DC
	Battery Type	Lead / Acid	Lead / Acid	Lead / Acid	Lead / Acid
	Cold Cranking Amperes	950 CCA	950 CCA	950 CCA	950 CCA
Weight & Pressure	Weight with Air Tires - No Options	14,100 lbs. (6400 kg)	14,815 lbs (6720 kg)	N/A	N/A
	Weight with Foam Tires - No Options	14,900 lbs (6758 kg)	15,652 lbs. (7100 kg)	7100 kg	7100 kg
	Wheel Load	7800 lbs (3540 kg)	8180 lbs. (3700 kg)	3630 kg	3900 kg
	Locally Concentrated Pressure - LCP	133 psi (917 kPa)	140 psi (960 kPa)	930 kPa	1000 kPa
	Overall Uniform Pressure - OUP	181 psi (9 kPa)	190 psi (9.1 kPa)	9.5 kPa	9.5 kPa

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NOTE: All dimensional values are nominal and do not account for tire deflection.

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3.4 Hydraulic Schematic Parts List (Continued)

Index No.	Skyjack Part No.	Qty.	Description
			Parts list continued from previous page.
CV2	159814	1	VALVE, Check (Main LS)
CV3	159814	1	VALVE, Check (Main LS)
CV4	159814	1	VALVE, Check (Main LS)
CV5	159814	1	VALVE, Check (Main LS)
CV6	159814	1	VALVE, Check (Main LS)
CV7	159814	1	VALVE, Check (Main LS)
CV8	159814	1	VALVE, Check (Main LS)
CV9	159814	1	VALVE, Check (Main LS)
CV10	159814	1	VALVE, Check (Main LS)
CV11	159814	1	VALVE, Check (Main LS)
CV12	159813	1	VALVE, Check (System Pump)
CV13	166065	1	VALVE, Check (Brake Manifold)
CV14	N/A	1	VALVE, Check (EPU)
CV15	159814	1	VALVE, Check (12 kW Generator)
CV16	159814	1	VALVE, Check (Generator LS)
CV17	168059	1	VALVE, Check (Generator)
CV18	168243	1	VALVE, Check (2 SPD)
DCV1	159817	1	VALVE, Check (Double, Steering)
DCV2	159817	1	VALVE, Check (Double, Platform Level)
DSV1	166062	1	COMPENSATOR (Swing)
DSV2	166061	1	COMPENSATOR (Boom Lift)
DSV3	166061	1	COMPENSATOR (Boom Extend)
EPU	160923	1	PUMP (Emergency)
F1	161932	1	FILTER (High Pressure)
F2	161933	1	FILTER (Return)
M1	161964	1	MOTOR (Axle Drive)
M2	N/A	1	MOTOR (Swing)
M3	N/A	1	MOTOR (Generator, 3.5kW)
M4	N/A	1	MOTOR (Generator, 12kW)
MB1	162843	1	MANIFOLD (Main)
MB2	162844	1	MANIFOLD (Brake)
MB3	162497	1	MANIFOLD (Jib)
MB4	163541	1	MANIFOLD (No Jib)
MB5	166092	1	MANIFOLD (Jib Cylinder)
MB6	168158	1	MANIFOLD (Pressure Reducing)
MB7	168400	1	MANIFOLD (Generator 3.5kW)
MB8	168401	1	MANIFOLD (Generator 12kW)
OC1	160800	1	COOLER, Oil
OR1	166077	1	ORIFICE, 0.078" (Main Manifold)
OR2	166079	1	ORIFICE, 0.043" (Main Manifold)
OR3	166081	1	ORIFICE, 0.018" (Main Manifold)
OR4	166081	1	ORIFICE, 0.018" (Main Manifold)
OR5	166058	1	ORIFICE (Main Manifold)
OR6	166073	1	ORIFICE, 0.073" (Bleed Off)
OR7	168061	1	VALVE, Needle (3.5kW Generator)
			Parts list continued on following page.

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5.4-6 Deutz D2.9L Fault Codes

Code	SPN	FMI	Blink Code	Error Identification
1439	524034	4	8-1-6	Disc separator; short circuit to ground.
1440	524030	7	8-1-5	EGR actuator; internal error.
1441	524031	13	8-1-5	EGR actuator, calibration error.
1442	524032	2	8-1-5	EGR actuator; status message "EGRCust" is missing.
1443	524033	7	8-1-5	EGR actuator; due to overload in Save Mode.
1455	3711	12	7-1-1	Temperature during stand-still main phase too low or too high.
1458	523960	0	7-7-1	High exhaust gas temperature EGR cooler downstream; warning threshold exceeded.
1464	0	0	-	
1466	0	0	-	
1467	0	0	-	
1469	0	0	-	
1470	0	0	-	
1471	0	0	-	
1472	0	0	-	
1481	524025	5	8-4-5	DPF system; operating voltage error.
1482	524044	9	1-8-8	CAN message ComMS_Sys7 not received from slave.
1484	524068	2	8-9-5	Master ECU and Slave ECU have been identified as the same types.
1485	524052	11	8-3-6	Master ECU and Slave ECU data sets or software are not identical.
1486	523718	5	6-7-6	SCR mainrelay; open load (only CV56B).
1488	523718	3	6-7-6	SCR mainrelay; short circuit to battery (only CV56B).
1489	523718	4	6-7-6	SCR mainrelay; short circuit to ground (only CV56B).
1661	524116	9	1-9-4	Timeout error of CAN-Transmit-Frame SCR2.
1662	524117	9	9-4-1	Timeout error of CAN-Transmit-Frame SCR3.
1663	524097	9	9-2-1	Timeout error of CAN-Transmit-Frame DPFBrnAirPmpCtl.
1664	524098	9	9-2-2	Timeout error of CAN-Transmit-Frame ComDPFBrnPT.
1665	524099	9	9-2-3	Timeout error of CAN-Transmit-Frame ComDPFC1.
1666	524100	9	9-2-4	Timeout error of CAN-Transmit-Frame ComDPFHisDat.
1667	524101	9	9-2-5	Timeout error of CAN-Transmit-Frame ComDPFTstMon.
1668	524105	9	9-2-9	Timeout error of CAN-Transmit-Frame ComEGRMsFlw (EGR Steller).
1669	524108	9	9-3-2	Timeout error of CAN-Transmit-Frame ComEGRTVActr (EGR actuator).
1670	524110	9	9-3-4	Timeout error of CAN-Transmit-Frame ComETVActrTO.
1671	524112	9	9-3-6	Timeout ComIntake Throttle Valve Actr.
1672	524118	9	9-4-2	Timeout error of CAN-Receive-Frame ComRxCM1.
1675	524103	9	9-2-7	Timeout error of CAN-Receive-Frame ComRxDPFBrnAirPmp.
1676	524104	9	9-2-8	Timeout error of CAN-Receive-Frame ComRxDPFCtl.

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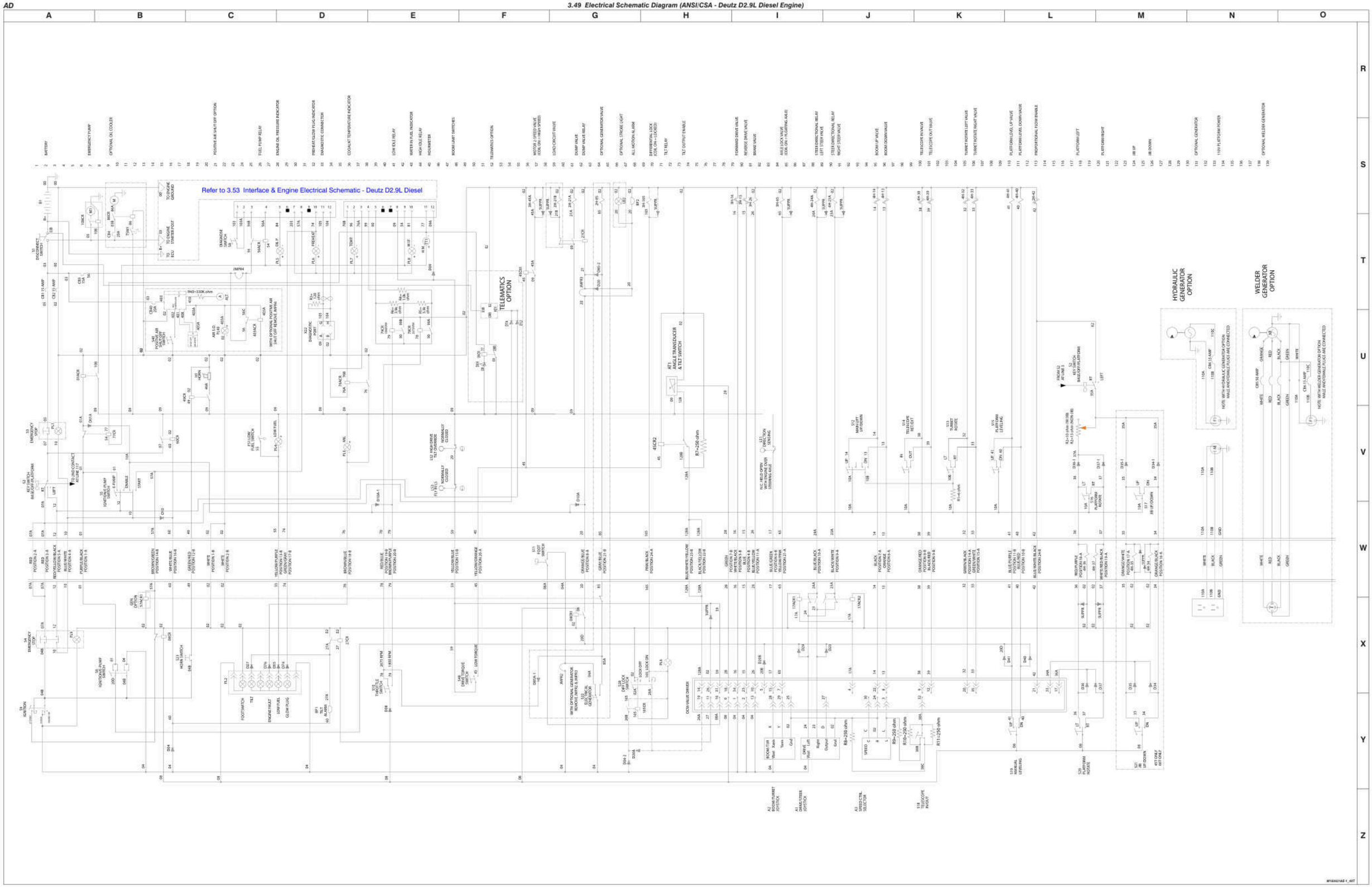
Table 2.6 Torque Specifications for Hydraulic Couplings & Hoses

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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Refer to 3.53 Interface & Engine Electrical Schematic - Deutz D2.9L Diesel
TELEMATICS OPTION
HYDRAULIC GENERATOR OPTION
WELDER GENERATOR OPTION
A2 BOOM/JIB/BOOM JOYSTICK
A1 DRIVE/STEER JOYSTICK
A3 FUNCTION SELECTOR
S18 FOOTSWITCH PEDAL
S39 MANUAL LEVELING
S26 PLATFORM ROTATE
S21 LIFT BOOM
KEY ONLY
660 ONLY