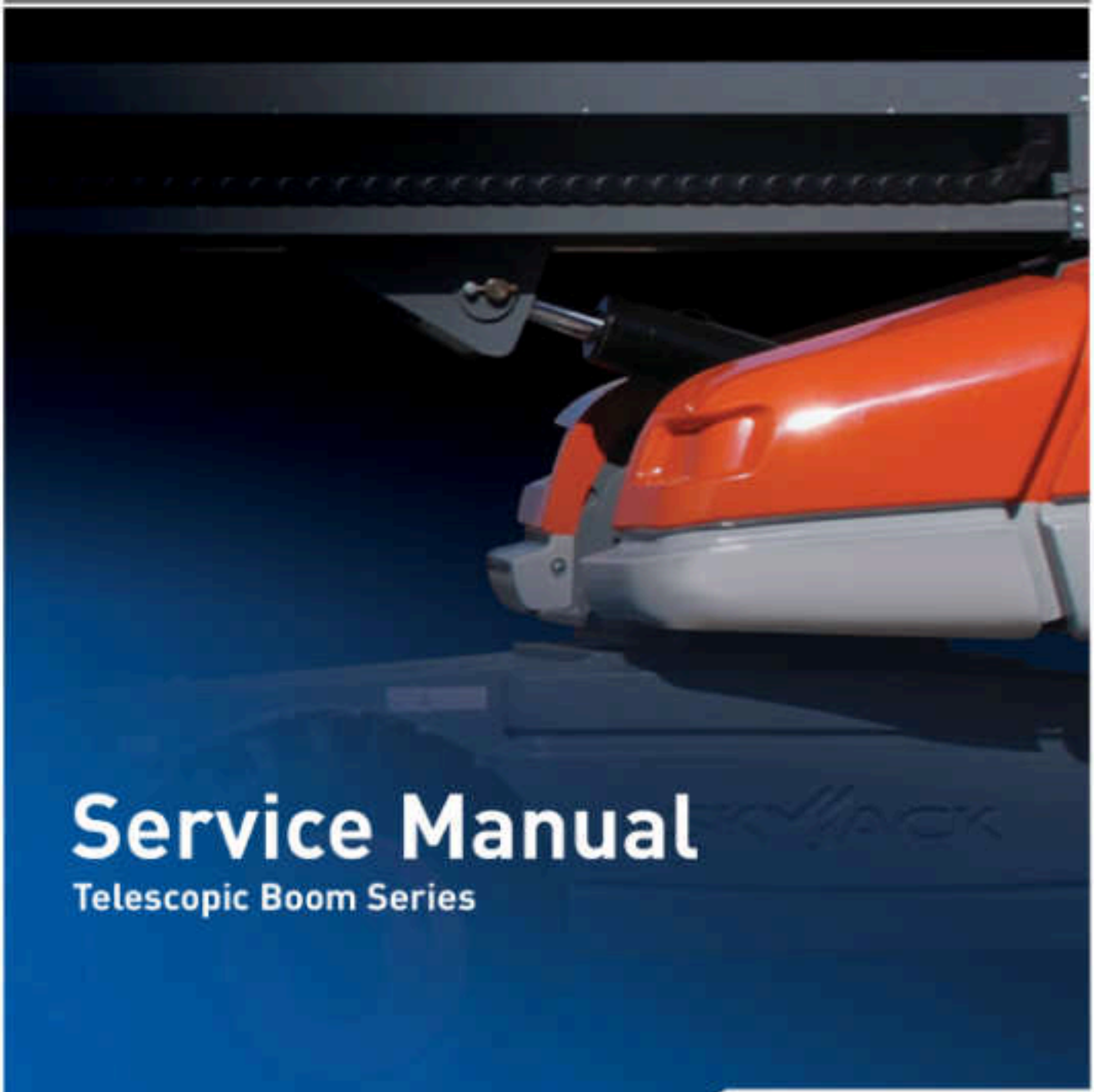
MODELS | SJ40T SJ45T



Service Manual

Telescopic Boom Series

Part No. 143844AG August 2022

SKYJACK

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Table 2.8a Specifications and Features

MODEL			SJ 40T	SJ 45T	SJ 61T	SJ 66T
Maximum Load Capacity			650 lb. (295 kg)	500 lb (227 kg)	500 lb (227 kg)	500 lb (227 kg)
Platform Size	Total Platform Length (Outside)		96 in. (243.8 cm)	96 in. (243.8 cm)	96 in. (243.8 cm)	96 in. (243.8 cm)
	Total Platform Depth (Outside)		36 in. (91.4 cm)	36 in. (91.4 cm)	36 in. (91.4 cm)	36 in. (91.4 cm)
Height	Working		44 ft. (13.4 m)	48 ft. (14.6 m)	65 ft. (19.8 m)	70 ft. (21.3 m)
	Platform Elevated		40 ft. (12.4 m)	45 ft. (13.7 m)	61 ft. (18.6 m)	66 ft. (20.1 m)
	Drive		driveable at all heights		driveable at all heights	
	Turret		7 ft. 10 in. (2.4 m)	7 ft. 10 in. (2.4 m)	8 ft. 5 in. (2.6 m)	8 ft. 5 in. (2.6 m)
Length	Overall with platform		25 ft. 5 in. (7.7 m)	28 ft. 10 in. (8.8 m)	30 ft. 4 in. (9.2 m)	33 ft. 11 in. (10.3 m)
	Base and tires		12 ft. 3 in. (3.7 m)	12 ft. 3 in. (3.7 m)	11 ft. 5 in. (3.5 m)	11 ft. 5 in. (3.5 m)
Width	Outside std. tires		7 ft. 6 in. (2.3 m)	7 ft. 6 in. (2.3 m)	8 ft. (2.4 m)	8 ft. (2.4 m)
	Turret		7 ft. 4 in. (2.2 m)	7 ft. 4 in. (2.2 m)	7 ft. 6 in. (2.3 m)	7 ft. 6 in. (2.3 m)
Weight	Weight (with air tires)		14,900 lb. (6,759 kg)	15,850 lb. (7,189 kg)	23,880 lb. (10,796 kg)	27,300 lb. (12,383 kg)
	Weight (with foam-filled tires)		15,700 lb. (7,121 kg)	16,650 lb. (7,552 kg)	25,200 lb. (11,431 kg)	28,700 lb. (13,018 kg)
Platform Rotation			170 degrees	180 degrees	170 degrees	180 degrees
Horizontal Reach			34 ft. (10.4 m)	39 ft. 9 in. (12.1 m)	51 ft. 3 in. (15.6 m)	57 ft. (17.4 m)
Wheelbase			8 ft. (2.4 m)	8 ft. (2.4 m)	8 ft. (2.4 m)	8 ft. (2.4 m)
Turret Rotation			360 degrees continuous		360 degrees continuous	
Turret Tailswing			3 ft. 1 in. (94 cm)	3 ft. 1 in. (94 cm)	3 ft. 11 in. (145 cm)	3 ft. 11 in. (145 cm)
Gradeability (torque equivalent to)			45%	45%	45%	45%
Ground Clearance Between Wheels			11 in. (28 cm)	11 in. (28 cm)	16 in. (41 cm)	16 in. (41 cm)
Turning Radius	Inside	2WD	7 ft. 7 in. (2.3 m)	7 ft. 7 in. (2.3 m)	9 ft. 3 in. (2.8 m)	9 ft. 3 in. (2.8 m)
		4WD	9 ft. (2.7 m)	9 ft. (2.7 m)	9 ft. 3 in. (2.8 m)	9 ft. 3 in. (2.8 m)
	Outside	2WD	17 ft. (5.2 m)	17 ft. (5.2 m)	16 ft. 7 in. (5.0 m)	16 ft. 7 in. (5.0 m)
		4WD	18 ft. 7 in. (5.7 m)	18 ft. 7 in. (5.7 m)	16 ft. 7 in. (5.0 m)	16 ft. 7 in. (5.0 m)
System Voltage			12 VDC		12 VDC	
Battery	Type		Lead Acid		Lead Acid	
	Cold Cranking Amperes		800 A		800 A	
Operating Times	Main boom up		30 - 40 seconds (approx.)		45 - 60 seconds (approx.)	
	Main boom down		30 - 40 seconds (approx.)		45 - 60 seconds (approx.)	
	Fly boom extend		30 - 40 seconds (approx.)		60 - 70 seconds (approx.)	
	Fly boom retract		30 - 40 seconds (approx.)		60 - 70 seconds (approx.)	
	Jib up		20 - 30 seconds (approx.)		20 - 30 seconds (approx.)	
	Jib down		14 - 24 seconds (approx.)		14 - 24 seconds (approx.)	
	Turret rotate - counterclockwise 360° (fully stowed)		70 - 110 seconds (approx.)		83 - 120 seconds (approx.)	
	Platform rotate - full		10 - 20 seconds (approx.)		10 - 20 seconds (approx.)	
Driving Speeds	Drive Speed (maximum-stowed)		4.5 mph (7.2 km/h)		4.5 mph (7.2 km/h)	
	Drive Speed (maximum-elevated)		0.5 mph (0.8 km/h)		0.5 mph (0.8 km/h)	

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3.4 Hydraulic Schematic Parts List (Continued) *AC*

Index No.	Skyjack Part No.	Qty.	Description
			Parts list continued from previous page.
RA1	138232	1	ACTUATOR, Platform rotary
RA2	138280	1	ACTUATOR, Turret rotation swing drive
RV1	141287	1	VALVE, Relief (Drive pump)
RV2	141287	1	VALVE, Relief (Drive pump)
RV3	141230	1	VALVE, Relief (Drive pump)
RV4	141440	1	VALVE, Relief (Brake)
RV5	N/A	1	VALVE, Relief (EPU)
RV6	141403	1	VALVE, Relief (Main control swing drive)
RV7	141403	1	VALVE, Relief (Main control boom extend)
RV8	146015	1	VALVE, Relief (Main control clipping)
SV1	141439	1	VALVE, Shuttle (Brake valve)
SV2	141441	1	VALVE, Shuttle (Brake valve - M1 / M2)
SV3	141414	1	VALVE, Shuttle (Main control valve - RA / RB)
SV4	141414	1	VALVE, Shuttle (Main control valve - LA / LB)
SV5	141414	1	VALVE, Shuttle (Main control valve - EA / EB)
SV6	146014	1	VALVE, Shuttle (Boom rotation)
SV7	138394	1	VALVE, Shuttle (Generator option)
V1	141436	1	VALVE, Control (Brake release override)
V2	141442	1	VALVE, Control (Loop flush)
V3	141437	1	VALVE, Control (Brake hand pump)

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Electrical System (Continued)

16. Loose or broken white wire from relay 57ACR to start solenoid 32BCR.
    - Check continuity. Replace if defective.
17. Defective starter solenoid 32BCR.
    - Check solenoid. Replace if defective.
18. Loose or broken battery cable from starter solenoid 32BCR to starter motor.
    - Check continuity. Replace if defective.
19. Defective starter motor.
    - Check motor. Repair or replace if defective.

4.1-9 Engine Cranks but Will Not Start (GM Dual Fuel)

NOTE

For additional engine troubleshooting refer to diagnostic trouble codes for use with the check engine light.

1. Loose or broken red wire from battery positive to relay 2002CR.
   - Check continuity. Replace if defective.
2. Loose or broken red/tan wire from ECU fuse F8 to relay 2002CR.
   - Check continuity. Replace if defective.
3. Loose or broken white/ light blue wire from ECU connector pin #71 to relay 2002CR.
   - Check continuity. Replace if defective.
4. Defective relay 2002CR.
   - Check relay. Replace if defective.
5. Loose or broken pink/dark green wire from relay 2002CR to ignition fuse F10.
   - Check continuity. Replace if defective.
6. Defective fuse F10.
   - Check fuse. Replace if defective.
7. Loose or broken pink/dark green wire from fuse F10 to ignition coil IGC1 pin #A.
   - Check continuity. Replace if defective.
8. Loose or broken yellow wire from ignition coil IGC1 pin #B to ignition module IGM1.
   - Check continuity. Replace if defective.
9. Defective ignition coil IGC1.
   - Check coil for spark. Replace if defective.
10. Loose or broken pink/dark green wire from fuse F10 to ignition module IGM1 pin #A.
    - Check continuity. Replace if defective.
11. Loose or broken black wire from ignition module IGM1 pin #C to engine ground.
    - Check continuity. Replace if defective.
12. Loose or broken yellow wire from ignition module IGM1 pin #B to ECU connector pin #31.
    - Check continuity. Replace if defective.
13. Defective ignition module IGM1.
    - Check module for operation. Replace if defective.
14. Loose or broken pink/dark green wire from fuse F10 to gas injectors GI-1, GI-2, GI-3 and GI-4.
    - Check continuity. Replace if defective.
15. Loose or broken pink/white wire from ECU connector pin #82 to throttle actuator RA1.
    - Check continuity. Replace if defective.
16. Loose or broken tan/orange wire from ECU connector pin #83 to throttle actuator RA1.
    - Check continuity. Replace if defective.
17. Loose or broken light green/red wire from ECU connector pin #19 to throttle actuator RA1.
    - Check continuity. Replace if defective.

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Table 2.4 Axles Maintenance Intervals

Operation		Frequency	Lubricants
Check Levels	Differential	monthly	SAE85W90 (API GL4 - MIL L-2105) With additives for oil-bath brakes
	Planetary reduction	every 200 hours	
Oil Change	Differential	every 800 hours *	
	Planetary reduction	every 1000 hours *	
	Self-locking differential gear	every 700 * &	

Operation	Member	Conditions	Frequency	Lubricants
Greasing	Articulations	Normal work	monthly	MOLIKOTE
		Awkward work	weekly	

Adjustments and Checks			
Unit	Operation	Frequency	Service Brake Circuit
Negative Brake	Adjustment	every 1000 hours *	Only for mineral oil use, e.g., ATF Dexron II. Make sure that master cylinder seals are suitable for mineral oil.
Service Brake	Adjustment	every 500 hours	
Wheel Nuts	Tightening	every 200 hours	

* Initially after 100 working hours
& When it starts sounding noisy

Gear Box Lubricant Intervals	
Check levels	monthly
Oil change	once at 50 hours after every 1000 hours
Screw/bolt tighten	every 200 hours
Lubricant	SAE 90 oil API GL3

Torque Wrench Settings (Nm)			
Size of Screw	8G/8.8	10K/10.9	12K/12.9
M4	2.9	4.1	-
M6	10	14	-
M8	25	35	-
M12	49	69	-
M10 x 1.25	-	73	-
M12	86	120	-
M14	135	190	-
M14 x 1.5	-	-	250
M16	210	295	-
A18	325	-	-

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Note: 1 Nm = 0.7376 ft-lb

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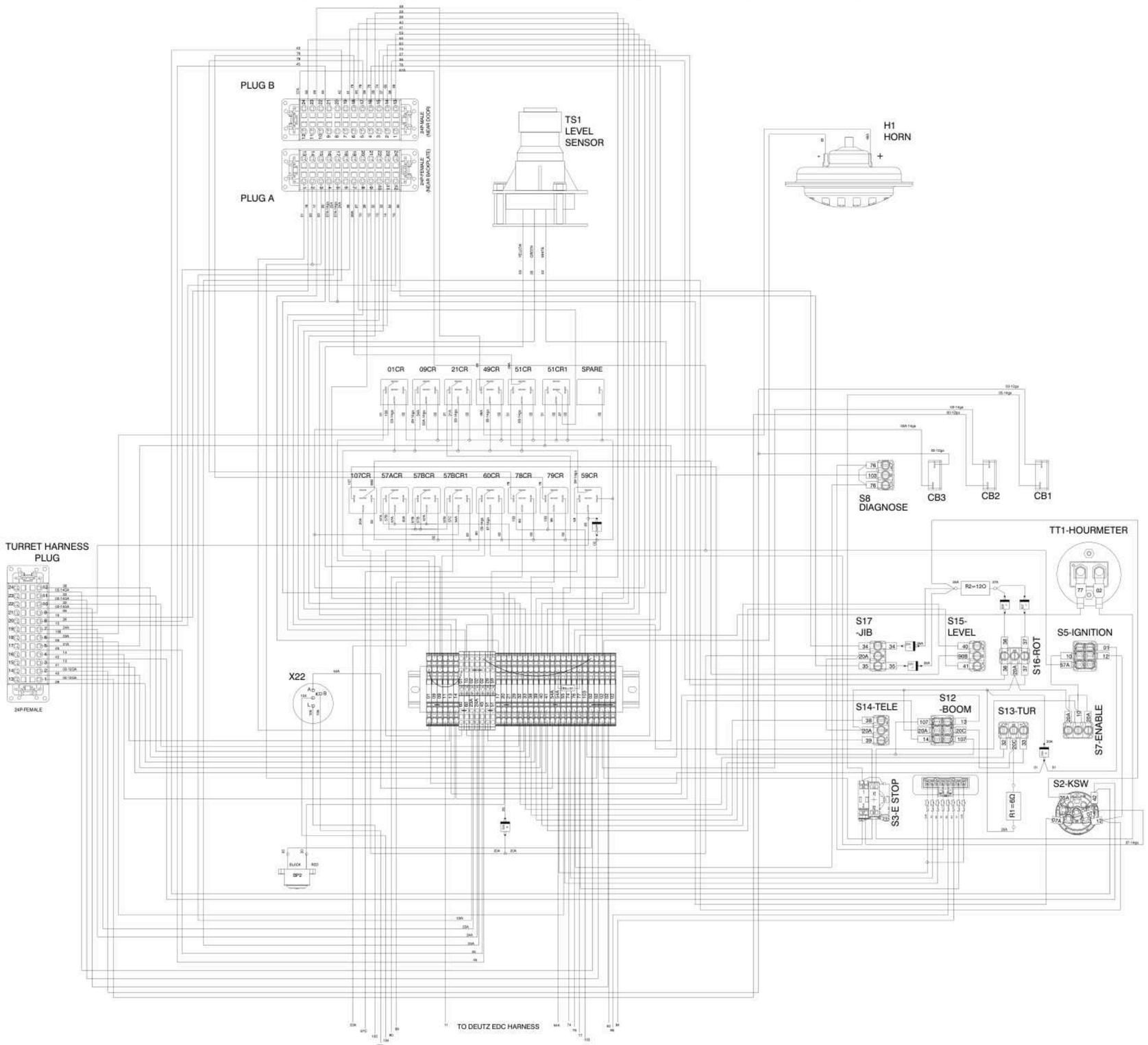
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Serial Breakdown Reference Chart		
Model	Serial Number	Reference
SJ-45T	980143 & Below	Figure 3.31a
	980144 & 98000481	Figure 3.31b



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