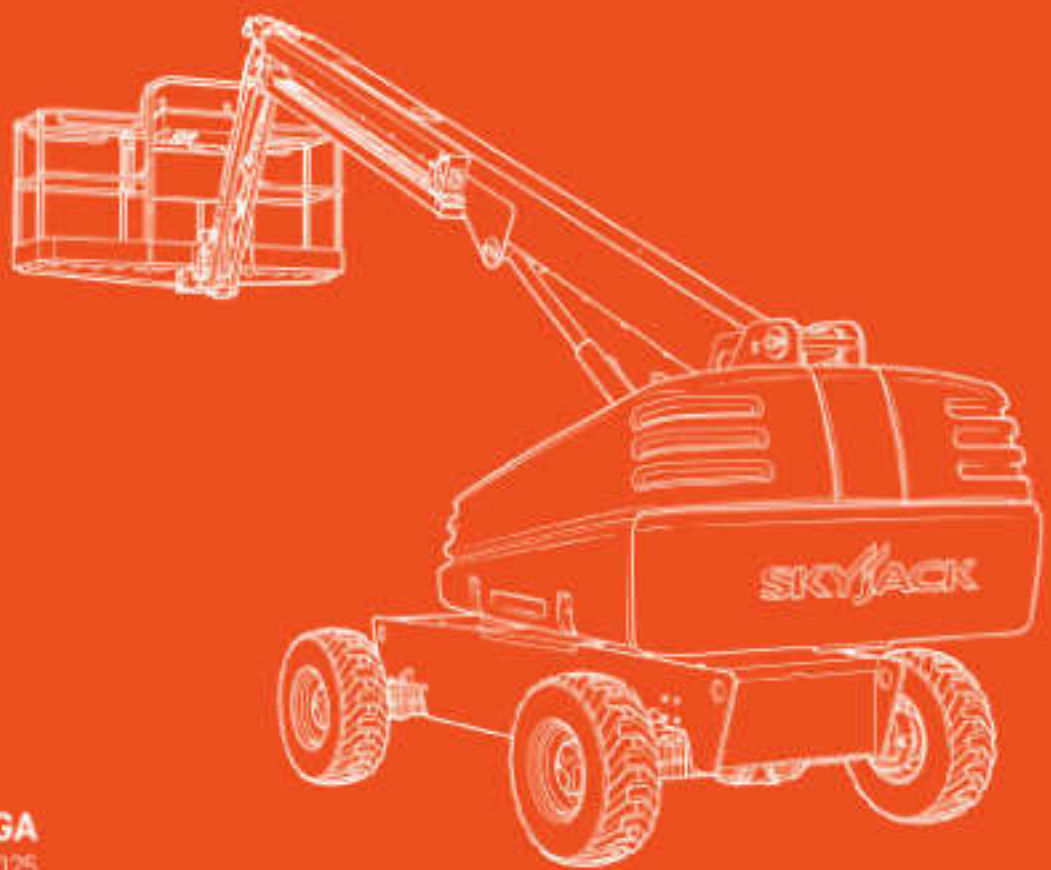
SKYJACK

SERVICE MANUAL

SJ40 T+, SJ45 T+

TELESCOPIC BOOMS



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ANSI/CSA, CE, AS

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Table of Contents

Section 1 – Scheduled Maintenance 13

1.1 Read and Heed 13

1.1-1 Mobile Elevating Work Platform (MEWP) Definition 13

1.1-2 Purpose of Equipment 13

1.1-3 Use of Equipment 13

1.1-4 Manual 13

1.1-5 Service Policy and Warranty 13

1.1-6 Operator Safety Reminders, Warnings and Precautions 13

1.2 Maintenance and Service 14

1.2-1 Maintenance and Inspection Schedule 14

1.2-2 Owner's Annual Inspection Record 14

1.2-3 Replacement Parts 14

1.2-4 Maintenance and Service Safety Tips. 14

1.2-5 Hydraulic System & Component Maintenance and Repair 15

1.2-6 Hydraulic Maintenance Hints 15

1.2-7 Railing Maintenance and Repair. 16

1.3 Scheduled Maintenance 17

1.3-1 Service Bulletins 17

1.3-2 Maintenance and Inspection 17

1.3-3 Maintenance Instructions 17

1.4 Owner's Annual Inspection Record 18

1.5 Pre-Delivery/Maintenance Inspection Checklist 19

1.6 Scheduled Maintenance Inspections 20

1.6-1 Electrical 20

1.6-2 Hydraulic 20

1.6-3 Labels 20

1.6-4 Limit switches 20

1.6-5 Engine compartment. 21

1.6-6 Control Compartment 24

1.6-7 Base 26

1.6-8 Platform 28

1.6-9 Boom Assembly 29

1.6-10 Optional equipment 30

1.7 Function Tests 31

Section 2 – Maintenance Tables and Diagrams 33

2.1 Standard Hose Numbering System 33

2.2 MEWP Torque Specifications 35

MidWestTech | Skyjack SJ40 T+, SJ45 T+ Telescopic Boom Lift Service Manual | Publicati... Order the manual at mid-west-tech.com >

2.3 Axle Torque Specifications 36
2.4 Torque Specifications for Fasteners (US) 37
2.5 Torque Specifications for Fasteners (Metric) 38
2.6 Torque Specifications for Hydraulic Couplings & Hoses 39
2.7 Axles Maintenance Intervals 40
2.8 Tire Specifications 41
2.9 Floor Loading Pressure 42
2.10 Hydraulic Specifications 43
2.11 Hydraulic & Gear Oils 44
2.12 Platform Capacities 44
2.13 Specifications and Features - Dimensional Data 45
2.14 Specifications and Features - Performance and Speeds 46
2.15 Engine Specifications 47
2.16 Reach Diagram - SJ40 T+ 48
2.17 Dimensions - SJ40 T+ 49
2.18 Reach Diagram - SJ45 T+ 50
2.19 Dimensions - SJ45 T+ 51
2.20 Axle Oscillation Diagrams 52

Section 3 – System Component Identification and Schematics 53

3.1 Electrical Symbol Chart 54
3.2 Hydraulic Symbol Chart 55
3.3 Wire Number and Colour Chart 56
3.4 Hydraulic Parts List 57
3.5 Electrical Component Parts List 60
3.6 Rotary Manifold Port Identification 63
3.7 Brake Manifold Port Identification 64
3.8 System Pump Port Identification 65
3.9 Drive Pump Port Identification 66
3.10 Drive Motor Port Identification 67
3.11 Jib & Platform Rotate Valve Port Identification - SJ45 T+ 68
3.12 Platform Rotate Valve Port Identification - SJ40 T+ 69
3.13 Main Manifold Port Identification 71
3.14 Main Manifold Electrical Component Identification 72
3.15 Main Manifold Hydraulic Component Identification 73
3.16 Major Components 74
3.17 Main Harness Wiring Diagram 75
3.18 Engine Interface Harness - Deutz D2.2 76
3.19 ECU Engine Wiring Diagram - Deutz D2011 77
3.20 Engine Interface Harness - Deutz D2.9L 78
3.21 Engine Interface Harness - Kubota WG2503 79
3.22 Glow Plug Harness - Deutz D2.9L 80
3.23 Glow Plug Harness - Deutz D2011 81

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3.24 Jib and Platform Rotate Harnesses . . . 82
3.25 Limit Switch Connections . . . 83
3.26 Flashing Light Connection . . . 84
3.27 Oil Cooler Harness Connections . . . 85
3.28 Generator Wire Kit Connections . . . 86
3.29 Differential Lock Harness . . . 87
3.30 SGE Wiring Diagram . . . 88
3.31 SGE Connections . . . 89
3.32 Load Cell Connections . . . 90
3.33 Footswitch Connections . . . 91
3.34 CANbus Cable Connections . . . 92
3.35 Power Cable Connections . . . 93
3.36 Hydraulic Schematic . . . 95
3.37 Platform Controls Wiring - SJ40 T+ . . . 96
3.38 Platform Controls Wiring - SJ45 T+ . . . 97
3.39 Base Controls Wiring - SJ40 T+ . . . 98
3.40 Base Controls Wiring - SJ40 T+ with Positive Air Shut-Off Option . . . 99
3.41 Base Controls Wiring - SJ45 T+ ANSI/CSA & AS . . . 100
3.42 Base Controls Wiring - SJ45 T+ ANSI/CSA & AS with Positive Air Shut-Off Option . . . 101
3.43 Base Controls Wiring - SJ45 T+ CE . . . 102
3.44 Electrical Schematic - ANSI/CSA & AS . . . 103
3.45 Electrical Schematic - CE . . . 104
3.46 Interface & Engine Electrical Schematic - Deutz TD2.9L & D2.2 . . . 105
3.47 Interface & Engine Electrical Schematic - Deutz D2011 . . . 106
3.48 Interface & Engine Electrical Schematic - Kubota WG2503 . . . 107
3.49 OEM Engine Harness - Deutz D2.2 . . . 108

Section 4 – Troubleshooting Information . . . 109

4.1 Introduction . . . 109
4.2 Electrical System . . . 110
4.2-1 All Controls are Inoperative from the Base or Platform Console . . . 110
4.2-2 All Controls are Inoperative from the Base Console . . . 112
4.2-3 The Engine will not Crank from the Base or Platform . . . 112
4.2-4 The Engine will not Crank from the Base . . . 113
4.2-5 The Engine will not Crank from the Platform . . . 113
4.2-6 The Boom Controls are Inoperative (Drive Operates) . . . 113
4.2-7 No Boom Up from the Base or Platform Controls . . . 114
4.2-8 No Boom Up from the Base Console . . . 114
4.2-9 No Boom Up from the Platform Console . . . 114
4.2-10 No Boom Down from the Base or Platform Consoles . . . 114
4.2-11 No Boom Down from the Base Console . . . 115
4.2-12 No Boom Down from the Platform Console . . . 115
4.2-13 No Turret Rotate Right from the Base or Platform Consoles . . . 115

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Table 2.15 Engine Specifications

			SJ40 T+ & SJ45 T+
Deutz D2.9L	RPM Settings		900 Low / 1700 / 2600 High
	Horsepower @ 2000 rpm (intermittent)		29.8 kW / 40 Hp
	Fuel Type		Diesel
	Fuel Tank Capacity		45 gal (170.3 L)
	Standard Lube Oil	0°F to 115°F (-18°C to -45°C)	SAE 15W-40 API CF/CG/CH-4
	Cold Lube Oil	-20°F to 90°F (-29°C to -32°C)	SAE 0W-30 API CF/CG/CH-4
	Arctic Lube Oil	- 40°F to 115°F (-40°C to -45°C)	SAE 0W-40 API CF/CG/CH-4
	Lube Oil Sump Capacity		2.38 gal (9 L)
	Standard & Arctic Coolant	-40°F to 115°F (-40°C to -45°C)	Delo 50/50 Extended Life Coolant
	Coolant Capacity		3.0 gal (11.4 L)
Deutz D2.2	RPM Settings		1200 Low /1600 / 2300 High
	Horsepower @ 2300 rpm (intermittent)		18.4 kW / 25 Hp
	Fuel Type		Diesel
	Fuel Tank Capacity		45 gal (170.3 L)
	Standard Lube Oil	0°F to 115°F (-18°C to 45°C)	SAE 15W-40 API CF/CG/CH-4
	Standard Coolant	-40°F to 115°F (-40°C to 45°C)	Delo 50/50 Extended Life Coolant
	Coolant Capacity		2.75 gal (10.4 L)
	Lube Oil Sump Capacity		2.11 gal (8.0 L)
Deutz D2011	RPM Settings		1600 Low / 2100 / 2675 High
	Gross Intermittent HP		36 kW / 48 Hp
	Horsepower @ 2600 rpm (intermittent)		34 kW / 45 Hp
	Fuel Type		Diesel
	Fuel Tank Capacity		45 gal (170.3 L)
	Standard Lube Oil	0°F to 115°F (-18°C to 45°C)	SAE 15W-40 API CF/CG/CH-4
	Cold Lube Oil	-20°F to 90°F (-29°C to 32°C)	SAE 0W-30 API CF/CG/CH-4
	Arctic Lube Oil	-40°F to 115°F (-40°C to 45°C)	SAE 0W-40 API CF/CG/CH-4
	Lube Oil Sump Capacity		1.45 gal (5.5 L)
Kubota WG2503	RPM Settings		927 Low / 1700 / 2675 High
	Gross Intermittent HP		45.5 kW / 61 Hp
	Fuel Type		Gasoline / Propane
	Fuel Tank Capacity		45 gal (170.3 L)
	Standard Lube Oil	-40°F to 115°F (- 40°C to 45°C)	SAE 5W-30 API SL
	Lube Oil Capacity		2.5 gal (9 L)
	Standard & Arctic Coolant	-20°F to 115°F (-29°C to 45°C)	Recochem 50/50 Extended Life Coolant
	Coolant Capacity		3.17 gal (12 L)

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8. Loose or broken 57A wire from connector P4 pin 8 to start input on ECU or 57ACR relay if equipped.	**Check schematic applicable to the engine equipped on the machine to determine ECU pin # or relay if equipped.**

NOTE

For other engine-related problems, consult the engine manufacturer's manual.

4.2-4 The Engine will not Crank from the Base

1. Loose or broken wire #57A from base start switch S5 to relay 57ACR (Deutz D2011 and GM 3.0l engines).	**Check continuity. Replace if defective.**
2. Defective base start switch S5.	**Check start switch. Replace if defective.**
3. Defective base start switch S5.	**Check start switch. Replace if defective.**

4.2-5 The Engine will not Crank from the Platform

NOTE

The engine will not crank from the platform with the footswitch pressed.

1. Loose or broken wire #04 from platform terminal block to start switch S9.	**Check continuity. Replace if defective**
2. Loose or broken wire #57B from start switch S9 to platform control module connector J12 pin 30	**Check continuity. Replace if defective**
3. Defective start switch S9	**Check continuity through switch. Replace if defective**

4.2-6 The Boom Controls are Inoperative (Drive Operates)

1. Loose or broken wire #21 from base control module connector J3 pin 24 to main harness 24 pin connector pin 5	**Check continuity. Replace if defective**
2. Loose or broken wire #21A from main harness plug pin #5 to dump valve 2H-21A	**Check continuity. Replace if defective**
3. Loose or broken wire #02 from dump valve 2H-21A to main harness plug	**Check continuity. Replace if defective**
4. Defective dump valve coil 2H-21A	**Check continuity and resistance through coil. Replace if defective**

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5.2-12 CANbus troubleshooting

SMB1-x06 Slave 1 ID 8 (upper controller)		
Error	**Possible cause**	**Remedy**
PRE OPER	A partial CAN communication error to that node caused by a short or open circuit on the CAN lines between the upper and lower controller.	1. To check for a short, disconnect the load cell CAN lines from the terminal strip in the upper control box. 2. With the wire to the load cell disconnected, check and see if SMB1-x06 Slave node 8 has changed to "OPERATING". 3. If it has changed to "OPERATING" the issue is within the load cell or load cell wiring. Follow the procedure *5.2-13 Verify the CANbus line* on the load cell CAN lines.
	The lower controller has not been set up and is in factory mode.	Check that the lower controller has the correct model, region, and engine.
	The P1 connector on the lower controller is unplugged.	Plug in the P1 connector.
	SMB1-x06 Slave 1 still reads "PRE OPER".	Do the procedure *5.2-13 Verify the CANbus line* on the CAN lines between the upper and lower controllers.
NO DATA	There is no communication from the lower SCM to the upper controller.	1. Verify you have proper power to the controllers and the upper and lower e-stops are pulled out. 2. Check for good connections on the CAN lines at the terminal strips of the upper and lower control boxes. 3. Follow the procedure *5.2-13 Verify the CANbus line* on the CAN lines between the upper and lower controllers. found at the end of this procedure.
	The lower controller will also show LOAD CELL 2 LOST on the start up screen if there is no communication.	
	LOAD CELL 2 LOST shows when the P11 connector in the upper control box is unplugged.	Plug in the P11 connector.

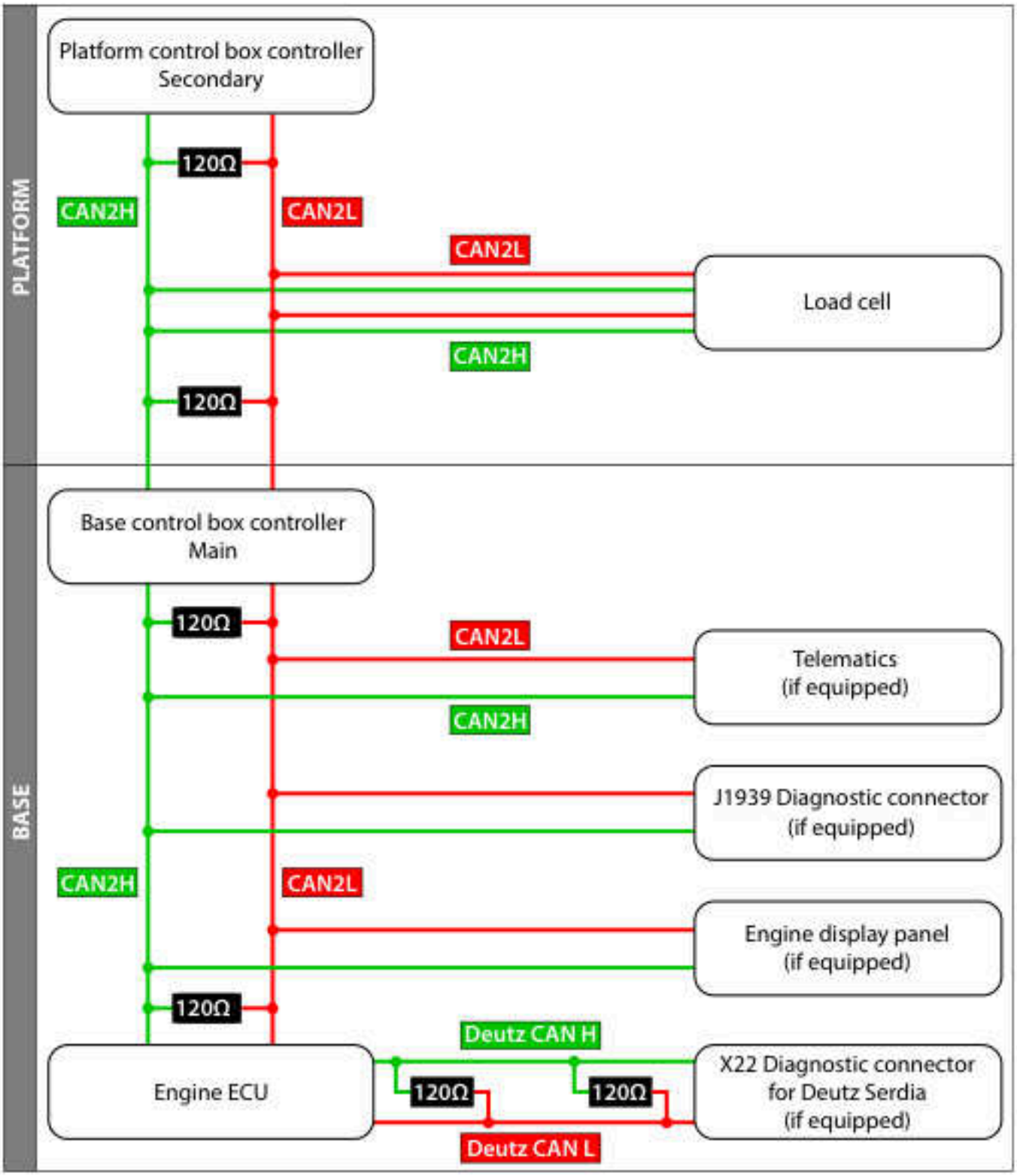
SMB1-x08 Main ID 1 (lower controller)			
Error		**Possible Cause**	**Remedy**
SMB1-x08	**PRE OPER**	The lower controller is in factory mode and has not been set up yet.	1. Follow the *5.2-7 SCM select model* flowchart.
MRW-1 and/or MRW-2 (load cell)	**NO DATA**	No communication from one or both nodes of the load cells.	1. Make sure the upper and lower e-stops are pulled out. 2. Verify you have the power to the controllers. 3. Verify the dipswitches are set to 2 and the load cell green lights are on. 4. If all of the above are true and the error continues, follow the procedure *5.2-13 Verify the CANbus line* to check the load cell CAN lines.
	LOAD CELL 1 or 2 LOST		

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5.3-2 Load cell 10% error troubleshooting . . . 164
5.3-3 Replace the load cell . . . 166
5.4 Boom . . . 170
5.4-1 Rotary Actuator Bolt Torque Procedure . . . 170
5.4-2 Cable Carrier Repair . . . 170
5.4-3 Check the Wear Pads . . . 171
5.4-4 Shim the Wear Pads . . . 172
5.4-5 Limit Switch Locations . . . 173
5.5 Turret . . . 175
5.5-1 Check and Replace the High Pressure Filter . . . 175
5.5-2 Adjust the Turret Rotation Gear Backlash . . . 175
5.5-3 Check the Swing Drive Oil . . . 176
5.5-4 Change the Swing Drive Oil . . . 176
5.5-5 Ring Gear Bolt Torque Sequence . . . 177
5.5-6 Check the Rotation Bearing for Axial Wear . . . 177
5.5-7 Battery Replacement . . . 179
5.5-8 Electronic Tilt Switch Setup Procedure . . . 179
5.6 Deutz Diesel Engines . . . 182
5.6-1 Replace the Engine Oil and Filter . . . 182
5.6-2 Replace the Fuel Filter . . . 183
5.6-3 Replace the Air Filter . . . 183
5.6-4 Check the Engine Belt . . . 183
5.6-5 Check the Oil Cooler (Deutz D2011 only) . . . 183
5.6-6 Retrieve Engine Fault Codes - Deutz D2.9L . . . 184
5.6-7 Deutz D2.9L Fault Codes . . . 185
5.7 Kubota WG2503 Dual Fuel Engine . . . 205
5.7-1 Engine Parameter Display (KAntrak 1700) . . . 205
5.7-2 Diagnostic Trouble Codes . . . 206
5.7-3 Diagnostic Trouble Codes . . . 207
5.7-4 Diagnostic Trouble Codes . . . 208
5.7-5 Diagnostic Trouble Codes . . . 209
5.7-6 Diagnostic Trouble Codes . . . 210
5.7-7 ECU Pin Reference Chart (Kubota WG2503) . . . 211
5.7-8 Fuse Box (Kubota WG2503) . . . 212
5.7-9 MAP Sensor (Kubota WG2503) . . . 213
5.7-10 IAT Sensor (Kubota WG2503) . . . 213
5.7-11 ECT (Kubota WG2503) . . . 214
5.7-12 TPS & Engine Speed (Kubota WG2503) . . . 214
5.7-13 Fuel Temperature Sensor (Kubota WG2503) . . . 215
5.7-14 Oil Pressure Sensor (Kubota WG2503) . . . 215
5.8 Hydraulic Tank . . . 216
5.8-1 Hydraulic Oil Replacement . . . 216
5.8-2 Hydraulic Filter Replacement . . . 216

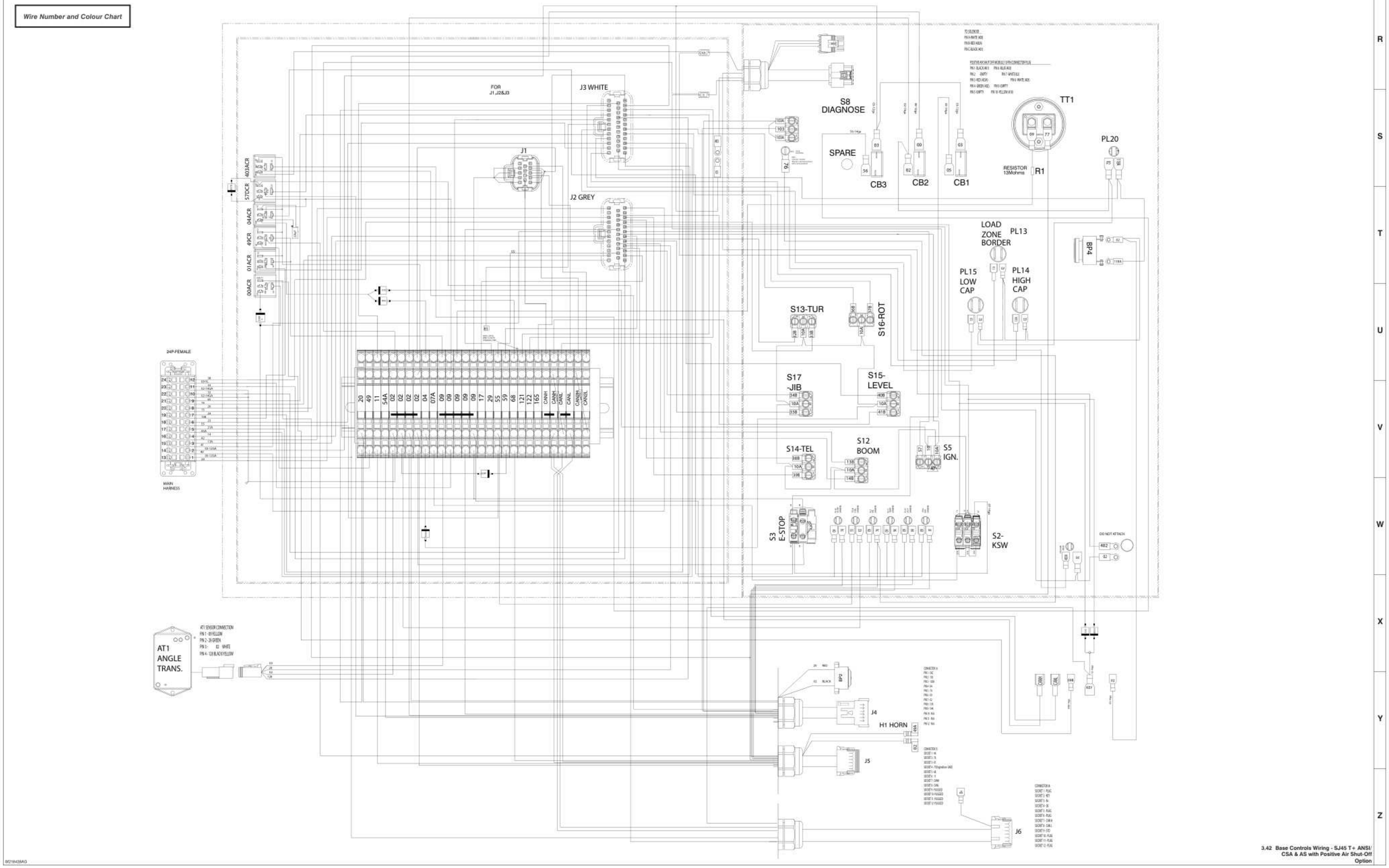
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5.2-14 CANbus connections diagram



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3.42 Base Controls Wiring - SJ45 T+ ANSI/CSA & AS with Positive Air Shut-Off Option



3.42 Base Controls Wiring - SJ45 T+ ANSI/CSA & AS with Positive Air Shut-Off Option

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