SKYJACK

SERVICE MANUAL

SJ6826 RT, SJ6832 RT

ROUGH TERRAIN SCISSORS



167955AGA

October 2024
ANSI/CSA

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

Table of Contents

Section 1 – Scheduled Maintenance 11

1.1 Read and Heed 11

1.1-1 Aerial Platform and Mobile Elevating Work Platform Definition 11

1.1-2 Purpose of Equipment 11

1.1-3 Use of Equipment 11

1.1-4 Manual 11

1.1-5 Service Policy and Warranty 11

1.1-6 Operator Safety Reminders, Warnings and Precautions 11

1.2 Maintenance and Inspection Schedule 12

1.2-1 Owner's Annual Inspection Record 12

1.2-2 Replacement Parts 12

1.2-3 Maintenance and Service Safety Tips 12

1.3 Hydraulic System & Component Maintenance and Repair 13

1.3-1 Maintenance Hints 13

1.4 About this Section 14

1.4-1 Service Bulletins 14

1.4-2 Maintenance and Inspection 14

1.4-3 Maintenance Instructions 14

1.5 Owner's Annual Inspection Record 15

1.6 Scheduled Maintenance Inspections 17

1.6-1 Electrical 17

1.6-2 Hydraulic 17

1.6-3 Manuals 18

1.6-4 Labels 18

1.6-5 Limit Switches 18

1.6-6 Engine Compartment 18

1.6-7 Hydraulic / Fuel Compartment 21

1.6-8 Platform Assembly 22

1.6-9 Lifting Mechanism 23

1.6-10 Base 27

1.7 Function Tests 29

Section 2 – Specifications 31

2.1 Specifications and Features 31

2.2 Floor Load Calculation 32

2.4 Floor Loading Pressure 33

2.3 Maximum Platform Capacities 33

2.5 Fluid Specifications 34

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

2.6 Torque Specifications 35
2.7 Torque Specifications for Fasteners (Imperial) 36
2.8 Torque Specifications for Fasteners (Metric) 37
2.9 Torque Specifications for Hydraulic Couplings & Hoses 38

Section 3 – System Component Identification and Schematics 39

3.1 Hydraulic Symbol Chart 40
3.2 Electrical Symbol Chart 41
3.3 AC Cord Color Code 42
3.4 Hydraulic Schematic Parts List 43
3.5 Electrical Parts List 45
3.6 Hydraulic Schematic S/N 37006450 and above 51
3.7 Hydraulic Schematic S/N 37006449 and below 52
3.8 Hydraulic Manifold Valve Port Identification 53
3.9 Hydraulic Manifold Valve Assemblies and Port Identification 54
3.10 Control Box Wiring Diagram 55
3.11 Outrigger / Hydraulic Generator Control Console Wiring Diagram 56
3.12 Scissor Arm Control Cable Wiring Diagram 57
3.13 Main Manifold Valve Harness Wiring Diagram 58
3.14 Kubota Engine Wiring Diagram – Dual Fuel System – S/N 37009728 and Below 59
3.15 Kubota Engine Wiring Diagram – Dual Fuel System – S/N 37009729 and Above 60
3.16 Kubota Engine Wiring Diagram (Diesel Fuel System) 61
3.17 Outrigger Harness Wiring Diagram 62
3.18 Hydraulic Generator Electrical Panel Assembly 63
3.19 All Motion Alarm Electrical Panel Diagram 64
3.20 Flashing Light Relay Harness 65
3.21 Elevate Telematics Wiring Diagram 66
3.22 ZTR & Calamp Telematics Harness Wiring Diagram 67
3.23 Electrical Panel Wiring Diagram S/N 37000235 and above 68
3.24 Electrical Panel Wiring Diagram S/N 37000234 and below 69
3.25 Electrical Panel Diagram with Positive Air Shut Off Option S/N 37000235 and above 70
3.26 Electrical Panel Diagram with Positive Air Shut Off Option S/N 37000234 and below 71
3.27 Positive Air Shut Off Harness Wiring Diagram – Diesel Engine 72
3.28 Electrical Schematic (No Option with Kubota Dual Fuel Engine) S/N 37009565 and above 73
3.29 Electrical Schematic (No Option with Kubota Dual Fuel Engine) S/N 37000235 to 37009564 74
3.30 Electrical Schematic (No Option with Kubota Dual Fuel Engine) S/N 37000234 and below 75
3.31 Electrical Schematic (All Option with Kubota Dual Fuel Engine) S/N 37009565 and above 76
3.32 Electrical Schematic (All Option with Kubota Dual Fuel Engine) S/N 37000235 to 37009564 77
3.33 Electrical Schematic (All Option with Kubota Dual Fuel Engine) S/N 37000234 and below 78
3.34 Electrical Schematic (All Option with Kubota Diesel Engine) S/N 37000235 and above 79
3.35 Electrical Schematic (All Option with Kubota Diesel Engine) S/N 37000234 and below 80

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

Section 4 – Troubleshooting Guide 81
4.1 Introduction 81
4.2 Electrical System 82
4.2-1 All Controls Inoperative 82
4.2-2 No Power To Platform 82
4.2-3 All Functions Inoperative from The Platform 83
4.2-4 Engine Will Not Crank from Platform or Base Control Console 83
4.2-5 Engine Cranks But Does not Start – Kubota Diesel 84
4.2-6 Engine Cranks But Does not Start – Kubota Dual Fuel 84
4.2-7 Glow Plugs Inoperative from Engine Controls or Platform (Diesel Models) 85
4.2-8 Choke Inoperative from Engine Controls or Platform (Kubota Dual Fuel) 86
4.2-9 High Throttle Inoperative 86
4.2-10 High Throttle On Demand Inoperative (Kubota Dual Fuel) 87
4.2-11 Drive and Steer Inoperative (Machines without outriggers option) 88
4.2-12 Drive and Steer Inoperative (Machines with outriggers option) 89
4.2-13 Brakes Does not Release 90
4.2-14 Steer Right Inoperative 90
4.2-15 Steer Left Inoperative 90
4.2-16 Reverse Drive Inoperative 90
4.2-17 Forward Drive Inoperative 91
4.2-18 First Drive Speed and Steering Inoperative 92
4.2-19 Second Drive Speed Inoperative 93
4.2-20 Third Drive Speed Inoperative 94
4.2-21 High Drive Speed Inoperative 94
4.2-22 Up Circuit Inoperative from Platform 95
4.2-23 Up Circuit Inoperative from Base Control Console 95
4.2-24 Up Circuit Inoperative from Platform or Base Control Console (without Outriggers) 95
4.2-25 Platform does not Lift from Platform or Base Control Console with Outriggers Retracted (Lift Operates Correctly with Outriggers Extended) 96
4.2-26 Platform does not Lift from Platform or Base Control Console with Outriggers Extended 97
4.2-27 Platform does not Lift from Platform or Base Control Console with Outriggers Extended or Retracted 98
4.2-28 Down Circuit Inoperative from Platform 98
4.2-29 Down Circuit Inoperative from Base 99
4.2-30 Hydraulic Generator Inoperative 99
4.2-31 Hydraulic Generator does not Shut Off from Generator Switch 100
4.2-32 All Outriggers Inoperative (Auto-Level and Manual) 100
4.2-33 All Outriggers Inoperative (Auto-Level and Manual from Platform Controls) 101
4.2-34 All Outriggers Inoperative (Base Controls only) 101
4.2-35 All Outriggers Inoperative (Auto Level only) 101
4.2-36 All Outriggers Inoperative (Auto Level only) 102
4.2-37 Left Front Outrigger Inoperative Manually 103
4.2-38 Right Front Outrigger Inoperative Manually 103

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

2.5 Fluid Specifications

Hydraulic Oil			
Model	**Capacity (Liters)**	**Capacity (US Gallons)**	**Oil Type**
SJ68XXRT	86.88	22.95	ATF Dexron III
			Shell Naturelle HF-E 32 (Biodegradable)

Engine Oil				
Engine Type	**Capacity (Liters)**	**Capacity (US Gallons)**	**Engine Oil Type**	**Recommended Equivalent Oil**
Kubota D902	3.9	1.03	SAE 10W-30	10W30 - API Service Designation CG-4, CF-4, CD, SH
Kubota D972	3.4	0.9		
Kubota WG 752				

Engine Coolant			
Engine Type	**Capacity (Liters)**	**Capacity (US Gallons)**	**Coolant Type**
Kubota	3.1	0.82	Anti-freeze 50/50 Premix

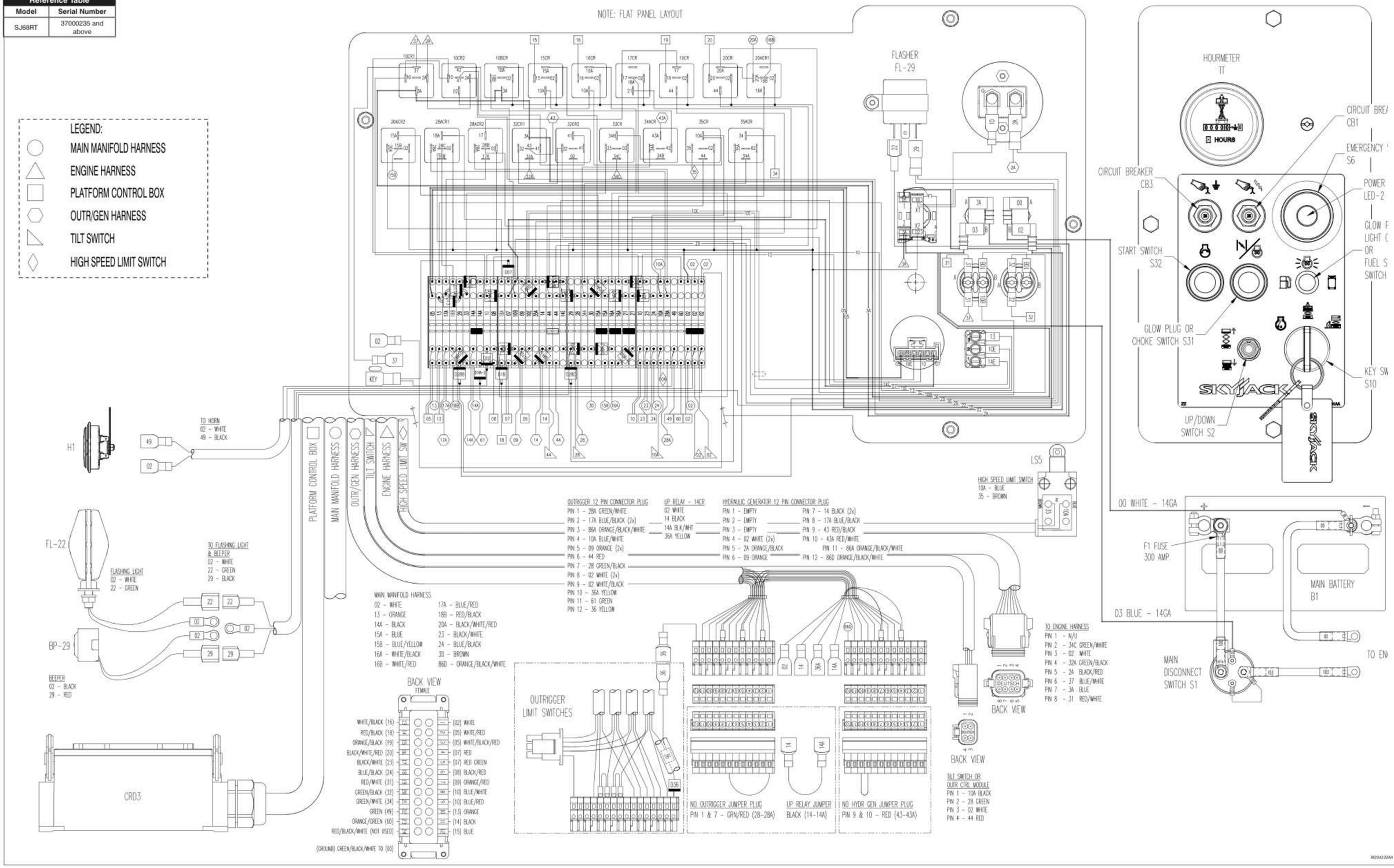
Engine Fuel			
Engine Type	**Capacity (Liters)**	**Capacity (US Gallons)**	**Fuel Type**
Kubota D902	86.88	22.95	Diesel
Kubota D972			Unleaded Gasoline
Kubota WG 752			

1512AA

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

3.23 Electrical Panel Wiring Diagram S/N 37000235 and above

Serial Number Breakdown Reference Table	
Model	**Serial Number**
SJ68RT	37000235 and above



MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual | Publication 167955AGA
Order the manual at mid-west-tech.com >

4.2-36 All Outriggers Inoperative (Auto Level only)

B: Led Power Indicator Light at Outrigger Control Module (OCM1) Flashing

Flash Code	Probable Cause	Remedy
1/1	1. Outriggers are all up and machine is tilted.	1. Level the machine.
1/2	1. Machine is elevated. 2. Loose or broken wire # 35.	1. Lower the scissor stack below high speed limit switch. 2. Check for input voltage on wire #35 at pin P2-10 of the outrigger control module (OCM1). Replace if defective.
2/2	1. At least one outrigger is not fully retracted. 2. Defective outrigger rod limit switch (LS61, LS62, LS63, LS64) or wiring. 3. Defective diode (D36) on outrigger board.	1. Fully retract all outriggers. 2. Replace defective or damaged switch(es) or wiring. 3. Check for continuity. Replace if defective.
2/1	1. Outriggers are all down and the machine is not fully level.	1. Move machine to less sloped terrain if it will not lift.
5/5	1. Power on wire #70 or #79 at power on. 2. Power on wire #70 or #79 when manually operating outriggers.	1. Check for power on wire #70 or #79 at pin P2-5 or P2-6 of the outrigger control module. Replace defective component. 2. Check for power on wire #70 or #79 while manually operating an outrigger.
5/2	1. Low or no voltage on wire #35c. 2. Loose or broken wire on #35c.	1. Check battery and charging system to ensure minimum 9 volts. 2. Check for input voltage on wire #35c at pin P4-9 of outrigger control module (OCM1).
7/1	1. Excessive vibration. 2. Defective outrigger control module.	1. Outrigger control module cannot read tilt sensor. 2. Replace.
6/6	1. Outriggers are being manually controlled.	1. Indicates function activated. No repair necessary.
7/8	1. Error occured while self diagnosing the hardware fail safe.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
5/1	1. Low input voltage to outrigger control module.	1. Check for minimum 9 volts between wire #02 at pin P2-11 and wire #10A at pin P2-12 at outrigger control module.
7/7	1. Startup error occurred while self diagnosing.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
7/5	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
7/2	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
8/1	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
8/2	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
8/3	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
8/4	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
8/5	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.
7/6	1. Internal failure of OCM1.	1. Turn off power to reset the outrigger control module. Turn power back on and see if the code has cleared. If problem persists, replace outrigger control module.

60416AB

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

5.4-7 Replace the air cleaner element . . . 121
5.4-8 Replace the oil filter cartridge . . . 121
5.4-9 Change the oil . . . 122
5.4-10 Check and replenish the radiator coolant level . . . 122
5.4-11 Drain and refill the radiator . . . 123
5.5 Base . . . 124
5.5-1 Inspect and torque the wheel bolts and nuts . . . 124
5.5-2 Install and torque the wheels . . . 124
5.5-3 Tighten the wheel nut . . . 125
5.5-4 Grease points . . . 126
5.5-5 Reconnect the platform control box for use from the ground . . . 127
5.5-6 Electronic tilt switch set up procedure . . . 128
5.6 Hydraulics . . . 131
5.6-1 Tightening and torque recommendations for hydraulic couplings and hoses . . . 131
5.6-2 Do a check of the holding valve . . . 132
5.6-3 Set the system pressure . . . 133
5.6-4 Set the lift pressure . . . 134
5.6-5 Drive circuit flush procedure . . . 135
5.6-6 Drive motor test . . . 136
5.6-7 System pressure test . . . 136
5.6-8 Drive pressure test . . . 136
5.7 Outriggers . . . 137
5.7-1 Outrigger mechanical limit switch wiring diagram . . . 137
5.7-2 Replace and adjust the outrigger upper limit switch (LS61, LS62, LS63, LS64) . . . 138
5.7-3 Replace and adjust the Outrigger lower limit switch (LS65, LS66, LS67, LS68) . . . 139
5.8 EZcal Diagnostic Tool . . . 140
5.8-1 Hand held EZcal calibration and diagnostic tool key functions . . . 140
5.8-2 Flash the controller . . . 141
5.8-3 Outrigger codes . . . 142
5.9 Auto-leveling Outrigger PC Board Layout . . . 143
5.10 GP-106 (OCM1) Control Module . . . 144
5.10-1 Outrigger control module (GP-106/OCM1) instructions . . . 144
5.10-2 Auto-leveling outrigger settings and error codes . . . 147
5.10-3 Auto-leveling outrigger error code breakdown . . . 148
5.10-4 Set up the GP-106 outrigger controller . . . 149
5.10-5 GP-106 outrigger controller pin reference table . . . 150
5.11 GP-108 Control Module . . . 151
5.11-1 Set up the GP-108 outrigger controller . . . 151
5.11-2 GP-108 outrigger controller pin reference table . . . 153
5.11-3 GP-108 LED error codes . . . 155

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

5. Referencing the following table, use a second box wrench to tighten the nut the appropriate number of flats past the mark. Do NOT over tighten it.

FLATS FROM WRENCH RESISTANCE CHART for JIC Hose Ends			
Size		FFWR	
Dash	Frac. (in.)	37° Tube Nut	Swivel Nut
-4	1/4"	2	1.5
-5	5/16"	2	2
-6	3/8"	1.5	1.5
-8	1/2"	1.5	1.25
-10	5/8"	1.5	-
-12	3/4"	1.25	-
-16	1"	1	-
-20	1 1/4"	1	-
-24	1 1/2	1	-
-32	2"	1	-

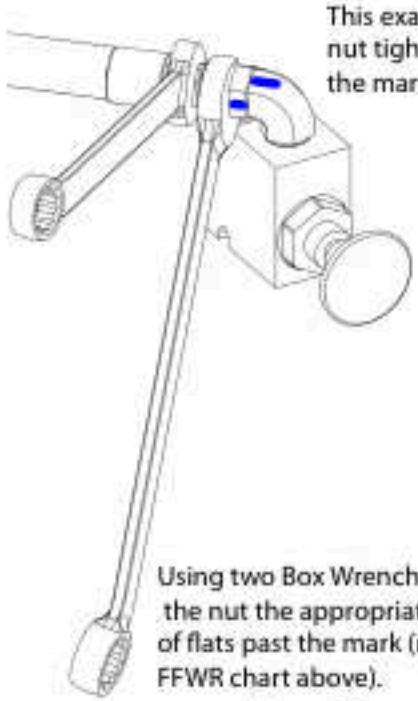


Figure 34

6. Apply a drop of torque seal to the connection.

5.6-2 Do a check of the holding valve

1. Raise the platform to an approximate height of 13 ft (4 m).
2. Locate the emergency lowering valve in the cutout on the front of the tank side cabinet.
3. Pull the knob, and hold it. The holding valves are in good working condition if the platform does not lower with the knob pulled out. However, if the platform lowers, you must replace the holding valves.

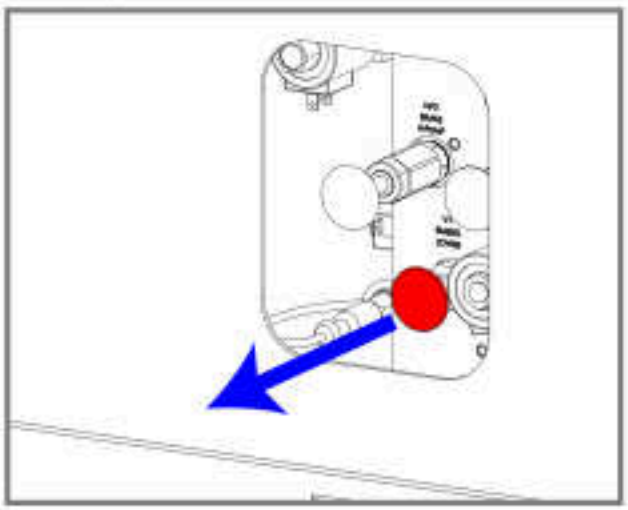
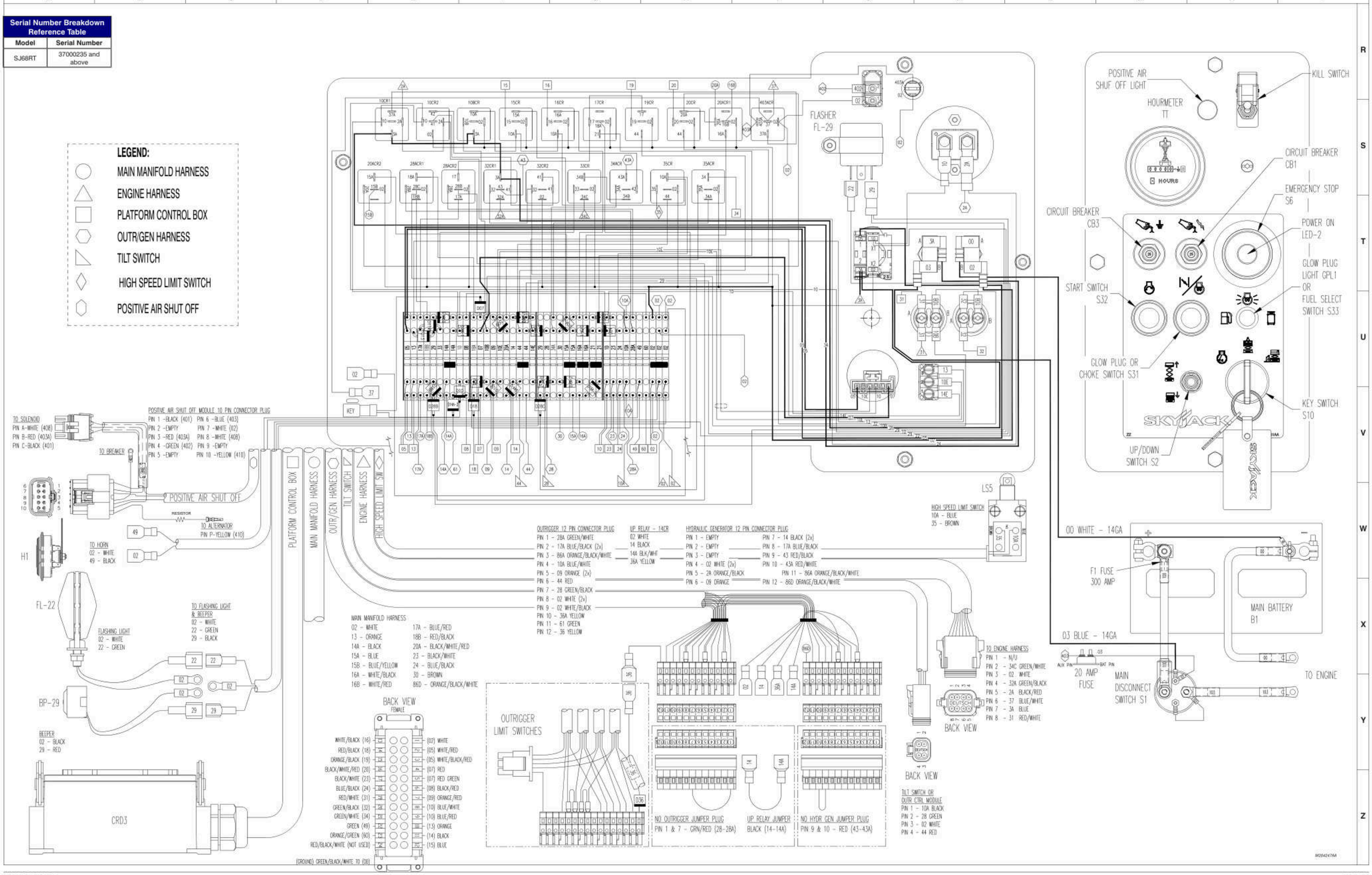


Figure 35

MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual |... Order the manual at mid-west-tech.com >

3.25 Electrical Panel Diagram with Positive Air Shut Off Option S/N 37000235 and above

Serial Number Breakdown Reference Table	
Model	Serial Number
SJ68RT	37000235 and above



MidWestTech | Skyjack SJ6826 RT, SJ6832 RT Rough Terrain Scissor Lift Service Manual | Publication 167955AGA
Order the manual at mid-west-tech.com >