

SERVICE MANUAL (ALL STANDARDS)

VERTICAL MAST

MODEL SJ12

155185AI January 2023

SKYJACK

MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI

Order the manual at mid-west-tech.com >

Section 1
SCHEDULED MAINTENANCE

Table of Contents

Operator's Responsibility for Maintenance

Aerial Platform Definition....7
Purpose of Equipment....7
Use of Equipment....7
Manuals....7
Operator....7
Service Policy and Warranty....7
Optional Accessories....7
Scope of this Manual....8
Operator Safety Reminders....8
Electrocution Hazard....9
Safety Precautions....10
Maintenance and Inspection Schedule....14
Owner's Annual Inspection Record....14
Replacement Parts....14
Maintenance and Service Safety Tips....14
Hydraulic System & Component Maintenance and Repair....15
Maintenance Hints....16
Railing Maintenance and Repair....16

Service and Maintenance

About this Section....17
Service Bulletins....17
Maintenance and Inspection....17
Maintenance Instructions....17

Tables

Table 1.1 Owner's Annual Inspection Record....18
Table 1.2 Maintenance and Inspection Checklist....19

Scheduled Maintenance Inspections

1.1 Scheduled Maintenance Inspections....20
1.2 Function Tests....27

MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI

Order the manual at mid-west-tech.com >

Table 2.2 Specifications and Features

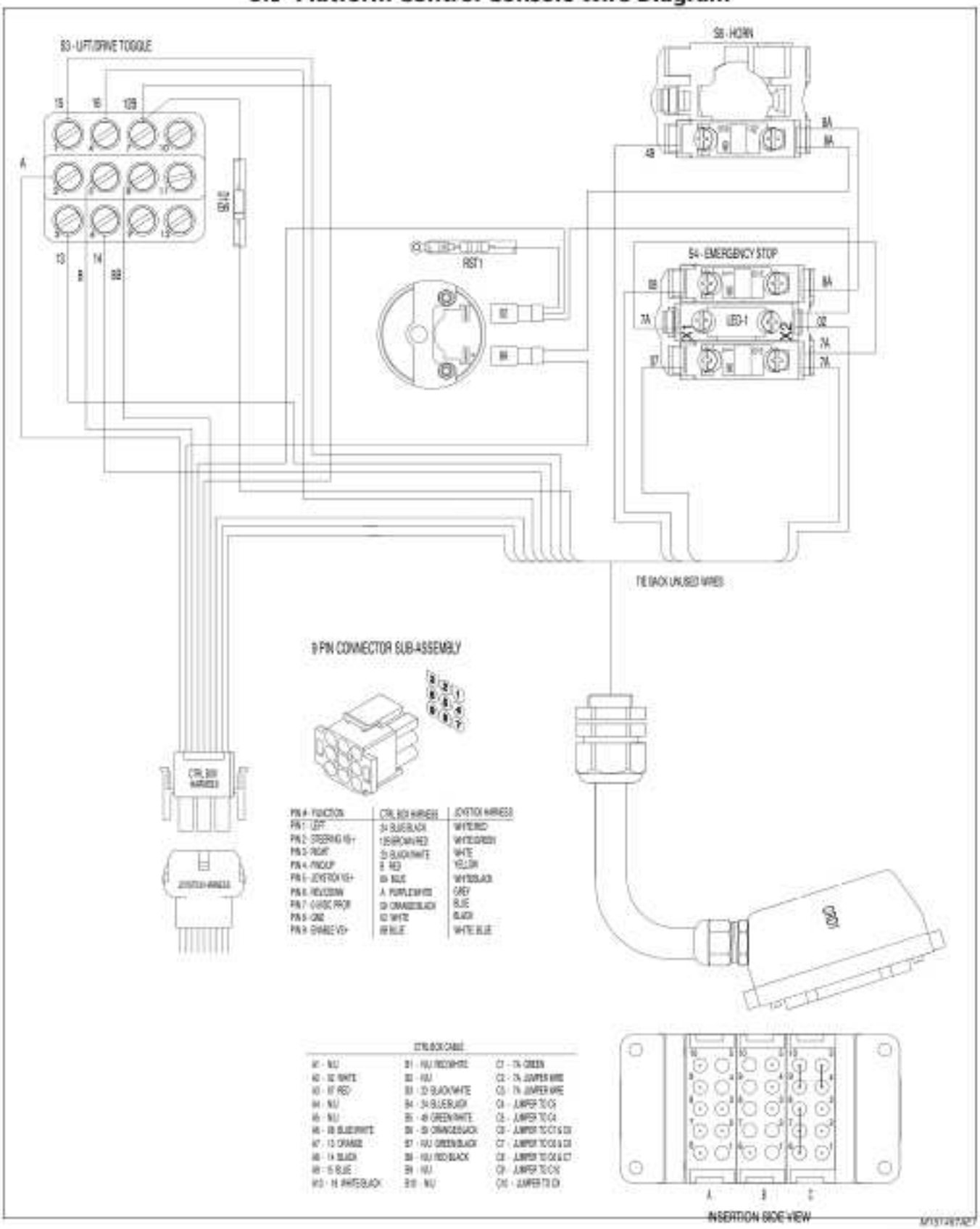
MODEL	CE	ANSI
	SJ12	SJ12
Weight *	780 kg	1720 lb.
Overall Width	76.2 cm	30 in.
Overall Length	137.2 cm	54 in.
Platform Size (inside)	67.3 x 97.8 cm	26.5 x 38.5 in.
Platform Traversing	40.6 cm	20 in.
Height		
Working Height	5.6 m	18.6 ft.
Platform Elevated Height	3.6 m	11.8 ft.
Stowed Height	166.4 cm	65.5 in.
Drive Height	Full	Full
Standard Operating Times		
Lift Time (Rated Load)	15.2 s	
Lower Time (Rated Load)	12.1 s	
Chassis		
Normal Drive Speed	4.8 km/h	3.0 mph
Elevated Drive Speed	0.8 km/h	0.5 mph
Gradeability (Ramp Angle)**	30% / 25%	
Tires (Solid Rubber)	309 x 100 mm	12 x 4 in.
Hydraulic Oil		
Type	ATF Dexron III	
Tank Capacity	4.92 L	1.3 gal.

262AA_S

* Weights are approximate; refer to serial nameplate for specific weight.
** Refer to Section 2.10 Loading/Unload of Operating manual for more details.

MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI Order the manual at mid-west-tech.com >

3.9 Platform Control Console Wire Diagram



MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI Order the manual at mid-west-tech.com >

Introduction

The following pages contain a table of Troubleshooting Information for locating and correcting most service trouble which can develop. Careful and accurate analysis of the systems listed in the table of Troubleshooting Information will localize the trouble more quickly than any other method. This manual cannot cover all possible troubles and deficiencies that may occur. If a specific trouble is not listed, isolate the major component in which the trouble occurs, isolate whether the problem is electrical or hydraulic, and then isolate and correct the specific problem.

The content of this section is separated into "probable cause" and "remedy." The information preceded by a number represents the "probable cause." The following line, noted by a dash represents the "remedy" to the "probable cause" directly above it. See example below for clarification.

1. Probable Cause
   - Remedy

MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI Order the manual at mid-west-tech.com >

5.5 Mast Chain Inspection

1. Lower the mast fully and remove the top cover plate.
2. Insepct each chain for slack. Each pairing chain should have same amount of slack. See Figure 5-43 for maximun allowable slack. Replace the chain if required.

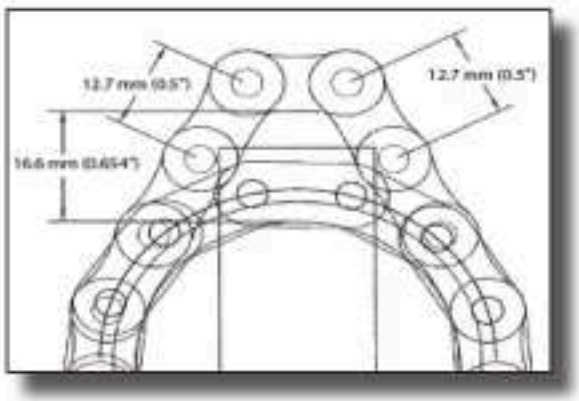


Figure 5-43. Mast Chain Slack Inspection

3. Inspect each chain for broken, cracked, stiff or worn links. See Figure 5-44. Replace the chain if required.

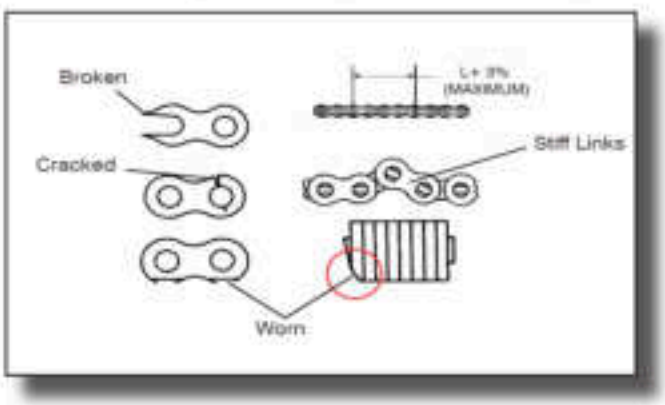


Figure 5-44. Mast Chain Condition Inspection

5.6 Mast Roller Inspection/Maintenance

5.6-1 Roller and Roller Mount Inspection

1. Lower the mast fully and remove the top cover plate.
2. Inpsect rollers and roller mounts for wear.
3. Using a feeler guage, measure the gap between the roller and the roller mount. See Figures 5-48 and 5-49.

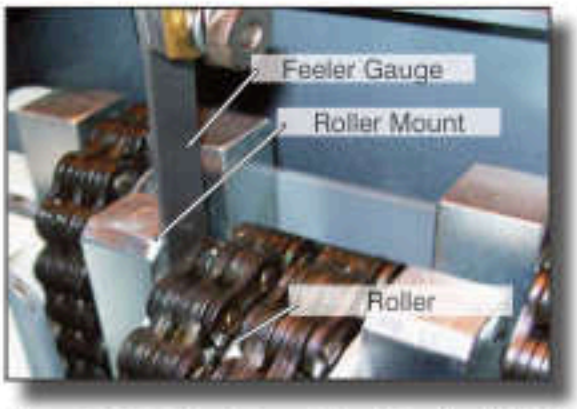


Figure 5-48. Feeler Guage Gap (Double Roller)

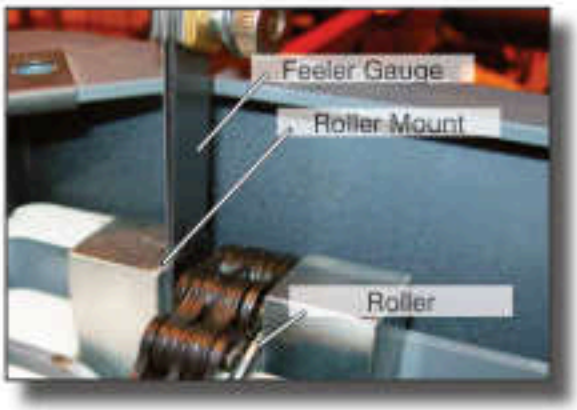


Figure 5-49. Feeler Guage Gap (Single Roller)

5. Measured gap should not exceed 0.083" for the double roller and 0.038" for the single roller.
6. If the chain is contacting the roller mounts, or if measured gap exceeds those listed in step 5, replace the rollers and roller mounts. Contact Skyjack Service Department for mast roller replacement procedure.

MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI
Order the manual at mid-west-tech.com >

Section 5
PROCEDURES

List of Procedures

General....85
Safety and Workmanship....85

Electrical System

5.1 Electrical System Adjustment....85
5.1-1 Resistor - Voltage Divider....85
5.1-2 Troubleshooting - Diagnostic Switch....86
5.1-3 Tilt Switch Orientation....86
5.1-4 Mast Limit Switch Replacement....87
5.1-5 Testing Limit Switch....88

Hydraulic System

5.2 Pressure Adjustment....89
5.2-1 System Relief Pressure Adjustment....89
5.2-2 Lift Pressure Adjustment....89

Service Procedures

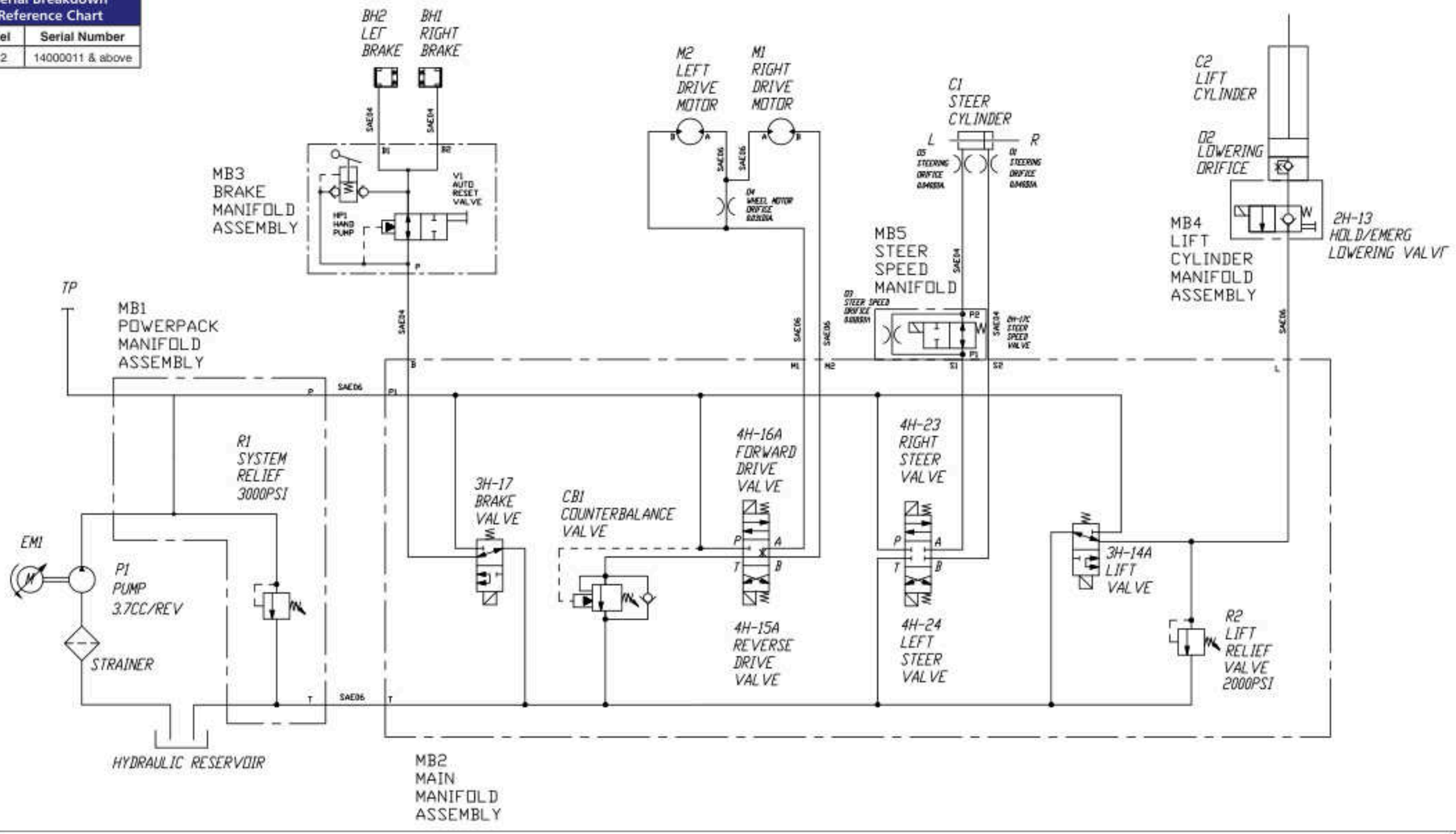
5.3 Electronic Tilt Switch Setup Procedure....90
5.3-1.0 Tilt Switch Replacement....90
5.3-1.1 Reprogramming Existing Tilt Switch....92
5.3-1.2 Test and Verify Tilt Circuit....93
5.4 Mast Lubrication Procedure....94
5.4-1 Outside Mast Lubrication....94
5.4-2 Inner Mast Lubrication....95
5.5 Mast Chain Inspection....96
5.6 Mast Roller Inspection/Maintenance....96
5.6-1 Roller and Roller Mount Inspection....96
5.6-2 Roller Operation Inspection....98
5.7 Mast Assembly Procedure....100
5.7-1.0 Preparation....100
5.7-2.0 Platform/Mast removal....100
5.7-2.1 Platform/Mast 4 Removal....100
5.7-2.2 Mast 3 Assembly Removal....102
5.7-2.3 Mast 2 Assembly Removal....102
5.7-2.4 Mast 1 Assembly Removal....103
5.7-3.0 Mast Installation....105
5.7-3.1 Mast 1 Installation....105
5.7-3.2 Mast 2 Installation....107
5.7-3.3 Mast 3 Installation....108
5.7-3.4 Platform/Mast 4 Assembly Installation....109
5.7-4.0 Function Test....110
5.7-5.0 Chains Installation....110
5.7-5.2 Outer chain Mount Installation....110
5.7-5.3 Double Chain Mount Installation....111

5

MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI

Order the manual at mid-west-tech.com >

Serial Breakdown Reference Chart	
Model	Serial Number
SJ 12	14000011 & above



MidWestTech | Skyjack SJ12 Vertical Mast Lift Service Manual | Publication 155185AI
Order the manual at mid-west-tech.com >