An Oshkosh Corporation Company

Service and Maintenance Manual

Model
1250AJP

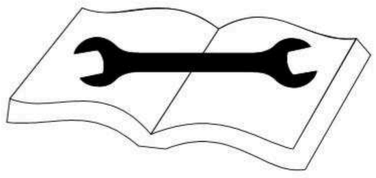
PN - 3121171

May 31, 2019 - Rev S

ANSI

CE

AS/NZS



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

SECTION NO.	TITLE	PAGE NO.
SECTION A - INTRODUCTION - MAINTENANCE SAFETY PRECAUTIONS		
A	General	A-1
B	Hydraulic System Safety	A-1
C	Maintenance	A-1
SECTION 1 - SPECIFICATIONS		
1.1	Operating Specifications & Performance Data	1-1
1.2	Capacities	1-1
1.3	Chassis Specifications	1-1
1.4	Tires	1-1
1.5	Dimensional Data	1-2
1.6	Engine Data	1-2
	Caterpillar 3.4T	1-2
	Deutz BF4M2011	1-2
	Deutz TD2011L4	1-2
	Deutz TCD2.9L4	1-3
1.7	Torque Requirements	1-3
1.8	Major Component Weights	1-3
1.9	Pressure Settings	1-3
1.10	Hydraulic Oil	1-4
1.11	Lubrication & Operator Maintenance	1-7
SECTION 2 - GENERAL		
2.1	Machine Preparation, Inspection, and Maintenance	2-1
	General	2-1
	Preparation, Inspection, and Maintenance	2-1
	Pre-Start Inspection	2-1
	Pre-Delivery Inspection and Frequent Inspection	2-1
	Annual Machine Inspection	2-1
	Preventative Maintenance	2-1
2.2	Service and Guidelines	2-2
	General	2-2
	Safety and Workmanship	2-2
	Cleanliness	2-2
	Components Removal and Installation	2-2
	Component Disassembly and Reassembly	2-3
	Pressure-Fit Parts	2-3
	Bearings	2-3
	Gaskets	2-3
	Bolt Usage and Torque Application	2-3
	Hydraulic Lines and Electrical Wiring	2-3
	Hydraulic System	2-3
	Lubrication	2-4
	Battery	2-4
	Lubrication and Servicing	2-4
2.3	Lubrication and Information	2-4
	Hydraulic System	2-4
	Hydraulic Oil	2-4
	Changing Hydraulic Oil	2-4
	Lubrication Specifications	2-4
2.4	Cylinder Drift Test	2-5
	Theory	2-5
	Cylinder Leakage Test	2-5
	Cylinder Thermal Drift	2-5
2.5	Pins and Composite Bearing Repair Guidelines	2-6

MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171 Order the manual at mid-west-tech.com >

SECTION NO.	TITLE	PAGE NO.
2.6	Welding on JLG Equipment	2-6
	Do the Following When Welding on JLG Equipment	2-6
	Do NOT Do the Following When Welding on JLG Equipment	2-6
SECTION 3 - CHASSIS & TURNTABLE		
3.1	Tires & Wheels	3-1
	Tire Inflation	3-1
	Tire Damage	3-1
	Tire Replacement	3-1
	Wheel and Tire Replacement	3-1
	Wheel Installation	3-2
3.2	Axle Extension System	3-3
3.3	Axle Limit Switch Adjustment Procedure	3-3
3.4	Drive System	3-4
3.5	Steering Control System	3-4
3.6	Drive/Steering Speed Control	3-5
3.7	Traction Control System	3-5
3.8	Drive Orientation System	3-5
3.9	Ground Control Enable System	3-5
3.10	Oscillating Axle System	3-14
3.11	Oscillating Axle Bleeding Procedure and Lockout Test	3-14
	Lockout Cylinder Bleeding	3-14
	Oscillating Axle Lockout Test	3-15
3.12	Wheel Drive Assembly	3-16
	Removal	3-16
	Installation	3-16
3.13	Drive Hub - If Equipped With Rexroth	3-17
	Disassembly	3-17
	Cover Disassembly	3-17
	First Stage Planetary (7) Disassembly	3-17
	Second Stage Planet Gears (1) Disassembly	3-17
	First Stage Planetary (7) Assembly	3-18
	End Cover Unit (8) Assembly	3-18
	Final Assembly	3-18
	Initial Start-up And After Repairs	3-18
	Oil Change Interval-Gear Drive	3-18
3.14	Drive Hub - If Equipped With Bonfiglioli	3-21
	Product Identification	3-21
	Hydraulic Motor Installation	3-21
	Installation of the Wheel Drive on the Machine	3-21
	Start Up and Running In	3-21
	General Information	3-22
	Gearbox Disengagement	3-24
	Maintenance Information	3-26
	Disassembly Information	3-27
	Disassembly	3-27
	Inspection of Parts	3-36
	Assembly	3-36
	Final Test and Reinstallation	3-46
3.15	Drive Hub - If Equipped With Reggiana Riduttori	3-51
	Symbol Nomenclature	3-51
	Tools	3-51
	Disassembly	3-56
	Assembly	3-60
3.16	Swing Drive Hub	3-67
	Removal	3-67
	Assembly/Disassembly	3-67
	Installation	3-67

MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171 Order the manual at mid-west-tech.com >

SECTION NO.	TITLE	PAGE NO.
3.17	Swing Drive	3-68
	Roll and Leak Testing	3-68
	Tightening and Torquing Bolts	3-68
	Motor Control Valve Disassembly	3-69
	Motor and Brake Disassembly	3-70
	Main Disassembly	3-71
	Hub-Shaft Disassembly	3-72
	Carrier Disassembly	3-73
	Hub-Shaft Sub-Assembly	3-74
	Carrier Sub-Assembly	3-75
	Main Assembly	3-77
	Motor and Brake Assembly	3-79
	Motor Control Valve Assembly	3-80
3.18	Swing Brake	3-83
	Pre-Installation Checks	3-83
	Installation	3-84
	Maintenance	3-84
	Disassembly	3-84
	Examination	3-84
	Assembly	3-84
3.19	Swing Motor	3-87
	Disassembly and inspection	3-87
	Assembly	3-94
	One Piece Stator Construction	3-100
3.20	Procedure For Setting Gear Backlash	3-102
3.21	Swing Drive Lubrication	3-103
3.22	Turntable Bearing	3-105
	Turntable Bearing Mounting Bolts Condition Check	3-105
	Turntable Bearing Wear Measurement	3-106
	Turntable Bearing Removal	3-111
	Turntable Bearing Installation	3-111
3.23	Swing Speed Proportioning	3-114
3.24	Chassis Tilt Indicator System	3-114
3.25	Rotary Coupling	3-115
3.26	Generator	3-118
	Every 250 hours	3-118
	Every 500 hours	3-118
	Overload Protection	3-119
	Inspecting Brushes, Replacing Brushes, and Cleaning Slip Rings	3-119
3.27	Cold Weather Package	3-121
3.28	Engine	3-121
	Glow Plugs	3-121
	Checking Oil Level	3-121
	Changing Engine Oil	3-122
	Changing Oil Filter	3-123
	Replacing Fuel Filter or Pre-Filter	3-124
	Cleaning Fuel Strainer (D2011 L03 Only)	3-124
	Removal	3-126
	Installation	3-129
3.29	Deutz EMR 2 (SN 87575 to Present)	3-130
3.30	Bio Fuel in Deutz Engines	3-143
	General	3-143
	Bio Fuel	3-143
	Biological Contamination In Fuels	3-144
3.31	Deutz Turbocharger Operation	3-145
	Operating Practices	3-145

MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171 Order the manual at mid-west-tech.com >

Testing & Evaluation

Refer to Troubleshooting if the Load Sensing System fails to meet these guidelines.

1. Connect the JLG Analyzer.
2. Level the Platform. The platform should be approximately level for analysis, or the guidelines below will not be applicable. Level the platform from Ground Control (if necessary) to within ±5 degrees.
3. Observe the Empty Platform Weight. Proceed to the DIAGNOSTICS, PLTLOAD sub-menu and observe the measured platform load. All tools, debris, and customer-installed devices shall be removed during evaluation. Ideally, the PLTLOAD should be zero but can vary ±15lbs (± 7kg). Further, the reading should be stable and should not vary by more than ±2lbs (±1kg) (unless there is heavy influence from wind or vibration).
4. Use the Technician's Weight to Evaluate. The technician should enter the platform and record the PLTLOAD reading while standing in the center of the platform.
5. Confirm Control System Warnings and Interlocks. Using the keyswitch, select Platform Mode and power-up. Start the vehicle's engine and ensure that all controls are functional and the Load Sensing System's Overload Visual and Audible Warnings are not active. Simulate an Overload by unplugging the Shear Beam Load Cell. The Overload Visual Warning should flash, and the Audible Warning (at Platform and Ground) should sound for 5 seconds On, and 2 seconds Off. With the engine running, all control should be prevented. Cycle the Platform EMS to stop the engine and then power-up again. The Overload Visual and Audible Warning should continue. Confirm that controls are responsive when using the Auxiliary Power Unit for emergency movement. Reconnect the Load Cell. The Overload Visual and Audible Warnings should cease and normal control function should return. Switch the vehicle's keyswitch to Ground Mode and repeat the above procedure. The Overload Visual Warning at the Ground Controls should flash, and the Audible Warning (at Platform and Ground) should sound for 5 seconds On, 2 seconds Off. However, the controls should remain functional when using the engine and the Auxiliary Power Unit (if the Control System's MACHINE SETUP, LOAD is set to "2=CUTOUT PLT". If set to "3=CUTOUT ALL", then Ground Controls will be prevented when using the engine as in the platform).
6. Confirm Control System Capacity Indication (optional for vehicles with Dual Capacity Ratings). For vehicles equipped with a Capacity Select switch on the Platform Console Box, it is necessary to examine an additional interface between the Load Sensing System and the Control System. Using the keyswitch, select Platform Mode and power-up. If necessary, put the boom in the transport position (completely stowed) and center the Jib Plus (if equipped). Place the Capacity Select switch in the unrestricted position and ensure that the proper indicator illuminates on the Platform Console Box. Plug the JLG Analyzer into the Analyzer connection and proceed to the DIAGNOSTICS, SYSTEM submenu. Ensure that the CAPACITY displays indicate OFF. Place the Capacity Select switch in the unrestricted position (if so equipped) and ensure that the proper indicator illuminates on the Platform Console Box (but does not flash). For vehicles with unrestricted capacity, ensure that the unrestricted CAPACITY display indicates ON but the restricted CAPACITY indicates OFF. For vehicles with restricted capacity, ensure that the unrestricted CAPACITY display indicates OFF but the restricted CAPACITY indicates ON.
7. Confirm Load Sensing System Performance with Calibrated Weights. Operate the vehicle from Ground Control and place the boom in the transport position (fully stowed) for safety. Plug the JLG Analyzer into the control system connection and proceed to the DIAGNOSTICS, PLTLOAD display. Place 500lbs (230kg) in the platform and ensure that PLTLOAD is with ±5% of the actual weight. For Dual Capacity vehicles, do the same for the alternate capacity (unrestricted or restricted).

MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171 Order the manual at mid-west-tech.com >

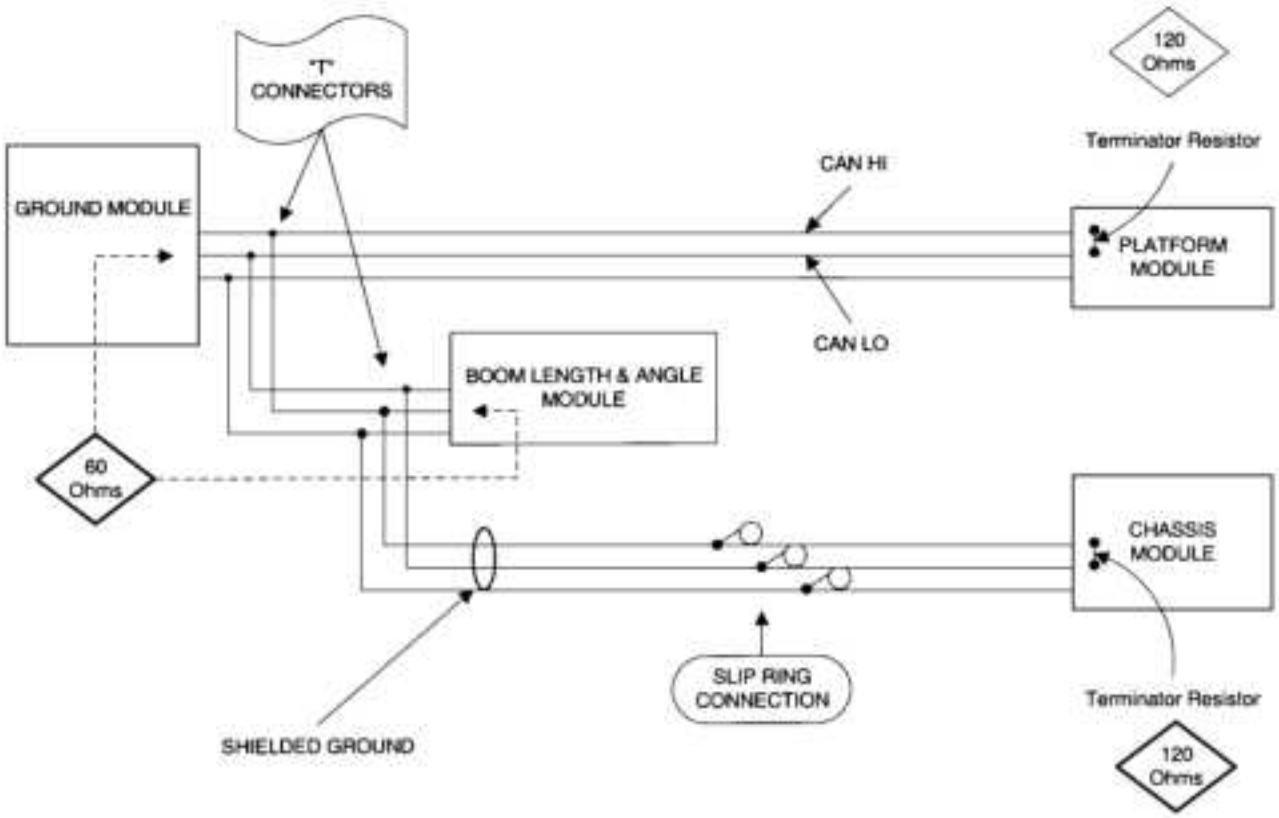


Figure 6-17. CANbus Connections Diagram

6.17 CANBUS TROUBLESHOOTING

The PLATFORM MODULE and the CHASSIS MODULE have "Terminator Resistors" located inside the modules, these resistors squelch high speed signal reflections in the CANbus transmission lines. The value of the terminators is determined by wire properties, this includes the type of insulation and geometry, combined to determine the perfect value for bus termination. Improper values or missing terminators allow bus ringing. A complete CANbus circuit (wired in parallel) is approximately 60 Ohms at the "T" fitting inside the Ground Station or at the Boom Length & Angle Module. Each individual circuit from their respective Module should read approximately 120 Ohm. For CANbus connections, refer to Figure 6-17., Figure 6-18., Figure 6-19., Figure 6-20., and Figure 6-21.

MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171 Order the manual at mid-west-tech.com >

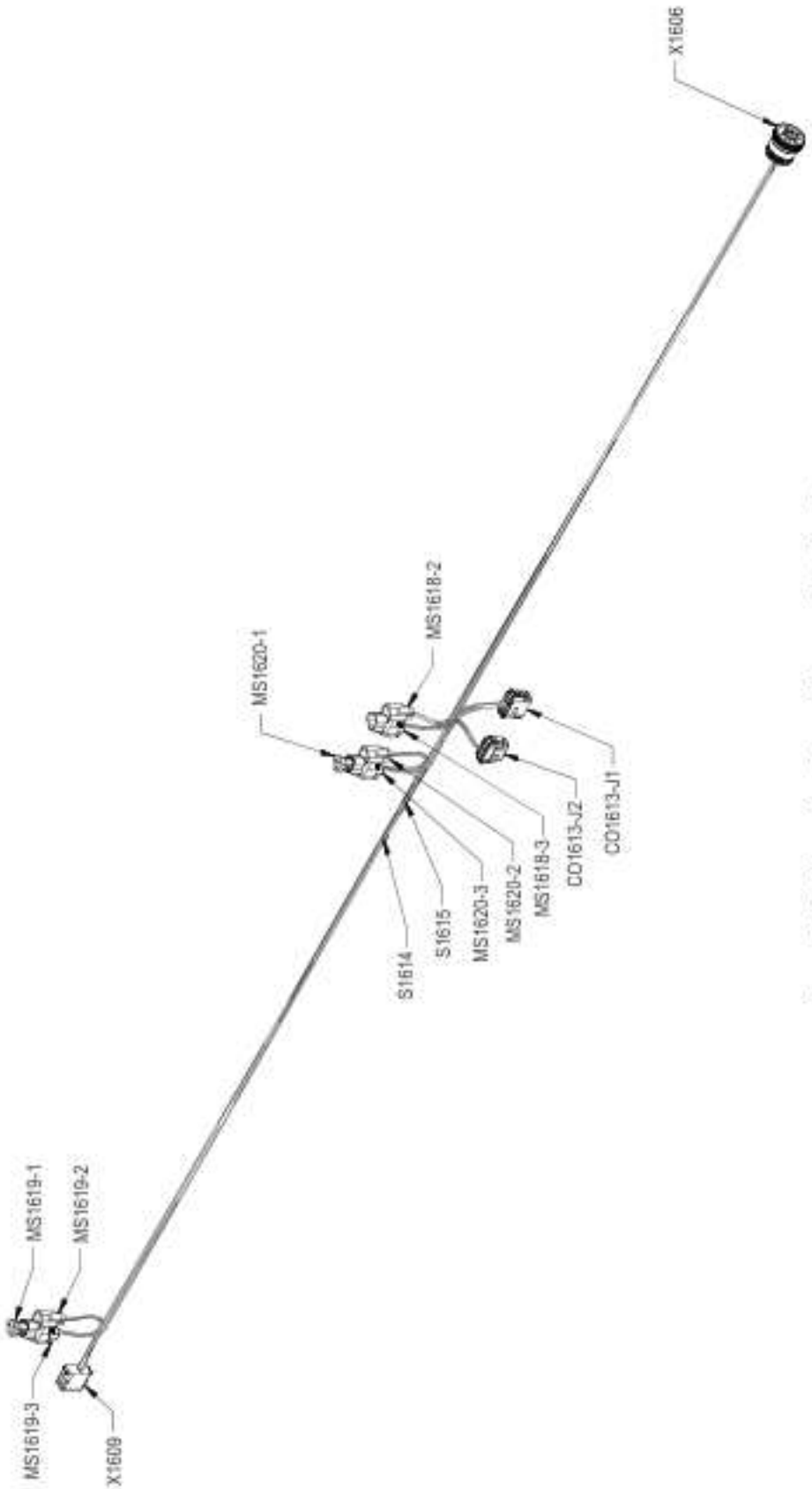
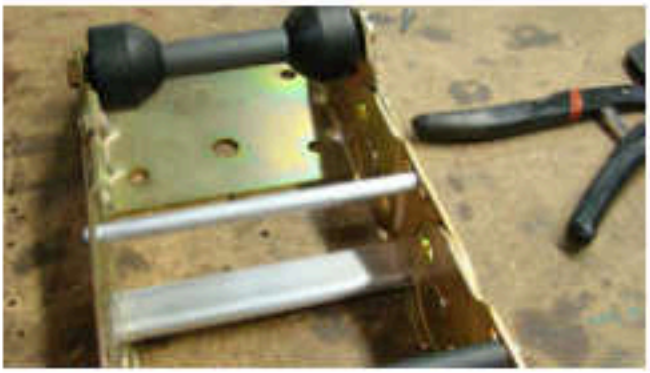


Figure 7-18. Telematics Gateway Harness - Sheet 1 of 3

MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171 Order the manual at mid-west-tech.com >

5. Slide the poly roller off of the round bar.





6. Hold the round bar to remove the other screw.

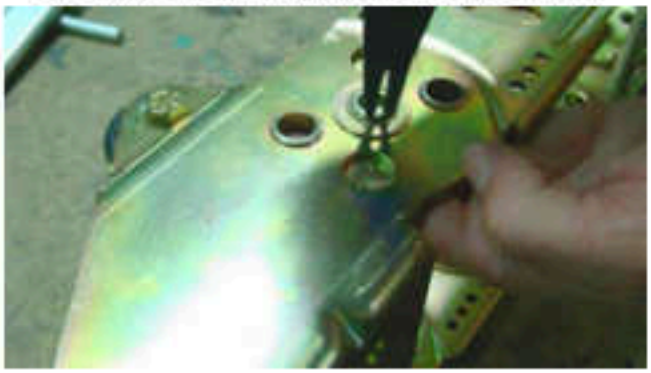


7. Slide the flat bar out.





8. Remove the snap ring from one side of the bracket.



9. Remove the snap ring from the other side of the bracket.



MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171

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







1. Install the tower mid section into the tower base section. Install the wear pads in the tower base section.

NOTE: *Keep the tower fly section out of the tower mid section enough to allow for installation of the telescope cylinder retaining pin.*

2. Install the tower fly section into the tower mid section. Install the wear pads in the tower mid section.

3. Extend the telescope cylinder so the rod will be extended enough to install the retaining pin holes in the tower fly section. It may be necessary to secure one end to make sure the desired rod end extends. Install the telescope cylinder into the tower boom. Refer to the Service Mode procedure in Section 4.25, Tower Telescope Cylinder.



4. Align the telescope cylinder trunnions. Install the keepers and shims. Secure them in place with the retaining bolts.



5. Install the upper and lower length sensors.



6. Connect all hoses and electrical lines as tagged during disassembly.

7. Install the power track to the side of the tower boom. Connect all hoses as tagged during disassembly.

MidWestTech | JLG 1250AJP Boom Lift Service Manual | Publication 3121171 Order the manual at mid-west-tech.com >