An Oshkosh Corporation Company

Service and Maintenance Manual

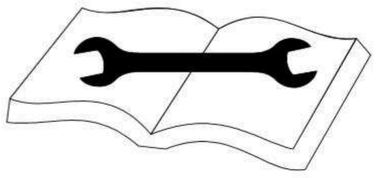
Model

340AJ

3121259

January 29, 2019 - Rev F

ANSI



MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259

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	1-1
1.2	Dimensional Data	1-1
1.3	Capacities	1-1
1.4	Tires	1-1
1.5	Engine Data	1-2
1.6	Hydraulic Oil	1-2
	Major Component Weights	1-3
1.7	Function Speeds	1-4
	Test Notes	1-4
1.8	Operator Maintenance	1-6
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
	Preventive 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	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
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

MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >

SECTION NO. **TITLE** **PAGE NO.**

SECTION 3 - CHASSIS & TURNTABLE

3.1 Tires and Wheels 3-1
Tire Replacement 3-1
Wheel and Tire Replacement 3-1
Wheel Installation 3-1
3.2 Drive Orientation System 3-2
3.3 Beyond Transport Position - Drive Speed Cutback System 3-2
3.4 Drive/Steer - Boom Function Interlock System (CE ONLY) 3-2
3.5 Drive System 3-2
3.6 Drive Motor 3-3
Disassembly 3-3
Assembly 3-3
3.7 Drive Hub 3-10
Roll, Leak and Brake Testing 3-10
Tightening and Torquing Bolts 3-10
Measuring Rolling Torque 3-11
Main Disassembly 3-11
Housing-Spindle Disassembly 3-13
Spindle-Brake Subassembly Disassembly 3-15
Cover Disassembly 3-16
Planet Gear Subassembly 3-18
Spindle-Brake Subassembly 3-19
Housing-Spindle Subassembly 3-21
Housing-Ring Gear Subassembly 3-22
Cover Subassembly 3-23
Main Assembly 3-24
Integral Brake Check Procedure 3-25
3.8 Oscillating Axle System 3-30
Oscillating Axle Bleeding Procedure 3-30
3.9 Chassis Tilt Indicator System 3-32
3.10 Swing Motor 3-32
Removal 3-34
Preparation Before Disassembly 3-34
Disassembly and Inspection 3-35
Assembly 3-42
One Piece Stator Construction 3-48
Two Piece Stator Construction 3-49
Final Checks 3-50
Installation 3-50
3.11 Swing Drive 3-50
Removal 3-50
Installation 3-55
Turntable Bearing Mounting Bolt Condition Check 3-56
Wear Tolerance 3-56
Swing Bearing Torque Value 3-56
Disassembly 3-58
Assembly 3-60
3.12 Engine Operating States 3-70
3.13 Engine Start Conditions 3-71
3.14 Engine RPM Levels 3-71
Engine Stop RPM 3-71
Idle RPM 3-71
Mid Engine RPM 3-71
Multi-Function RPM 3-72
High Engine RPM 3-72
Generator RPM 3-72

MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >

SECTION NO.	TITLE	PAGE NO.
3.15	Engine Controls	3-72
	Ambient Air Temperature Sensor	3-72
	Fuel Level Sensor	3-72
3.16	Engine Startup Procedure (Kubota)	3-73
3.17	Kubota Engine	3-74
	Engine Oil Pressure Switch	3-74
	Engine Speed Sensor	3-74
	Coolant Sensor	3-75
	Glow Plugs	3-75
	Engine Speed Actuators	3-76
	Engine Start	3-77
	Alternator Excitation	3-77
	Fuel Pump	3-77
	Shutdown	3-77
3.18	GM Dual Fuel Engine	3-82
	Communications with the JLG Control System	3-82
	Engine Start	3-82
	Oil Pressure	3-82
	Engine Speed	3-82
	Coolant Temperature	3-82
	Fuel Select	3-82
3.19	Fuel Reserve / Cut-Out System	3-96
3.20	Cold Start System (Diesel Engine)	3-96
3.21	Generator	3-96
3.22	Counterweight	3-97
SECTION 4 - BOOM & PLATFORM		
4.1	Platform Control Enable System	4-1
4.2	Transport Position Sensing System	4-1
4.3	Platform	4-2
	Platform/Support Removal	4-2
	Support Installation	4-3
4.4	Main Boom Powertrack	4-5
	Removal	4-5
	Installation	4-5
4.5	Powertrack Maintenance	4-6
	Remove Link	4-6
	Install New Link	4-9
	Replace Fixed End Brackets	4-12
	Replace Moving End Brackets	4-13
4.6	Boom Maintenance	4-15
	Disassembly of the Main Boom	4-15
	Inspection	4-16
	Assembly of the Main Boom	4-16
4.7	Boom Cleanliness Guidelines	4-20
4.8	Rotary Actuator	4-23
	Theory of Operation	4-23
	Tools Required	4-24
	Disassembly	4-25
	Inspection	4-30
	Assembly	4-31
	Greasing Thrust Washers	4-35
	Installing Counterbalance Valve	4-35
	Testing the Actuator	4-35
	Installation and Bleeding	4-37
	Troubleshooting	4-38

MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >

Table 1-8. Mobilfluid 424 Specs

SAE Grade	10W30
ISO Viscosity Grade	55
Gravity, API	29.0
Density, Lb/Gal. 60°F	7.35
Pour Point, Max	-46°F (-43°C)
Flash Point, Min.	442°F (228°C)
Viscosity	
Brookfield, cP at -18°C	2700
at 40°C	55 cSt
at 100°C	9.3 cSt
Viscosity Index	152

Table 1-9. DTE 10 Excel 32 Specs

ISO Viscosity Grade	32
Pour Point, Max	-65°F (-54°C)
Flash Point, Min.	482°F (250°C)
Viscosity	
at 40°C	32.7 cSt
at 100°C	6.63 cSt
at 100°F	32.7 cSt
at 212°F	6.63 cSt
Viscosity Index	164

Table 1-10. Quintolubric 888-46

Density	0.92 g/cm^3 @ 15°C (59°F)
Pour Point	<-30°C (<-22°F)
Flash Point	300°C (572°F)
Fire Point	360°C (617°F)
Autoignition Temperature	>450°C (842°F)
Viscosity	
at 0°C (32°F)	320 cSt
at 20°C (68°F)	109 cSt
at 40°C (104°F)	47.5 cSt
at 100°C (212°F)	9.5 cSt
Viscosity Index	190

Table 1-11. Exxon Univis HVI 26 Specs

Specific Gravity	32.1
Pour Point	-76°F (-60°C)
Flash Point	217°F (103°C)
Viscosity	
at 40°C	25.8 cSt
at 100°C	9.3 cSt
Viscosity Index	176
NOTE:	*Mobil/Exxon recommends that this oil be checked on a yearly basis for viscosity.*

Major Component Weights

⚠ WARNING

DO NOT REPLACE ITEMS CRITICAL TO STABILITY WITH ITEMS OF DIFFERENT WEIGHT OR SPECIFICATION (FOR EXAMPLE: BATTERIES, FILLED TIRES, PLATFORM) DO NOT MODIFY UNIT IN ANY WAY TO AFFECT STABILITY.

Table 1-12. Critical Stability Weights

Components	LBS.	KG.
Counterweight	1875 ± 75	850.5 ± 34
Tire and Wheel - 20x9 Pneumatic	130	59
Tire and Wheel - 20x9 Foam-Filled	220	99.8
Tire and Wheel - 18x7	230	104.3
Tire and Wheel - 33x12 Pneumatic	129	58.5
Tire and Wheel - 33x12 Foam-Filled	227	125.6
Platform & Console - 30x60	242.5	110
Platform & Console - 30x48	216	98
Battery	66	30

MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >

Table 6-15. Fault Code Troubleshooting Information

Help Message	DTC	Condition Producing DTC	Control System Response or Machine Condition	Corrective Action/ Operational Requirement for Function Movement and/or to Clear Fault
EVERYTHING OK or GROUND MODE OK	001[1]	The platform station (EVERYTHING OK) or ground station (GROUND MODE OK) is selected and the system detects no problems exist.	No response required.	-
RUNNING AT CUTBACK – OUT OF TRANSPORT POSITION	0010[1]	Tower Elevation Switch shows tower is elevated out of transport position or Boom Elevation Switch #1 shows boom elevated out of transport position or Boom Elevation Switch #2 shows boom elevated out of transport position	Machine is considered Out Of Transport Position	Lower boom into transport position
FSW OPEN	0011[1]	Machine is in Platform Mode Drive/Steer or Boom function control is activated when Footswitch not engaged	Machine is not allowed to enter the Machine Enabled state	Release controls, Engage Footswitch and reactivate Drive/ Steer and/or Boom function control
RUNNING AT CREEP - CREEP SWITCH OPEN	0012[1]	Machine is in Platform Mode Platform creep switch is turned on	Creep Mode is active	Turn Platform creep switch off
RUNNING AT CREEP - TILTED AND ABOVE ELEVATION	0013[1]	Fault RUNNING AT CREEP - CREEP SWITCH OPEN (DTC 0012) is not active Machine is Out Of Transport Position Machine chassis is considered Tilted	Creep Mode is active	Lower Machine and place on firm, level surface
RUNNING AT CREEP – PLATFORM STOWED	0030[1]	Platform is in Stowed Position	Lift Down and Level Down function speed maximums are limited to Ground Creep	Raise Platform from Stowed Position
LOAD SENSOR READING UNDER WEIGHT	0015	LSS has been calibrated and the UGM has determined that the load sensing system reading is less than -50lbs for 2 seconds. If the load sensing system determines that the reading is greater than -50lbs for 5 seconds this fault will no longer be annunciated. No control system interlocks present when DTC is active.		Ensure platform is not resting on the ground or is not leveled at an extreme negative angle. Re-calibrate the load sensing system if the above items are not a factor.
FUEL LEVEL LOW – ENGINE SHUTDOWN	0031	Engine Shutdown has occurred due to Fuel Level being EMPTY	Machine prohibits engine cranking and throttle functions	Add fuel to fuel tank
APU ACTIVE	0035	Emergency Descent Mode is active	Operation specified in Emergency Descent Mode section	Stop using Emergency Descent Mode
KEYSWITCH FAULTY	212	Both Ground and Platform Keyswitches are energized at the same time	The Control System assumes a station selection of Ground	On Analyzer under DIAGNOSTICS-->SYSTEM-->PLATFORM SELECT (and GROUND SELECT), activate Platform and Ground keyswitches to determine fault location; then troubleshoot wiring and/or keyswitch.
FSW FAULTY	213	The ground footswitch input and platform footswitch input have been both engaged or disengaged for a time period greater than or equal to 1 second	Machine does not allow any functions	Use the Emergency Stop Switch to cycle power

MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >

7.7 ELECTRICAL SCHEMATICS

SHEET 2: PLATFORM BOX

SHEET 3: PLATFORM AND BOOM COMPONENTS

SHEET 4: CHASSIS, TURN-TABLE, AND UGM

SHEET 5: GROUND USER INTERFACE AND TELEMATICS INTERFACE

SHEET 6: ENGINE (KUBOTA) AND GENERATOR

SHEET 7: ENGINE (GM) VENDOR SCHEMATIC

SHEET 8: MIDENGINE HARNESS SCHEMATIC

SHEET 9: CHASSIS LIGHT, PLATFORM LIGHTS SCHEMATIC

SHEET 10: ALERT BEACON OPTION
HARNESS,GEN 2 PLAT INTERFACE

SHEET 11: PLATFORM BOX
CONSOLE BOX HARNESS WITH SKYGUARD
CONN AND 1 CELL LSS

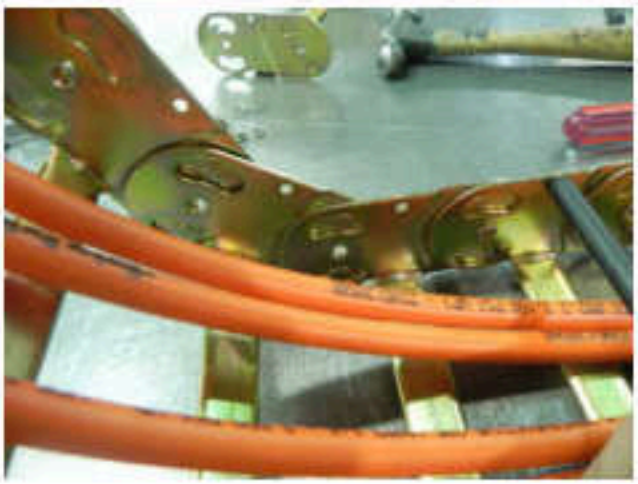
1001119038-Q
MAP03010

Figure 7-25. Electrical Schematic - Sheet 1 of 20

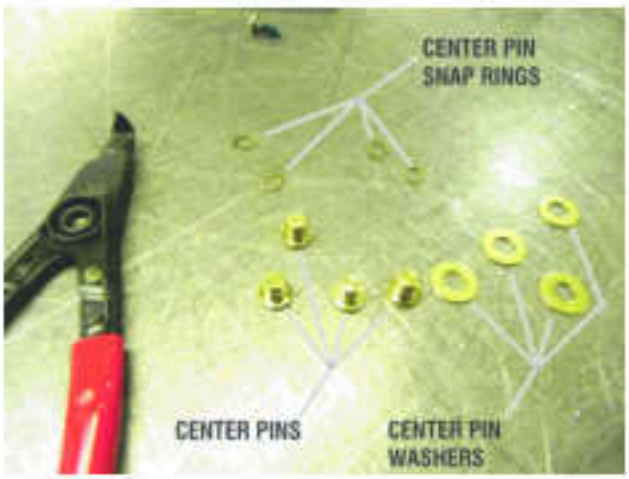
MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >

4. Pull moving end over track so new connection is positioned in curve of powertrack. Round half-shears will rotate into cut-outs.





5. Parts shown below connect new link to powertrack.



6. Push pin through center hole then slide washer on pin.



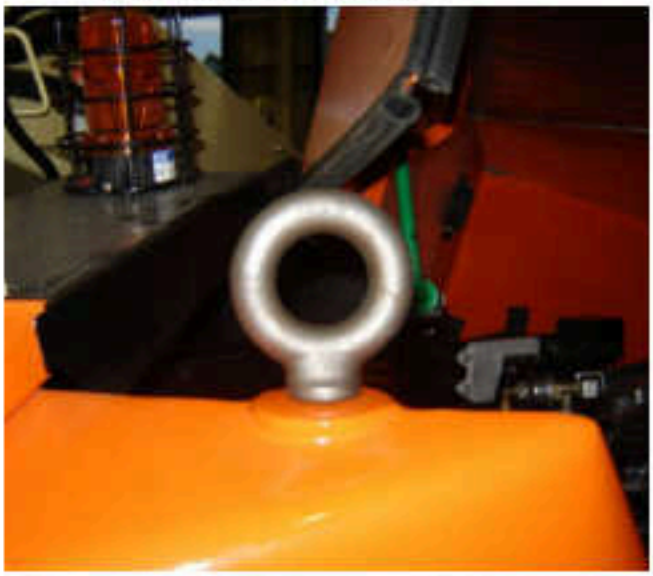


7. Install snap ring in groove on pin. Repeat pin installation steps for all center holes with rivets removed.



MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >

3. Install eyebolts as specified in Figure 3-33., Eyebolt for Counterweight in the counterweight.



4. Securely strap the booms together to prevent any movement during the lifting process.







MidWestTech | JLG 340AJ Boom Lift Service Manual | Publication 3121259 Order the manual at mid-west-tech.com >