An Oshkosh Corporation Company

Service and Maintenance Manual

Model

E450A
E450AJ
M450A
M450AJ

P/N - 3121127

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ANSI

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1.14 CYLINDER SPECIFICATIONS

NOTE: All dimensions are given in inches (in.), with the metric equivalent, millimeters (mm), given in parentheses.

Table 1-17. Cylinder Specifications

Cylinder	Bore	Stroke	Rod Dia.
Upper Lift Cylinder	3.00 (76.2)	28.3125 (719.1)	1.50 (38.1)
Mid Lift Cylinder	3.00 (76.2)	21.25 (539.7)	1.50 (38.1)
Lower Lift Cylinder	4.00 (101.6)	23.25 (590.5)	2.25 (57.1)
Telescope Cylinder	2.00 (50.8)	92 (2337)	1.25 (31.8)
Master Cylinder (E/M450A)	2.00 (50.8)	9.375 (238.1)	1.00 (25.4)
Master Cylinder (E/M450AJ)	3.00 (75)	11.5 (292)	1.25 (32)
Slave Cylinder (E/M450A)	2.00 (50.8)	9.375 (238.1)	1.00 (25.4)
Slave Cylinder (E/M450AJ)	3.00 (75)	11.6 (295.5)	1.25 (32)
Rotator Cylinder	1.875 (47.6)	15.250 (387.3)	1.00 (25.4)
Steer Cylinder (Double Rod)	2.50 (63.5)	4.06 (103.1)	1.75 (44.5)

1.15 MAJOR COMPONENT WEIGHTS

Table 1-18. Major Component Weights

Component	LB.	KG.
Platform and Support	215	97.5
Upper Boom Complete	810	367
Mid Boom Complete	550	249
Lower Boom Complete	550	249
Upper Lift Cylinder	89	40
Mid Lift Cylinder	95	43
Lower Lift Cylinder	110	50
Telescope Cylinder	85	38.5
Upper Upright	225	102
Lower Upright	97	44
Turntable	948	430
Battery Box (incl. batteries)	600	272
Chassis (w/ pneu. tires)	4,295	1948
Chassis (w/ foam-filled tires)	4,695	2130
Counterweight	3850	1746
Machine Complete	11,800	5352

⚠ WARNING

SELECT LIFTING EQUIPMENT WITH CAPACITY CAPABLE OF SAFELY SUPPORTING WEIGHT.

1.16 SERIAL NUMBER LOCATIONS

For machine identification, a serial number plate is affixed to the left rear of frame, in front of left rear wheel. If the serial number plate is damaged or missing, the machine serial number is stamped on the top left side of the frame and the top left side of the turntable. In addition, the serial number is stamped on top of the end of the upper boom, mid boom, and lower boom at the left rear of the booms.

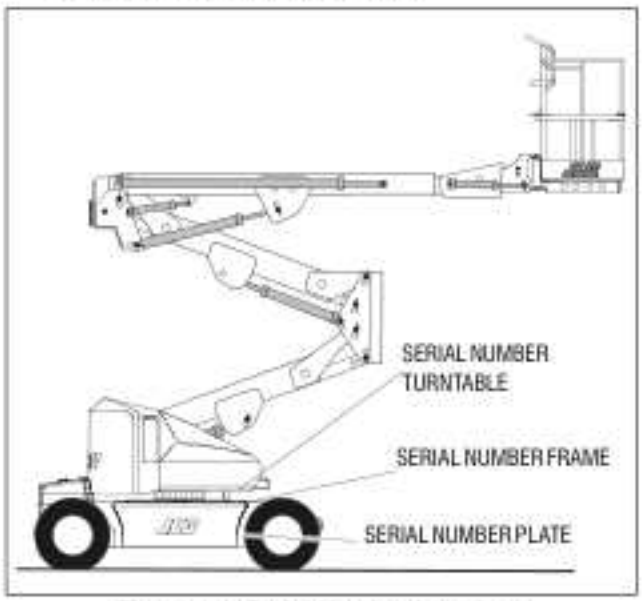


Figure 1-1. Serial Number Locations

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Table 7-5. Hydraulic System - Troubleshooting

TROUBLE	PROBABLE CAUSE	REMEDY
HYDRAULIC SYSTEMS - GENERAL.		
Hydraulic pump noisy.		
	Air entering system through broken line or fitting. (Suction Side.)	Repair or replace line or fitting.
	Air bubbles in oil. (Reservoir oil too low.	Replenish oil as required.
	Suction hose squeezed shut.	Determine cause and repair.
	Oil filter dirty.	Replace hydraulic filter.
	Wrong type of hydraulic oil.	Replace hydraulic oil.
Pump cavitating. (Vacuum in pump due to oil starvation.)		
	Restricted suction line.	Clean, repair, or replace line.
	Restricted reservoir air vent.	Clean or replace vent.
	Oil viscosity too high.	Drain system and replace with recommended oil. (Refer to Hydraulic Oils.)
	Air leak in suction side of tank.	Repair leak.
System overheating.		
	Oil viscosity too high.	Drain system and replace with recommended oil. (Refer to Hydraulic Oils.)
	Bypass valve not operating properly.	Repair or replace valve.
	Main relief valve set too low.	Reset valve as required.
	Hydraulic system oil low.	Replenish oil as necessary.
	Port relief set too high.	Reset valve as required.
	Restricted or blocked return line.	Repair or replace line.
Pump not delivering oil.		
	Restricted suction line.	Clean, repair, or replace line.
	Air entering system through broken line or fitting.	Repair or replace line or fitting.
	Broken pump drive shaft/pump coupling.	Repair or replace pump/pump coupling. **Note: Any time pump or pump drive coupling is removed coat pump and drive coupling splines with Lithium Soap Base Grease (TEXACO CODE 1912 OR EQUIVALENT).**

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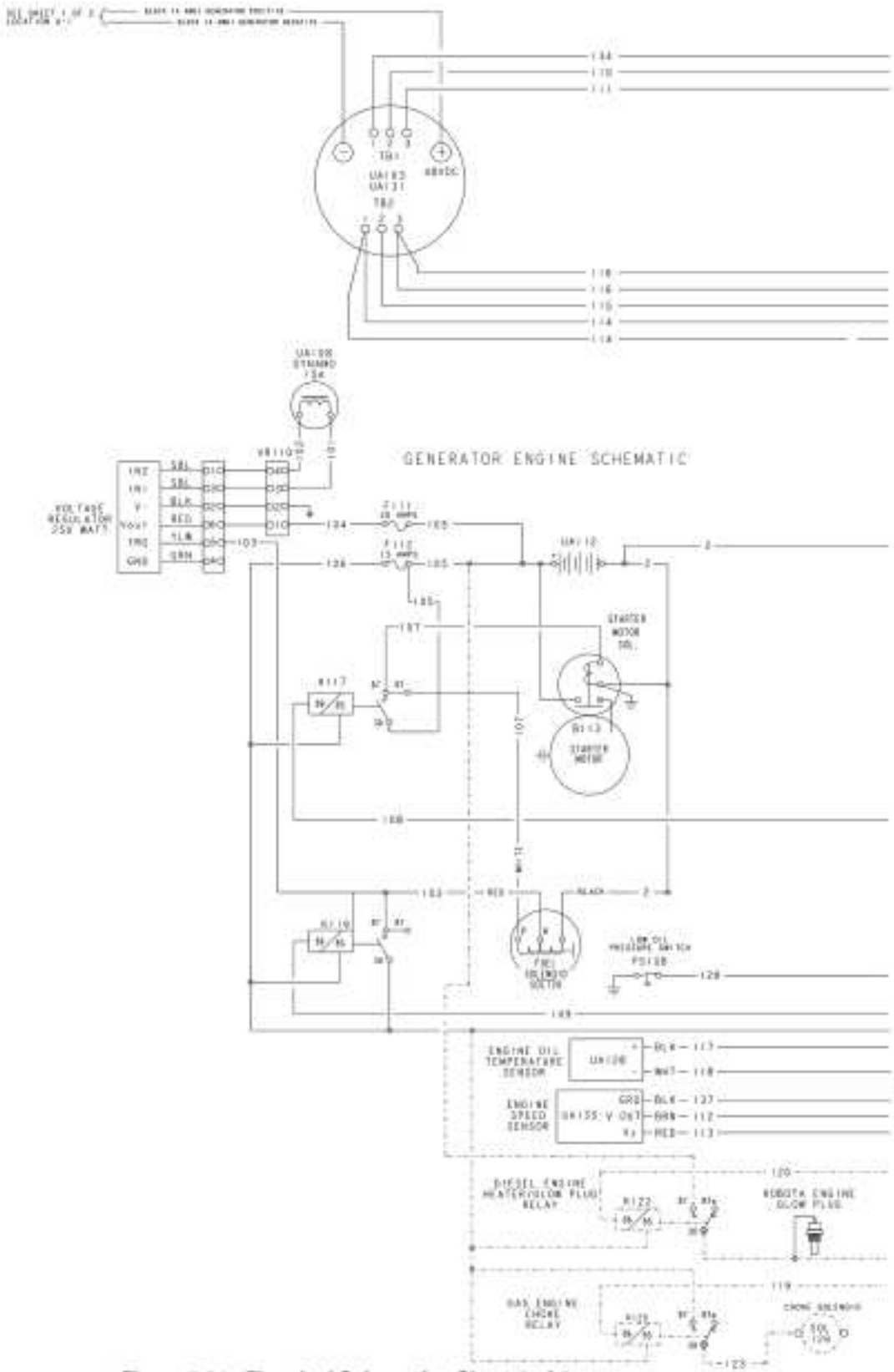
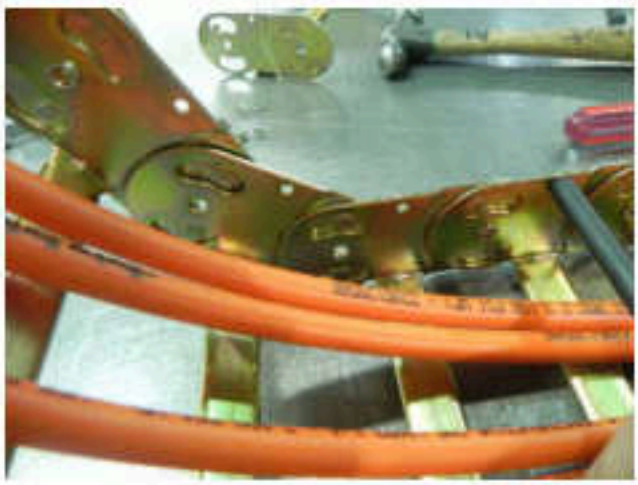


Figure 7-24. Electrical Schematic - Sheet 5 of 6

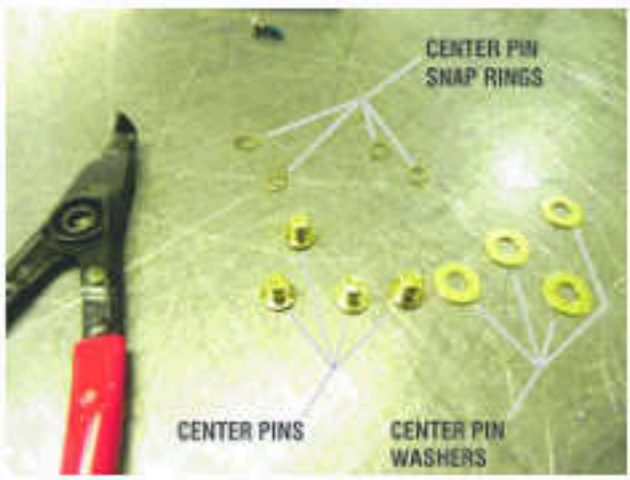
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4. Pull the moving end out over the track so that the new connection is positioned in the curve of the powertrack. In this position the round half-shears will rotate into the peanut cut outs.





5. The parts shown below will be used to connect the new link to the powertrack.



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





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Table 7-4. Chassis Assembly - Troubleshooting

TROUBLE	PROBABLE CAUSE	REMEDY
FRONT FRAME AXLE AREA.		
One or both wheels will not steer.		
	Steering link or tie rod broken or attaching hardware missing.	Replace steering link, tie rod or hardware as necessary.
One or both front wheels will not rotate or rotate erratically.		
	Wheel hub or bearings damaged or not lubricated.	Replace hub or bearings as necessary and repack bearings with approved grease.
REAR FRAME AXLE AREA.		
Difficulty encountered when moving machine.		
	Load capacity exceeded.	Reduce load. Apply loads only in accordance with load capacity indicator.
	Hubs Disconnected.	Engage hubs as outlined in Operators Manual.
	Machine being moved up too steep a grade.	Remove machine from grade and check that drive system operates correctly.
	Grade too steep.	See WARNING Placard on platform for specified grades and sideslopes.
	Towing valve not closed.	Close towing valve.
	Drive wheel tire treads worn smooth.	Replace tires as necessary and inflate to specified pressure.
	Drive brakes "dragging".	Re-adjust pressure.
	System pressure too low.	Re-adjust pressure.
	Drive hub(s) defective.	Repair or replace hub.
DRIVE SYSTEM.		
No response to control.		
	Drive function not activated within 7 seconds after footswitch was depressed.	Recycle footswitch.
	Hydraulic system oil low.	Replenish oil as necessary.
	Hydraulic pump not functioning properly.	Repair or replace pump.
	Restricted or broken pump supply line.	Clean, repair or replace line.
	Restricted or broken line on valve bank.	Clean, repair or replace line.
	Air in wheel brake circuit.	Bleed circuit, determine and correct cause.
	Damaged wiring on joystick.	Repair or replace wiring /Run System Test.

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