An Oshkosh Corporation Company

Service and Maintenance Manual

Model

E450AJ

PVC 2001

31215013

November 26, 2019 - Rev A

ANSI

CE

AS/NZS

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1.7 CRITICAL STABILITY WEIGHTS

Component	LB	KG
Counterweight	3850	1746
Tire & Wheel (foam-filled)	207	94
Platform (4ft [1.2 m])	90	41
Platform (5 ft [1.5 m])	100	45
Battery (each)	120	54

⚠ WARNING

DO NOT REPLACE ITEMS CRITICAL TO STABILITY, SUCH AS BATTERIES OR TIRES, WITH ITEMS OF DIFFERENT WEIGHT OR SPECIFICATION. DO NOT MODIFY THE MEWP IN ANY WAY TO AFFECT STABILITY.

1.8 MAJOR COMPONENT WEIGHTS

Component	LB	KG
Platform and Support	215	97.5
Upper Boom Complete	450	204
Mid Boom Complete	419	190
Lower Boom Complete	419	190
Upper Lift Cylinder	97	44
Mid Lift Cylinder	60	27
Lower Lift Cylinder	130	59
Master Cylinder	405	184
Slave Cylinder	432	196
Telescope Cylinder	103	47
Upper Upright	222	101
Lower Upright	93	42
Turntable	948	430
Battery Box (incl. batteries)	600	272
Chassis (w/ foam-filled tires)	4695	2130
Counterweight	3850	1746
Machine Complete	14480	6568

1.9 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.

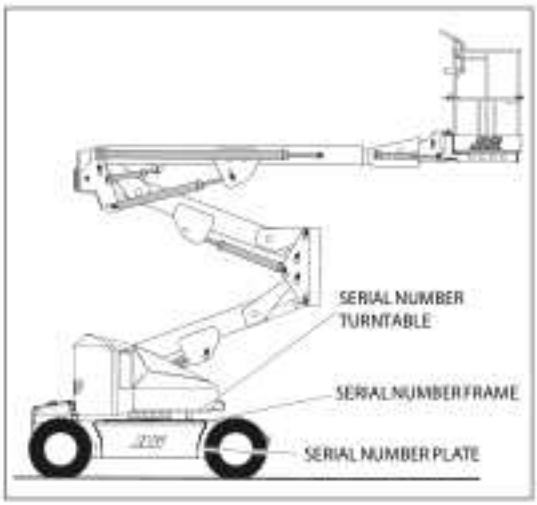


Figure 1-1. Serial Number Locations

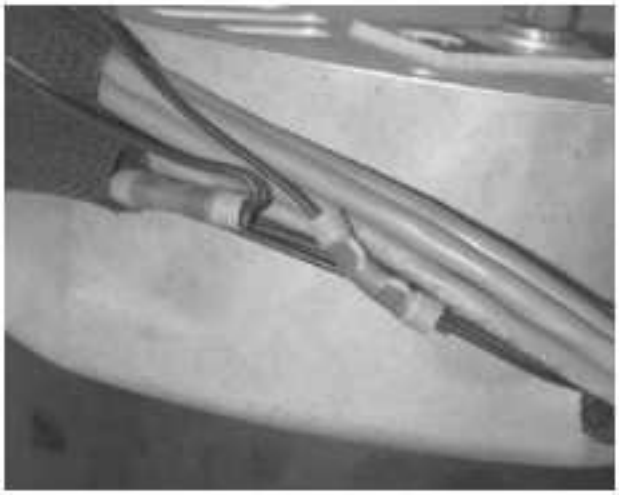
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4. Cut and remove the Wire Ties holding the Harness label to the harness. Next, remove the Wire Ties so that the cable sleeve can be moved, exposing the conductors of the harness.



5. Cut wire 106 going to the Engine/Generator Controller after the existing connection point and install the conductors that lead to the new inline fuse holder. Use insulated butt splice connectors for these conductors.





6. Re-install the harness with the new fuse in place.



7. Reconnect the lift and APU start battery. The APU is now ready for use.

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Troubleshooting

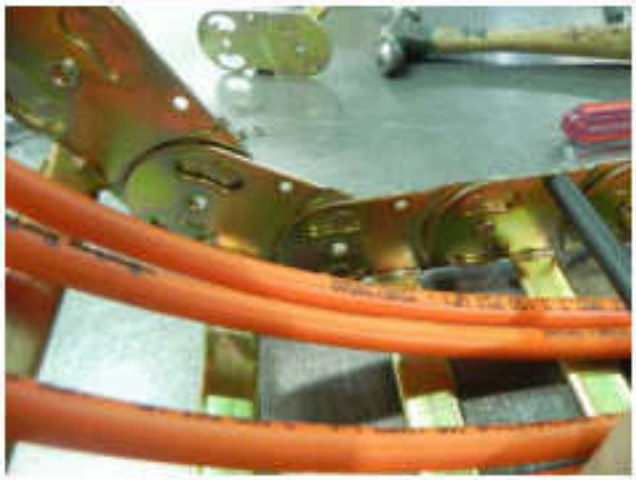
Table 4-1. Troubleshooting

Problem	Cause	Solution
1. Shaft rotates slowly or not at all	a. Insufficient torque output	a. Verify correct operating pressure. Do not exceed OEM's pressure specifications. Load may be above maximum capacity of the actuator.
	b. Low rate of fluid flow	b. Inspect ports for obstructions and hydraulic lines for restrictions and leaks.
	c. Control or counterbalance valve has internal leak	c. Disconnect hydraulic lines and bypass valve. Leave valve ports open and operate the actuator through housing ports (do not exceed OEM's operating pressure). The valve must be replaced if a steady flow of fluid is seen coming from the valve ports.
	d. Piston and/or shaft seal leak	d. Remove the plug and the housing's valve ports. Operate the actuator through the housing ports. Conduct the internal leakage test as described in the Testing section on page 24 of this manual.
	e. Corrosion build-up on the thrust surfaces	e. Re-build the actuator. Remove all rust then polish. Replacement parts may be needed.
	f. Swollen seals and composite bearings caused by incompatible hydraulic fluid	f. Re-build the actuator. Use fluid that is compatible with seals and bearings.
2. Operation is erratic or not responsive	a. Air in actuator	a. Purge air from actuator. See bleeding procedures.
3. Shaft will not fully rotate	a. Twisted or chipped gear teeth	a. Check for gear binding. Actuator may not be able to be re-built and may need to be replaced. Damage could be a result of overload or shock.
	b. Port fittings are obstructing the piston	b. Check thread length of port fittings. Fittings should during stroke not reach inside the housing bore.
4. Selected position cannot be maintained	a. Control or counterbalance valve has internal leak	a. Disconnect hydraulic lines and bypass valve. Leave valve ports open and operate the actuator through housing ports (do not exceed OEM's operating pressure). The valve must be replaced if a steady flow of fluid is seen coming from the valve ports.
	b. Piston and/or shaft seal leak	b. Remove the plug and the housing's valve ports. Operate the actuator through the housing ports. Conduct the internal leakage test as described in the Testing section on page 24 of this manual.
	c. Air in actuator	c. Purge air from actuator. See bleeding procedures

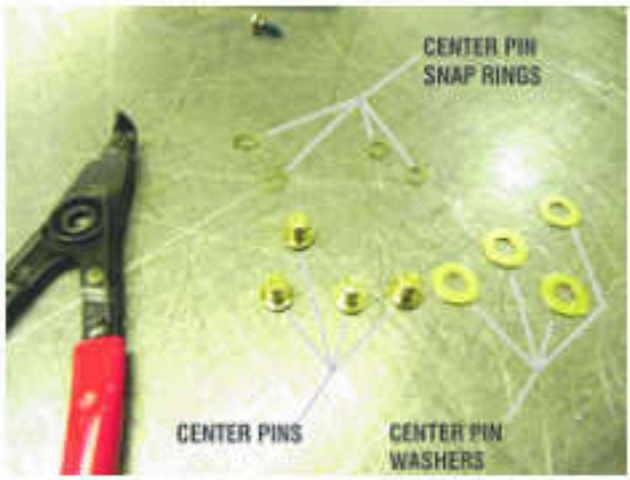
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In this position the round half-shears will rotate into the peanut cut outs.





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



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





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C01-J8					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	BLK	4-0-1 BASTR GND	12 AWG	GXL	X2-B (3)
2	YEL	5-10-1-1 SWITCHED PWR	12 AWG	GXL	S541 (1)
3	BLK	PLAT GND	12 AWG	GXL	X4-A (16)
4	YEL	PLATFORM PWR	12 AWG	GXL	X4-A (12)

MS423-1 - CAN					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
A	YEL	CAN1 HI	20 AWG	J1939 CABLE	X4-A (3)
B	GRN	CAN1 LO	20 AWG	J1939 CABLE	X4-A (2)
C					

C01-J12					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1					
2					
3	YEL	83-1-1 CAN2 HIGH	20 AWG	J1939 CABLE	X756 (2)
4	GRN	84-1-1 CAN2 LOW	20 AWG	J1939 CABLE	X756 (3)
5					
6					
7					
8	WHT	80-0 M550	18 AWG	GXL	X3-A (7)

LB86-AMB BEACON					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	WHT	2-12 STROBE	18 AWG	GXL	S653 (1)
2	BLK	1-7-1 GND	18 AWG	GXL	S796 (1)

S593					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	YEL	CAN1 HI	18 AWG	GXL	C01-J7 (13)
1	YEL	CAN1 HI	18 AWG	GXL	X2-B (11)
2	YEL	CAN1 HI	18 AWG	GXL	M5423-2 (A)

S594					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	GRN	CAN1 LO	18 AWG	GXL	C01-J7 (24)
1	GRN	CAN1 LO	18 AWG	GXL	X2-B (12)
2	GRN	CAN1 LO	18 AWG	GXL	MS423-2 (B)

S542					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	YEL	5-2-1 IGN MODE	18 AWG	GXL	X3-A (4)
1	YEL	5-2-5 IGN	18 AWG	GXL	X4-A (15)
2	YEL	5-2-2 IGN	18 AWG	GXL	X2-B (4)

X649 - BLUE BEACON					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	WHT	300-1 ALERT PWR	18 AWG	GXL	C01-J1 (2)
2	BLK	300-2 ALERT GND	18 AWG	GXL	C01-J1 (4)

S650					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	WHT	82-1 PLAT TX	18 AWG	GXL	C01-J7 (2)
1	WHT	82-2 PLAT TX	18 AWG	GXL	C01-J7 (1)
2	WHT	82-0 PLAT TX	18 AWG	GXL	X4-A (4)

S794					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	RED	3-0-1 CONSTANT 12V	12 AWG	GXL	X3-A (1)
2	RED	3-0 CONSTANT 12V	12 AWG	GXL	X2-B (1)
2	RED	3-0-2 CONSTANT 12V	18 AWG	GXL	X793 (1)

S795					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	YEL	5-11-1 IGN PLAT	18 AWG	GXL	X3-A (5)
2	YEL	5-11-1-1 IGN PLAT	18 AWG	GXL	X4-A (9)
2	YEL	5-11-1-2 IGN PLAT	18 AWG	GXL	X793 (4)

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