An Oshkosh Corporation Company

Service and Maintenance Manual

Model

E300A
E300AJ
E300AJP

P/N - 3120772

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ANSI

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SECTION 1. SPECIFICATIONS

1.1 CAPACITIES

Table 1-1. Capacities

Hydraulic Oil Tank	3.0 gallons (11.35 liters)
Hydraulic System (Including Tank)	4.0 gallons (15.14 liters)
Torque Hub, Drive*	17 ounces (0.50 L)
*Torque hubs should be one half full of lubricant.	

1.2 OPERATING SPECIFICATIONS

Table 1-2. Operating Specifications - E300A

Capacity: Unrestricted:	500 lbs. (227 kg)
Maximum Travel Grade, stowed Position (Gradeability) see Figure 4-3.	25%
Maximum Travel Grade, stowed Position (Side Slope) see Figure 4-3.	5%
Vertical Platform Height	30 ft. (9.14 m)
Horizontal Platform Reach (Up & Over)	20 ft. (6.1 m)
Machine Width	4 ft. (1.22 m)
Turning Radius (Outside)	10 ft. (3.05 m)
Turning Radius (Inside)	5 ft. (1.52 m)
Drive Speed (High Drive) (Above Horz.)	45-50 sec/ 200ft. (61 m) 55-68 sec/ 50 ft. (15.2 m)
Gross Machine Weight	14,300 lbs. (6,487 kg)
Maximum System Voltage	48 VDC
Maximum Main Relief Hyd. Pressure	2500 psi. (172.3 bars)

Table 1-3. Operating Specifications - E300AJ

Capacity: Unrestricted:	500 lbs. (227 kg)
Maximum Travel Grade, stowed Position (Gradeability)	25%
Maximum Travel Grade, stowed Position (Side Slope)	5%
Vertical Platform Height	30 ft. (9.14 m
Horizontal Platform Reach (Up & Over)	20 ft. (6.1 m)
Machine Width	4 ft. (1.22 m)
Turning Radius (Outside)	10 ft. (3.05 m)
Turning Radius (Inside)	5 ft. (1.52 m)
Drive Speed (High Drive) (Above Horz.)	45-50 sec/ 200ft. (61 m) 55-68 sec/ 50 ft. (15.2 m)
Gross Machine Weight	15,400 lbs. (6985 kg)
Maximum System Voltage	48 VDC
Maximum Main Relief Hyd. Pressure	2500 psi. (172.3 bars)

Table 1-4. Operating Specifications - E300AJP

Capacity: Unrestricted:	500 lbs. (227 kg)
Maximum Travel Grade, stowed Position (Gradeability)	25%
Maximum Travel Grade, stowed Position (Side Slope)	5%
Vertical Platform Height	30 ft. (9.14 m
Horizontal Platform Reach (Up & Over)	20 ft. (6.1 m)
Machine Width	4 ft. (1.22 m)
Turning Radius (Outside)	10 ft. (3.05 m)
Turning Radius (Inside)	5 ft. (1.52 m)
Drive Speed (High Drive) (Above Horz.)	45-50 sec/ 200ft. (61 m) 55-68 sec/ 50 ft. (15.2 m)
Gross Machine Weight	15,800 lbs. (7167 kg)
Maximum System Voltage	48 VDC
Maximum Main Relief Hyd. Pressure	3200 psi. (220.6 bars)

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Component Disassembly and Reassembly

When disassembling or reassembling a component, complete the procedural steps in sequence. Do not partially disassemble or assemble one part, then start on another. Always recheck your work to assure that nothing has been overlooked. Do not make any adjustments, other than those recommended, without obtaining proper approval.

Pressure-Fit Parts

When assembling pressure-fit parts, use an anti-seize or molybdenum disulfide base compound to lubricate the mating surface.

Bearings

1. When a bearing is removed, cover it to keep out dirt and abrasives. Clean bearings in nonflammable cleaning solvent and allow to drip dry. Compressed air can be used but do not spin the bearing.
2. Discard bearings if the races and balls (or rollers) are pitted, scored, or burned.
3. If bearing is found to be serviceable, apply a light coat of oil and wrap it in clean (waxed) paper. Do not unwrap reusable or new bearings until they are ready to install.
4. Lubricate new or used serviceable bearings before installation. When pressing a bearing into a retainer or bore, apply pressure to the outer race. If the bearing is to be installed on a shaft, apply pressure to the inner race.

Gaskets

Check that holes in gaskets align with openings in the mating parts. If it becomes necessary to hand-fabricate a gasket, use gasket material or stock of equivalent material and thickness. Be sure to cut holes in the right location, as blank gaskets can cause serious system damage.

Bolt Usage and Torque Application

1. Use bolts of proper length. A bolt which is too long will bottom before the head is tight against its related part. If a bolt is too short, there will not be enough thread area to engage and hold the part properly. When replacing bolts, use only those having the same specifications of the original, or one which is equivalent.
2. Unless specific torque requirements are given within the text, standard torque values should be used on heat-treated bolts, studs, and steel nuts, in accordance with recommended shop practices. (See Torque Chart Section 1.)

Hydraulic Lines and Electrical Wiring

Clearly mark or tag hydraulic lines and electrical wiring, as well as their receptacles, when disconnecting or removing them from the unit. This will assure that they are correctly reinstalled.

Hydraulic System

1. Keep the system clean. If evidence of metal or rubber particles are found in the hydraulic system, drain and flush the entire system.
2. Disassemble and reassemble parts on clean work surface. Clean all metal parts with non-flammable cleaning solvent. Lubricate components, as required, to aid assembly.

Lubrication

Service applicable components with the amount, type, and grade of lubricant recommended in this manual, at the specified intervals. When recommended lubricants are not available, consult your local supplier for an equivalent that meets or exceeds the specifications listed.

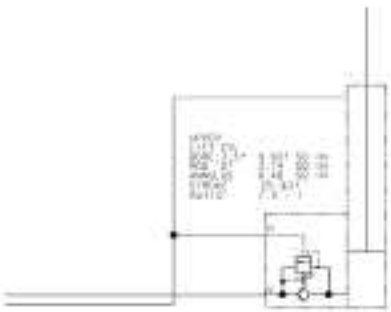
Battery

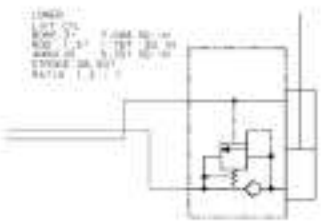
Clean battery, using a non-metallic brush and a solution of baking soda and water. Rinse with clean water. After cleaning, thoroughly dry battery and coat terminals with an anti corrosion compound.

Lubrication and Servicing

Components and assemblies requiring lubrication and servicing are shown in the Lubrication Chart in Section 1.

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COMPONENTS MAIN VALVE

1. PROPORTIONAL FLOW REGULATOR, PRESSURE COMPENSATED, PV-1033016-2-N-120W
2. 2-POS, 2-WAY POPPET VALVE, NORMALLY OPEN, SV08-21-0-N-120W (BYPASS VALVE)
3. 3-POS, 4-WAY VALVE, SV10-41E-0-N-120W, 1/2 MOTOR SPOOL (LOWER LIFT)
4. 3-POS, 4-WAY VALVE, SV10-47E-0-N-120W, 1/2 MOTOR SPOOL (UPPER LIFT)
5. 3-POS, 4-WAY VALVE, SV08-47C-0-N-120W, CLOSED CENTER SPOOL (SWING)
6. 2-POS, 2-WAY SPOOL VALVE, NORMALLY CLOSED SV08-24-0-N-120W (SWING RESTRICTOR)
7. 2-POS, 3-WAY VALVE, SV10-33-0-N-120W, (TELESCOPE OUT)
8. 2-POS, 3-WAY VALVE, SV10-33-0-N-120W, (TELESCOPE IN)
9. 3-POS, 4-WAY VALVE, SV08-47D-0-N-120W, MOTOR SPOOL (PLATFORM LEVEL)
10. 3-POS, 4-WAY VALVE, SV08-47C-0-N-120W, CLOSED CENTER SPOOL (ROTATOR)
11. RELIEF VALVE, DIRECT ACTING, RV08-20A-0-N-/33 (LOWER LIFT DOWN)
12. RELIEF VALVE, DIRECT ACTING, RV08-20A-0-N-/18 (UPPER LIFT DOWN)
13. RELIEF VALVE, DIRECT ACTING, RV08-20A-0-N-/33 (TELESCOPE)
14. RELIEF VALVE, DIRECT ACTING, RV08-20A-0-N-/33 (PLATFORM LEVEL BACKWARD MODE)
15. RELIEF VALVE, DIRECT ACTING, RV08-20A-0-N-/33 (PLATFORM LEVEL FORWARD PISTON END)
16. SHUTTLE VALVE, LSSB-20-0-N, (TELESCOPE)
17. PILOT OPERATED CHECK, PCDB-20-0-N, (PLATFORM LEVEL, ROD SIDE)
18. PILOT OPERATED CHECK, PCDB-20-0-N, (PLATFORM LEVEL, PISTON SIDE)
19. ROTARY 2-POS, 3-WAY VALVE, MV10-31-0-N, (EMERGENCY DESCENT) w/ 6113146
20. MANUAL HAND PUMP, HP10-21A-0-N-A
21. .031"ORIFICE PLUG
22. 7031028, .028" ORIFICE DISC
23. RELIEF VALVE, RV08-2B0E-0-N-30/13
24. SAE #8 Plug, #6103008

COMPONENTS STEER/BRAKE VALVE
1. PV7D-33B-0-N-120W
2. RV5B-22A-0-N-46/
3. SV08-47C-0-N-120W
4. SV16-38-0-N-120W
5. CVDB-20-0-N-4
6. LSSB-20-0-N CHECK VALVE
7. RV08-22A-0-N-30/ SHUTTLE
8. SW-KA-500K-TP
9. 01761

MAIN PUMP SPECS

*	500 PSI	3.878 GPM
	750 PSI	3.847 GPM
	1000 PSI	3.821 GPM
	1500 PSI	3.767 GPM
	2000 PSI	3.710 GPM
	2500 PSI	3.656 GPM
	3000 PSI	3.599 GPM
	3250 PSI	3.578 GPM
	3500 PSI	3.545 GPM

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Figure 7-23. Hydraulic Schematic - 300A - Sheet 2 of 2

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SECTION 5. HYDRAULICS

5.1 LUBRICATING O-RINGS IN THE HYDRAULIC SYSTEM

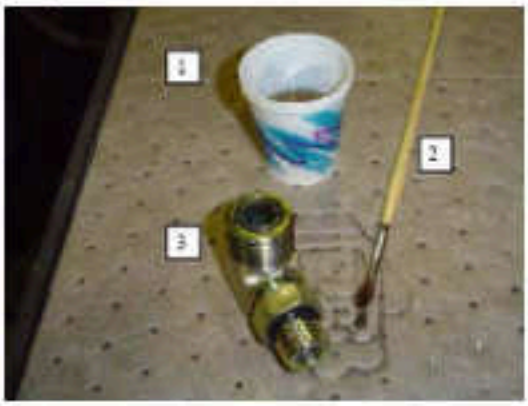
When assembling connectors in the hydraulic that use o-ring fittings, it is necessary to lubricate all fittings with hydraulic oil prior to assembly. To lubricate the fittings, use one of the following procedures.

NOTE: *All O-ring fittings must be pre-lubricated with hydraulic oil prior to assembly.*

Cup and Brush

The following is needed to correctly oil the o-ring in this manner:

- A small container for hydraulic oil
- Small paint brush



1. Hold the fitting in one hand while using the brush with the other hand to dip into the container. Remove excess hydraulic oil from the brush so an even film of oil is applied on the o-ring.



2. Holding the fitting over the hydraulic oil container, brush an even film of oil around the entire o-ring in the fitting, making sure the entire o-ring is completely saturated.



3. Turn the o-ring on the other side of the fitting and repeat the previous step, ensuring the entire o-ring is coated with hydraulic oil.



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7.5 DEUTSCH CONNECTORS

DT/DTP Series Assembly

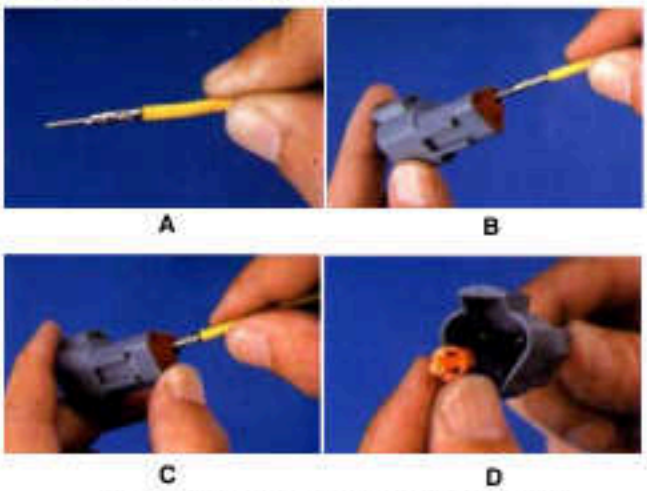


Figure 7-12. DT/DTP Contact Installation

1. Grasp crimped contact about 25mm behind the contact barrel.
2. Hold connector with rear grommet facing you.
3. Push contact straight into connector grommet until a click is felt. A slight tug will confirm that it is properly locked in place.
4. Once all contacts are in place, insert wedgelock with arrow pointing toward exterior locking mechanism. The wedgelock will snap into place. Rectangular wedges are not oriented. Thy may go in either way.

NOTE: *The receptacle is shown - use the same procedure for plug.*

DT/DTP Series Disassembly

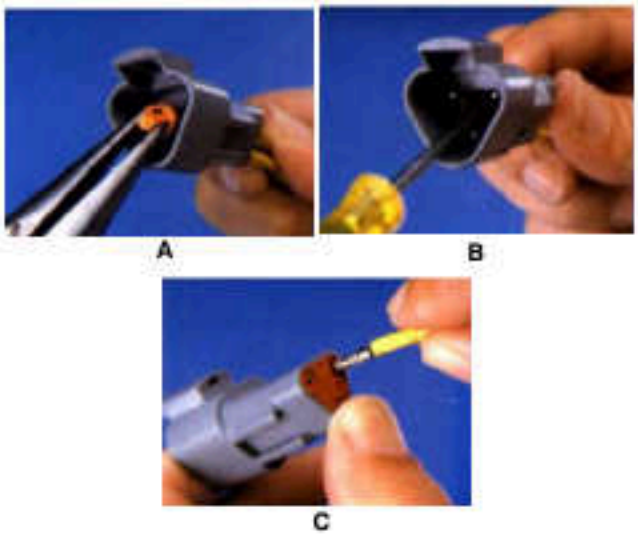


Figure 7-13. DT/DTP Contact Removal

1. Remove wedgelock using needlenose pliers or a hook shaped wire to pull wedge straight out.
2. To remove the contacts, gently pull wire backwards, while at the same time releasing the locking finger by moving it away from the contact with a screwdriver.
3. Hold the rear seal in place, as removing the contact may displace the seal.

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