An Oshkosh Corporation Company

Service and Maintenance Manual

Models
E400Anarrow
E400AJPnarrow

PVC 2007

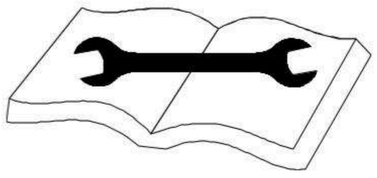
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1.5 LUBRICATION SPECIFICATIONS

Refer to Section 1.10, Maintenance and Lubrication, for specific lubrication procedures.

Hydraulic Oil

Hydraulic System Operating Temperature Range	S.A.E. Viscosity Grade
+0°to+180°F(-18°to+83°C)	10W
+0°to+210°F(-18°to+99°C)	10W-20, 10W30
+50°to+210°F(+10°to+99°C)	20W-20

NOTE: *Hydraulic oils must have anti-wear qualities at least to API Service Classification GL-3, and sufficient chemical stability for mobile hydraulic system service.*

NOTE: *Aside from JLG recommendations, it is not advisable to mix oils of different brands or types, as they may not contain the same required additives or be of comparable viscosities. If use of hydraulic oil other than standard UTTO is desired, contact JLG Industry for proper recommendations.*

Table 1-1. Mobil DTE 10 Excel 15 Specs

ISO Viscosity Grade	#15
Pour Point, Max	-65°F (-54°C)
Flash Point, Min.	360°F (182°C)
Viscosity	
at 40°C	15.8 cSt
at 100°C	4.07 cSt
at 100°F	15.8 cSt
at 212°F	4.07 cSt
Viscosity Index	168
Density (Kg/l) @ 15°C	0.8375
Density (lb/in3) @ 60°F	0.0302

Table 1-2. Mobil EAL H 32 Specs

Type	Synthetic Biodegradable
ISO Viscosity Grade	32
Density (Kg/l) @ 15°C	0.869
Pour Point, Max	-38°F (-39°C)
Flash Point, Min.	514°F (268°C)
Viscosity	
at 40°C	33.1 cSt
at 100°C	6.36 cSt
Viscosity Index	147

Table 1-3. Mobil EAL Envirosyn SHC 32 Specs

Type	Synthetic Biodegradable
ISO Viscosity Grade	32
Density (Kg/l) @ 15°C	0.936
Pour Point, Max	-27°F (-33°C)
Flash Point, Min.	540°F (282°C)
Viscosity	
at 40°C	33.1 cSt
at 100°C	6.2 cSt
Viscosity Index	152

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Table 3-2. Swing Motor Troubleshooting

Trouble	Cause	Remedy
Oil Leakage	1. Hose fittings loose, worn or damaged.	Check & replace damaged fittings or "O" Rings. Torque to manufacturers specifications.
	2. Oil seal rings (4) deteriorated by excess heat.	Replace oil seal rings by disassembling unit.
	3. Special bolt (1, 1A, 1B or 1C) loose or its sealing area deteriorated by corrosion.	(a) Loosen then tighten single bolt to torque specification. (b) Replace bolt.
	4. Internal shaft seal (16) worn or damaged.	Replace seal. Disassembly of motor unit necessary.
	5. Worn coupling shaft (12) and internal seal (16).	Replace coupling shaft and seal by disassembling unit.
Significant loss of speed under load	1. Lack of sufficient oil supply	(a) Check for faulty relief valve and adjust or replace as required. (b) Check for and repair worn pump. (c) Check for and use correct oil for temperature of operation.
	2. High internal motor leakage	Replace worn rotor set by disassembling unit.
	3. Severely worn or damaged internal splines.	Replace rotor set, drive link and coupling shaft by disassembling unit.
	4. Excessive heat.	Locate excessive heat source (usually a restriction) in the system and correct the condition.
Low mechanical efficiency or undue high pressure required to operate unit	1. Line blockage	Locate blockage source and repair or replace.
	2. Internal interference	Disassemble unit, identify and remedy cause and repair, replacing parts as necessary.
	3. Lack of pumping pressure	Check for and repair worn pump.
	4. Excessive binding or loading in system external to motor unit.	Locate source and eliminate cause.

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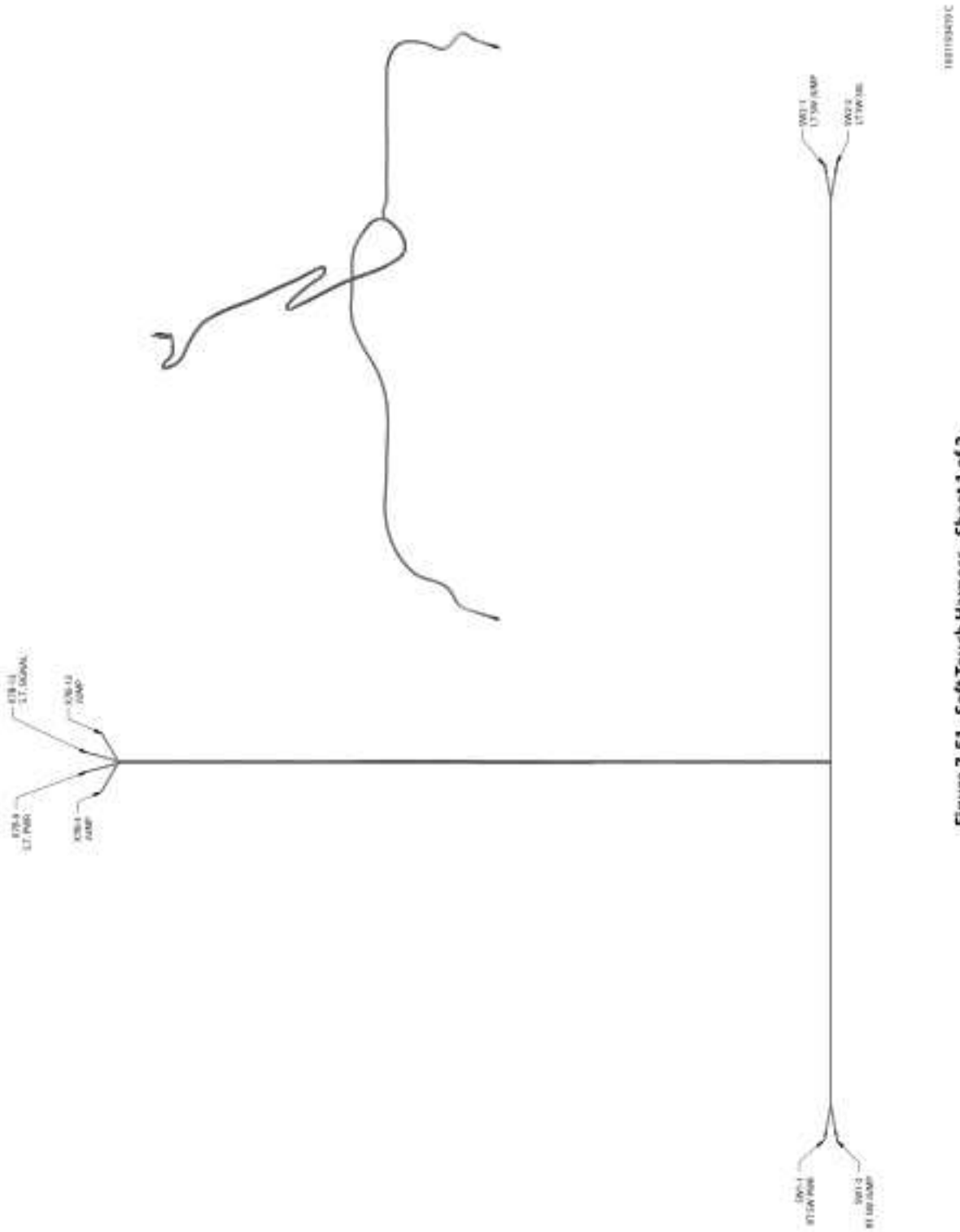


Figure 7-51. Soft Touch Harness - Sheet 1 of 2

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7.7 DEUTSCH CONNECTORS

DT/DTP Series Assembly

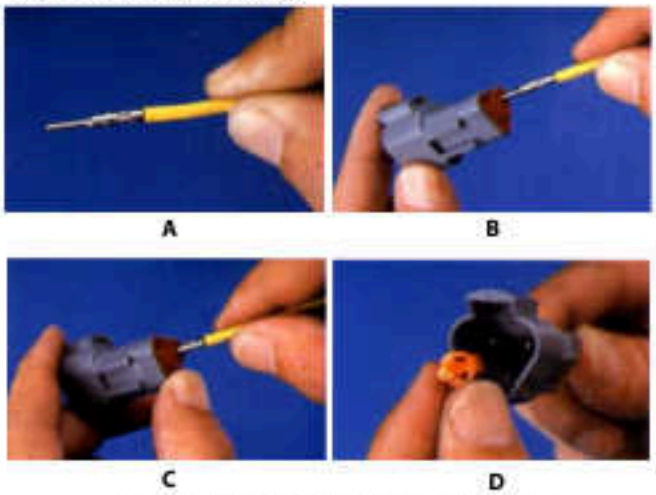


Figure 7-12. DT/DTP Contact Installation

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. They may go in either way.

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

DT/DTP Series Disassembly

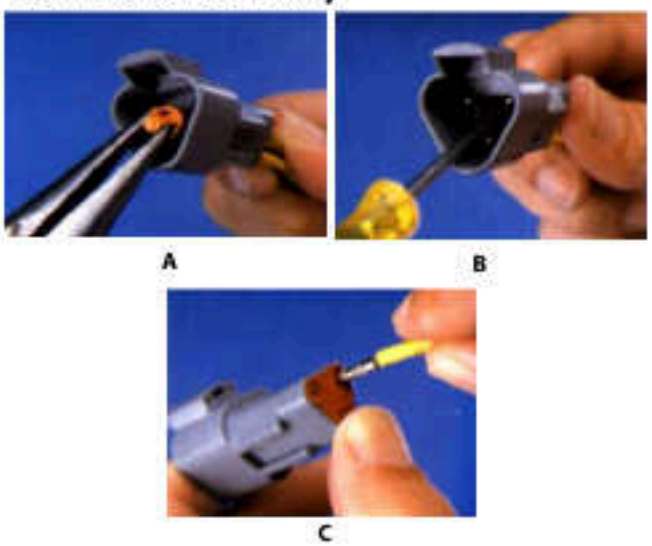


Figure 7-13. DT/DTP Contact Removal

5. Remove wedgelock using needle nose pliers or a hook shaped wire to pull wedge straight out.
6. 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.
7. Hold the rear seal in place, as removing the contact may displace the seal.

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Assembly Instructions for American Standard Pipe Thread Tapered (NPTF) Connections.

1. Inspect components to ensure male and female port threads are free of rust, splits, dirt, foreign matter, or burrs.
2. Apply a suitable thread sealant, such as Loctite 567, to the male pipe threads if not already applied. Ensure the first 1 to 2 threads are uncovered to prevent system contamination.
3. Assemble connection hand tight.
4. Mark fittings, male and female.

⚠ CAUTION

OVER TIGHTENING MAY CAUSE DEFORMATION OF THE PIPE FITTING AND DAMAGE TO THE JOINING FITTING, FLANGE OR COMPONENT MAY OCCUR.

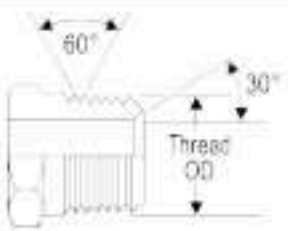
NEVER BACK OFF (LOOSEN) PIPE THREADED CONNECTORS TO ACHIEVE ALIGNMENT. MEET THE MINIMUM REQUIRED TURNS AND USE THE LAST TURN FOR ALIGNMENT.

5. Rotate male fitting the number of turns per Table 5-1, NPTF Pipe Thread. See FFWR and TFFT Methods for TFFT procedure requirements.

NOTE: *TFFT values provided in Table 5-1, NPTF Pipe Thread are applicable for the following material configurations:*

a. STEEL fittings with STEEL mating components.
b. STEEL fittings with ALUMINUM or BRASS mating components.
c. ALUMINUM or BRASS fittings with STEEL mating components.
d. ALUMINUM or BRASS fittings with ALUMINUM or BRASS mating components.

Table 5-1. NPTF Pipe Thread



TYPE/FITTING IDENTIFICATION					Turns From Finger Tight (TFFT)**
Material	Dash Size	Thread Size (UNF)	ØA* (in)	ØA* (mm)	
STEEL, ALUMINUM, OR BRASS FITTINGS WITH STEEL, ALUMINUM, OR BRASS MATING COMPONENTS	2	1/8-27	0.40	10.24	2to3
	4	1/4-18	0.54	13.61	2to3
	6	3/8-18	0.67	17.05	2to3
	8	1/2-14	0.84	21.22	2to3
	12	3/4-14	1.05	26.56	2to3
	16	1-11 1/2	1.31	33.22	1.5to2.5
	20	1 1/4-11 1/2	1.65	41.98	1.5to2.5
	24	1 1/2-11 1/2	1.89	48.05	1.5to2.5
	32	2-11 1/2	2.37	60.09	1.5to2.5

*ØA thread dimension for reference only.

**See FFWR and TFFT Methods for TFFT procedure requirements.

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