An Oshkosh Corporation Company

Service and Maintenance Manual

Model

E400A/AJP
E400A/AJPnarrow
M400A/AJP
M400A/AJPnarrow

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An Oshkosh Corporation Company

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1.8 DIMENSIONAL DATA

Table 1-8. Dimensional Data

Machine Height (stowed) E/M400AJP E/M400AJPnarrow E/M 400A E/M 400Anarrow	 6 ft. 7 in. (2.0 m) 6 ft. 5.75 in. (1.31m) 6 ft. 7 in. (2.0 m) 6 ft. 5.75 in. (1.97 m)
Machine Width E/M 400A E/M 400Anarrow E/M400AJP E/M400AJPnarrow	 5 ft. 9 in. (1.75 m) 4 ft. 11 in. (1.50 m) 5 ft. 9 in. (1.75 m.) 4 ft. 11 in. (1.49 m.)
Machine Length (stowed) E/M 400A E/M 400Anarrow E/M400AJP E/M400AJPnarrow	 18 ft. 1 in. (5.50 m) 18 ft. 1 in. (5.50 m) 22.0ft. (6.7 m) 22.0 ft. (6.7 m)
Wheel Base	6 ft. 7.0 in. (2.00 m)
Track Width E/M 400A, E/M400AJP E/M 400Anarrow, E/M400AJPnarrow	Track Width 5 ft. 0 in. (1.51 m) 4 ft. 3.75 in. (1.31 m)
Ground Clearance E/M 400A, E/M400AJP E/M 400Anarrow, E/M400AJPnarrow	 8.5 in. (0.22 m) 5 in. (0.13 m)
Working Height	46 ft. 0 in. (14.02 m)
Platform Height	40 ft. 0 in. (12.19 m)
Up and Over Platform Height	21 ft. 5 in. (6.55 m)
Horizontal Reach @ Maximum Up and Over E/M 400A, E/M 400Anarrow E/M400AJP, E/M400AJPnarrow	 21 ft. 2 in. (6.41 m) 22 ft. -5 in. (6.83 m)
Tail Swing (Any Position) E/M 400A, E/M400AJP, E/M400AJPnarrow - 0 in. E/M 400Anarrow - 4 in.	Tail Swing (Any Position) E/M 400A, E/M400AJP, E/M400AJPnarrow - 0 in. E/M 400Anarrow - 4 in.
Turning Radius (Inside) E/M 400A E/M 400Anarrow E/M400AJP E/M400AJPnarrow	 2 ft. 0 in. (0.61 m) 2 ft. 10 in. (0.86 m) 2 ft. - 0 in. (0.61 m) 2 ft. -10 in. (0.86 m)
Turning Radius (outside)	10 ft. - 4 in. (3.15 m)

1.9 FUNCTION SPEEDS

Table 1-9. Function Speeds

Function	Seconds
Main Lift Up	30-24
Main Lift Down	29-23
Turntable Swing Right & Left 360°	81-67*
Telescope Out - E400AJP, M400AJP, E400AJPn, M400AJPn	10-6
Telescope Out - E400An, M400An, E400A, M400A	18-14
Telescope In - E400AJP, M400AJP, E400AJPn, M400AJPn	15-10
Telescope In - E400An, M400An, E400A, M400A	28-23
Platform Rotate (4 ft.) - Right & Left 180° - E400AJP, M400AJP, E400AJPn, M400AJPn	20-24**
Platform Rotate (5 ft.) - Right & Left 180° - E400AJP, M400AJP	16-19**
Platform Rotate - Right & Left 180° - E400An, M400An, E400A, M400A	17-14**
Jib Up	25-26
Jib Down	24-25
Jib Swing	18-25
Lower Lift Up	33-27
Lower Lift Down	26-22
High Drive - Fwd. & Rev. E400AJP/M400AJP (200 ft.)	42-44*** 3.2 mph. (5.1 kph)
High Drive - Fwd. & Rev. E400AJPn/M400AJPn (200 ft.)	45-50*** 3.0 mph. (4.8 kph)
Drive above Horiz. (ANSI) - Fwd. & Rev. E400A, E400AJP/M400A, M400AJP (50 ft.)	50-53*** 0.64 mph (1 kph)
Drive above Horiz. (ANSI) - Fwd. & Rev. E400An/ E400AJPn/M400n, M400AJPn (50 ft.)	78-85*** 0 .44 mph. (0.7 kph)
Drive above Horiz. (CE) - Fwd. & Rev. E400AJP/ M400AJP (50 ft.)	107-112*** 0.32 mph (0.5 kph)
Drive above Horiz. (CE) - Fwd. & Rev. E400An/ E400AJPn/M400An/ M400AJPn (50 ft.)	78-85*** 0 .44 mph. (0.7 kph)
Drive above Horiz. (CE) - Fwd. & Rev. E400A/M400A (50 ft.)	67-71*** 0 .48 mph. (0.8 kph)
*Swing Left to Swing Right should be within 10% of each other.	
**Swing Left to Swing Right should be within 15% of each other.	
***Drive Forward to Drive Reverse should be within 10% of each other.	

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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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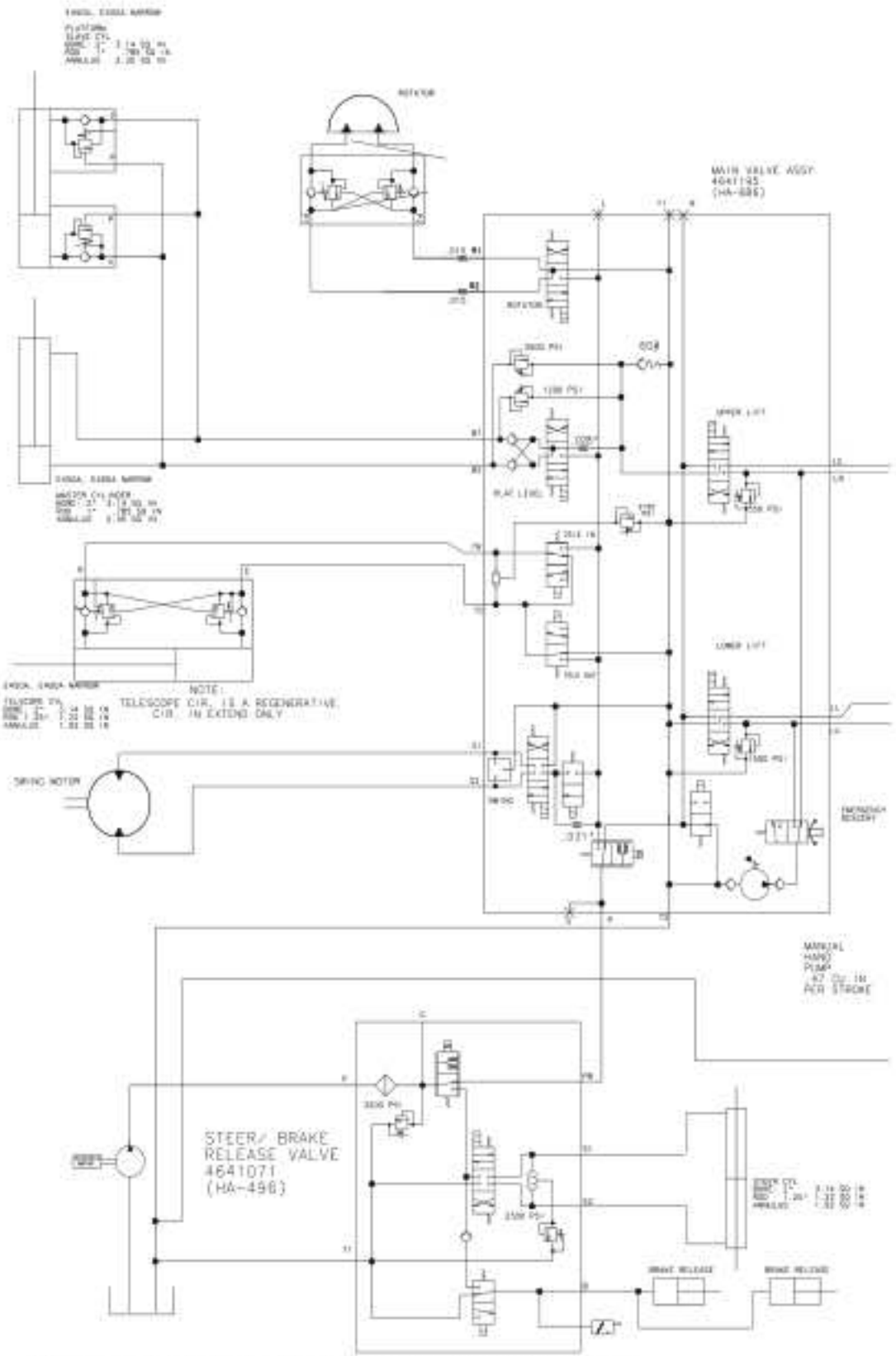
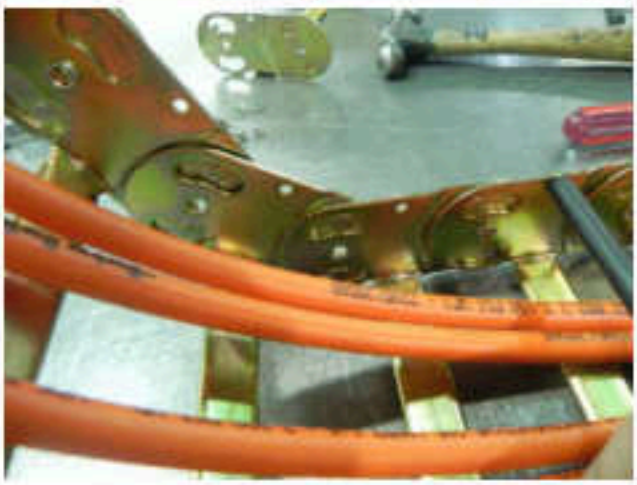


Figure 7-24. Hydraulic Schematic - M400A/E400A - Sheet 1 of 2

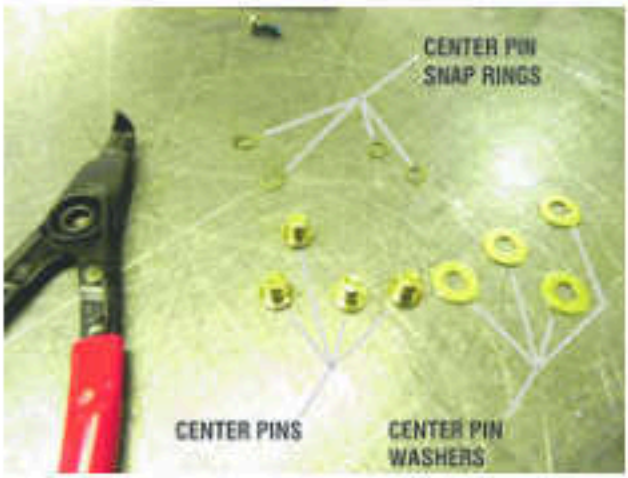
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4. Pull the moving end out over the track so that the new connection is positioned in the curve of the powertrack. In this position the round half-shears will rotate into the peanut cut outs.





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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1.17 OPERATOR MAINTENANCE & LUBRICATION

NOTE: *The following numbers correspond to those in Figure 1-2., Operator Maintenance & Lubrication Diagram.*

Table 1-19. Lubrication Specifications.

KEY	SPECIFICATIONS
MPG	Multipurpose Grease having a minimum dripping point of 350 degrees F. Excellent water resistance and adhesive qualities; and being of extreme pressure type (Timken OK 40 pounds minimum).
EPGL	Extreme Pressure Gear Lube (oil) meeting API Service Classification GL-5 or Mil-Spec Mil-L-2105.
HO	Hydraulic Oil. Mobil DTE-11M
OG*	Open Gear Lube - Tribol Molub-Alloy 936 Open Gear Compound. (JLG Part No. 3020027)
BG*	Bearing Grease (JLG Part No. 3020029) Mobilth SHA 460.
LL	Synthetic Lithium Lubricant, Gredag 741 Grease. (JLG Part No. 3020022)
EO	Engine (crankcase) Oil. Gas - API SF/SG class, MIL-L-2104. Diesel - API CC/CD class, MIL-L-2104B/MIL-L-2104C.
*MPG may be substituted for these lubricants, if necessary, but service intervals will be reduced.	

NOTICE

LUBRICATION INTERVALS ARE BASED ON MACHINE OPERATION UNDER NORMAL CONDITIONS. FOR MACHINES USED IN MULTI-SHIFT OPERATIONS AND/OR EXPOSED TO HOSTILE ENVIRONMENTS OR CONDITIONS, LUBRICATION FREQUENCIES MUST BE INCREASED ACCORDINGLY.

1. Swing Bearing

   Lube Point(s) - 2 Grease Fittings
   Capacity - A/R
   Lube - MPG
   Interval - Every 3 months or 150 hrs of operation
   Comments - Remote Access

2. Swing Bearing/Worm Gear Teeth



   Lube Point(s) - 2 Grease Fittings
   Capacity - Spray On
   Lube - Mobiltac 375NC
   Interval - A/R
   Comments - If necessary install grease fittings into worm gear housing and grease bearings.

DO NOT OVEGREASE BEARINGS. OVERGREASING BEARINGS WILL RESULT IN BLOWING OUTER SEAL IN HOUSING.



3. Hydraulic Tank



   Lube Point(s) - Fill Cap
   Capacity - 4 Gal. (15.1 L)
   Lube - HO
   Interval - Check Level daily; Change every 2 years or 1200 hours of operation.
   Comments - On new machines, those recently overhauled, or after changing hydraulic oil, operate all systems a minimum of two complete cycles and recheck oil level in reservoir.

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