1-1. CAPACITIES.

- **Fuel Tank.**
  - 15 U.S gallons (56.77 l).
- Oil Capacity - 6.9 quarts (6.50 l.) w/filter, 6.34 quarts (6.00 l.) w/o filter.
- Low (mid) RPM - 2200.
- High RPM - 3000.

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INDEX NO.	COMPONENT	NUMBER/TYPE LUBE POINTS	LUBE & METHOD	INTERVAL (HOURS)
1	Articulating Cylinder (Rod End)	1 Grease Fitting	MPG - Pressure Gun	50
2	Articulating Cylinder (Cylinder End)	1 Grease Fitting	MPG - Pressure Gun	50

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2-8. CYLINDER REPAIR.

Note

The following are general procedures that apply to all of the cylinders on this machine. Procedures that apply to a specific cylinder will be so noted.

a. Disassembly.

IMPORTANT

DISASSEMBLY OF THE CYLINDER SHOULD BE PERFORMED ON A CLEAN WORK SURFACE IN A DIRT FREE WORK AREA.

(1). Connect a suitable auxiliary hydraulic power source to the cylinder port block fitting.

(2). Operate the hydraulic power source and extend the cylinder. Shut down and disconnect the power source. Adequately support the cylinder rod, if applicable.

(3). If applicable, remove the cartridge-type holding valve and fittings from the cylinder port block. Discard o-rings.

(4). Place the cylinder barrel into a suitable holding fixture.

(5). Using a suitable spanner wrench, loosen the cylinder head retainer, if applicable, and/or cylinder head gland, and remove from cylinder barrel.

(6). Attach a suitable pulling device to the cylinder rod port block end or cylinder rod end, as applicable.

IMPORTANT

EXTREME CARE SHOULD BE TAKEN WHEN REMOVING THE CYLINDER ROD, HEAD, AND PISTON. AVOID PULLING THE ROD OFF-CENTER, WHICH COULD CAUSE DAMAGE TO THE PISTON AND CYLINDER BARREL SURFACES.

(7). With the barrel clamped securely, apply pressure to the rod pulling device and carefully withdraw the complete rod assembly from the cylinder barrel.

CAUTION

ONCE THE HEAD GLAND HAS CLEARED THE CYLINDER CASE MOUTH, THE ROD MUST BE SUPPORTED CLOSE TO THE CYLINDER CASE PRIOR TO THE PISTON BEING PULLED PAST THE CYLINDER CASE THREADS, TO AVOID DAMAGE TO THE CYLINDER CASE THREADS, AND/OR THE PISTON AND PISTON SEALS.

(8). Using suitable protection, clamp the cylinder rod in a vise or similar holding fixture as close to the piston as possible.

(9). Remove the set screw(s), if applicable, and nut which attach the piston to the rod, and remove the piston. Discard nylon point set screws.

(10). Remove the piston rings.

(11). Remove and discard the piston o-rings, seal rings, and backup rings.

(12). Remove the set screw, if applicable, piston spacer, and wear ring, if applicable, from the rod.

(13). Remove the rod from the holding fixture. Remove the cylinder head gland and retainer, if applicable. Discard the o-rings, back-up rings, rod seals, and wiper seals.

b. Cleaning and Inspection.

(1). Clean all parts thoroughly in an approved cleaning solvent.

(2). Inspect the cylinder rod for scoring, tapering, ovality, or other damage. If necessary, dress rod with Scotch Brite or equivalent. Replace rod if necessary.

(3). Inspect threaded portion of rod for excessive damage. Dress threads as necessary.

(4). Inspect inner surface of cylinder barrel tube for scoring or other damage. Check inside diameter for tapering or ovality. Replace if necessary.

(5). Inspect threaded portion of barrel for damage. Dress threads as necessary.

(6). Inspect piston surface for damage and scoring and for distortion. Dress piston surface or replace piston as necessary.

(7). Inspect seal and o-ring grooves in piston for burrs and sharp edges. Dress applicable surfaces as necessary.

(8). Inspect cylinder head inside diameter for scoring or other damage and for ovality and tapering. Replace as necessary.

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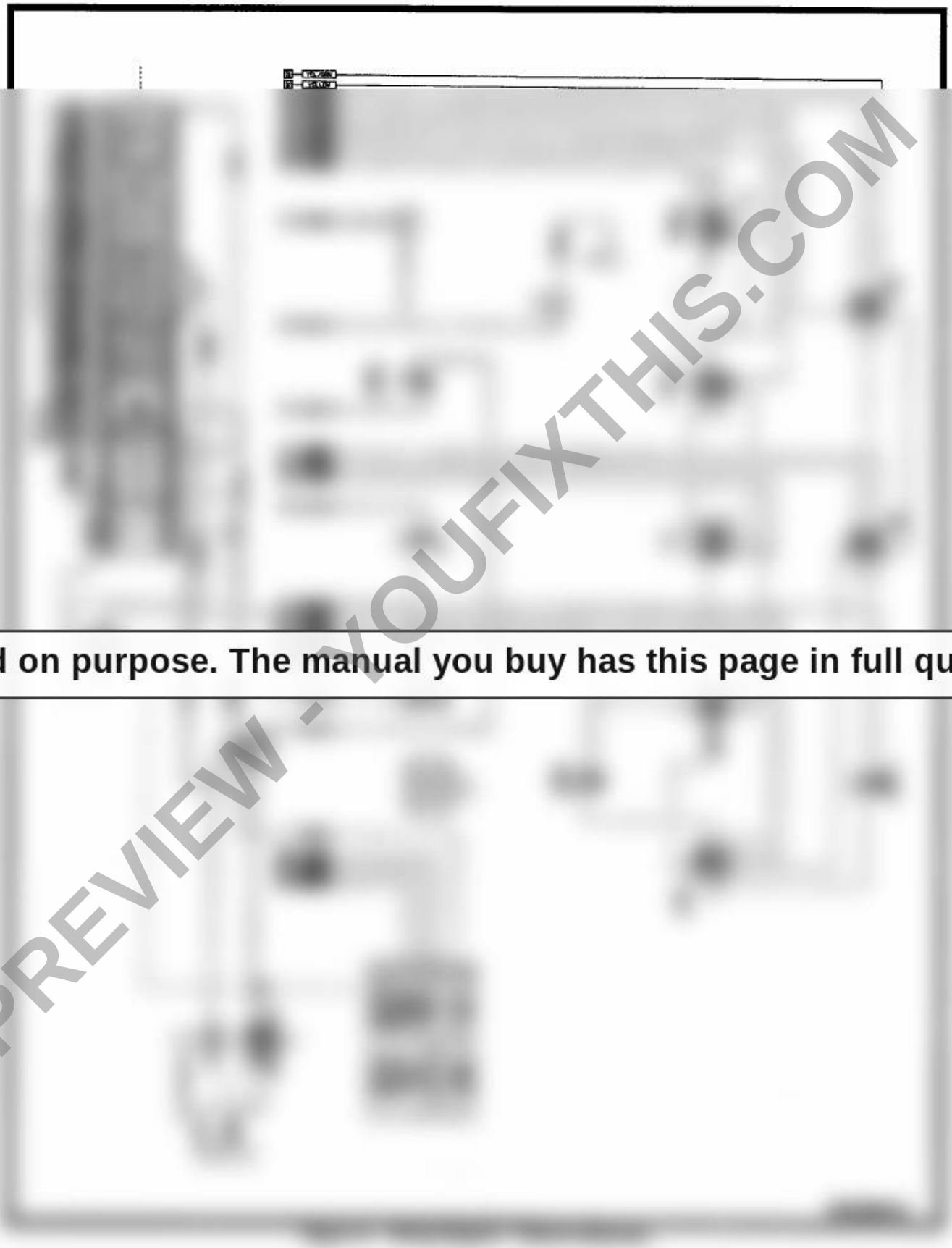
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Table 3-1. Platform Assembly Troubleshooting.

TROUBLE	PROBABLE CAUSE	REMEDY
Platform Leveling System.		
Automatic leveling inoperative.	Hydraulic system oil low.	Replenish oil as necessary.
	Dual check valves dirty/inoperative.	Clean or replace as necessary.
	Restricted or broken hydraulic line or fitting on slave cylinder or main lift cylinder.	Clean, repair, or replace line or fitting.
	Worn seal(s) in slave level or main lift cylinder.	Replace seal(s).
	Slave level or main lift cylinder not functioning properly.	Repair or replace cylinder.
Platform will not maintain level attitude.	Counterbalance valve on slave leveling cylinder improperly adjusted or not functioning properly.	Replace valve.
	Worn seal(s) in slave level or main lift cylinder.	Replace seal(s).
	Damaged slave level or main lift cylinder.	Repair or replace cylinder.
No response to platform leveling controls.	Level control inoperative.	Repair or replace control lever.
	Hydraulic system oil low.	Replenish oil as necessary.
	Restricted or broken hydraulic line or fitting.	Clean, repair, or replace line or fitting.
	Control valve not functioning properly.	Repair or replace valve.
	No electric to dump or control valve.	See proper wiring diagram.
	Slave cylinder not functioning properly.	Repair or replace pump.
Platform will not adjust "up" to level.	Hydraulic pump not functioning properly.	Repair or replace pump.
	Restricted or broken hydraulic line or fitting.	Clean, repair, or replace line or fitting.
	Slave cylinder not functioning properly.	Repair or replace cylinder.
	Electrical failure.	See proper wiring diagram.
Platform will not adjust "down" to level.	See: Platform will not adjust "up" to level.	

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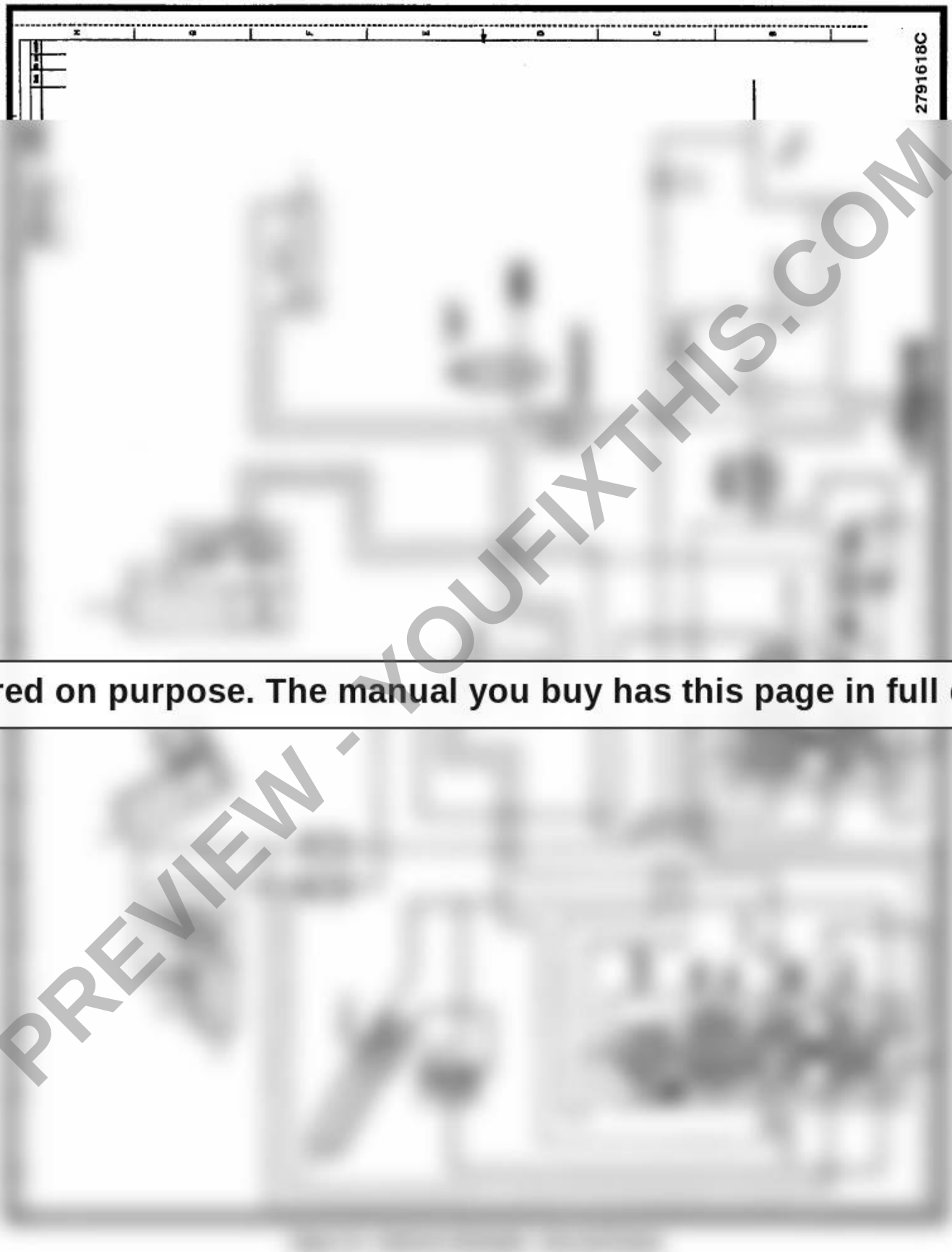
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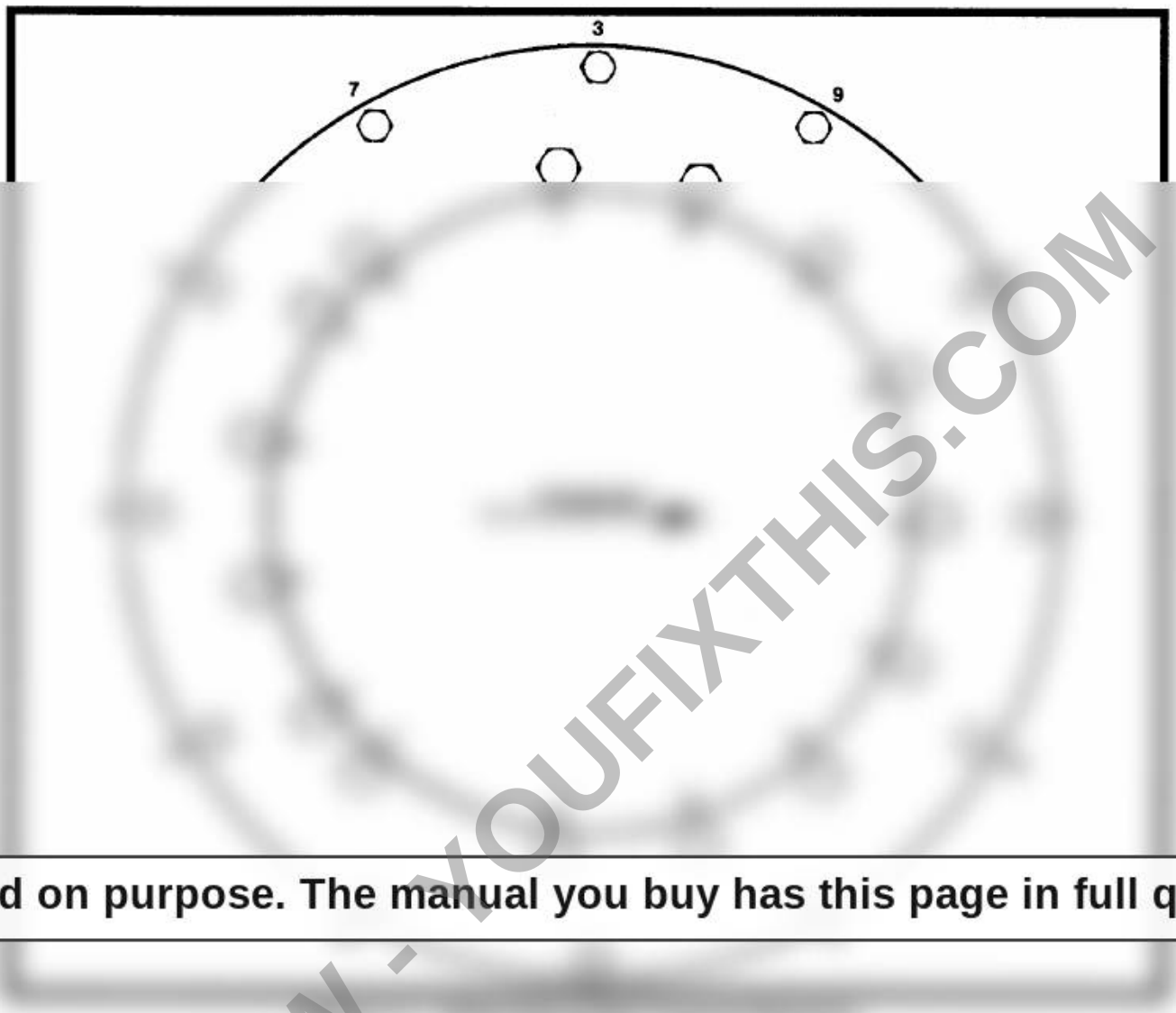
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PREVENTIVE MAINTENANCE AND INSPECTION SCHEDULE					
AREA	INTERVAL				
PLATFORM AND BOOMS	10 HOURS DAILY	50 HOURS WEEKLY	200 HOURS MONTHLY	500 HOURS 3 MONTH	1000 HRS 6 MONTH
1. Engine Oil	3	5			
2. Battery	3	5			
3. Radiator (if equipped)		3,5			
4. Air Cleaner	1	14			
5. Exhaust System	1		1,5		
6. Engine Mounts			1		
7. Gauges/Ground Controls	1,2,11				
8. Main Hydraulic Pump	1	5			
9. Auxiliary Power Pump	1	5			
10. Valves	1	5			
11. Hydraulic Filters (See Lube Chart)	14	5			
12. Hydraulic Hoses and Tubing	1	5			
13. Hydraulic Oil Tank*	3	5	4		16
14. Breather - Hydraulic Tank		6,14			
15. Fuel Tank (if equipped)	3,5		4		
16. Cylinders, Hydraulic	12	1,5,6,13	4		
17. Shields	1				
18. Turntable Locking Pin	1,7		4		
19. Horizontal Limit Switch	1,7				
20. Oil Coupling		5			
21. Placards and Decals	1,2				
22. Tilt Alarm Switch		1			
23. Swing Bearing		1,12		9	
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* Inspection and Maintenance Code 10 to be performed annually.

** Axle Lockout Test to be performed quarterly.

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Table 3-4. Chassis Assembly Troubleshooting.

TROUBLE	TROUBLESHOOTING CHART PROBABLE CAUSE	REMEDY
Steering System.		
No response to control.	Circuit breaker open.	Determine and correct cause; reset circuit breaker.
	If equipped, steer/tow selector in "tow" position.	Actuate control to "steer" position. (Valve knob in)
	Hydraulic system oil low.	Replenish oil as necessary.
	Hydraulic system pressure too low.	Adjust pressure.
	Damaged wiring on control switch or solenoid valve.	See proper wiring diagram.
	Control switch not functioning properly.	Replace switch.
	Restricted or broken hydraulic line on valve bank, hydraulic pump or rotary coupling. (If equipped.)	Clean, repair or replace line.
	If equipped, swivel coupling leaking internally. (Seals defective.)	Repair or replace coupling.
	Control valve not functioning properly.	Repair or replace valve.
	Steer cylinder not functioning properly.	Repair or replace cylinder.
Machine hard to steer or steering is erratic.	Hydraulic system oil low.	Replenish oil as necessary.
	Restricted hydraulic line or fitting.	Clean, repair or replace line or fitting.
	Lack of lubrication.	Lubricate as required. (Refer to Lubrication Chart.
	Tires sinking into ground.	Check tire pressure.
	Restricted crossover relief valve.	Clean or replace valve.
	Steer system pressure low.	Adjust pressure.
	Bent linkage (tie rod(s) or steering hitch).	Repair or replace linkage as required.
	Hydraulic pump not functioning properly.	Repair or replace pump.
	Steer cylinder not functioning properly.	Repair or replace cylinder.

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