SECTION 1. SPECIFICATIONS

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2. Carefully disconnect hydraulic hose from retract port of cylinder. There will be initial weeping of hydraulic fluid which can be caught in a suitable container. After the initial discharge, there should be no further leakage from the retract port.
3. Activate hydraulic system and activate cylinder extend function. Check retract port for leakage.
4. If cylinder leakage is 6-8 drops per minute or more, piston seals are defective and must be replaced. If cylinder retract port leakage is less than 6-8 drops per minute, carefully reconnect hose to retract port and retract cylinder.
5. With cylinder fully retracted, shut down hydraulic system and carefully disconnect hydraulic hose from cylinder extend port.
6. Activate motor and activate cylinder retract function. Check extend port for leakage.
7. If cylinder leakage is 6-8 drops per minute or more, piston seals are defective and must be replaced. If extend port leakage is less than 6-8 drops per minute, carefully reconnect hose to extend port, then activate cylinder through one complete cycle and check for leaks.

Cylinders w/Single Counterbalance Valves - Lift Cylinder

⚠ IMPORTANT

OPERATE ALL FUNCTIONS FROM GROUND CONTROL STATION ONLY.

1. Using all applicable safety precautions, activate hydraulic system.

⚠ WARNING

WHEN WORKING ON THE LIFT CYLINDER, RAISE THE PLATFORM COMPLETELY AND SUPPORT THE PLATFORM USING A SUITABLE OVERHEAD LIFTING DEVICE.

2. Raise platform completely and place a suitable overhead lifting device or prop approximately 2.5 cm (1 in.) below the platform.
3. Shut down hydraulic system and allow machine to sit for 10-15 minutes. Carefully remove hydraulic hoses from cylinder port block.
4. There will be initial weeping of hydraulic fluid, which can be caught in a suitable container. After the initial discharge, there should not be any further leakage from the ports. If leakage continues at a rate of 6-8 drops per minute or more, cylinder repairs must be made. If the retract port is leaking, the piston seals are defective and must be replaced. If the extend port is leaking, the counterbalance valve is defective and must be replaced.
5. If no repairs are necessary or when repairs have been made, carefully reconnect hydraulic hoses to the appropriate ports.
6. Remove lifting device from platform, activate hydraulic system and run cylinder through one complete cycle to check for leaks.

2.10 CYLINDER REMOVAL AND INSTALLATION

Lift Cylinder Removal

1. Place the machine on a flat and level surface. Start the engine/motor and raise the platform. Shut down the engine/motor and attach a suitable support device to the platform.
2. Remove the bolts, lock washers, and flat washers securing the cylinder rod attach pin #1 to the upper inner arm assembly. Using a suitable brass drift, drive out the rod end attach pin from the arm assembly.

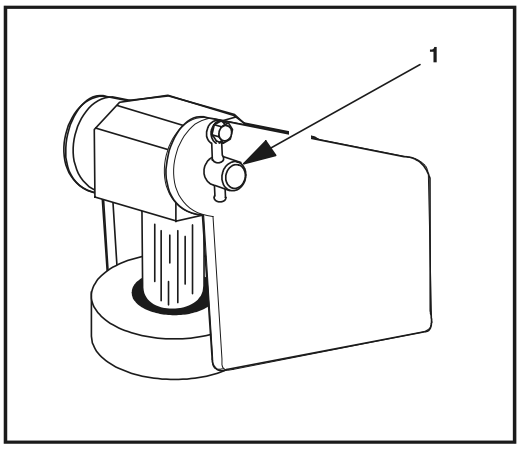


Figure 2-2. Top Lift Cylinder Pin Location

3. Retract the lift cylinder rod completely.
4. Tag and disconnect, then cap the lift cylinder hydraulic lines and ports.
5. Remove the bolts, lock washers, and flat washers securing the barrel end attach pin to the lower arm assembly. Using a suitable brass drift, drive out the barrel end attach pin #2 from the arm assembly.

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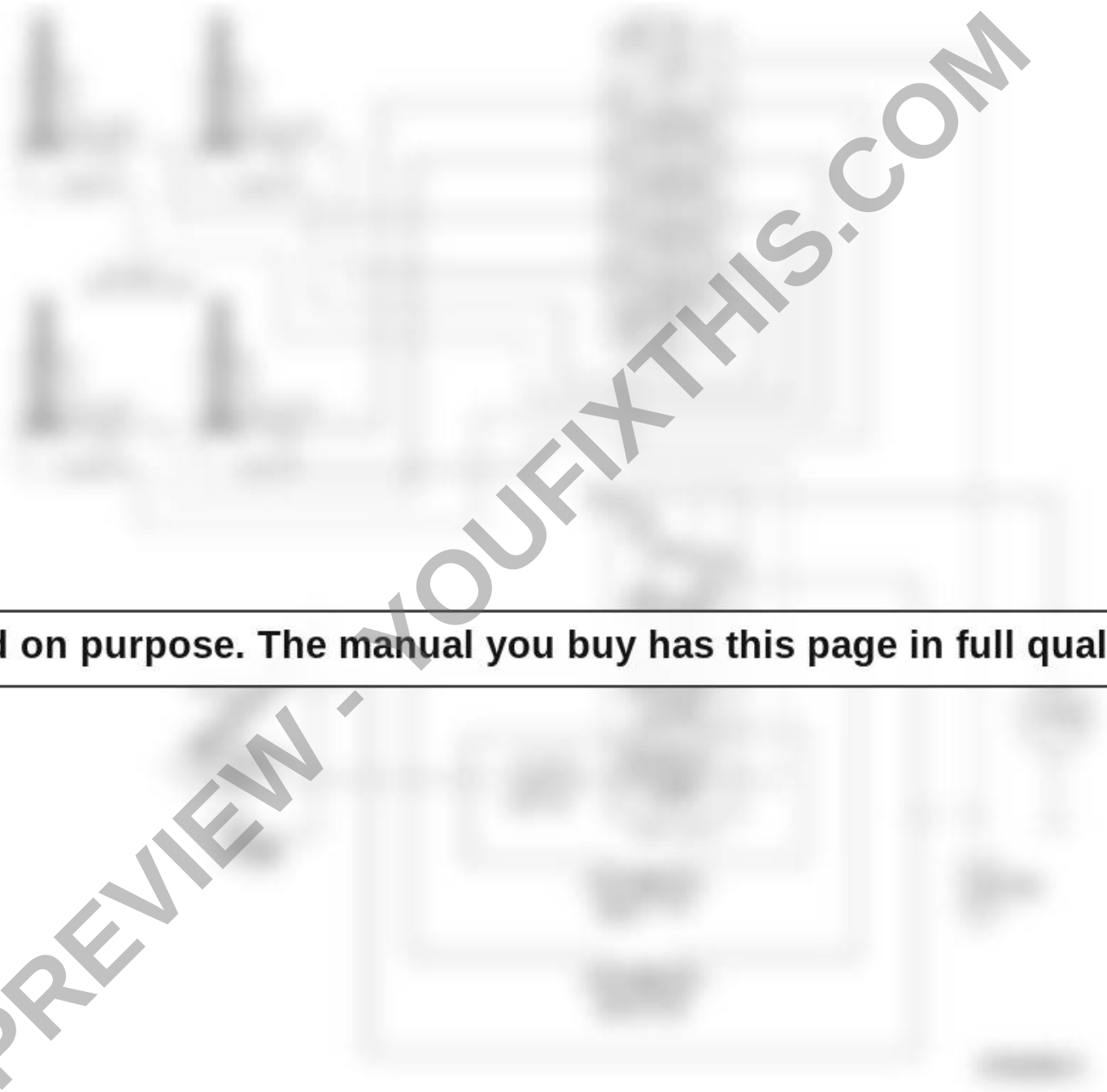
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Table 3-1. Platform Assembly - Troubleshooting

TROUBLE	PROBABLE CAUSE	REMEDY
No response to control switch		
	Enable switch not activated	Activate enable switch
	Function not activated within the 3 seconds after enable switch was depressed	Reactivate enable switch
	Enable switch not functioning properly	Replace enable switch circuit card
	Lift control switch inoperative	Repair or replace lift control switch
	Hydraulic system oil low	Replenish oil as necessary
	No power supply	See wiring diagram
	Restricted or broken supply line on valve bank or hydraulic pump	Clean, repair or replace line
	Control valve not functioning properly	Repair or replace valve
	Defective dump valve on cylinder	Repair or replace dump valve
	Lift cylinder not functioning properly	Repair or replace lift cylinder
	Hydraulic pump not functioning properly	Repair or replace hydraulic pump
Platform will not raise		
	Enable switch not activated	Activate enable switch
	Function not activated within the 3 seconds after enable switch was depressed	Reactivate enable switch
	Enable switch not functioning properly	Replace enable switch circuit card
	Load capacity exceeded. (Personnel and/or equipment.)	Reduce load. (Refer to capacity placard.)
	Hydraulic system oil low	Replenish oil as necessary
	Broken or binding pivot pin	Repair or replace pivot pin
	Restricted or broken hydraulic line or fitting	Clean, repair or replace line or fitting
	Control valve not functioning properly	Repair or replace control valve
	Lift cylinder not functioning properly	Repair or replace lift cylinder
	Pump does not respond when lift control switch is moved to the up position	Refer to electrical troubleshooting table
	No electrical signal being sent to lift up control valve cartridge	Refer to electrical troubleshooting table
Platform will not lower		
	Enable switch not activated	Activate enable switch
	Function not activated within the 3 seconds after enable switch was depressed	Reactivate enable switch
	Enable switch not functioning properly	Replace enable switch circuit card
	Pump does not respond when lift control switch is moved to the down position	Refer to electrical troubleshooting table
	No electrical signal being sent to lift down control valve cartridge	Refer to electrical troubleshooting table
	Lift down control valve cartridge not functioning properly	Repair or replace lift down control valve cartridge
	Lift cylinder not functioning properly	Repair or replace lift cylinder

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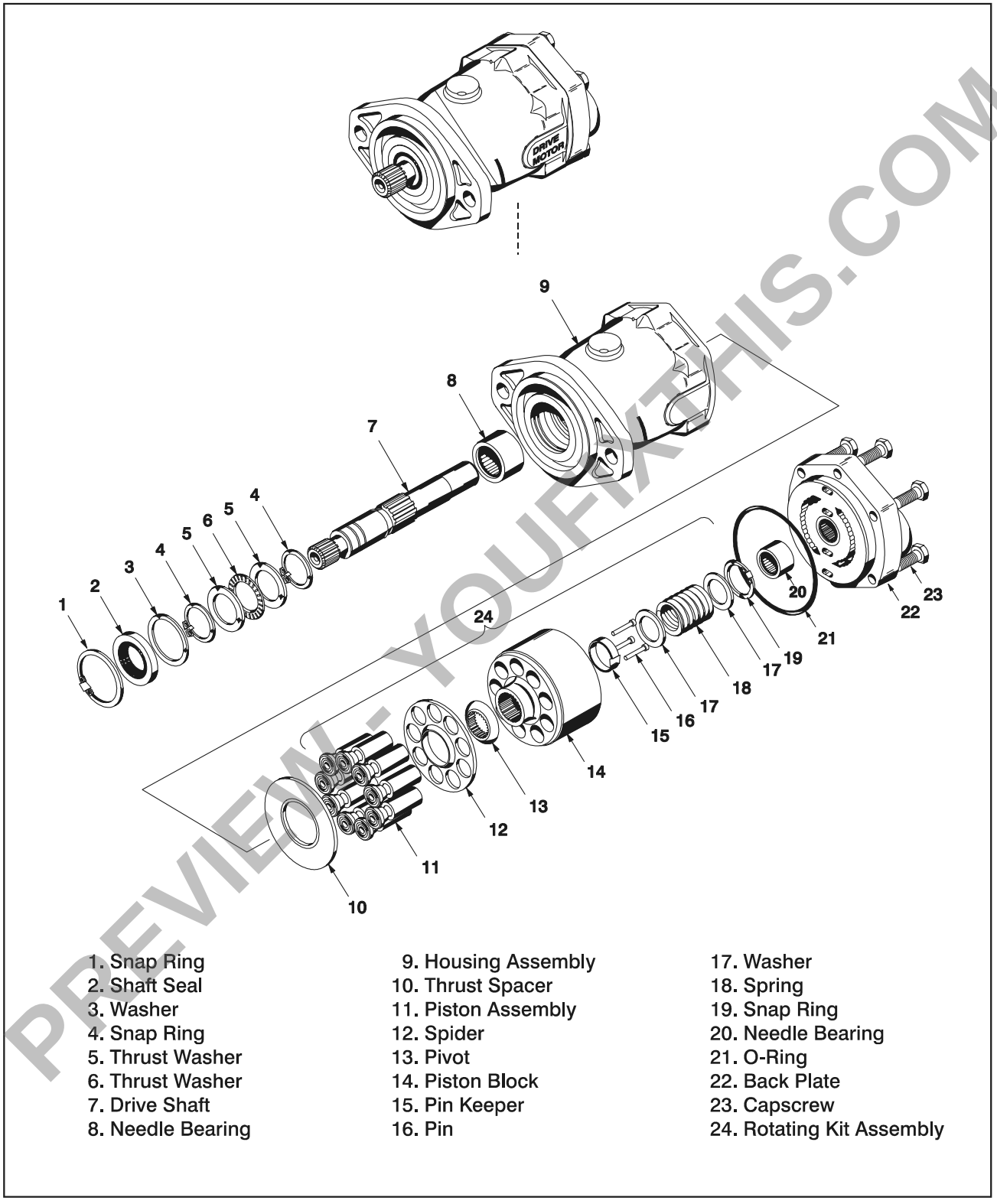
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2. Shaft Seal
3. Washer
4. Snap Ring
5. Thrust Washer
6. Thrust Washer
7. Drive Shaft
8. Needle Bearing
9. Housing Assembly
10. Thrust Spacer
11. Piston Assembly
12. Spider
13. Pivot
14. Piston Block
15. Pin Keeper
16. Pin
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