

Part 1: Safety Procedures and Precautions for Service and Repair

A regular schedule of maintenance is essential to keep your unit at peak operating efficiency. Operators or service personnel responsible for the care of the unit must be completely familiar with the type and frequency of inspections, maintenance, and lubrication operations to be performed.

Always keep the loader free from sand and other foreign particles to ensure trouble-free operation and to avoid excessive wear. Air entering the oil tank carries with it small quantities of impurities and moisture. The hydraulic oil should be drained at least once a year to rid the system of any contamination and condensation.

The hydraulic circuit diagram is included in the “Diagrams & Drawings” section of this manual for service or maintenance information.

Make sure you observe the following procedures and precautions when performing maintenance and/or repairs on your equipment.

Safety Procedures and Precautions for Service and Repair

- Do not perform any work on the loader unless you are qualified and authorized to do so.
- Loader is placed where it will cause the least interference with other equipment or operations in the area.
- All controls at the off position and all operating features in neutral position.
- Do not attempt to clean, oil or service a loader when the power source is on.
- Deactivate means for starting. Use lockout-tagout procedure.
- Bucket and boom at rest on ground.
- Do not disconnect hydraulic connections under pressure. Hot hydraulic fluid can cause serious injury. Stay clear of hydraulic leaks as high pressure and hot hydraulic fluid can cause serious injury.

Modification to any part of the loader can create a safety hazard and therefore shall not be made without the manufacturer's written approval. It is important that you use factory replacement parts to ensure that size and capacity are as the original parts.

It is important that hydraulic components be rated at proper flow and pressure. If your loader is rebuilt or remounted, mounting procedures and retesting is required in accordance with factory instructions.

Disconnecting, removing, or disabling any part or component which controls the speed of the loader is a misuse of the loader.

The following lists inspections and maintenance which are to be conducted on your unit to help assure it is operating properly and safely. These inspections are in addition to any inspections previously listed, such as daily inspections. Check all items at the frequency listed and make necessary repairs prior to operating.

The following are minimum service requirements. Hard use or dirty operating conditions dictate more frequent inspection and maintenance.

After service adjustment, and repairs, the loader shall not be returned to service until all guards have been reinstalled, trapped air removed from the hydraulic system if required, safety devices reactivated, and maintenance equipment removed.

Part 2: Service:

EVERY 40 HOURS	
Grease all fittings.	<p>See Grease and Maintenance Diagram in the "Diagrams & Drawings" section of this manual.</p> <p>Grease fittings that are worn and will not hold the grease gun, or those that have a stuck check ball, must be replaced.</p> <p>Grease = EP2 (Extreme Pressure)</p>
Check hydraulic hoses for cuts or abrasions, or any evidence of binding or leakage.	Replace any damaged hoses.
Check all hydraulic fittings to make sure they are in place and do not show signs of leakage.	Replace any missing, damaged or modified fittings.
Tighten bucket brake pads.	If brake pads show excessive wear, replace. Tighten gimbal rotator bolt and tip boom gimbal bolt, if needed.
Check oil level.	<p>All oil levels are to be checked while the oil is cold, unless otherwise specified. Oil level should be two to three (2 to 3) inches from top of tank.</p> <p>Hydraulic Oil = AW32</p>
Check lock collar for excess clearance.	Lock collar must be tight against bottom of spindle bearing housing with maximum gap of one-quarter inch (1/4").

EVERY 80 HOURS <i>(These requirements are in addition to the 40 hour service requirements.)</i>	
Re-torque boom swing actuator bolts.	To 500 ft. lbs. - dry threads
Re-torque bucket rotator bolts.	To 110 ft. lbs. - dry threads

EVERY 160 HOURS <i>(These requirements are in addition to the 80 hour service requirements.)</i>	
Examine all loader pivot points (head and pedestal, main boom, tip boom, and bucket) for visible play.	If visible play is observed at pivot points, bushings and/or pins must be replaced as needed.
Structurals - Visually inspect complete loader for damage, especially cracks in weldments.	It is necessary for your loader to clean of oil and grease for these inspections to be made. The Petersen rotating head assembly has special high strength steel components that are welded together. After welding, the entire assembly receives post-weld heat treatment. Do not weld on the rotating head assembly. Welding on the rotating head could reduce its load bearing capacity and fatigue life.
Fasteners - Check all pins, sheaves, retainers, bolts and nuts.	Replace damaged or missing parts.
Retighten main boom and tip boom connecting bolts.	Replace if needed.
Re-torque loader tie-down bolts.	Follow bolt manufacturer's recommended torque standards.
Clean hydraulic oil filter on suction line, and replace return line filter cartridge.	
Decals - Check for presence and legibility.	Check decal listing in "Part 3: Safety Devices – Safety Symbols" of this manual for required operational and safety decals. Replace missing or illegible decals.