



Heavy Equipment Maintenance Checklist

Company name

Date

Location

Pre-start checks (walk around)

Before you start the heavy equipment, perform these checks:

- Parking:** Is the piece of equipment parked in a safe space?
- Hazards:** Are there any tripping hazards? Are there any overhead hazards?
- Damaged/worn/loose parts:** Inspect the overall condition.
- Leaks:** Look under the equipment for any wet spots.
- Fluid analysis:** Check engine oil fluid levels, power steering fluid levels, windshield washer fluid.
- Undercarriage:** Look for worn or missing bogies or rollers, track tension, and overall condition on excavators.
- Check tires:** Look for low or sagging tires, cuts to cord depth, damage, and general wear.
- Valve stems:** Are caps present and securely screwed?
- Steering:** Check for excessive play.
- Belts:** Check for cracks, fraying, or splits.
- Hoses:** Check for pinched, cracked, or loose hoses.
- Suspension system:** Does the equipment bounce or vibrate when it's in motion? Listen for any irregular noises when going over bumps or turning the wheel.
- Battery:** If accessible, inspect cables, clamps, and connections. Are any loose? Is there any corrosion?
- Cab condition:** Check glass, mirrors, wiper blades, horn, and seat belts.

Warm-up checks

Perform these checks after the equipment has been running for five to 10 minutes:

- Air filter system:** Check for warnings. Replace or clean the filter if necessary.
- Listen for unusual noises**
- Dashboard gauges:** Do they appear to be working and at safe, operating levels?
- Lights:** Test the lights. Headlights, high beams, signal lights, brake lights, and backup lights.
- Hydraulic system:** Test all hydraulic lines and systems. For example, with a dump truck, raise the dump body, or with an excavator, move the bucket, stick, and boom. Listen and watch for issues. Are there any leaks? Is everything functioning properly? Are there any irregular noises?
- Check fluid levels:** Engine, steering tank, hydraulic oil, power terrain, engine coolant, and swing drives.
- Brakes:** Test that the brakes work properly.

Daily operating checks

During operation, watch and listen for irregularities:

- Listen for unusual noises**
- Monitor gauges**
- Feel for excessive vibrations**
- Watch for any equipment performance changes**

Shutdown check

After every shift, take the following actions:

- Fill the fuel tank:** Fill the tank all the way to full.
- Idle engine:** Allow the vehicle to idle for five minutes before shutting down completely.
- Park the vehicle in a safe place:** Engage the parking brake.
- Clean or wash vehicle:** If a washing station is available.

Every 250 to 500 hours:

Around 250 to 500 hours, it is best practice to schedule a basic engine service. This involves a number of checks and actions:

- Perform oil changes
- Change oil filters
- Change engine air filters
- Change fuel filters

*Oil change intervals will rely on the quality of oil and filter being used in each piece of equipment.

Every 1,000 to 1,200 hours

Around 1,000 to 1,200 hours, perform these checks:

- Replace cabin air filters
- Replace coolant filter (if applicable)
- Inspect air dryer (if applicable)

Every 4,800 to 5,000 hours

Around 4,800 to 5,000 hours, take the following actions:

- Change return filters:** Applicable for heavy equipment like hydraulic excavators.
- Check hydraulic filters:** Replace at 80%.
- Check hydraulic oils:** Fill or change if necessary.
- Conduct transmission differentials service**
- Check pins and bushing:** How much play is in the joints? Are they worn out?
- Check radiator**
- Change antifreeze,** except when coolant is Extended Life Coolant (ELC).
- Check hydraulic tank**