# Preventive / Scheduled Maintenance

## Preventive Maintenance

**Note: Always refer to manufacture's (e.g. engine, transmission, axle) maintenance manual before performing any maintenance.**

Preventive maintenance is a system that is designed to detect problem areas and prevent equipment failure and maximize machine availability. The system is based on a series of maintenance checks and servicing points. To be effective, a preventive maintenance program demands strict adherence to a planned schedule.

### Benefits of Preventive Maintenance

Time spent making required periodic checks is a real investment in working equipment and efficient use of man hours. Valuable benefits can be realized, all of which mean savings in time and resources.

Preventive Maintenance:

- **Promotes Safety** - properly maintained equipment is better able to operate within its design specifications and react positively to the operator's control.
- **Improves Equipment Availability**- by minimizing the chances of breakdown.
- **Reduces Unexpected Downtime**- unexpected downtime is expensive and detracts from normal scheduled maintenance.
- **Allows Planning of Daily Production**- by knowing the condition of available equipment.
- **Allows Planning of Maintenance Man Hours**- by distribution of duties and necessary lead time for parts ordering.
- **Provides Complete History of Equipment**- based on performance, frequency and type of repairs and actual man hours expended on maintenance.

### Establishing a Preventive Maintenance Program

The key to an effective preventive maintenance program is diligence in following a maintenance schedule set at regular planned intervals. Such intervals should be made compatible with the nature of operation of the equipment and with the capabilities of the maintenance facility. The intervals and inspection requirements must be planned, regular and consistent.

Specific maintenance should be completed using the following intervals:

- 10 Hours (each shift or daily)
- First 50 Hours
- First 100 Hours
- 50 Hours (weekly)
- 100 Hours (bi-weekly)
- 250 Hours (monthly)
- 500 Hours (quarterly)
- 1000 Hours (semiannually)
- 2000 Hours or 1 Year
- 2500 Hours
- 3000 Hours or 3 Years
- 4000 Hours
- 5000 Hours
- 6000 Hours or 3 Years
- 10,000 Hours
- 12,000 Hours or 6 Years

Each successive schedule (e.g. weekly, monthly, quarterly, etc.) builds on the former and is accumulative in nature. For example, when performing weekly maintenance, the mechanic will first take note of the shift maintenance, and in addition will perform the checks specified in the weekly schedule.

### Maintenance Record Keeping

The importance of good record keeping cannot be overemphasized. Each scheduled maintenance form should be checked off as the inspections and service is performed. Quantities of replenished lubricants should be recorded, as well as hydraulic pressure readings. All discrepancies should be recorded whether remedied or pending. Operators and mechanics should sign off forms and return them to the maintenance supervisor for approval and retention in an equipment unit life.

Accurately recorded maintenance forms will give the maintenance personnel an overall view of how particular equipment is holding up under specific operating conditions. Good records and the ease by which they can be reviewed also enable maintenance personnel to identify and evaluate problem areas and allow adjustment in the maintenance scheduling for their particular operation.

## Shift Maintenance

Shift Maintenance is where preventive maintenance begins. The operator normally completes this inspection. It consists of the routine servicing and lubrication of the machine's major systems. On a daily basis, the operator is in a position to identify, remedy and/or record potential problem areas and is able to quickly recognize any change in the performance of the machine. The comments he or she records on the shift maintenance report become a valuable tool for the maintenance department, and is important to the overall success of a preventive maintenance program.

### Shift Maintenance Checklist

A recommended checklist is given here as an aid in developing a practical shift maintenance program, if one has not been developed by your company. A shift maintenance report, based on the checklist, should be used to report defects found when making maintenance checks at the beginning of each shift.

Your company may have a different reporting method, however, it is usually a requirement that this form be filled out at the end of each shift. Accurate shift maintenance reports can help your company anticipate maintenance problems and take action to prevent costly failures.

### Using the Checklist

The reference numbers in the left-hand column of the checklist indicate the physical location of each check point or lubrication point as it appears on the shift maintenance diagram.

## Scheduled Maintenance

Periodic scheduled maintenance is intended to be performed in a complete maintenance facility by trained mechanics. The timely scheduling and completion of these periodic inspections by the maintenance department will determine the length of downtime of a particular machine.

Therefore, maintenance scheduling becomes a critical factor in the effective use of man hours and the availability of serviceable equipment.

### Scheduled Maintenance Checklists

Actual operating environment governs the maintenance schedule. Some checks should be performed more often under severe conditions, such as heavy dust, extreme temperatures or extremely heavy loads.

The maintenance checklists are designed to be used as a guide until adequate experience is obtained in establishing a schedule to meet your specific needs.

A detailed list of component checks is provided with a suggested schedule basis given in hours of operation, or calendar time.

The engine manufacturer's operation and maintenance manual should be consulted for additional engine related checks.

A maintenance schedule should be established using these checklists as a guide. The result will be a maintenance program to fit your specific operation.

### Using the Checklists

Scheduled maintenance is normally carried out by trained mechanics who are knowledgeable of the equipment systems and component locations. Scheduled maintenance procedures can be found by referring to the appropriate section of the service manual.

# Daily/Shift Maintenance

Note general vehicle condition. Clear away all collected debris - steam clean if necessary. Check for mechanical damage and loose or leaking components. Report all faults to maintenance department.

**Always refer to manufacture's (e.g. engine, transmission, axle) maintenance manual before performing any maintenance.**

| Before Starting Engine, Check the Following: | | | | |
|---|---|---|---|---|
| Ref | Component | OK | NO | ADD |
| 1 | ENGINE (Check oil level - check for leaks) | | | |
| 2 | ENGINE BELTS & CRANKCASE BREATHER TUBE (Check for loose belts, or clogs) | | | |
| 3 | COOLERS & FANS (Check for damage - clear debris buildup) | | | |
| 4 | HYDRAULIC TANK (Check oil level - check for leaks) | | | |
| 5 | COOLANT LEVEL CHECK (Check coolant level - check for leaks) | | | |
| 6 | AIR CLEANER/INTAKE SYSTEM (Check indicator - clean / change element if indicator shows red, empty dust cup, check for leaks / damage) | | | |
| 7 | FUEL/WATER SEPARATOR (Drain) | | | |
| 8 | WHEELS & TIRES (Check condition and pressure) | | | |
| 9 | TORQUE WHEEL NUTS (Daily for first 50 hours, every 100 hours thereafter) | | | |
| 10 | LUBRICATE CHASSIS (Refer to lube chart) | | | |
| 11 | WALK AROUND INSPECTION OF STRUCTURE (Check welds, leaks, damaged components, etc...) | | | |
| 12 | FIRE SAFETY CHECK (Check for accumulated debris in engine compartment, etc) | | | |
| 13 | FIRE SUPPRESSION SYSTEM (Verify certifications are current) | | | |
| 14 | TRANSMISSION (Check oil level) | | | |
| 15 | DEF Tank (Check level. Fill as necessary.) | | | |

| After Starting Engine, Check the Following: | | | | |
|---|---|---|---|---|
| Ref | Component | OK | NO | ADD |
| 16 | ENGINE (Does it sound normal?) | | | |
| 17 | INSTRUMENTS AND CONTROLS (Check for normal readings and functioning) | | | |
| 18 | AIR INTAKE SYSTEM (Inspect all connections) | | | |
| 19 | EXHAUST SYSTEM (Check for leaks and excessive smoke) | | | |
| 20 | CHARGE AIR PIPING (Check for leaks and inspect all connections) | | | |
| 21 | AFTERTREATMENT EXHAUST PIPING (Check for leaks and inspect all connections) | | | |
| 22 | TRANSMISSION (After warming to operation temp, check oil level - check for leaks) | | | |
| 23 | HYDRAULIC FILTERS (Check indicator - change element as required) | | | |

| Note Anything Abnormal or in Need of Repair: | | |
|---|---|---|
| | Component | Comments |
| | LIGHTS | |
| | DEFROSTER | |
| | REVERSE WARNING HORN | |
| | HORN | |
| | WINDSHIELD WIPERS | |
| | HEATER / AIR CONDITIONER | |

OPERATOR _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

## Daily Maintenance Procedures

### General

The following maintenance procedures should be performed at the beginning of each work shift. The numbers before each maintenance procedure correspond to the numbers on the charts on the previous page.

### Before Starting Engine

1. **Engine**

   The oil level should be checked prior to starting the engine. The dipstick and fill port are located on the right side of the machine, just in front of the cooling fan (See Figure 1). Make sure that the area around the dipstick is clean and the machine is sitting on level ground.

   **NOTE: A 15 minute drain-back time is recommended if the engine has been running.**

   The oil level must be maintained between the "L" (low) mark and the "H" (high) mark, but as close to the "H" mark as possible.

**⚠ CAUTION**

**Never operate the engine with the oil level below the "L" mark or above the "H" mark. Refer to the engine's Operation and Maintenance manual for detailed engine service information. Use only approved engine oil (see Lubricant Specifications Chart). Do not overfill. Check engine for leaks.**

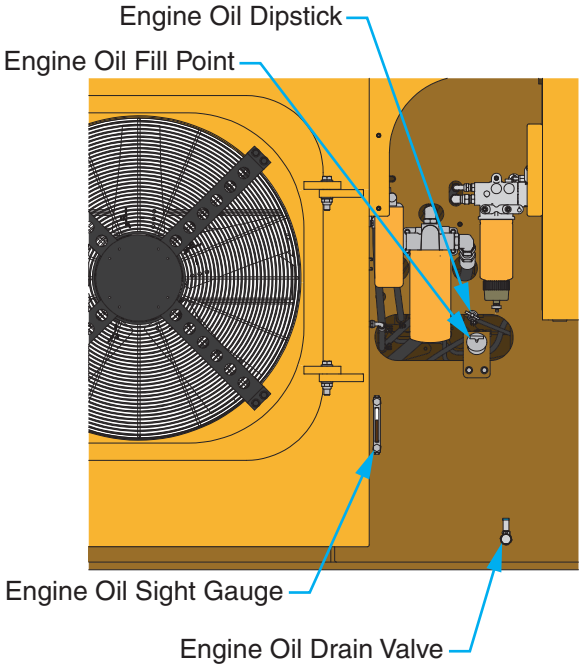


*Figure 1 Engine Oil Dipstick & Fill Tube*

2. **Engine Belts and Crankcase Breather Tube**

   If any belt is loose or worn, report to maintenance for corrective action. Check the connection between the engine and torque converter. Consult the manual supplied with your engine for inspection procedures.

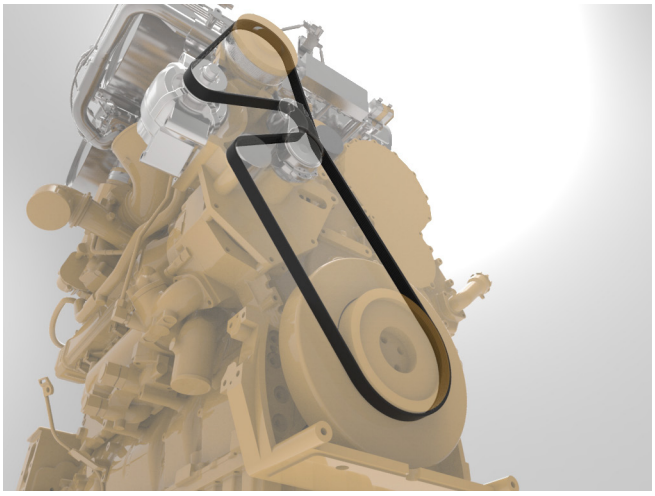

*Figure 2 Engine Belt Deflection*

3. **Coolers and Fans**

   A visual inspection of the coolers and fans is required daily. Check coolers on both sides of the chassis. Inspect for any damaged or bent components or leaking connections. Clean any debris buildup in the cooling bays. Ensure that the fan blades are not damaged and are free to rotate.

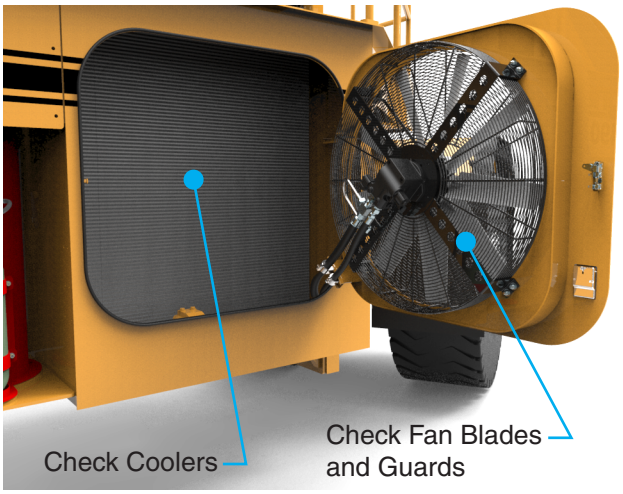


*Figure 3 Radiator/Fan Inspection*

## 4. Hydraulic Tank

**⚠ CAUTION**

**Always open the tank breather petcock (located on the breather pipe) before adding oil at the fill port. Failure to vent tank can result in injury or a substantial oil spill. Be sure to close the petcock before operating the machine.**

Always check the hydraulic oil level prior to operation. The sight gauge is located on the right side of the chassis (See Figure 4). Oil added at the pressure fill port is directed through the return filters before entering the tank to keep your oil as clean as possible.

The oil level should be checked with the with the carriage in the normal park position. The oil level should be at or near the “H” (high) mark on the sight glass. Fill with approved hydraulic fluid as required. Do not overfill.

## 5. Coolant Level Check

Inspect the coolant level daily. The coolant reservoir sight gauge and fill cap are located on the left side of the chassis, under the cab (See Figure 5). Cooling systems using anti-aeration baffles restrict visual observation of the true coolant level. Although the coolant can be seen, the system may not be full. To gain a true fill, add water slowly up to the bottom of the fill neck and allow a 30 second settling period. Remember to compensate for the loss of antifreeze when adding water.

**⚠ WARNING**

**Never remove the radiator cap if the engine is hot. The coolant will be under pressure and could flash to steam with explosive force, causing severe burns. Remove the radiator cap only when the engine is cool.**

**NOTE: If the engine is hot, the coolant will be higher than when it is cold. Inspect the radiator daily for restriction caused by leaves, paper or bent fins. Inspect the radiator cap, hoses and connectors for any signs of leakage or damage.**

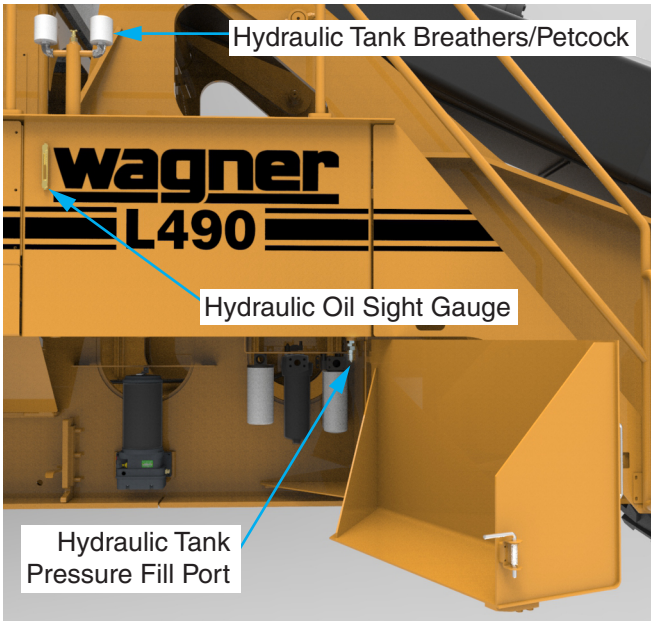


*Figure 4 Hydraulic Oil Dipstick and Fill*

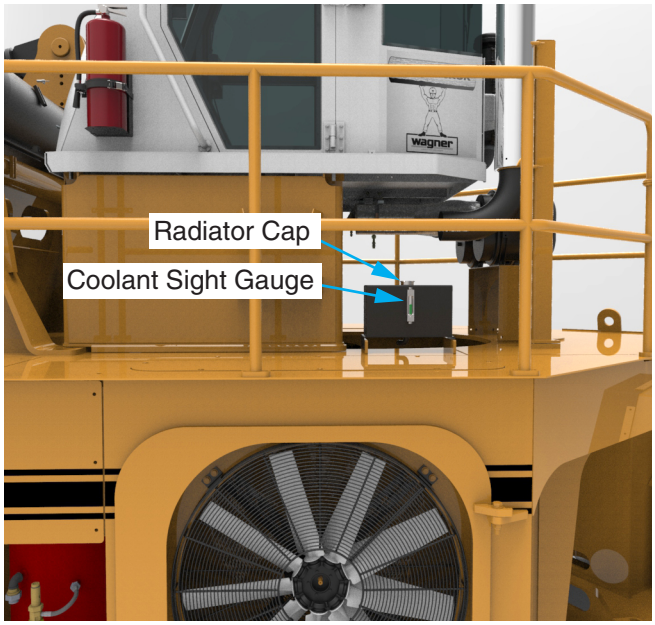


*Figure 5 Coolant Fill and Sight Gauge*

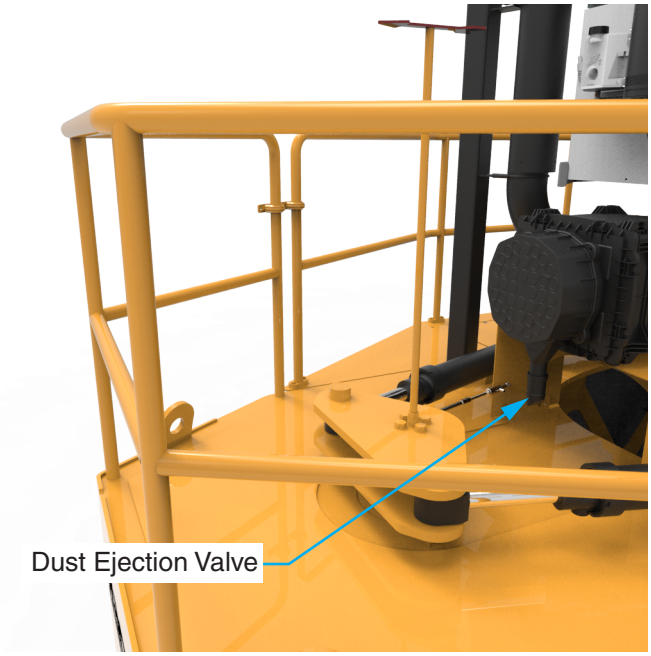


*Figure 6 Air Filter Dust Ejection Valve*


*Figure 7 Air Filter Service Indicator*

## 6. Air Cleaner/Intake System

The air cleaner is a two stage dry air filter, mounted on the back of the cab. The dust ejection valve should be opened daily to remove dust and dirt from the pre-cleaner (See Figure 6).

A service indicator (See Figure 7) shows the condition of the filter. The indicator will show in the green zone when the filter is clean. The indicator will show red if the filter is restricted. If red appears in the indicator window, clean or change the element and press the reset button on the indicator.

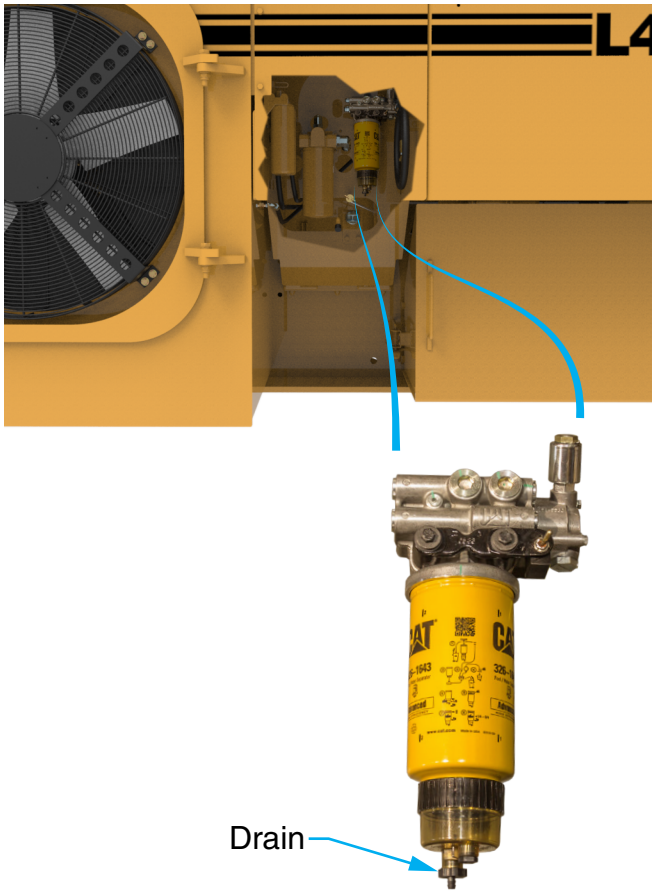


*Figure 8 Fuel Water Separator*

## 7. Fuel/Water Separator

The fuel/water separator is mounted on the chassis, right side (See Figure 8). Drain the fuel/water separator into a container and dispose of in accordance with local environmental regulations. Consult the Operation and Maintenance Manual for your engine for details.

## 8. Wheels & Tires

Visually inspect the tires for low air pressure and damage. Also check the wheel assemblies for cracks, loose or missing lug nut, broken studs, etc. Report any problems to maintenance.

## 9. Torque Wheel Nuts

Torque the wheel nuts daily for the first 50 hours, and every 100 hours thereafter. To eliminate overtorque, always use a torque wrench and torque to:

**Front Axle: 221-295 ft-lbs**.

See form 80-891 for details.

### 10. Lubricate Chassis

### 11. Walk Around Inspection Of Structure

Walk around the machine and inspect for structural cracks. If cracks are present, repair before resuming operation. Refer to Allied Service Form 80-850 for information on how to properly weld structural cracks.

### 12. Fire Safety Check

Inspect for and remove all combustible materials from engine area. These materials build up in tight corners and are highly combustible.

Inspect the driveshaft and brakes for debris and remove as necessary.

### 13. Fire Suppression System

Your Fire Suppression System should be activated and certified upon machine delivery, and periodically maintained by a qualified ANSUL representative. Check that the system's certifications are current before operating the machine. Contact your local ANSUL representative for details.

### 14. Transmission Oil Level

The transmission oil dipstick and fill tube are located under the boom, and are accessible from the right side stairwell (see Figure 9).

Always check the transmission oil level prior to starting the engine to be sure there is oil in the sump. The cold oil level must be above the "L" (low) mark on the dipstick.

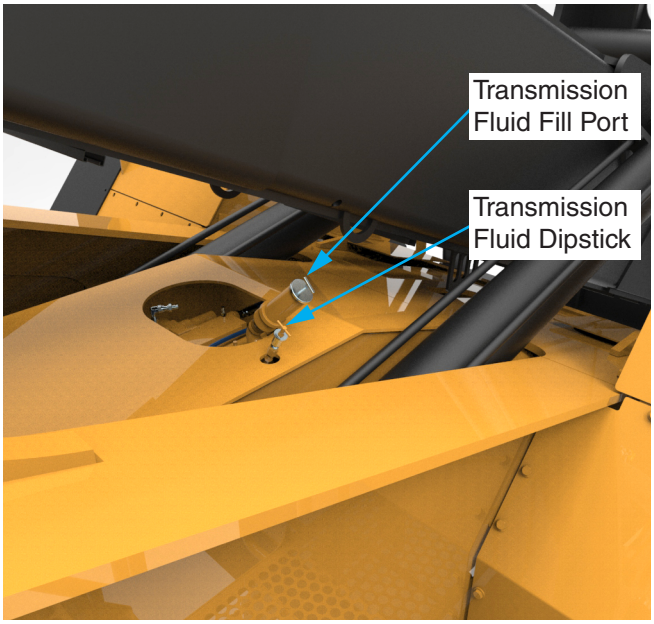


*Figure 9 Transmission Oil Dipstick and Fill*

*Figure 10 DEF Tank*

### 15. DEF Tank

The DEF tank must not be allowed to run dry. It MUST be checked daily. Refill as necessary. Do not overfill. The DEF tank is located on the left side of the chassis, just in front of the diesel tank. See Figure 10.

## After Starting Engine

### 16. Engine

After starting, check that the engine runs and sounds normal. It should come up to operating temperature and pressure within a few minutes after starting. Refer to the operation and maintenance manual for your engine for details. If you notice unusual noises or excessive smoke, have maintenance check it out.

### 17. Instruments and Controls

Check all instruments for normal readings immediately after starting engine. Make sure that pressures and temperatures are within acceptable limits. Also, check that all controls function properly. They should be smooth and responsive. See Section 2 for details.

### 18. Air Intake System

Inspect all connections for damage, loose clamps, and air leaks. Look for damaged fittings and loose connections. Do not operate the machine if leaks are present. Dirt could enter the engine intake and cause severe damage.

**19. Exhaust System**

Check for leaks. Make sure that exhaust gases are not entering the operator's cab. Mounting brackets must be in place and all connections tight. Check for excessive smoke.

**20. Charge Air Piping**

Inspect all connections for damage, loose clamps, and air leaks. Look for damaged fittings and loose connections. Mounting brackets must be in place and all connections tight.

**21. Aftertreatment Exhaust Piping**

Inspect all connections for damage, loose clamps, and air leaks. Look for damaged fittings and loose connections. Mounting brackets must be in place and all connections tight.

**22. Transmission Oil Level**

The transmission oil dipstick and fill tube are located under the boom, and are accessible from the right side stairwell (See Figure 9). The level should be checked again after the engine warms up, with 180 to 200 showing on the transmission temperature gauge.

Check oil level with engine running at idle, at operating temperature, and with the transmission in neutral. The level should be between the "H" (high) and "L" (low) marks. Fill with approved fluid only. Do not overfill. Inspect for leaks.

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# Maintenance Checklists

Periodic scheduled maintenance is intended to be performed in a complete maintenance facility by trained mechanics. Scheduled maintenance procedures can be found by referring to the appropriate section of the service manual.

**Always refer to manufacture's (e.g. engine, transmission, axle) maintenance manual before performing any maintenance.**

## First 50 Hours

These checks should be performed after the machine has been in service for 50 hours.

| | | | |
|---|---|---|---|
| 1 | Check fluid levels - differential, planetaries | OK ❒ | Add ❒ |
| 2 | Check hydraulic system - hoses, fittings | OK ❒ | Repair ❒ |
| 3 | Check battery - cables & connections | OK ❒ | Repair ❒ |
| 4 | Check all driveline capscrews - torque to spec. See service forms 80-1057 Torque Specification Chart & 80-627 Driveline Service. | OK ❒ | No ❒ |
| 5 | Check electrical system - lights, options, connections | OK ❒ | No ❒ |
| 6 | Check all pins, bushings and load bearing hardware | OK ❒ | No ❒ |
| 7 | Check accumulator pre-charge (see 80-1076) | OK ❒ | No ❒ |
| 8 | Check parking brake lining wear and readjust if necessary | OK ❒ | Readjust ❒ |
| 9 | Check wheel lug nuts and studs mechanically, check torque | OK ❒ | Readjust ❒ |

## First 100 Hours

These checks should be performed after the machine has been in service for 100 hours.

| | | | |
|---|---|---|---|
| 1 | Drain and fill differential | OK ❒ | No ❒ |
| 2 | Drain and fill planetaries | OK ❒ | No ❒ |
| 3 | Inspect wheel bearing preload, readjust if necessary | OK ❒ | No ❒ |
| 4 | Check wheel lug nuts and studs mechanically, check torque | OK ❒ | Readjust ❒ |
| 5 | Change transmission filters | OK ❒ | No ❒ |

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

# Weekly Maintenance (50 Hours)

Perform these checks weekly, or after 50 hours, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Repeat the daily check - see form Daily/Shift Maintenance in section 5 | OK ❒ | No ❒ |
| 2 | Check for fluid leaks - oil, fuel, water, transmission | OK ❒ | Repair ❒ |
| 3 | Check battery electrolyte level | OK ❒ | Add ❒ |
| 4 | Lubricate chassis & driveline cross assemblies | OK ❒ | No ❒ |
| 5 | Record engine rpm | High_____ | Stall_____ |
| 6 | Check for structural damage - inspect chassis & attachments for bending, cracking & broken welds | OK ❒ | Repair ❒ |

# Bi-Weekly Maintenance (100 Hours)

Perform these checks every other week, or after 100 hours, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Repeat the 50 hour check | OK ❒ | No ❒ |
| 2 | Check wheel lug nuts and studs mechanically, check torque | OK ❒ | Repair ❒ |

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

# Monthly Maintenance (250 Hours)

Perform these checks monthly, or after 250 hours, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Repeat the 100 hour check | OK ❒ | No ❒ |
| 2 | Obtain engine oil sample for analysis | OK ❒ | No ❒ |
| 3 | Check axle differential oil level | OK ❒ | Add ❒ |
| 4 | Check axle planetary oil levels | OK ❒ | Add ❒ |
| 5 | Check all hydraulic pressures and record | OK ❒ | No ❒ |
| 6 | Check fire suppression actuator (if installed) | OK ❒ | No ❒ |
| 7 | Check and adjust the parking brake (if required) | OK ❒ | No ❒ |
| 8 | Clean radiator | OK ❒ | No ❒ |
| 9 | Change hydraulic tank breather assembly | OK ❒ | No ❒ |
| 10 | Check pump mounting bolts and hose connections. Re-torque if necessary. | OK ❒ | No ❒ |
| 11 | Inspect/Adjust/Replace engine serpentine belt | OK ❒ | No ❒ |
| 12 | Inspect/Clean/Tighten engine grounding stud | OK ❒ | Add ❒ |

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

# Quarterly Maintenance (500 Hours)

Perform these checks quarterly, or after 500 hours, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Repeat the 250 hour check | OK ❒ | No ❒ |
| 2 | Change high pressure hydraulic filters (if applicable) | OK ❒ | No ❒ |
| 3 | Change hydraulic return filters | OK ❒ | No ❒ |
| 4 | Change transmission filters | OK ❒ | No ❒ |
| 5 | Take oil samples from transmission, axle, and hydraulic system for analysis | OK ❒ | No ❒ |
| 6 | Check accumulator pre-charge pressure (see 80-1076) | OK ❒ | No ❒ |
| 7 | Change brake cooling return filters | OK ❒ | No ❒ |
| 8 | Change engine oil & filters | OK ❒ | No ❒ |
| 9 | Check antifreeze concentration | OK ❒ | Add ❒ |
| 10 | Test radiator pressure cap | OK ❒ | No ❒ |
| 11 | Check charge air cooler | OK ❒ | No ❒ |
| 12 | Replace fuel/water separator element | OK ❒ | No ❒ |
| 13 | Replace secondary fuel filter element | OK ❒ | No ❒ |
| 14 | Inspect/replace hoses and clamps on engine | OK ❒ | No ❒ |

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

# Semi-Annual Maintenance (1000 Hours)

Perform these checks semi-annually, or after 1000 hours, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Repeat the 500 hour check | OK ❒ | No ❒ |
| 2 | Change transmission oil | OK ❒ | No ❒ |
| 3 | Change transmission filters | OK ❒ | No ❒ |
| 4 | Check pins and bushings for wear | OK ❒ | No ❒ |
| 5 | Steam clean machine, inspect for structural cracks | OK ❒ | No ❒ |
| 6 | Replace cab pressurizer and air recirculation elements. | OK ❒ | No ❒ |
| 7 | Drivelines - See service form 80-627, Driveline Service & Maintenance. | OK ❒ | No ❒ |
| 8 | Have ANSUL representative inspect and recertify fire suppression system | OK ❒ | No ❒ |
| 9 | Change the recirculating air filter elements | OK ❒ | No ❒ |
| 10 | Remove, clean and reinstall the air filters on the evaporators | OK ❒ | No ❒ |
| 11 | Inspect AC system components (see 80-1082 in Service Manual) | OK ❒ | No ❒ |
| 12 | Drain and fill differential | OK ❒ | No ❒ |
| 13 | Drain and fill planetaries | OK ❒ | No ❒ |

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

# Annual Maintenance (2000 Hours)

Perform these checks annually, or after 2000 hours, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Repeat the 1,000 hour check | OK ❒ | No ❒ |
| 2 | Change hydraulic oil | OK ❒ | No ❒ |
| 3 | Drivelines - Inspect slip splines for wear (backlash).<br>See service form 80-627, Driveline Service & Maintenance | OK ❒ | No ❒ |
| 4 | Have Allied representative inspect machine (annually) | OK ❒ | No ❒ |
| 5 | Check wet disc brake lining wear | OK ❒ | No ❒ |
| 6 | Inspect wheel bearing preload, readjust if necessary | OK ❒ | Readjust ❒ |
| 7 | Obtain coolant sample (level 2) for analysis | OK ❒ | No ❒ |
| 8 | Test engine air shutoff | OK ❒ | No ❒ |

# Every 2500 Hours

Perform these checks every 2500 hours.

| | | | |
|---|---|---|---|
| 1 | Inspect/adjust/replace engine compression brake | OK ❒ | No ❒ |
| 2 | Check engine valve backlash | OK ❒ | No ❒ |
| 3 | Check engine valve actuators | OK ❒ | No ❒ |

# Every 3000 Hours

Perform these checks every 3000 hours or 3 years, whichever comes first.

| | | | |
|---|---|---|---|
| 1 | Change coolant | OK ❒ | No ❒ |

# Every 4000 Hours

Perform these checks every 4000 hours.

| | | | |
|---|---|---|---|
| 1 | Inspect engine mounts | OK ❒ | No ❒ |
| 2 | Inspect starting motor | OK ❒ | No ❒ |

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

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# Every 5000 Hours

Perform these checks every 5000 hours.

| | | | |
|---|---|---|---|
| 1 | Clean ARD spark plug | OK ❒ | No ❒ |
| 2 | Replace diesel exhaust fluid filter | OK ❒ | No ❒ |
| 3 | Clean diesel particulate filter | OK ❒ | No ❒ |
| 4 | Replace diesel exhaust fluid injector | OK ❒ | No ❒ |

# Maintenance (6000 Hours), or 3 Years

Perform these checks at 6000 hours, or 3 years, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Add coolant extender (ELC) | OK ❒ | No ❒ |

# Every 10,000 Hours

Perform these checks every 10,000 hours.

| | | | |
|---|---|---|---|
| 1 | Replace DEF manifold filters | OK ❒ | No ❒ |

# Every 12,000 Hours, or 6 Years

Perform these checks at 12,000 hours, or 6 years, whichever occurs first.

| | | | |
|---|---|---|---|
| 1 | Change coolant (ELC) | OK ❒ | No ❒ |

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____

# Overhaul Schedule

To maximize efficiency and minimize downtime and costly failures, Allied Systems Company recommends the following overhaul chart to be used. When followed closely, your equipment will last longer with less unexpected downtime. Contact your local Wagner dealer for the kits necessary to overhaul your drivetrain components or allow your dealer to overhaul the components for you. They are authorized to overhaul and test your components.

It is recommended that some components be overhauled at the same time, even if they might have some time before their required rebuild, to minimize downtime. Many components may have to be removed in order to gain access to others so the parts should all be rebuilt together. This will save you from having to tear the machine down again a few thousand operation hours later.

During the overhaul process, make sure all parts are thoroughly cleaned before installation. Parts that do not receive this cleaning can cause the lubricant to become contaminated, which leads to much shorter service life.

**⚠ CAUTION**

**The overhaul schedule below is applicable when all preventive maintenance and oil testing is performed and only when genuine Wagner OEM replacement parts and lubricants are used. Major component overhauls may need to be performed more frequently if preventive maintenance is not performed, non-OEM replacement parts are used, and/or the machine is operated frequently on slopes, uneven terrain, or in poor traction conditions.**

| Component | Hours/Fuel Consumption in Liters |
|---|---|
| Engine | 20,000/585,000 |
| Transmission | 20,000 |
| Converter | 10,000 |
| Pumps | 10,000 |
| Axle | 20,000 |
| Brakes | 20,000* |
| Hydraulic Cylinders - Reseal | 10,000 |
| Hoses and Fittings | 20,000 |

* Or sooner if indicated during 2,000 hour wear check.

MECHANIC _____

SUPERVISOR _____

DATE _____

MODEL _____

SERIAL No _____

HOUR METER _____