

## 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 manufacturer'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	TRANSMISSION (Check oil level)			
14	DEF Tank (Check level. Fill as necessary.)			

After Starting Engine, Check the Following:				
Ref	Component	OK	NO	ADD
15	ENGINE (Does it sound normal?)			
16	INSTRUMENTS AND CONTROLS (Check for normal readings and functioning)			
17	AIR INTAKE SYSTEM (Inspect all connections)			
18	EXHAUST SYSTEM (Check for leaks and excessive smoke)			
19	CHARGE AIR PIPING (Check for leaks and inspect all connections)			
20	AFTERTREATMENT EXHAUST PIPING (Check for leaks and inspect all connections)			
21	TRANSMISSION (After warming to operation temp, check oil level - check for leaks)			
22	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, Section 5-2). Do not over-fill. Check engine for leaks.

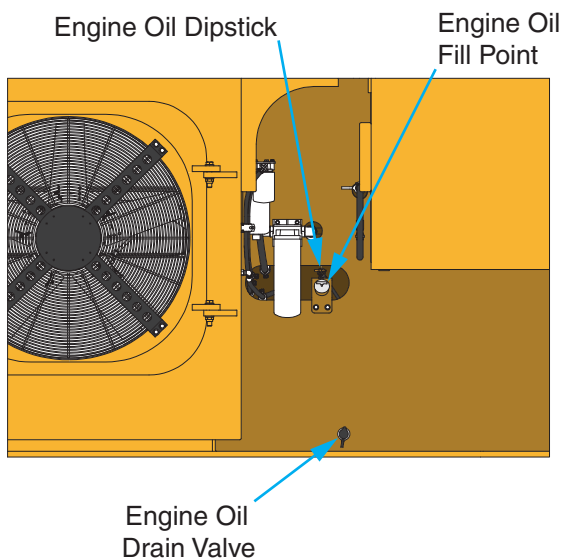


Figure 1 Engine Oil Dipstick & Fill Tube

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

If any belt is loose or worn, report to maintenance for corrective action. Check crankcase breather tube for obstructions. Consult the manual supplied with your engine for inspection procedures.

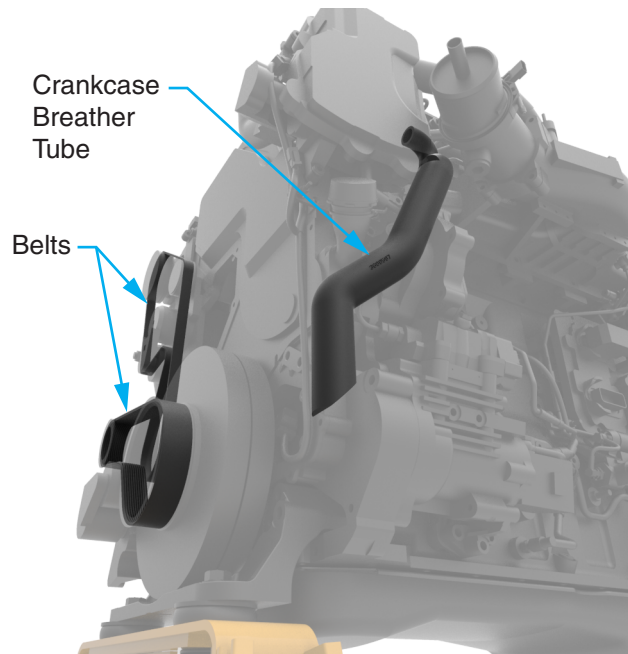


Figure 2 Engine Belt Deflection

#### 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.

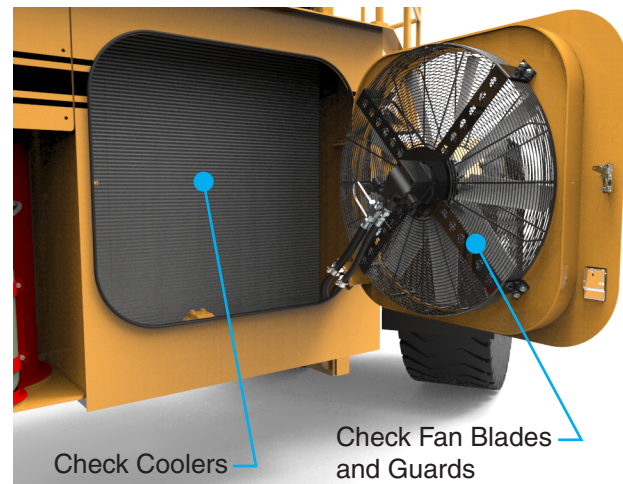


Figure 3 Radiator/Fan Inspection

## 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 carriage in the normal park position (see Section 4-2). The oil level should be at or near the “H” (high) mark on the sight glass. Fill with approved hydraulic fluid as required (see Section 5-2). Do not overfill.

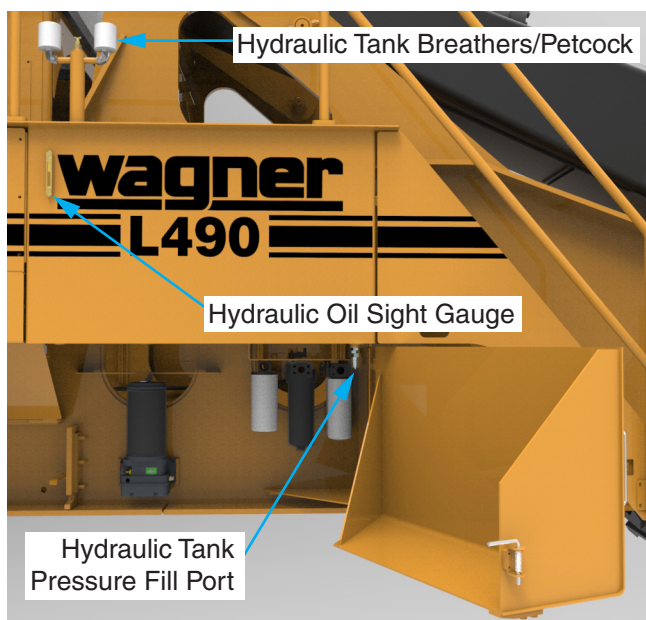


Figure 4 Hydraulic Oil Dipstick and Fill

## 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.**

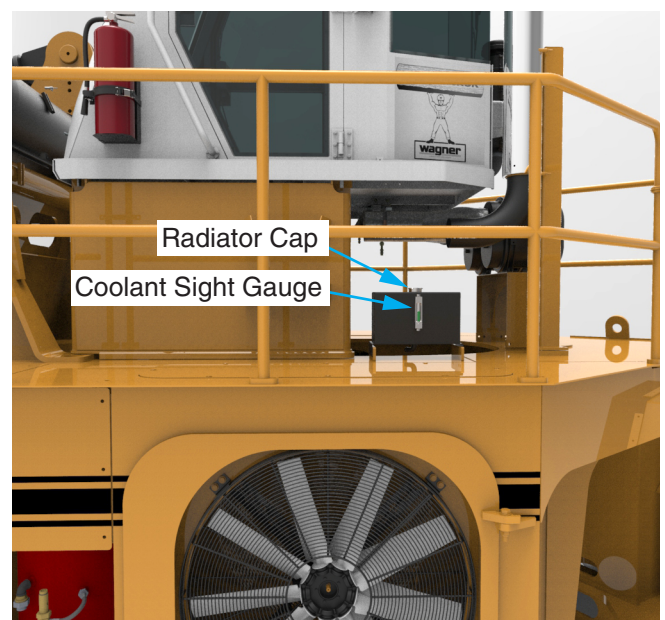


Figure 5 Coolant Fill and Sight Gauge



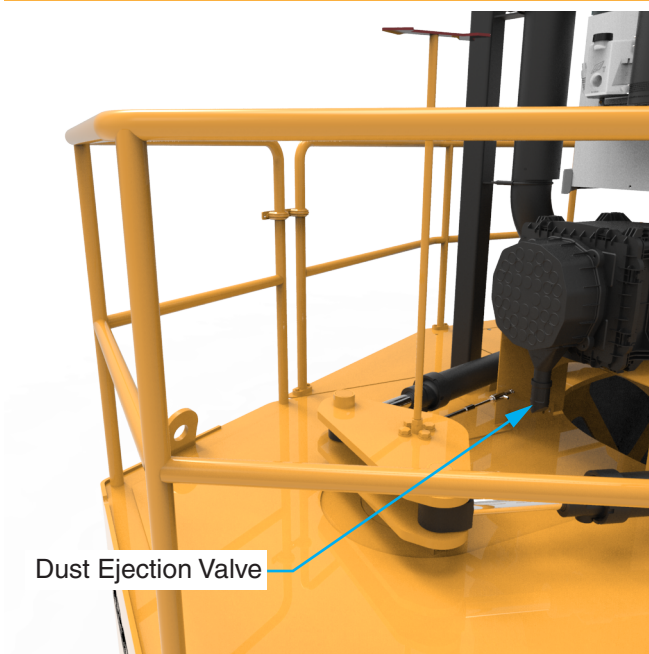


Figure 6 Air Filter Dust Ejection Valve

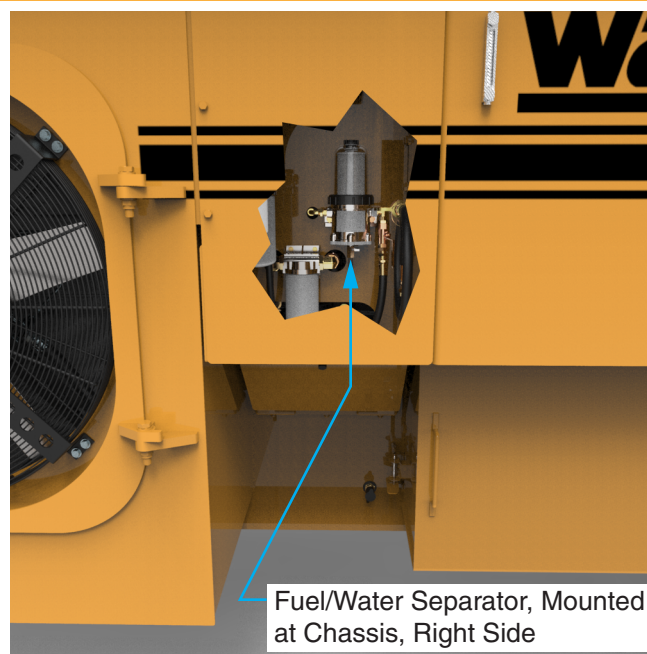


Figure 8 Fuel Water Separator



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 (See Section 5-5).

## 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 over-torque, always use a torque wrench and torque to:

**Front Axle: 450-500 ft-lbs.**

See form 80-891 in your service manual for details.

## 10. Lubricate Chassis

Refer to Section 5-3.

## 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. 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.

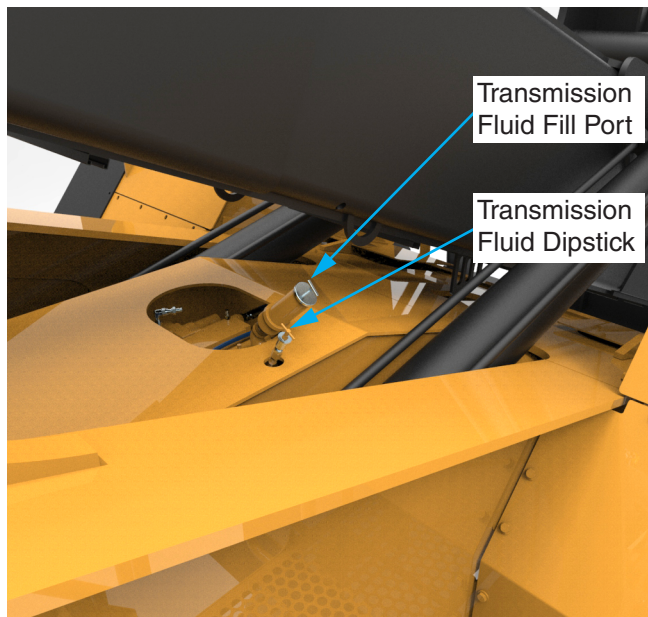


Figure 9 Transmission Oil Dipstick and Fill



Figure 10 DEF Tank

## 14. 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

### 15. 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.

### 16. 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.

### 17. 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. See Section 1.

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### **18. 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.

### **19. 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.

### **20. 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.

### **21. 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 (see Section 5-2). Do not overfill. Inspect for leaks.