Operation & Maintenance Manual

Dump Truck

860E-1KT

Serial Numbers A30036 & Up

WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept near the machine for reference and periodically reviewed by all personnel who will come into contact with it.

NOTICE

Komatsu has Operation & Maintenance Manuals written in some other languages. If a foreign language manual is necessary, contact your local distributor for availability.

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Retarding Grid Drier Switch



Retarding grid drier switch (4) is a rocker switch. When in the ON position, this feature is used to dry the retarding grids when starting the truck after it has been washed or parked in rainy conditions. This will minimize the possibility of activating a ground fault due to water in the grids. It can also be used to keep the engine warm in cold conditions because it puts a small amount of load against the engine.

AC Drive System Rest Switch



Rest switch (5) is a rocker switch with a locking device. A safety tab on the switch must be pushed to unlock the switch before the top of the switch can be depressed to activate the rest mode.

When activated, an internal amber lamp will illuminate. The switch should be activated to deenergize the AC drive system whenever the engine is to be shutdown or parked for a length of time with the engine running.

The directional control lever must be in PARK or NEUTRAL and the vehicle not moving to enable this function. This will allow the engine to continue running while the AC drive system is de-energized.

⚠ WARNING

- **Activation of the rest switch alone DOES NOT completely ensure that the drive system is safe to work on. Refer to the Safety chapter for more information on servicing an AC drive. Check all "link-on", or "link energized", indicator lights to verify the AC drive system is de-engergized before performing any maintenance on the drive system. DO NOT activate the rest switch while the truck is moving! The truck may unintentionally enter the "rest" mode after stopping.**

Wheel Brake Lock Switch



Wheel brake lock switch (6) should be used with engine running for dumping and loading operations only. The brake lock switch actuates the hydraulic brake system which locks the rear wheel service brakes only.

When pulling into shovel or dump area, stop the truck using the foot-operated service brake pedal. When truck is completely stopped and in loading position, move the directional control lever to NEUTRAL, then apply the brake lock by pressing the top of the rocker switch. To release the brake, press the bottom of the rocker switch.

Use at shovel and dump only to hold the truck in position.

NOTE: *The wheel brake lock will not apply when the directional control lever is placed in the PARK position, or when the key switch is OFF, or when the engine is not running.*

⚠ WARNING

- **DO NOT use the wheel brake lock control switch to stop the truck unless the foot-operated treadle valve is inoperative. Use of this switch applies rear service brakes at a reduced, unmodulated pressure. DO NOT use the brake lock for parking. With the engine stopped, hydraulic pressure will bleed down, allowing the brakes to release.**

Pantograph Switch



Pantograph switch (25) is a momentary rocker switch. Press and hold the switch in the RAISE position to raise the pantograph. Press and hold the switch in the LOWER position to lower the pantograph. The directional control lever must be in the T position to use this switch. If the directional control lever is not in the T position, this switch is disabled.

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INITIAL 50 HOUR LUBRICATION AND MAINTENANCE INSPECTION B.8-0000053889

NOTE: *These checks are required only after the initial 50 hours of operation, such as the commissioning of a new truck, or after a new or rebuilt component installation.*

INITIAL 50 HOUR SERVICE INSPECTION	
Item	**Task**
SUSPENSION (See note below)	Suspension oiling height- Front: 25.4 mm (1 in.) Rear: 54.1 mm (2.13 in.)
	Front charge height: 229 mm (9 in.) at 3 261 kPa (473 psi)
	Rear charge height: 270 mm (10.63 in.) at 1 558 kPa (226 psi)
HYDRAULIC SYSTEM FILTERS	Replace filter elements only, after the initial 50, 100 and 250 hours of operation; then at each 500 hours of operation thereafter.
NOTE: *Refer to the Shop Manual for complete suspension oiling and charging instructions.*	

INITIAL 50 HOUR HARDWARE TORQUE	
Item	**Task**
Steering Arm to Suspension	Verify hardware torque - Target: **2 705 N·m (1,995 ft lb)**
Steering Cylinder to Frame	Verify hardware torque - Target: **1 017 N·m (750 ft lb)**
Steering Cylinder to Steering Arm	Verify hardware torque - Target: **1 017 N·m (750 ft lb)**
Tie Rod Pin Retainer	Verify hardware torque - Target: **1 017 N·m (750 ft lb)**
Tie Rod Clamp Nut	Verify hardware torque - Target: **420 ± 42 N·m (310 ± 31 ft lb)**
Wheel Nuts	Verify hardware torque - Target: **1 166 N·m (860 ft lb)**

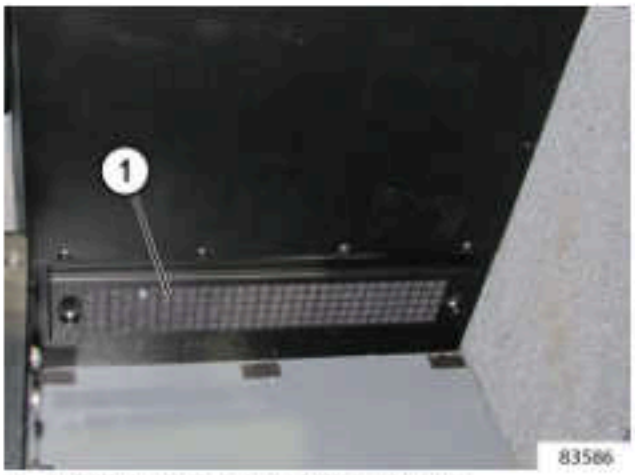
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30,000 HOUR LUBRICATION AND MAINTENANCE CHECKS A.12-0000069152

NOTE: *Maintenance for every 10, 250, 500, 1000, 2000, 5000, & 6000 hour Lubrication and Maintenance Checks must also be performed at this time. "Lube Key" references are to the lubrication chart.*

EVERY 30,000 HOUR MAINTENANCE	
Item	**Task**
TRACTION ALTERNATOR	• General alternator overhaul. • Replace bearing.
TRACTION MOTOR	During overhaul • Replace the DE bearing. • Replace the NDE bearing. • Check the stator winding insulation resistance, >2M ohms. • After cleaning, resistance, > 10M ohms. • Test the winding resistance.

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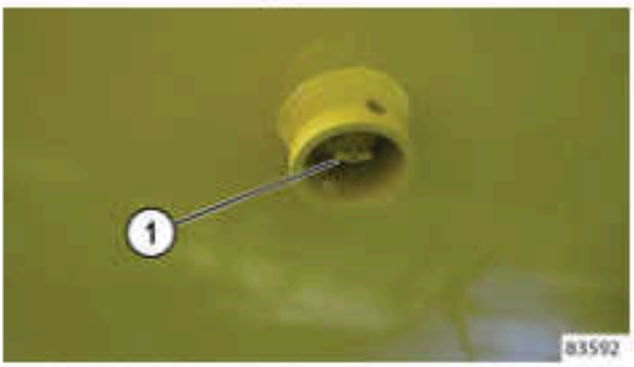
1. HVAC Recirculation Filter Element

Figure 7-7 HVAC RECIRCULATION FILTER LOCATION

1. Clean both filter elements (1, Figure 7-6 CAB AIR FILTER LOCATION, page 7-6 and Figure 7-7 HVAC RECIRCULATION FILTER LOCATION, page 7-7) with mild soap and water.
2. Rinse completely clean and air dry with a maximum of 275 kPa (40 psi).
3. Reinstall the filters.

FUEL SYSTEM SERVICE G.44-0000051601

Fuel Tank Cleaning

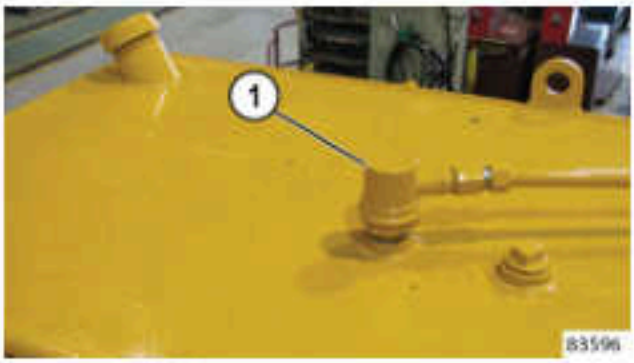


1. Fuel Tank Drain

Figure 7-8 FUEL TANK

Open fuel tank drain (1, Figure 7-8 FUEL TANK, page 7-7) to drain water and sediment from the fuel tank. The fuel tank is provided with a drain and a cleaning port in the side that allows steam or solvent to be utilized in cleaning tanks that have accumulated foreign material.

It is not necessary to remove the tank from the truck for cleaning of sediment, however rust and scale on the walls and baffles may require complete tank removal. Prior to a cleaning procedure of this type, all vents, fuel gauge, and hose connections should be removed and temporarily sealed. After all scale, rust, and foreign material has been removed, the temporary plugs can be removed. A small amount of light oil must be sprayed into the tank to prevent rust if the tank is to remain out of service. All openings should be sealed for rust prevention.



1. Fuel Tank Breather

Figure 7-9 FUEL TANK BREATHER

Remove breather (1, Figure 7-9 FUEL TANK BREATHER, page 7-7) and clean in solvent. Dry with pressurized air and reinstall.

Fuel Filter Service



1. Water Drain Valves

Figure 7-10 WATER SEPARATOR DRAIN

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Lubricant Required For Automatic Lubrication System

Grease requirements will depend on ambient temperatures encountered during truck operation:

- Above 32°C (90°F) - Use NLGI No. 2 multipurpose grease (MPG).
- -32° to 32°C (-25° to 90°F) - Use NLGI No. 1 multipurpose grease (MPG).
- Below -32°C (-25°F) - Refer to local supplier for extreme cold weather lubricant requirements.

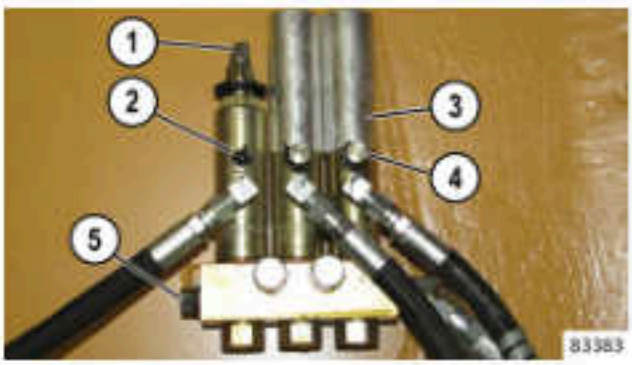
Priming The Automatic Lubrication System

The system must be full of grease and free of air pockets to function properly. After maintenance, if primary or secondary lubrication lines were replaced, it will be necessary to prime the system to eject all entrapped air.



1. Vent Valve
2. Main Supply Line

Figure 5-14 AUTO LUBE MAIN SUPPLY LINE



1. Injector Indicator
2. Injector Grease Zerk
3. Injector Cover
4. Injector Grease Zerk Cap
5. Injector Manifold Plug

Figure 5-15 INJECTOR MANIFOLD

To prime the main supply lines, perform the following:

1. Fill lube reservoir with lubricant, if necessary.
2. Remove injector manifold plug (5, Figure 5-15 INJECTOR MANIFOLD, page 5-44) from injector manifold. Always start with the injector manifold closest to the pump. The last grease line to be purged should be the main grease line to the rear axle (longest grease line).
3. Disconnect main supply line (2, Figure 5-14 AUTO LUBE MAIN SUPPLY LINE, page 5-44) from vent valve (1). Connect an external grease supply to main supply line (2).
4. Pump grease in main supply line (2) until grease appears at the injector manifold plug.
5. Re-install the injector manifold plug. Repeat for remaining injector groups.

After all main supply lines are purged of air, the injector circuits must now be primed.

To prime the secondary supply lines, perform the following:

1. If necessary, disconnect an injector grease line from the component that particular injector supplies grease to.
2. Remove injector grease zerk cap (4, Figure 5-15 INJECTOR MANIFOLD, page 5-44) from each injector and connect an external grease supply to injector grease zerk (2) on the injector.
3. Pump grease into the injector until grease appears at the far end of the individual grease line or the joint being greased.
4. Reconnect injector grease line to the component, remove the external grease supply, and reinstall injector grease zerk cap.
5. Repeat steps 1 through 4 until all secondary supply lines have been primed.
6. After all grease lines are primed, use the override switch to cycle the automatic lubrication pump a few times to lube the components.

PREVENTIVE MAINTENANCE PROCEDURES E.6-0000051465

Use the following maintenance procedures to ensure proper system operation.

Daily Lubrication System Inspection

1. Check the grease reservoir level after each shift of operation. Grease usage should be consistent from day-to-day operations. Lack of lubricant usage would indicate an inoperative

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