CEAM027002

Operation & Maintenance Manual

Dump Truck

830E-1AC

Serial Numbers A40851 - A40938, A40995

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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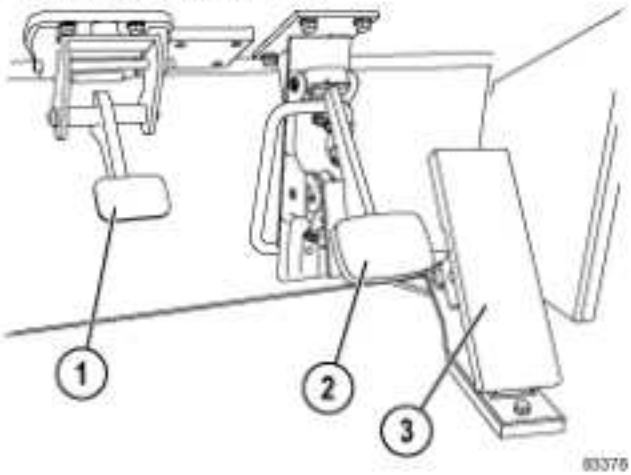
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PEDALS C.5-0000051459



1. Service Brake Pedal
2. Dynamic Retard Pedal
3. Accelerator Pedal

Figure 6-3 PEDALS

Service Brake Pedal

Service brake pedal (1, Figure 6-3 PEDALS, page 6-4) is a foot operated pedal which applies the service brakes. Only apply the service brakes when dynamic retarding requires additional braking force to slow the truck speed quickly, or to bring the truck to a complete stop once truck speed is less than 5 kph (3 mph).

Dynamic Retard Pedal

Dynamic retard pedal (2) is a foot operated pedal which allows the operator to slow the truck and maintain a safe productive speed without the use of the service brakes. For normal truck operation, only dynamic retarding must be used to slow and control the speed of the truck. Use the grade/speed chart, located on the left post next to the windshield, to determine maximum safe truck speeds for descending a grade with a loaded truck. Only apply the service brakes when dynamic retarding requires additional braking force to slow the truck speed quickly or to bring the truck to a complete stop.

When dynamic retarding is in use, the engine rpm will automatically go to an advance rpm retard speed setting (usually 1250 rpm). Dynamic retarding will be applied automatically, if the speed of the truck reaches the predetermined overspeed retard setting. Dynamic retarding is available in FORWARD/REVERSE at all truck speeds above 0 kph/mph, but is available in NEUTRAL only when truck speed is above 5 kph (3 mph).

Dynamic Retarding

Dynamic retarding is a braking torque (not a brake) produced through electrical generation by the wheelmotors when the truck motion (momentum) is the propelling force.

For normal truck operation, dynamic retarding must be used to slow and control truck speed.

Dynamic retarding is available in FORWARD/REVERSE at all truck speeds above 0 kph/mph; however, as the truck speed slows below 5 kph (3 mph), the available retarding force may not be effective. Use the service brakes to bring the truck to a complete stop.

Dynamic retarding will not hold a stationary truck on an incline.Use the parking brake or wheel brake lock for this purpose.

Dynamic retarding is available in NEUTRAL only when truck speed is above 5 kph (3 mph).

When dynamic retarding is in operation, engine rpm will automatically go to an advance retard speed setting. This rpm will vary depending on temperature of several electrical system components.

Dynamic retarding will be applied automatically if the speed of the truck obtains the maximum speed setting programmed in the control system software.

When dynamic retarding is activated, an indicator light in the overhead display will illuminate. The grade/speed retard chart must always be used to determine safe downhill speeds. Refer to the grade speed chart in the cab.

Accelerator Pedal

Accelerator pedal (3) is a foot-operated pedal which allows the operator to control engine rpm depending on pedal depression.

It is used by the operator to request torque from the motors when in forward or reverse. In this mode, the propulsion system controller commands the correct engine speed for the power required. In NEUTRAL, this pedal controls engine speed directly.

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INITIAL 50 HOUR LUBRICATION AND MAINTENANCE INSPECTION C.9-0000051635

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: 54.2 mm (2.13 in.)
	Front charge height: 229 mm (9 in.) at 2 689 kPa (390 psi)
	Rear charge height: 270 mm (10.63 in.) at 1 186 kPa (172 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: **712 N·m (525 ft lb)**
STEERING CYLINDER TO STEERING ARM	Verify hardware torque - Target: **712 N·m (525 ft lb)**
TWO CAP SCREW STYLE TIE ROD CLAMP NUT	Verify hardware torque - Target: **420 ± 42 N·m (310 ± 31 ft lb)**
FRONT BRAKE CALIPER MOUNTING (Cap screw with Nut)	Verify hardware torque - Target: **1 085 N·m (800 ft lb)**
FRONT BRAKE CALIPER MOUNTING (Cap screw only)	Verify hardware torque - Target: **1 166 N·m (860 ft lb)**
REAR SERVICE BRAKE CALIPER MOUNTING	Verify hardware torque - Target: **780 N·m (575 ft lb)**
REAR BRAKE ADAPTER MOUNTING	Verify hardware torque - Target: **488 N·m (360 ft lb)**
BRAKE DISC TO ADAPTER MOUNTING	Verify hardware torque - Target: **278 N·m (205 ft lb)**

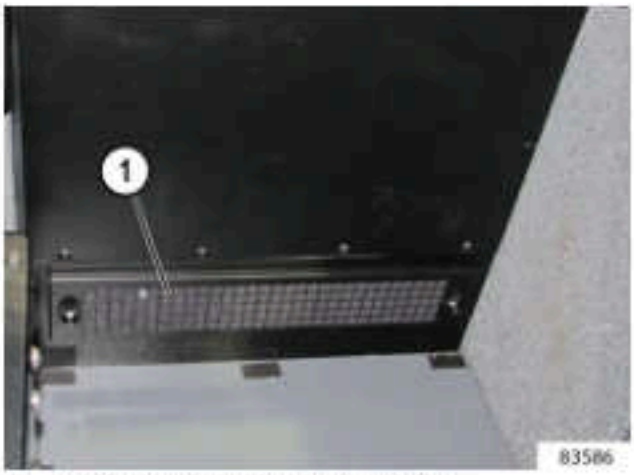
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EVERY 18,000 HOUR MAINTENANCE A.4-0000071978

NOTE: *Maintenance for every 10, 250, 500, 1,000, 2,000 & 3,000 hour Lubrication and Maintenance Checks must also be performed at this time. "Lube Key" references are to the lubrication chart.*

EVERY 18,000 HOUR MAINTENANCE	
Item	**Task**
SEAT BELTS AND TETHERS	Even if there are no signs of damage, replace both driver and passenger seat belts five years after seat belt manufacture, or every three years after start of use, whichever comes first.

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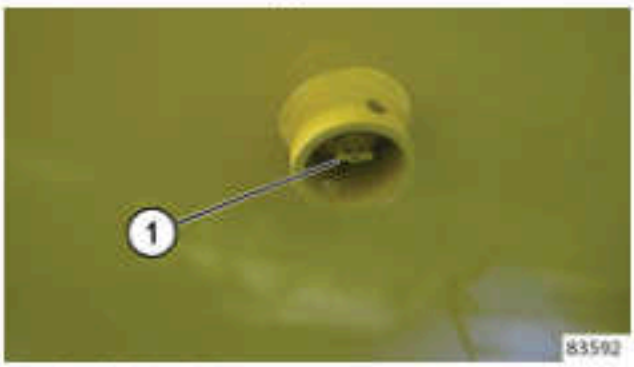
1. HVAC Recirculation Filter Element

Figure 7-7 HVAC RECIRCULATION FILTER LOCATION

1. Clean both filter elements (1, Figure 7-6 CAB AIR FILTER LOCATION, page 7-5 and Figure 7-7 HVAC RECIRCULATION FILTER LOCATION, page 7-6) 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.41-0000051601

Fuel Tank Cleaning

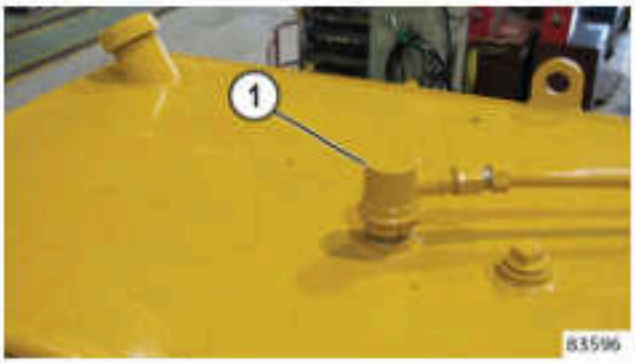


1. Fuel Tank Drain

Figure 7-8 FUEL TANK

Open fuel tank drain (1, Figure 7-8 FUEL TANK, page 7-6) 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 7-6) and clean in solvent. Dry with pressurized air and reinstall.

Fuel Filter Service



1. Water Drain Valves

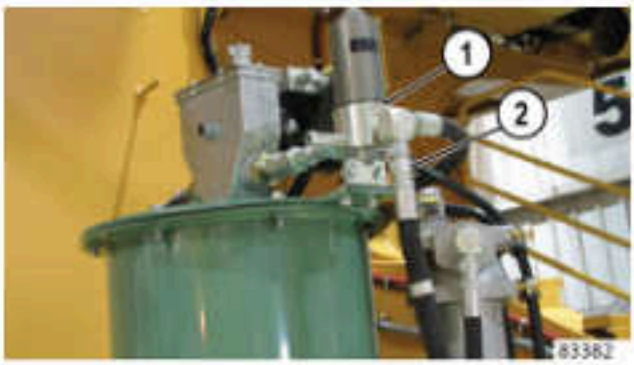
Figure 7-10 WATER SEPARATOR DRAIN

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- -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.

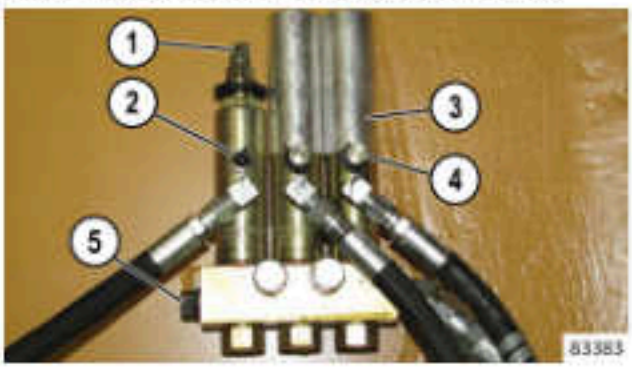
Priming The Automatic Lubrication System

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 5-22 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 5-23 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 5-23 INJECTOR MANIFOLD, page 5-54) 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 5-22 AUTO LUBE MAIN SUPPLY LINE, page 5-54) 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) 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 system. Excessive usage would indicate a broken supply line.
2. Check filter bypass indicator when filling reservoir. Replace element if bypassing.
3. Check all grease hoses from the injectors to the lubrication points.
   a. Repair or replace all damaged feed line hoses.

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