CEAM024204

Operation & Maintenance Manual

Dump Truck

930E-4

Serial Numbers

A30990 — A30991
A31002 — A31692
A31698
A31700
A31704
A31718 – A31724

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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GENERAL INFORMATION E.2-0000051234

This manual provides dual dimensioning for many specifications. Metric units are specified first, with U.S. standard units in parentheses. When torque values are not specified in the assembly instructions contained in this manual, use the standard torque value for the hardware being used. Standard value torque tables are contained in this chapter for metric and SAE hardware.

This truck is assembled with both metric and SAE (U.S.) hardware. Reference the correct table when determining the proper torque value.

⚠ CAUTION

- **References throughout the manual to standard torques or other standard values will be to one of the following tables. Do not use standard values to replace specific torque values in assembly instructions.**

For values not shown in any of the charts or tables, standard conversion factors for most commonly used measurements are provided in the following tables.

Effect Of Special Lubricants

The Komatsu engineering department does not recommend the use of special friction-reducing lubricants, such as Copper Coat, Never-Seez®, and other similar products, on the threads of standard fasteners where standard torque values are applied. The use of special friction-reducing lubricants will significantly alter the clamping force being applied to fasteners during the tightening process.

If special friction-reducing lubricants are used with the standard torque values listed in this chapter, excessive stress and possible breakage of the fasteners may result.

Where the torque tables specify "Lubricated Threads" for the standard torque values listed, these standard torque values are to be used with simple lithium base chassis grease (multi-purpose EP NLGI) or a rust-preventive grease (see below) on the threads and seats unless specified otherwise.

NOTE: *Ensure the threads of fasteners and tapped holes are free of burrs and other imperfections before assembling.*

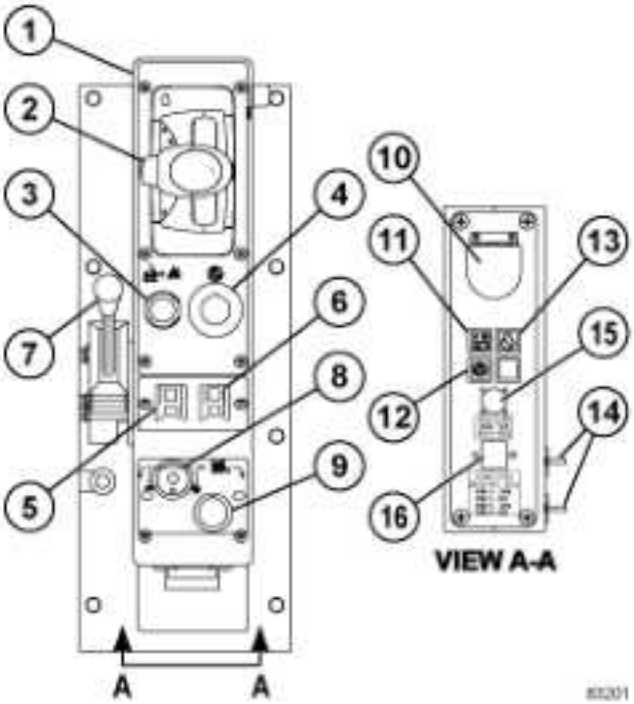
Suggested Sources For Rust Preventive Grease

NOTE: *This list represents the current engineering approved sources for use in Komatsu manufacture. It is not exclusive. Other products may meet the same specifications of this list.*

- American Anti-Rust Grease #3-X from Standard Oil Company (also American Oil Co.)
- Gulf NoRust #3 from Gulf Oil Company.
- Mobilarma 355, Product No. 66705 from Mobil Oil Corporation.
- Rust Ban 326 from Humble Oil Company.
- Rustolene B Grease from Sinclair Oil Co.
- Rust Preventive Grease - Code 312 from the Southwest Grease and Oil Company.

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CENTER CONSOLE D.63-0000051505



1. Center Console
2. Directional Control Lever
3. Override/Fault Reset Switch
4. Engine Stop Switch
5. LH Window Control Switch
6. RH Window Control Switch
7. Hoist Control Lever
8. Retarder Speed Control Dial
9. Retarder Speed Control Switch
10. Data Store Button
11. KOMTRAX Plus Snapshot In Progress Light
12. Link Energized Light (Red)
13. Service Engine Light (Blue)
14. 12V Auxiliary Power Outlets
15. Fire Suppression Control Outlet
16. Communication Radio Outlet

Figure 6-3 CENTER CONSOLE

Directional Control Lever

Directional control lever (2) is mounted on a console to the right of the operator's seat. It is a four position lever that controls the park, reverse, neutral, and forward motion of the truck. Before moving the directional control lever, apply the service brakes to completely stop the truck. Depress the button on the side to release the detent lock, then move the control lever to the desired position. When the control lever is in the center N position, it is in NEUTRAL. When the control lever is in the P position, it is in PARK, and the parking brake will be applied. The parking brake is spring applied and hydraulically released. It is designed to hold the truck stationary when the engine is off and the key switch is turned OFF. The truck must be completely stopped before moving the control lever to PARK, or damage may occur to the park brake. When the key switch is ON, and the control lever is in PARK, the parking brake indicator light in the overhead panel will be illuminated.

NOTE: *The directional control lever must be in PARK to start the engine. DO NOT move the directional control lever to the PARK position at the shovel or dump.*

Select FORWARD drive by moving the control lever to the F position.

Select REVERSE drive by moving the control lever to the R position. DO NOT allow the control lever to travel too far and go into the PARK position when REVERSE is desired.

NOTE: *The truck must be completely stopped before the control lever is moved to a drive position or into PARK. A drive system fault will be recorded if the control lever is placed into the PARK position while the truck is still moving.*

Override/Fault Reset Switch

Override/fault reset switch (3) is spring-loaded to the OFF position. When pushed in and held, this switch may be used for several functions.



1. This switch permits the operator to override the body-up limit switch and move the truck forward when the directional control lever is in FORWARD, the dump body is raised, and the brakes are released.

   Use of the override switch for this purpose is intended for emergency situations only!

2. The push button deactivates the retard pedal function when truck speed is below 5 kph (3 mph).

3. The override switch is also used to reset an electric system fault when indicated by a red warning light. Refer to OVERHEAD STATUS/WARNING INDICATOR, page 6-25 in this section.

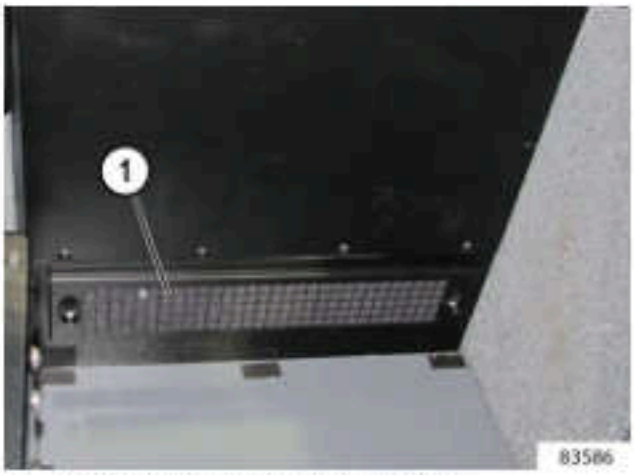
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EVERY 1000 HOURS LUBRICATION AND MAINTENANCE F.23-0000051631

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

EVERY 1000 HOURS LUBRICATION AND MAINTENANCE	
Item	**Task**
HYDRAULIC SYSTEM	Drain the hydraulic tank and clean the inlet strainer. Refill the tank with new oil. (Lube Key "B"). ***NOTE:*** *Oil change interval can be extended to 2,500 hours if oil is sampled at every 250 hour intervals and no abnormalities are detected.*
COOLING SYSTEM	Clean the cooling system with a quality cleaning agent. Flush the system with water. Refill the system with anti-freeze and water solution. Check the Coolant Specifications, page 7-4 in this chapter.
FUEL SYSTEM	Service the fuel tank breather. Refer to FUEL SYSTEM SERVICE, page 7-6 for more detailed instructions.
OPERATOR'S SEAT	Apply grease to the slide rails. (Lube Key "D").
AUTOMATIC BRAKE APPLICATION	Ensure the brakes are automatically applied when brake pressure decreases below the specified limit. Refer to the Shop Manual for more details.
AUTOMATIC LUBE SYSTEM	Check pump housing oil level using the dipstick on top of the pump unit. If necessary, add SAE 10W-30 motor oil.
ELIMINATOR FILTER (If Equipped)	Clean and check centrifuge. Refer to engine manufacturer's Operation & Maintenance Manual. (Service interval is dependent on duty cycle, oil quality, etc.)
BRAKE DISC	Use the front and rear brake wear indicators included in the truck's tool group to check for brake disc wear. Refer to the shop manual for instructions.

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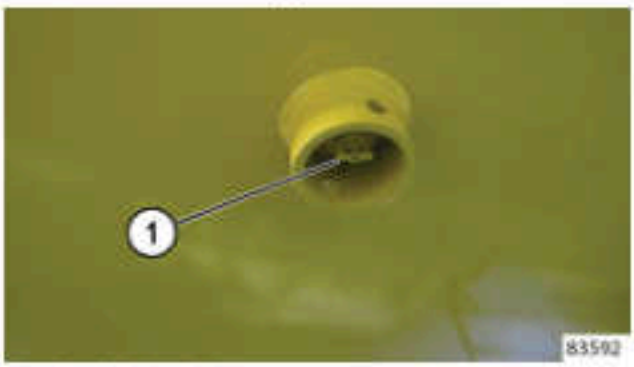
1. HVAC Recirculation Filter Element

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.33-0000051601

Fuel Tank Cleaning

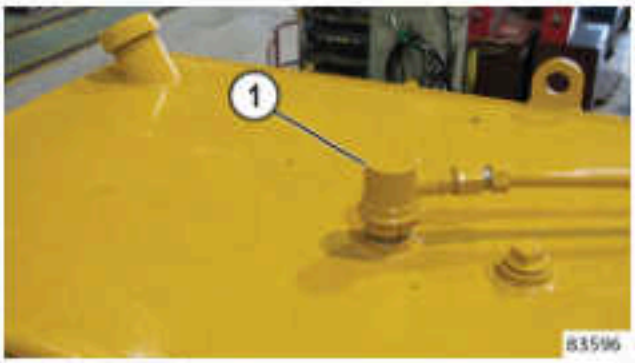


1. Fuel Tank Drain

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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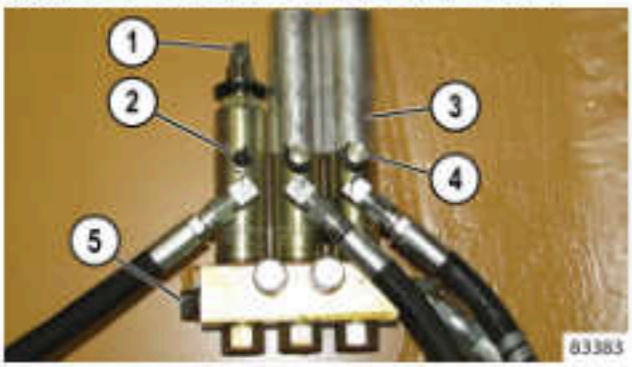
Priming The Automatic Lubrication System

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 5-18 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 5-19 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 5-19 INJECTOR MANIFOLD, page 5-50) 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 5-18 AUTO LUBE MAIN SUPPLY LINE, page 5-50) 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.
   b. Ensure that all air is purged and all new feed line hoses are filled with grease before returning the truck to service.

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