CEAM032102

Operation & Maintenance Manual

930E-5

DUMPTRUCK

SERIAL NUMBERS 930E-5 A40004 and up

ENGINE 16V160

January 2018

KOMATSU®

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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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b. Move the directional control lever to FORWARD, release the brake lock. Depress the override button and drive forward to clear the material. Stop, shift the directional control lever to NEUTRAL, apply the brake lock and lower the body again.

NOTE: *When an attempt to lower the body is unsuccessful because of material obstruction, raise the body back up. This will help to prevent the body from suddenly dropping when pulling away from the obstruction.*

2. With the body returned to the frame, move the directional control lever to FORWARD, release the brake lock, and carefully leave the dump area.

SUDDEN LOSS OF ENGINE POWER OR LOSS OF DRIVE SYSTEM FUNCTION F.13-0000051428

The loss of engine power and/or drive system will result in loss of retard/propel functions on the truck. Under loss of retard/propel conditions, the truck should be immediately stopped using the service brakes. In all cases, the service brakes should be utilized to stop the truck.

⚠ WARNING

- **Dynamic retarding will not be available. DO NOT use the service brakes for continuous retarding purposes.**

If the engine and/or drive system functionality is lost, there is enough hydraulic pressure stored in the brake and steering accumulators to allow the operation of the steering and brake functions. However, this oil supply is limited so it is important to stop the truck as quickly and safely as possible.

When loss of engine power or drive system function occurs, perform the following:

1. Bring the truck to a safe stop as quickly as possible by using the foot pedal to apply the service brakes. If possible, safely steer the truck to the side of the road while braking.
2. As soon as the truck has stopped moving, park the truck.
3. Slowly release the service brakes to check the capacity of the parking brake. If the parking brake can not hold the truck stationary, apply the service brakes and hold them ON. DO NOT turn the key switch OFF, and DO NOT release the service brakes.
4. Notify maintenance personnel immediately.
5. If the truck is on level ground, or if the parking brake can hold the truck stationary and the truck is in a stable condition, it is then OK to turn the key switch OFF.
6. If safe to do so, have maintenance personnel place wheel chocks or other mechanisms in front or behind the wheels, depending on the slope, to reduce the risk of the truck rolling.
7. If traffic is heavy near the disabled machine, mark the truck with warning flags during daylight hours or use flares at night. Adhere to local regulations.

EMERGENCY STEERING SYSTEM A.2-0000074231

Operation

This truck is equipped with an emergency steering system. This system is a backup in the event of loss of oil supply to the main steering system. The emergency steering system was designed to meet or exceed SAE J1511 and ISO 5010 standards.

Each time the red triangle and alarm is activated, refer to the digital dash display to determine the nature of the fault.

If a failure in the hydraulic oil supply to the steering and brake system exists, there is typically enough hydraulic pressure stored in the brake and steering accumulators to allow brief operation of the steering and brake functions. However, this oil supply is limited. Therefore, it is important to stop the truck as quickly and safely as possible after the alarm is first activated.

If the oil pressure continues to decrease, the brake auto-apply feature will activate the service brakes to stop the truck.

Pre-Operation Testing

NOTE: *Komatsu recommends that operators perform this test to verify that the steering accumulator precharge pressure is adequate at the beginning of each shift before operating the truck.*

⚠ WARNING

- **Ensure no one is near the front tires during this test. All personnel are warned that clearances change when the steering wheel is turned and this could cause serious injury.**

This test can only be performed with an empty truck.

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EVERY 3000 HOUR LUBRICATION AND MAINTENANCE A.6-0000061694

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

EVERY 3000 HOUR MAINTENANCE	
Item	**Task**
WHEEL MOTOR OIL	Change the wheel motor gear oil. The oil must be filtered/changed prior to 3000 hours if oil analysis indicates contaminated oil.
CONTROL CABINET CPU SOFTWARE	Check for GE software updates and install latest versions as needed.

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WARNING DECALS A.4-0000074994

A warning decal is located on the left front post of the operator's cab. Always read the Operation and Maintenance Manual before carrying out operation, maintenance, disassembly or assembly of machine.



These 5 decals are located on the left front post of the operator's cab.

Wireless signals from the truck's KOMTRAX Plus 2 system can interfere with other wireless signals in the area. This interference can cause a malfunction in a blast zone resulting in an unintended detonation. Know the locations of blast zones in the area and keep a safe distance to avoid unintentional blasts. Operating frequency of KOMTRAX Plus 2 is 148 MHz to 150 MHz.



If the machine comes too close to electric cables, there is danger of electrocution. Always keep a safe distance from electric cables.



Always use seat belt when operating the machine to reduce risk of injury or death in case of a roll-over. Read the Operation and Maintenance Manual.



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Remove breather drain hose cap (2, Figure 7-9 FUEL TANK BREATHER, page 7-5) from breather hose in order to drain.

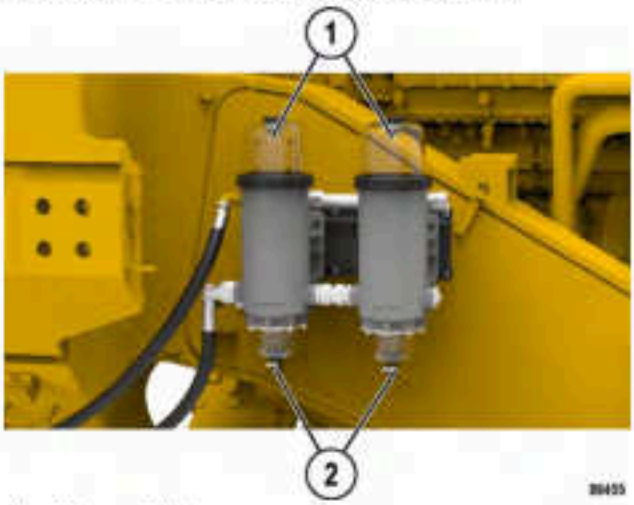
Remove breather element (1) and clean in solvent. Dry with pressurized air, reinstall element and drain hose cap.

Fuel Filter Service



1. Water Drain Valves

Figure 7-10 WATER SEPARATOR DRAIN



1. Stage 1 Filter
2. Water Drain Valve

Figure 7-11 WATER SEPARATOR DRAIN (TIER 4 ONLY)

Open water drain valve on the engine mounted fuel filters (1, Figure 7-10 WATER SEPARATOR DRAIN, page 7-6) and on the stage 1 fuel filter (2, Figure 7-11 WATER SEPARATOR DRAIN (TIER 4 ONLY), page 7-6) to remove water from the fuel/water separator daily.

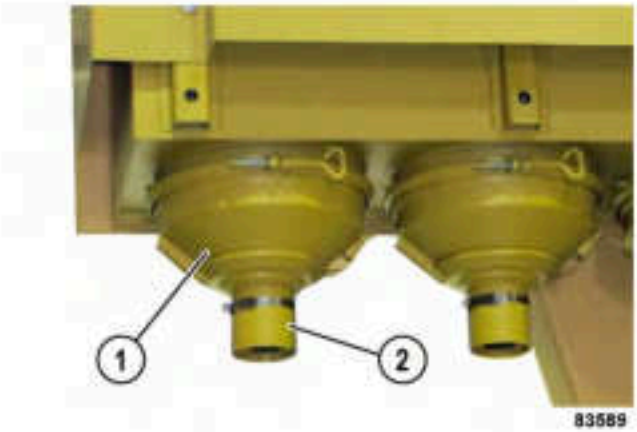
INTAKE AIR CLEANER SERVICE A.2-0000074303

⚠ CAUTION

- **The engine must be turned off before servicing the air cleaner assemblies or opening the engine air intake system. Never start the engine with the filter elements removed. Serious engine damage can result.**

During operation or after the engine has been turned off, observe the air filter restriction gauges mounted on the overhead panel in the cab. When a gauge shows maximum restriction, filter service is required.

To service the intake air cleaner system, perform the following:



1. Dust Cup 2. Vacuator™ Valve

Figure 7-12 DUST CUP LOCATION

1. Inspect and empty dust cups (1, Figure 7-12 DUST CUP LOCATION, page 7-6). Never allow the dust level to build up to the tube (precleaner) chamber.

NOTE: *On dust cups with the Vacuator™ valve, dust cup service is minimal; just check the valve to see that it is not inverted, damaged or plugged. If it is damaged, replace it immediately.*

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