CEAM024302

Operation & Maintenance Manual

930E-4

DUMP TRUCK

SERIAL NUMBERS **A30990 & UP**

U.S.A. EPA TIER 2 & TIER 4 COMPLIANT

KOMATSU®

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Failure of the Discharge System

If the capacitor charge lights remain illuminated, a failure of the normal (fast) capacitor discharge system (RP discharge path) has likely occurred. The slow discharge resistors that are hard wired across the DC link should then discharge the capacitors. The slow discharge resistors will discharge the DC link to less than 1 VDC in under 7.5 minutes. If after 7.5 minutes, the capacitor charge lights are still illuminated, it must be assumed that the automatic discharge system is not working and that high voltage is present in the high voltage area.

1. Open the high voltage area doors.
2. With a suitable high voltage meter rated for at least 2000 VDC, such as PC3186 or equivalent, plus suitable protective equipment, measure the voltage across each of the DC link capacitors. Place one meter lead on the positive (+) capacitor terminal, and the other meter lead on the negative (-) capacitor terminal, and observe the voltage. See Figure 20-7 and Figure 20-8. If the voltage is less than 1.0 V the capacitor is sufficiently discharged. Repeat on all DC Link capacitors. If the voltage of any capacitor is above 1.0 V, manually discharge the capacitor as described in Manual Discharge of Capacitors on page 30-22.

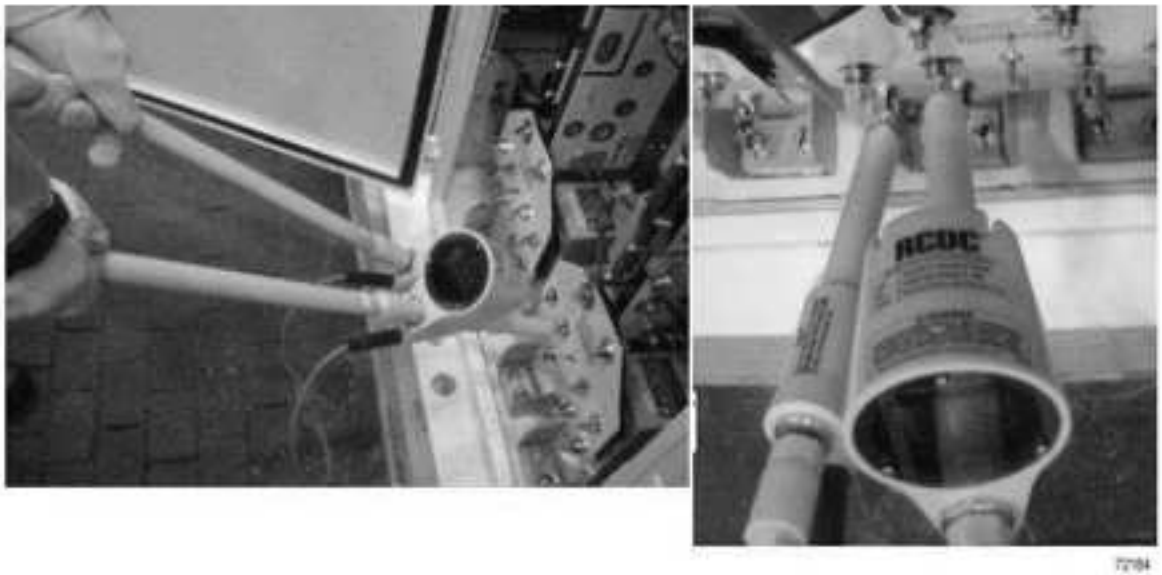


FIGURE 20-7. DC METER ON CAPACITOR

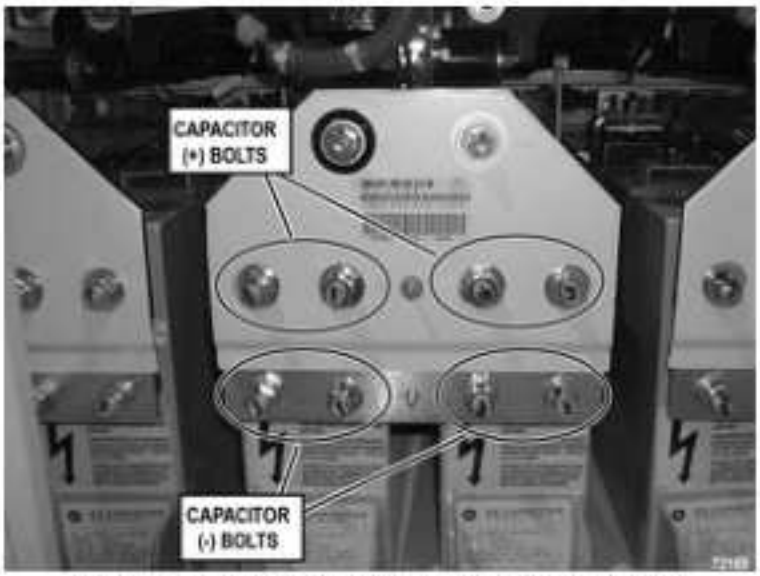


FIGURE 20-8. CAPACITOR TERMINAL POLARITY

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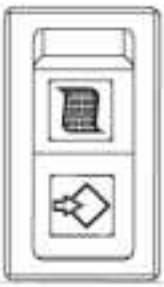
Fog Light Switch

Pressing the top of fog light switch (21, Figure 32-10) turns the lights on. Pressing the bottom of the switch turns the lights off.



Payload Meter Switch

Payload Meter switch (22, Figure 32-10) is a two-way momentary rocker switch. The top position is the SELECT position. The SELECT position is used to step through the different displays. The lower position is the SET position. The SET position is used to set the operator ID, or clear the load and total ton counters. Refer to Section 60, Payload Meter III, for a more complete description of the payload meter system and its functions.



Panel Illumination Light Dimmer Switch

Panel illumination light dimmer switch (23, Figure 32-10) is a rheostat which allows the operator to vary the brightness of the instruments and panel illumination lights.



Rotating knob to the full counterclockwise position turns panel lights on to brightest condition. Rotating knob clockwise continually dims lights until the OFF position is reached at full clockwise rotation.

Hydraulic Oil Temperature Gauge

Hydraulic oil temperature gauge (24, Figure 32-10) indicates the hydraulic oil temperature. There are two colored bands: green and red.



Green indicates normal operation.

As the needle approaches the red zone, minimum engine idle speed will increase to help cool the oil.

Red indicates high oil temperature. Continued operation could damage components in the hydraulic system. Warning lights (A1) and (E1, Figure 32-11) in the overhead panel will illuminate when the temperature exceeds a certain level (when the needle enters the red zone). If this occurs, the operator should safely stop the truck, move directional control lever to PARK and operate the engine at 1200 - 1500 rpm to reduce system temperature.

NOTE: If the temperature gauge does not move into the green range after a few minutes, and the warning lights do not go out, shut down the truck and notify maintenance personnel immediately.

Engine Hourmeter

Engine hourmeter (25, Figure 32-10) registers the total number of hours the engine has been in operation.



Fuel Gauge

Fuel gauge (26, Figure 32-10) indicates how much diesel fuel is in the fuel tank. The fuel tank capacity is 4 542 liters (1,200 gallons).



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250 HOUR LUBRICATION AND MAINTENANCE CHECKS (Cont.)

All *10 Hour (Daily) Inspections* should also be performed at this time.

NOTE: "Lube Key" references are to the ***Lubrication Chart*** *on page 40-5.*

Truck Serial Number_____ **Site Unit Number**_____ **Date**_____

Hourmeter_____ **Name of Service Technician**_____

	TASK	COMMENTS	CHECKED	INITIALS
2.	ENGINE - 1. Change the engine oil. Refer to the engine operation and maintenance manual for engine oil specifications. (Lube Key "A") *NOTE: If the engine is equipped with the Centinel™ oil system and/or the Eliminator™ filter system, engine oil and filter change intervals are extended beyond 250 hours. Take an engine oil sample for analysis. Refer to engine operation and maintenance manual for specific oil and filter change intervals.* 2. Replace the engine oil filters. Follow the instructions of the filter manufacturer, which are normally printed on the outside of the filter. **Do not use a wrench or strap to tighten filter elements.** 3. Change the reserve tank oil filter. 4. Check the tension and condition of each accessory drive belt. Refer to the engine operation and maintenance manual for specific adjustment instructions. 5. Check the torque on the cooling fan mounting capscrews. Tighten to **237 N·m (175 ft lb)**.			
3.	COOLING SYSTEM - 1. Check the coolant level and fill the radiator with the proper coolant mixture according to Coolant Specifications on page 40-2.Refer to the engine operation and maintenance manual for additional coolant recommendations. 2. Change the coolant filters. Refer to the engine operation and maintenance manual for coolant filter replacement instructions. 3. Check the cooling system hoses for damage and deterioration. Replace as necessary.			
4.	FUEL FILTERS - Change the Stage 1 and Stage 2 fuel filters. Refer to the engine operation and maintenance manual for filter replacement instructions.			
5.	FUEL TANK - Drain water and sediment from the fuel tank. Refer to Section B4, Fuel Tank - Cleaning, in the shop manual.			

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2. Observe both capacitor charge lights (CCL1, CCL2). CCL1 is on the outside of the contactor box. CCL2 is on the switch panel inside the low voltage area. The lights will stay illuminated as long as the voltage on the DC link is greater than 50 VDC. Refer to Figure 20-6.

⚠WARNING

Hazardous voltages may be present in this equipment even if the engine and capacitor charge lights are off.

Use measurement and protective equipment rated for 2000 VDC minimum to verify that no voltage is present before touching any terminal.

⚠WARNING

Verify functionality of the measurement equipment using site-approved procedures both before and after performing control group measurements.

Failure to observe these precautions may result in death or serious personal injury.

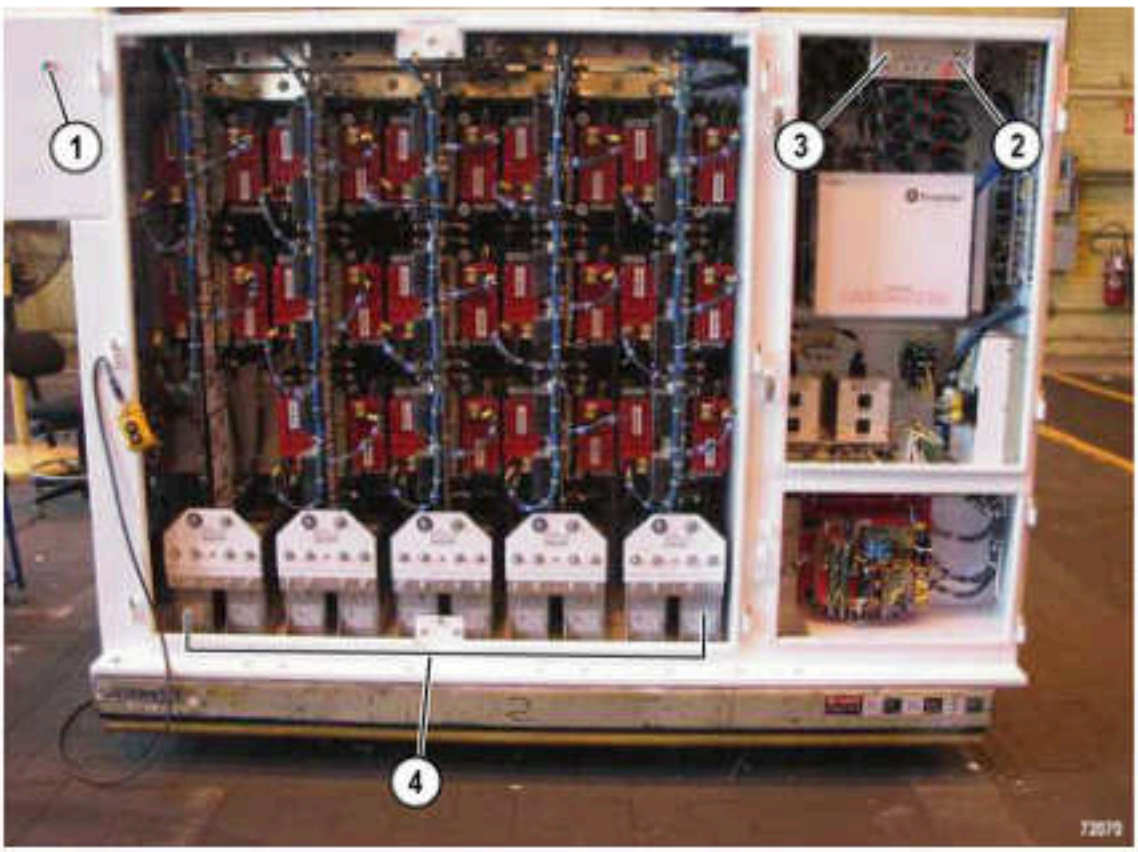


FIGURE 20-6. CAPACITOR CHARGE LIGHTS

1. Exterior Capacitor Charge Light (CCL2)
2. Interior Capacitor Charge Light (CCL1)
3. Information Display Panel
4. DC Link Capacitors

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Setting the Computer Subnet Mask and IP Address

If the adaptor software does not allow for setting an IP address, then this must be done manually.

The Windows TCP/IP settings must be modified for the correct subnet mask and an adequate IP address. The steps to reach the point where the TCP/IP settings can be modified vary according to the operating system and are described below. The actual steps for making the changes to the settings are described for the following operating systems.

Windows 2000:

1. Click on the start menu, select settings and then "Network and Dial-up Connections."
2. Right click on the wireless network adaptor and select "properties." Skip instructions for other Operating Systems and continue to the topic of "Properties".

Windows XP:

1. Click on the start menu, right click on "My Networks" and select "Properties." A window with all available networks will be shown.
2. Right click on the wireless network and select "Properties." Skip instructions for Windows Vista and continue to the topic of "Properties".

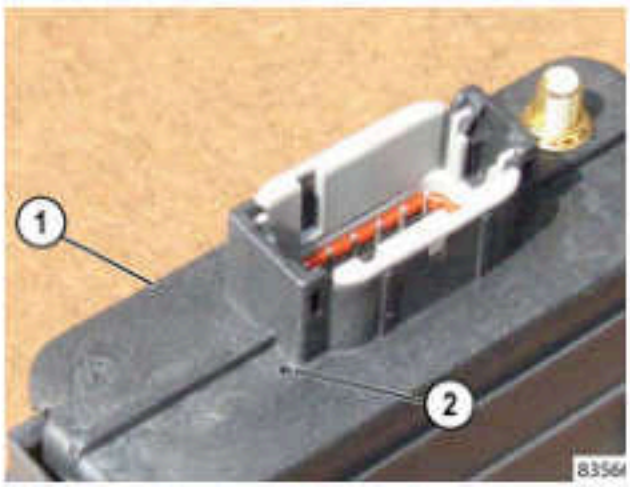


FIGURE 32-17. RESET LOCATION

1. Komatsu Wireless Bridge
2. Reset Button Hole

Windows Vista:

1. Click on the Windows menu, right click on "Network" then select "Properties." A window will open with the option "Manage network connections" as one of the options on the left side. Select that option.
2. A new window showing all available networks will open. Right click on the wireless network to be used to connect to the KWB and select "Properties." Vista will inquire if this was an intentional selection; select "Continue." Continue to the topic of "Properties".

Properties

Once the window with the list of available protocols is shown, the TCP/IP should then be selected. Click on "Properties" and bring up a window for setting the IP address and the subnet mask (alternatively, double click on TCP/IP). Before making any changes, write down the current settings. These settings will be needed to restore the original computer settings if needed.

3. Select "Use the following IP address," then set the IP address to 192.168.0.xxx, where xxx represents any number between 1 and 255. 123 is generally used. However, no two computers should use the same IP address). The subnet mask should now be set to 255.255.0.0. If a gateway address is requested, this is set to the same as the IP address.

This prepares the computer to communicate with the KWB and to interact with the automatic download software.

NOTE: The previous steps are not necessary if the software that comes with the computer/adaptor allows an IP address and mask to be assigned to each profile. This is done automatically by selecting the profile.
It may be necessary to repeat these steps to restore the computer settings when connecting to another network.

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