CEAM011001

Operation & Maintenance Manual

730E

DUMP TRUCK

SERIAL NUMBERS A30212 - A30259

KOMATSU®

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Safety records of most organizations will show that the greatest percentage of accidents are caused by unsafe acts of persons. The remainder are caused by unsafe mechanical or physical conditions. Report all unsafe conditions to the proper authority. These safety rules are provided as a guide for the Komatsu truck operator. However, local conditions and regulations may add many more to this list.

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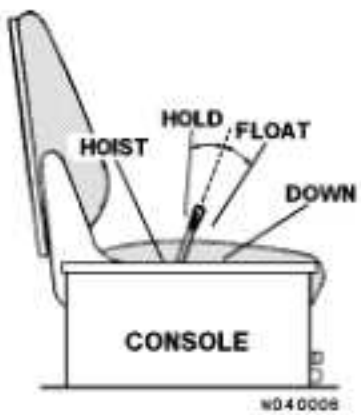
HOIST CONTROL LEVER

The hoist control (3, Figure 3-4) is a four position hand-operated lever located between the operator seat and the Center Console.

To Raise dump body:

1. Pull the lever to the rear to actuate hoist circuit. (Releasing the lever anywhere during "hoist up" will place the body in "hold" at that position.)
2. Raise engine RPM to increase hoist speed.
3. Reduce engine RPM as the last stage of the hoist cylinders begin to extend and then let the engine go to low idle as the last stage reaches half-extension.
4. Release hoist lever as the last stage reaches full extension.
5. After material being dumped clears the body, lower the body to frame.

Refer to "OPERATING INSTRUCTIONS, DUMPING" for more complete details concerning this control.



To lower body:

Move hoist lever forward to "down" position and release. Releasing the lever places hoist control valve in the "float" position allowing the body to return to frame.

ASH TRAY

The Ash Tray (4, Figure 3-4) is used for extinguishing and depositing smoking materials. DO NOT use for flammable materials, such as paper wrappers.

Be certain that all fire ash is extinguished!

LIGHTER

Lighter (5, Figure 3-4) may be used for lighting cigars/cigarettes.

Always use CAUTION with smoking materials!

This socket may also be used for a 12 VDC power supply.

L.H. WINDOW CONTROL SWITCH

This switch (6, Figure 3-4) is spring-loaded to the "OFF" position. Pushing the front of the switch raises the left side cab window. Pushing the rear of the switch lowers the window.

R.H. WINDOW CONTROL SWITCH

This switch (7, Figure 3-4) is spring-loaded to the "OFF" position. Pushing the front of the switch raises the right side cab window. Pushing the rear of the switch lowers the window.

ENGINE SHUTDOWN SWITCH



This switch (8, Figure 3-4) is used for engine shutdown by depressing this button and holding it until engine stops.

Use this switch to shutdown engine if engine does not shutdown by turning off keyswitch, or to shutdown engine without turning off 24 VDC electric circuits.

There is also a ground level engine shutdown switch on the left front frame rail behind the ladder.

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100 HOUR LUBRICATION AND MAINTENANCE CHECKS

Maintenance for every 10 & 50 hour Lubrication and Maintenance Checks should also be carried out at this time.

Truck Serial Number _____
Site Unit Number _____
Date: _____ Hour Meter _____
Name of Service Person _____

1.REAR HYDRAIR® SUSPENSION PIN JOINTS - (If not equipped with automatic lube system) - Add one or two applications of grease to each grease fitting for the upper and lower suspension mount pins. Use Lube Key "D".

2. BODY HINGE PINS - (If not equipped with automatic lube system) - Add one or two applications of grease to each grease fitting. Lube Key "D" for the body hinge pins.

3. HOIST CYLINDER - (If not equipped with automatic lube system) - Add one or two applications of grease to each grease fitting for bearing and pivots. Use Lube Key "D".

4. ANTI-SWAY BAR - (If not equipped with automatic lube system) - Add one or two applications of grease to each grease fitting for pin and bearings. Use Lube Key "D".

5. HYDRAULIC OIL FILTERS - Change filter elements after the initial 100 hours of operation; then at 250 hours; and then each 500 hours of operation thereafter.

COMMENTS	CHECKED	INITIALS

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MAJOR COMPONENT DESCRIPTION

The KOMATSU Model 730E Dump Truck is an electric drive, off-highway, rear dump truck whose gross vehicle weight is 715,000 lbs. (324 324 kg) rated for a maximum payload of 210 tons (190 t).

ENGINE

The KOMATSU 730E Dump Truck is powered by a Komatsu SSA16V159 engine rated at 2000HP (1492 kW).

ALTERNATOR (GE GTA-22)

The diesel engine drives an alternator mounted in-line with the engine. The alternating current (AC) output of the alternator is rectified to direct current (DC) and sent to the DC drive wheel motors.

WHEEL MOTORS (GE 788)

The output of the alternator supplies electrical energy to the two wheel motors attached to the rear axle housing. The two wheel motors convert electrical energy back to mechanical energy through built-in gear trains within the wheel motor assembly. The direction of the wheel motors is controlled by a forward or reverse hand selector switch located on a console to the right side of the operator.

BLOWER

The blower supplies cooling air for the rectifiers, AC alternator, and to both wheel motors, where it is then exhausted to atmosphere.

OPERATOR'S CAB

The Operator's Cab for the KOMATSU 730E Dump Truck has been engineered for operator comfort and to allow for efficient and safe operation of the truck.

The cab provides for wide visibility, with an integral 4-post ROPS/FOPS structure, and an advanced analog operator environment. It includes a tinted safety-glass windshield and power-operated side windows, a deluxe interior with a fully adjustable seat with lumbar support, a fully adjustable/tilt steering wheel, controls mounted within easy reach of the operator, and an analog instrument panel which provides the operator with all instruments and gauges which are necessary to control and/or monitor the truck's operating systems.

POWER STEERING

The KOMATSU 730E Dump Truck is equipped with a full time power steering system which provides positive steering control with a minimum of effort by the operator. The system includes nitrogen-charged accumulators which automatically provide emergency power if the steering hydraulic pressure is reduced below an established minimum.

DYNAMIC RETARDING

The dynamic retarding is used to slow the truck during normal operation or control speed coming down a grade. The dynamic retarding ability of the DC electric system is controlled by the operator through the activation of the retarder pedal in the operators cab and by setting the RSC (Retarder Speed Control). Dynamic Retarding is automatically activated if truck goes to a preset overspeed setting.

BRAKE SYSTEM

The wheel service brakes are caliper/dry disc brakes applied by an all hydraulic actuation system. Depressing the brake pedal actuates wheel-speed single disc front brakes and armature-speed dual disc rear brakes. The rear brakes can also be activated by operating a switch on the instrument panel.

All wheel brakes will be applied automatically if system pressure decreases below a preset minimum.

The parking brake is a caliper/disc type, mounted on each rear wheel motor, and is spring-applied and hydraulically-released with wheel speed application protection (will not apply with truck moving).

SUSPENSION

HYDRAIR®II suspension cylinders located at each wheel provide a smooth and comfortable ride for the operator and dampens shock loads to the chassis during loading and operation.

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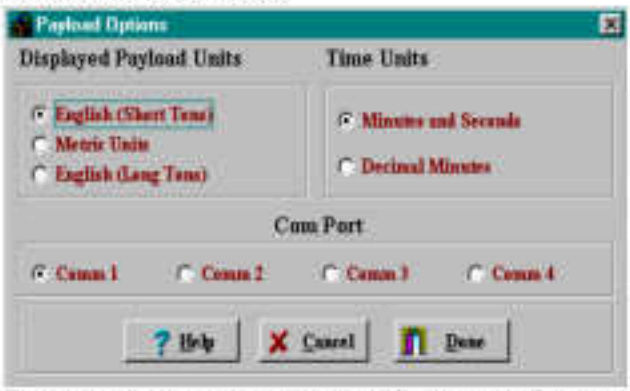
PLMIII System Configuration

Starting Communications

The PDM software allows users to download and configure the system.



Before connecting to the payload meter, select "Change Program Options" and confirm that the program has selected the correct laptop serial port. Most laptops use Comm 1 for serial communications. The units displayed for reports and graphs by the PC software can be set on this form. Click "Done" to return to the main menu.



From the main menu, click the "Connect to Payload Meter" button. The PC will try to connect to the payload meter and request basic information from the system. In the event of communications trouble, the PC will try 3 times to connect before "timing-out". This may take several seconds.

Displayed Payload Units



Three options are available for the display of units in the PC software, reports, and graphs:

Short Tons: Payload is displayed in short tons, distances and speeds will be displayed in Miles

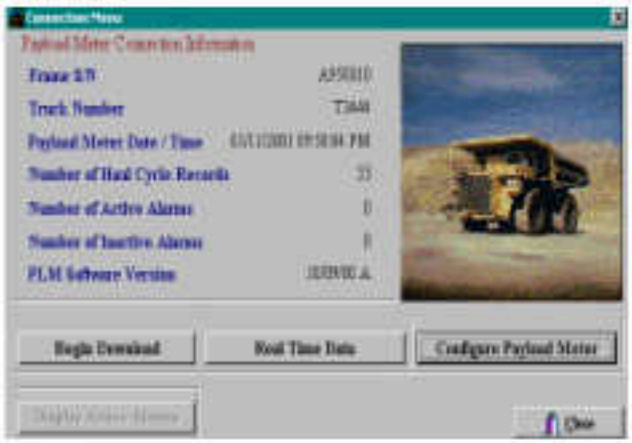
Metric Tons: Payload is displayed in metric tons, distances and speeds are displayed in Kilometers

Long Tons: Payload is displayed in long tons, distances and speeds are displayed in Miles

Time Units

Minutes and Seconds Example:
Five minutes and thirty-two seconds = 5:32
Decimal Minutes Example:
Five minutes and thirty-two seconds = 5.53

Connection Menu



The connection screen displays basic system information to the user.

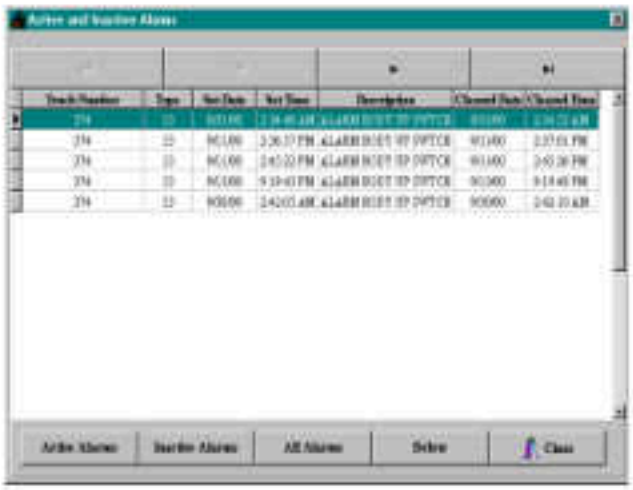
- Frame S/N should agree with the truck serial number from the serial plate located on the truck frame.
- Truck Number is an ID number assigned to the truck by the mine.
- The Payload Meter Date / Time values come from the payload meter at the moment of connection.
- Number of Haul Cycle Records is the number of haul cycles records stored in memory and available for download.
- Number of Active Alarms shows how many alarms are currently active in the system at the time of connection. If there are active alarms, the "Display Active Alarms" button is available.
- Number of Inactive Alarms shows how many alarms have been recorded in memory and are available for download.
- PLM Software Version displays the current version of software in the payload meter.

The information on the connection menu comes from the configuration of the payload meter system on the truck.

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Viewing Alarms

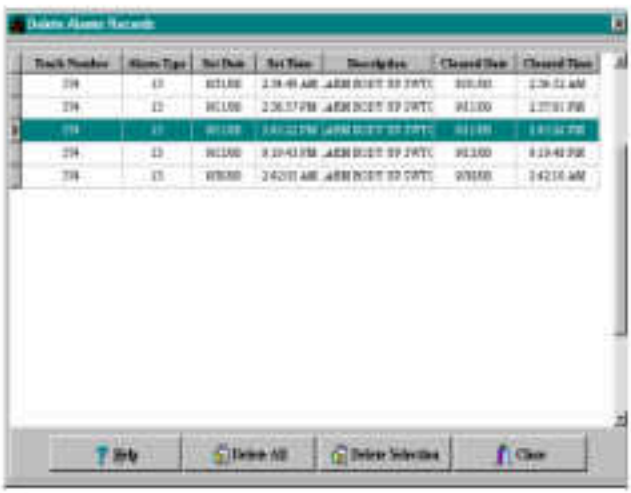
From the Payload Summary screen, click the "Alarms" button to display the alarm screen. The alarms are sorted by the query settings from the Payload Summary screen. Alarms can be displayed as Active or Inactive.



Deleting Alarm Records

To delete alarm records from the main database, press the "Delete" button at the bottom of the "Alarm Display" screen. The program will display a summary of the alarms from the query. To delete an alarm, select one at a time and press the "Delete" button. It is recommended that the query data be exported to a ".zip" file for archival purposes before deletion. Multiple records may be selected by holding down the Shift key. Pressing the "Delete All" button will select all the alarms from the current query and delete them.

NOTE: There is no recovery for alarms that have been deleted from the main database. It is highly recommended that all records be exported and archived in a compressed file format for future reference before being deleted.



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