SHOP MANUAL

KOMATSU

HD785-3

DUNP TRUCK

(PAYLOAD METER - BULT - IN MICRO COMPUTER)

MACHINE MODEL	SERIAL No.
HD785-3	**20001 and up**

CONTENTS

OPERATION

1. INTRODUCTION

- The signals from the pressure sensors, clinometer (not installed on −60°C specification machine), body float detection, and neutral detection are input to the payload meter. These signals are processed by the built-in micro computer, the payload is calculated and displayed on the panel. At the same time, the external display lamps show the loading condition.

- The payload meter always carries out self diagnosis of this system, and if any abnormality or warning is generated, it displays the details.

- Using the control switches on the payload meter, it is possible to display various data, such as the total payload from a certain time, the overall number of cycles, or the abnormalities and warnings that are now being generated or have occurred and have already been corrected.

- The payload meter automatically stores in memory various operating data for the dump truck such as the payload, time, distance, travel speed for each cycle, the date and time that the engine was started and stopped, the date and time of abnormalities or warnings that occurred or were canceled, and the total payload and the overall number of cycles from a certain time.

- These automatically recorded data are retained even when the power is switched off, so if a personal computer is connected to the payload meter through the connection port for the communications cable inside the cab, it is possible to send (download) the data later to a personal computer using cable communication (ANSI/EIA RS-232C).
  In addition, based on these data, it is possible to display the operation data on the screen of the computer, to print out the data, or to convert the data for use with Lotus 1-2-3.

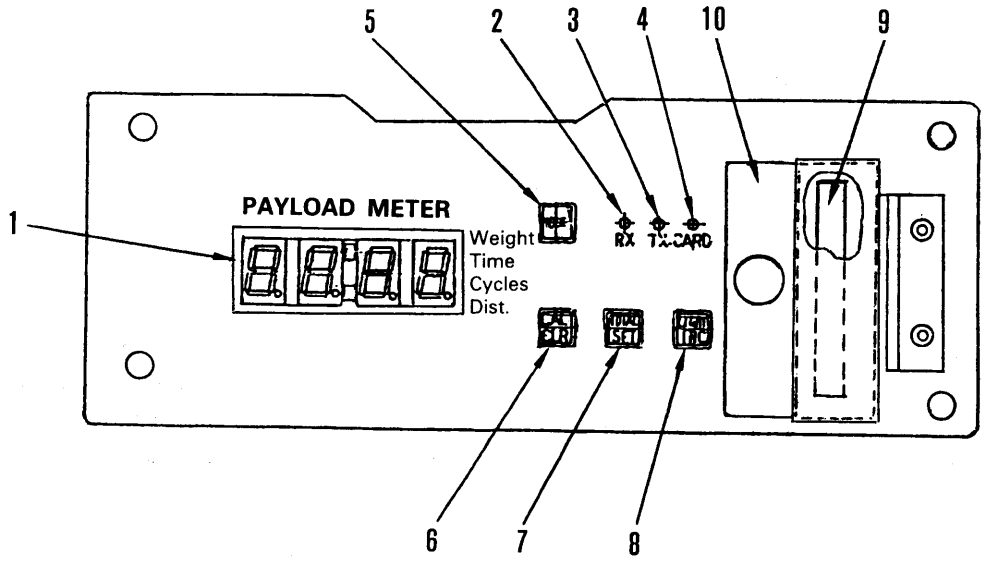
- It is also possible to set a memory card in the payload meter and to write the various data to the memory card. This memory card can then be used to load the data into a personal computer and to carry out the same data processing that is available using cable communications.

★ To download the data, read the data from the memory card to the personal computer, and carry out the data processing, it is necessary to use the personal computer software provided by Komatsu.

- It is possible to set the machine ID, open ID, and speed limit for each payload meter (that is, each machine).

2. GENERAL LOCATIONS

2.1 Front face of controller



① Display panel

② Reception pilot lamp (Rx busy)

③ Transmission pilot lamp (Tx busy)

④ Memory card access lamp (CARD busy)

⑤ Mode switch [MODE]

⑥ Calibration/clear switch [CAL / CLR]

⑦ Total/shift switch [TOTAL / SFT]

⑧ Light/increment switch [LIGHT / INC]

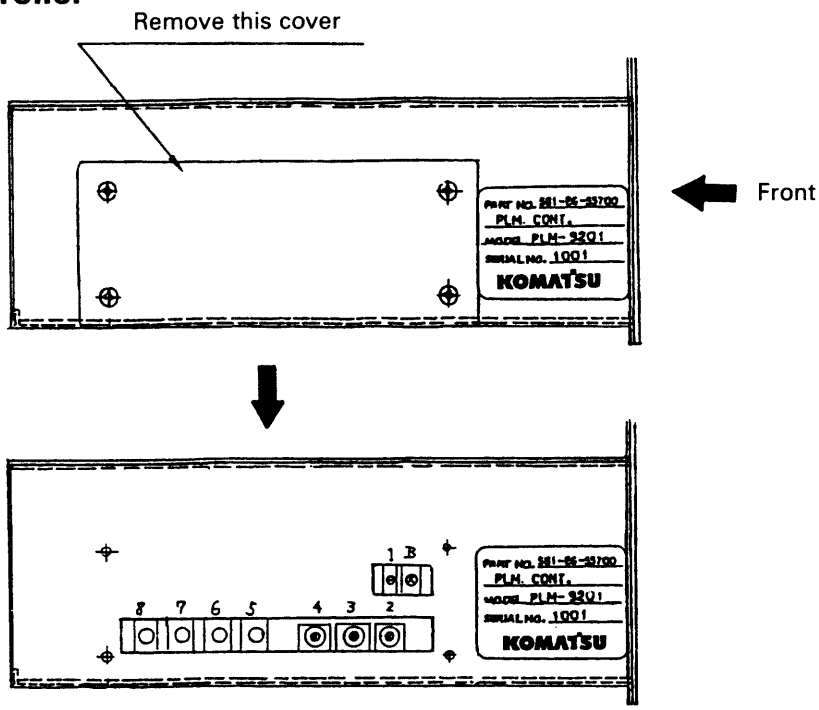
⑨ Memory card

⑩ Cover

When not inserting or removing memory card ⑨, always keep cover ⑩ closed.

★ ③. "Transmission pilot lamp" lights up when the communication cable is not connected to the personal computer or when it is not properly connected.

2.2 Left face of controller



- **DETAILS OF SWITCHES ON LEFT SIDE**

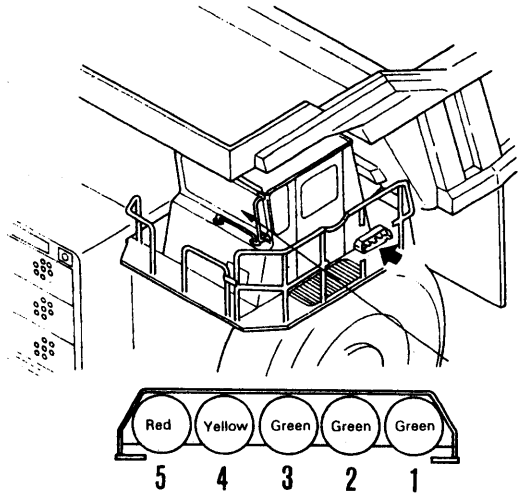
No.	NAME	TYPE	REMARKS
1	PAYLOAD GAIN ADJUSTMENT TRIMMER	ROTARY VOLUME	−20% to +20% (Turn to left) (Turn to right)
2	SPEED REGULATION SWITCH	0 − F 0 − F ROTARY SWITCH	0: 107% − 7: 100% − F: 92%
3	DISTANCE REGULATION SWITCH	0 − F 0 − F ROTARY SWITCH	0: 107% − 7: 100% − F: 92%
4	MODEL SELECTION SWITCH	0 − F 0 − F ROTARY SWITCH	REFER TO MODEL SELECTION CHART
5	USE OF MEMORY-CARD SWITCH	TOGGLE SWITCH	UPPER: NOT USED, LOWER: USED
6	USE OF CLINOMETER SWITCH	TOGGLE SWITCH	UPPER: NOT USED, LOWER: USED
7	WEIGHT UNIT SETTING SWITCH	TOGGLE SWITCH	UPPER: METRIC TONNES LOWER: U.S. TONS
8	NOT USED	TOGGLE SWITCH	—
B	BUZZER VOLUME REGULATION	ROTARY VOLUME	For MIN volume, turn to RIGHT For MAX volume, turn to LEFT

⚠ **The switches on the side are already set when they are shipped. Do not touch any switch except No. 7 and No. B.**

- **MODEL SELECTION CHART**

NO. OF MODEL SELECTION SWITCH	MODEL
0	HD1200-1 STD Large-tire CUMMINS ENGINE
1	HD785-3 STD Large-tire KOMATSU ENGINE
2	
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	
E	

2.3 External display lamps

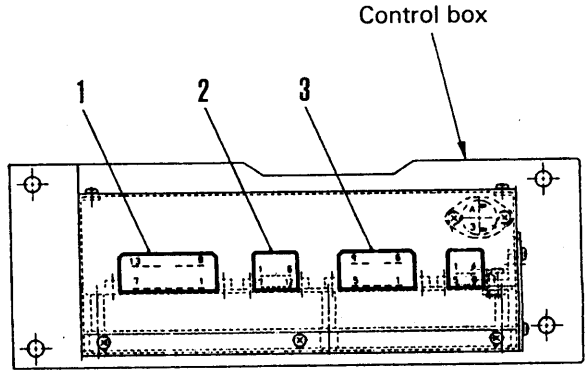


2.4 Communications cable connection port for personal computer

① Connection port for machine wiring harness

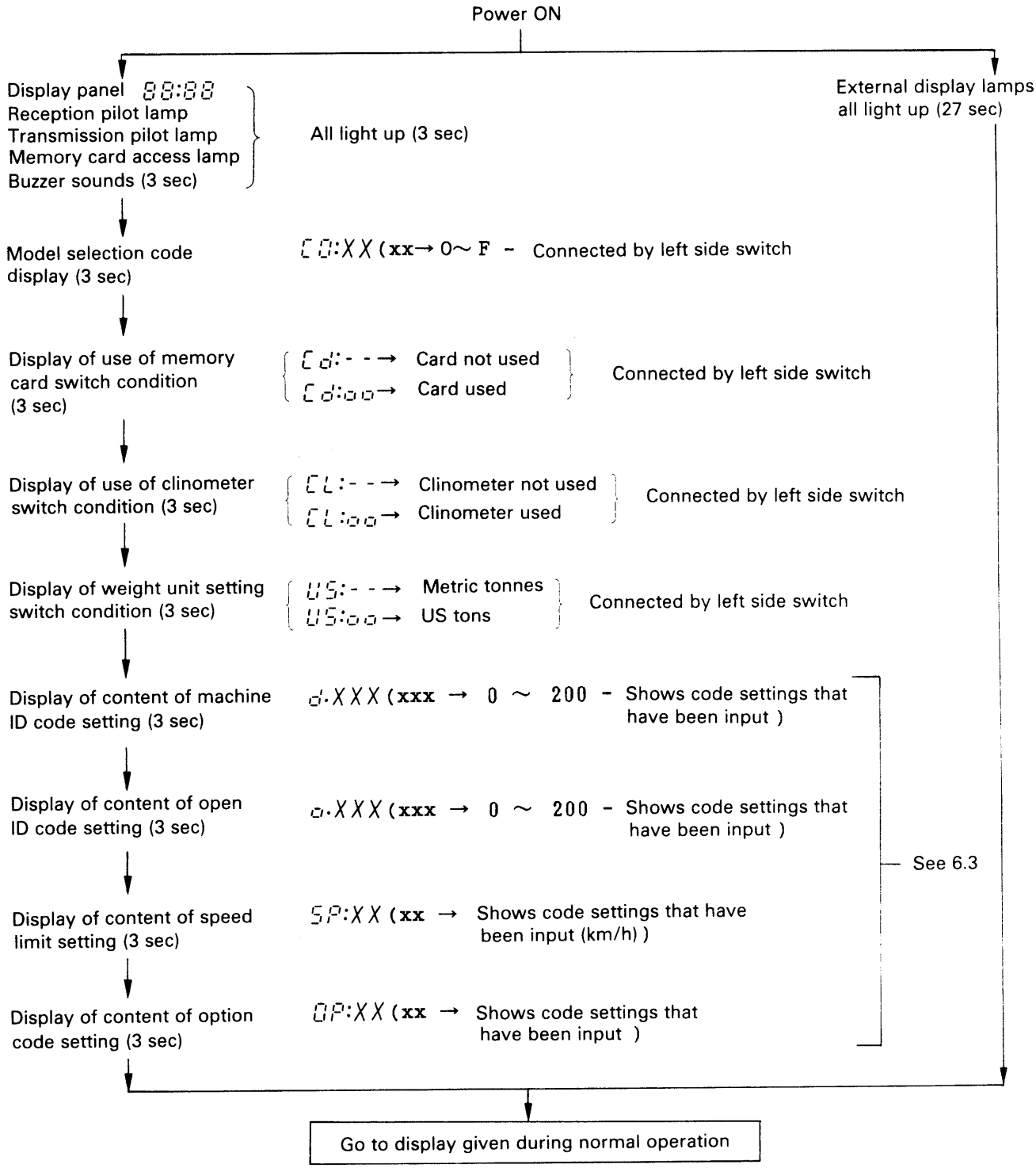
② Connection port for machine wiring harness

③ Communications cable connection port for personal computer



3. CONTENT OF DISPLAY (CONTROLLER, EXTERNAL DISPLAY LAMPS)

3.1 When power is ON



★ If the engine is started during this flow of displays, even if there are items which should still be displayed, the display switches after several seconds to 3.2 Display during normal operations.

3.2 Display during normal operations

Condition of machine		Shift lever position	Dump lever position (*1)	Display panel	External display lamp (see 4)
When empty	Stopped	N	FLOAT	Payload display (*2)	Payload display
	Traveling	Except N	FLOAT	Time display	OFF
During loading, until 50% of standard load is reached	Stopped (*3)	N	FLOAT	Payload display	Payload display and display of estimate
	Traveling	Except N	FLOAT	Payload display	OFF
During loading, after 50% of standard load is reached	Stopped	N	FLOAT	Payload display	Payload display and display of estimate
	Traveling (*4)	Except N	FLOAT	Travel distance displayed in units of meter from 0 to 160 meter (every 5 m)	OFF
When loaded	Traveling	Except N	FLOAT	After completion, time display	OFF
	Stopped (*5)	N	FLOAT	Payload display	Payload display
When dumping (*6)		N	FLOAT → RAISE → LOWER → FLOAT	Total payload display (*7)	OFF
When abnormality or warning is generated See 7		—	—	See 7 (error codes are displayed in order of priority)	See 7

The details of Notes *1 to *7 given in the table are as follows.

(*1) Between the start of the loading operation and the start of the dumping operation, do not operate the dump lever to any position other than FLOAT. If the dump lever is operated to any position other than FLOAT, the data will not be recorded when dumping, or the data will be recorded but the data for time, distance, and speed will not be recorded accurately.
With the display, b-FL may be displayed instead of the total payload when dumping, and after completion of loading, the time display may be given instead of the distance display when starting to travel.

(*2) When the load is less than 50% of the standard payload, 0 ton is displayed.

(*3) If there is no fresh load within 5 minutes from the time of the previous load, both the display panel and the external display lamps will change for the display for "When empty, Stopped" in the table.

(*4) ① If the machine is stopped before traveling 160 m:
both the panel display and the external display lamps will return to the display for "During loading, Stopped" in the table.
② If the load is dumped before traveling 160 m:
both the panel display and the external display lamps will return to the display for "When dumping" in the table.

(*5) When this happens, if loading is carried out again:
Immediately after loading again, the panel display and external display lamp will both return to the display for "During loading, Stopped" in the table.

(*6) If the load that is dumped is not more than 50% of the standard payload, the machine will not think that a load has been dumped.
It will consider it only as a movement of the dump lever. (See *1)

(*7) The display for the total payload (see 5.4 Data for total payload, overall number of cycles) is displayed in units of 100 tons. (The number is rounded to the nearest 100.)
For the method of clearing the total payload (setting the measurement back to 0), see 6.2 Forced display of total payload, overall number of cycles.
During dumping, while the shift lever is at any position other than N [other than HD1200-1] or if the parking brake is OFF [HD1200-1], b-FL will flash. If the dump lever is at any position other than FLOAT from the beginning of the loading operation to the ending of the dumping operation, the data will not be recorded accurately.

The payload meter keeps the existing condition for the machine when it is empty, during loading, and when it is loaded even if the power is turned off, so when the operator starts operation again, the system starts from the existing machine condition.

⚠ When stopping the machine empty, stopping it during loading, and stopping it when loaded, always move the shift lever to the N position after stopping the machine. If you do not do this, the period for stopping will not be calculated and will be included in the travel time when unloaded or the travel time when loaded. As a result, the travel speed will be reduced and the data stored in the payload meter will not be accurate.
In addition, the external display lamps will also stay off.

⚠ In the following cases (1) to (4), the condition of the machine as seen by the payload meter will be different from the actual condition of the dump truck.
(1) When a new controller is installed
(2) When the controller is replaced
(3) When the built-in battery is replaced
(4) If any of the following conditions should occur
① If the external display lamps give the estimate display although no loading is taking place.
② When loading, even if more than 50% of the standard load is loaded and the machine travels, the display gives the time display (it does not display the distance from 0 to 155 m).

In the case of (1) or (4), carry out calibration with the machine empty, then load to close to the rated load. The payload meter will recognize the empty (stopped) condition. The cycle data (see 5) recorded when dumping the load may be partially inaccurate.

- Do not switch the power off during the period from the point for starting to dump the load (dump lever moved from FLOAT to RAISE) to a point 5 seconds after the completion of the dumping operation (dump lever moved from LOWER to FLOAT).
- Even when not dumping, do not switch the power off within 5 seconds after moving the dump lever to the FLOAT position from any position other than the FLOAT position.

⚠

When the starting switch has been at the ON position (power ON) for a long time without the engine being operated, and then the engine is to be started, first turn the starting switch OFF, then start the engine.
If the engine is started without turning the starting switch OFF, the time that the engine was not running with the starting switch at the ON position will be calculated as "Stopped, Empty" time or as "Stopped, Loaded" time.

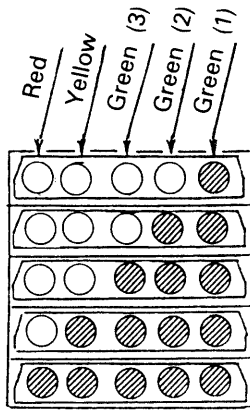
4. EXTERNAL DISPLAY LAMPS

4.1 Display level for lamps

When the external display lamps display the load, the lamps light up as shown in the diagram on the right.

★ To prevent overloading, we recommend you to load to a point where the three green lamps light up. If the yellow lamp lights up, the limit for the specified load has been reached.

⚠ If the red lamp lights up, the machine is overloaded. Do not travel with the machine in this condition.



HD785-3
From 47 tons to 62 tons
From 62 tons to 78 tons
From 78 tons to 86 tons
From 86 tons to 94 tons
Over 94 tons

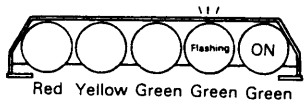
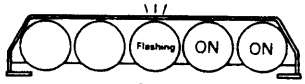
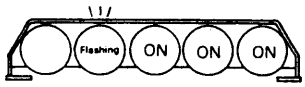
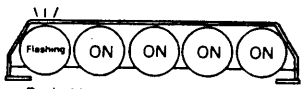
4.2 Estimate display

- The amount loaded changes in steps each time the bucket dumps a load in the dump body. The loads so far are calculated to give the average load, and this calculation is used to estimate what the total load in the dump body will be if one more bucket is loaded. The corresponding lamp flashes to indicate this value to the operator in order to prevent overloading.

- The estimate display is given at the same time as the payload display.

[Example of loading]
1st load: 13 tons
2nd load: 13 tons (total: 26 tons)
3rd load: 13 tons (total: 39 tons)
4th load: 13 tons (total: 52 tons)
5th load: 13 tons (total: 65 tons)
6th load: 13 tons (total: 78 tons)
7th load: 13 tons (total: 91 tons)

If the dump body is loaded in this way, the external display lamps will give the display in the table below.

Number of loads	External display lamps	Remarks
4th load		• The amount that has actually been loaded is 52 tons, so the first green lamp lights up. • The estimated load is 65 (52 + 13) tons, so the second green lamp flashes.
5th load		• The amount that has actually been loaded is 65 (52 + 13) tons, so the first two green lamps light up. • The estimated load is 78 (65 + 13) tons, so the third green lamp flashes.
6th load		• The amount that has actually been loaded is 78 tons, so the three green lamps light up. • The estimated load is 91 (78 + 13) tons, so the fourth lamp (yellow lamp) flashes.
7th load		• The amount that has actually been loaded is 91 (78 + 13) tons, so the three green lamps and the yellow lamp light up. • The estimated load is 104 (91 + 13) tons, so the red lamp flashes.

5. DETAILS OF DATA STORED IN MEMORY OF PAYLOAD METER

- The payload meter stores the data in non-volatile RAM.

- These data are retained even when the power is switched off, so they can be used later as follows.

  ① The data can be downloaded to a personal computer through a cable connected to the RS-232C port, and the personal computer can be used to display these data or to print them out using a printer. The data stored in the personal computer can be processed using Lotus 1-2-3, and can be converted to a data base, so these data can be processed freely and used to make forms.

  ② The data in the non-volatile RAM can be downloaded to the memory card inserted in the payload meter, and the data can be read from this memory card to a personal computer. After reading it to the personal computer, it can be processed in the same way as in Item ①.

★ For details of the processes in Items ① and ②, please see the software manual provided with the personal computer.

- The following shows the details of the data that are stored.

5.1 Cycle data

- One cycle is taken as the time from the point where the load is dumped to the point where the next load is dumped, and the data between these two points is recorded.
- The cycle data is sent to the RAM every time the load is dumped.
- The maximum number of cycles that can be stored in memory for the cycle data is 2900 cycles.

Item	Unit	Range	
Engine operation number	Integer	1-65535	These show the value and set value when the load is dumped
Month	Month	1-12	
Day	Day	1-31	
Time Hour	Hour	24 hour clock	
Time Min	Min	0-59	
Machine ID	Integer	0-200	
Operator ID	Integer	0-200	
Payload	MT OR UST	0-6553.5	
Travel time when empty	MIN	0-6553.5	
Travel distance when empty	km	0-25.5	
Max. travel speed when empty	km/h	0-99	
Average travel speed when empty	km/h	0-99	
Stopping time when empty	MIN	0-6553.5	
Stopping time during loading	MIN	0-6553.5	
Travel time when loaded	MIN	0-6553.5	
Travel distance when loaded	km	0-25.5	
Max. travel speed when loaded	km/h	0-99	
Average travel speed when loaded	km/h	0-99	
Stopping time when loaded	MIN	0-6553.5	
Dumping time	MIN	0-25.5	
Speed limit	km/h	0-99	Shows the set value when dumping (*1)
Warning items for each cycle			
Analog spare 1			See (*2)
Max. electric potential	V		
Min. electric potential	V		
Average electric potential	V		
Analog spare 2			
Max. electric potential	V		
Min. electric potential	V		
Average electric potential	V		
Digital spare 1			
Times for Lo		0-255	
Digital spare 2			
Times for Lo		0-255	

(MT: Metric tonnes, UST: US tons)

(*1): The abnormalities and warnings that occur during the cycle are displayed simply. For details, see the output examples in the software manual.

(*2): The data processing on the personal computer (display, printing, saving, etc.) is independent from the other data in the cycle data, and is handled as spare signal input data.

5.2 Engine ON/OFF data

- When the engine is started or stopped, these data are recorded in RAM.
- The maximum limit for engine ON/OFF data is 115 sets of ON/OFF data.

Item	Unit	Range	
Engine operation number	Integer	1-65535	Consecutive numbers for operation of engine (*1)
Last two digits of year	Year	0-99	Shows when engine was switched ON
Month	Month	1-12	
Day	Day	1-31	
Time Hour	Hour	24 hour clock	
Time Min	Min	0-59	
Last two digits of year	Year	0-99	Shows when engine was switched OFF
Month	Month	1-12	
Day	Day	1-31	
Time Hour	Hour	24 hour clock	
Time Min	Min	0-59	
Total payload	MT OR UST	0-9999000	Total payload from time engine was switched ON to time engine was switched OFF
Overall number of cycles		0-9999	

(MT: Metric tonnes, UST: US tons)

(*1): Every time the engine is switched ON, the engine operation number advances by 1, and is recorded. The engine operation numbers in the cycle data and the engine operation numbers in the abnormality and warning data, which are recorded from the time the engine is switched on to the time it is switched off, are all recorded as the same value.
As a result, when using a personal computer later to compiled the data, it is possible to determine what time during the engine operation the cycle data or system abnormality refers to.

5.3 Abnormality, warning data

- When there is an abnormality or warning generated or cancelled by the payload meter system, these data are recorded in RAM.
- The maximum limit for abnormality or warning data is 230 sets of occurrence and cancellation.

Item	Unit	Range	
Error code	According to 7		
Engine operation number at time of occurrence	Integer	0-85535	(*1)
Number of times of occurrence since engine was switched ON		1-255	
Last two digits of year	Year	0-99	Shows time when problem occurred
Month	Month	1-12	
Day	Day	1-31	
Time Hour	Hour	24 hour clock	
Time Min	Min	0-59	
Engine operation number when canceled	Integer	0-65535	(*2)
Last two digits of year	Year	0-99	Shows time when problem was canceled
Month	Month	1-12	
Day	Day	1-31	
Time Hour	Hour	24 hour clock	
Time Min	Min	0-59	

(*1), (*2): See 5.2 Engine ON/OFF data (*1).

If the engine operation number is 0, it shows that the problem occurred or was canceled when only the power was switched ON (using the starting switch key), and the engine was not started.

5.4 Total payload, overall number of cycles data

- The total payload and overall number of cycles can be calculated and recorded from any desired time with each act of dumping.
- The calculation of both values is started from the point where the ZERO CLEAR switch is pressed for the total payload and overall number of cycles.
- Both total values can be displayed on the monitor panel by using the operation given in 6.2 Forced display of total payload and overall number of cycles. (See the same section for details of the method for ZERO CLEAR.
  The total payload is also displayed automatically when dumping.
- The maximum limit for the total payload and overall number of cycles is 999900.0 metric tonnes or US tons and 9999 cycles.

Item	Unit	Range	
Total payload	MT OR ST	0-999900.0	This shows the total value from the point where ZERO CLEAR was pressed
Overall number of cycles		0-9999	
Last two digits of year	Year	0-99	The date and time show the point where the ZERO CLEAR was pressed
Month	Month	1-12	
Day	Day	1-31	
Time Hour	Hour	24 hour clock	
Time Min	Min	0-59	

(MT: Metric tonnes, UST: US tons)

5.5 Other data

Content	Item	Unit	Range	
Set data for operator check mode	Machine ID	Integer	0-200	Set by switch input operation
	Open ID	Integer	0-200	
	Speed limit	km/h	0-99	See 6.3 Operator check mode
	Option code	Integer	0-4	
Calibration data	Last two digits of year	Year	0-99	Date and time when calibration was carried out
	Month	Month	1-12	
	Day	Day	1-31	
	Time Hour	Hour	24 hour clock	
	Time Min	Min	0-59	
Data written by user	Data 1		20 characters	Comments which can be written freely to the payload meter. However, they can only be input using the cable communications from the personal computer (see the software manual).
	Data 2		20 characters	
	Data 3		20 characters	
	Data 4		20 characters	

6. OPERATION OF SWITCHES

By operating the switches on the payload meter, it is possible to force the following operations.

(1) Calibration
(2) Forced display of total payload and overall number of cycles, forced display of occurrence of abnormalities and warnings.

(3) Operator check mode

  (a) Memory card dump
  (b) Data all clear
  (c) Display of input signal condition, cancel condition during occurrence of abnormality, warning
  (d) Machine ID setting
  (e) Open ID setting
  (f) Speed limit setting
  (g) Option code setting
  (h) Adjusting time, date

(4) Dimming monitor panel

(5) Adjusting buzzer sound level

(6) Setting unit of weight (switching between metric tonnes and US tons)

6.1 Carrying out calibration

(1) When carrying out calibration

Carry out calibration in the following cases.

- When delivering the machine, and once a month
- When the oil and gas pressure for the suspension cylinder have been adjusted. (When the suspension is adjusted.)
- When the chassis has been modified and the weight of the machine when empty has changed more than 100 kg.
- When the suspension pressure sensor has been replaced.
- When anything has been done to suspension related parts.
- When the condition of the machine as judged by the payload meter is different from the actual condition of the dump truck. (See the precautions for 3.2 Display during normal operation.)

(2) Method of carrying out calibration (method of operation)

1. Empty the dump body. When doing this, remove all the mud that is stuck to the dump body.
2. Press CAL/CLR switch ① for at least 2 seconds. (The letters CAL flash)
3. Drive the machine, and when the travel speed reaches 10 km/h, press the CAL/CLR switch ① again (the letters CAL light up). In this condition, continue to drive the machine, and if the display changes to the time display after approx. 30 seconds, the procedure is completed.

★ Carry out this operation on flat level ground.

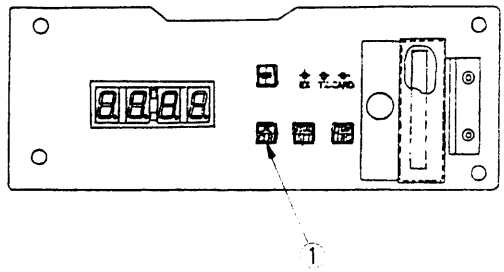
★ Travel in a straight line (travel distance: approx. 100 m)

★ When traveling, keep the travel speed to a range of 5 to 10 km/h.

★ The calibration data is stored in the RAM, and is retained even if the power is switched off.

★ If you want to stop calibration during the operation, when the letters CAL in Step 2 are flashing, press CAL/CLR switch ① and the display will change from a flashing CAL to a flashing SCH. Press the CAL/CLR switch ① again, and the display will return to the normal display.

★ During the normal operation display, calibration can be carried out when the dump lever is at the FLOAT position. However, if some of the abnormality or warning items in Item 7 have occurred, the calibration cannot be carried out. (For details, see Item 7.)



6.2 Forced display of total payload and overall number of cycles Forced display of abnormalities, warnings when they have occurred.

- The payload meter displays the total payload when the load is dumped, but it is also possible to use this operation at other times to display the total payload and overall number of cycles.

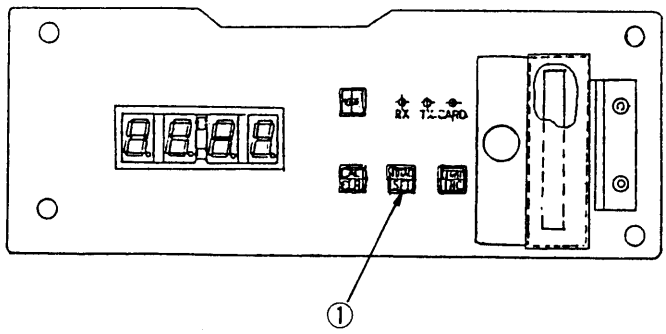
- For the total payload and overall number of cycles, each time the load is dumped, its weight is added. Furthermore, it is possible to clear this figure and return the total to 0 at any time. (See (2))

- However, when this operation is carried out, if any abnormality or warning given in Item 7 has occurred, the error code for that abnormality or warning is displayed. Even if multiple abnormalities and warnings occur, all of the error codes are displayed in turn. (During normal operation, only the item with the highest priority is displayed.)

(1) Method for forced display operation

★ The forced display of the total payload and overall number of cycles, zero clear, and forced display of the warning codes during occurrence can only be carried out if the shift lever is at the N position and the dump lever is at the FLOAT position during display in normal operation.

★ If any new abnormality or warning should occur during the display, the system will return automatically to the display during normal operation.



1. Press TOTAL / SFT switch ①.

1-a If none of the abnormalities or warnings shown in Item 7 are occurring at present:

The total payload is displayed (100 ton units, rounded to the nearest 100 tons) (lights up)

2. Press TOTAL / SFT switch ① again.
   Display the overall number of cycles. (unit: number of times) (lights up)
3. Press TOTAL / SFT switch ① again.
   ":" is displayed (lights up) for 2 seconds, then the display returns to the display for normal operation. (end)

1-b If any of the abnormalities or warnings shown in Item 7 are now occurring:

The error code for that problem is displayed. (flashes)

2'. Press TOTAL / SFT switch ① again.

2'-a. If other abnormalities or warnings are now occurring:

The error code for that problem is displayed. (flashes)

3'. Repeat Step 2'.

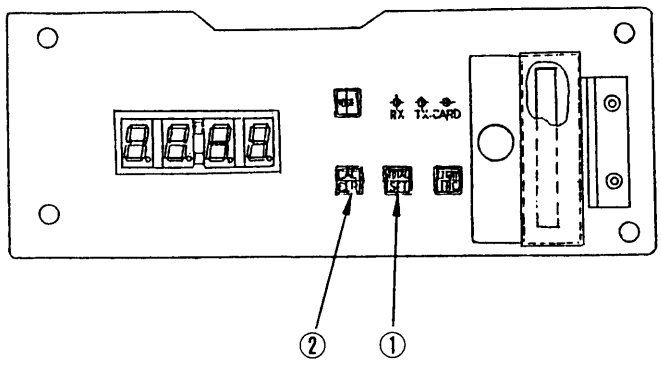
2'-b. If no other abnormalities or warnings are occurring at present:

":" is displayed (lights up) for 2 seconds, then the display returns to the display for normal operation. (end)

- It is possible to clear the total payload and overall number of cycles whenever desired.
  After the values are cleared, the total payload and overall number of cycles is calculated again from 0.

Before clearing the data, download the previous data for the total payload and overall number of cycles to a personal computer or save the data to the memory card if necessary.

(2) Method of clearing total payload and overall number of cycles



1. Carry out the procedure up to Step 1 or Step 2 for Item (1) Method of operation for forced display, and display the total payload and overall number of cycles. (Do not go on to Step 3 of (1).)
2. Press CAL/CLR switch ② for at least 2 seconds.
   The total payload or overall number of cycles display will flash.
3. Press CAL/CLR switch ② for at least 2 seconds again.
   After "0000" is displayed for 2 seconds, if the display returns to the normal operation display, the zero clear operation is completed.

★ The zero clear operation for the total payload and overall number of cycles is carried out at the same time. It is impossible to carry out the zero clear operation individually for only one of these items.

- The maximum limit for the total payload and overall number of cycles is as follows.
  - Total payload: 999900.0 tons
  - Overall number of cycles: 9999 times

★ If either the total payload or overall number of cycles goes above the set value, the error code given in Item 7 is displayed.
(See Item 7 (*1) Notes (4) and (5))
  - ★ Carry out the zero clear operation for the total payload and overall number of cycles before the error code is displayed.
  - ★ If either the total payload or overall number of cycles exceeds the maximum limit, both values will be automatically cleared.
  - ★ Once an error code is displayed, it is impossible to forcibly clear the data or cancel the display until the value exceeds the limit and the data are automatically cleared.

6.3 Operator check mode

- By using the operator check mode, it is possible to forcibly display, set, or correct the following.

ⓐ **Memory card dump**
The data shown in Item 5 is written en bloc to the memory card inserted in the payload meter.
★ This function only works when the No. 5 switch (memory card USED switch) on the left side of the controller is set to the USED condition.

ⓑ **Data all clear**
This function forcibly erases all the cycle data, engine ON/OFF data, and abnormality and warning data.
★ Note that the data for total payload and overall number of cycles are not cleared.

⚠

Before clearing the data, download the necessary data to a personal computer or carry out ⓐ Memory card dump.

ⓒ **Display of abnormalities and warnings during occurrence, cancellation, condition of input signals**
This distinguishes between abnormalities and warnings that are now occurring and abnormalities and warnings that have occurred and have now been corrected and reset, and automatically displays the error code.
It also partially displays the condition of the signals from the sensors that are input to the payload meter.

ⓓ **Setting machine ID**
The dump truck ID is input or corrected and set.
- Range of values that can be set: 0 — 200

⚠

There is no particular effect on the chassis functions of the payload meter if this is not set, but when using cable communications to a personal computer, the communication cannot be carried out if it is not set to the machine ID set in the personal computer.

ⓔ **Setting open ID**
The open ID is input or corrected and set.
- Range of values that can be set: 0 — 200

There is no particular effect on the functions of the payload meter if this is not set.
Example of open ID
- The number showing the location of the work face
- The ID number of the operator

ⓕ **Setting speed limit**

If there is a speed limit on the road that the dump truck uses, it is possible to display a warning on the payload meter if the dump truck exceeds that speed. Input or correct the value to set the speed limit.

- Range of setting: 1.0 — 99 [km/h]

★ If the speed limit warning is not needed, set it to 99.

ⓖ **Setting option code**

The option code can be set by inputting or correcting the value to set the baud to give the desired baud rate for the cable communications function (RS-232C), ON/OFF for the automatic transmission function. The code can be set as shown in the table below.

Option code	Communications baud rate (bit/sec)	Automatic transmission function
0	9600	NO
1	9600	YES
2	1200	NO
3	1200	YES

⚠

★ **When sending (downloading) the data set in the payload (see Item 5) to the personal computer using a cable, always set the option code to 0 or 2 before starting.**

★ We recommend that you normally set the option code to 0.

ⓗ **Setting time, date**

Set the time and date on the payload meter.

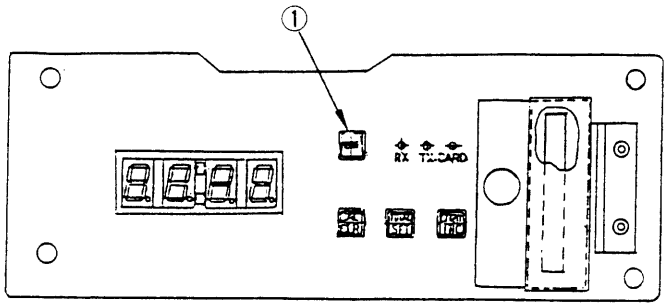
- Of the functions in the operator check mode, the following functions can be set from the personal computer using the download software for the personal computer provided by Komatsu.
  - ○ Setting machine ID
  - ○ Setting open ID
  - ○ Setting speed limit
  - ○ Setting option code
    However, the option code can only be corrected from 0 to 2 or from 2 to 0.
  - ○ Setting time, date

  For details, please see the software manual.

(1) Method of operation

★ The operator check mode is actuated during the normal operation display when the shift lever is at the N position and the dump lever is at the FLOAT position.
However, it does not work during the period from starting the loading operation to completion of the loading operation.

★ **While the operator check mode is being operated, do not move the shift lever to any position other than the N position or the dump lever to any position other than the FLOAT position.**
If these levers are operated, the payload meter will return to the display for normal operation, but in this case, the values input and set using the operator check mode may not be processed correctly.



(*1)

Press [MODE] switch ① for at least 2 sec.
Display

" " shows that this part flashes

Go to a Memory card dump operation

(*1) This function can only be used when the No. 5 switch (memory card USED switch) on the left side of the controller is set to USED.

(*2) This function is actuated by pressing the switch for at least 2 seconds when the No. 5 switch (memory card USED switch) on the left side of the controller is set to NOT USED.

Press [MODE] switch ① (*2)
Display

Go to b Data all clear operation

Press [MODE] switch ①.
Display

Go to operation c Display of abnormalities and warnings during occurrence, cancellation, condition of input signals

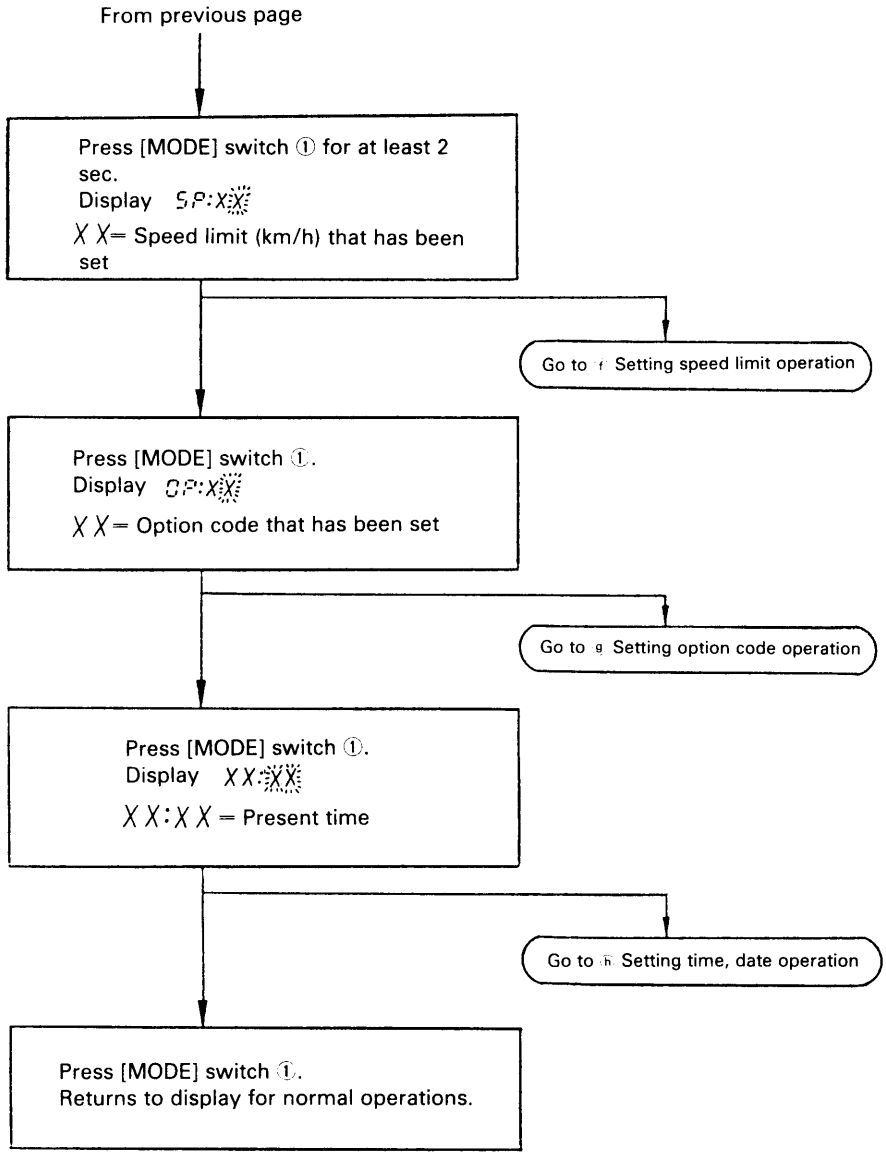
Press [MODE] switch ① for at least 2 sec.
Display
XXX = Machine ID that has been set

Go to d Setting machine ID operation

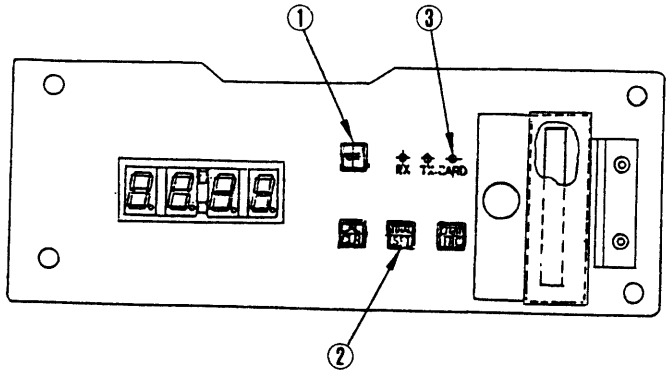
Press [MODE] switch ① for at least 2 sec.
Display
XXX = Open ID that has been set

Go to e Setting open ID operation

Go to next page


From previous page
Press [MODE] switch ① for at least 2 sec.
Display SP:XX
XX= Speed limit (km/h) that has been set
Go to f Setting speed limit operation
Press [MODE] switch ①.
Display OP:XX
XX= Option code that has been set
Go to g Setting option code operation
Press [MODE] switch ①.
Display XX:XX
XX:XX = Present time
Go to h Setting time, date operation
Press [MODE] switch ①.
Returns to display for normal operations.

ⓐ Memory card dump operation



1. When the display is C.dAP , press TOTAL / SFT switch ②.
   Display C.dAP

2. Press TOTAL / SFT switch ② again.
   The panel display goes out and memory card access lamp ③ lights up.
   When the memory card dump operation is completed, it automatically returns to the display for normal operation. (end)

★ If you wish to stop the memory card dump operation when the display is C.dAP, press MODE switch ①. The memory card dump operation is not carried out, and the display returns to the display for normal operations.
★ This function only works when the No. 5 switch (memory card USED switch) on the left side of the controller is set to the USED condition.