

**PARTS & SERVICE
NEWS**

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SUBJECT: MODIFICATION OF VHMS CONTROLLER ON HD465-7

PURPOSE: To introduce modification procedure to replace the VHMS controller on HD465-7 and HD605-7 dump trucks
(Only those vehicles to which the VHMS controller is optionally installed)

APPLICATION: HD465-7 Dump Trucks, Serial Nos. 7027 thru 7030,
7068, 7069

FAILURE CODE: DPHMA

DESCRIPTION:

1. Introduction

Regarding the VHMS controller (7826-11-1000) being optionally installed onto the HD465-7 and HD605-7 dump trucks, since the fill time trend data cannot be updated (※), make the modification being introduced in this Service News to replace the VHMS controller.

(※) Among various data to be acquired from each section of the vehicle body, the "transmission fill time trend data" which is to be acquired from the transmission at every 200 hours can only be acquired at the first time and the second time data and cannot be acquired thereafter, thus updating will not be effected. (Defective software is the cause for the above failure.)

2. Precautions when replacing the VHMS controller

(1) Before starting the replacement work

1) Downloading the VHMS data

Since the failure history data upto the time of making the replacement will be lost when the VHMS controller is replaced, download the accumulated data into a personal computer first.

Also, since it is necessary to input these downloaded data into the WebCARE (data base), transmit the data to Komatsu by e-mail.

The e-mail address is indicated at the low end part of the attached Section II) VHMS setting procedure (after replacement) .

Regarding the downloading method and data transmission method to the WebCare, refer to the Instruction Manual (※) for the VHMS technical analysis tool. If you have any question, contact the mailing address.

(※) This manual is included in the package of the VHMS technical analysis tool box (Part No. 799-608-3211).

2) Confirming and recording the contents of the VHMS settings

After replacing the VHMS controller, it becomes necessary to make re-setting of the data.

In order to make proper setting, check the contents of the current settings and record them onto the attached check sheet.

Carry out the above re-setting work referring to the attached:

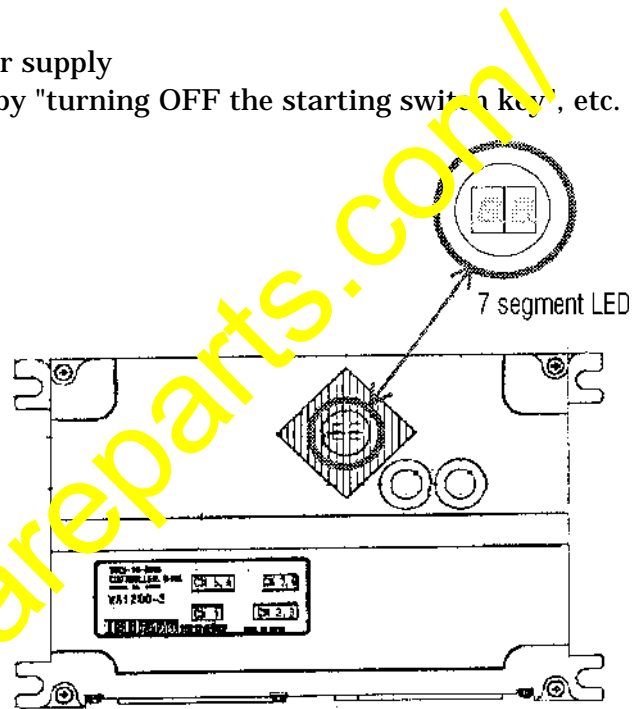
- I) Confirmation procedure for the contents of the VHMS settings (before replacement)
- II) VHMS setting procedure (after replacement)
- III) Work procedure check sheet

3) Properly shutting down the VHMS power supply

- ① Shut down the ordinary power supply by "turning OFF the starting switch key", etc.
- ② Hold the firm power supply at the specified state for at least 2 minutes.

Make sure the "7 segment LED" is being turned off.

- ③ Shut down the firm power supply.
(By disconnecting the connector HM-CN1 of the VHMS controller or by disconnecting the battery connection)



(2) Replacement method, setting method and measures to take after finishing the replacement work

- ① Precautions when replacing the VHMS controller: Actual replacement procedure will be described on the next page and after.

Be careful not to apply excessive power, shocks, etc. to the controller body, harnesses, etc.

Regarding the connectors to the VHMS controller body, disconnect the connector No. HM-CN1, which contains the power line at first, when removing the current VHMS controller and connect it at the last after installing the new VHMS controller.

- ② Settings to make after finishing the replacement work

It is necessary to make data settings to the VHMS controller after it is replaced.

Make these data settings properly referring to the Shop Manual for the HD465-7 and HD605-7.

Setting items:

- Date and time
- Settings of the vehicle model, serial number, etc.
- Settings of the serial numbers of the components

- ③ Handling of the removed current controller after replacement work

Return the removed current controller to the following address:

kenichirou maeda, QA Dept., Electronics Division, Komatsu Ltd.

3-25-1, Shinomiya, Hiratsuka-shi, Kanagawa-ken, 254-8555, Japan.

Phone: 81-463-22-8486

Fax: 81-463-22-8400

3. Replacement procedure

- (1) Downloading the data and confirming and recording the contents of the current settings (data)

Park the vehicle on a level and hard ground and, using the VHMS technical analysis tool, download the accumulated data in the VHMS controller into a personal computer. Regarding the downloaded data, transmit it to the address indicated at the low end part of the attached Section "II) VHMS setting procedure (after replacement)" by e-mail.

After that, check the contents of the settings in the VHMS controller before replacement and record the contents of the settings onto the "III) Work procedure check sheet".

- (2) Shutting down the vehicle power supply

Turn off the starting switch key to shut down the power supply to the vehicle.

- (3) Replacing the VHMS controller

After at least 2 minutes are passed from the above (2), replace the VHMS controller being installed to the rear box positioned inside the operator's cab following the procedure described below.

- ① Removing the cover (Refer to Fig. 1.)

Remove the cover (569-06-86121) of the rear box positioned inside the operator's cab. (All the removed parts are being reused and be careful not to lose them.)

- ② Disconnecting the harness ((Refer to Fig. 2.)

Disconnect the connectors in turn starting from the connector No. HM-CN1.

- ③ Removing the VHMS controller (Refer to Fig. 3.)

Remove the mounting bolts (01010-80885) and washers (01643-30823) for the VHMS controller (7826-11-1000) being installed to the bracket (569-06-86131) in the rear section toward the RH side of the operator's cab, to remove the controller from the bracket.

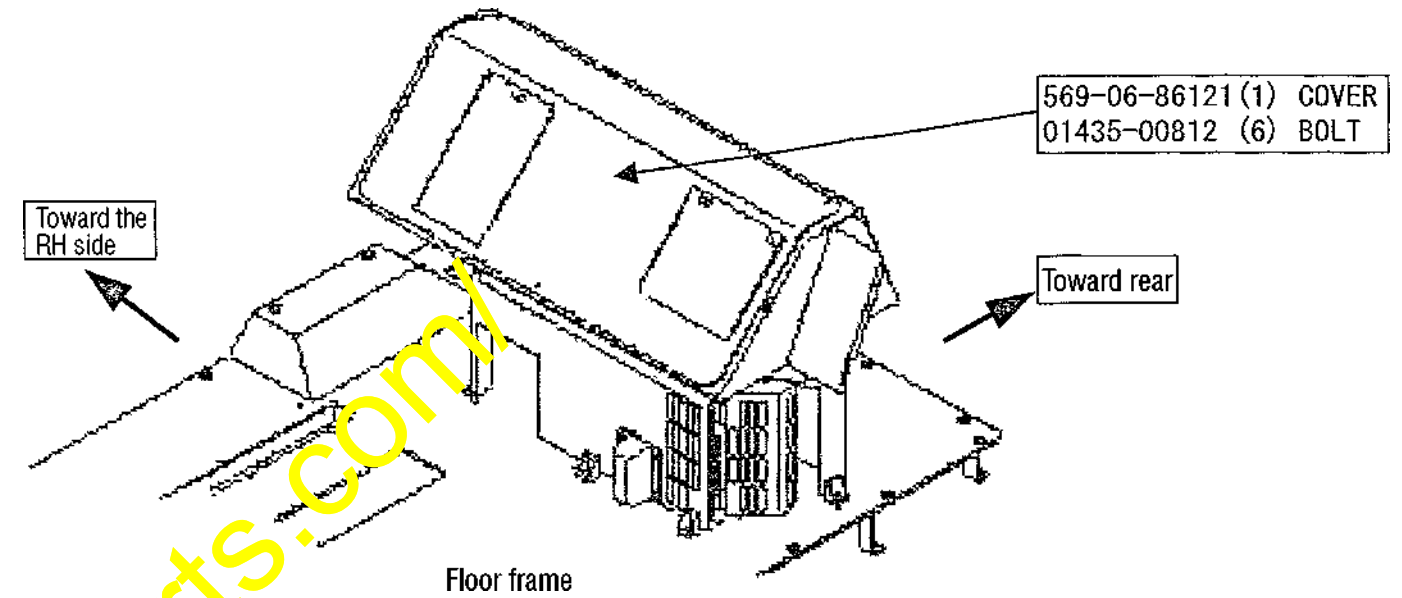


Fig. 1

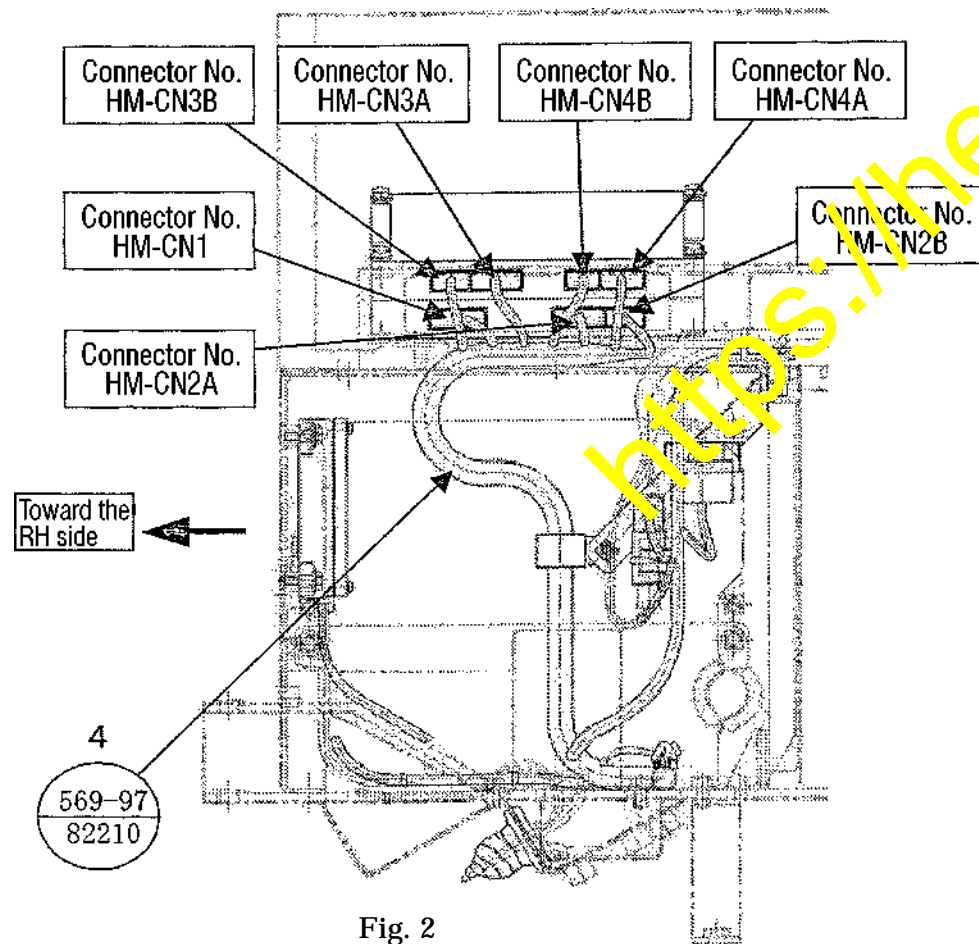


Fig. 2

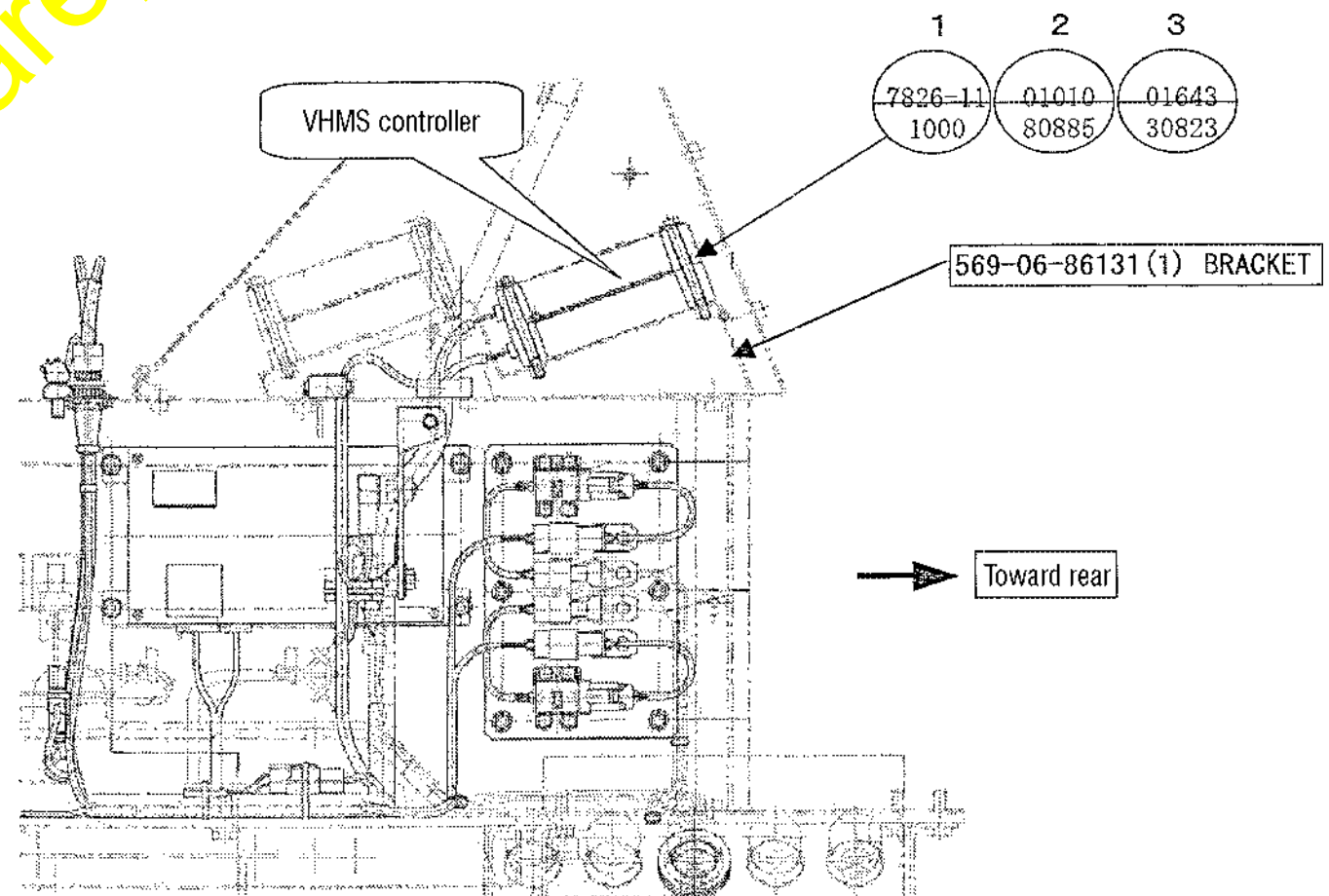


Fig. 3

- ④ Installing the new VHMS controller
Fasten the new VHMS controller to the bracket using the bolts and washers which have been removed as per the above Item ③.
※ Pay attention to the direction of the controller.
- ⑤ Installing the harness
Connect the connectors in the reversed procedure to the procedure per the above Item ② so that the connection of the connector No. CN1 may become the last time.
※ After finishing the connection work, re-check if the connections have been properly made, if the connectors have been inserted securely and if excessive power is not being applied to the harness.
- ⑥ Installing the cover
Set the cover to its original position and fasten the cover using the mounting bolts which have been removed as per the above Item ①.

(4) Setting the vehicle body data

Turn on the power supply for the vehicle, and referring to the Shop Manual for the HD465-7 and HD605-7, make proper settings of the following items.
Confirm the settings making marks on "III) Work procedure check sheet".

1) Calendar settings

--- Current date and time

[The following settings should be made to the same values as the recorded ones, which have been checked before replacing the VHMS controller, and recorded on the "III) Work procedure check sheet".]

2) Time zone settings

3) Confirmation and settings for the vehicle model name, etc.

--- Vehicle model, type, serial number of the vehicle

4) Variation code settings

"IV) Table of the variation codes" is indicated on the last page of this document and refer to the table as needed.

5) Setting of the Serial No. of the engine


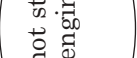





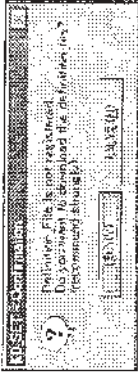

6) Setting of the Serial No. of the transmission ass'y

(5) Sending the downloaded data and returning the removed VHMS controller

- Transmit the downloaded data which have been acquired as per Section 4-(1) to the WebCARE Support Center by e-mail.
(The e-mail address is indicated at the low end part of the attached Section "II) VHMS setting procedure (after replacement)".)
- Also, fax the "III) Work procedure check sheet" which have been filled as per Section 4-(4) to the WebCARE Support Center.
- Return the current VHMS controller which has been removed as per Section 4-(3)-③ to the following address.

To: kenichirou maeda, QA Dept., Electronics Division, Komatsu Ltd.
3-25-1, Shinomiya, Hiratsuka-shi, Kanagawa-ken, 254-8555, Japan.
Phone: 81-463-22-8486 Fax: 81-463-22-8400

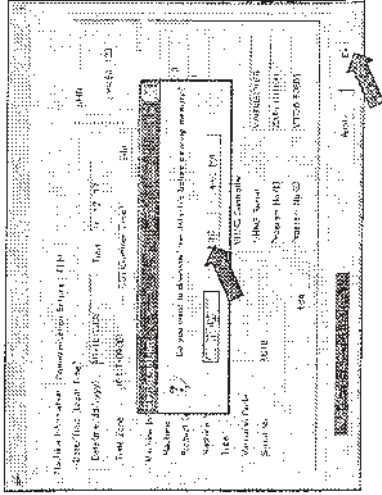
I) Confirmation procedure for the contents of the VHMS settings
(Applicable vehicle model: HD465-7 and HD605-7 dump trucks)

Timing	Work step	Explanations
<p>Before starting the work</p> <p>Turn OFF the starting switch key. </p> <p>Turn ON the starting switch key. </p> <p>Do not start the engine as yet. </p> <p>Turn OFF the starting switch key. </p>	<p>① Connecting the personal computer and the VHMS controller</p> <p>② Checking that the VHMS controller is operating properly</p> <p>③ Starting up the VHMS initial setting tool (VHMS technical analysis tool box) (Automatic updating of the definition data)</p> <p>④ Confirming and recording the contents of the current settings in the VHMS controller</p> <p>Check the basic data of the vehicle being set into the current VHMS controller and record the contents on the attached "III) Work procedure check sheet" (in the column for the confirmed values for the current settings). (The contents inside the frames in the picture shown on the RH side.)</p>	<p>* Although the downloading connectors are located at 2 places (inside the operator's cab and in the ground level download box), perform the setting works inside the operator's cab. 799-608-3220 Cable 799-608-3211 Program for the setting work (VHMS technical analysis tool box) Lap top type personal computer</p> <p> </p> <p>Connect the cable (799-608-3220) to the downloading connector (VHMS) of the VHMS controller. Connect the other end of the above cable to the RS232C terminal of the lap top type personal computer.</p> <p>Check that the VHMS controller is operating properly (*) on the 7 segment LED indication window of the VHMS controller. * The LED indications showing that the VHMS controller is operating properly are that the 7 segment LED will start flashing in rotating state and, after that, the 7 segment LED will indicate count ups in hexadecimal notation when the starting switch key is turned ON. For more details, refer to the Shop Manual.</p> <p>Start the personal computer and click the icon for the "VHMS initial setting tool". </p> <p>Regarding the installation method for the VHMS initial setting program, refer to the separate "Program Operation Manual".</p> <p></p> <p>After finishing the starting up operation, input the ID (Service ID) at first. ◆ Service ID (for the HD465-7 and HD605-7: 732611000) Select the "Set up" </p> <p>This "ID" is the part number of the VHMS controller. Be careful since the ID is different depending on the vehicle models.</p> <p>1) Confirmation of the vehicle model, type and serial number 2) Confirmation of the variation code 3) Confirmation of the engine type and serial number 4) Confirmation of the serial number of the transmission assy -- The serial number of the transmission assy is set as "Engine Serial No. 2". 5) Confirmation of the time zone</p> <p>Click "Exit" to end the program after completing the confirmation and recording works.</p> <p>Check the 7 segment indication on the inspection window of the VHMS controller. -- After turning off the starting switch key, the indication will continue for several seconds. Make sure that this (saving process) indication turns off completely.</p> <p>1) It is normal if the LED on the VHMS controller indicates the SF and SH (memory processing time) before ending the program (by turning off the power supply of the VHMS controller) when the starting switch key is turned OFF. 2) In case the power supply of the VHMS controller is turned off immediately after the starting switch key is turned OFF, the firm power supply is not being applied.</p>

II) Setting procedure for the VHMS controller (when replaced)
(Applicable vehicle model: HD465-7 and HD605-7 dump trucks)

Timing	Work step	Explanations
<p>Turn OFF the starting switch key.</p> <p style="text-align: center;">➔</p> <p>Turn ON the starting switch key.</p>	<p>① Connecting the personal computer and the VHMS controller</p> <p>② Checking that the VHMS controller is operating properly</p>	<p>Connect the cable (799-608-3220) to the downloading connector (VHMS) of the VHMS controller.</p> <p>Connect the other end of the above cable to the RS232C terminal of the lap top type personal computer.</p> <p>Check that the VHMS controller is operating properly (*) on the 7 segment LED indication window of the VHMS controller.</p> <p>* The LED indications showing that the VHMS controller is operating properly are that the 7 segment LED will start flashing in rotating state and, after that, the 7 segment LED will indicate count ups in hexadecimal notation when the starting switch key is turned ON. For more details, refer to the Shop Manual.</p>
<p>Do not start the engine as yet.</p> <p style="text-align: center;">➔</p>	<p>③ Starting up the VHMS initial setting tool (VHMS technical tool box)</p> <p>(Automatic updating of the definition data)</p>	<p>Start the personal computer and click the icon for the "VHMS initial setting tool".</p> <p>Regarding the installation method for the VHMS initial setting program, refer to the separate "Program Operation Manual".</p> <p>In case the definition data of the vehicle to which the connection is made do not exist in the "Analysis tool" in the personal computer, the VHMS controller will download the data automatically to update the "Analysis tool". Press the "YES" to update it.</p>
<p>④ Confirming and recording the contents of the current settings in the VHMS controller</p> <p>Check the basic data of the vehicle being set into the current VHMS controller and record the contents on the attached "III) Work procedure check sheet" (in the column for the confirmed values for the current settings). (The contents inside the frames in the picture shown on the RH side.)</p> <p style="text-align: center;">➔</p>	<p>④ Confirming and recording the contents of the current settings in the VHMS controller</p> <p>Check the basic data of the vehicle being set into the current VHMS controller and record the contents on the attached "III) Work procedure check sheet" (in the column for the confirmed values for the current settings). (The contents inside the frames in the picture shown on the RH side.)</p>	<p>Be careful since this program cannot be started when the VHMS controller and the personal computer are not being connected.</p> <p>After finishing the starting up operation, input the ID (Service ID) at first.</p> <ul style="list-style-type: none"> ◆ Service ID (for the HD465-7 and HD605-7: 7826111000) <p>Select the "Data Clear and Set up".</p> <p>"Analysis ID" is the part number of the VHMS controller. Be careful since the ID is different depending on the vehicle models.</p> <ol style="list-style-type: none"> 1) Setting the calendar and time zone. <ul style="list-style-type: none"> --- Set the current date, time and time zone. 2) Setting the vehicle model name, etc. <ul style="list-style-type: none"> --- Set the vehicle model, type and serial number. 3) Setting the variation code (Refer to the attached "4) Table of the variation codes".) 4) Setting the serial number of the engine 5) Setting the serial number of the transmission ass'y <ul style="list-style-type: none"> --- Set the serial number of the transmission ass'y to the "Engine Serial No. 2". <p>Finally, click "OK" and, after that, click "Apply" to register these settings.</p> <p>When "Apply" is clicked, the table of the contents of the settings will be indicated and, if the contents are correct, click "OK". (Referring to the attached "III) Work procedure check sheet", check if the contents inside the frame in the picture shown on the RH side are correct.)</p>

II) Setting procedure for the VHMS controller (when replaced)
 (Applicable vehicle model: HD465-7 and HD605-7 dump trucks)

Timing	Work step	Explanations
<p>Turn OFF the starting switch key.</p>	<p>⑤ Storing the contents of the settings</p> <p>When the starting switch key is turned off, the saving process to the VHMS controller will be completed.</p>	<p>Then a column asking you if you want to download the data, click "NO" and, after that, click "Exit" to end the program.</p> 
<p>Turn ON the starting switch key.</p> <p style="text-align: center;">↓</p> <p>Turn OFF the starting switch key.</p>	<p>⑥ Checking that the VHMS controller is operating properly</p>	<p>Check the 7 segment indication on the inspection window of the VHMS controller. -- After turning off the starting switch key, the indication will continue for several seconds. Make sure that this (saving process) indication turns off completely.</p> <p>1) It is normal if the LED on the VHMS controller indicates the SF and SH (memory processing time) before ending the program (by turning off the power supply of the VHMS controller) when the starting switch key is turned OFF.</p> <p>2) In case the power supply of the VHMS controller is turned off immediately after the starting switch key is turned OFF, the firm power supply is not being applied.</p>
<p>Turn ON the starting switch key.</p> <p style="text-align: center;">↓</p> <p>Turn OFF the starting switch key.</p>	<p>Completion of the replacement work for the VHMS controller and notification to Komatsu</p>	<p>Check and confirm that the VHMS controller is operating properly (*) on the 7 segment LED indication window of the VHMS controller. * The LED indications showing that the VHMS controller is operating properly are, when the starting switch key is turned ON, the 7 segment LED will start flashing in rotating state and, after that, the 7 segment LED will indicate count ups in hexadecimal notation. For more details, refer to the Shop Manual.</p> <p>Check and confirm the 7 segment indication on the inspection window of the VHMS controller. -- After turning off the starting switch key, the indication will continue for several seconds. Make sure that this (saving process) indication turns off completely.</p> <p>1) It is normal if the LED on the VHMS controller indicates the SF and SH (memory processing time) before ending the program (by turning off the power supply of the VHMS controller) when the starting switch key is turned OFF.</p> <p>2) In case the power supply of the VHMS controller is turned off immediately after the starting switch key is turned OFF, the firm power supply is not being applied.</p>
		<p>By the above, the setting work for the VHMS controller is completed. At the same time as making the notification of finishing the work, send the "III) VHMS controller (when replacing) - Work procedure check sheet" to Komatsu by fax.</p> <p>VHMS • WebCARE Support Center Service Business Development Group, Customer Support Department, Headoffice of Komatsu Ltd. Phone: 03-5561-2765 Fax: 03-5561-4766 e-mail: webcare@komatsu.co.jp</p>

III) VHMS controller (when replacing) -- Work procedure check sheet
 (Applicable vehicle model: HD465-7 and HD605-7 dump trucks)

Setting data:	(day),	(month),	(year)
Fax transmission date:	(day),	(month),	(year)
DB/Branch name:			
Filled by:			

Setting steps	Check items	Confirmation of the current settings		Results (after replacement)	
		yes	no	yes	no
① Connection between the personal computer and the VHMS controller	Are they connected securely?	/		yes	no
② Confirmation of the proper operation of the VHMS controller	Is the VHMS controller operating properly? (After flashing in rotating state, the 7 segment LED will indicate count ups in hexadecimal notation.)	/		yes	no
③ Starting up of the VHMS controller initial setting tool	Is the mode selection for the setting tool:	/		/	
	"Set up" while conducting the confirmation work?	yes	no	yes	no
④ Setting of the VHMS controller ④-1 Confirmation of the vehicle data ④-2 Setting of the vehicle body data At this stage, the basic data of the vehicle are being confirmed and set to the VHMS controller.	"Data Clear and Set up" while performing the setting work?	/		yes	no
	Is the date (mm/dd/yyyy) [month/day/year] today's date?	/		yes	no
	Is the time (clock) showing the present time?	/		yes	no
	Has the time zone (GMT + (****)) been inputted correctly?	/		yes	no
	Is the product group correct?	/		yes	no
	Is the vehicle model name coincides with the actual vehicle?	/		yes	no
	Is the vehicle type coincides with the actual vehicle?	/		yes	no
	Has the variation code selection been set correctly?	/		yes	no
	Has the serial number been inputted correctly?	/		yes	no
	Has the engine model been inputted correctly?	/		yes	no
⑤ Confirmation of the contents of the settings	Are the contents of the settings correct?	/		yes	no
⑥ Saving of the contents of the settings	Did the LED (7 segment) turn off after the saving process is finished?	/		yes	no
⑦ Confirmation of the function (operation) of the VHMS controller	Has the LED operated properly?	/		yes	no

Sending address: VHMS • WebCARE Support Center
 Service Business Development Group, Customer Support Department,
 Headoffice of Komatsu Ltd.
 Phone: 03-5561-2765
 Fax: 03-5561-4766
 e-mail: webcare@komatsu.co.jp

IV) Table of the variation code settings

(Applicable vehicle model: HD465-7 and HD605-7 dump trucks)

Vehicle state				Settings		
If the VHMS controller is installed or not.	If the vehicle is equipped with the built-in PLM function of the VHMS controller or not.	If the PLM-II (card type payload meter) is installed or not.	If the vehicle is equipped with the payload function or not.	Setting position of the Rotary SW 1 of the transmission controller	Setting position of the Rotary SW 2 of the transmission controller	Setting of the VHMS controller variation code
VHMS controller is not installed.	—	PLM-II is not installed.	No	4	F	—
VHMS controller is not installed.	—	PLM-II is installed.	Yes		F	—
VHMS controller is installed.	Not equipped with the built-in PLM function.	PLM-II is not installed.	No		B	ST
VHMS controller is installed.	Equipped with the built-in PLM function.	PLM-II is not installed.	Yes		9	PV
VHMS controller is installed.	Not equipped with the built-in PLM function.	PLM-II is installed.	Yes		r	P2

<https://hespareparts.com/>