

# PARTS & SERVICE NEWS

REF NO.	AT01060
DATE	May 23, 2001

Page 1 of 3

**SUBJECT:** REPAIR OF VHMS CONTROLLER ON WA1200-3

**PURPOSE:** To expound on the steps for replacing the existing VHMS controller with new improved one and the latter's setting

**APPLICATION:** WA1200-3 Wheel Loaders, Serial Nos. 50001 thru 50008

**FAILURE CODE:** DA00Z9

## DESCRIPTION:

### 1. Introduction

WA1200-3 wheel loaders are equipped with a VHMS controller as part of their standard specifications. The VHMS controller is a device to control the CGC display and to record the history of machine operation.

The VHMS controller is constantly powered direct by a battery and its function is to compile and record the day's operation in the VHMS memory, after the engine is switched off, while checking data consistency with the record up to the previous day. This work takes a certain amount of time, i.e. approx. 10 seconds. For this reason, cautions have to be taken in advance, when disconnecting the power to the VHMS. Such disconnection usually takes place with machines equipped with a battery isolator and a turbo-timer, when switching off the engine for emergency, right after the turbo-timer has been set in operation, or when the battery terminal is disconnected immediately after switching off the starting switch, say for welding. In such case the compilation and write-in work in the VHMS memory is interrupted, resulting in the controller program being damaged and the initial screen remaining in the CGC display unchanged.

Hence be sure to provide an interval of more than two minutes after the engine is switched off and before disconnecting all the electric circuits.

In order to solve this trouble, Komatsu has prepared for a new VHMS controller with software strengthened to protect the program from such damage, even when the worse comes to the worst. Another improvement incorporated in this new controller is "a failure frequency display mode", aimed at avoiding using up the memory capacity with the same failures that occur repeatedly. Moreover the number of memory for failure history has been increased from 400 up to 600.

This Parts and Service News describes the procedures for you to follow when replacing the existing VHMS controller with this new one.

(Note) It is recommended that you refer to another Parts and Service News titled "CAUTION FOR TURNING OFF CONSTANT POWER SWITCH OF VHMS CONTROLLER ON WA1200-3"(Service News No. AT01043) together with this News.

### 2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
7826-10-2006 (7826-10-2005)	Controller (Controller)	Replacement	1 (1)	

### 3. Precautions for Controller Replacement

#### (1) Before starting with the replacement

##### ① Download the VHMS data.

First download the data on failure history in the existing VHMS controller that have been stored up to that moment, since they will likely be lost by the replacement. Next send them to WebCare.

For the data downloading and transmission to WebCare, follow the instructions set forth in a separate special manual (PC tool manual).

##### ② Disconnect the normal VHMS power source.

- i) Terminate the normal power supply by turning off the ignition key.
- ii) Maintain constant power supply for the controller at least for more than two minutes.
- iii) Then terminate constant power supply for the controller by disconnecting the power source.

For more details, refer to the next page.

#### (2) Procedures for replacement and setting of VHMS system and actions after replacement

① Precautions for replacement: Concrete procedures are shown on the page following. Replace the existing VHMS system with a new one, taking care that no excessive force or shock is applied to the main body, the harness, etc. Relative to the VHMS connectors, disconnect CN1 first and connect it last, since it serves as a power supply cable, too.

##### ② Controller setting after replacement

When a VHMS controller is replaced, data setting has to be done anew. Make correct setting, referring to the relative shop manual.

Items to be newly set

- Date, Time, Unit and User ID (Setting Screen)
- Model Name and Serial No. (Machine Serial No. Setting Screen)
- Component Serial No. (Component Serial No. Setting Screen)
- Service Meter Setting (HOW TO SET SERVICE METER OF VHMS)

Be careful when making this setting, as it cannot be undone, once it has been set.

##### ③ Disposal of replaced VHMS controller

Return the replaced VHMS controller to the Overseas Service Department, Komatsu Ltd. in accordance with its request for return of fault parts. When returning the controller, be sure to attach a tag to it, declaring that it is the VHMS controller replaced under this Parts and Service News.

#### 4. Replacement Procedures

##### (1) Download the data on failure history.

Park the machine on the flat and solid ground, and then proceed to download the data on failure history stored in the VHMS controller, using the PC tool.

##### (2) Switch off the starting switch for the vehicle.

##### (3) Replace the installed VHMS controller.

Min. two minutes after the process in Item (2) above, start with dismantling the VHMS controller installed under the operator's seat (See Fig 1) in the following steps.

###### ① Remove the outer cover. (See Fig 2)

Remove the outer cover by loosening outer cover securing bolts (3) and (4).

###### ② Pull out the VHMS controller mount. (See Fig 3)

Pull out the VHMS controller with the mount toward the machine front after loosening bolt (10) fixing the controller mount.

###### ③ Disconnect the wire harness.

Start with the CN1 connector for constant power supply.

###### ④ Dismantle the installed VHMS controller. (See Fig 3)

Detach the installed VHMS controller from the mount by loosening bolt (11) fixing the controller to the mount.

###### ⑤ Mount a new replacement VHMS controller.

Mount a new replacement VHMS on the mount and fix it to the mount with bolt (11).  
(Note) At that time, pay attention to the direction of the controller.

###### ⑥ Install the wire harness.

Connect all the connectors, ending up with the CN1 connector, exactly in the reverse order of the Item ③ above.

※: Check again to make sure that the wiring is correct, that all the connections are made properly and that no excessive force is applied to the wire harness.

###### ⑦ Fasten the VHMS controller mount.

Push back the VHMS controller mount to the original position and fasten it with bolt (10).

※: Check again to make sure that the wiring is correct, that all the connections are made properly and that no excessive force is applied to the wire harness.

###### ⑧ Fix the outer cover.

Set the outer cover rightly and secure it with bolts (3) and (4).

##### (4) Controller Setting

Switch on the power for the vehicle and set the newly installed VHMS controller correctly for the following items of information in reference to the relevant shop manual.

- Date, Time, Unit and User ID (Setting Screen)
- Model Name and Serial No. (Machine Serial No. Setting Screen)
- Component Serial No. (Component Serial No. Setting Screen)
- Service Meter Setting (HOW TO SET SERVICE METER OF VHMS)

**(Note) Be careful when making this setting, as it cannot be undone, once it has been set.**

##### (5) Transmission of Data on Failure History

- Send the data downloaded in the Item (1) above to WebCare.
- Return the VHMS controller dismantled in the Item ④ above to the Overseas Service Department of Komatsu Ltd.

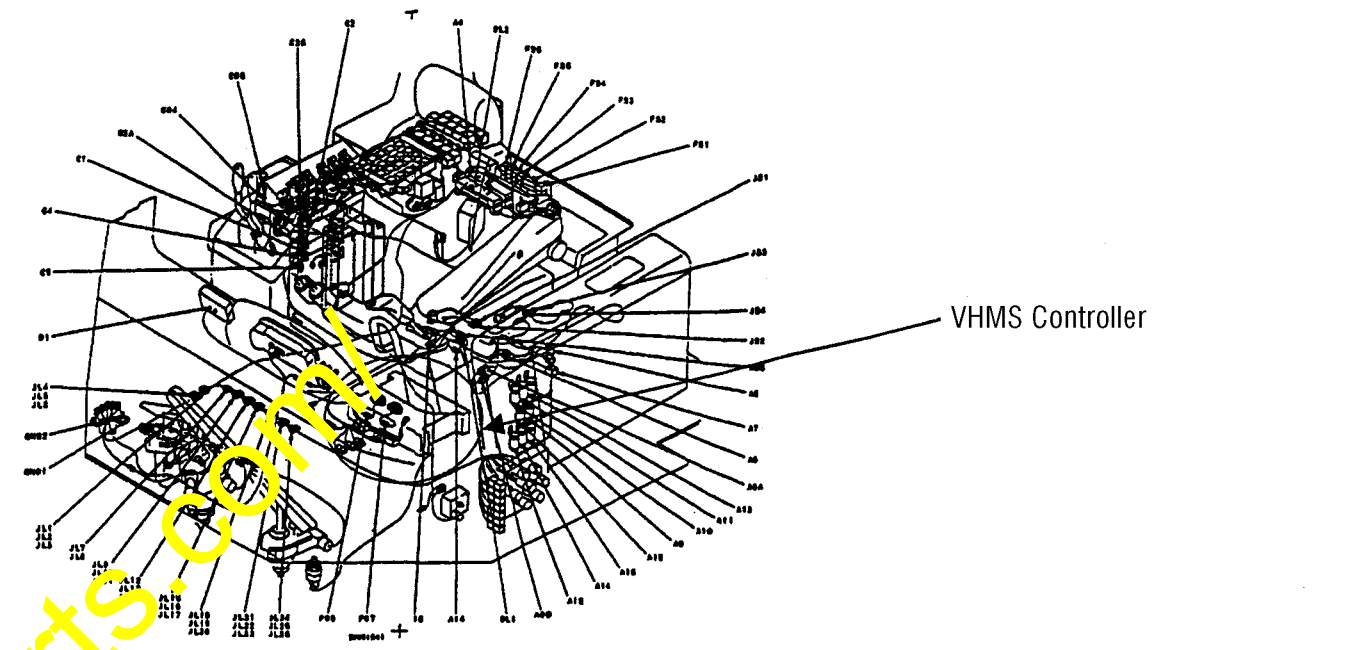


Fig 1

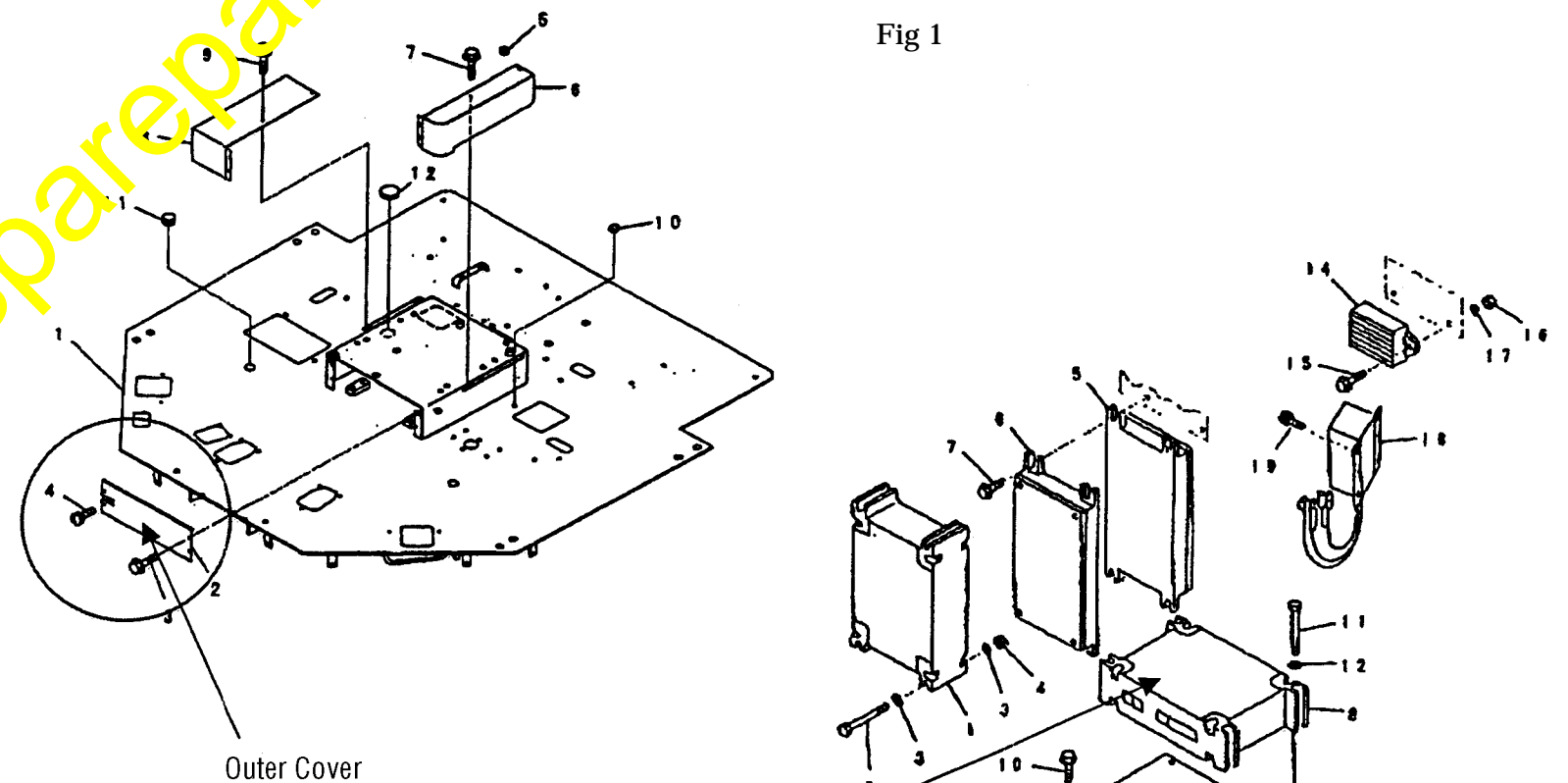


Fig 2

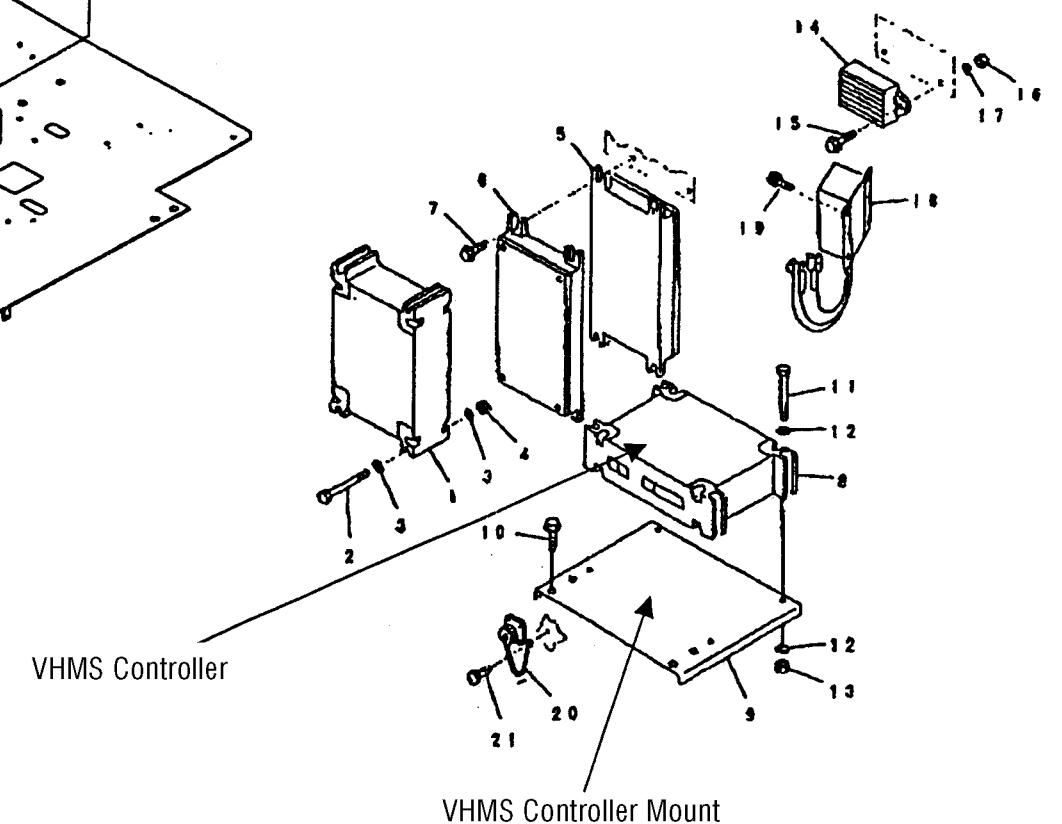


Fig 3