

PARTS & SERVICE NEWS

REF NO. AT04238

DATE Sept. 28, 2004

Page 1 of 6

SUBJECT: THE PARTS TO IMPROVE THE OPERATIONABILITY OF WA700-3 AJSS

PURPOSE: To inform field service personnel

APPLICATION: WA700-3 Wheel Loader, S/N 51001 thru 51026

FAILURE CODE: R200MC

DESCRIPTION:

1. Introduction

This Parts & Service News will introduce the parts and modification procedure to improve the straight forward traveling characteristics of the WA700-3 AJSS, same as the modification made on the WA800-3 and WA900-3.

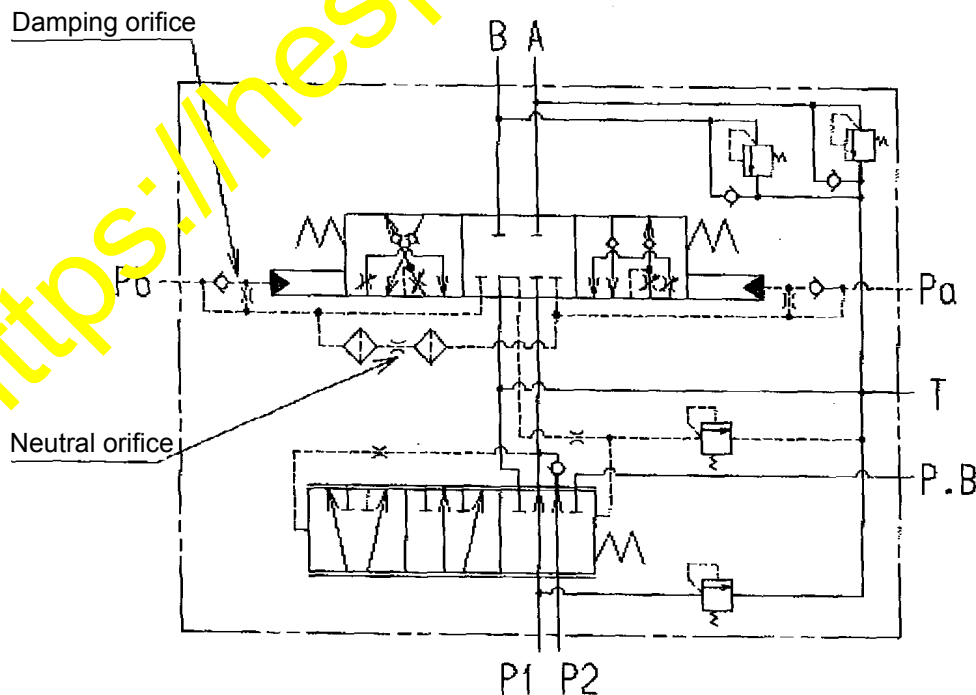
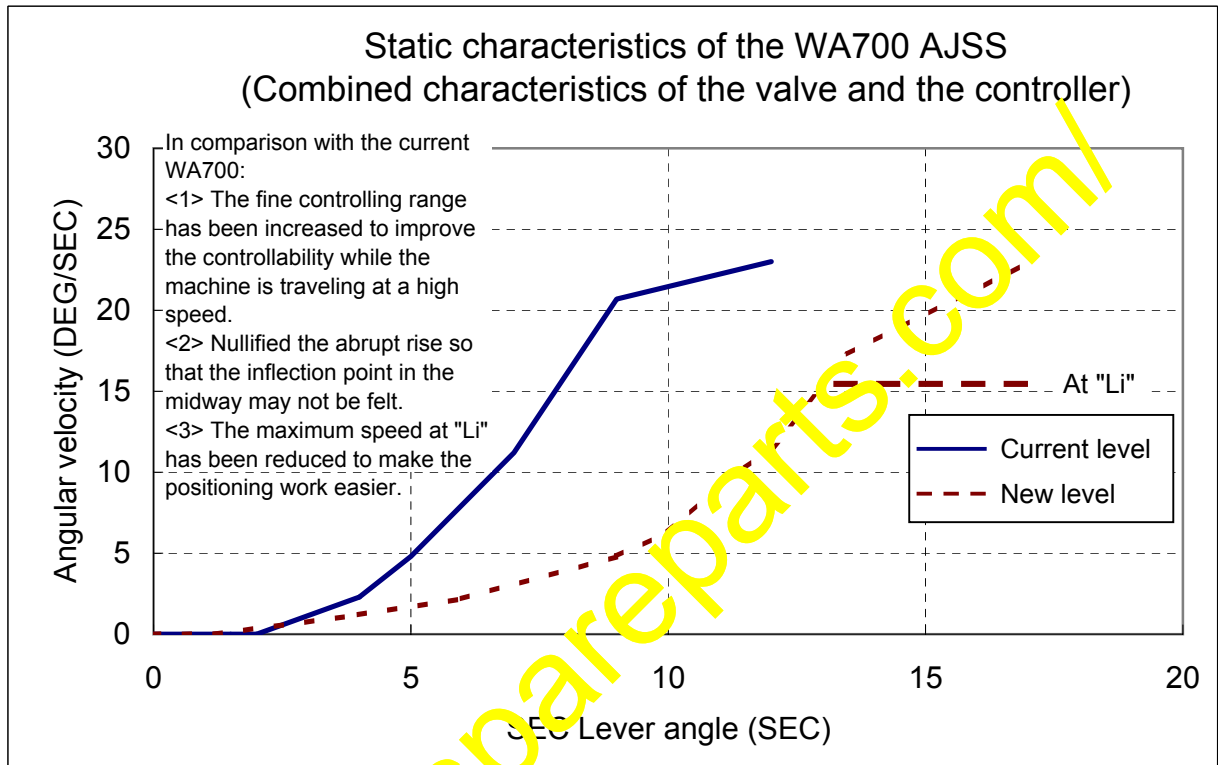
2. List of parts

Part No.	Part Name	Q'ty	Remarks
428-S33-3230 (428-S33-3210)	Stg.Valve	1	
7823-16-2002 (7823-16-2001)	Controller	1	
07002-22034	O-ring	2	To be replaced with the new parts when installing the valve
07000-F3042	O-ring	3	To be replaced with the new parts when installing the valve
07000-F3035	O-ring	4	To be replaced with the new parts when installing the valve
07000-E3048	O-ring	1	To be replaced with the new parts when installing the valve
07000-F3032	O-ring	2	To be replaced with the new parts when installing the valve

1. Details of the modification

This modification is to be made to solve the abrupt movement problem occurring when the fine steering operation is made or when it is turned back by:

- <1> changing the flow characteristics and damping characteristics of the steering valve, and
- <2> changing the control characteristics of the "transmission and steering" controller, thus nullifying the abrupt movements occurring when the steering operations and turning back operations are made and making the fine control of the machine easier.



Changing the damping characteristics
 In comparison with the current WA700:

- <1> The damping orifice has been made smaller: $\Phi 1.3 \rightarrow \Phi 0.8$
- <2> The neutral orifice has been made larger: $\Phi 0.6 \rightarrow \Phi 1.1$, thus dulling the response when the steering turning back operations are made to reduce the shocks.

Fig. 1

2. Modification procedure

Applicable machine model: WA700-3 (AJSS)

1. Preparations before starting the modification work

- 1) Prepare the replacing parts. Refer to the Parts list.
- 2) On a level horizontal and hard ground, lower the work equipment to touch the ground, turn on the parking brake, stop the engine, set the safety bar and apply chocks to the tires.
- 3) Operate the joystick lever for 2 to 3 times to release the remaining pressure in the piping.
- 4) Slowly loosen the cap of the hydraulic oil tank to release the internal pressure of the tank.
- 5) Remove the lower cover of the operator's cab so that the replacement work can be made easily.
- 6) Clean the surroundings of the steering valve and the piping section, and be careful so that dust does not enter into them while carrying out the replacement work of the parts.

2. Replacement of the steering valve and removal of the 2-way restrictor

- 1) Removal of the steering valve (current valve)
Remove the steering valve referring to the section "Removal of the steering valve ass'y" in the chapter "Disassembly and assembly" in the Shop Manual.
- 2) Installation of the steering valve (new valve)
Install the new steering valve referring to the section "Installation of the steering valve ass'y" in the chapter "Disassembly and assembly" in the Shop Manual.
At this time, replace the O-rings (4 types, 8 pcs. as per Fig. 2) for each port of the steering valve with new parts.

	Q'ty
<1> 07002-22034 (Pa and Pb port)	2
<2> 07000-F3042 (PB,P1 and P2 port)	3
<3> 07000-F3035 (A and B port)	2
<4> 07000-E3048 (T port)	1

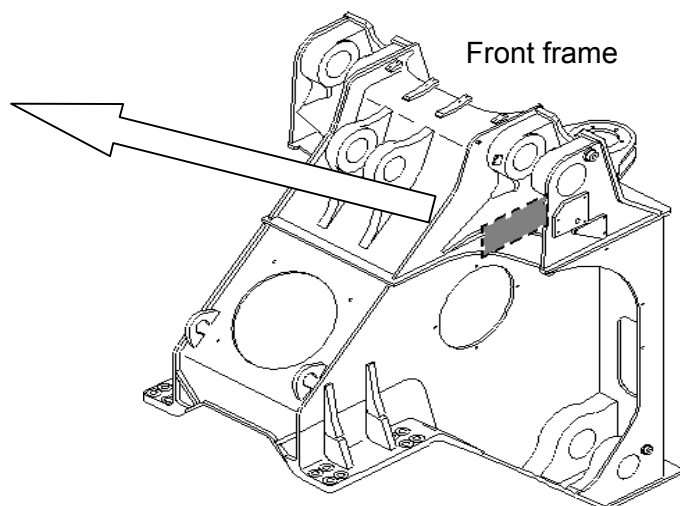
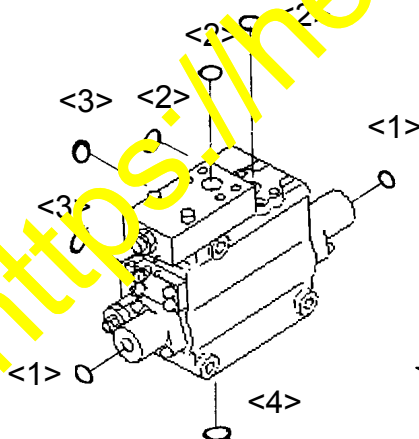


Fig. 2

3) Removal of the 2-way restrictor

Remove the following parts from the LH and RH steering cylinder pipings. (Refer to Fig. 3.)

<6>	428-62-11370	VALVE	Q'ty	2
<7>	205-60-51310	SPRING	Q'ty	2
<8>	205-60-51320	SEAT	Q'ty	2
<9>	04065-02812	RING,SNAP	Q'ty	2

Replace the following O-rings with the new parts which have been ordered referring to the parts list and install the piping to the original state.

<3>	07000-F3035	O-RING	Q'ty	2
<5>	07000-F3032	O-RING	Q'ty	2

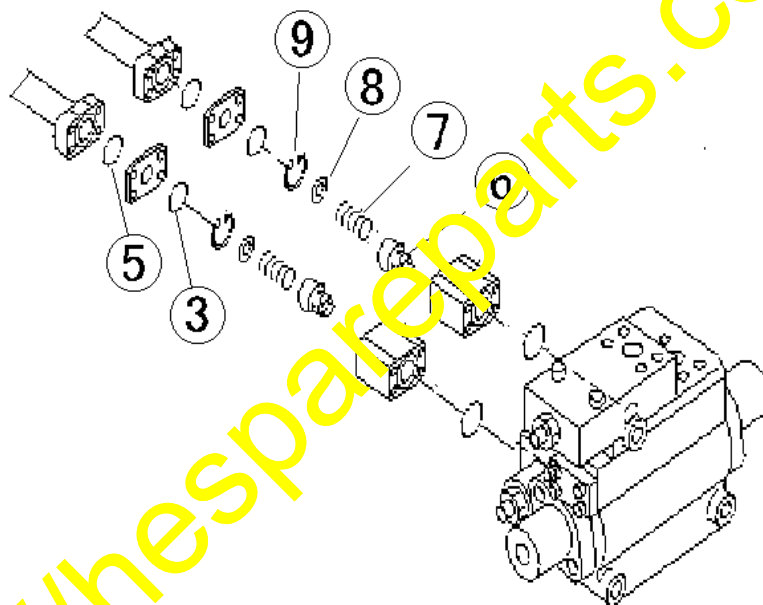


Fig. 3

- 4) Supply oil to the hydraulic oil tank and tighten the cap.
- 5) Install the lower cover of the operator's cab.
- 6) Carry out air bleeding from the pump referring to the chapter "Testing and adjusting" in the Shop Manual.
- 7) Release the safety bar and the tire chocks.
- 8) Start the engine and carry out air bleeding from the steering circuit referring to the chapter "Testing and adjusting" in the Shop Manual
- 9) When making the steering operations for the purpose of air bleeding from the circuit, make sure that the steering operations can be carried out properly.
- 10) After finishing the air bleeding work, check if oil leakage is occurring or not.
- 11) Check the oil level of the hydraulic oil tank and supply oil if it is in short.

3. Replacement of the transmission and steering controller

- 1) Once again, lower the work equipment to touch the ground, turn on the parking brake, stop the engine, set the safety bar and apply chocks to the tires.
- 2) Remove the outer cover of the control stand case located on the RH side in the operator's cab.
- 3) Disconnect the harness connectors C1 thru C5 indicated in Fig. 4.
- 4) Remove the mounting bolts and remove the controller ass'y.

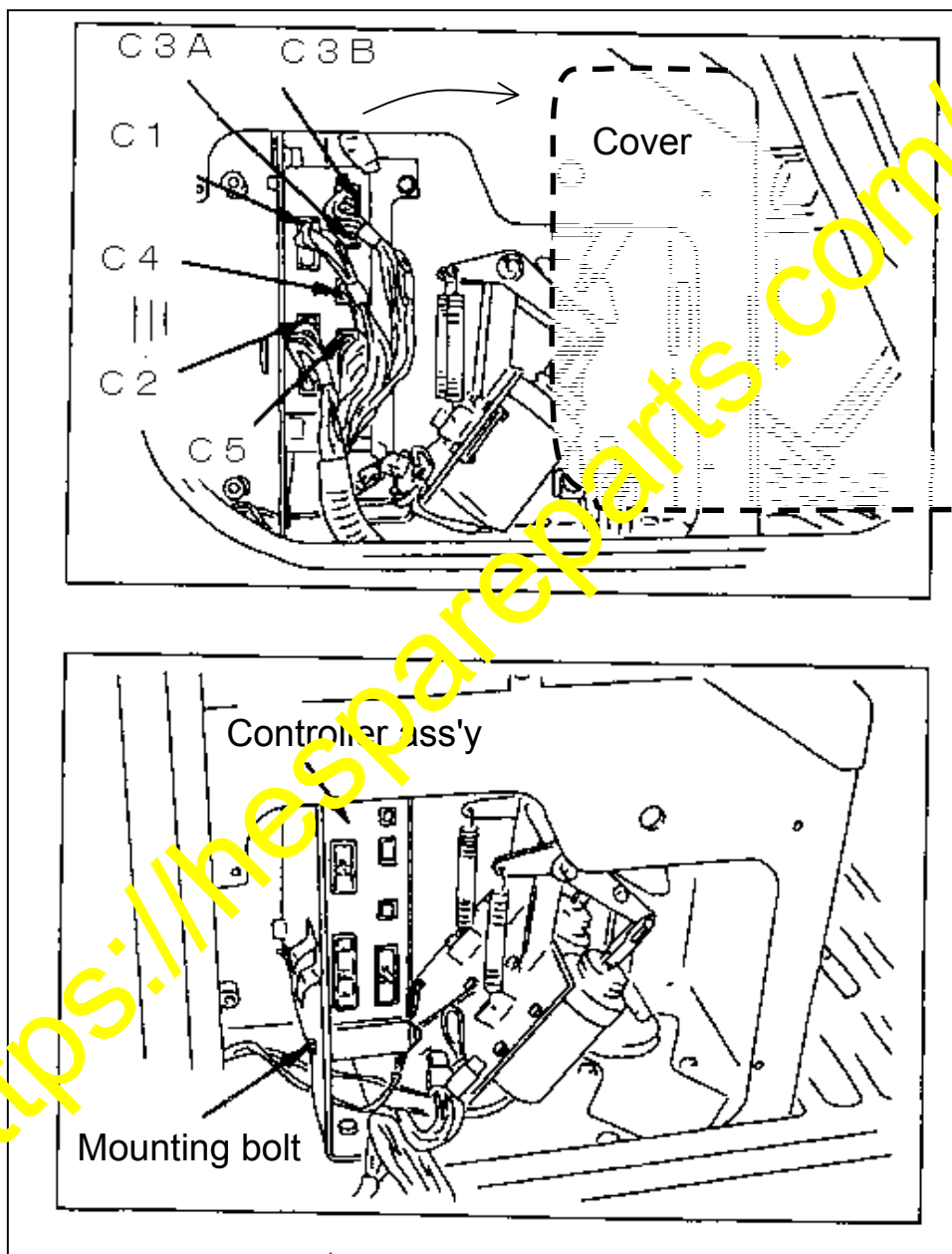


Fig. 4

- 5) Install the new controller for this modification in the reversed procedure to the removal procedure.

4. Adjustment of the steering lever angle sensor and the frame angle sensor

- 1) Position the machine straight forward (visually) and set the joystick steering lever <1> to the neutral position.
- 2) Set the steering lock lever <2> to the lock position (to the lower side).

- 3) Start the engine and keep it at the Lo-Idling speed.
- 4) Slide the arm rest to the auxiliary position (rear end). (At this time, the console switch will be turned ON.)
- 5) Set the steering lock lever <2> to the FREE position (to the upper side).

- 6) When "peep, peep, peep" sound is heard about 1 second later, the adjustment has been completed properly. Do not move the steering lever <1> during the above Processes 1) thru 6).

- 7) In case the adjustment cannot be completed properly, check the mounting direction of the frame angle sensor <4> and the lever angle sensor before carrying out the adjustment work once again.

- 8) After finishing the adjustment work, make sure an error code is not indicated on the monitor.

5. The modification work has been finished by the above.

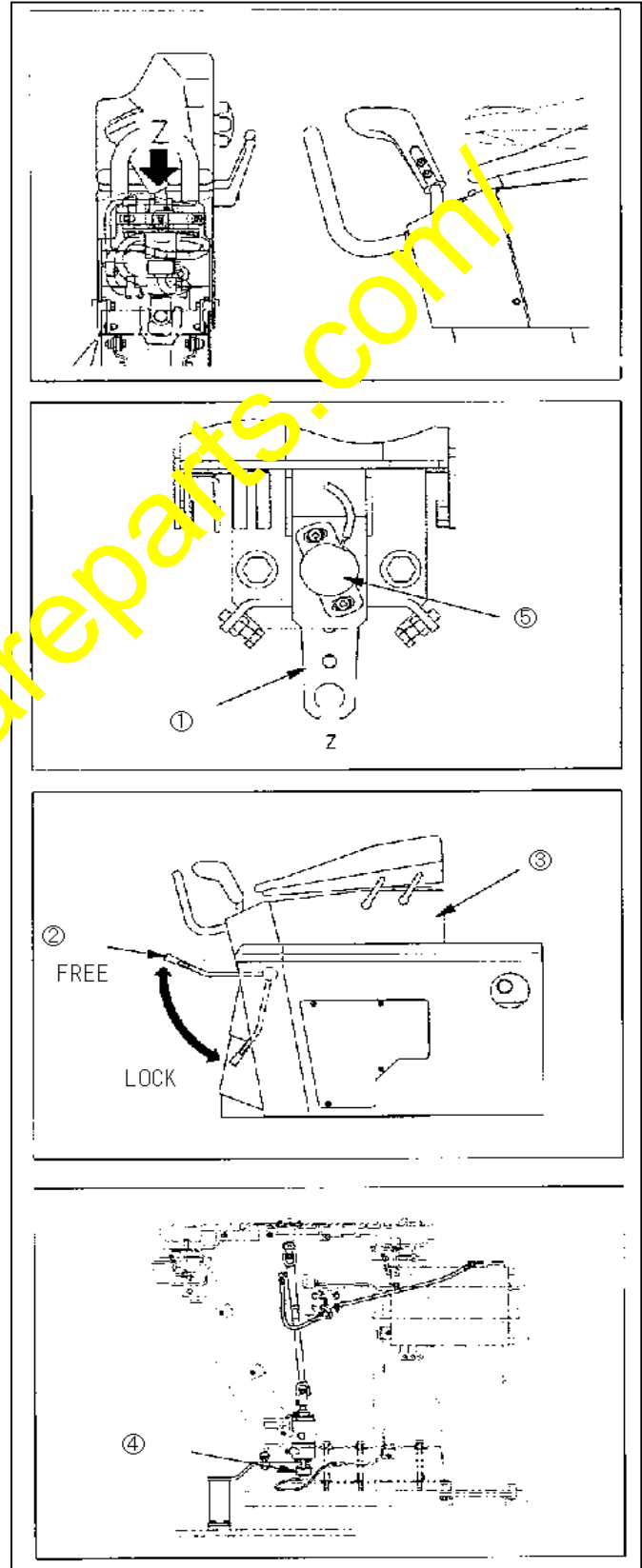


Fig. 5