

# PARTS & SERVICE NEWS

REF NO.	AT04421
DATE	JANUARY 20, 2005

**SUBJECT:** MODIFICATION PROCEDURE TO REPAIR THE RETURNING TROUBLE OF THE WORK EQUIPMENT CONTROL LEVER

**PURPOSE:** To inform field service Personnel

**APPLICATION:** GD555-3A: 10001-11064  
GD555-3C: 50001-51045  
GD655-3: 1001-4117  
GD655-3A: 10001-11034  
GD655-3C: 50001-51101  
GD655-3Y: 4001-4117  
GD675-3A: 10001-11017  
GD675-3C: 50001-51011

**FAILURE CODE:** 4491MX

## DESCRIPTION:

### Introduction

Work equipment levers on the GD655-3 do not return to the neutral position even when the operator releases his hand from the work equipment lever, carry out the modification introduced in this parts and service news.

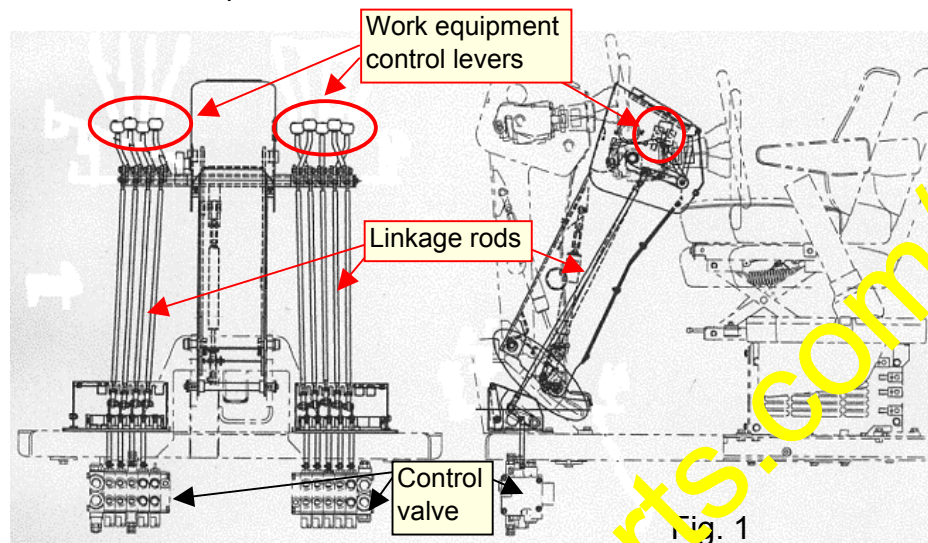
### List of Parts

Part No.	Part Name	Purpose of Part	Q'ty	Remarks
23B-43-35513 (23B-43-35512)	Rod (Rod)	Replacement	8 (8)	The quantities of the using parts differ depending on the installation condition of the attachment.

Details of the modification to repair the returning trouble of the work equipment control levers

1. Nature of the trouble

The work equipment lever (control valve spool) sometimes does not return to the neutral position even when the operator releases his hand from the lever.



2. Cause of the problem and details of the countermeasure

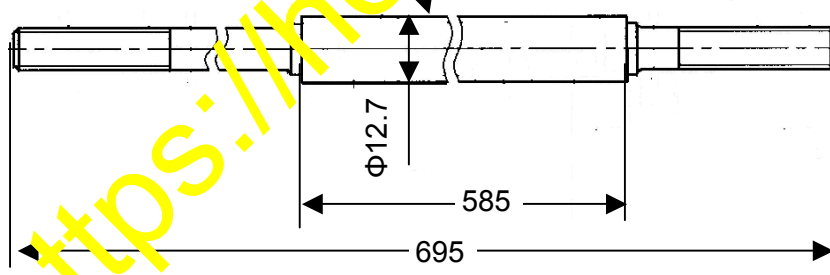
2-1. Cause

Since the rod has been changed to the solid round bar, the weight has increased and the force to return the lever has become insufficient.

2-2. Countermeasure

The material of the linkage rod is to be changed from the round bar to the hollow tube.

Structure: Integral structure



Section A

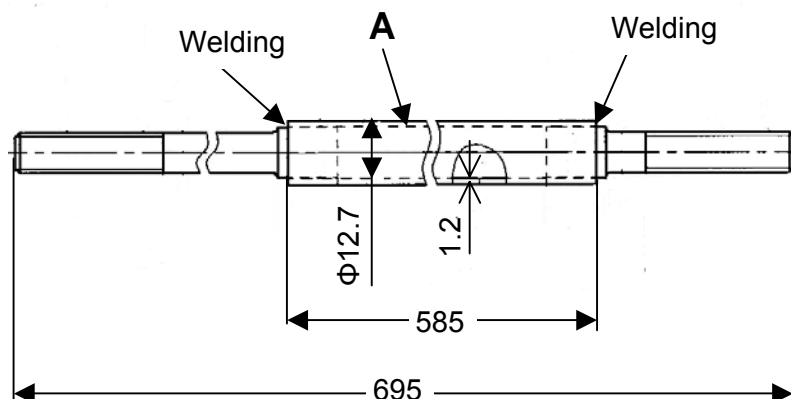
Material: SGD400-B

(Round bar)

Outer diameter: Φ12.7

Weight: 656 g

Structure: Welded structure



Section A

Material: STKM11A (PIPE)

Outer diameter: Φ12.7

Plate thickness: 1.2 mm

Weight: 256 g

Fig. 2

### 3. Preparations

- 1) Park the machine on a flat place and lower the blade to touch the ground.
- 2) Pull the parking brake lever and stop the engine.
- 3) Move each work equipment lever to the stroke end to release the pressure.

### 4. Replacement procedure

- 1) Remove the covers <1> and <3> from the covers <2> and <4>, after that, pull them upward with the boot <6> and the pipe <7> along the rod <5>.

\* Depending on the machine, the boot <6> and the pipe <7> may not be installed since they are the optional parts.

- 2) Loosen the nuts <8> and <10> and remove the rod <5> from the joints <9> and <11> to replace the rod with the improved one.

The part numbers of the new and current rods are as follows:

New rod: 23B-43-35513

Current rod: 23B-43-35512

Refer to page 3 for the identification method for the new and current rods.

Refer to Fig. 4 regarding the installation direction of the rod.

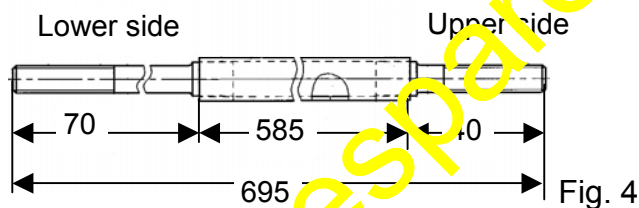


Fig. 4

LH and RH control levers

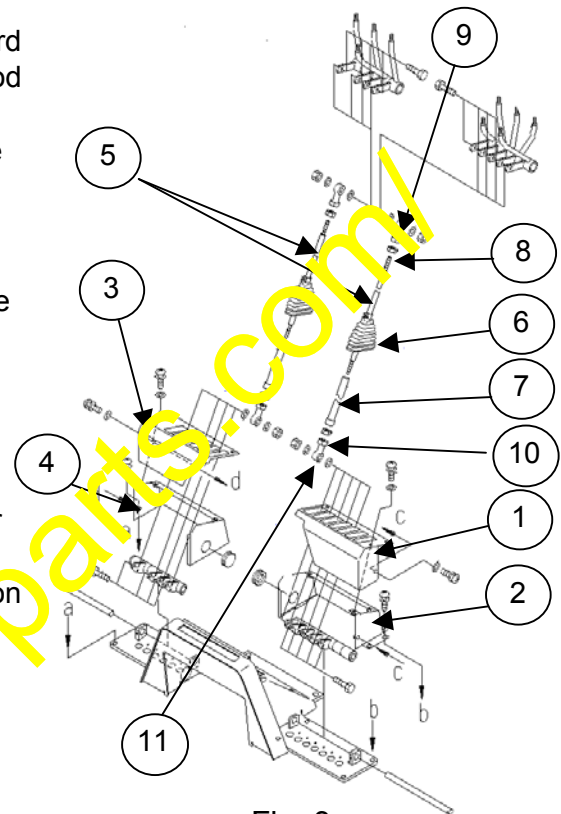


Fig. 3

### 5. Adjustment of the lever position

When adjusting the lever position, pull the steering wheel post to its full stroke in advance.

The status at which the steering wheel post has been pulled to its full stroke

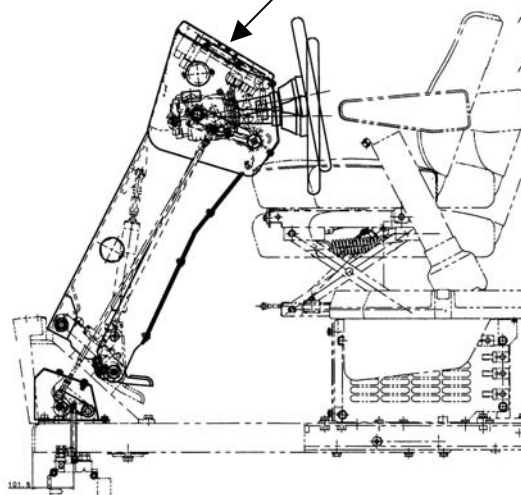


Fig. 5

### 6. Adjustment of the lever position

Loosen the nuts shown in Fig. 6 and turn the rod by hand to adjust the lever position.

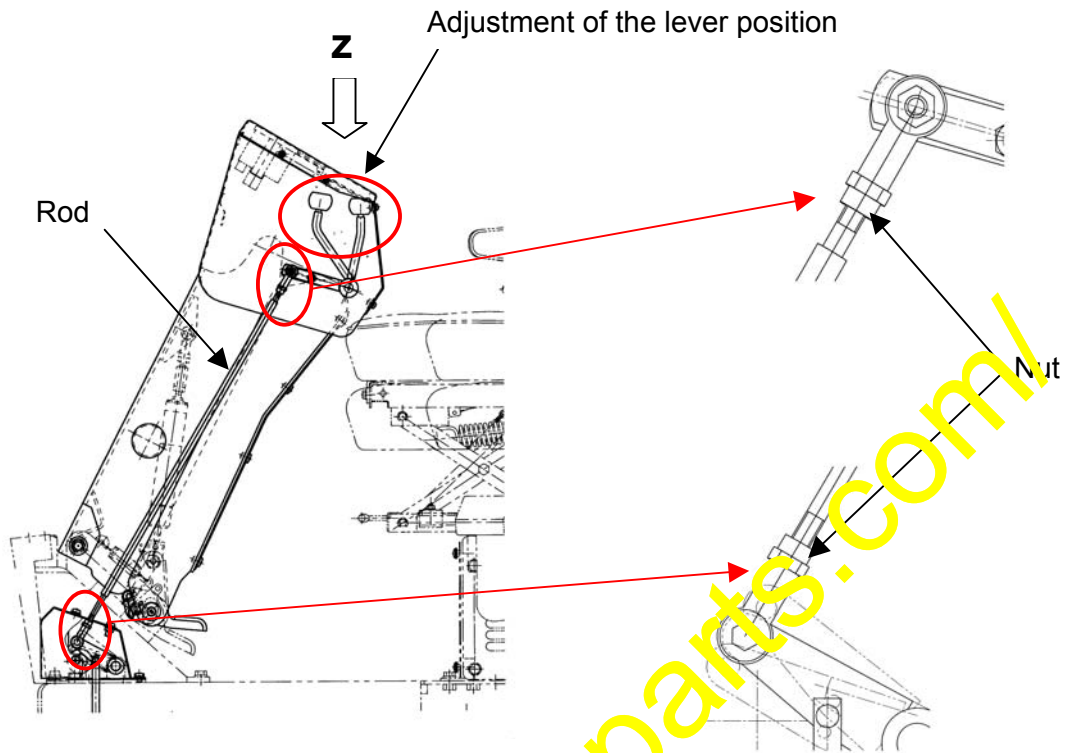


Fig. 6

\* Adjust the lever position to the dimensions as per Fig. 7. (Dimensions in ( ) are reference values. Unit: mm)

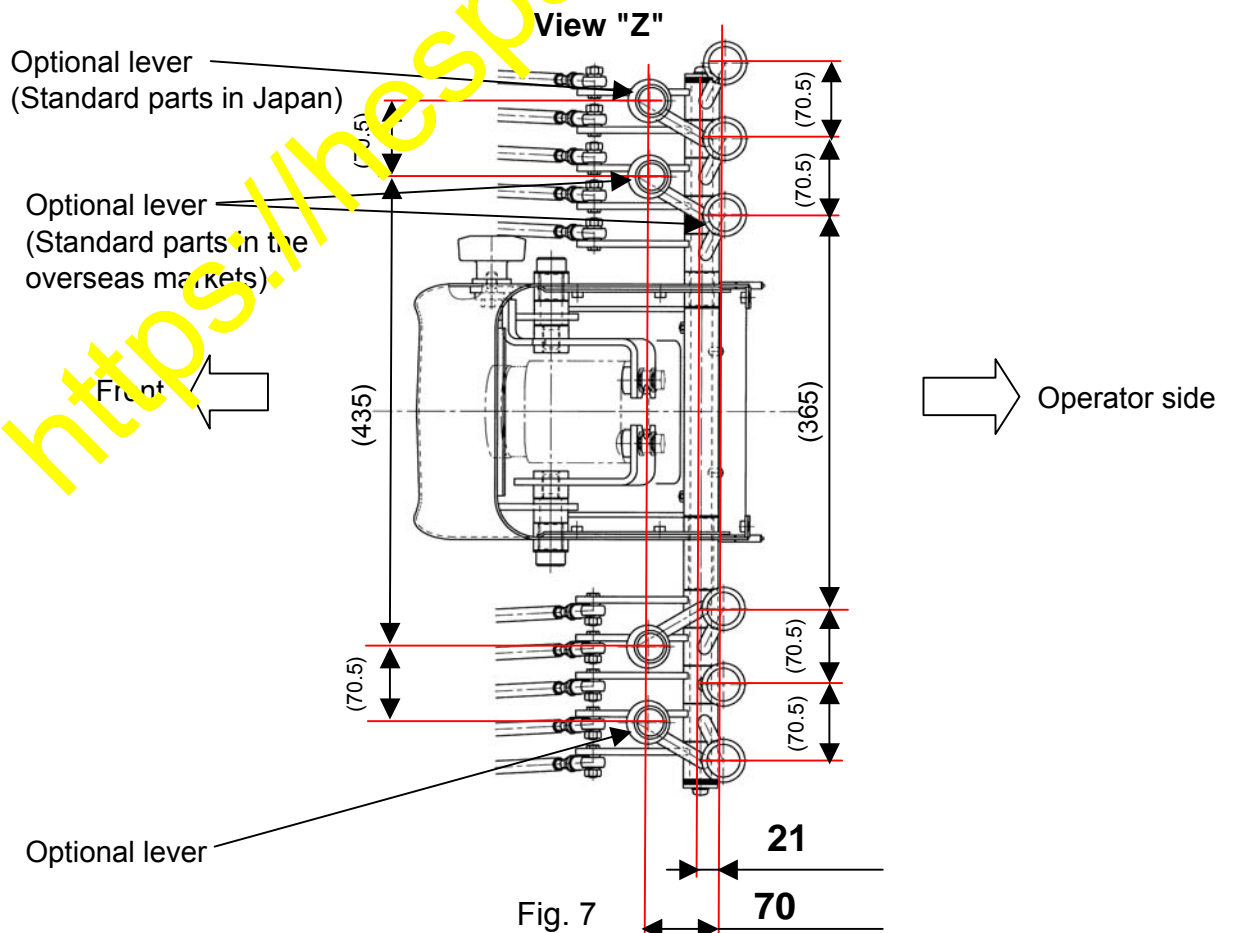


Fig. 7

## Precautions (In case of the machines equipped with the boot)

- 1) The contact surfaces of the boot and the cover are being adhered by use of an adhesive (LT-1B).  
If the boot and the cover are separated while carrying out this replacement work, bond them again using the above adhesive.
- 2) After finishing the replacement work, before starting the engine, move each lever to the stroke end and release the lever to check that it returns to the neutral position smoothly.  
If the tested lever does not return to the neutral position, disassemble the lever at the section P and section Q and apply grease. Also, make sure the yoke connecting the section Q and the control valve align properly.

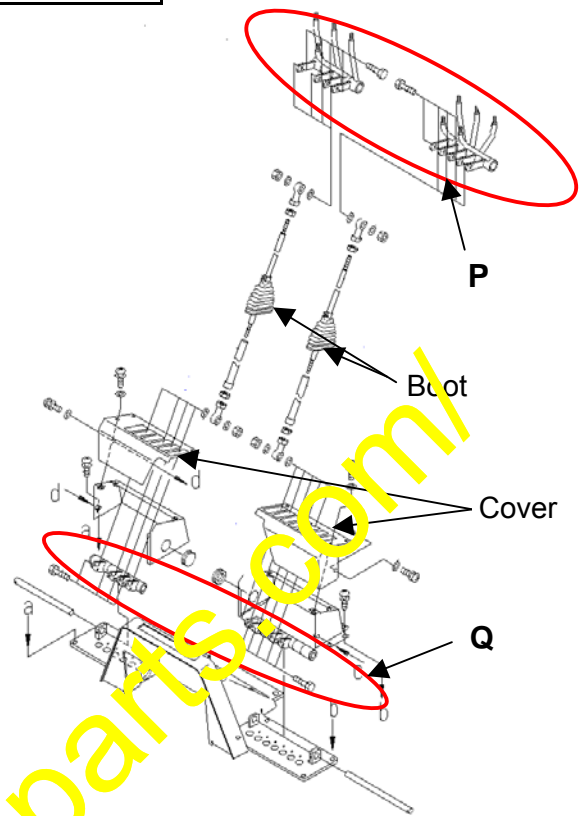


Fig. 8

## 7. Checks to make

- 1) Measure the necessary operating force with the engine running at SLOW speed. The right value is 2.7 kgf or less.

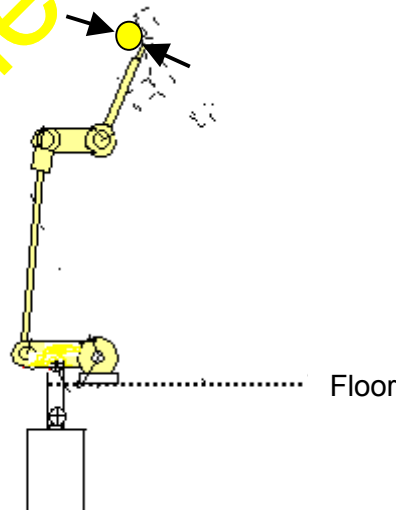


Fig. 9

- 2) Keeping the engine running at the FULL speed, operate the work equipment cylinder to the stroke end and make sure the lever returns securely. (Hydraulic oil temperature: Around 50°C)