

INSTALLATION MANUAL

REF NO.	BT03018
DATE	Jun. 20, 2003

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SUBJECT: INSTALLATION PROCEDURE OF SWITCH PUMP NORMALLY CUT OFF KIT ON WA380/WA400/WA430 AND WA470-5

PURPOSE: To introduce installation procedure for the switch pump normally cut-off kit onto WA380-5, WA400-5, WA430-5 and WA470-5 wheel loaders

APPLICATION: WA380-5 Wheel Loaders, Serial Nos. 60001 and up
WA400-5 Wheel Loaders, Serial Nos. 70001 and up
WA430-5 Wheel Loaders, Serial Nos. 60001 and up
WA470-5 Wheel Loaders, Serial Nos. 70001 and up

FAILURE CODE: J100MB

DESCRIPTION:

1. Introduction

As a new option, a parts kit to keep the switch pump cut-off valve normally "ON" has been made available for use on the WA380-5, WA400-5, WA430-5 and WA470-5 wheel loaders

(Sales Code: 6WF85)

Thanks to this function, the machine load torque can be reduced to provide more margin to the engine torque and the following effects can be expected:

- Improved response of the engine on high altitude areas where the low revolution rate torque of the engine drops
- Improved uphill traveling performance on work sites where it is necessary to raise the boom while the machine is making an uphill traveling in order to dump material into the hopper
- Improved fuel consumption by reduction of the work equipment load

※ However, this kit is not suitable when higher work equipment speed is necessary like in a loading work on a narrow place.

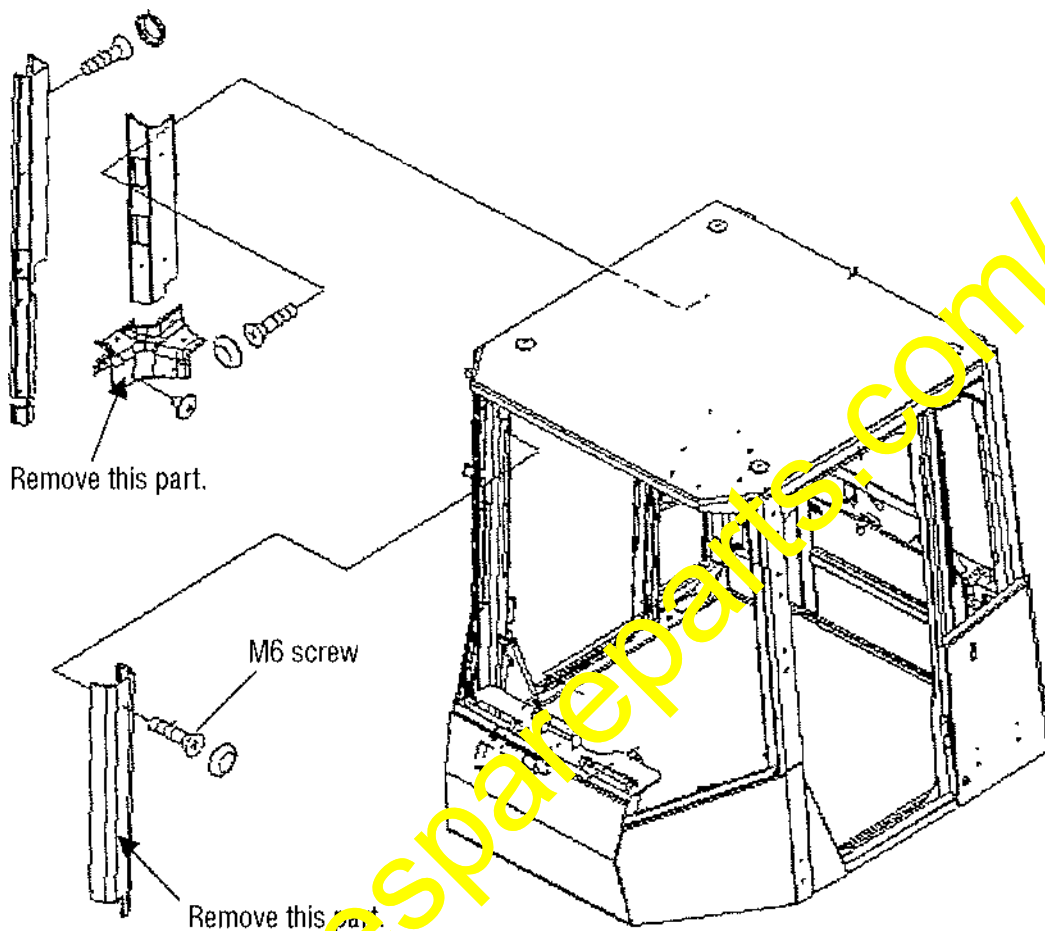
When installing this kit, follow the installation procedure being outlined in this Installation Manual.

2. List of parts

Part No.	Part Name	Q'ty	Remarks
421-06-32580	Wiring harness	1	
421-06-32590	Wiring harness	1	
421-06-32570	Switch	1	
421-93-23460	Plate	1	
08054-20519	Band	5	

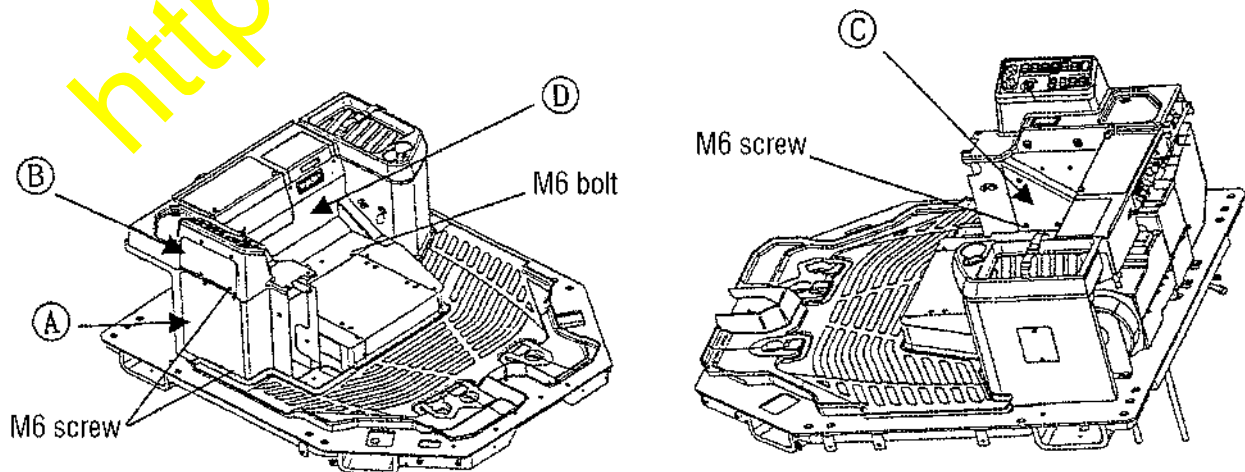
3. Installation procedure

- (1) Turn "OFF" the starting switch.
- (2) Remove the interior parts inside the operator's cab shown in the drawing below.



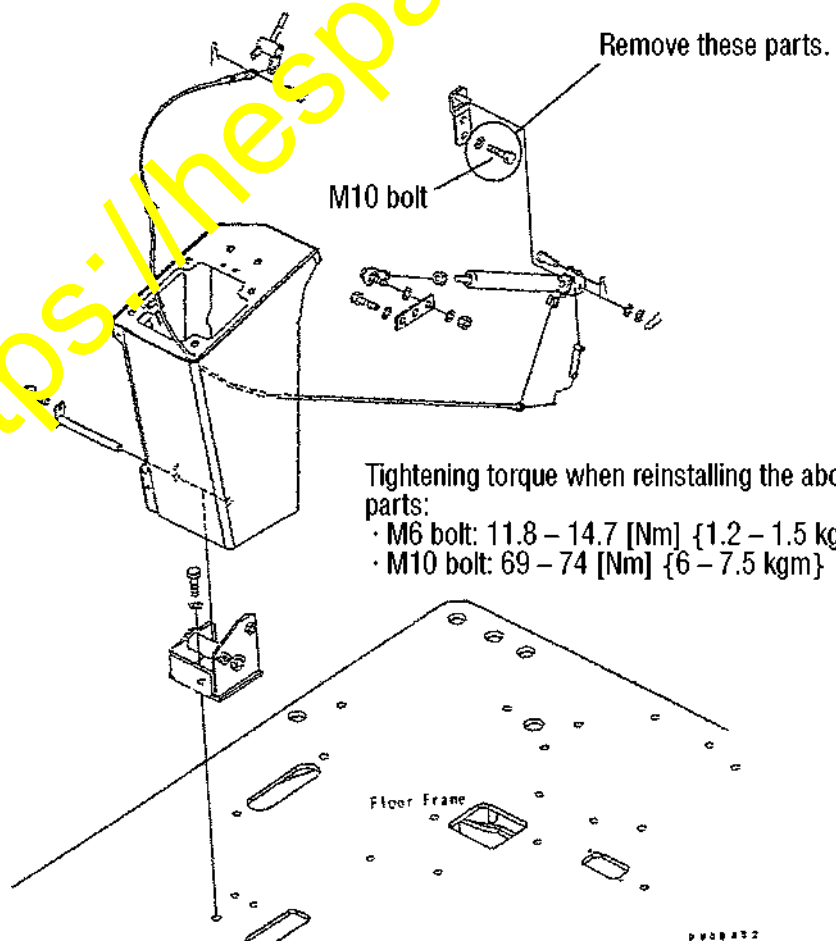
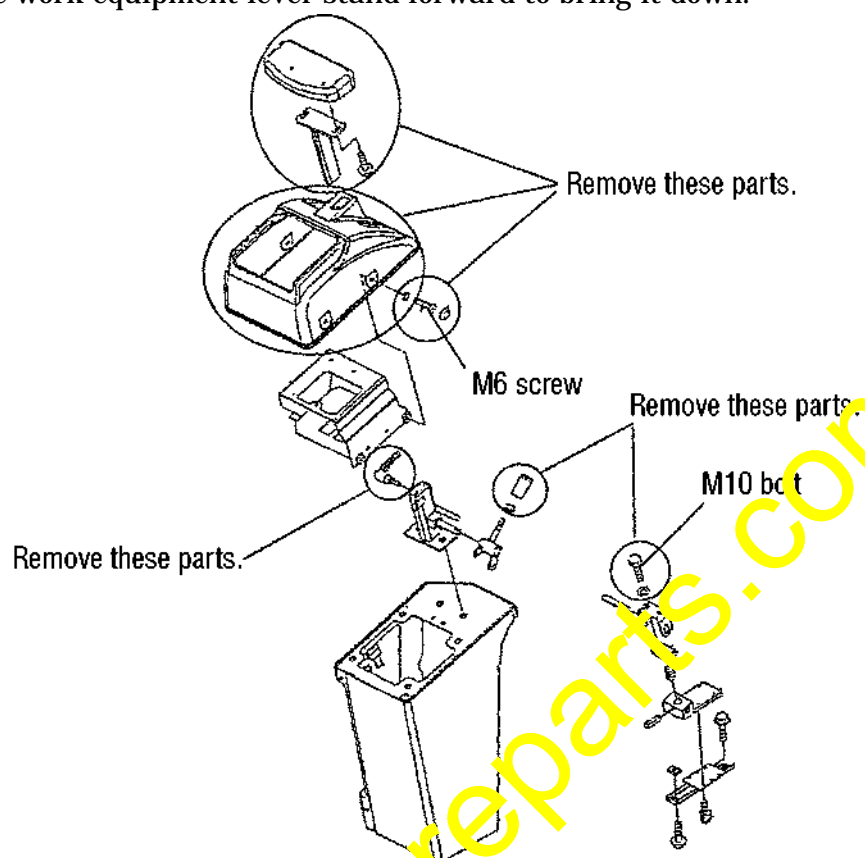
- Tightening torque when reinstalling the above parts:
M6 bolt: 11.3 – 14.7 [Nm] {1.2 – 1.5 kgm}

- (3) Remove the covers (A), (B), (C) and (D).

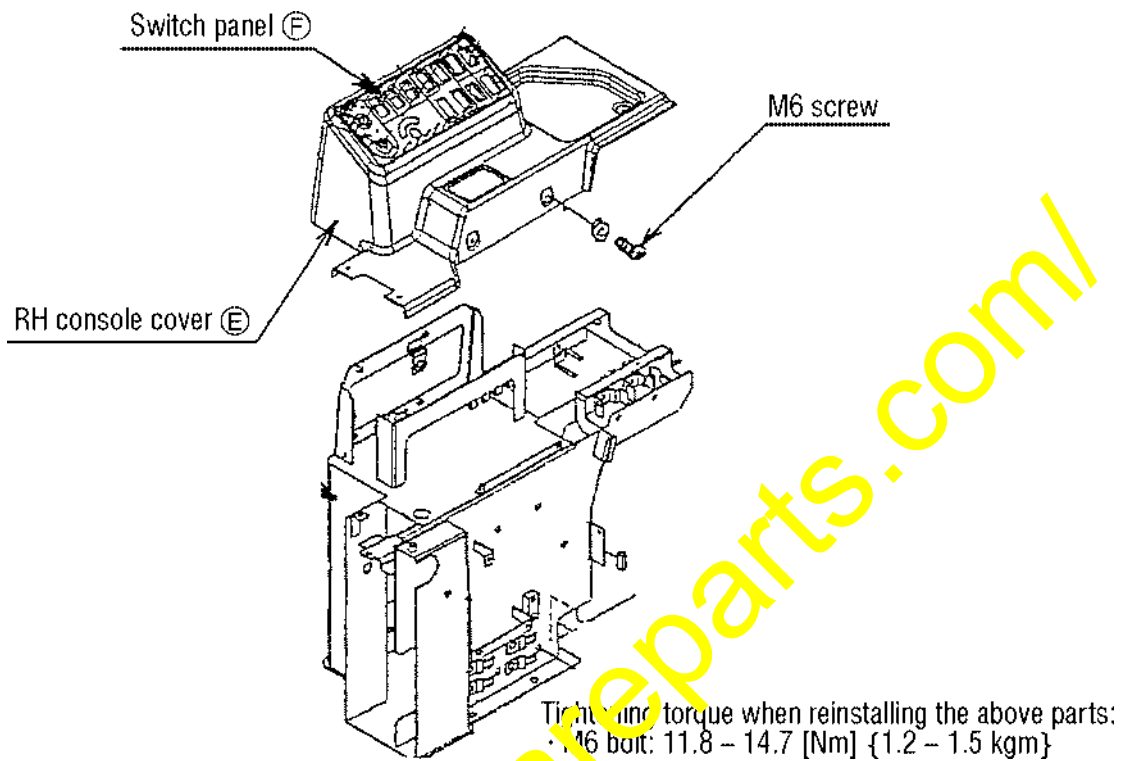


- Tightening torque when reinstalling the above parts:
M6 bolt: 11.8 – 14.7 [Nm] {1.2 – 1.5 kgm}

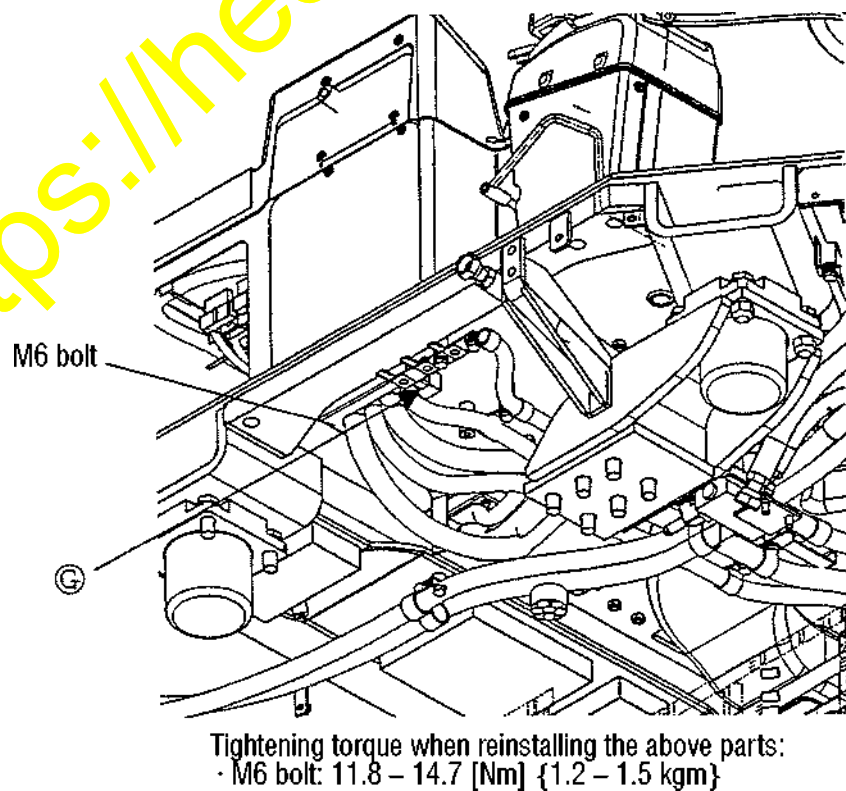
- (4) Remove the circled parts of the RH side work equipment lever stand, and after that, push the work equipment lever stand forward to bring it down.



- (5) Disconnect the connectors of respective switches, and after that, remove the RH console cover ⑤.
(Remove the RH console cover ⑤ with the switch panel ⑥ being installed to it.)

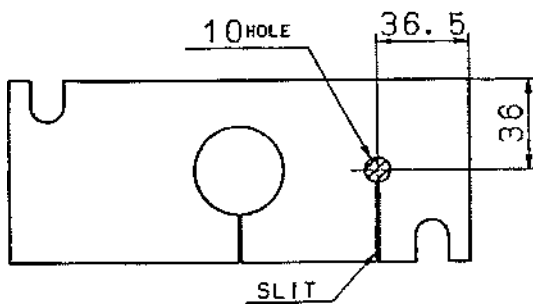


- (6) Remove the rubber sheet ⑦ being installed underneath the floor frame.

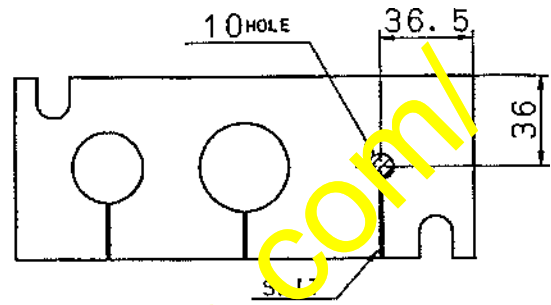


- (7) Add a hole in the rubber sheet © which has been removed as above.
(The position of the additional hole for each specification of the machine is as per the drawing below.)

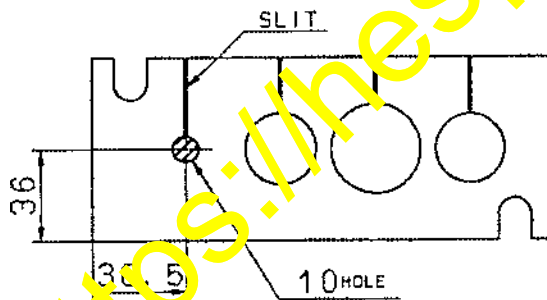
WA380/400/430-5
(Standard spec.)



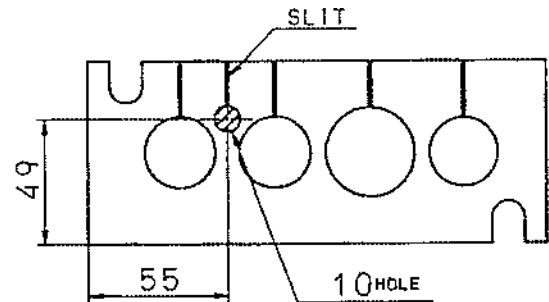
WA380/400/430-5
(Optional spec.:
EPC work equipment lever spec. or
joystick steering spec.)



WA470-5
(Standard spec.)

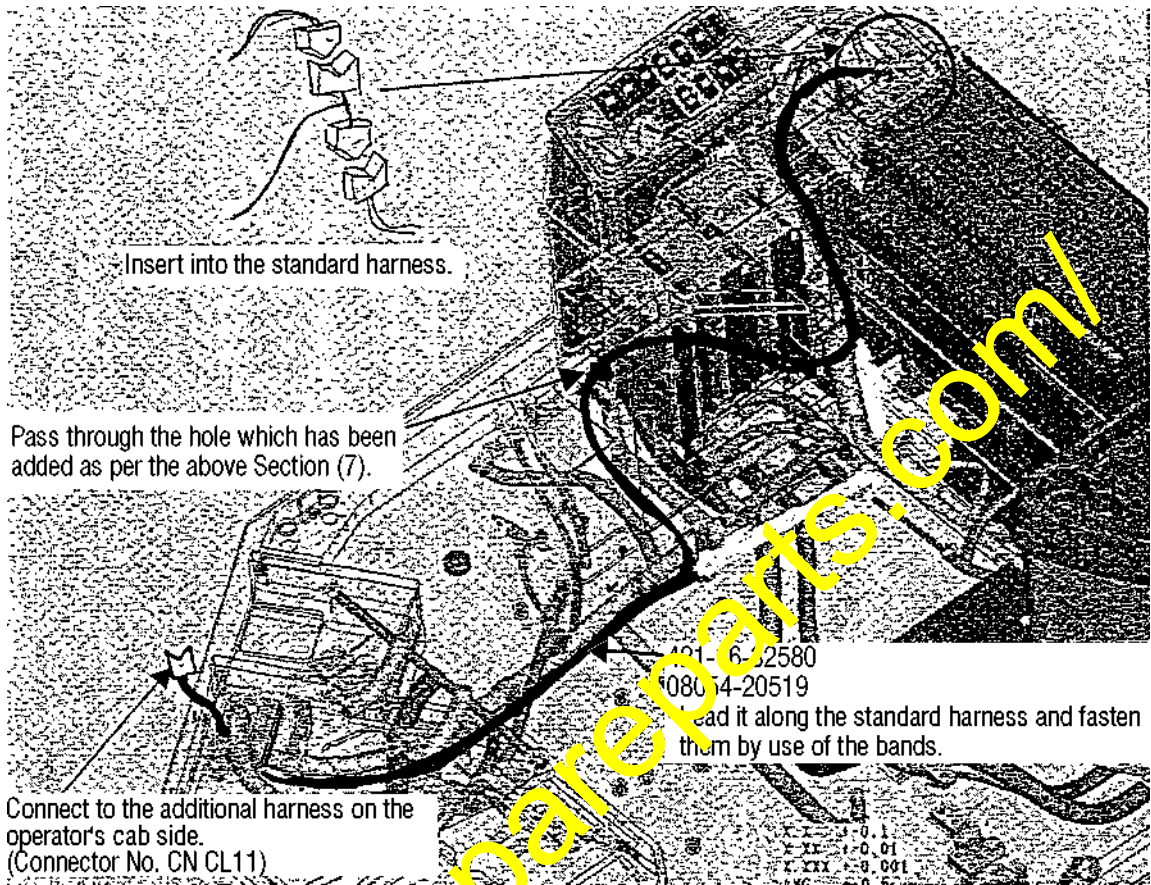


WA470-5
(Optional spec.:
EPC work equipment lever spec. or
joystick steering spec.)



(8) Install the switch and harness as per the instructions given in the drawing below.

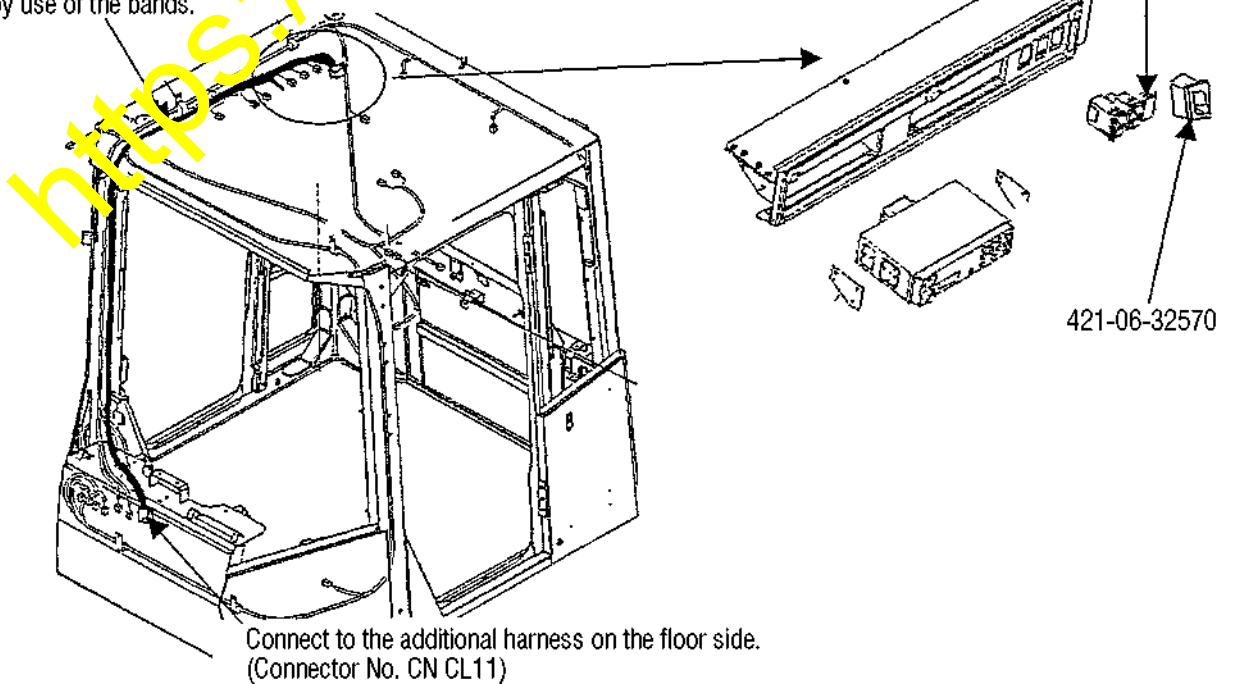
① On the floor side



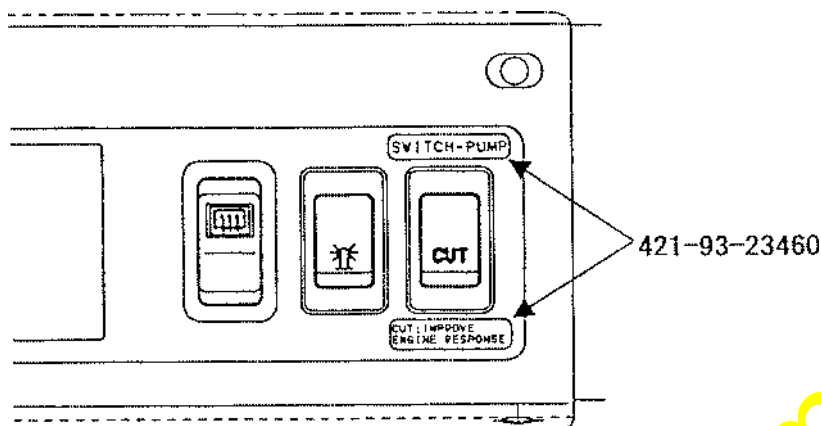
② On the CAB side

421-06-32590
08054-20519

Lead it along the standard harness, and fasten them by use of the bands.



- (9) Stick the decal near the switch.



Precautions when sticking the decal:

- Clean the sticking surface to remove dirt and oil.
- Do not stick the decal with oily hands or wearing work gloves.

- (10) Restoration of the machine

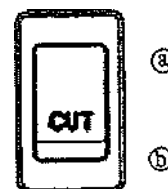
Restore the parts which have been removed as per the above Sections (2) thru (6) back to their original positions in the reversed procedure to their removal procedure.

When carrying out the restoration work, if the mounting buttons (23B-950-4450) for the interior parts inside the operator's cab and the work equipment lever box upper cover mounting cap (421-09-31310) are damaged or broken, replace them with new parts.

- (11) Operation checks

- Carry out the operation checks for the switch pump normally cut-off function following the procedure described below.

- ① Start the engine and make sufficient warming up operation.
- ② Measure the boom raising time and confirm that the boom raising time is as follows.



Unloaded boom raising time ※

[sec] ± 0.5

	Switch position	
	① (OFF)	② (ON)
WA380-5	5.3	7.7
WA400-5	5.9	8.5
WA430-5	6.0	9.4
WA470-5	5.8	8.1

- ※ The time needed to raise the bucket from the ground level to the top end position under Hi-Idling revolution of the engine