

PARTS & SERVICE NEWS

REF NO. AA04052A

DATE Sept. 5, 2004

(C)

Page 1 of 13

This Parts & Service News supercedes AA04052 dated May 11, 2004 and should be discarded

SUBJECT: REPAIR PROCEDURE OF LIGHTING SWITCH

PURPOSE: To introduce modification procedure to repair when the contact section of the lamp lighting switch becomes damaged to cause melting failure or impossibility of turning on the lamp

APPLICATION: WA500-3 Wheel Loaders, S/N 50001 and up
 WA500-3L Wheel Loaders, S/N A70001 and up
 WA500-3LK Wheel Loaders, S/N up to A72197
 WA500-5L Wheel Loaders, S/N all S/N
 WA600-3 Wheel Loaders, S/N 50001 and up
 WA600-3L Wheel Loaders, S/N A52001 and up
 WA600-3LK Wheel Loaders, S/N A53001 and up
 WA700-3 Wheel Loaders, S/N 50001 and up
 WA700-3L Wheel Loaders, S/N A50001 thru A50027
 WA700-3LC Wheel Loader, S/N A50001 thru A50038
 WA800-3 Wheel Loaders, S/N 50001 and up
 WA800-3LC Wheel Loaders, S/N A50001 thru A50030
 WA900-3 Wheel Loaders, S/N 50001 and up
 WA900-3L Wheel Loader, S/N A50001 thru A50037
 WZ4000-1 Wheel Loaders, S/N 1001 and up
 WD500-2 Wheel Dozers, S/N 50001 and up
 WD600-3 Wheel Dozers, S/N 50001 and up
 WD900-3 Wheel Dozers, S/N 50001 and up
 WF550-3 Wheel Compactors, S/N 50001 and up
 WF650-1 Wheel Compactors, S/N 50001 and up
 WT150-1 Towing Tractors, S/N 10001 and up
 WT250E-1 Towing Tractors, S/N 10001 and up
 WT500E-1 Towing Tractors, S/N 1001 and up

FAILURE CODE: DDH1DH

DESCRIPTION:

SUBJECT: REPAIR PROCEDURE OF LIGHTING SWITCH


Since there is a possibility of occurrence of the failures described below of the lamp lighting switch being built into the transmission combination switch assembly being used on all WA-3 Type Wheel Loaders and related models, while its switching operation is being repeated, we have improved the lamp switch by increasing the durability. Therefore, when the failures being described below occur, replace the lamp switch following the modification procedure being outline in this **Parts & Service News**.

2. The contact will become damaged generating heat to cause smoking from the switch section or the resin case of the lamp switch starts melting out.

<https://hespareparts.com/>

2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
★ 421-43-26123 (421-43-26122)	Switch TM combi (Switch TM comb)	} Rework	1 (1)	
★ 421-43-26132 (421-43-26131)	Switch TM combi (Switch TM combi)		1 (1)	
★ 425-43-26113 (425-43-26112)	Switch TM combi (Switch TM combi)		1 (1)	
★ 427-43-26123 (427-43-26122)	Switch TM combi (Switch TM combi)		1 (1)	
★ 427-43-26132 (427-43-26131)	Switch TM comb (Switch TM combi)		1 (1)	
★ 43A-43-11112 (43A-43-11111)	Switch TM combi (Switch TM combi)		1 (1)	
417-43-26221 (417-43-26220)	Switch light & dimmer (Switch light & dimmer)	Replacement	1 (1)	Component parts of the assemblies marked ★ in this parts list. Exclusive Part No. as spare parts

 Page added

Obtain parts common to all models and model-specific parts and make modifications.

Part No.	Part Name	Purpose of part	Q'ty	Remarks	
569-06-61960	Relay)	1	Parts common to all models to be ordered	
08034-20536	Band		3		Band for fixing harness
287-06-16420	Plate		1		Rear mount plate
WA500-3, WA600-3, WA800-3, WA900-3 / WD500-3, WD600-3, WD900-3 / WF550A-3, WF650T-3 repair parts					
425-06-23310	Harness)	1	The schematic diagram of repair harness is shown in page 8.	
01435-00608	Bolt		1		
01584-00605	Nut		1		
WA700-3 repair parts					
428-06-23310	Harness	Adoption	1	The schematic diagram of repair harness is shown on page 8.	
01435-00608	Bolt		1		
01584-00605	Nut		1		
WT150E-1 / WT250E-1 (front and rear seat specifications) / WT500E-1 / WZ4000-1 repair parts					
432-06-13310	Harness)	1	The schematic diagram of repair harness is shown on page 10.	
432-06-12140	Bracket		1	Mount plate retaining bracket	
01435-00608	Bolt		2		
01435-01020	Bolt		1		

Additional parts to be ordered in relation to addition of a relay.

A
 3. ~~Non-conformity phenomenon and details of modification to improve the switch~~ Improvements
~~In order to increase the durability of the lamp switch:~~

- ① Replace the lamp switch with a new one with increased durability.
 - 1) By increasing the width of the grease groove made around the sliding contacts and fixed contact terminals (0.15 mm → 0.8 mm), worn resin powder can be kept from riding on the surface of the contact thus preventing to form an electric resistance against the contact and to generate heat.
 - 2) By changing the material of the resin made base for the fixed contact terminals and by changing the material of the grease to be applied between the movable contact and the fixed contacts into new materials possessing higher abrasion resistance, thus preventing occurrence of the above failure.

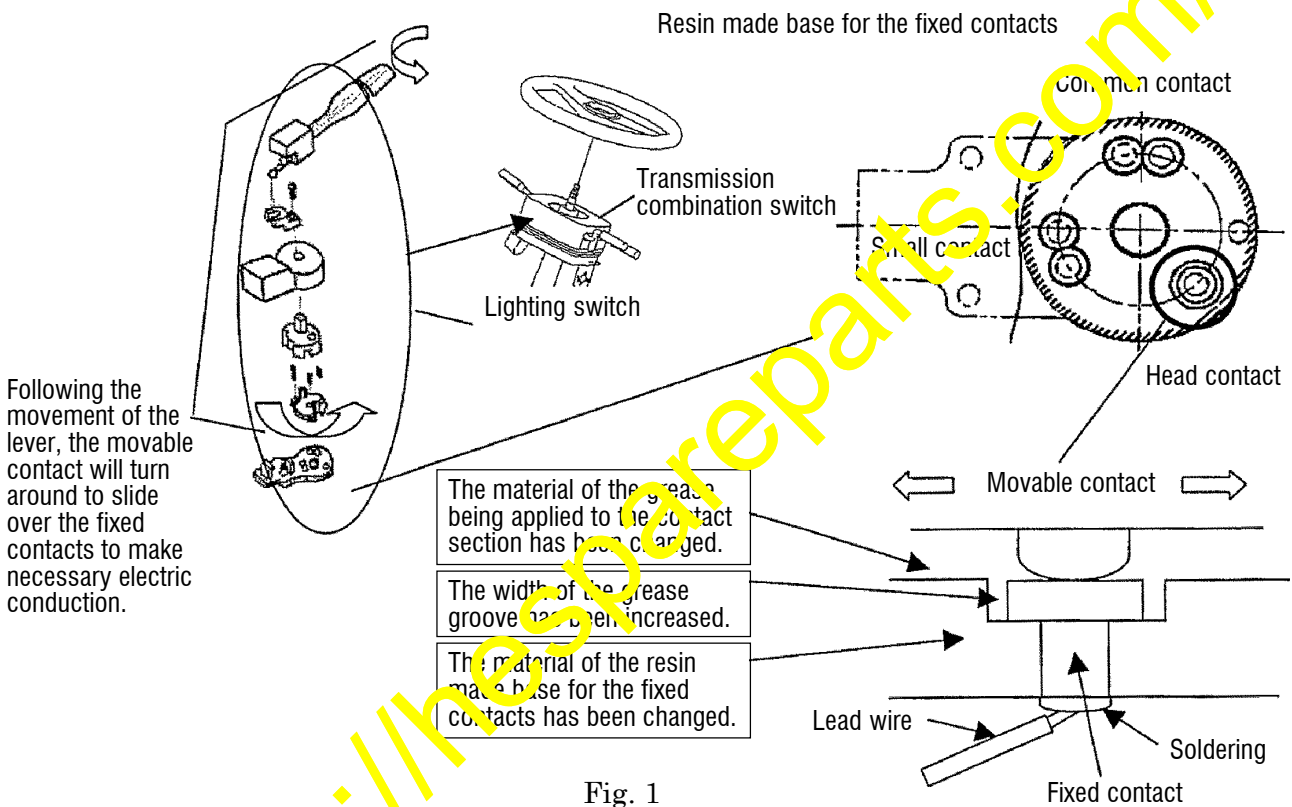


Fig. 1

[Identification method to distinguish from the current parts]

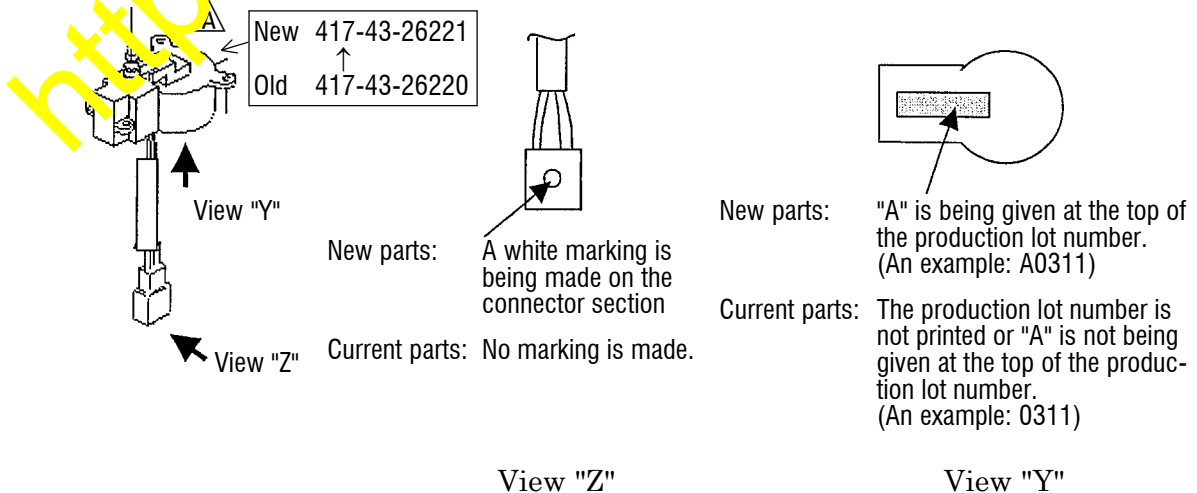



Fig. 2

 Page added

- ② To reduce load current on the head lamp switch contact, change the circuit and add a relay between the switch and the lamp.

Example) For WA500-3,600-3,800-3,900-3

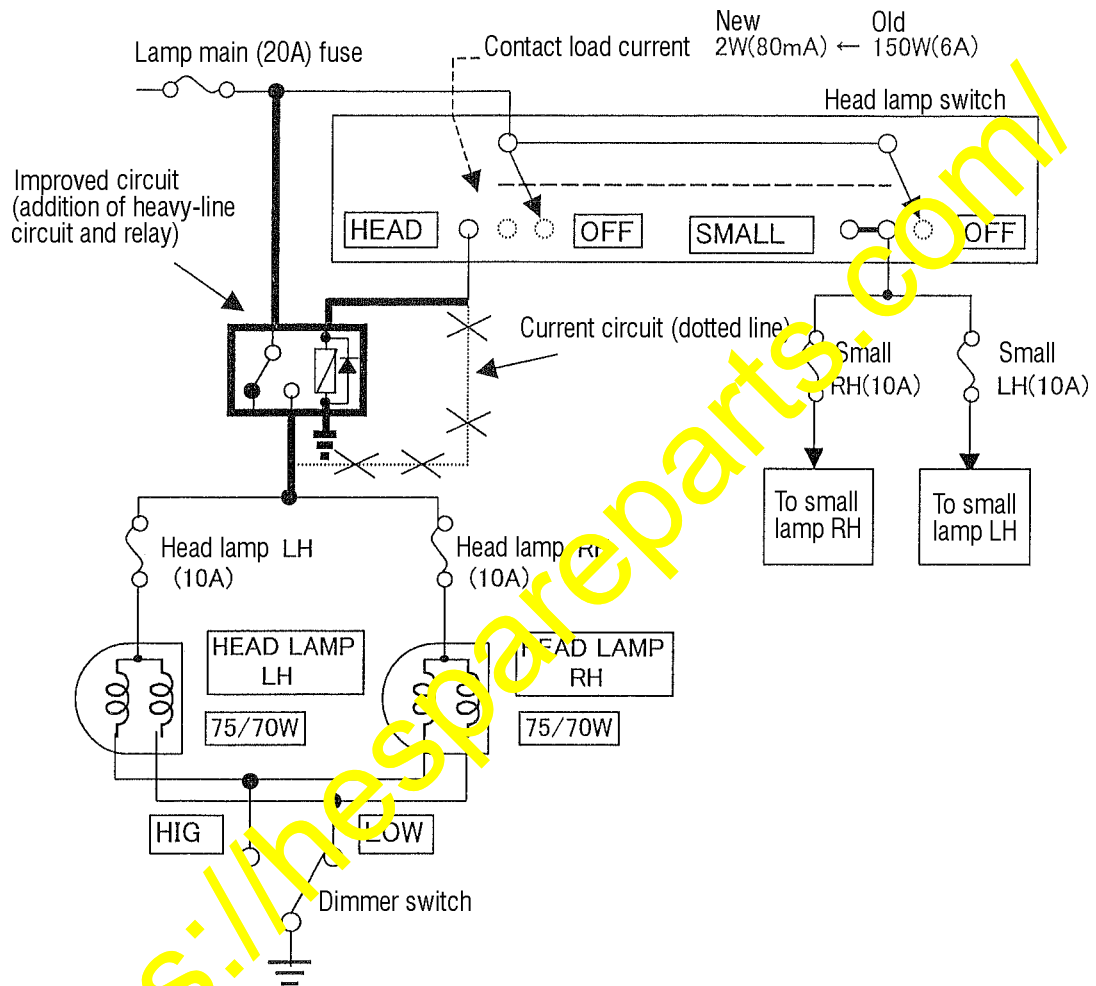



Fig. 3

4. Modification procedure

 ① Head lamp switch replacement procedures

Park the machine on a flat and rigid ground (on those machines being equipped with the chocks, apply chocks for the wheels) and turn off the starting switch. After that, replace the lamp switch being built into the transmission combination switch ass'y as per the instructions being described below.

Process 1) Remove the steering wheel and the steering column cover.

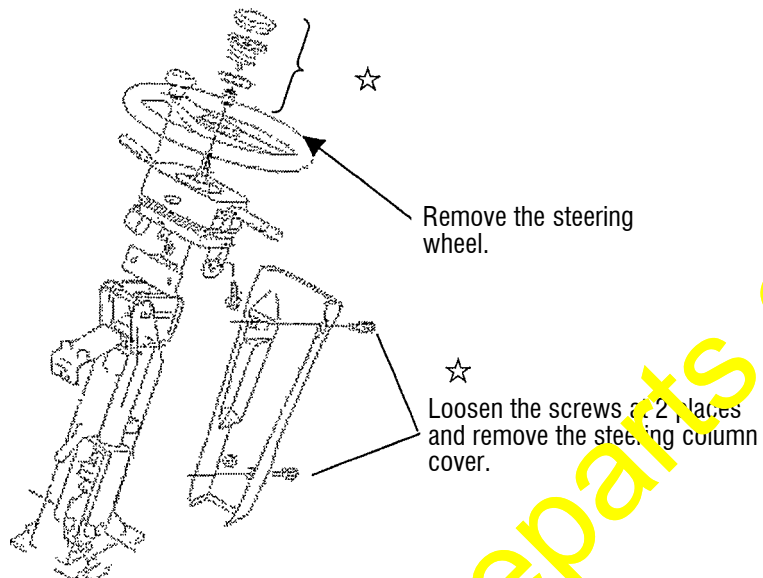



Fig. 4

Since those parts which are marked  in the Processes described below are being reused when carrying out the reassembly work, be careful not to drop and lose them.

Process 2) Disconnect the connectors of the transmission combination switch ass'y and take out the transmission combination switch ass'y.

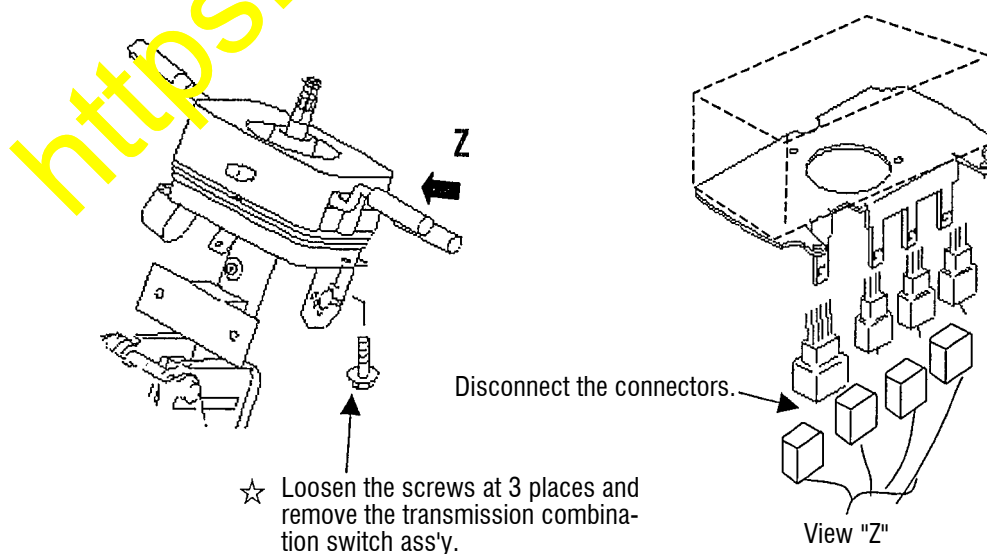


Fig. 5

Process 3) Remove the plate and replace the built-in lighting switch.

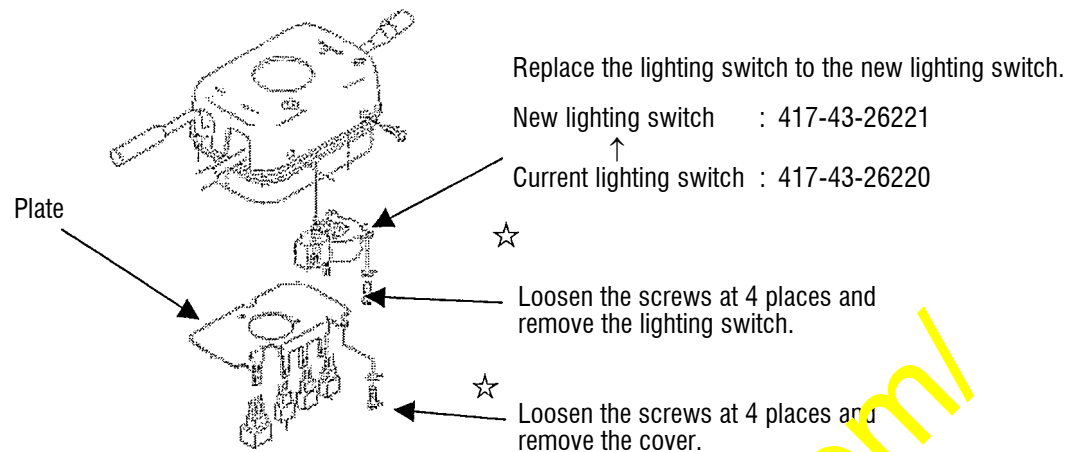


Fig. 6

Note 1) When reinstalling the new lighting switch after replacing the current lighting switch, match the positions of the switch lever and of the lighting switch.

Match the switch lever to the "SMALL" position.

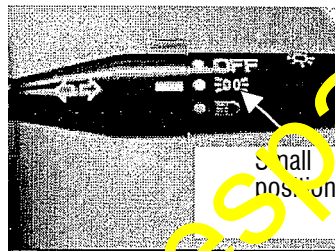


Photo. 1

Match the switch to the intermediate position.

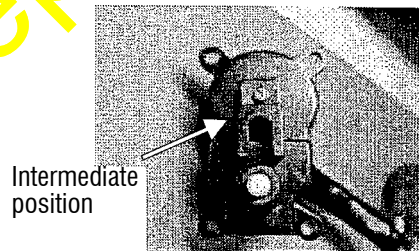


Photo. 2

Process 4) Install the transmission combination switch ass'y into the steering column, connect the connectors and check to confirm the operation of the head lamp switch.

Process 5) Reinstall the steering column cover and the steering wheel.



② Change procedures for lamp switch circuit

Add and mount a relay using the procedures on pages 8 thru 11.

③ Lamp switch operation check

After replacing the lamp switch and modifying the circuit, check operation of the lamp switch.

- Turn on the small lamp in accordance with operation of the lamp switch.
- Turn on the head lamp in accordance with operation of the lamp switch.
- The head lamp must be switched back and forth between Hi and Lo in accordance with operation of the dimmer switch.

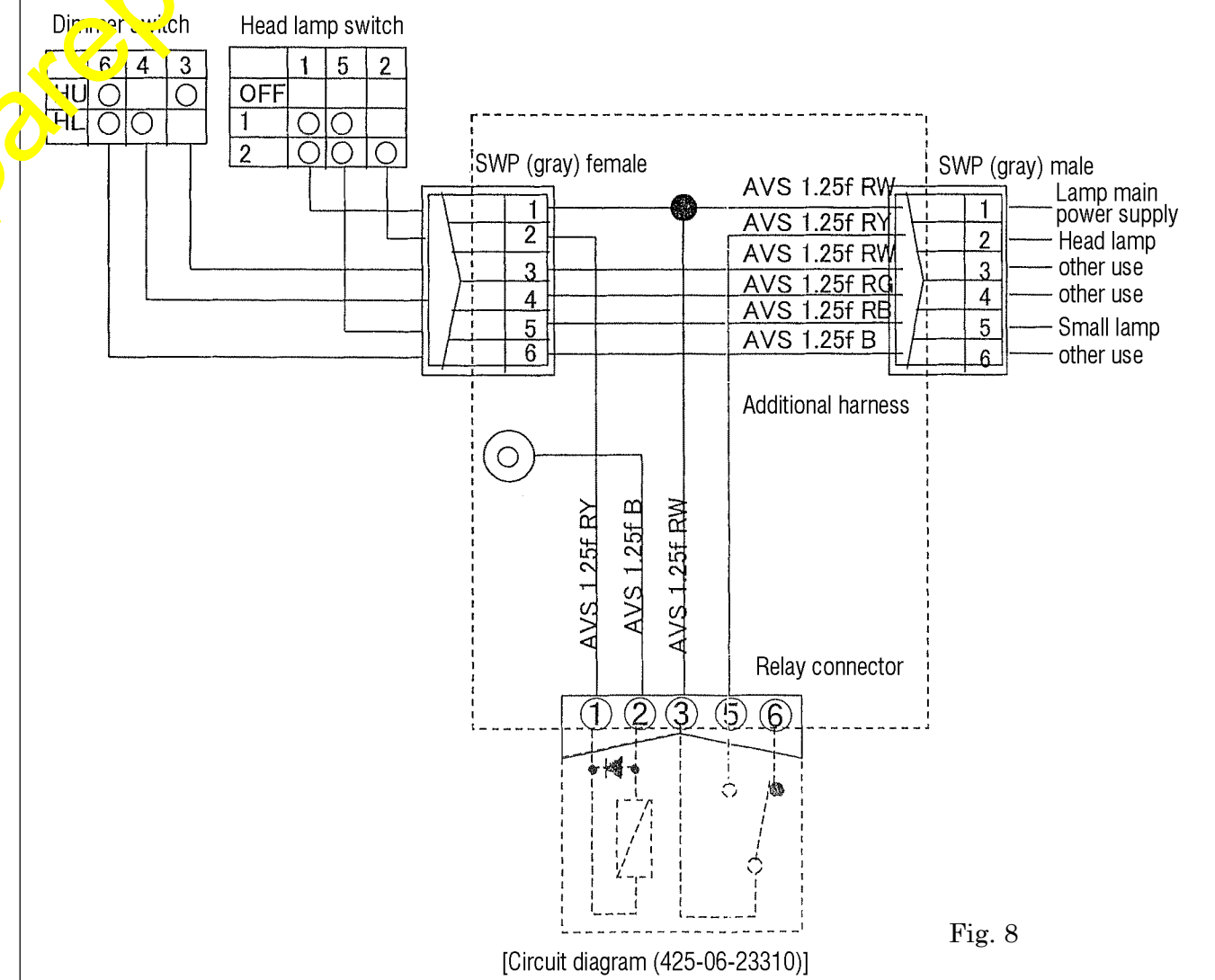
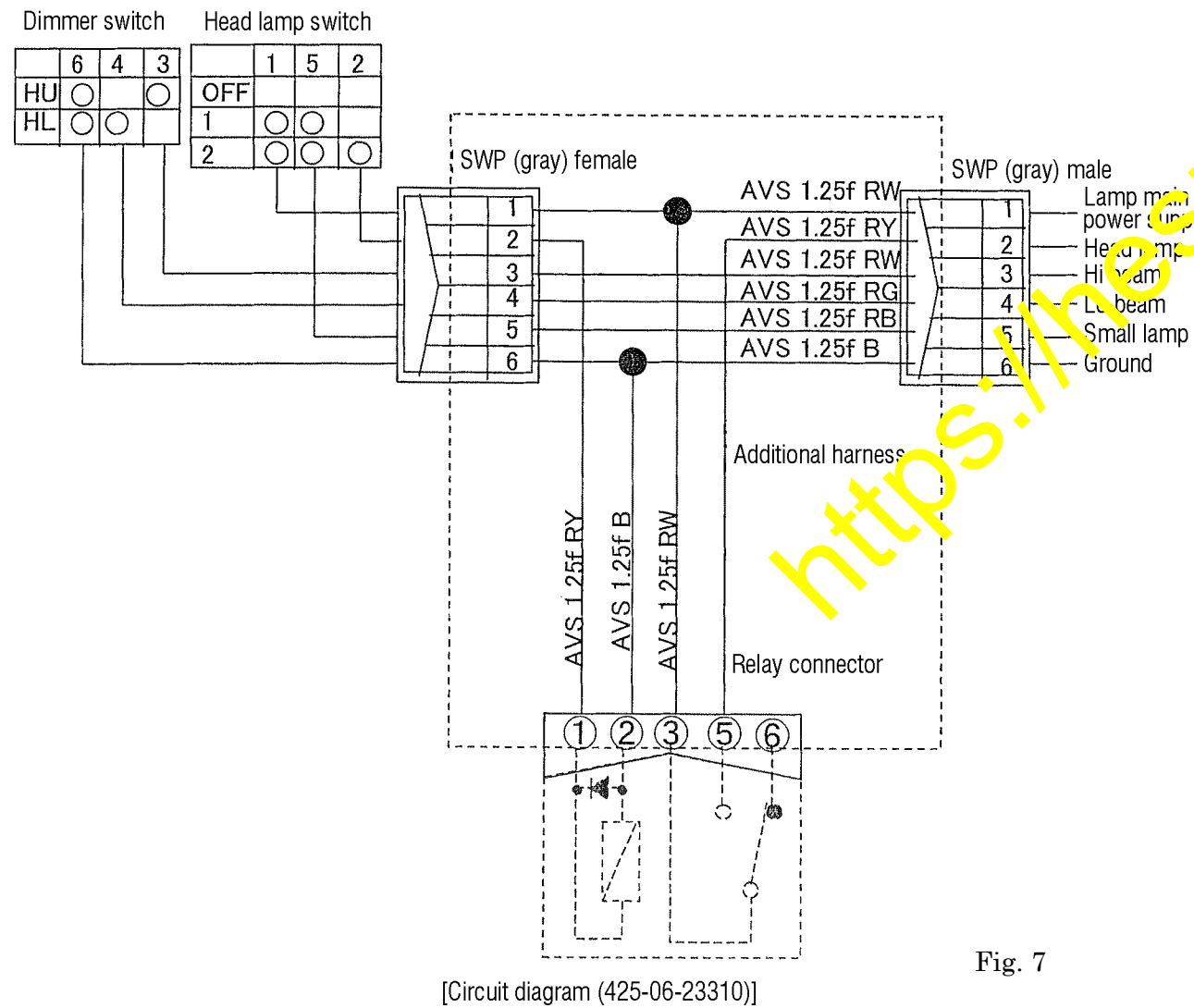
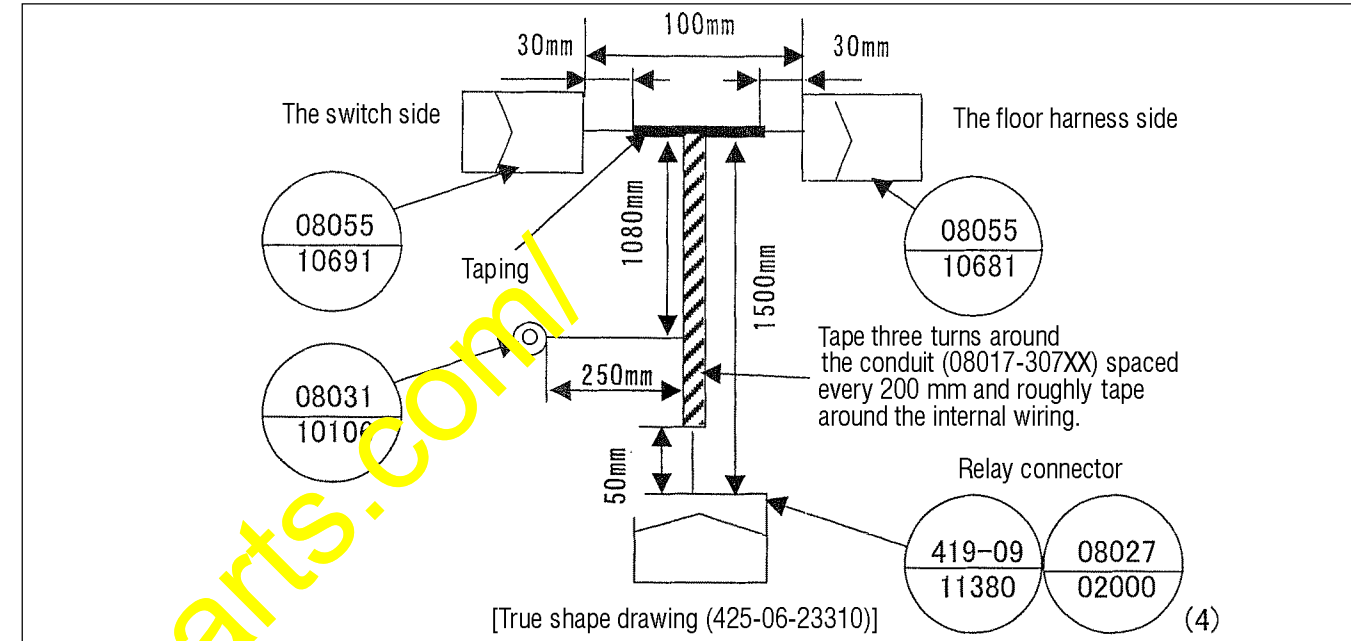
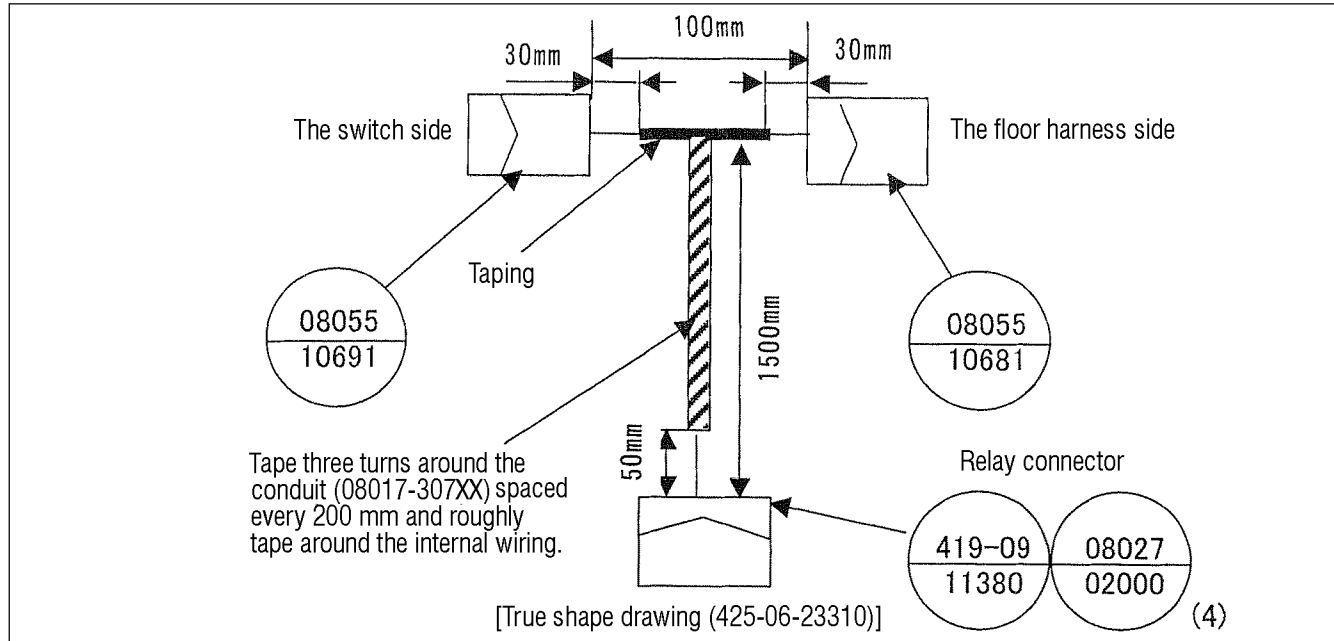
[Modification Procedure for Head Lamp Circuit]

1) Applicable models: WA500-3 – WA900-3 / WD500-3, WD600-3, WD900-3 / WF550A-3, WF650T-3

① Diagram of additional wiring harness

(WA500-3, WA600-3, WA800-3, WA900-3/WD500-3, WD600-3, WD900-3/WF550A-3, WF650T-3)

(WA700-3)



Page added

② Work procedure

Step 1) Conduct additional work to make the head lamp relay mounting hole (For details, see Fig. 9.)

※ Perform Step 2 only for WA700-3.

Step 2) Remove paint from the installed position of the grounding terminal and apply rust preventing oil (For details, see Fig. 9.)

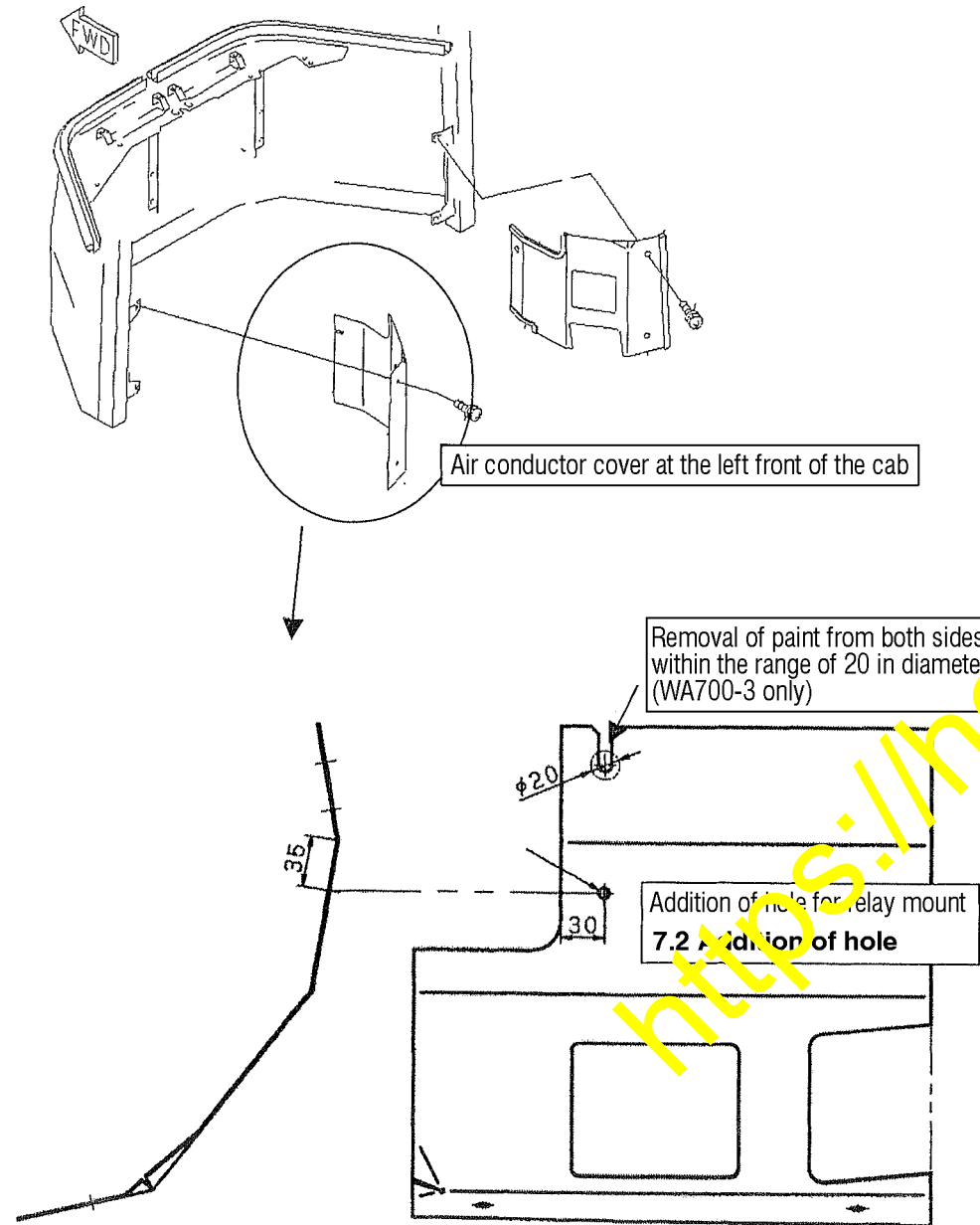


Fig. 9

Step 3) Install a relay on the cover at the left front of the cab on which additional work was conducted (For details, see Fig.10.)

Step 4) After connecting the additional harness to the relay installed and fix it to the floor harness with a band, then connect the interrupt connector to the CN-L02 connector in the steering post. Tighten the ring terminal for the additional harness ground together with the cover mounting bolt.

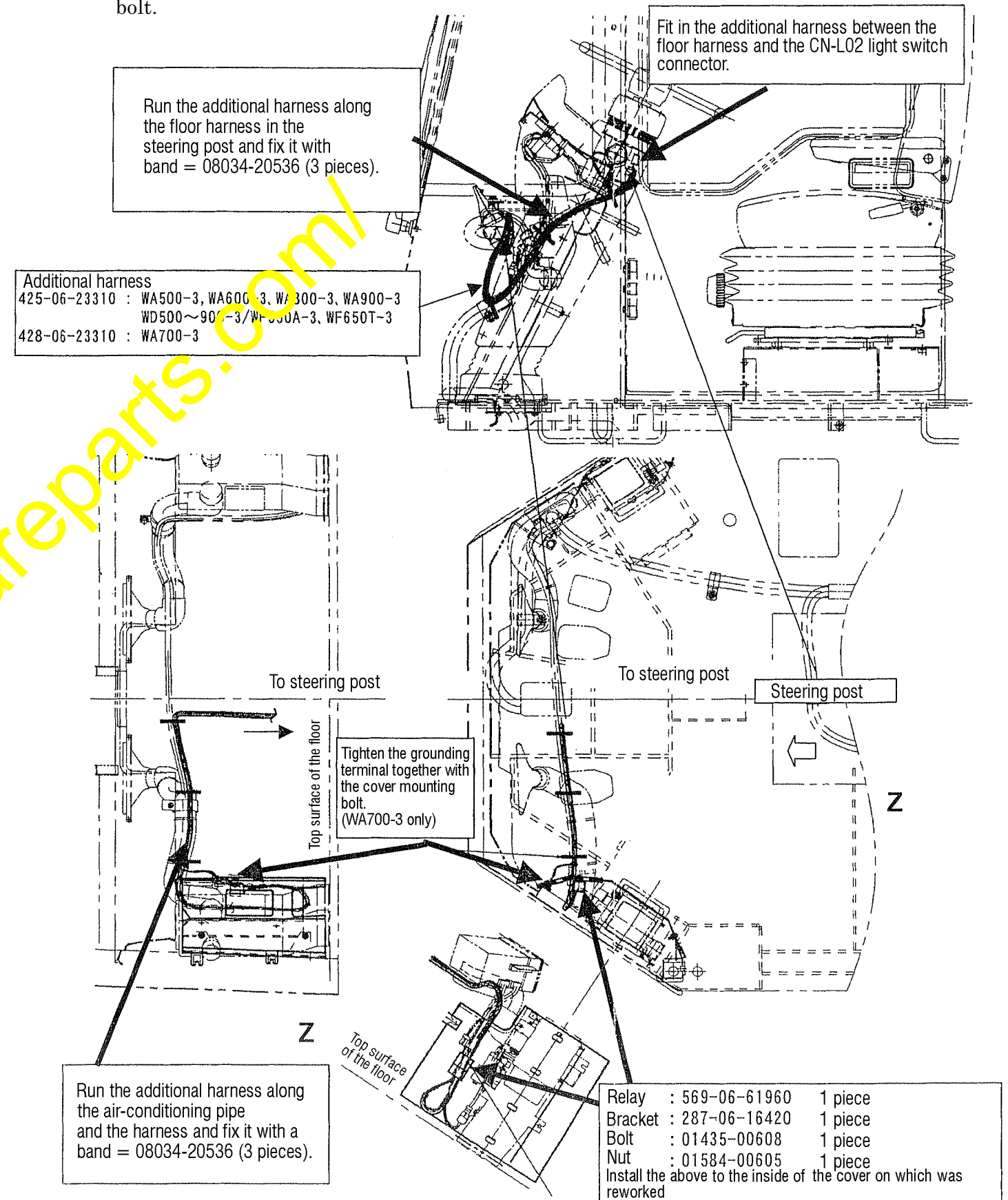



Fig. 10

 Page added

2) Applicable models: WT150E-1/WT250E-1 (front and rear seat specifications)/WT500E-1/WZ4000-1

※ WT250E-1 (front seat specifications are not included.)

① Diagram of additional wiring harness

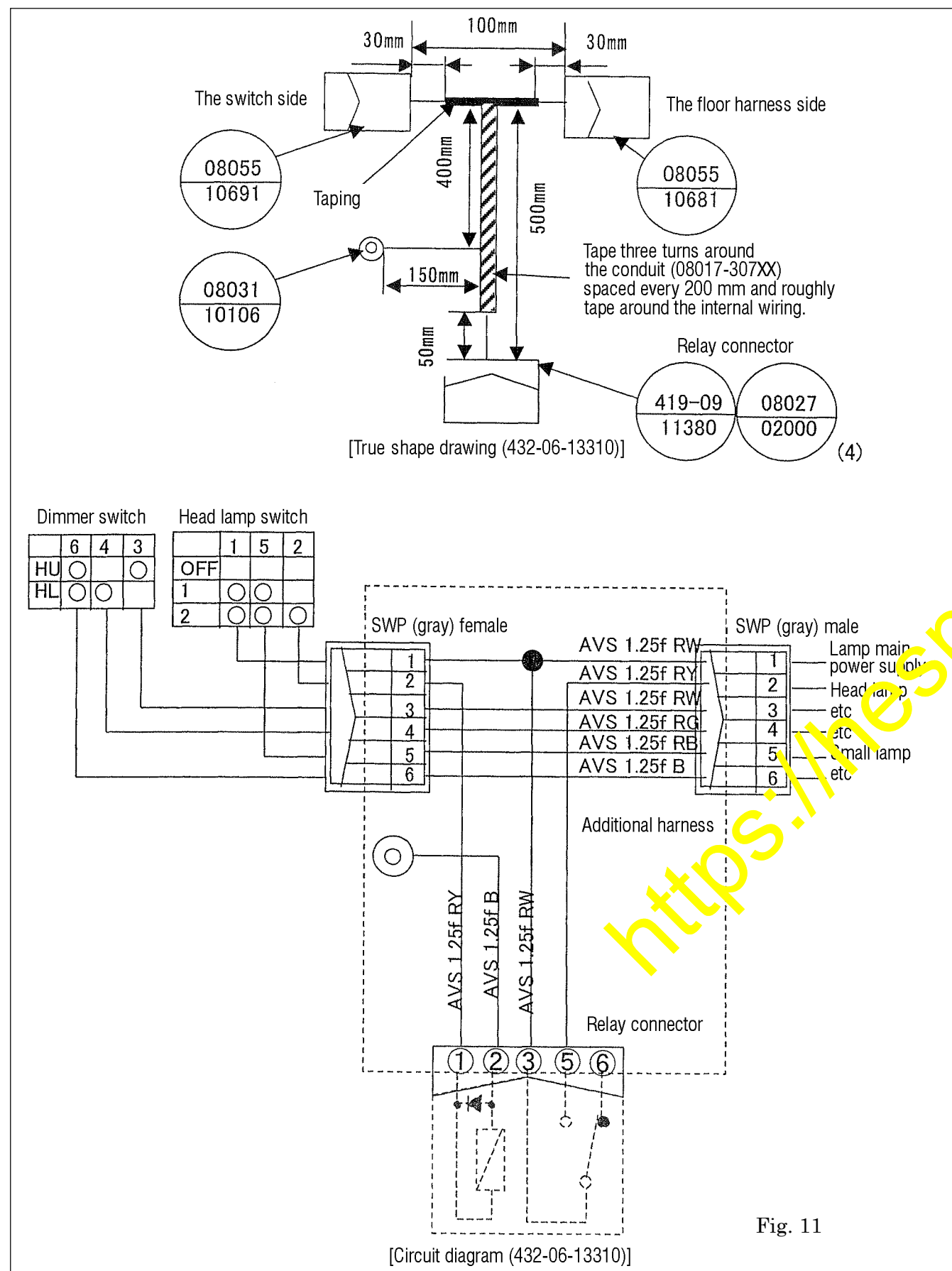


Fig. 11

Page added

① Work procedure

- Step 1) Remove paint from the relay fixing bracket and steering post mounting surface and the installed position of the grounding terminal (For details, see Fig. 12.)
- Step 2) Install the head lamp relay at the back of the steering post, using the bracket and plate (For details, see Fig.12.)
- Step 3) After connecting the created harness to the relay installed, connect the interrupt connector to the head lamp switch connector in the steering post and ground the ring terminal to the bracket with the bolt.

Head lamp switch connector No. by model (positions interrupted)

	Front seat connector No.	Rear seat connector No.
WT150E-1	CN L4	
WT250E-1 Front and rear seat specifications	CN L02	CN L24
WT500E-1 Front seat specifications	CN L02	
WT500E-1 Front and rear seat specifications	CN L02	CN L102
WZ4000-1	CN L02	CN L60

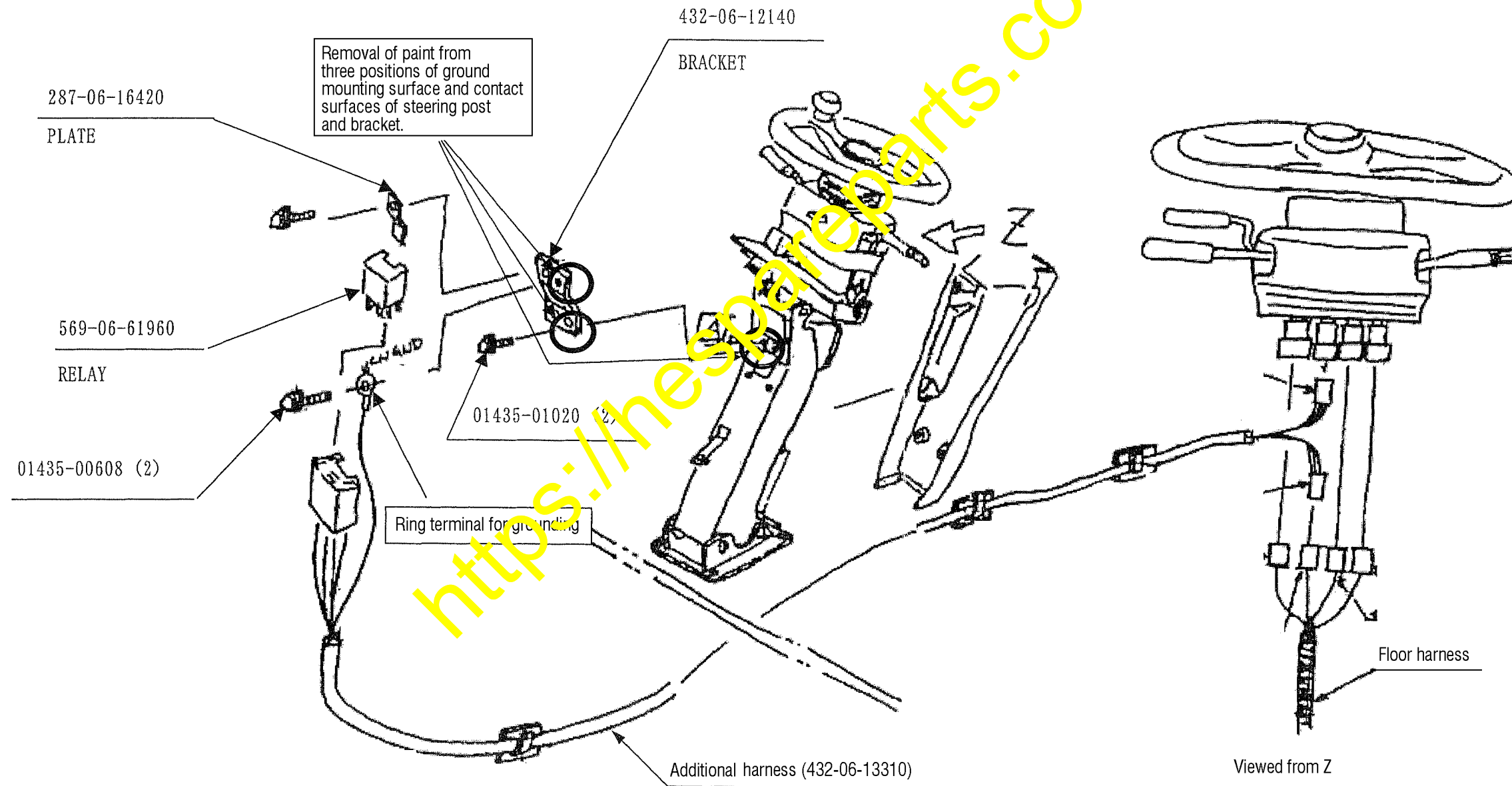


Fig. 12

5. Serial numbers of the applicable machines

Serial numbers of the applicable machines to the modification as per this Service News are as follows:



Machine model	Machines already shipped	Factory shipping machines	
		Machines already modified at plant (Change of lamp switch)	Added relay
WA500-3	#50001 and up	#52193 and up	#52207 and up
WA600-3	#50001 and up	#52101 and up	#53048 and up #52125 and up
WA700-3	#50001 and up	#51017 and up	#51022 and up
WA800-3	#50001 and up	#50042 and up	#50046 and up
WA900-3	#50001 and up	#50035 and up	#50040 and up
WD500-3	#50001 and up	#50012 and up	#50015 and up
WD600-3	#50001 and up	#50008 and up	#50011 and up
WD900-3	#50001 and up	#50013 and up	#50014 and up
WF550-3	#50001 and up	#50005 and up	#50006 and up
WF650T-3	#50001 and up	#50003 and up	#50003 and up
WT150E-1	#10001 and up	#10008 and up	#10008 and up
WT250E-1	#10001 and up	#10034 and up	#10036 and up
WT500E-1	#1001 and up	#1036 and up	#1039 and up
WZ4000-1	#1001 and up	#1007 and up	#1007 and up

For machines on which change of the lamp switch only was made by following the Service News AT04055, add a relay separately in accordance with this Service News.