

# PARTS & SERVICE NEWS

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**SUBJECT:** REPAIR PROCEDURE OF WINDOW MOTOR FAILURE ON WA1200-3

**PURPOSE:** To introduce the modification procedure to repair power window failures on WA1200-3 wheel loaders

**APPLICATION:** WA1200-3 Wheel Loaders, Serial Nos. 50001 thru 50012

**FAILURE CODE:** D120MA

**DESCRIPTION:**

1. Introduction

Power window failures causing frequent fusing of the power window fuse on the WA1200-3 wheel loaders can be resulting from malfunctioning (welding of the contact) of the power window operating relay.

When the aforementioned failure occurs, implement the modification being introduced in this Service News to repair the failures.

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## 2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
42C-06-12780	Wiring Harness	Additional	1	
42C-06-12790 (427-06-22710)	Plate (Plate)	} Replacement	1 (1)	
56B-06-16840 (23W-05-2510)	Relay (Relay)		1 (4)	
569-06-86360	Bracket	} Additional	1	
56B-06-16850	Sheet		1	
56B-06-16390	Sheet		1	
56B-06-16380	Sheet		2	
421-09-21420	Sheet		2	
01010-80612	Bolt		2	
01643-30623	Washer		2	
08056-11221	Body		1	
08056-10060	Terminal		5	
08056-10061	Terminal		6	
08056-11240	Rear Holder	1		
08034-00414	Band	1		
42C-93-11410	Plate	1		
42C-93-11420	Plate	1		

## Precautions when carrying out the modification work

### 1. Precautions when carrying out the removal work

- When disconnecting the harness connectors, hold the connector body taking care not to apply excessive force.
- Attach tags, etc. to disconnected harnesses in order not to make connection errors when reconnecting them.
- Before removing the unit, clean the neighborhood and, after removing the unit, cover the hole to prevent entry of foreign substance.

### 2. Precautions when carrying out the installation work

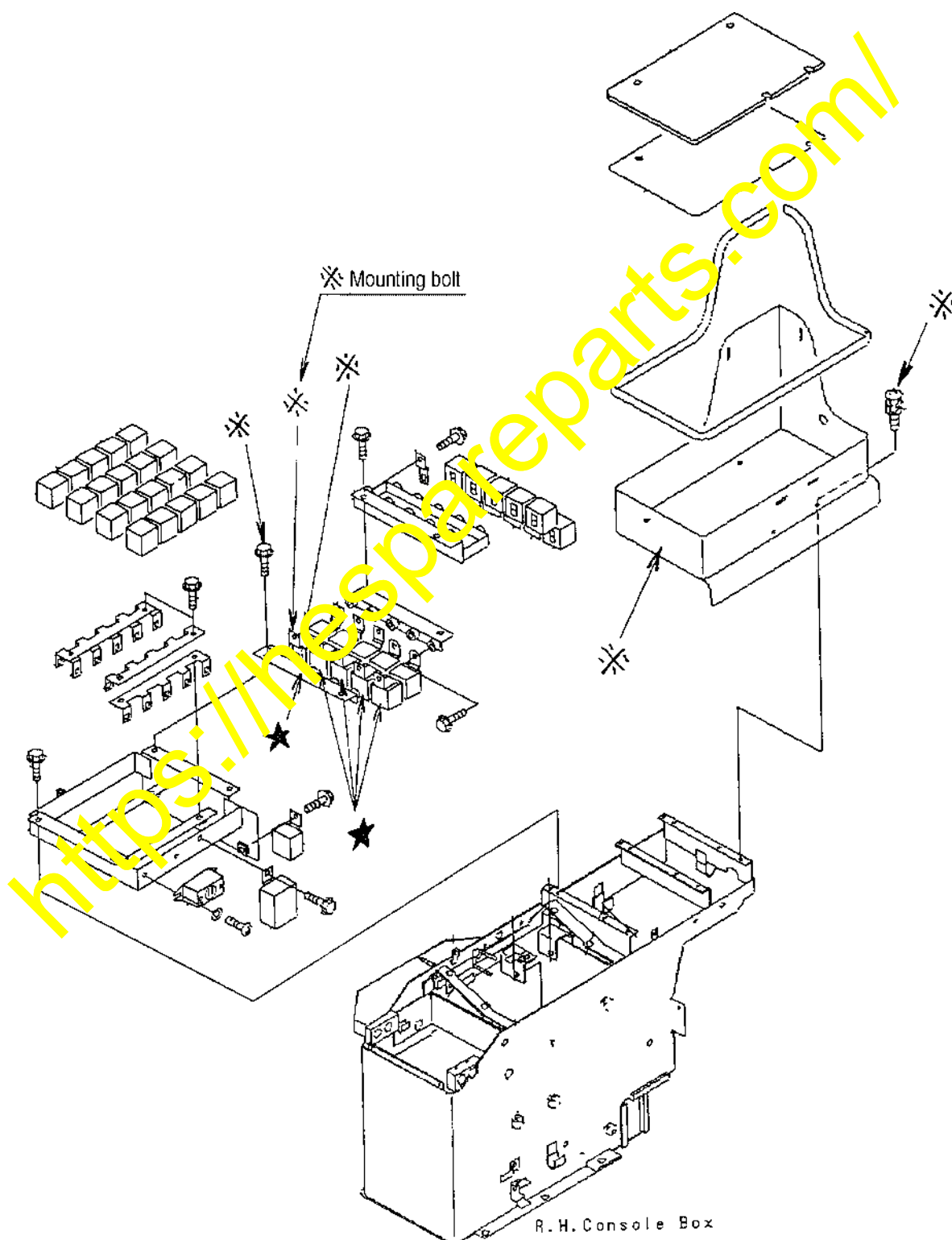
- Tighten the bolts and nuts at the specified (KES) tightening torque.
- Clean the installing parts and, if they are damaged, deformed, burred or rusted, repair them.
- When connecting the harness connectors, clean the connector to remove oil, dust, water, etc. and connect them securely.

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## Removing the parts which need to be removed for the modification

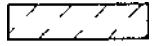



## Removal of the relay and the bracket from the console box, RH

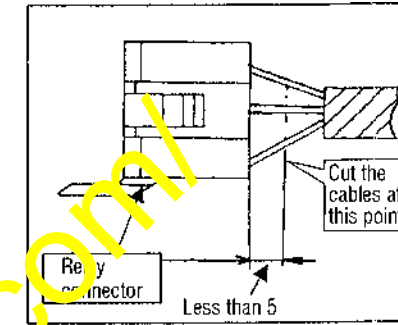
- Remove the ★ marked and ※ marked parts referring to the drawing shown below.
- Since the ※ marked parts are being reused when carrying out the installation work, store them carefully.



Additional working procedure - 1

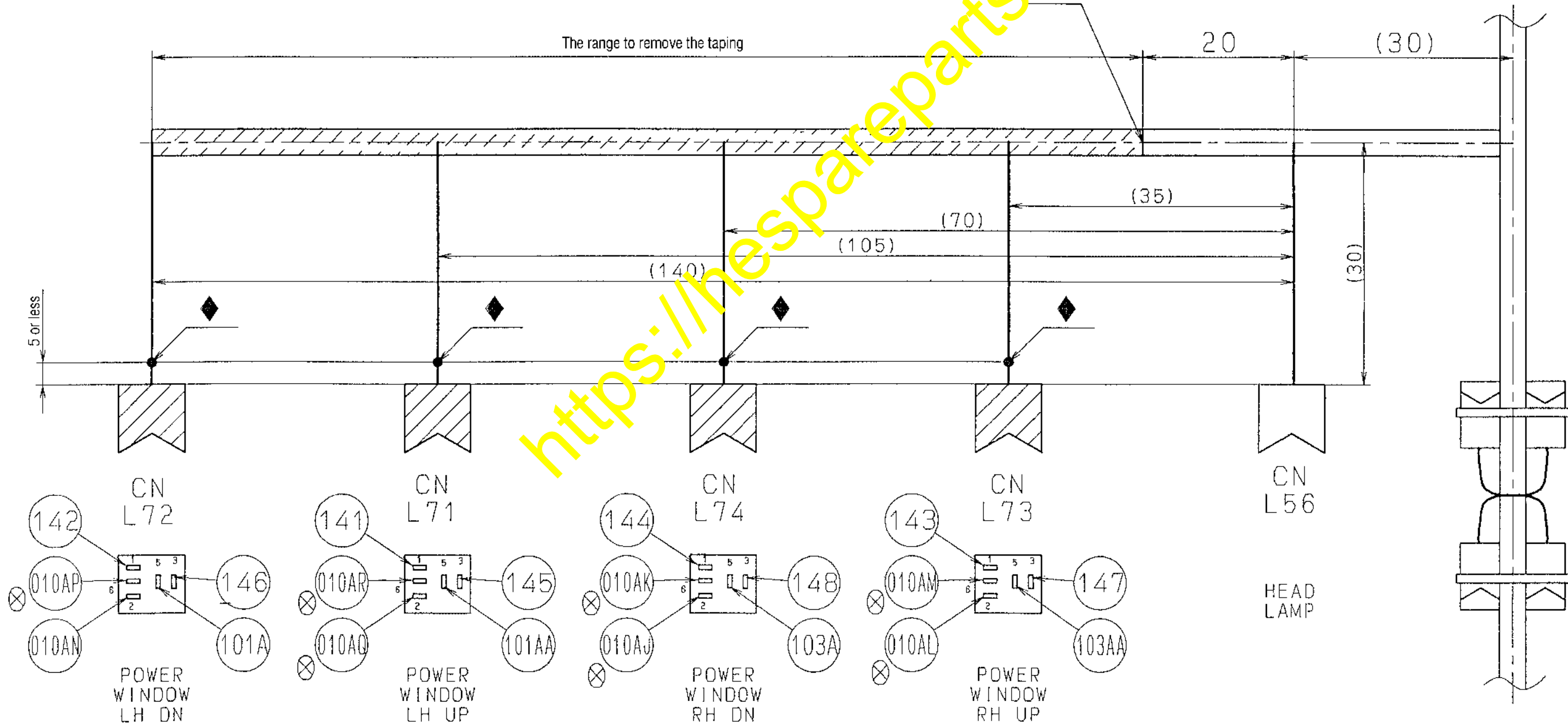
Disassembly and cutting of the floor harness at the power window relay section inside the console box, RH

- Remove the tape being wound around the  marked section in the drawing below up to the  marked position taking care not to break the tape midway. Regarding the cables connecting to the connectors CN L71, CN L72, CN L73 and CN L7 write the cable numbers on the respective tapes of the 13 cables excluding the 7  marked cables in the drawing shown below.
- Cut all the 20 cables at the 4 places marked  in the drawing shown below. Use of the hatched connectors with the current connector numbers CN L71, CN L72, CN L73 and CN L7 at 4 places will be canceled.





Note: Since same color cables exist, put a tape indicating the cut section (for example: L72) onto the cable to clarify the cut section.

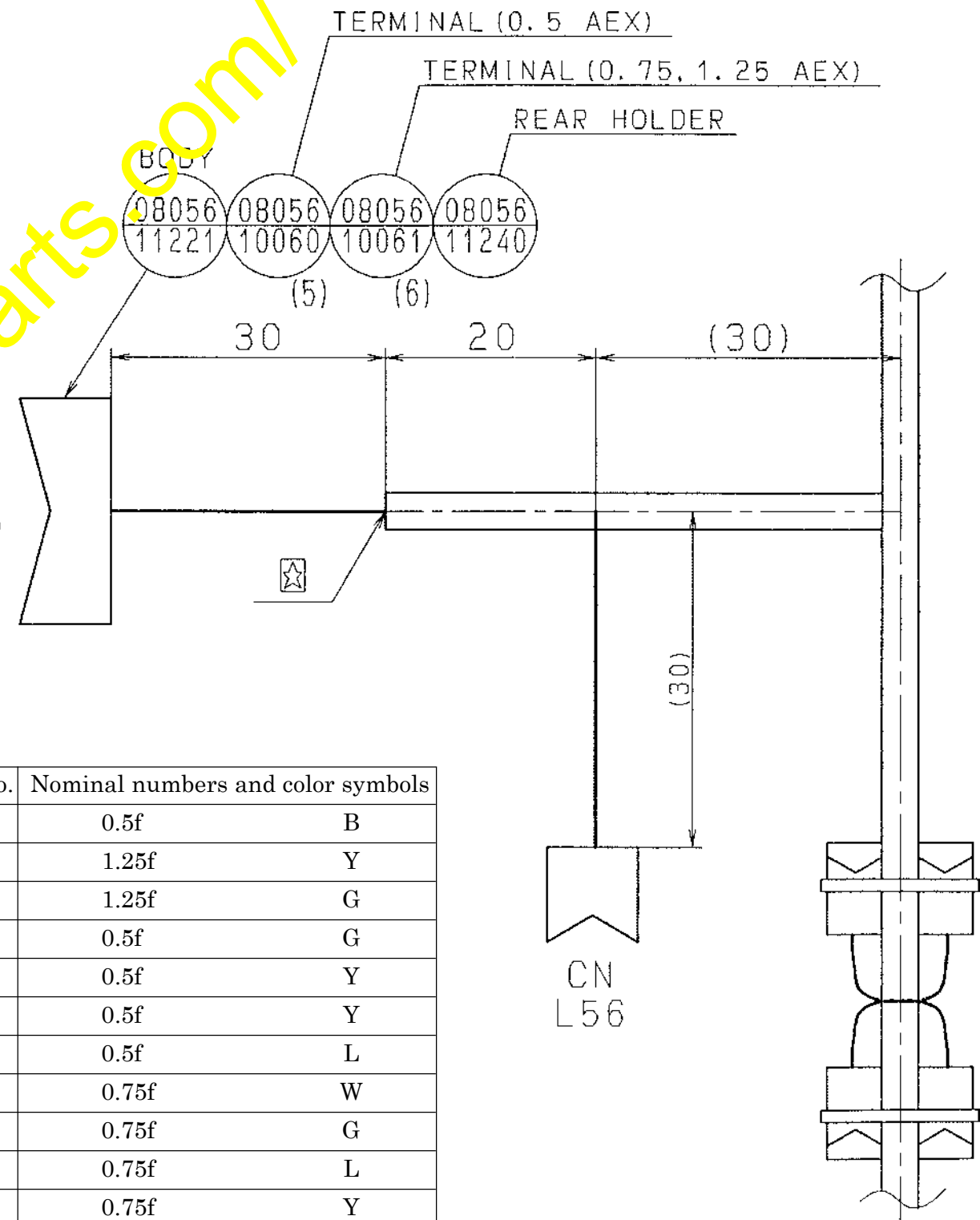
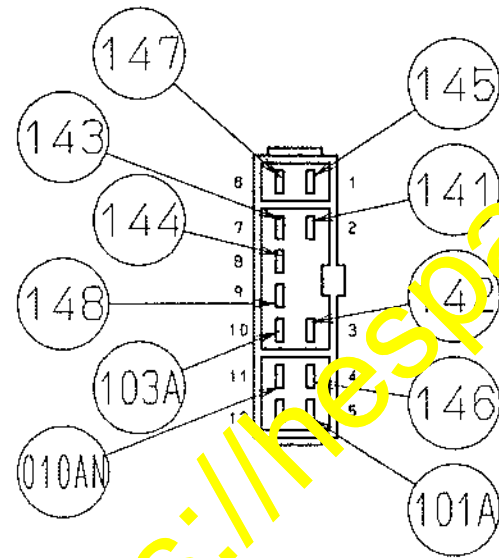
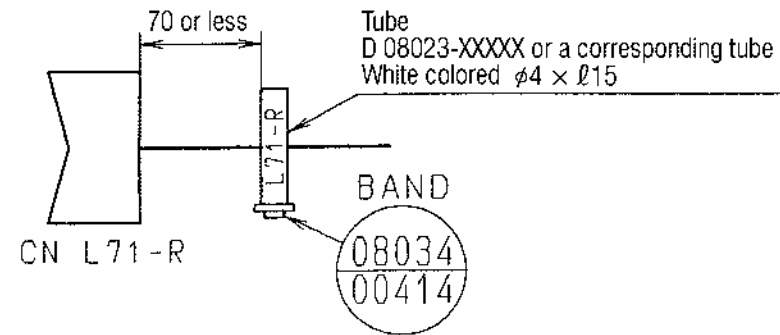
Note: This cutting length matches to the connection to the new connector (L71R).



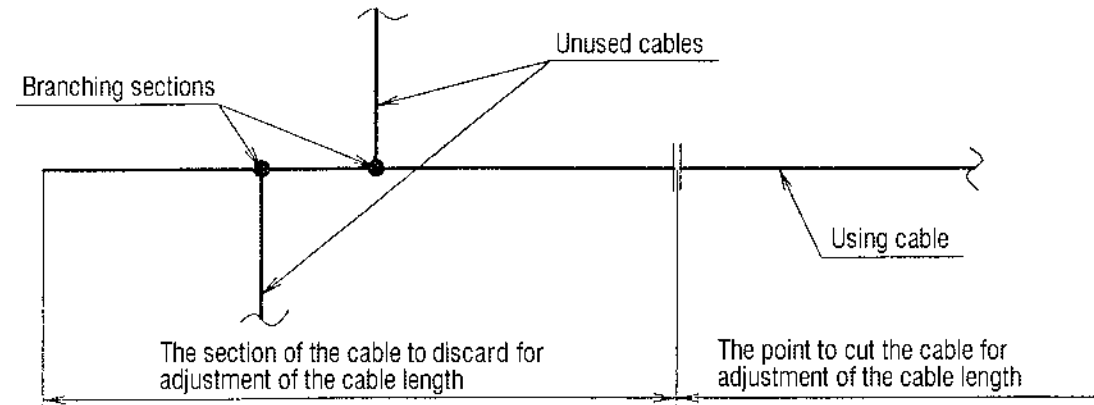
Additional working procedure - 2

Reconnection to the floor harness after the disassembly and cutting work

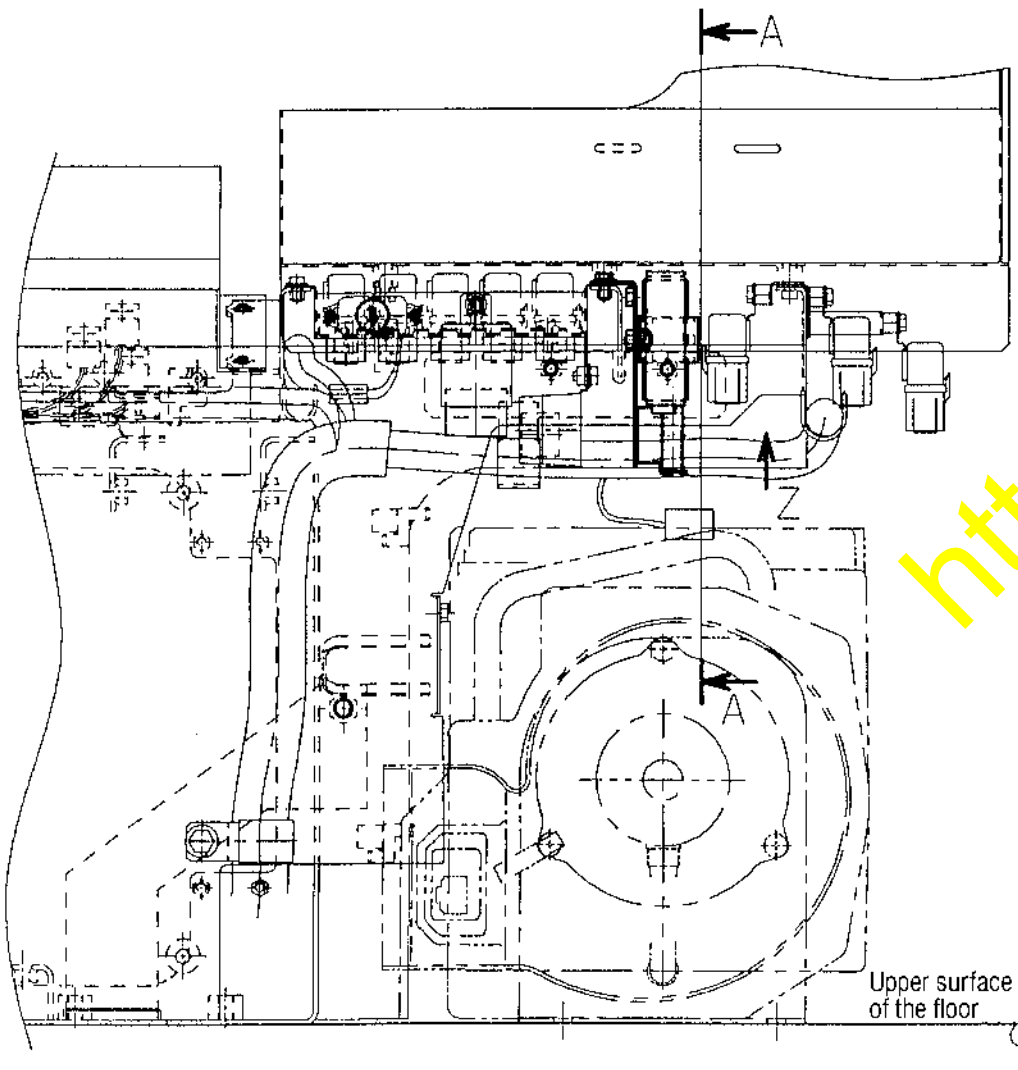
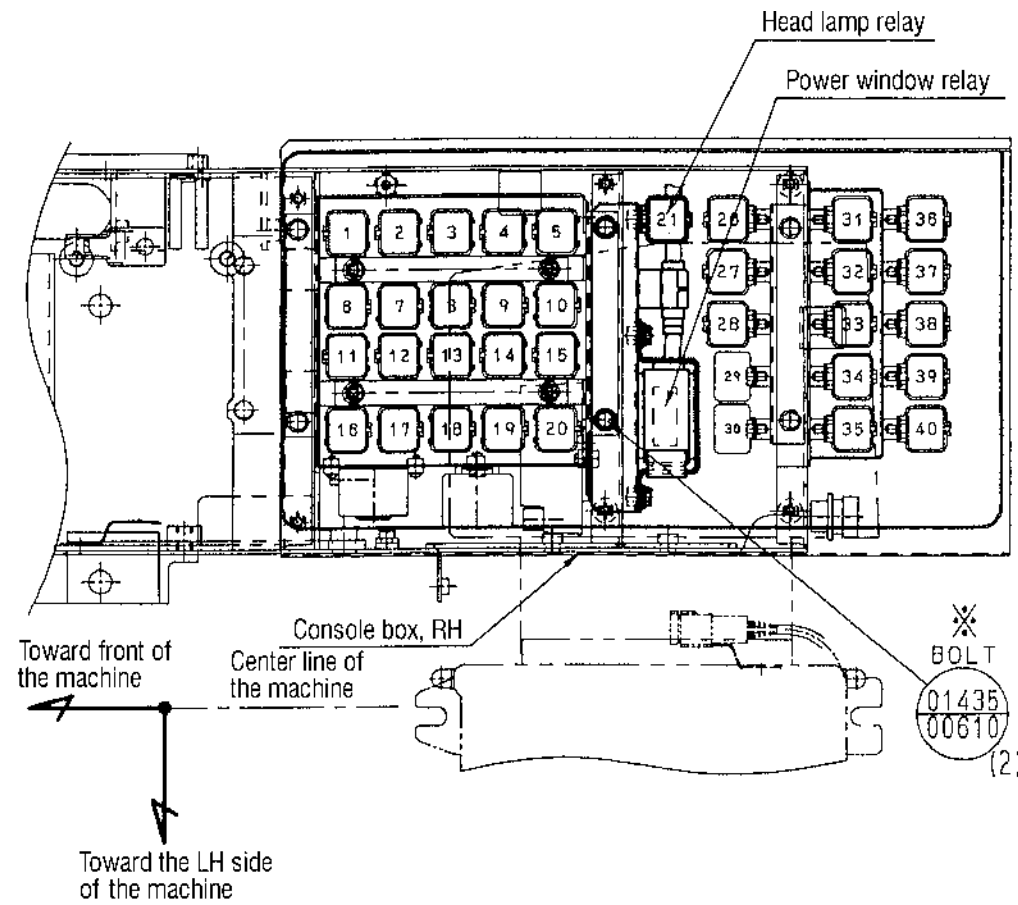
- After confirming the cable to connect to the newly prepared connector CN L71-R and after adjusting the length of each cable to the lengths being indicated in the drawing, remove the insulating cover at their edges by 4 to 5 mm and crimp the terminal before inserting into the connector. (Since there can be cases where the crimping is imperfect, solder them after finishing the crimping work.)
- Regarding the power cables No. 101AA (0.75fY) and 103AA (0.75fG) which are not being used after this modification, cut them at their branching sections, or cut them at the  marked sections with 20 mm or more of allowances and insulate them by taping. Regarding other 7 grounding cables, cut them after arranging their ends even and gather them up by taping. (Part No. of the using tape: KES D08024-91920 or equivalent tape)
- Finish the end section of the  marked taping securely so that oil, dust, etc. may not adhere to the end section of the taping. Taping at the end should be of the triple winding and cut the remaining section of the tape. (The tape which has been removed as per the instructions given on page 6 may be reused.)
- Regarding the connectors, write the connector number as shown in the drawing below.



Note: In cases like being indicated in the drawing below, cut and discard the section including the branching sections and, although it will be the matter of course, taping work is not necessary for these unused cables.



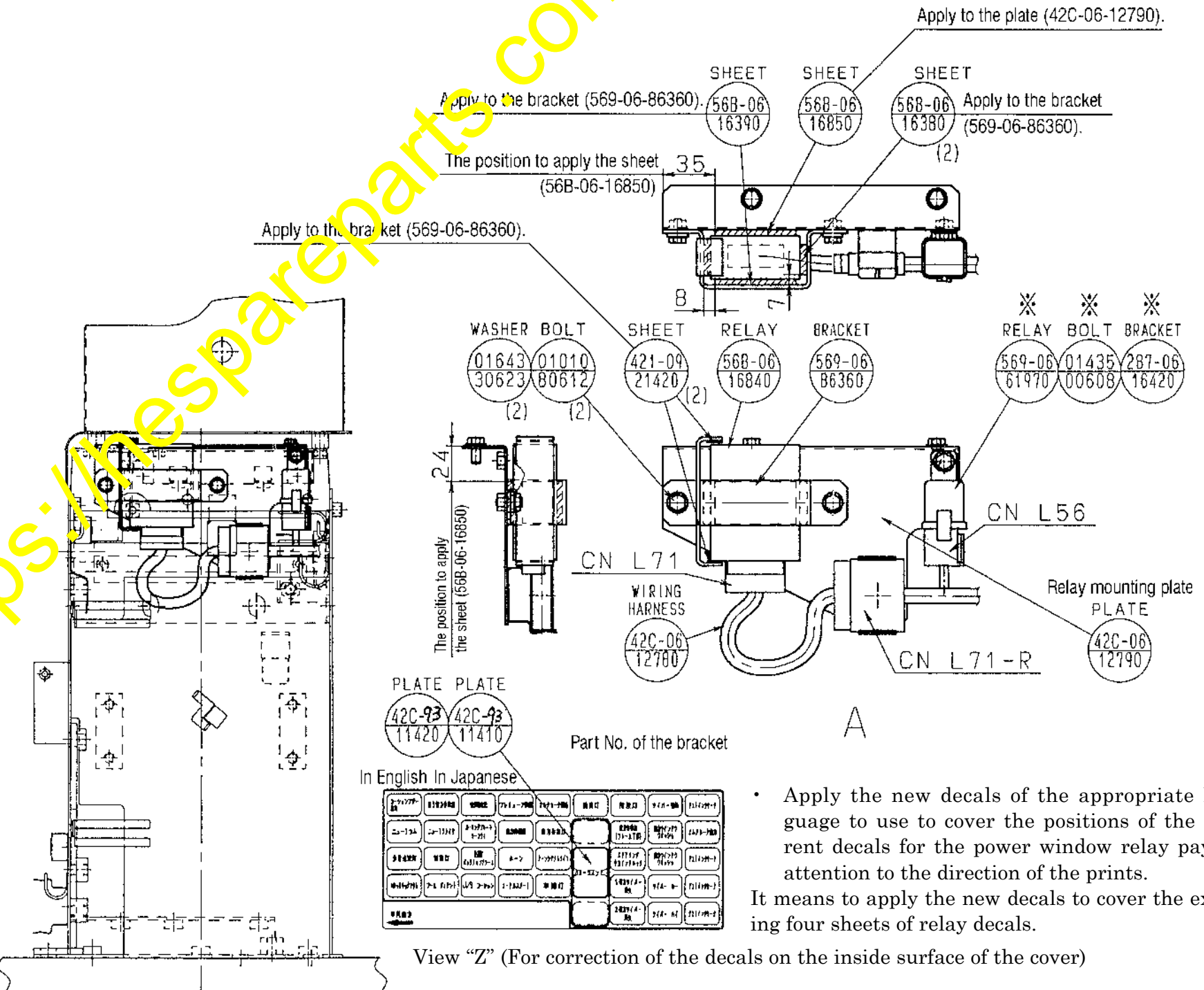
Cable No.	Nominal numbers and color symbols	
010AN	0.5f	B
101A	1.25f	Y
103A	1.25f	G
141	0.5f	G
142	0.5f	Y
143	0.5f	Y
144	0.5f	L
145	0.75f	W
146	0.75f	G
147	0.75f	L
148	0.75f	Y



Installation procedure

Installation and wiring of the power window relay

- Regarding the parts marked ※, reuse the existing parts which have been removed as per the instructions on page 7.
  - Apply the sheet (56B-06-16850) to the relay mounting plate (42C-06-12790) and apply the sheets (56B-06-16390), (56B-06-16380: 2 sheets) and (421-09-21420: 2 sheets) to the relay mounting bracket (569-06-86360) at the positions instructed in the drawing below.
  - Connect the connectors L56, L71R and L71 of the wiring harness and connect the power window relay and the existing head lamp relay. (Tightening torque for the M6 bolts should be at 8.8 – 14.7 Nm {0.9 – 1.5 kgm})
  - After checking the operation of the power window, reinstall the cover which has been removed as per the instructions on page 7 after correcting its decal (Refer to the View "Z".)
- "Tightening torque for the 4 pcs. of the cover mounting screws (※421-09-21430): 3.43 – 4.41 Nm {0.35 – 0.45 kgm}"



- Apply the new decals of the appropriate language to use to cover the positions of the current decals for the power window relay paying attention to the direction of the prints. It means to apply the new decals to cover the existing four sheets of relay decals.

View "Z" (For correction of the decals on the inside surface of the cover)



Modified circuit diagram for the power window relay

