TADANO

Publication No. AW-250TG-3/C2-1E

Service Manual

(Circuit Diagrams and Data)

01

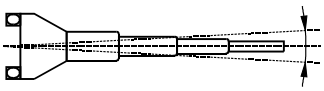
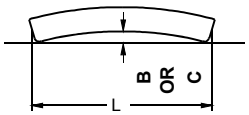
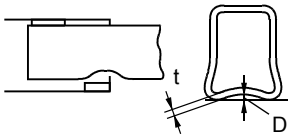
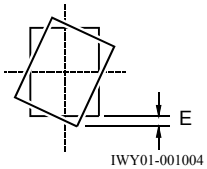
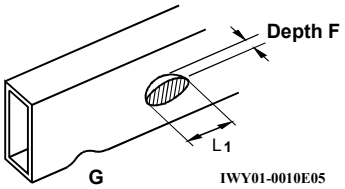
Aerial Platform

Model AW-250TG-3

Applicable Serial No. 420454 --

TADANO LTD.

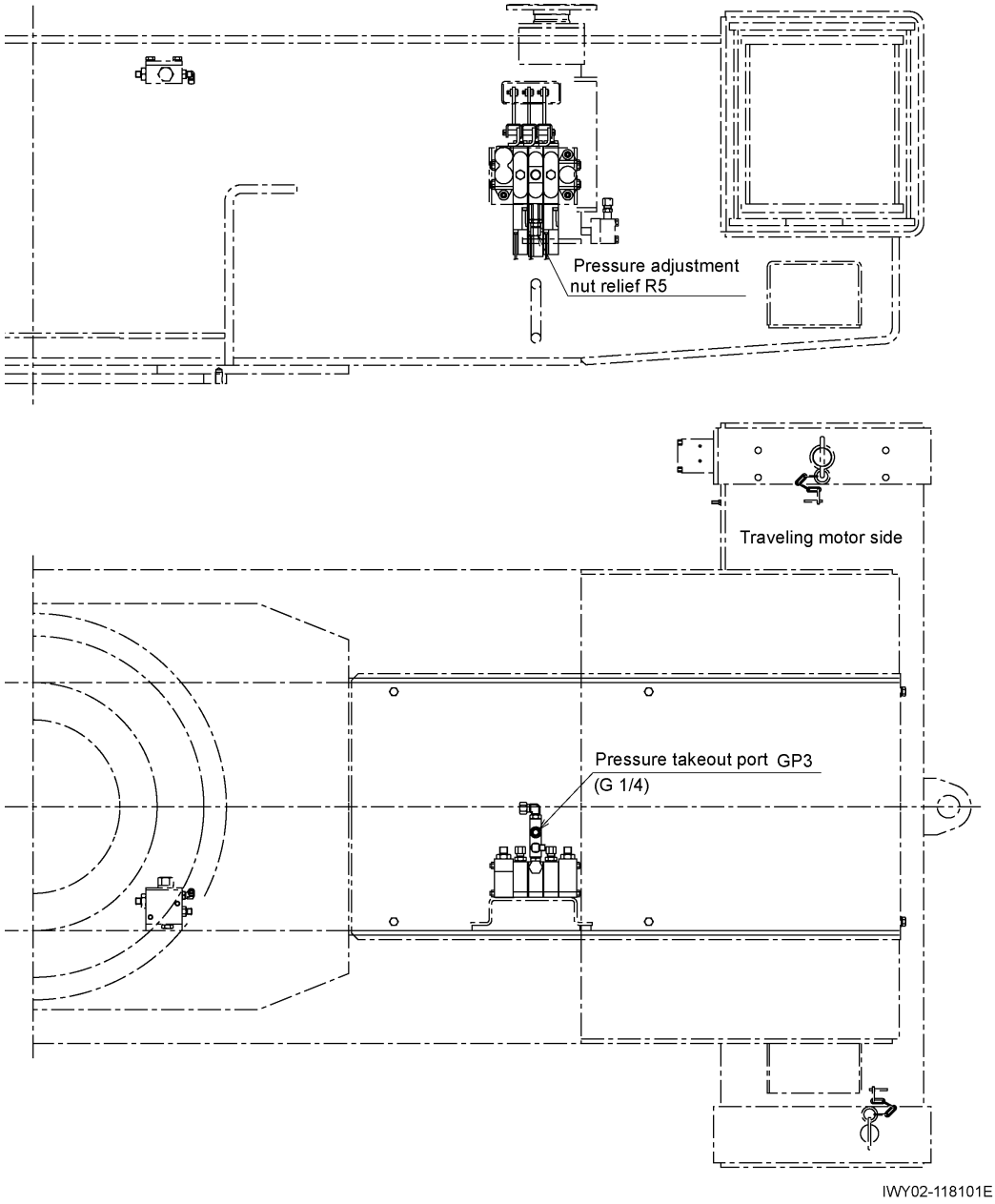
5.3 Boom bend and deformation

Item			Standard (mm)	Remarks
Overall boom bending (at full extension, maximum elevation angle, rated load)  IWY01-001001			Free of large vertical or horizontal bends along the entire boom length.	With machine level, adjust pads as appropriate.
Individual boom bends (Lengthwise direction)  IWY01-0010E02	Vertical	Base boom section 2nd boom section Top boom section	B ≤ 16.2 B ≤ 16.6 B ≤ 16.2	B ≤ 1.5 × L /1000 L: Boom length of each boom section
	Lateral	Base boom section 2nd boom section Top boom section	C ≤ 10.8 C ≤ 11.1 C ≤ 10.8	C ≤ 1.0 × L /1000 L: Boom length of each boom section
Presence of indentions at boom overlap section (bend of floor plate)  IWY01-001003		2nd boom section Top boom section	D ≤ 3.0 D ≤ 2.3	D ≤ t/2
Check for deformation of side plate			Free of large deformation, particularly on the compression side (where larger load is applied than other places of the plate).	
Check for twisting in the lengthwise direction when boom is fully extended  IWY01-001004			E ≤ 5	
Check for dents and other localized indentation.  IWY01-0010E05			F ≤ 2 Check the dents whose L_1 is 50 or larger. Generally dent G on the 4 corners cannot be repaired.	

442-004-80000 ⚠0

Adjusting Procedure (Hydraulic)

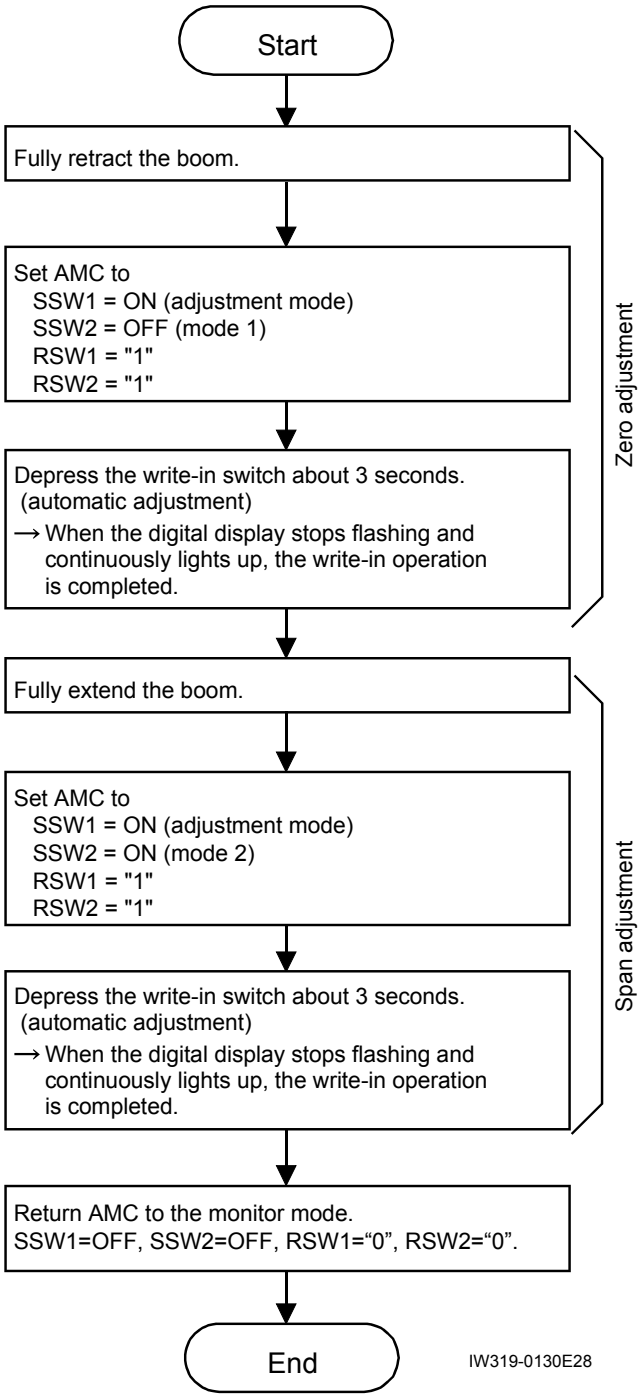
Pressure adjusting position and pressure measuring position (Lower frame)



444-011-00130 △0
444-011-00120 △0
444-011-00110 △0

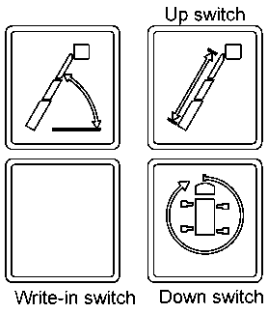
4. Adjustment of AMC

4.1 Adjustment of boom length detector zero/span

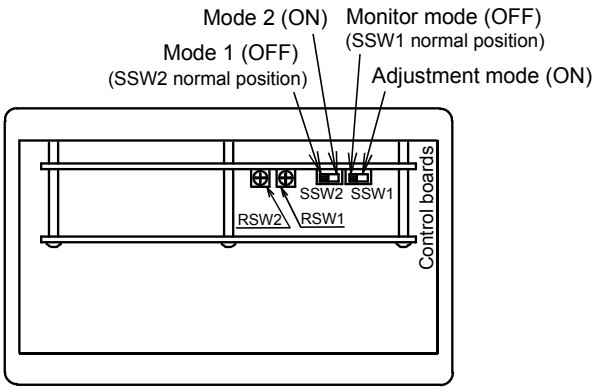


IW319-0130E28

Switch layout



IWY04-153002E



View when the front panel is removed. IW301-0190E23

The zero point displayed value and the span point displayed value when normal are as follows.

- Zero point displayed value: 9.80 $^{+0.03}_{-0.04}$ m
- Span point displayed value: 24.20 $^{+0.03}_{-0.04}$ m

[NOTICE]

◆ Adjust with safe boom direction and boom angle even when the boom fully extended.

◆ When extending the boom fully, use the emergency controls.

◆ If pressing the write-in switch cannot make the digital display stop flashing, take the following measures.

1. Release the write-in switch, and wait for 1 second or more.
2. Press the write-in switch again for 1 second or more.
   When the digital display lights up, the write-in operation is completed.

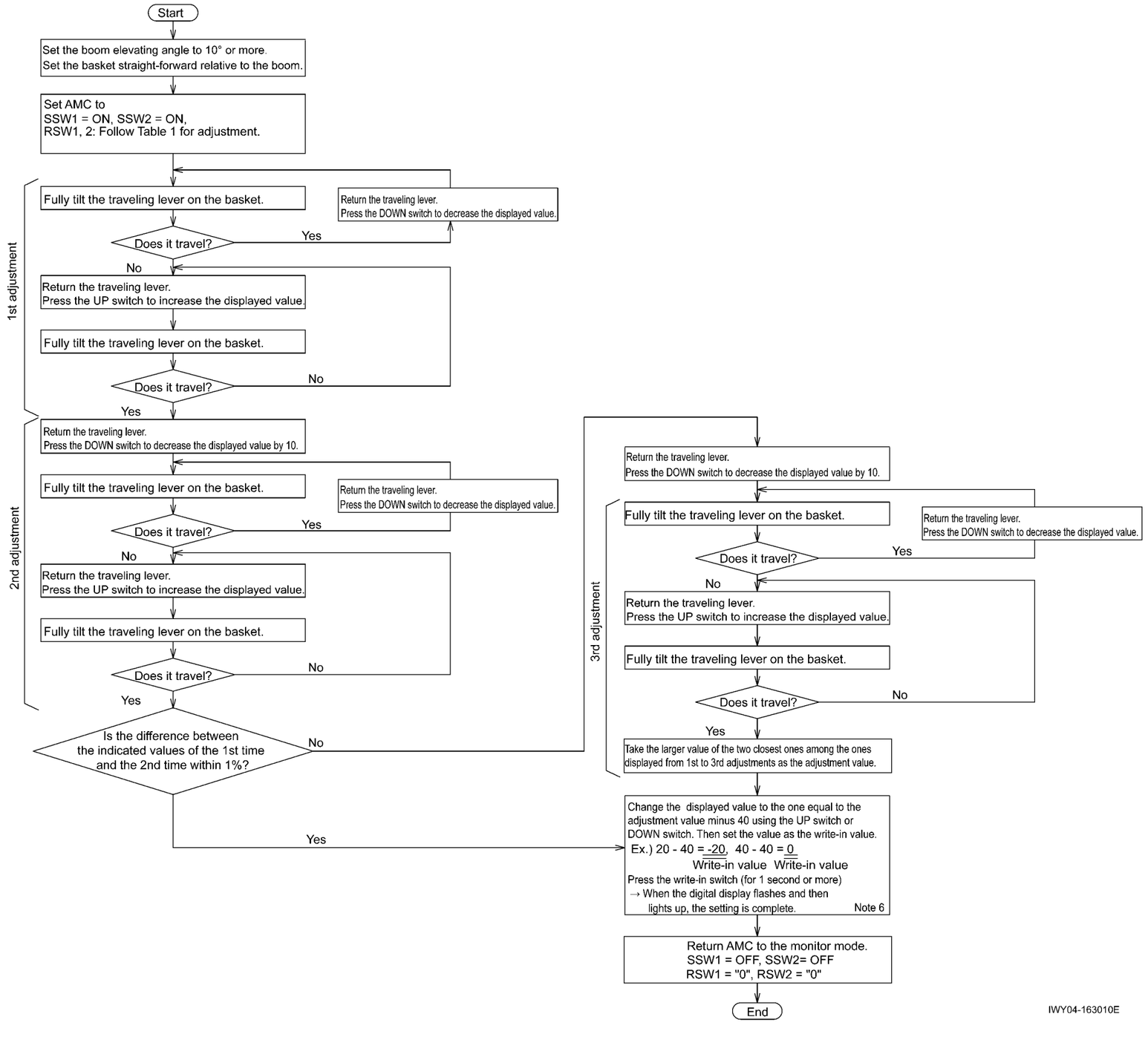
◆ Operate the boom to check that the written value is within the range of the tolerance after adjustment. When checking the written value, also change SSW and RSW of the AMC to the same positions as adjustment.

- When checking zero adjustment value
  SSW1 = ON, SSW2 = OFF
  RSW1 = "1", RSW2 = "1
- When checking span adjustment value
  SSW1 = ON, SSW2 = ON
  RSW1 = "1", RSW2 = "1"

444-011-01020 ⚠0

4.7 Offset adjustment for traveling operation valve

In order to increase the accuracy of slow start and slow stop, perform the following adjustment to store “operation signal voltage at the point when the machine starts to travel” into the AMC.

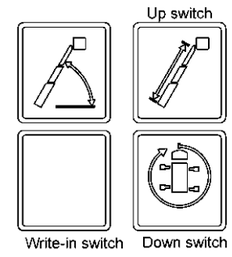


IWY04-163010E

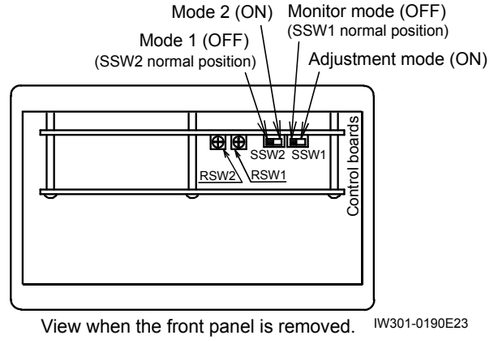
[NOTES]

1. Increase or decrease the displayed value 1 by 1 for adjustment unless otherwise specified.
2. Measure each operation twice, and if the dispersion is 1% or less, write in the value obtained by subtracting 40 from the second adjustment value. However, if the dispersion exceeds 1%, make a third measurement and write in the larger value of the closest two among the three measured values.
3. Set both of the accelerator switch and travel speed select switch to “L” during adjustment.
4. To eliminate an error due to backlash of the detector, start the adjustment after slightly operating the control toward the direction of the adjustment.
5. Make this adjustment with the hydraulic oil temperature 45±5°C.
6. If pressing the Write-in switch cannot make the digital display stop flashing, take the following measures.
   1. Release the Write-in switch, and wait for 1 second or more.
   2. Press the Write-in switch again for 1 second or more.
   When the digital display lights up, the write-in operation is completed.

Switch layout



IWY04-153002E



View when the front panel is removed. IW301-0190E23

Table 1: RSW1 and RSW2 selecting position and adjusted item comparison

RSW2 \ RSW1	8	···	A
C	Travel right forward (%)	···	Travel right backward (%)

444-010-21040 ⚠1

- Moment detector

[NOTICE]

◆ Check the moment detector by measuring its resistances after switching off the power.

Detector specification	Elevating moment detector		Leveling moment detector	
	Measuring terminal CNA1 F	Standard value	Measuring terminal CNA1 F	Standard value
Bridge resistance	1–22	182±1 Ω	1–23	91±1 Ω
	1–3		1–4	
	5–22		5–23	
	3–5		4–5	
Insulation resistance	1–Swing frame	200 MΩ or more	1–Swing frame	200 MΩ or more
	5–Swing frame		5–Swing frame	
	6–22		6–23	
	3–6		4–6	
Condition for resistance check	- Measure after removing CN ML (leveling cylinder moment detector connector). (In order to eliminate a sneak path problem.) - Use a tester to measure at connector CNA1 (female) on AMC.		- Measure after removing CN M (elevating cylinder moment detector connector). (In order to eliminate a sneak path problem.) - Use a tester to measure at connector CNA1 (female) on AMC.	

444-011-01050 ⚠1

11. Swing system

Refer to operation and maintenance manual of the applicable model for the following items.

1. Maintenance table
2. Swing bearing mounting bolt check

12. Electrical system

Refer to operation and maintenance manual of the applicable model for the following items.

1. Maintenance table
2. Battery electrolyte level check
3. Replacing fuses

13. Boom

Refer to operation and maintenance manual of the applicable model for the following items.

1. Maintenance table
2. Adjustment of tension in telescoping wire rope
3. Adjustment of tension in hoses and cable inside boom
4. Slide plate wear check

14. Oils and greases

Refer to operation and maintenance manual of the applicable model for the following items.

1. Oils and greases table
2. Recommended oils and greases

15. Consumable parts

Refer to operation and maintenance manual of the applicable model for the following items.

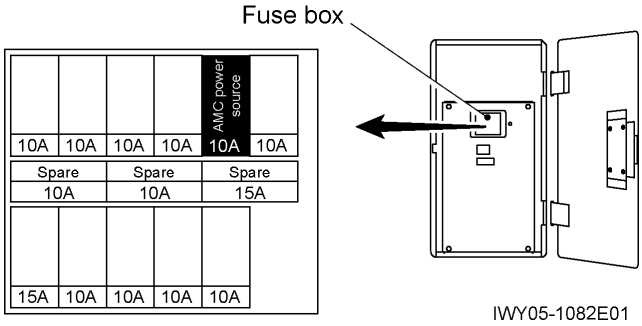
1. Filters
2. Fuses

16. Others (compulsion release method)

⚠ WARNING

⚠ Because overload protector (AMC3) does not operate, work is strictly prohibited in the following condition.
This is the tentative measure until the aerial platform is put into the state of storage at emergency.
Install the fuse on the original position promptly after storage.

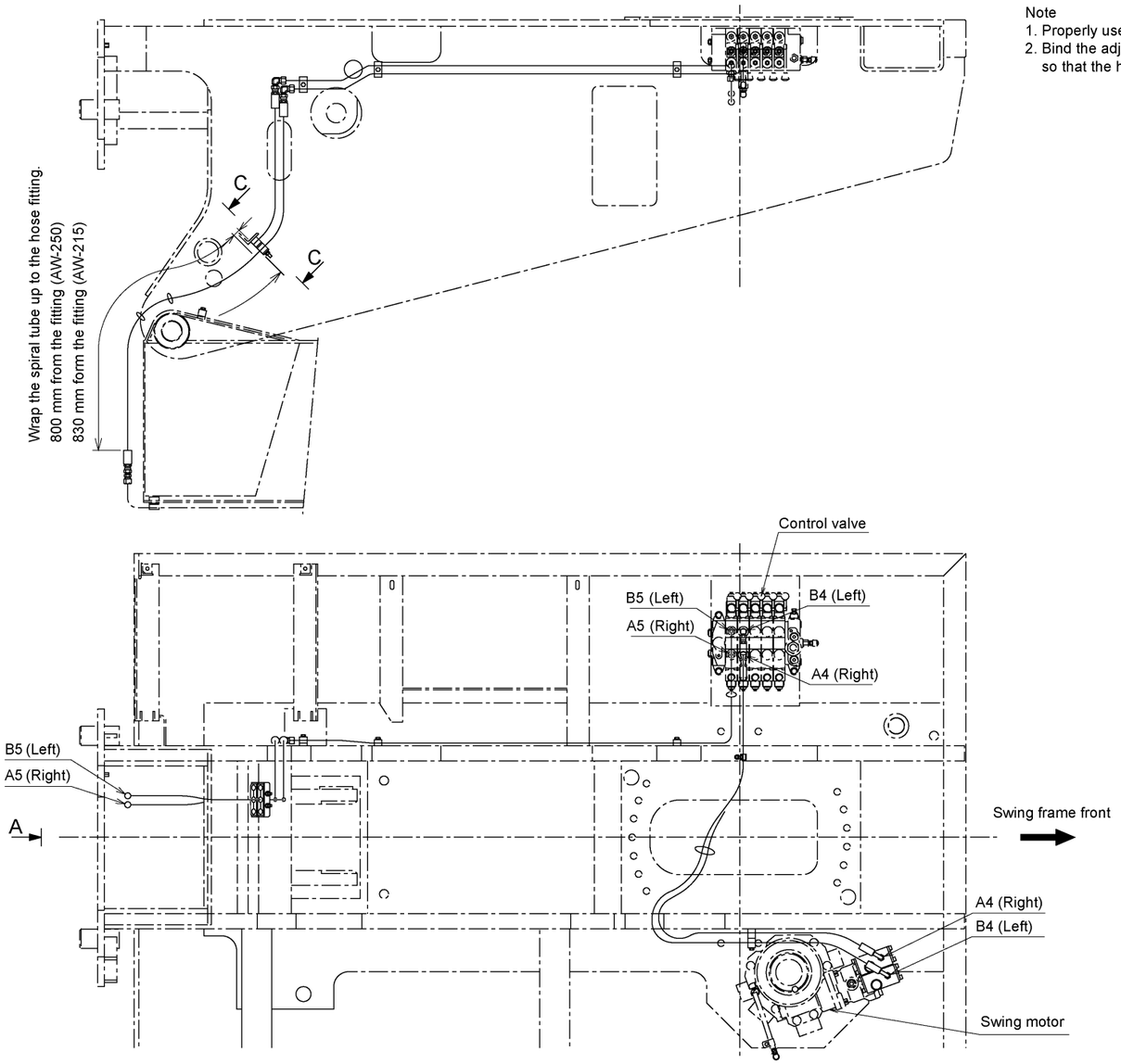
If the emergency storage operation is impossible with an emergency switch, detach the fuse (AMC power source) shown in the figure below. (Operation is available.)



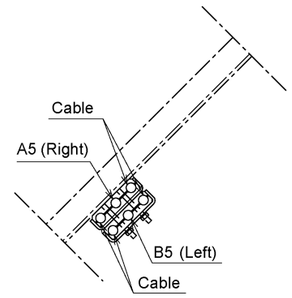
IWY05-1082E01

Z-6

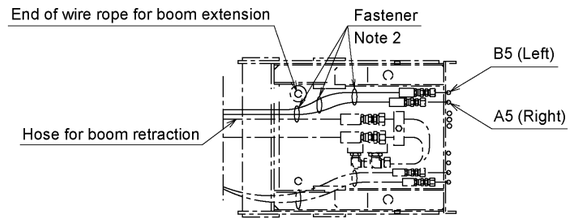
2. Swing



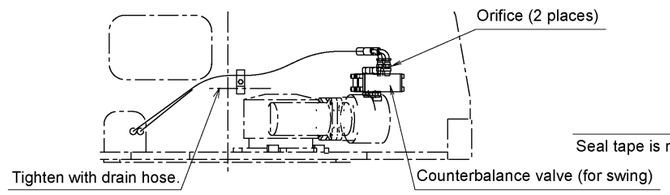
Note
1. Properly use fasteners to bind the hose.
2. Bind the adjoined hose for boom retraction to the rear end of the boom so that the hose does not reach the area for wire end R25.

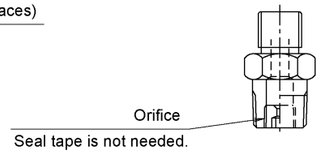


View C-C



View A



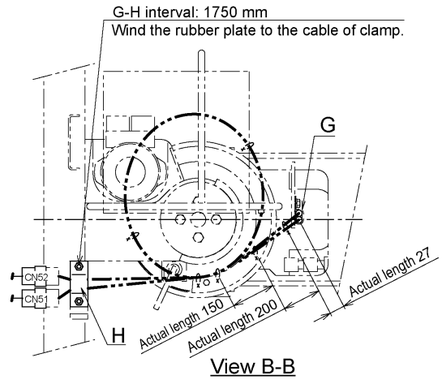


Detailed view of orifice assembly

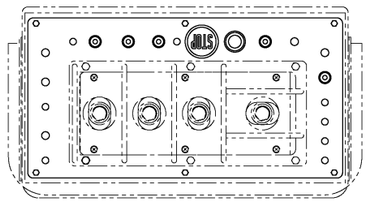
IWZ07-280001E

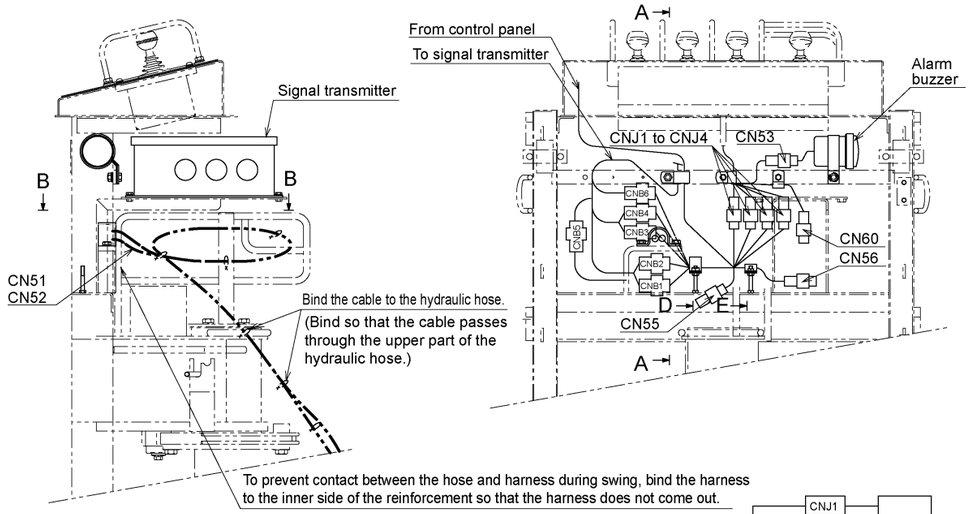
Z-9 Location of Electric Parts (Basket)

1. Basket wiring

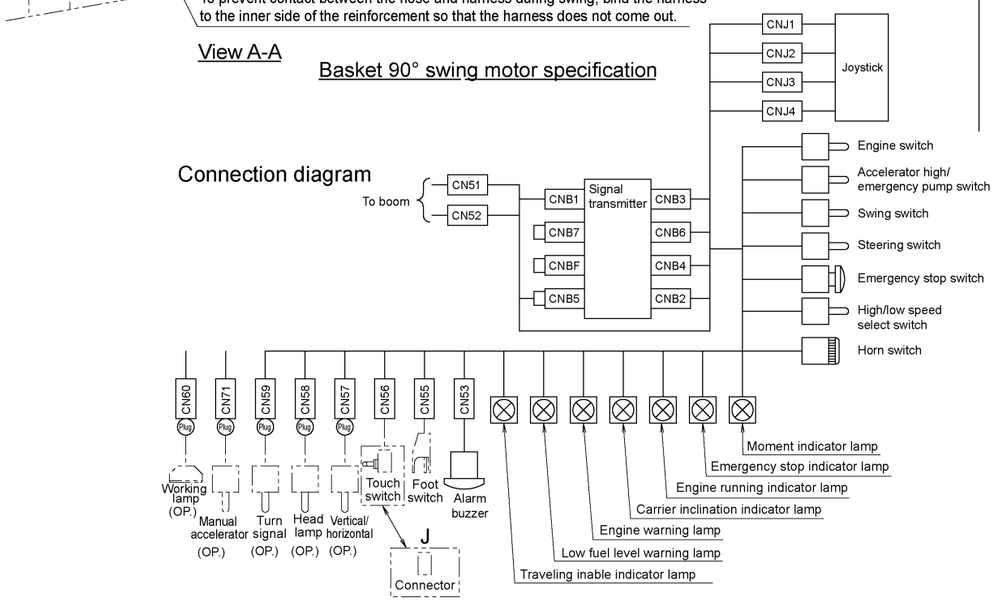


View B-B



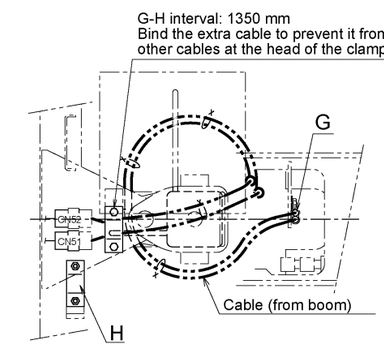


View A-A

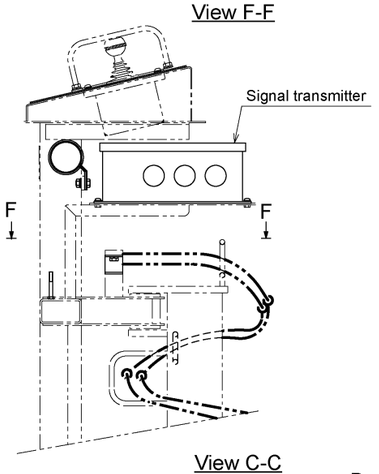


Basket 90° swing motor specification

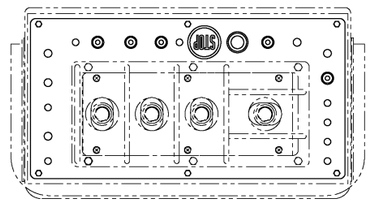
Note
1. After installation, check for operation so that the fastener which binds the cables and hoses does not catch the cable guide.
In addition, the hose smoothly slides around the post while it does not strongly push the harness.

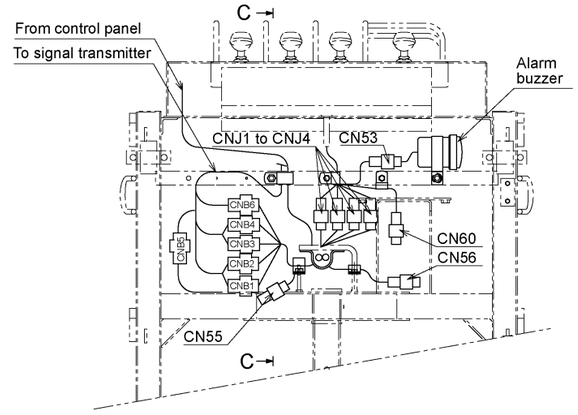


View F-F



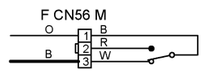
View C-C



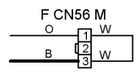


Basket 60° swing cylinder specification

For touch switch



For connector



Circuit diagram of J

IWZ02-464001Eb