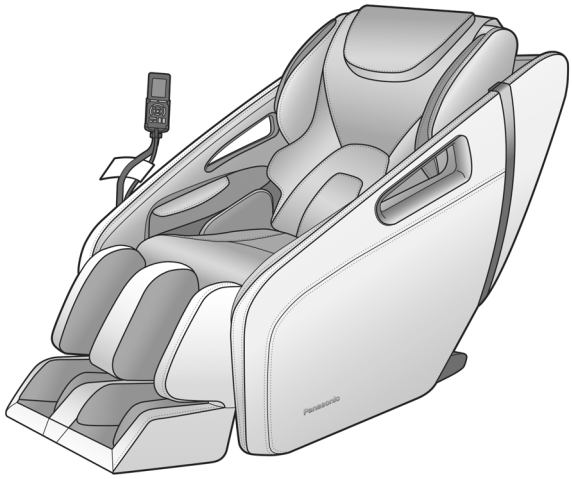
Order Number WSH2105T01CE

Service Manual

Massage Lounger



Model No. EP-MA32

Taiwan

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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Panasonic

1 Specifications

1.1. General Specifications

關於電源		AC 110 V 60 Hz
額定功率		145 W （操作器關閉時約為0.3 W）
上半身按摩	按摩範圍 （上下方向）	約62 cm
	按摩範圍 （左右方向）	使用產品時的按摩輪間距（包含按摩輪寬度） 頸部、 肩部、 背部、 腰部： 約4 cm ~ 15 cm 在背上滾動和上下移動時的按摩輪間距（包含按摩輪寬度）： 約5 cm ~ 17 cm
	按摩範圍 （前後方向）	按摩輪突出量（強度可調）： 約10 cm
	按摩速度	揉捏： 約每分鐘4次~約每分鐘25次 捶打： 約每分鐘285次~約每分鐘495次（單側） 移動速度： 約2 cm/s ~ 4.5 cm/s
氣囊按摩	氣囊（小腿）	3： 約32 kPa 2： 約30 kPa 1： 約18 kPa （* 確切數值可能因身體部位而稍微不同。）
傾斜角度		靠背: 約127° ~ 150° 小腿‧腳掌按摩部(小腿‧腳掌按摩部分): 約8°~ 78°
自動關機		最大約15分鐘後自動關機
尺寸	未傾斜時 （長×寬×高）	約146 cm×78 cm×105 cm
	傾斜時（長×寬×高）	約178 cm×78 cm×95 cm
重量		約83 kg
包裝箱尺寸（長×寬×高）		約192 cm×82 cm×92 cm
重量 （含包裝箱）		約105 kg

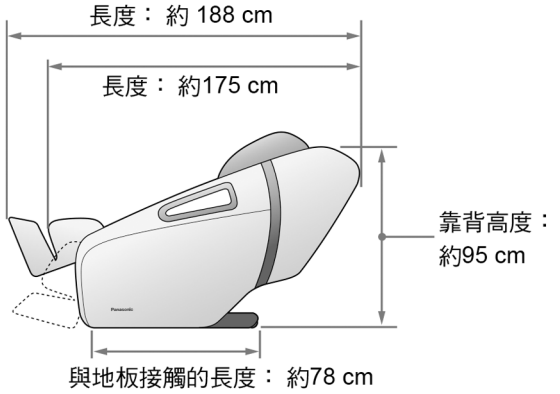
如果使用者的體重超過 100 kg， 產品的噪音可能較大， 布料外層可能磨損得較快。

1.2. Dimensions

尺寸圖例

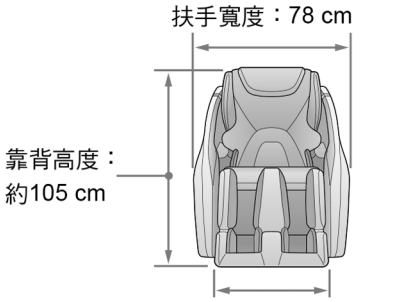
側面

靠背完全傾斜時



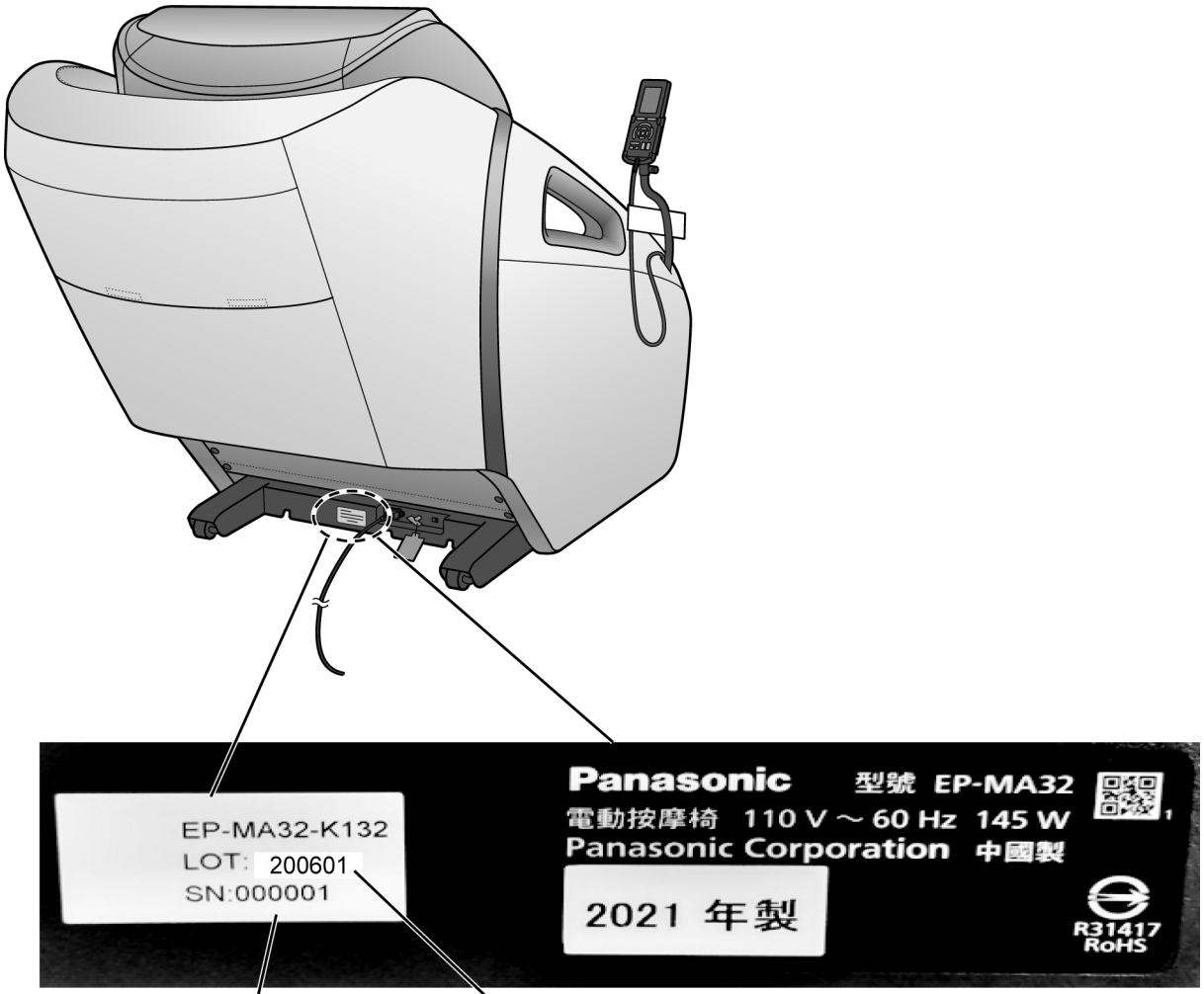
正面

靠背未傾斜時



1.3. Product Number and Serial Number

- The product number is indicated at the following two positions.
- The product serial number has six digits.

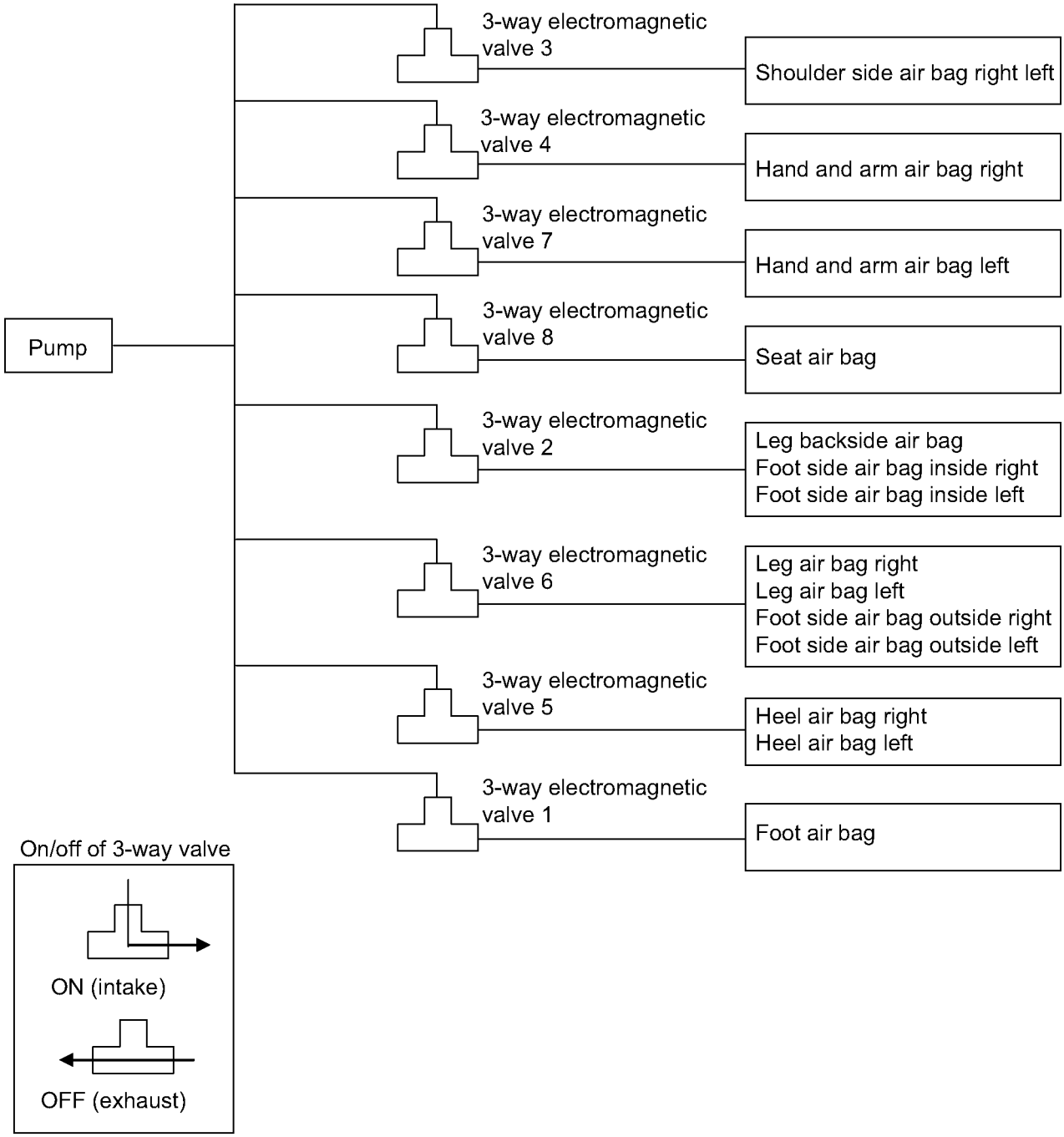


2 Technical Descriptions

2.1. Operation of Electromagnetic Valves and Air Bags

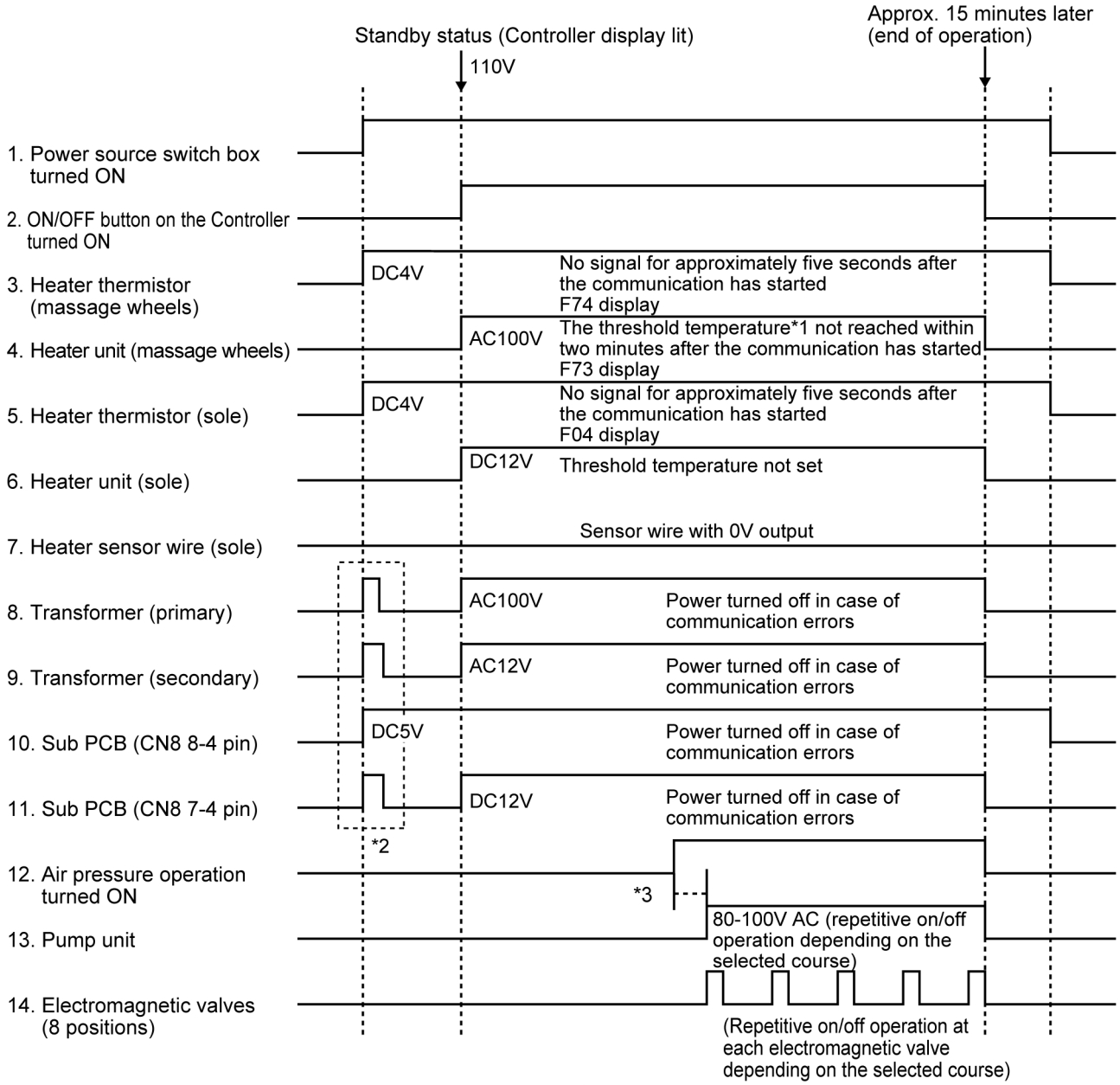
Air massage is performed using a pump unit and an Electromagnetic valve unit (with eight valves).

1. When the operation stops, the Pump and all the Electromagnetic valves are OFF.
2. While the reclining lift motor and Ottoman lift motor are in operation, the air control operation stops (voltage output off). (Air exhaust will be performed.)
3. To operate Electric reclining lift or electric Ottoman lift while in operation using the ON/OFF button on the Controller or while in standby, turn off the pump (voltage output off).
   Or turn it off five seconds after the operation has been stopped from the retraction mode or operation stop mode (in retraction mode), or after the Electric reclining lift or electric Ottoman lift has been turned off while in standby mode.



2.2. Program Processes (Output Values)

The 100V is generated from 220V by the TAP transformer.
When the power is turned on by the Power source switch box or Controller, each output goes into the process as follows.
Use the chart for operation analysis, etc.



*1 The threshold temperature is set to approximately 31℃.

*2 Instantaneous output of voltage occurs.

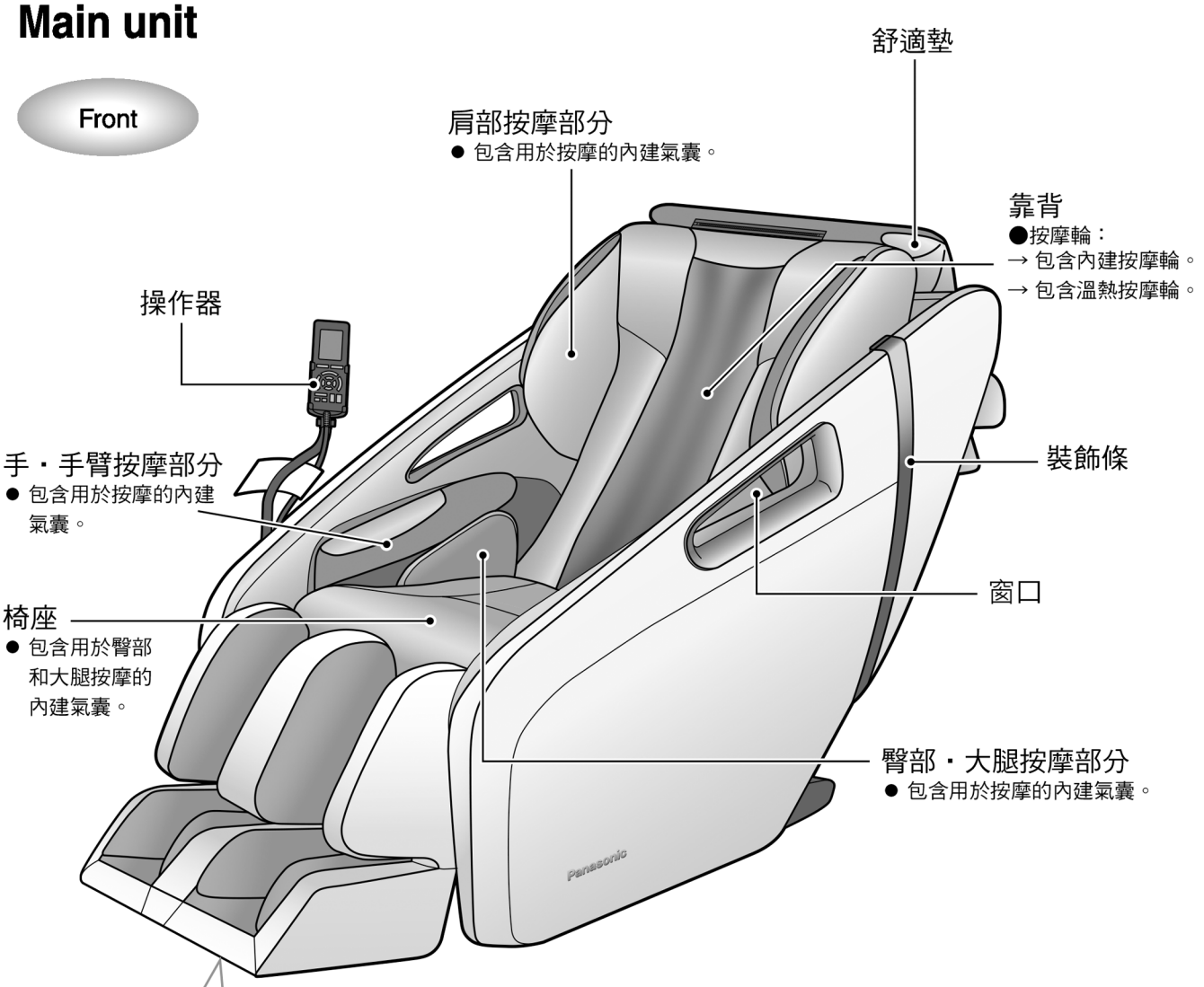
*3 There is a short time lag after the air pressure operation switch is turned on until the air pumps start to operate.

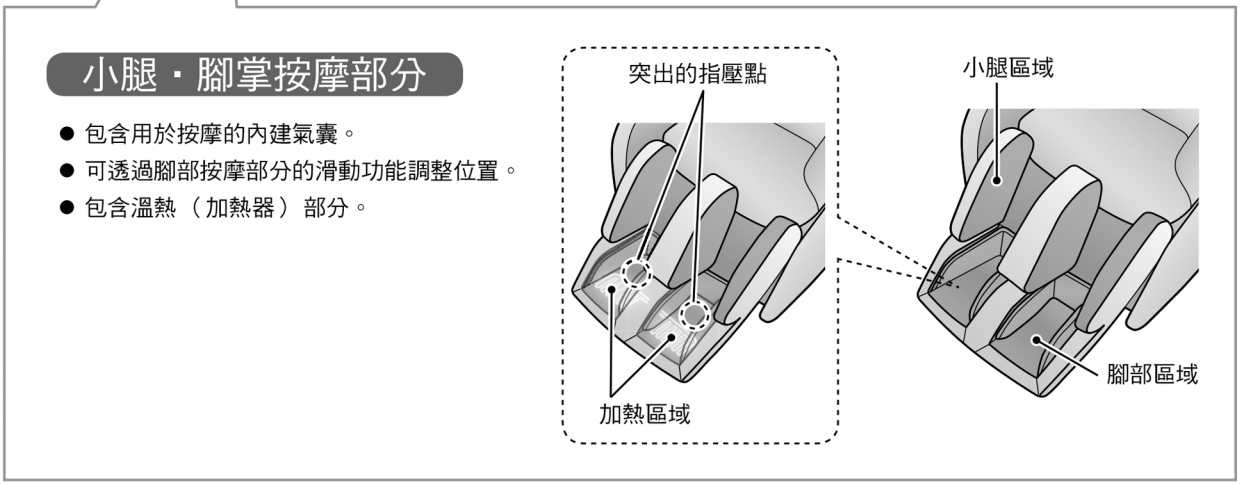
・If the lift unit is operated (up and down) by the Controller buttons, the output voltage to the pump unit and electromagnetic valves will be 0V for safety. (The electromagnetic valves will be opened and air will be exhausted consequently.)

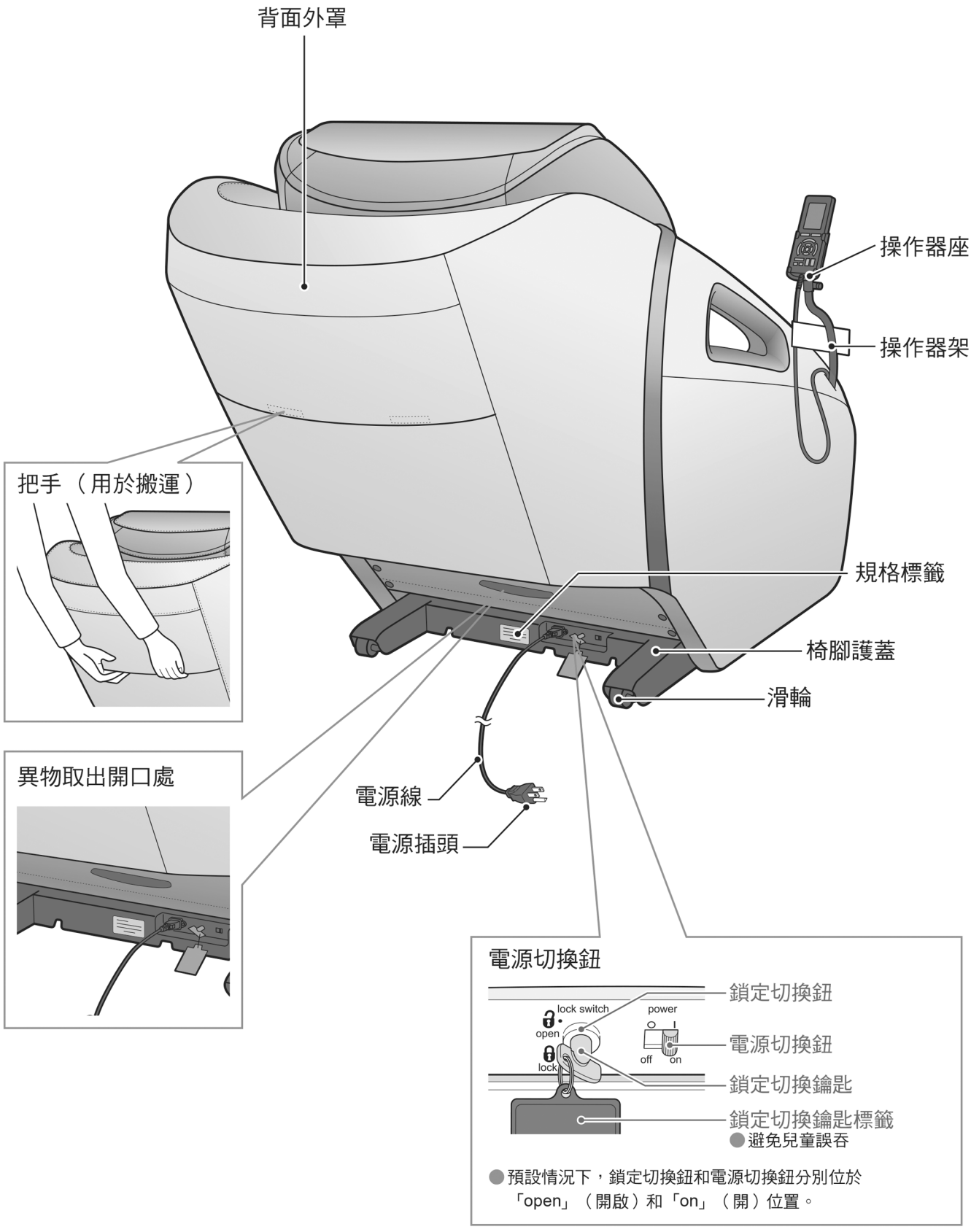
3 Location of Controls and Components

3.1. Main unit

Main unit

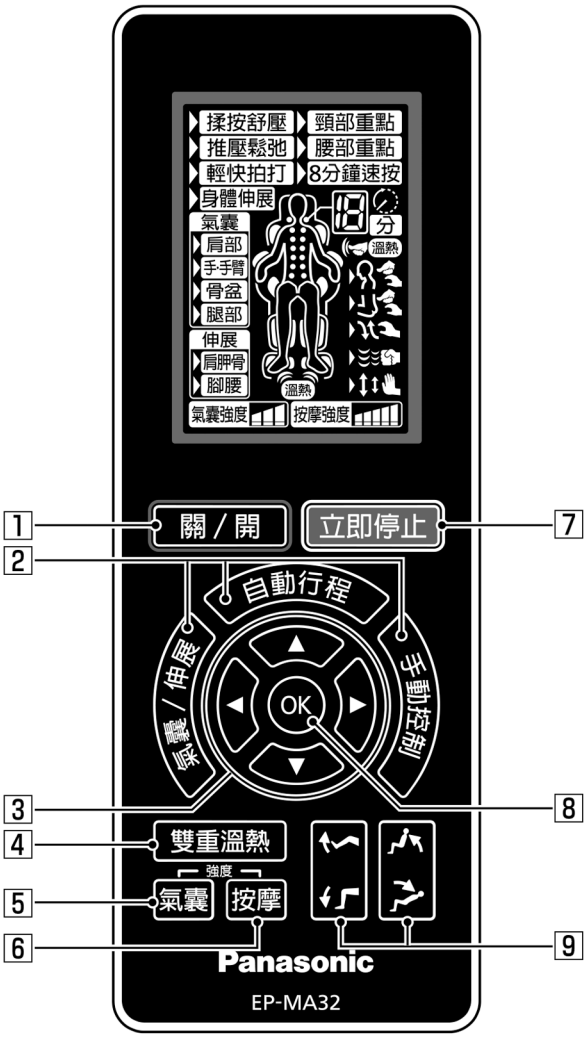





背面外罩
操作器座
操作器架
把手（用於搬運）
規格標籤
椅腳護蓋
滑輪
異物取出開口處
電源線
電源插頭
電源切換鈕
鎖定切換鈕
lock switch
power
open
lock
off
on
電源切換鈕
鎖定切換鑰匙
鎖定切換鑰匙標籤
●避免兒童誤吞
●預設情況下，鎖定切換鈕和電源切換鈕分別位於「open」（開啟）和「on」（開）位置。

3.2. Controller

操作器



● 上圖所示為所有燈光恆亮的狀態。

1 關／開按鈕
- ● 用於連接或切斷電源。

2 選單選擇按鈕

3 上下 (▲▼) 選擇／調整按鈕
左右 (◀ ▶) 選擇／調整按鈕

4 雙重溫感關／開按鈕
- ● 按摩輪溫熱／腳部溫熱按摩關／開按鈕。

5 氣囊強度調整按鈕

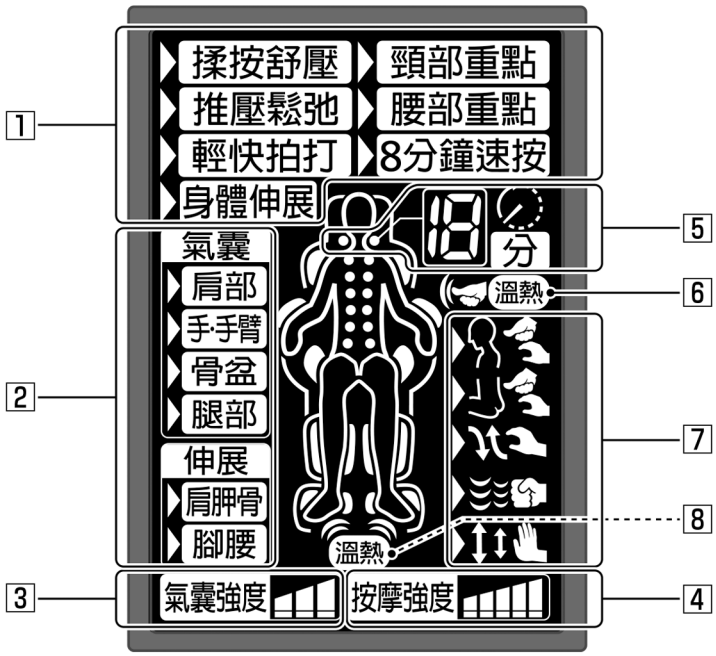
6 背部按摩強度調整按鈕

7 立即停止按鈕
- ● 按下可立即停止按摩。

8 決定按鈕

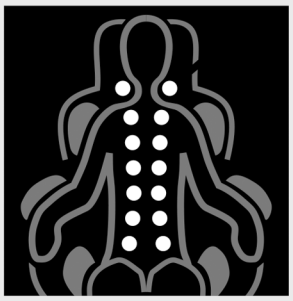
9 傾斜角度調整按鈕
- ● 用於調整靠背或小腿按摩部分的角度。

顯示



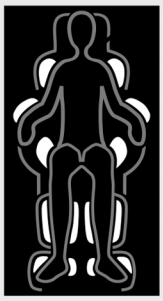
● 上圖所示為所有燈光恆亮的狀態。

按摩部位顯示



目前的大概按摩位置閃爍。

氣囊顯示



目前選擇的氣囊按摩動作燈光恆亮。
目前的氣囊按摩位置燈光閃爍。

1 自動行程顯示

● 選擇行程時...
所選行程前方有 ◗ 符號。

● 按摩時...
顯示正在進行的行程名稱。

2 氣囊按摩和伸展顯示

● 所選的動作和身體部位。

3 氣囊強度顯示

● 氣囊強度（三段）。

4 背部按摩強度顯示

● 背部按摩強度（五段）。

5 肩部位置顯示

● 產品進入肩部位置調整模式時，
燈光將亮起。
有 19 個肩部位置。

剩餘時間顯示

● 和 分 指剩餘時間。

6 溫熱按摩輪顯示

● 溫熱按摩輪的開啟／關閉狀態。

7 按摩模式顯示

● 目前的按摩模式。

8 腳部溫熱顯示

● 腳部溫熱按摩的開啟／關閉狀態。

4 Service Mode

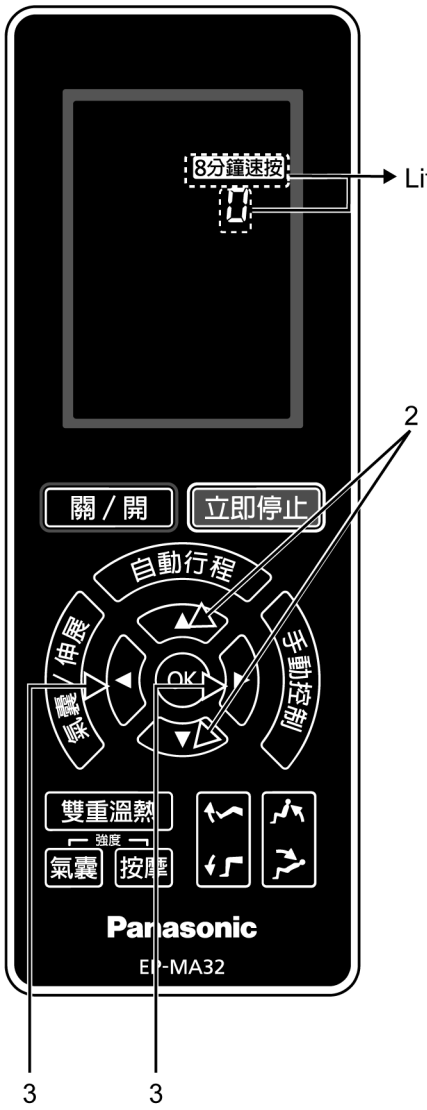
4.1. Preparation of Secret Mode

Before proceeding to each Secret Mode, perform the following Preparation of the Secret Mode.

1. Insert the power plug to the power source, and turn off the switch of the Power source switch box.
2. While holding down the buttons ▲ and ▼ on the Controller, turn on the switch of the Power source switch box and wait for at least three seconds. (push ▲ / ▼ button firmly simultaneously)

   (Then, 8分鐘速按 is shown on the display, “0” is indicated on the time display, and a beep sound.)
3. You can select each operation mode (0-9, C, E) by pushing the buttons ◀ and ▶ on the Controller.
   After selection, push the OK button.

   After selection, hold down the OK button for at least three seconds to return to the procedure of Preparation of the Secret Mode.



Display of total usage time	[0]
Entry of total usage time	[2]
Display of individual usage time	[3]
Display of abnormal stop	[4]
(Display of the location of abnormal stop	[5])*
Display of abnormal stop operation	[6]
Display of motor stalled	[7]
Display of sensor malfunction	[8]
Display of abnormal stop status	[9]
Check of air pressure operation	[C]
Massage mechanism manual operation	[E]
Massage mechanism operation test	[2]

*: No. [5] above is not used for repair service.

4.2. Display of Total Usage Time [0]

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶, set the time display to “0”, and push the OK button.
3. Push the OK button again, then 1,000's place is lit. A number is shown on the display.
4. Every time you push the OK button, 100's place to single's place is lit and the number is shown on the display.
5. If you push the OK button after single's place, two beeps sound, and the status returns to step 3 above.

1,000's place	Intensity display...	1, 2, 3, 4 lit
100's place	Intensity display...	1, 2, 3 lit
Ten's place	Intensity display...	1, 2 lit
Single's place	Intensity display...	1 lit

按摩強度

* The 按摩強度 display is used for digit switching.

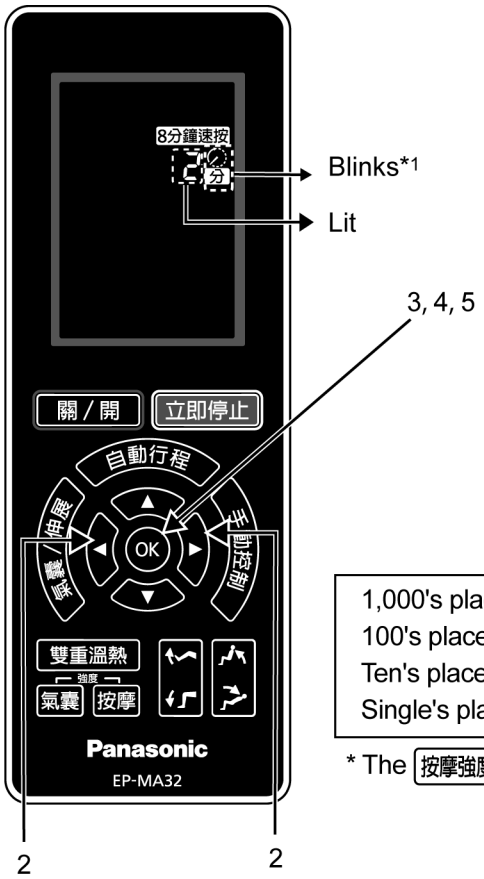
Example: 526 hour total usage time (0526 is shown).

SW button		Push OK	Push OK	Push OK	Push OK
Indication	8分鐘速按 0	8分鐘速按 0 →	8分鐘速按 5 →	8分鐘速按 2 →	8分鐘速按 6
Action		“0” is shown as the 1,000's place.	“5” is shown as the 100's place.	“2” is shown as the ten's place.	“6” is shown as the single's place.

It beeps twice.

4.3. Entry of Total Usage Time [2]

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “2”, and push the OK button. (*1 in the following figure blinks.)
3. Push the OK button again, then 1,000's place and checking status indication is lit. A number is shown on the display.
4. Every time you push the OK button, 100's place to single's place is lit and the number is shown on the display.
5. If you push the OK button after single's place, two beeps sound, and the status returns to step 3 above.



1,000's place	Intensity display... 1, 2, 3, 4 lit	按摩強度
100's place	Intensity display... 1, 2, 3 lit	按摩強度
Ten's place	Intensity display... 1, 2 lit	按摩強度
Single's place	Intensity display... 1 lit	按摩強度

* The 按摩強度 display is used for digit switching.

Example: 526 hour total usage time (0526 is shown).

SW button		Push OK	Select (using left/right button) → push OK	Select (using left/right button) → push OK	Select (using left/right button) → push OK	Select (using left/right button) → push OK
Indication	8分鐘速按 2	8分鐘速按 0	8分鐘速按 0	8分鐘速按 5	8分鐘速按 2	8分鐘速按 6
Action		Maintenance operation time entry screen “Hour, minute” blinks.	Enters “0” for the 1,000's place of the maintenance operation time. (In this example, as the entry screen shows “0”, you can push the OK button without changing the number using the right/left selection buttons.)	Displays “5” for the 100's place of the maintenance operation time.	Displays “2” for the 10's place of the maintenance operation time.	Displays “6” for the single's place of the maintenance operation time.

Record the number to EEPROM. It beeps twice.

4.4. Display of Individual Usage Time [3]

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “3”, and push the OK button.
3. Push the OK button again, and then push the buttons ◀ and ▶, to set it to a number you wish to check from the chart below (1 to 17).
4. Push the OK button again, then 1,000's place is lit. A number is shown on the display.
5. Every time you push the OK button, 100's place to single's place is lit and the number is shown on the display.
6. If you push the OK button after single's place, two beeps sound, and the status returns to step 3 above.

1,000's place	Intensity display...	1, 2, 3, 4 lit
100's place	Intensity display...	1, 2, 3 lit
Ten's place	Intensity display...	1, 2 lit
Single's place	Intensity display...	1 lit

按摩強度

* The 按摩強度 display is used for digit switching.

3、4、5、6

Example: 526 hour total usage time (0526 is shown).

Chart

	Operation mode	Description
1	Up/down motor usage time	Displays the total usage time of the up/down motor.
2	Massaging motor usage time	Displays the total usage time of the Massaging motor.
3	Intensity motor usage time	Displays the total usage time of the intensity motor.
4	Tapping motor usage time	Displays the total usage time of the tapping motor.
5	Ottoman lift motor usage time	Displays the total usage time of the Ottoman lift motor.
6	Reclining lift motor usage time	Displays the total usage time of the reclining lift motor.
7	Pump usage time	Displays the total usage time of the pump.
8	Course A usage time	Displays the total usage time of Course A.
9	Course B usage time	Displays the total usage time of Course B.
10	Course C usage time	Displays the total usage time of Course C.
11	Course D usage time	Displays the total usage time of Course D.
12	Course E usage time	Displays the total usage time of Course E.
13	Course F usage time	Displays the total usage time of Course F.
14	Course G usage time	Displays the total usage time of Course G.
15	Manual course usage time	Displays the total usage time of the manual course (total operation time).
16	Foot heater usage time	Displays the total usage time of the foot heater.
17	Back heater usage time	Displays the total usage time of the back heater.

Courses

A: 揉按舒壓
B: 推壓鬆弛
C: 輕快拍打
D: 身體伸展
E: 頸部重點
F: 腰部重點
G: 8分鐘速按

4.5. Display of Malfunction Analysis [4]

Information of abnormality is shown.

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “4”, and push the OK button.
   One of the following statuses in the following chart is indicated.

Operation mode	Description	Status	
		Display	Contents
Contents of abnormality	Indicates information of abnormal stop.	**0**	Normal
		1	Motor stall
		2	Abnormal sensor
		3	Data communication error
		4	Sub PCB abnormality
		5	----
		6	Heater error

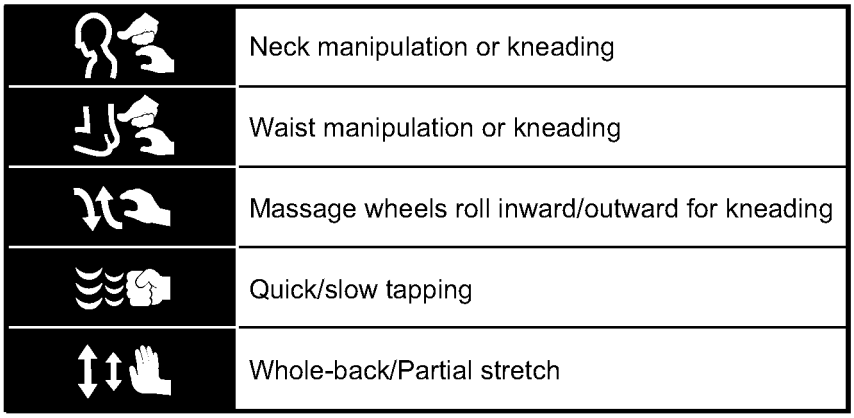
4.6. Display of Malfunction Analysis [6]

It indicates which operation has been stopped abnormally.

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “6”, and push the OK button.
   One of the following statuses in the following chart is indicated.

Operation mode	Description	Status	
		Display	Contents
Contents of abnormality	It indicates which operation has been stopped abnormally.	**0**	Normal
		1	Massaging
		2	Upward
		3	Downward
		4	Wider
		5	Narrower
		6	Stronger
		7	Weaker

• When you display the status indication “1”, the display indicates which massaging operation has been performed.



Example:

If an abnormality occurs during combined massage operations (tapping, kneading, and rolling), three pictograms appear lit. (See the figure on the right.)

4.7. Display of Malfunction Analysis [7]

It indicates which part has stopped operation.

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “7”, and push the OK button.
   One of the following statuses in the following chart is indicated.

Operation mode	Description	Status	
		Display	Contents
Stalled parts	Indicates which part has been stalled.	**0**	Normal
		1	Up/down motor
		2	Massaging motor
		3	Intensity motor
		4	Tapping motor
		5	Ottoman lift motor
		6	-----
		7	Reclining motor
		8	-----

4.8. Display of Malfunction Analysis [8]

It indicates which part has been stalled.

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “8”, and push the OK button.
   One of the following statuses in the following chart is indicated.

Operation mode	Description	Status	
		Display	Contents
Abnormal sensors	It indicates which sensor has stopped abnormally.	**0**	Normal
		1	Up/down sensor does not detect changes
		2	Up/down sensor detects abnormal changes
		3	Up/down motor rotation sensor abnormality
		4	Massaging sensor does not detect changes
		5	Massaging sensor detects abnormal changes
		6	Massaging motor rotation sensor abnormality
		7	Intensity sensor does not detect changes
		8	Intensity sensor detects abnormal changes
		10	Tapping motor rotation abnormality
		11	Ottoman sensor does not detect changes
		12	Ottoman sensor detects abnormal changes
		13	Reclining sensor does not detect changes
		14	Reclining sensor detects abnormal changes
		15	Foot heater operation error
		16	Back heater sensor error

Additional information

- Sensor does not detect anything. → Whole lead disconnection, connectors disconnection, sensor faulty.
- Sensor detects abnormal changes. → Partial lead disconnection, sensor faulty.
- When Massage mechanism block starts, Sensors are faulty. → Each Motor rotation sensor is faulty.

* If Position sensors are faulty, Sensors do not detect any changes.

4.9. Display of Malfunction Analysis [9]

It indicates the status and history of abnormal stop.

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “9”, and push the OK button.
3. Push the OK button again to display “1” on the display, then push the buttons ◀ and ▶ to switch the display to the following 1 to 3, and then push the OK button.
   * The display indicates the status and history of abnormal stop. The displayed contents are linked to Contents of abnormality in the procedure “4”.

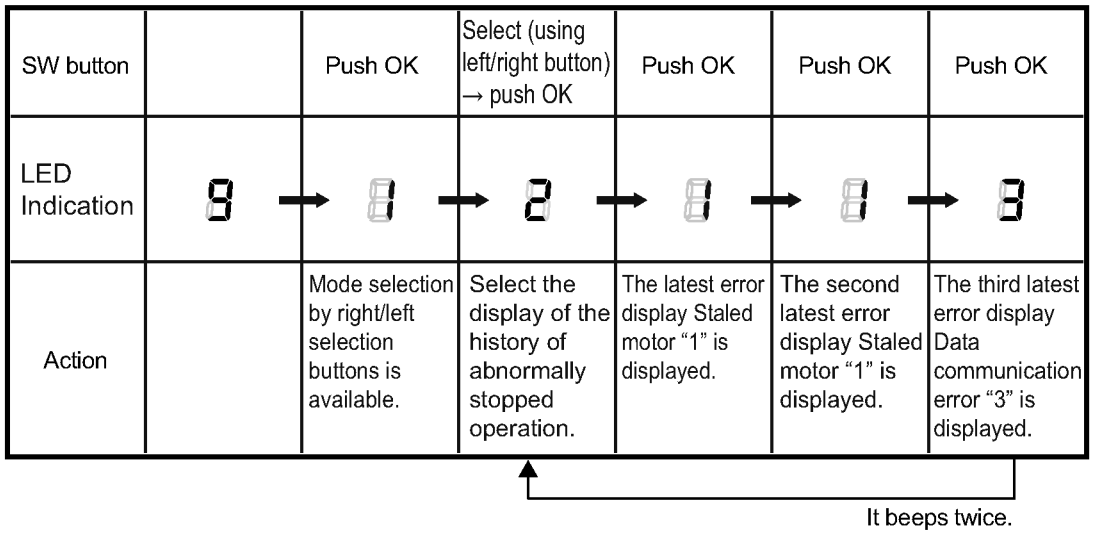
Indication No.	Operation mode	Description
1	Display of the status of abnormally stopped operation	Indicates the status of the latest abnormally stopped operation.
2	Display of the history of abnormally stopped operation	Indicates the history of abnormally stopped operation.
3	Clearance of the history of abnormally stopped operation	Clears the history of abnormally stopped operation.

For No. 3 in the above chart, error information except for the total usage time and individual usage time are cleared.

No. of times of errors	Faulty parts	Memory contents
1st	Up/down sensor error	Deleted
2nd	Width sensor error	Recorded (2: Sensor abnormality)
3rd	Massaging sensor error	Recorded (2: Sensor abnormality)
4th	Tapping motor error	Recorded (1: Stalled motor)
5th	Up/down motor error	Recorded (1: Stalled motor)
6th	Sub PCB error	Recorded (4: Sub PCB abnormality)

The last five records of abnormal stop information are displayed.
On the sixth time and later, the oldest record is deleted and the information is updated by the most recent abnormal stop record.

Example 1: Display of the history of abnormally stopped operation
(The latest error: Staled motor “1”, the second latest error: Stalled motor “1”,
and the third latest error: Data communication error “3” has occurred.)

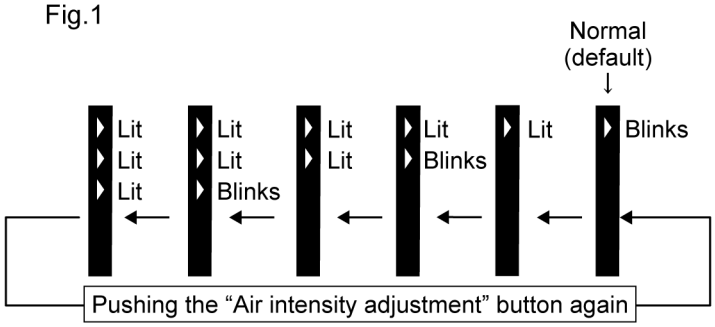


4.10. Display of Malfunction Analysis [C]

In this procedure, the normal (default) air pressure operation can be checked. Use the procedure for air pressure operation check.

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “C”, and push the OK button.
3. Push the “Air bag/stretch” button on the Controller.
4. Push the “Air intensity adjustment” button on the Controller to start air pressure operation. * Normal (default) operation starts.
5. Pushing the “Air intensity adjustment” button again enables switching of air pressure operation patterns.
   (Normal (default) setting is used in this procedure.)
6. Push the “Air bag/stretch” button again to stop the air pressure operation.
   * The air pressure operation patterns can be indicated as “massage option indicator 1 to 5” on the display as in Fig.1.

Fig.1



		Normal (default)	“Air bag intensity” Pushing once	“Air bag intensity” Pushing twice	“Air intensity adjustment” Pushing three times	“Air intensity adjustment” Pushing four times	“Air intensity adjustment” Pushing five times	“Air intensity adjustment” Pushing six times	“Air intensity adjustment” Pushing seven times	“Air intensity adjustment” Pushing eight times	“Air intensity adjustment” Pushing nine times
Air pattern		For air test GB	For Electro-magnetic valve 1 test GC	For Electro-magnetic valve 2 test GD	For Electro-magnetic valve 3 test GE	For Electro-magnetic valve 4 test GF	For Electro-magnetic valve 5 test GG	For Electro-magnetic valve 6 test GH	For Electro-magnetic valve 7 test GI	For Electro-magnetic valve 8 test GJ	For Electro-magnetic valve 9 test GK
Air intensity		Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Weak (Duly control)
Display indication	Massage option indicator 1	Blinks	Lit	Lit	Lit	Lit	Lit	Lit	Lit	Lit	Lit
	Massage option indicator 2	Lit off	Lit off	Blinks	Lit	Lit	Lit	Lit	Lit	Lit	Lit
	Massage option indicator 3	Lit off	Lit off	Lit off	Lit off	Blinks	Lit	Lit	Lit	Lit	Lit
	Massage option indicator 4	Lit off	Lit off	Lit off	Lit off	Lit off	Lit off	Blinks	Lit	Lit	Lit
	Massage option indicator 5	Lit off	Lit off	Lit off	Lit off	Lit off	Lit off	Lit off	Lit off	Blinks	Lit

Pushing the “Air intensity adjustment” button again

The patterns are described in the next page.

Electromagnetic valve 1: Sole
Electromagnetic valve 2: Foot inside
Leg backside
Electromagnetic valve 3: Shoulder
Electromagnetic valve 4: Right arm
Electromagnetic valve 5: Heel
Electromagnetic valve 6: Foot outside
Leg
Electromagnetic valve 7: Left arm
Electromagnetic valve 8: Seat

- Timer is disabled during in this mode.
- If an abnormal stop occurs during in this mode, follow the descriptions in the abnormal stop information display (F error display appears).
- Push the ON/OFF button or Stop button to exit this mode.

4.11. Massage Mechanism Manual Operation [E]

Manual mode is used to remove or install the Massage mechanism from or to the Massage chair, or to check individual operations. (You can check the individual operations of up/down, massaging, intensity, and tapping motors.)

1. Perform the procedures of 4.1. Preparation of Secret Mode.
2. Push the buttons ◀ and ▶ to set the time display to “E”, and push the OK button.
   Push the following Controller buttons to perform each operation.

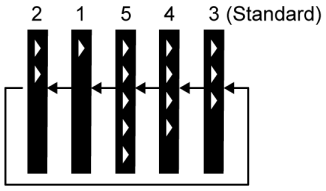


*Fig.1

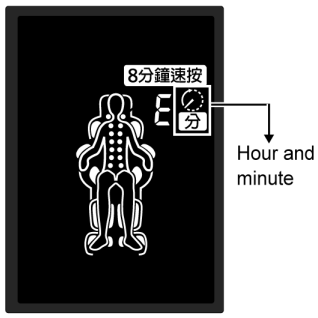


*Fig.2

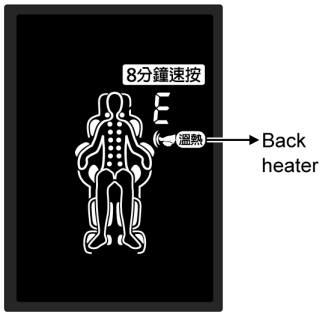


*Fig.3

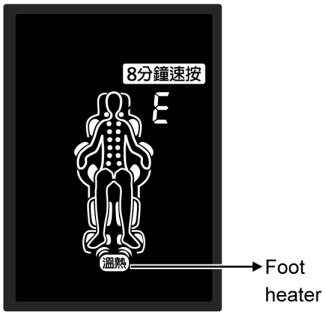


*Fig.4

・The standard speed of the Massage mechanism is 3/5. Pushing the “Air intensity adjustment” button repeatedly can switch the speed from 3 (standard) → 4 → 5 → 1 → 2 → 3.
The display shows the indications in Fig.1.
Speed 3: Massage option indicator 1, Massage option indicator 2, and Massage option indicator 3 lit
Speed 4: Massage option indicator 1, Massage option indicator 2, Massage option indicator 3, and Massage option indicator 4 lit
Speed 5: Massage option indicator 1, Massage option indicator 2, Massage option indicator 3,Massage option indicator 4, and Massage option indicator 5 lit
Speed 1: Massage option indicator 1 lit
Speed 2: Massage option indicator 1 and Massage option indicator 2 lit

A Up/down motor
To move up → Push the ▲ button.
To move down → Push the ▼ button.

B Massaging motor
・Push the OK button to switch to the display where the “Hour and minute” indication (Fig.2) is lit.
To narrow down → Push the ◀ button.
To widen → Push the ▶ button.

C Intensity motor
・Push the OK button to switch to the display where the “Hour and minute” indication (Fig.2) is not lit.
To make weaker → Push the ◀ button.
To make stronger → Push the ▶ button.

D Tapping operation
Push the “Manual” button once to start standard speed tapping operation.
Push the “Manual” button again to start soft tapping operation.
To stop the operation, push the “Manual” button again.

E Heater control
Push the “Dual-temperature ON/OFF” button to switch on/off the back heater (Fig.3) and Foot heater (Fig.4) as follows, and operate the heater.
(1) Normal - Back heater: OFF, foot heater: OFF
(2) Pushing the “Dual-temperature ON/OFF” button once
- Back heater: ON, foot heater: ON
(3) Pushing the “Dual-temperature ON/OFF” button twice
- Back heater: ON, foot heater: OFF
(4) Pushing the “Dual-temperature ON/OFF” button three times
- Back heater: OFF, foot heater: ON
(5) Return to (1) by pushing the “Dual-temperature ON/OFF” button four times.

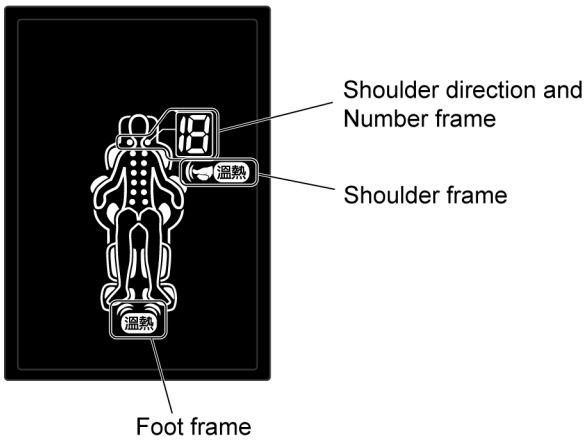
In this mode, if the heater is off, heating output is completely turned off.

Push the “Dual-temperature ON/OFF” button to turn on the heater.
Pushing the “Back massage intensity adjustment” button during in operation (when the back heater or foot heater is on) indicates the current thermistor temperature.

• Example of indication
* Back heater: Left thermistor temperature 34 deg., right thermistor temperature 34 deg.
* Foot heater: 23 deg.
(When either one of the back and foot heaters is on, the condition of one of them is indicated.)

Operation		Push the “Back massage intensity adjustment” button.					
Indication		“Shoulder frame” indicator lit		“Shoulder frame” indicator lit “Shoulder direction” indicator lit		“Foot frame” indicator lit	
		(1) ・Back heater The display shows the 10’s place of the left thermistor temperature. ・“Number frame” is displayed.	・Back heater The display shows the single’s place of the left thermistor temperaturer.	(2) ・Back heater The display shows the 10’s place of the right thermistor temperature. ・“Number frame” is displayed.	・Back heater The display shows the single’s place of the right thermistor temperaturer.	(3) ・Foot heater The display shows the 10’s place of the thermistor temperature. ・“Number frame” is displayed.	・Foot heater The display shows the single’s place of the thermistor temperaturer.
	6	3 →	4 →	3 →	4 →	2 →	3
Duration of lighting		1 second	1 second	1 second	1 second	1 second	1 second
		Back heater (left) temperature is indicated.		Back heater (right) temperature is indicated.		Foot heater temperature is indicated.	

Pushing the “Back massage intensity adjustment” button again



Shoulder direction and Number frame

Shoulder frame

Foot frame

4.12. Massage Mechanism Operation Test [2]

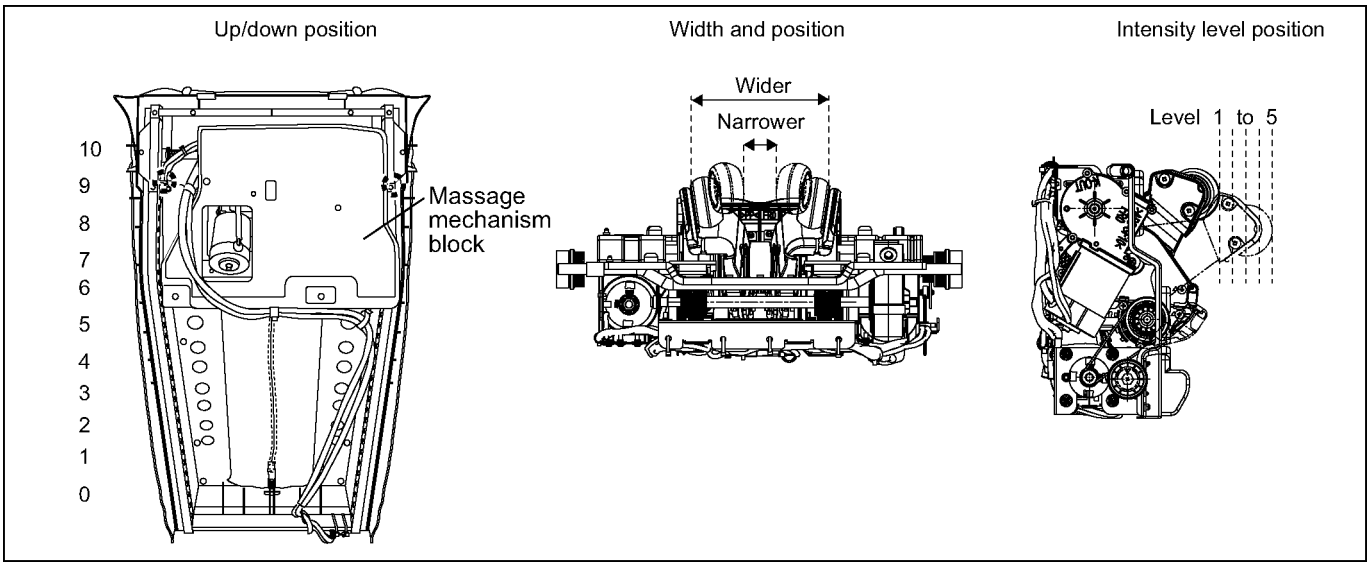
1. Before proceeding to each Secret Mode, perform the procedure of 4.1. Preparation of Secret Mode as follows.
   Insert the power plug to the power source, and turn off the switch of the Power source switch box.
2. While holding down the buttons ◀ and ▶ on the Controller, turn on the switch of the Power source switch box and wait for approximately three seconds.
   ("0" and 腰部重點 are lit on the display of the Controller.)
3. Push the buttons ◀ and ▶ on the Controller to set to each operation mode in (2), and push the OK button.
   The Massage mechanism starts operation.
   * To stop the massage operation in the middle, push the ON/OFF button or the "E-stop" button.
   * Every course finishes with one beep sound.
   * Operation check is available when no person sits on the chair.

Chart 1. Massage mechanism test operation

Descriptions of indications in the chart
CCW: Counter-clockwise rotation
CW: Clockwise rotation
M: Motor

STEP No.	Action	Number of times	Position			Speed	Remarks
			Up/down	Width	Intensity level		
0	Sensing	1					Checking shoulder positions and seating
1	Back rolling	1	10	Wider	Level 3	5	Checking the up/down M and CW
2	Massage upwards	3	10		Level 3	5	Checking the massaging M and CW
3	Massage downwards	3	10		Level 3	5	Checking the massaging M and CCW
4	Back rolling	1	10	Wider	Level 3		
5	Back rolling	1	10	Wider	Level 5		Checking the intensity M and CW/CCW (three rounds)
6	Back rolling	1	10	Wider	Level 1		
7	Back rolling	1	10	Wider	Level 5		
8	Back rolling	1	10	Wider	Level 1		
9	Back rolling	1	10	Wider	Level 5		
10	Back rolling	1	10	Narrower	Level 1		
11	Tapping	2	10	Narrower	Level 1	5	Checking the tapping operation
12	Back rolling	1	3	Narrower	Level 1	5	Checking the massaging M and CCW
13	Back rolling	1	0	Narrower	Level 1	1	Decreasing the speed to terminate

* Must be easily changeable and the new menu "Waist kneading" and "Waist manipulation" can be allocated.



4.13. Error code List

If there are any malfunction on each Sensor, each Motor, and power source and data communication lines in the operations, the following displays blink and the all the operations stop.
Use them for the reference in the repair.

* To display FXX, as the Controller display (number section) only indicates one digit, switch the display in order.
The durations of lighting on and off are 0.6 to 0.3 seconds.
(Example) Display indication for F38

Indication	F	Light off	3	Light off	8	Light off	F	Light off	3	…
Time (seconds)	0.6	0.3	0.6	0.3	0.6	1.0	0.6	0.3	0.6	…

Error code	Malfunction	Possible reasons	Remarks
F04	Foot heater operation error (Thermistor disconnection)	Heater unit error (Thermistor disconnection)	* 1
F05	Foot heater operation error (Thermistor short-circuit)	Heater unit error (Thermistor short-circuit)	* 1
F06	Foot heater operation error (Transistor short-circuit)	Sub PCB error (Trisistor short-circuit)	* 1
F08	Foot heater sensor wire short-circuit error	Heater unit error (Heater sensor wire short-circuit)	* 1
F73	Back heater operation error (Heater malfunction) (Thermistor connector contact failure)	Massage mechanism block malfunction (Heater/thermistor error)	* 1
F74	Back heater operation error (Thermistor disconnection)	Massage mechanism block malfunction (Thermistor disconnection)	* 1
F75	Back heater operation error (Thermistor short-circuit)	Massage mechanism block malfunction (Thermistor short-circuit)	* 1
F76	Back heater operation error (Triac short-circuit)	Sub PCB error (Transistor short-circuit)	* 1
F11	Data communication error	Connector connection error of Connecting PCB, Sub PCB, and Controller, Connecting cord disconnection, damage parts, etc.	
F12	Sub PCB MPU frequency sensor error	Sub PCB error	
F33	Tapping sensor	Sensor connector coming-off, Lead disconnection, parts damage, Connecting cord for power source disconnection, Sub PCB relay error, etc.	
F34	Ottoman sensor	Connector coming-off, Lead disconnection, parts damage, Sub PCB relay error	
F35	Reclining sensor	Connector coming-off, Lead disconnection, parts damage, Sub PCB relay error	
F36	Massaging (width) sensor	Sensor connector coming-off, Lead disconnection, parts damage, Connecting cord for power source disconnection, Sub PCB relay error, etc.	
F37	Up/down sensor (Up/down rotation sensor is included)	Sensor connector coming-off, Lead disconnection, parts damage, Connecting cord for power source disconnection, Sub PCB relay error, etc.	
F38	Intensity sensor	Sensor connector coming-off, Lead disconnection, parts damage, Connecting cord for power source disconnection, Sub PCB relay error, etc.	

*1: Once an error from F04 to F06, F08 and F73 to F76 in the above chart occurs, the massage lounger cannot be operated until the releasing operation is performed.
The part where a malfunction has occurred must be replaced before the releasing operation. Otherwise, the sensor detects an error and FXX is indicated again, which prevents the releasing operation.
However, you can move up or down the lift units.

• For the releasing operation, perform the procedure of 3.1. Preparation of Secret Mode (1 to 3), and then push the “E-stop” button.

Caution

When an F indication appears, be sure to check circuit voltage, motor resistance, a contact failure occurrence on a lead wire, etc. (See 5. Troubleshooting Guide/5.1 Checking.)

4.14. Error code List

If there are any malfunction on each Sensor, each Motor, and power source and data communication lines in the operations, the following displays blink and the all the operations stop.
Use them for the reference in the repair.

* To display FXX, as the Controller display (number section) only indicates one digit, switch the display in order.
  The durations of lighting on and off are 0.6 to 0.3 seconds.
  (Example) Display indication for F38

Indication	F	Light off	3	Light off	8	Light off	F	Light off	3	…
Time (seconds)	0.6	0.3	0.6	0.3	0.6	1.0	0.6	0.3	0.6	…

Error code	Malfunction	Possible reasons	Remarks
F15	Ottoman motor	Stalling by mechanical overload (Connector coming-off, open circuit are detected as sensor error.)	
F16	Reclining motor	Stalling by mechanical overload (Connector coming-off, open circuit are detected as sensor error.)	
F14	Tapping motor	Stalling by mechanical overload (Connector coming-off, open circuit are detected as sensor error (F33).)	
F80	Massaging motor	Stalling by mechanical overload (Connector coming-off, open circuit are detected as sensor error (F36).)	
F81	Up/down motor	Stalling by mechanical overload (Connector coming-off, open circuit are detected as sensor error (F37).)	
F82	Intensity motor	Stalling by mechanical overload (Connector coming-off, open circuit are detected as sensor error (F38).)	
U10	Seat sensor	If it cannot detect that people are sitting down, operation will be ended for safety. When this error occurs in spite of having sat down, lean on a backrest deeply and operate it again, after pushing a "E-stop" button.	

Caution

When an F indication appears, be sure to check circuit voltage, motor resistance, a contact failure occurrence on a lead wire, etc. (See 5. Troubleshooting Guide/5.1 Checking.)

Additional information on U10

Seat sensor and shoulder position sensor

Seat sensor and shoulder position sensor perform detection by reading the changes in the rotation counts[*1] of the tapping rotation sensor.

*1 The rotation counts decreases if loads are added to the massage wheels....The microcomputer determines that a person is seated.
If no load is added, the rotation count does not change...The microcomputer determines that no person is seated, indicates U10, and stops operation.

4.15. Occurrences on Sensor Error or Lock Protection

			CE mode width adjustment	CE mode adjustment upwards	CE mode adjustment stronger	CE mode adjustment weaker	During automatic menu operation
Massaging sensor	Massaging position sensor Massaging rotation sensor common	Black wire disconnection	F indicated, operation stopped	——	——	——	——
		Brown wire disconnection	F indicated, operation stopped	——	——	——	——
		Red wire disconnection	F indicated, operation stopped	——	——	——	——
	Massaging position sensor	Orange wire disconnection	F indicated, operation stopped	——	——	——	——
		Yellow wire disconnection	F indicated, operation stopped	——	——	——	——
	Massaging rotation sensor	Green wire disconnection	F indicated, operation stopped	——	——	——	——
		Connector disconnection	F indicated, operation stopped	——	——	——	——
Up/down sensor	Up/down position sensor (CN9)	Black wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Brown wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Red wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Orange wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Yellow wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Green wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Connector disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——

			CE mode width adjustment	CE mode adjustment upwards	CE mode adjustment stronger	CE mode adjustment weaker	During automatic menu operation
Up/down sensor	Up/down rotation sensor (CN8)	Black wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Brown wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Red wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Orange wire disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
		Connector disconnection	——	F indicated before reaching the upper end position, or stopped at an upward overrun position	——	——	——
Intensity sensor	Intensity level position sensor (CN11)	Black wire disconnection	——	——	Does not move to the stronger side	Overruns to the weaker side F indicated, operation stopped	——
		Brown wire disconnection	——	——	Does not move to the stronger side	Overruns to the weaker side F indicated, operation stopped	——
		Red wire disconnection	——	——	Does not move to the stronger side	Overruns to the weaker side F indicated, operation stopped	——
		Orange wire disconnection	——	——	Does not move to the stronger side	Overruns to the weaker side F indicated, operation stopped	——
		Yellow wire disconnection	——	——	Does not move to the stronger side	Overruns to the weaker side F indicated, operation stopped	——
		Green wire disconnection	——	——	Does not move to the stronger side	Overruns to the weaker side F indicated, operation stopped	——
		Connector disconnection	——	——	Does not move to the stronger side	Overruns to the weaker side F indicated, operation stopped	——

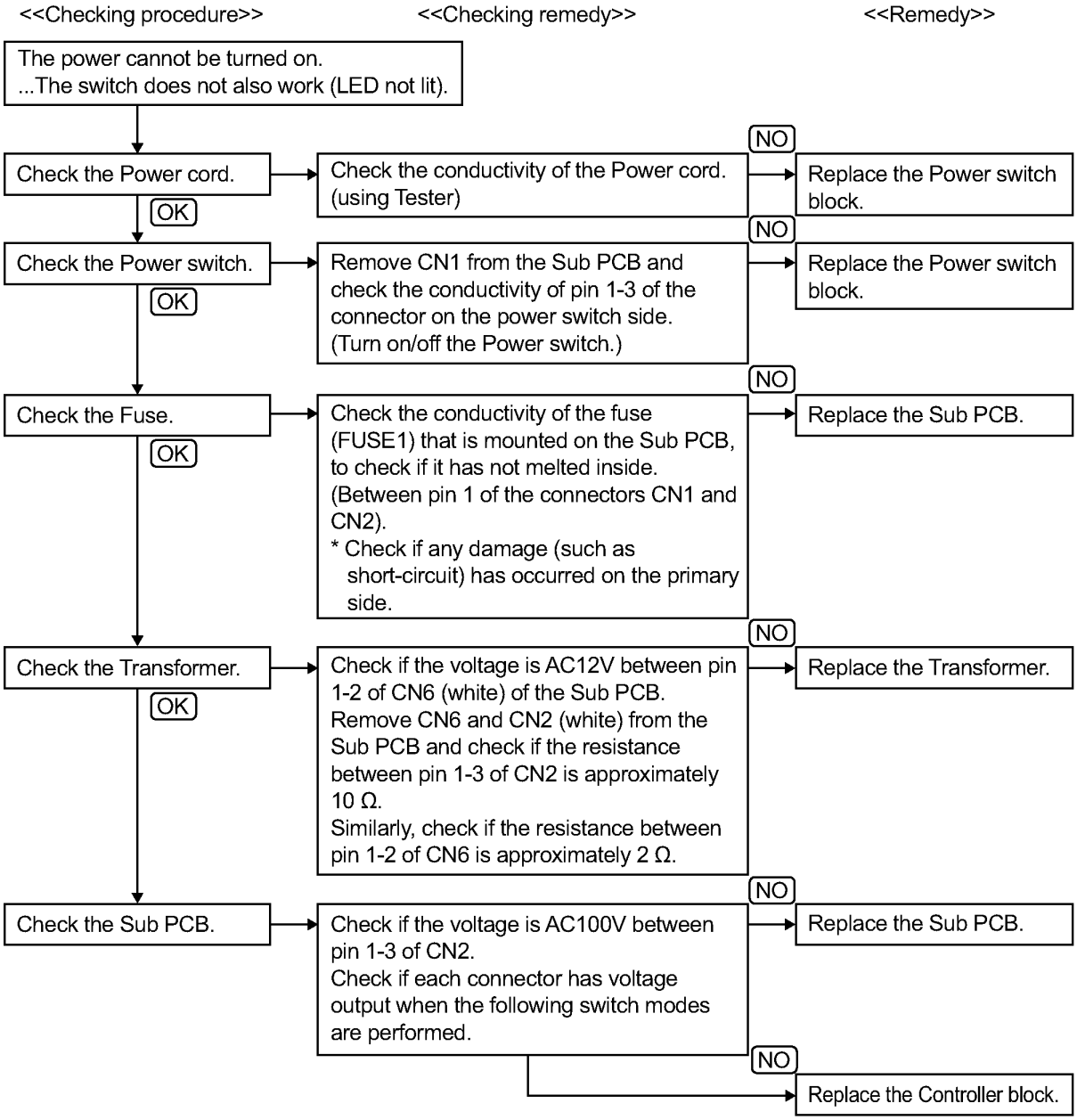
			CE mode width adjustment	CE mode adjustment upwards	CE mode adjustment stronger	CE mode adjustment weaker	During automatic menu operation
Tapping sensor	Tapping rotation sensor	Black wire disconnection	——	——	——	——	During "Shoulder positioning" display, F indicated and operation stopped
		Brown wire disconnection	——	——	——	——	During "Shoulder positioning" display, F indicated and operation stopped
		Red wire disconnection	——	——	——	——	During "Shoulder positioning" display, F indicated and operation stopped
		Orange wire disconnection	——	——	——	——	During "Shoulder positioning" display, F indicated and operation stopped
		Connector disconnection	——	——	——	——	During "Shoulder positioning" display, F indicated and operation stopped

			Retracting operation after wire disconnected and operation stopped
Massaging sensor	Massaging position sensor Massaging rotation sensor common	Black wire disconnection	F indicated, operation stopped
		Brown wire disconnection	F indicated, operation stopped
		Red wire disconnection	F indicated, operation stopped
	Massaging position sensor	Orange wire disconnection	F indicated, operation stopped
		Yellow wire disconnection	F indicated, operation stopped
	Massaging rotation sensor	Green wire disconnection	F indicated, operation stopped
		Connector disconnection	F indicated, operation stopped
Up/down sensor	Up/down position sensor (CN9)	Black wire disconnection	F indicated and operation stopped, or stopped at either upward or downward overrun position
		Brown wire disconnection	F indicated and operation stopped, or stopped at either upward or downward overrun position
		Red wire disconnection	F indicated and operation stopped, or stopped at either upward or downward overrun position
		Orange wire disconnection	F indicated and operation stopped, or stopped at either upward or downward overrun position
		Yellow wire disconnection	F indicated and operation stopped, or stopped at either upward or downward overrun position
		Green wire disconnection	F indicated and operation stopped, or stopped at either upward or downward overrun position
		Connector disconnection	F indicated and operation stopped, or stopped at either upward or downward overrun position
	Up/down rotation sensor (CN8)	Black wire disconnection	F indicated and operation stopped, or retraction completed
		Brown wire disconnection	F indicated and operation stopped, or retraction completed
		Red wire disconnection	F indicated and operation stopped, or retraction completed
		Orange wire disconnection	F indicated and operation stopped, or retraction completed
		Connector disconnection	F indicated and operation stopped, or retraction completed

			Retracting operation after wire disconnected and operation stopped
Intensity sensor	Intensity level position sensor (CN11)	Black wire disconnection	Overrun to the weaker side, operation stopped
		Brown wire disconnection	Overrun to the weaker side, operation stopped
		Red wire disconnection	Overrun to the weaker side, operation stopped
		Orange wire disconnection	Overrun to the weaker side, operation stopped
		Yellow wire disconnection	Overrun to the weaker side, operation stopped
		Green wire disconnection	Overrun to the weaker side, operation stopped
		Connector disconnection	Overrun to the weaker side, operation stopped
Tapping sensor	Tapping rotation sensor	Black wire disconnection	Retraction completed
		Brown wire disconnection	Retraction completed
		Red wire disconnection	Retraction completed
		Orange wire disconnection	Retraction completed
		Connector disconnection	Retraction completed
Sole heater	Heater, sensor wire, thermistor (CN9)	Blue wire disconnection	F not indicated and the heater not operated
		Black wire disconnection	F04 indicated and all operations stopped
		Yellow wire disconnection	Heater works but F indicated
		Red wire disconnection	F not indicated and the heater not operated
		White wire disconnection	F04 indicated and all operations stopped
		Connector disconnection	F04 indicated and all operations stopped
Massage head heater	Thermistor (CN15, CN16, CN17)	Blue wire disconnection	F74 indicated and all operations stopped
		Red wire disconnection	F74 indicated and all operations stopped
		Black wire disconnection	F74 indicated and all operations stopped
	Heater (CN12, CN13, CN14)	Black wire disconnection	F73 indicated and all operations stopped
		White wire disconnection	F73 indicated and all operations stopped
		Yellow wire disconnection	F73 indicated and all operations stopped

5 Troubleshooting Guide

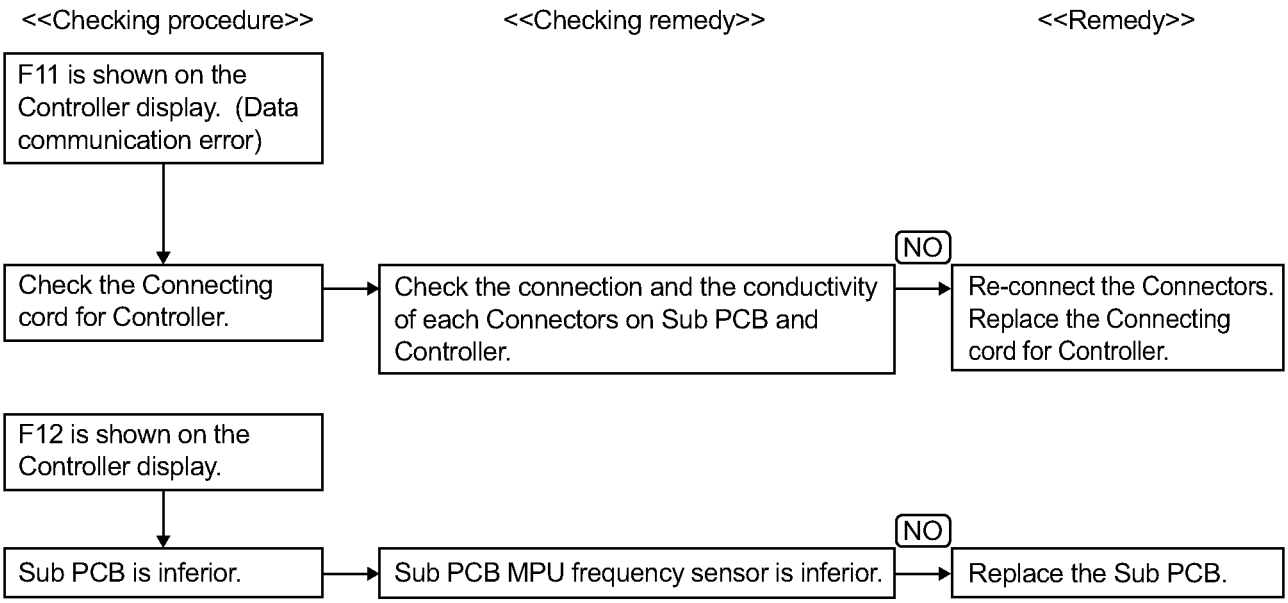
5.1. Checking

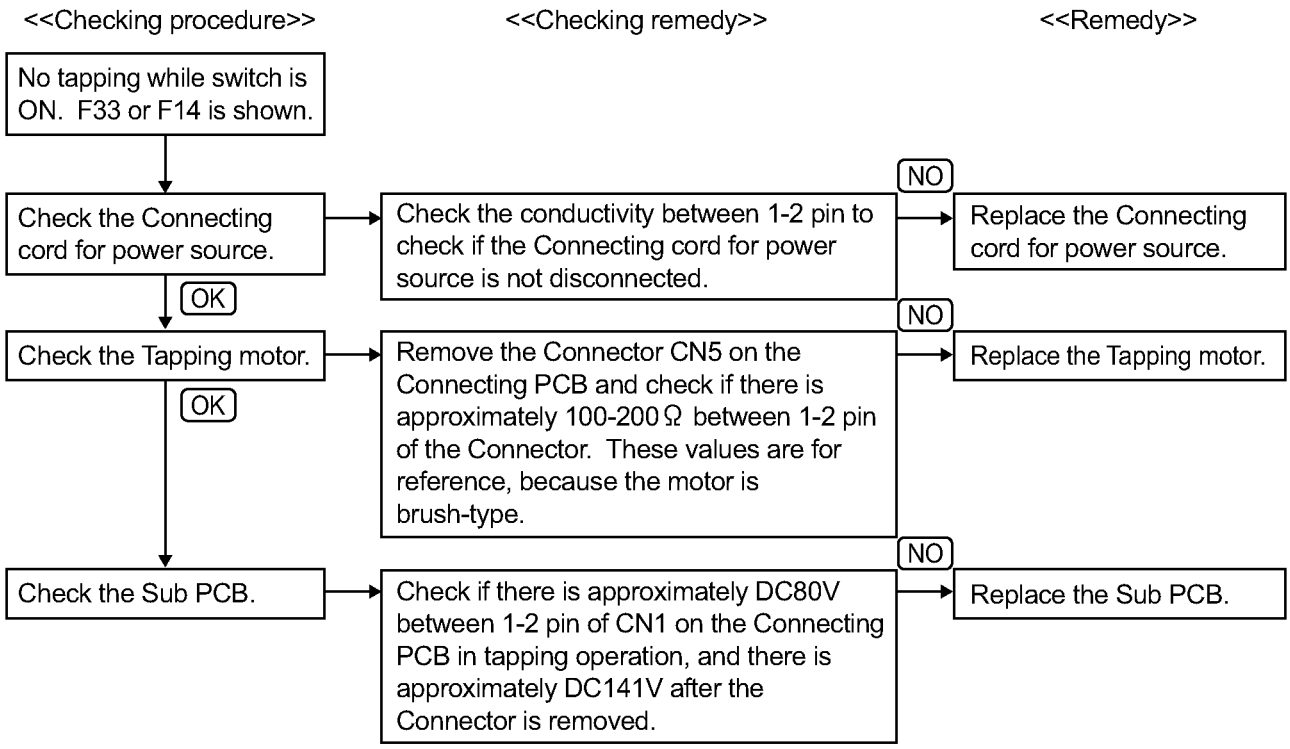


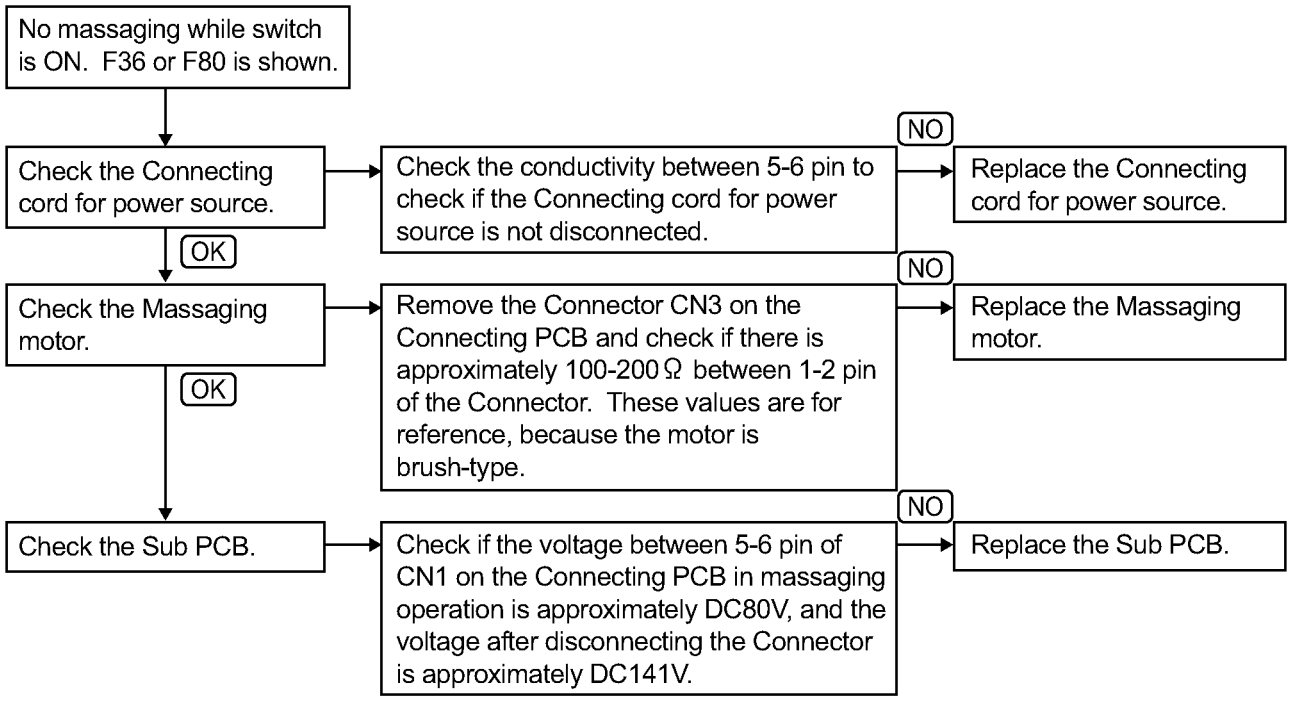
After the power switch is turned on (approximately 3 seconds), if the relay does not make any click sound and does not operate, also check the following positions. (The following chart shows a case of a normal condition.)

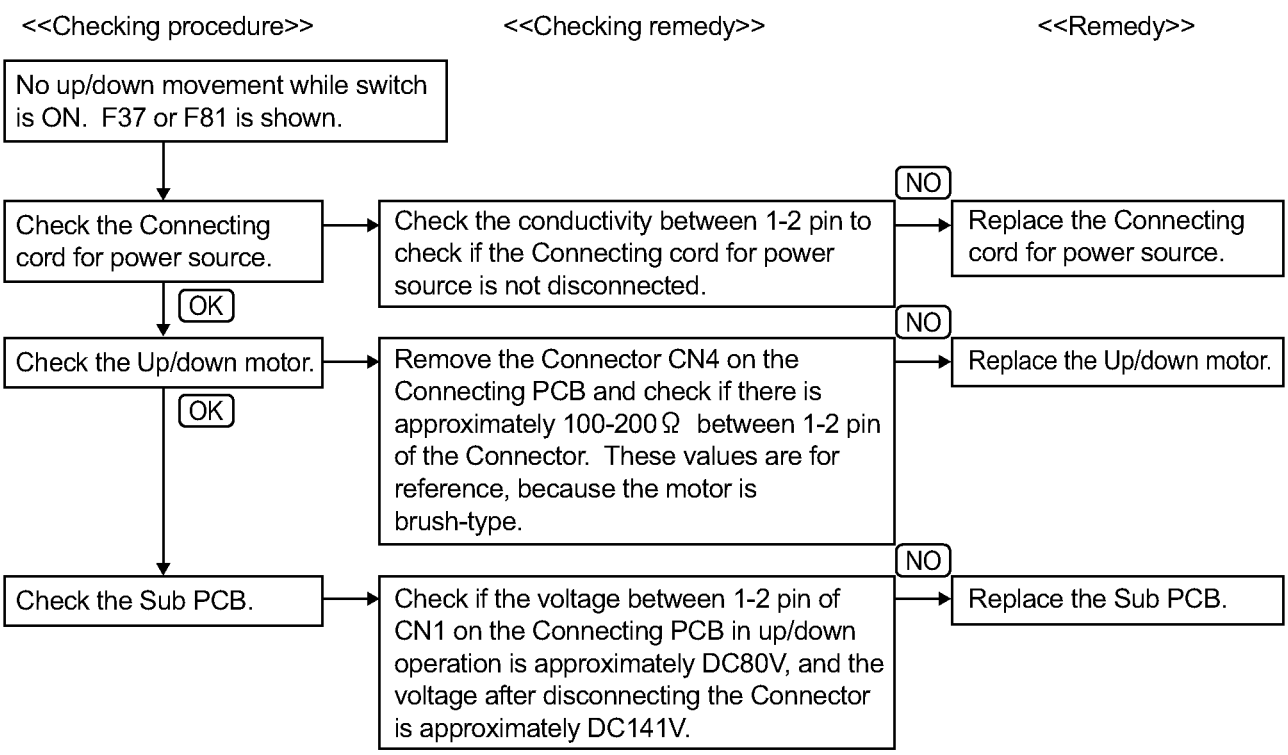
Switch mode	State	Condition/Pin No.CN8	
		7 pin (white) - 4 pin (black)	8 pin (green] - 4 pin (black)
Power source switch box	ON	Instantaneous voltage output of DC12V, and then 0V	DC5V
	OFF	0V	0V
Controller switch	ON	DC12V	DC5V
	After pushing OFF	0V (continuous voltage output of DC12V for a few seconds)	DC5V

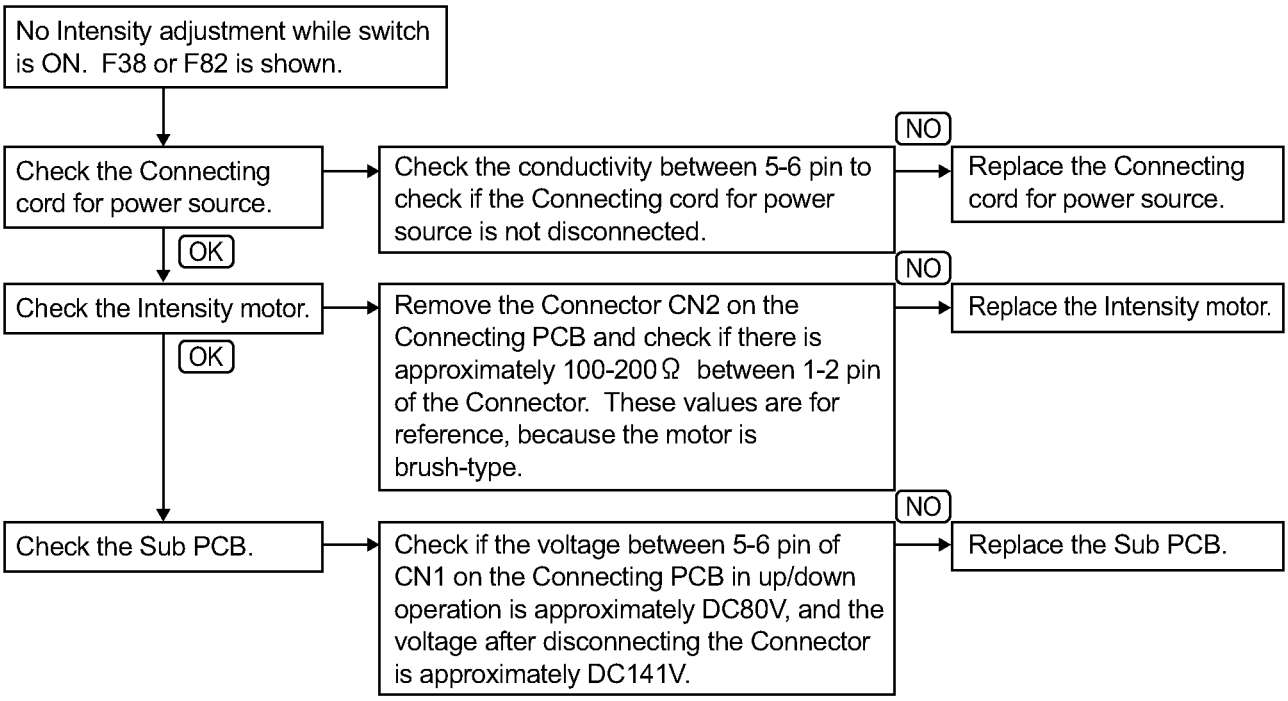
Switch mode	State	Transformer (primary) CN2 (white)	Transformer (secondary) CN6 (white)
		3 pin - 1 pin	2 pin - 1 pin
Power source switch box	ON	Instantaneous voltage output of AC100V, and then 0V	Instantaneous voltage output of AC12V, and then 0V
	OFF	0V	0V
Controller switch	ON	AC100V	AC12V
	OFF	0V	0V


<<Checking procedure>>
<<Checking remedy>>
<<Remedy>>
F11 is shown on the Controller display. (Data communication error)
Check the Connecting cord for Controller.
Check the connection and the conductivity of each Connectors on Sub PCB and Controller.
NO
Re-connect the Connectors. Replace the Connecting cord for Controller.
F12 is shown on the Controller display.
Sub PCB is inferior.
Sub PCB MPU frequency sensor is inferior.
NO
Replace the Sub PCB.


<<Checking procedure>>
<<Checking remedy>>
<<Remedy>>
No tapping while switch is ON. F33 or F14 is shown.
Check the Connecting cord for power source.
OK
Check the conductivity between 1-2 pin to check if the Connecting cord for power source is not disconnected.
NO
Replace the Connecting cord for power source.
Check the Tapping motor.
OK
Remove the Connector CN5 on the Connecting PCB and check if there is approximately 100-200Ω between 1-2 pin of the Connector. These values are for reference, because the motor is brush-type.
NO
Replace the Tapping motor.
Check the Sub PCB.
Check if there is approximately DC80V between 1-2 pin of CN1 on the Connecting PCB in tapping operation, and there is approximately DC141V after the Connector is removed.
NO
Replace the Sub PCB.


No massaging while switch is ON. F36 or F80 is shown.
Check the Connecting cord for power source.
OK
Check the conductivity between 5-6 pin to check if the Connecting cord for power source is not disconnected.
NO
Replace the Connecting cord for power source.
Check the Massaging motor.
OK
Remove the Connector CN3 on the Connecting PCB and check if there is approximately 100-200Ω between 1-2 pin of the Connector. These values are for reference, because the motor is brush-type.
NO
Replace the Massaging motor.
Check the Sub PCB.
Check if the voltage between 5-6 pin of CN1 on the Connecting PCB in massaging operation is approximately DC80V, and the voltage after disconnecting the Connector is approximately DC141V.
NO
Replace the Sub PCB.


<<Checking procedure>>
<<Checking remedy>>
<<Remedy>>
No up/down movement while switch is ON. F37 or F81 is shown.
Check the Connecting cord for power source.
Check the conductivity between 1-2 pin to check if the Connecting cord for power source is not disconnected.
NO
Replace the Connecting cord for power source.
OK
Check the Up/down motor.
Remove the Connector CN4 on the Connecting PCB and check if there is approximately 100-200Ω between 1-2 pin of the Connector. These values are for reference, because the motor is brush-type.
NO
Replace the Up/down motor.
OK
Check the Sub PCB.
Check if the voltage between 1-2 pin of CN1 on the Connecting PCB in up/down operation is approximately DC80V, and the voltage after disconnecting the Connector is approximately DC141V.
NO
Replace the Sub PCB.


No Intensity adjustment while switch is ON. F38 or F82 is shown.
Check the Connecting cord for power source.
Check the conductivity between 5-6 pin to check if the Connecting cord for power source is not disconnected.
NO
Replace the Connecting cord for power source.
OK
Check the Intensity motor.
Remove the Connector CN2 on the Connecting PCB and check if there is approximately 100-200Ω between 1-2 pin of the Connector. These values are for reference, because the motor is brush-type.
NO
Replace the Intensity motor.
OK
Check the Sub PCB.
Check if the voltage between 5-6 pin of CN1 on the Connecting PCB in up/down operation is approximately DC80V, and the voltage after disconnecting the Connector is approximately DC141V.
NO
Replace the Sub PCB.

<<Checking procedure>> <<Checking remedy>> <<Remedy>>

F04 is shown on the display. (Thermistor is disconnected.)
F05 is shown on the display. (Thermistor is short-circuited.)
* Operation does not start even after unplugging the power cord and then plugging it again.

[Additional information]
Push the ON/OFF button on the Controller to turn on the power (display lit), and then the microcomputer and thermistor start communication.
If a problem occurs in data communication (no signal), it is determined as a data communication error and F04 or F05 is indicated.

Check the Heater connecting cord.
→ -Check the connection status and conductivity of the connecting cord like disconnection.
-Check if the voltage beteen male connector side black-black is approximately DC3.2V.
NO → -Re-connect Connectors.
-Replace the Connecting cord for heater.
OK

Check the Sole thermistor.
→ Disconnect the female connector and check if the resistance between black - black is approximately 10kΩ.
NO → Replace the Heater unit.
OK

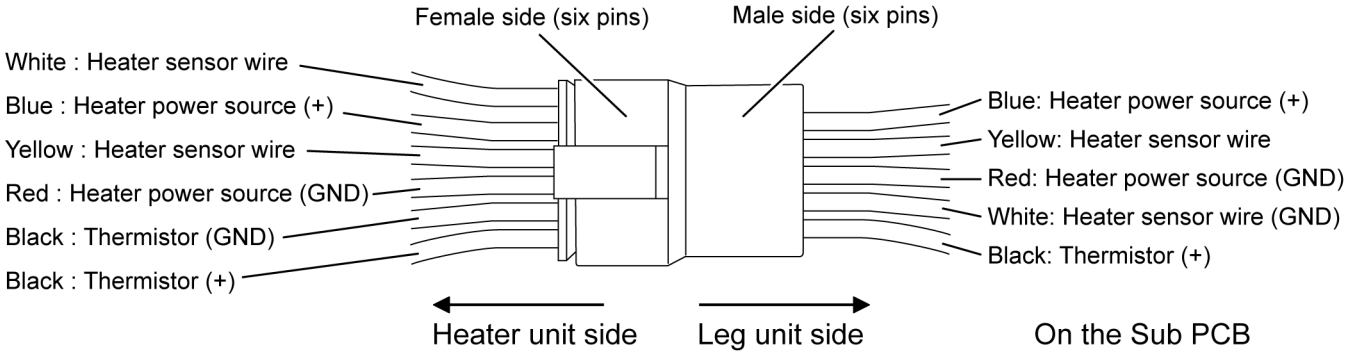
Check the Sole heater.
→ Disconnect the female connector and check if the resistance between blue - red is approximately 12 Ω.
NO → Replace the Heater unit.
OK

Check the Sub PCB.
→ Check if the voltage between female connector blue - red is approximately DC12V with the connector connected.
NO → Replace the Sub PCB .

F06 is shown on the display. (Thermistor is short-circuited.)
* Operation does not start even after unplugging the power cord and then plugging it again.

Check the Sub PCB.
→ Check if the voltage between female connector blue - red is approximately DC12V with the connector connected. (Heater must be turned on.)
NO → Replace the Sub PCB .

* Connector wires of the Foot heater unit are as follows;



<<Checking procedure>> <<Checking remedy>> <<Remedy>>

F08 is shown on the display. (Heater sensor wire is short-circuited.)
* Operation does not start even after unplugging the power cord and then plugging it again.

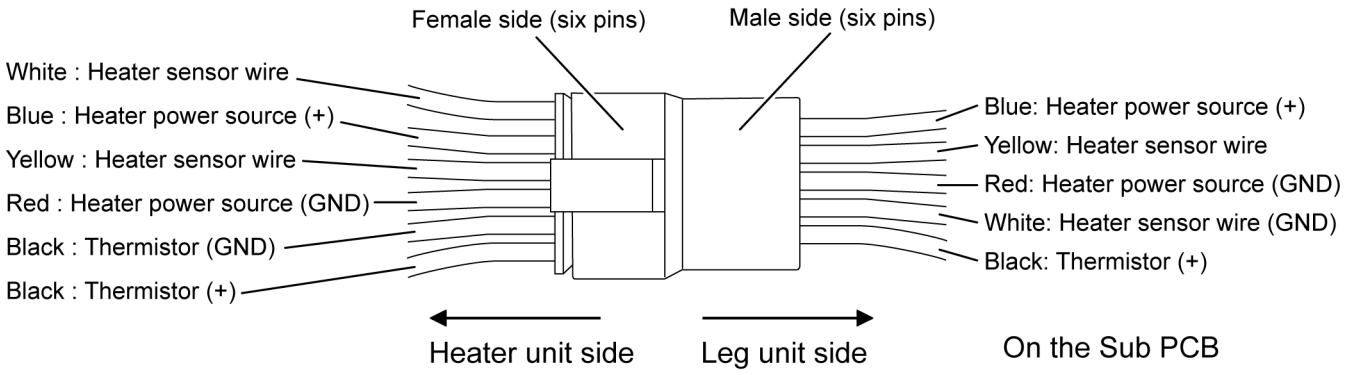
↓

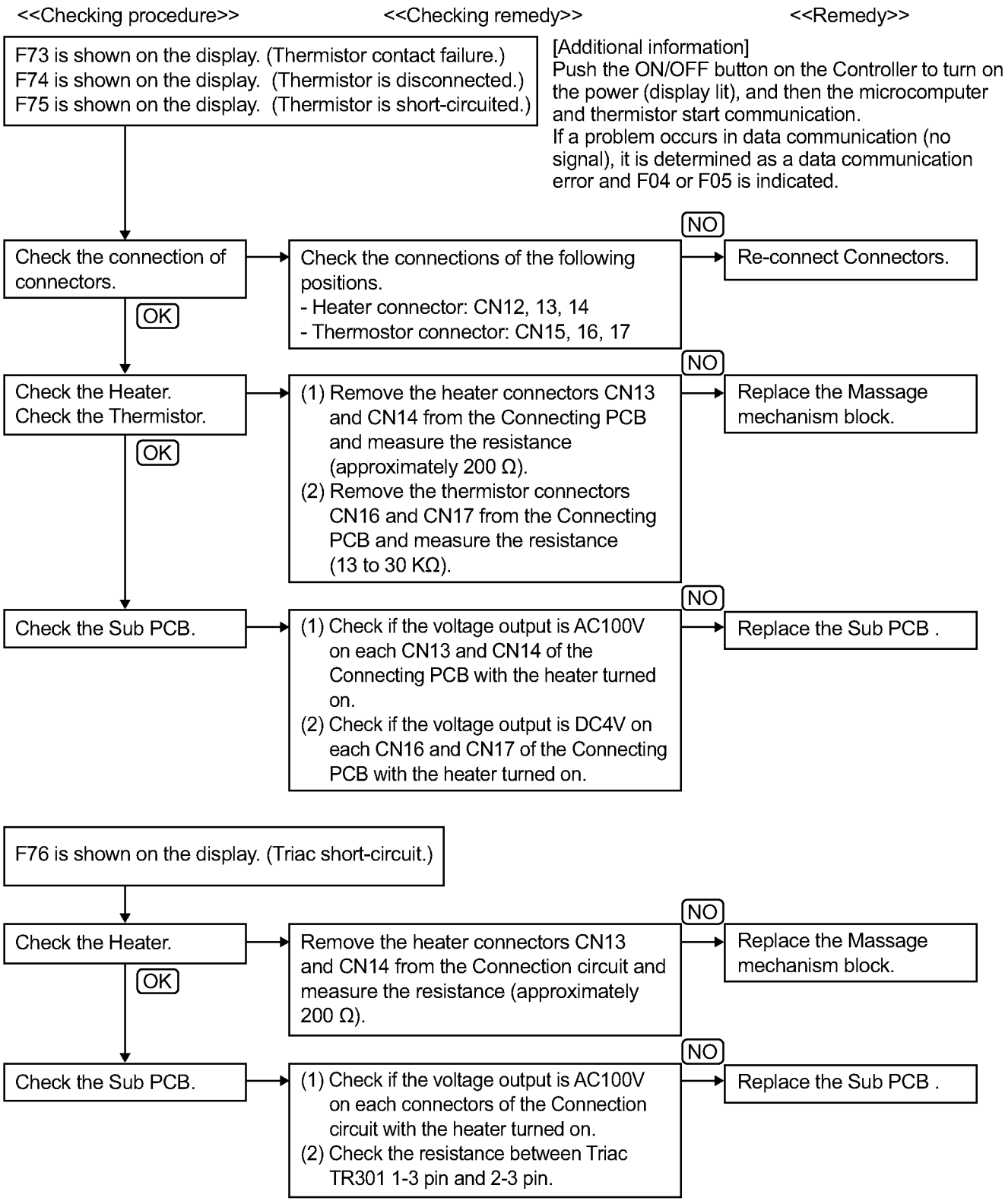
Check the Sole heater sensor wire. → Disconnect the Heater connector and check if the resistance between white-yellow is approximately 139kΩ. → NO → Replace the Heater unit.

↓ OK

Check the Sub PCB. → Check if the voltage between female connector blue - red is approximately DC12V with the connector connected. (Heater must be turned on.) → NO → Replace the Sub PCB.

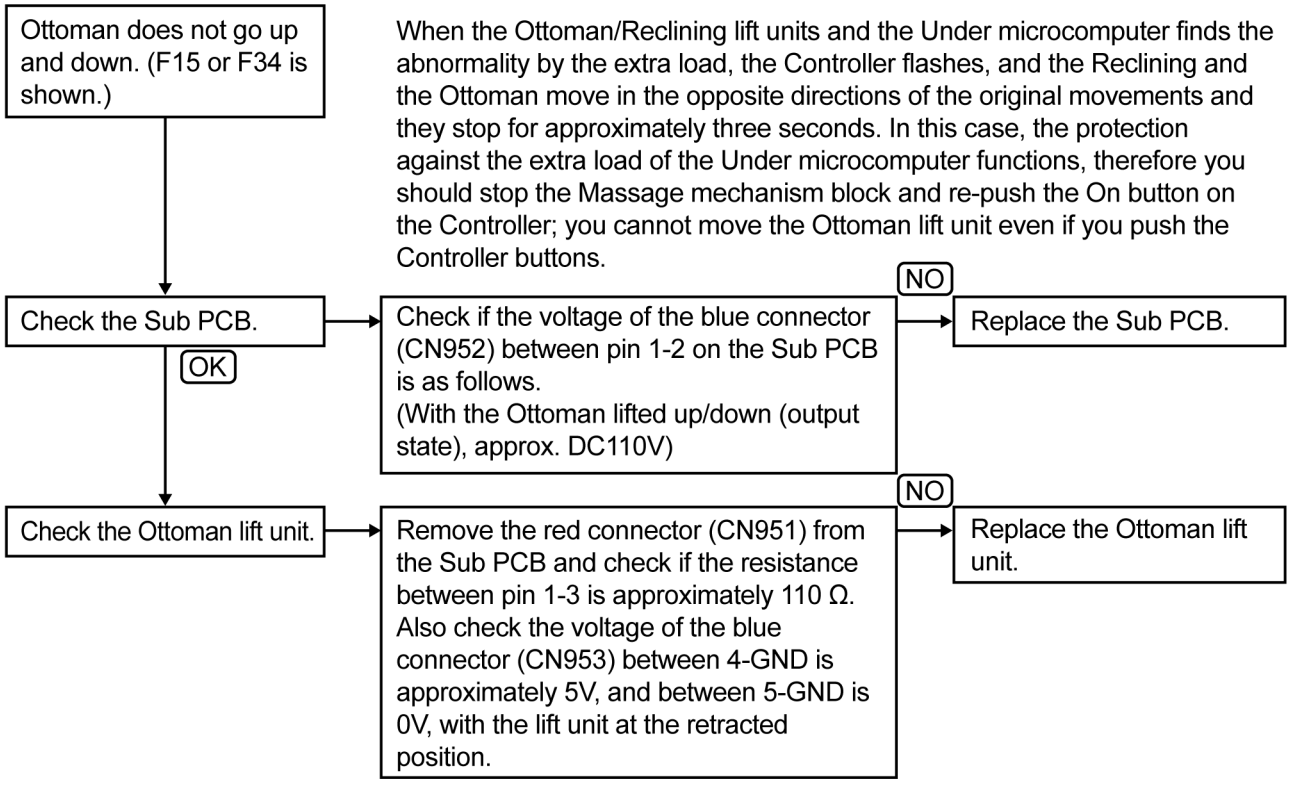
* Connector wires of the Foot heater unit are as follows;

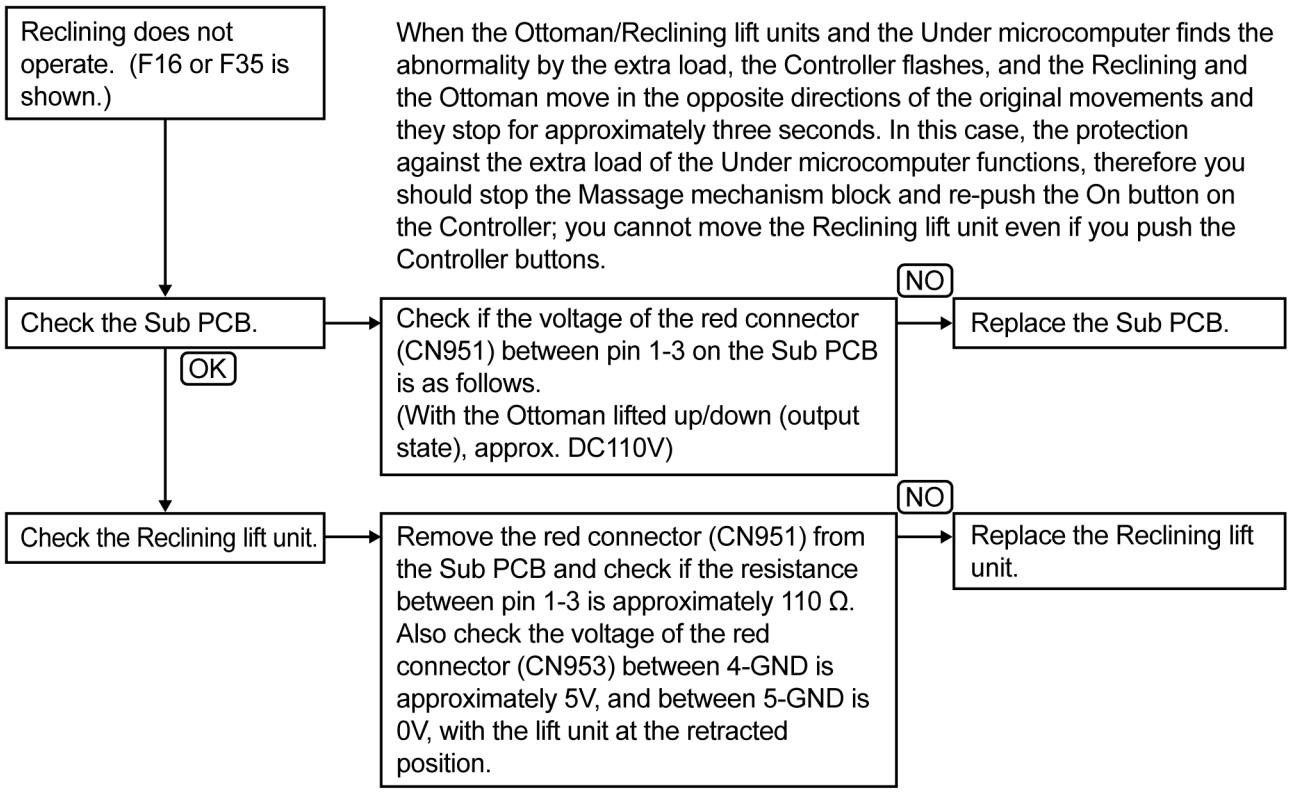


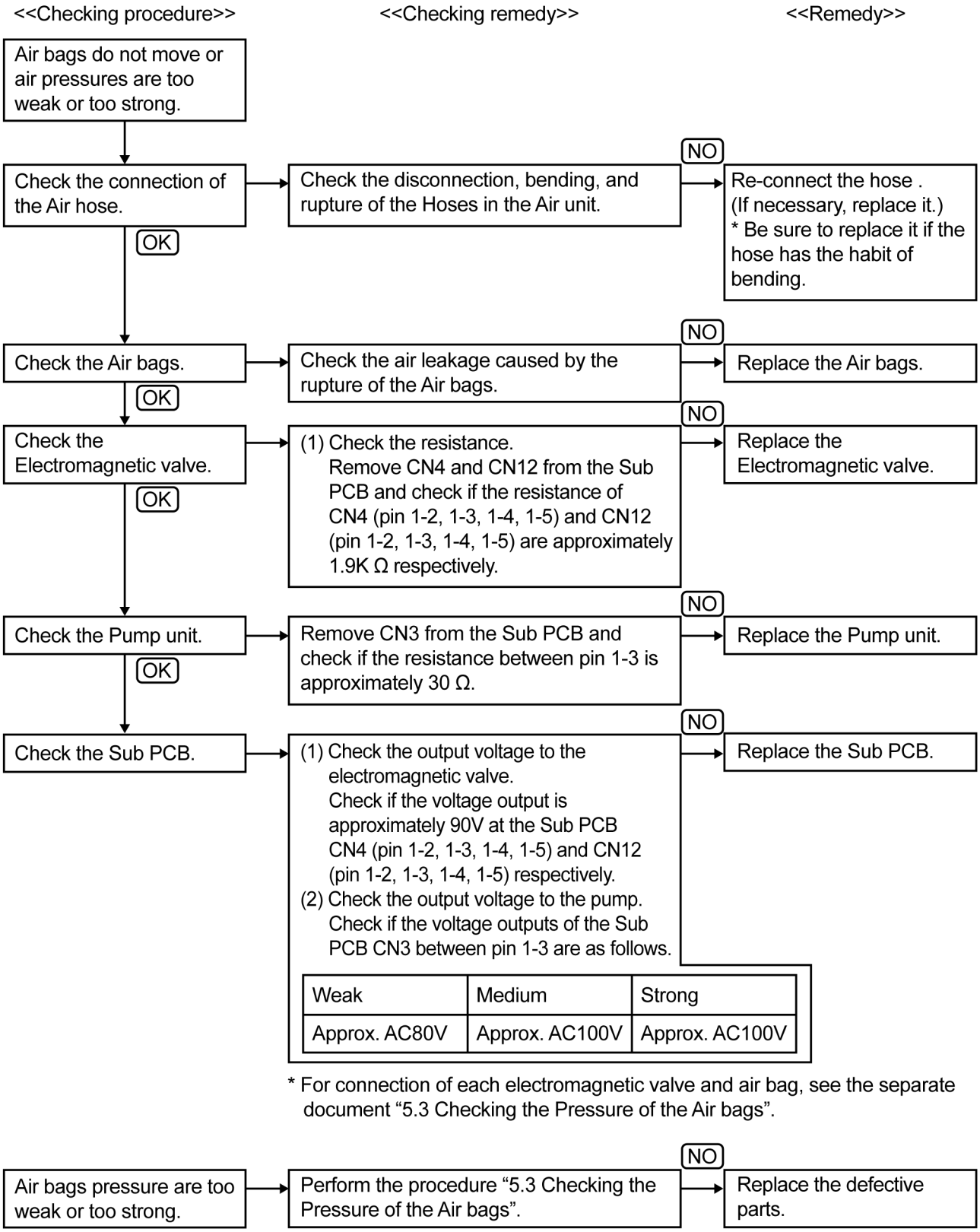

<<Checking procedure>>
<<Checking remedy>>
<<Remedy>>
F73 is shown on the display. (Thermistor contact failure.)
F74 is shown on the display. (Thermistor is disconnected.)
F75 is shown on the display. (Thermistor is short-circuited.)
[Additional information]
Push the ON/OFF button on the Controller to turn on the power (display lit), and then the microcomputer and thermistor start communication.
If a problem occurs in data communication (no signal), it is determined as a data communication error and F04 or F05 is indicated.
Check the connection of connectors.
OK
Check the connections of the following positions.
- Heater connector: CN12, 13, 14
- Thermostor connector: CN15, 16, 17
NO
Re-connect Connectors.
Check the Heater.
Check the Thermistor.
OK
(1) Remove the heater connectors CN13 and CN14 from the Connecting PCB and measure the resistance (approximately 200 Ω).
(2) Remove the thermistor connectors CN16 and CN17 from the Connecting PCB and measure the resistance (13 to 30 KΩ).
NO
Replace the Massage mechanism block.
Check the Sub PCB.
(1) Check if the voltage output is AC100V on each CN13 and CN14 of the Connecting PCB with the heater turned on.
(2) Check if the voltage output is DC4V on each CN16 and CN17 of the Connecting PCB with the heater turned on.
NO
Replace the Sub PCB .
F76 is shown on the display. (Triac short-circuit.)
Check the Heater.
OK
Remove the heater connectors CN13 and CN14 from the Connection circuit and measure the resistance (approximately 200 Ω).
NO
Replace the Massage mechanism block.
Check the Sub PCB.
(1) Check if the voltage output is AC100V on each connectors of the Connection circuit with the heater turned on.
(2) Check the resistance between Triac TR301 1-3 pin and 2-3 pin.
NO
Replace the Sub PCB .

<<Checking procedure>> <<Checking remedy>> <<Remedy>>

[Additional information]
If the FULL BODY automatic program is selected and operated, the Reclining and Ottoman lifts move to certain angles (details are described below). If any of the lift units has a problem, the display of the Controller starts to blink after 60 seconds from the error detection, and all operations stop.
- Reclining ••• Approx. 18° tilted
- Ottoman ••• Approx. 30° lifted






<<Checking procedure>>
<<Checking remedy>>
<<Remedy>>
Air bags do not move or air pressures are too weak or too strong.
Check the connection of the Air hose.
OK
NO
Check the disconnection, bending, and rupture of the Hoses in the Air unit.
Re-connect the hose . (If necessary, replace it.)
* Be sure to replace it if the hose has the habit of bending.
Check the Air bags.
OK
NO
Check the air leakage caused by the rupture of the Air bags.
Replace the Air bags.
Check the Electromagnetic valve.
OK
NO
(1) Check the resistance.
Remove CN4 and CN12 from the Sub PCB and check if the resistance of CN4 (pin 1-2, 1-3, 1-4, 1-5) and CN12 (pin 1-2, 1-3, 1-4, 1-5) are approximately 1.9K Ω respectively.
Replace the Electromagnetic valve.
Check the Pump unit.
OK
NO
Remove CN3 from the Sub PCB and check if the resistance between pin 1-3 is approximately 30 Ω.
Replace the Pump unit.
Check the Sub PCB.
NO
(1) Check the output voltage to the electromagnetic valve.
Check if the voltage output is approximately 90V at the Sub PCB CN4 (pin 1-2, 1-3, 1-4, 1-5) and CN12 (pin 1-2, 1-3, 1-4, 1-5) respectively.
(2) Check the output voltage to the pump.
Check if the voltage outputs of the Sub PCB CN3 between pin 1-3 are as follows.
Weak
Medium
Strong
Approx. AC80V
Approx. AC100V
Approx. AC100V
Replace the Sub PCB.
* For connection of each electromagnetic valve and air bag, see the separate document “5.3 Checking the Pressure of the Air bags”.
Air bags pressure are too weak or too strong.
NO
Perform the procedure “5.3 Checking the Pressure of the Air bags”.
Replace the defective parts.

Output voltage and resistance for each connector
Use the chart to check the defects of parts when an F (error) display appears, etc.

CN in the chart stands for connector.

No.	Module name	Measurement point	Standard	Remarks
1	Up/down motor input voltage	CN4 (1 pin - 2 pin)	DC141V (80V)	The value in ( ) is measured with the CNs connected.
2	Intensity motor input voltage	CN2 (1 pin - 2 pin)	DC141V (80V)	The value in ( ) is measured with the CNs connected.
3	Massaging motor input voltage	CN3 (1 pin - 2 pin)	DC141V (80V)	The value in ( ) is measured with the CNs connected.
4	Tapping motor input voltage	CN5 (1 pin - 2 pin)	DC141V (80V)	The value in ( ) is measured with the CNs connected.
5	Up/down motor resistance	CN4 (1 pin - 2 pin)	Within 100 to 200Ω	Perform measurement after removing the CNs.
6	Intensity motor resistance	CN2 (1 pin - 2 pin)	Within 100 to 200Ω	Perform measurement after removing the CNs.
7	Massaging motor resistance	CN3 (1 pin - 2 pin)	Within 100 to 200Ω	Perform measurement after removing the CNs.
8	Tapping motor resistance	CN5 (1 pin - 2 pin)	Within 100 to 200Ω	Perform measurement after removing the CNs.
9	Heater input voltage (Massage mechanism side)	CN13/14 (1 pin - 2 pin)	Approx. AC100V	Perform measurement with the CNs connected.
10	Heater input voltage (Ottoman side)	CN9	Approx. DC12V	Perform measurement with the CNs connected.
11	Heater wire resistance (Massage mechanism side)	CN3/14 (1 pin - 2 pin)	Approx. 200Ω	Perform measurement after removing the CNs.
12	Heater wire resistance (Ottoman side)	CN9	Approx. 10 to 14Ω	Perform measurement after removing the CNs.
13	Thermistor input voltage (Massage mechanism side)	CN16/17 (1 pin - 2 pin)	Approx. DC4V	Perform measurement with the CNs connected.
14	Thermistor input voltage (Ottoman side)	CN9	Approx. DC3V to 4V	Perform measurement with the CNs connected.
15	Thermistor resistance (Massage mechanism side)	CN16/17 (1 pin - 2 pin)	Approx. 15 to 30KΩ	Perform measurement after removing the CNs.
16	Thermistor resistance (Ottoman side)	CN9	Approx. 10KΩ	Perform measurement after removing the CNs.
17	Heater sensor wire resistance (Ottoman side)	CN9	Approx. 115 to 160Ω	Perform measurement after removing the CNs.
18	Transformer input voltage (primary)	CN2	Approx. AC100V	Perform measurement with the CNs connected.
19	Transformer output voltage (secondary)	CN6	Approx. AC12V	Perform measurement with the CNs connected.
20	Transformer resistance (primary)	CN2	Approx. 11Ω	Perform measurement after removing the CNs.
21	Transformer resistance (secondary)	CN6	Approx. 2Ω	Perform measurement after removing the CNs.
22	Controller input voltage	CN8 (4 pin - 8 pin) (4 pin - 7 pin)	 Approx. DC5V Approx. DC12V	Push the ON/OFF button on the Controller to operate and perform measurement.
23	Ottoman lift unit input voltage	CN952	Approx. DC110V	Perform measurement with the CNs connected.
24	Ottoman lift unit resistance	CN952	Approx. 110Ω	Perform measurement after removing the CNs.
25	Reclining lift unit input voltage	CN951	Approx. DC110V	Perform measurement with the CNs connected.
26	Reclining lift unit resistance	CN951	Approx. 110Ω	Perform measurement after removing the CNs.
27	Electromagnetic valve input voltage	CN4/12	Approx. DC90V	Perform measurement with the CNs connected.
28	Electromagnetic valve resistance	CN4/12	Approx. 1.9KΩ	Perform measurement after removing the CNs.
29	Pump unit input voltage	CN3	Approx. AC80V to 100V	Perform measurement with the CNs connected.
30	Pump unit resistance	CN3	Approx. 30Ω	Perform measurement after removing the CNs.

5.2. Checking Sensors

[Procedures]

1. Push the ON/OFF button on the Controller and set the unit in the standby mode.
2. Apply the lead on the 3 pins (MICON 5V) of the CN6 on the Connection PCB and on 4-11 or 14-16 pins, then rotate each Sensor. Sensors would be OK if there is 0V when the hole is seen, and -5V when the hole is not seen.

- when you use the CN6, check the following.

Sensors	Connector	PIN No.	GND
Massaging sensor	CN6	⑤ ⑥ ⑦	③
Up/down rotation sensor	CN6	④	③
Up/down sensor	CN6	⑧ ⑨ ⑩	③
Tapping rotation sensor	CN6	⑪	③
Intensity sensor	CN6	⑭ ⑮ ⑯	③

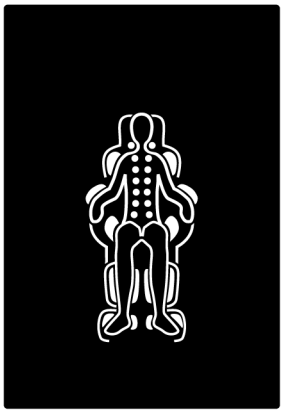
- when you use each Connectors, check the following.

Sensors	Connector	PIN No.	GND
Massaging sensor	CN7	④ ⑤ ⑥	③
Up/down rotation sensor	CN8	④	③
Up/down sensor	CN9	④ ⑤ ⑥	③
Tapping rotation sensor	CN10	④	③
Intensity sensor	CN10	④ ⑤ ⑥	③

Replace the Sensors if there is not output voltage.

Massage wheels may move automatically.

When the product is used again after the main unit power switch turned OFF or the power plug is pulled out, the massage wheels will possibly move automatically. The sign on the right side will appear at this time. It does suggest a fault. After moving, the product can be used normally.



5.3. Checking the Pressure of the Air bags

You can find the pressure leakage of the Air bags by this checking.

- Checking procedure

Note: Do not put feet on the Ottoman air part when checking the operation.

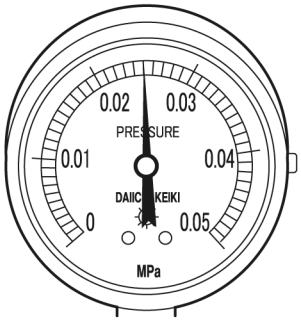
1. Remove the foot cover, back cover, and under box cover, remove the air hose to be measured, and connect a T-shaped joint.
2. Push the ON/OFF button on the Controller.
3. Push the “Air bag/stretch” button on the Controller.
4. Push the button ▲ or ▼ to select the air bags intensity for feet, push the button ◀ or ▶, and push the OK button. Then, air pressure operation starts.
   - Check the individual parts (foot, seat, arm, and shoulder).
   - Check the three levels of Air intensity (weak, medium, strong).

If the pressure values are within the tolerance, the pump unit and air hose are normal.
If the values are out of the tolerance range, the following causes are possible.

a. One of the hoses between air bags and pump unit is broken or disconnected.
b. One of the electromagnetic valves is malfunctioning.
c. Pump unit is malfunctioning and the output voltage from the Sub PCB has decreased.
d. One of the air bags is broken.

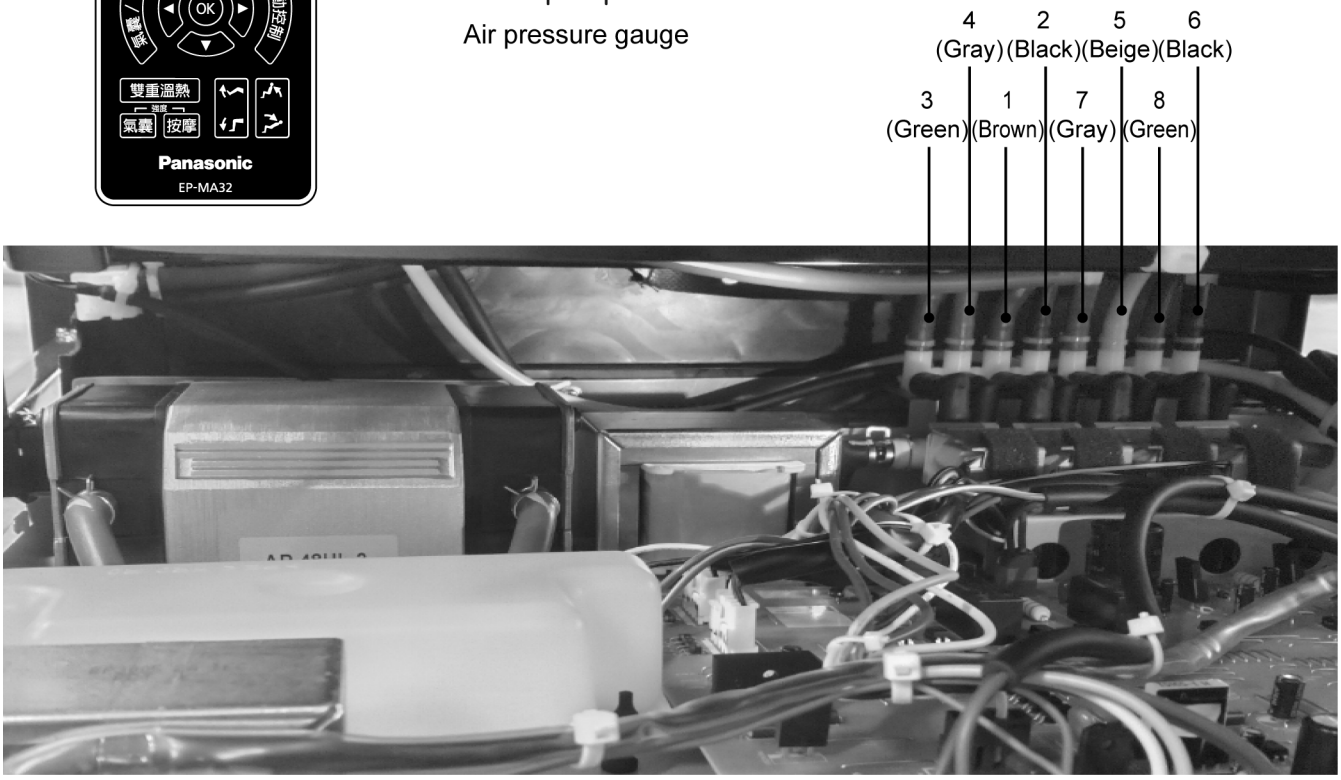
Unit: kPa

	Air pattern	Weak	Medium	Strong	Measurement point
Leg rear+Foot inside (Right/Left)	1st	26.2±7kPa	34.1±7kPa	37.7+4/-7kPa	1
Leg+Foot outside (Right/Left)	1st	14.2±6kPa	21.4±7kPa	27.5±7kPa	2
Heel (Right/Left)	1st	11.5±6kPa	20.7±7kPa	25.9±7kPa	3
Foot	1st	27.2±7kPa	34.9±7kPa	38.0+4/-7kPa	4
Seat (Right/Left)	1st	20.9±7kPa	32.1±7kPa	33+6/-7kPa	8
Left arm	1st	24.0±7kPa	34.3±7kPa	35.2+4/-7kPa	7
Right arm	1st	23.5±7kPa	34.2±7kPa	35.1+4/-7kPa	6
Shoulder outside (Right/Left)	1st	11.5±6kPa	21.8±7kPa	29.3±7kPa	5



Air pressure gauge

1 Leg backside+Foot inside
2 Leg+Foot outside
4 Sole
3 Heel
5 Shoulder outside
6 Arm right
7 Arm left
8 Seat



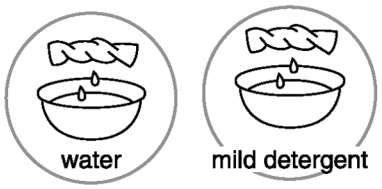
Air bag position	Hose No.	Hose color	CN No.	Pin No.	Harness color
Leg air bag right Leg air bag left Foot air bag right/outside Foot air bag left/outside	2	Black	4	1-3	Black - Brown
Heel air bag right Heel air bag left	3	Green	12	1-2	Black - Red
Leg rear air bag Foot air bag right/inside Foot air bag left/inside	1	Brown	12	1-3	Black - Brown
Foot air bag	4	Gray	4	1-2	Black - Red
Seat air bag	8	Green	12	1-5	Black - Red
Hand and arm air bag left	7	Gray	12	1-4	Black - Yellow
Hand and arm air bag right	6	Black	4	1-5	Black - White
Shoulder air bag right left	5	Beige	4	1-4	Black - Yellow

* The colors of hoses or harnesses are subject to change due to changes in the design.

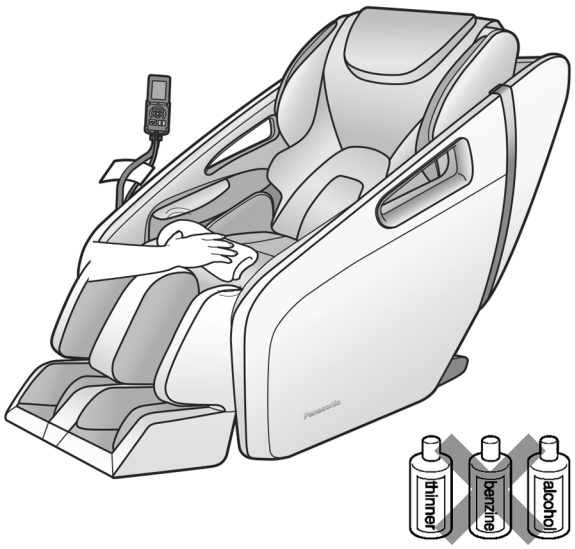
5.4. Maintenance

Cleaning of the synthetic leather

Wipe the synthetic leather with a soft dry cloth.



- **Do not clean the product with chemicals such as thinners, gasoline and alcohol.**
- **When using a leather maintenance product (cleaning cloth) sold on the market, follow its directions for use.**
- **If the synthetic leather is very dirty, wipe it with the method below.**
  - ①Put a piece of soft cloth into water or 3% to 5% neutral detergent contained hot water and wring it out.
  - ②Wipe surface of the synthetic leather with the soft cloth.
  - ③Wipe the detergent with a piece of cloth once soaked in clean water and wrung out.
  - ④Wipe with a piece of wrung soft cloth.
  - ⑤Have the synthetic leather take natural air drying.
- **If it is difficult to remove the stains on the synthetic leather, soak a piece of melamine foam bought from the market into a neutral detergent and use it wipe the product.**
- **Do not dry the surface by a hair drier.**
- **Surface of the synthetic leather may be dyed by fabric colors; therefore, be careful when wiping the product with denim or colored cloth.**
- **Keep these positions from long-time contact with plastics to avoid fading.**
- **Synthetic leather may discolor, so the position in contact with the hair dye used should be covered by a towel.**



Cleaning of the plastic parts

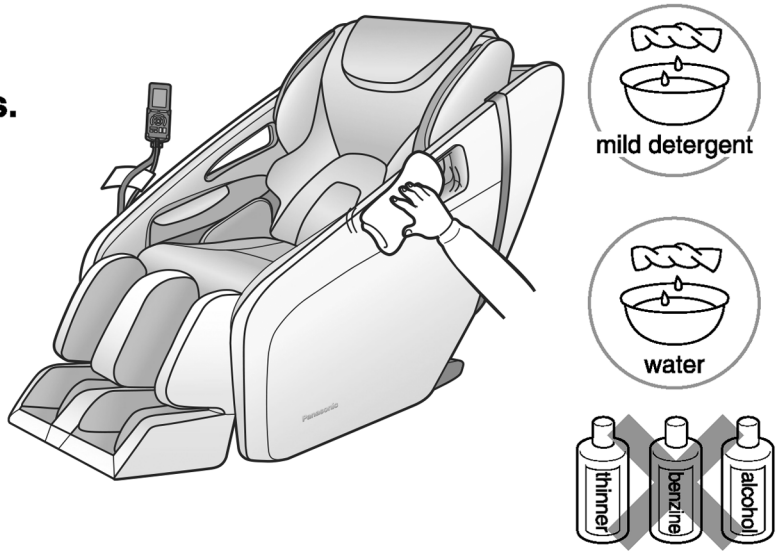
1 Put a piece of soft cloth into water or neutral detergent contained hot water, wring it out and wipe the plastic parts.

- **Do not clean the product with chemicals such as thinners, gasoline and alcohol.**

2 Wipe with a piece of cloth once soaked in clean water and wrung out.

- Wring the cloth out before using it to wipe the remote controller.

3 Have the plastic parts take natural air drying.



5.5. Positions to Check on the PCB and the Functions

Function descriptions: functions of circuits and transformer

5.5.1. Sub PCB

1. Generates DC5V from AC100V using the switching transformer (standby power circuit), supplies power to the Sub PCB microcomputer, and controls the Massage mechanism, pumps, and electromagnetic valves.
2. Generates DC12V from AC100V using the power transformer and supplies power to the sensor light-emitting circuit, Controller circuit, and Massage mechanism motor direction switching relay.
3. Generates DC5V from AC100V using the power transformer and supplies power to the motor drive circuit and sensor light-receiving circuit.
4. Inputs signals from the sensors to the Sub PCB microcomputer.
5. Supplies voltage of AC60V to 100V to the pump unit to operate the pumps.
6. Supplies full wave rectification of AC100V to the electromagnetic valves to activate each of the electromagnetic valves.

5.5.2. Controller

1. Receives signals from the switches and transmit the SW input signals from the Controller microcomputer to the Sub PCB microcomputer.
2. Receives signals from the switches and the main circuit microcomputer and indicates information on the display.
3. Notifies key reception sounds by a beep.

5.5.3. Transformer (mounted on the under box)

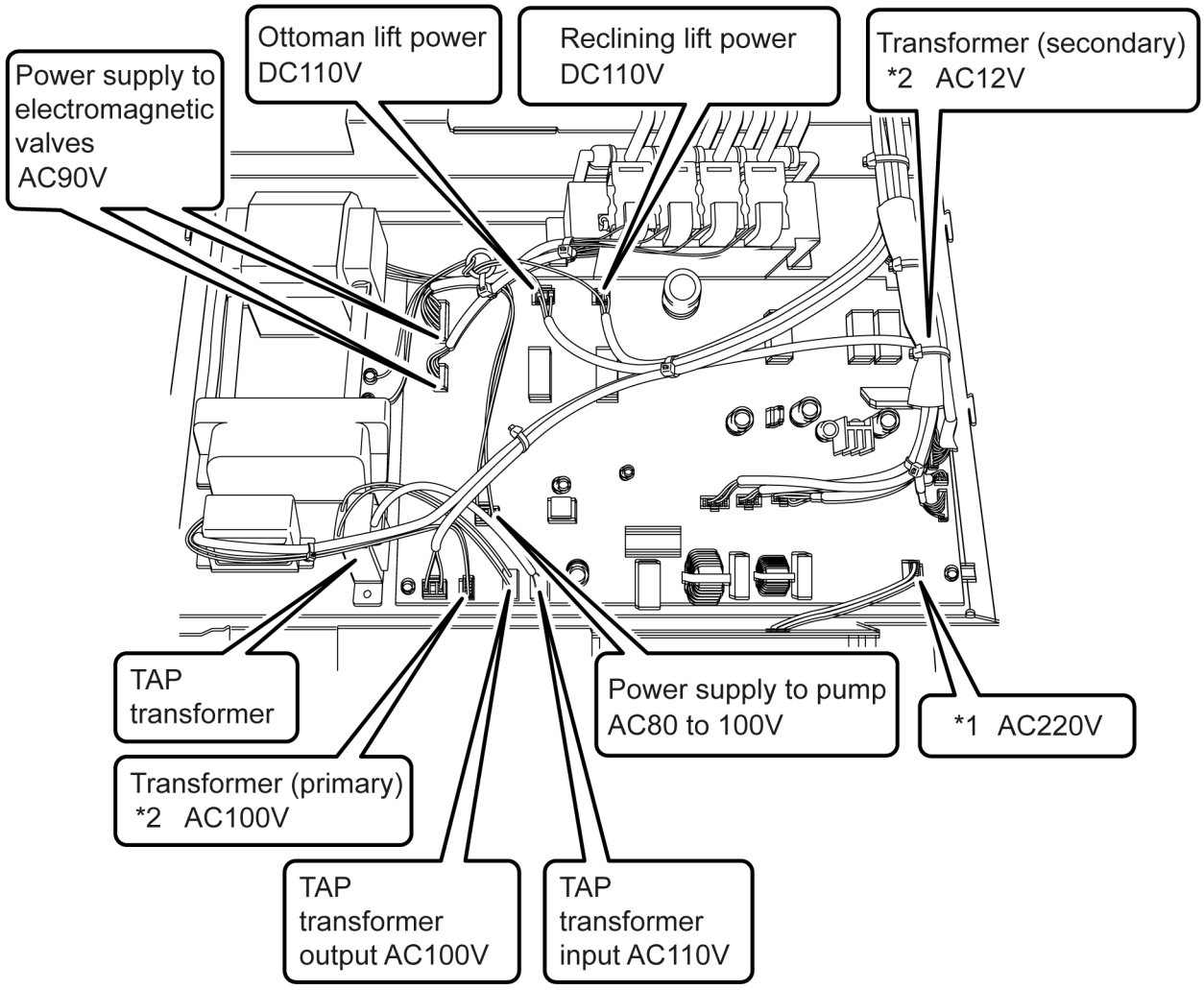
1. Transforms AC100V to AC12V to supply power.
2. Generates DC5V from AC100V using the switching transformer.

5.5.4. Output Voltage of Sub PCB

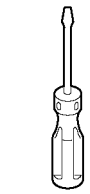
*** 1: This is the output voltage with the power plug inserted in the power source.**

*** 2: This is the output voltage with the Controller ON/OFF button pushed (standby mode).**

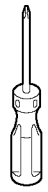
Others: These are the output voltages when each operations are carried out.



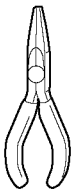
6 Service Fixture & Tools



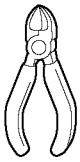
Slotted Screwdriver



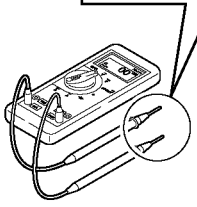
Phillips Screwdriver



Pliers

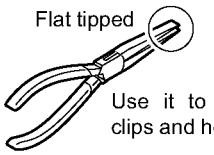


Cutter

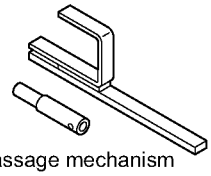


Tester

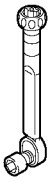
13mm box driver
(for Up/down shaft bolt)



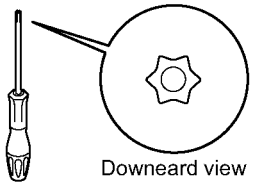
Use it to remove the anchor clips and hose clamps.



Massage mechanism block loading tool, anchor clip

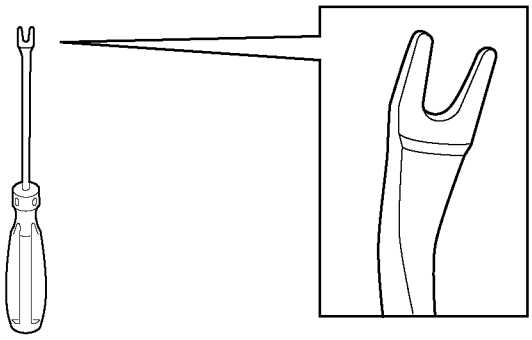


13mm torque wrench
(for Up/down shaft bolt)

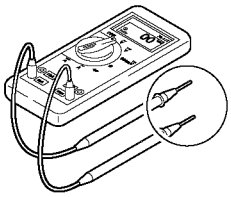


Torx screwdriver T10
(for Power source switc box)

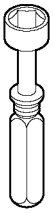
5mm Allen wrench
(for joints of the Ottoman base upper frame unit and seat frame unit, and Ottoman base upper frame unit and foot frameunit)



Y-shaped driver
(Jig for releasing back cover hooks)
* Part number not specified



Insulation resistance tester (Megger)
* Use it to check the insulation condition after maintenance work.
Specifications: DC500V/2MΩ minimum



10mm box driver
(for joints of the Ottoman base upper frame unit and seat frame unit)

7 Disassembly and Assembly Instructions

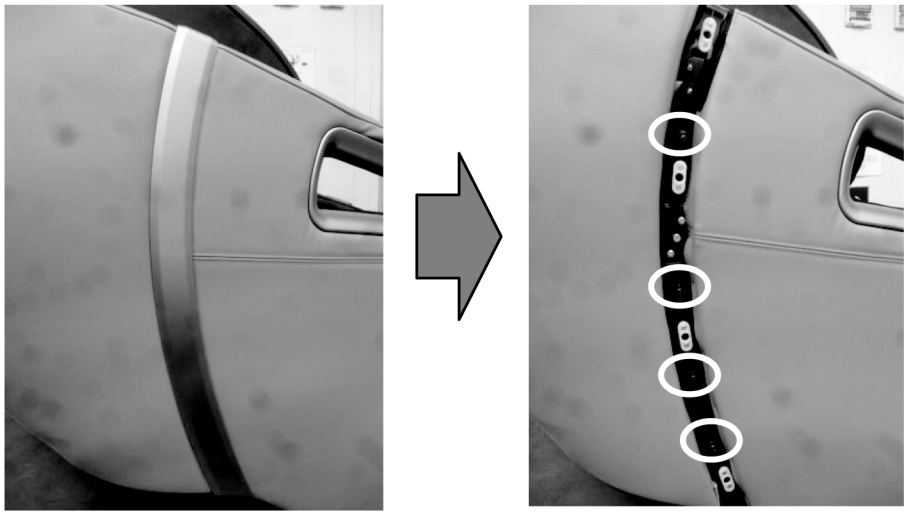
Before starting work

- When cutting the cable ties, make sure not to cut any fabric, hoses, or lead wires.
- When attaching the cable ties during assembly, fix them at the positions of the white tape.

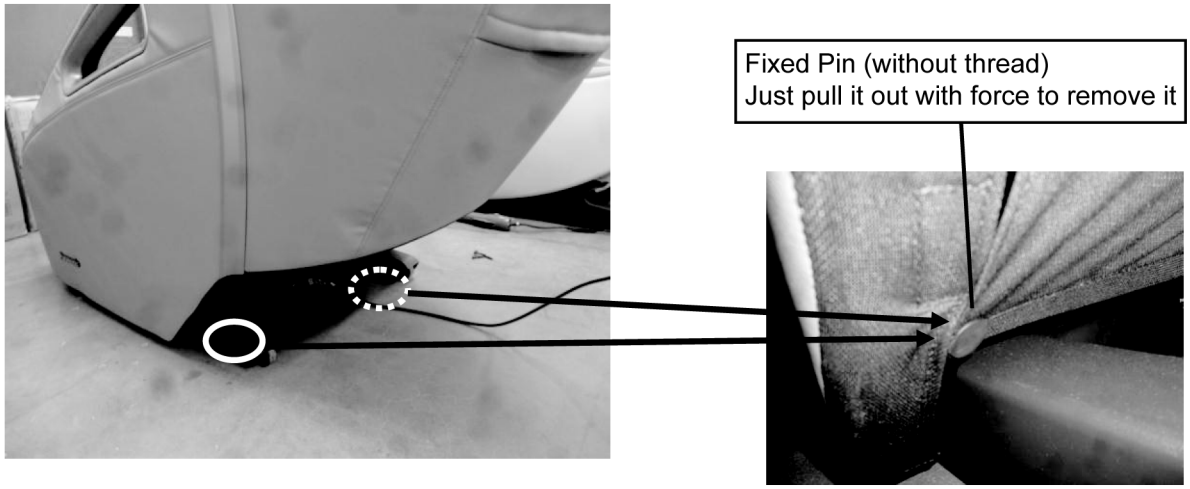
7.1. Removing Rear Cover

1. Remove the decorating strip of armrest from bottom to top by successively unlocking four fixed hooks of the strip with force, as per the method shown in the following figure.
   Note: make sure you use force at the hook position during removal; if not, it may result in the breakage of decorating strip. (The dotted red circle in the figure below indicates the position of hook.)

2. Remove eight screws under left and right decorating strips.

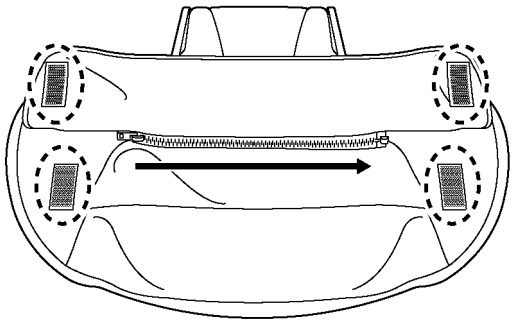


3. Remove two fixed pins which are pressed into the bottom of rear cover.



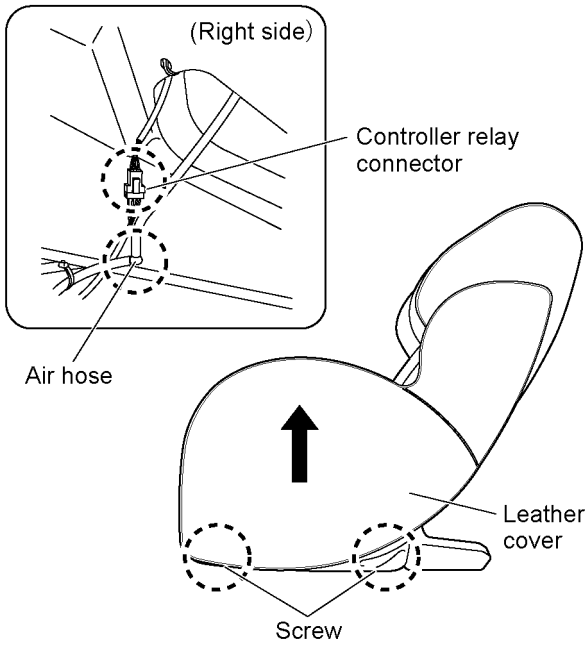
7.2. Removing the Backrest

1. Unfasten two hooks and loop fasteners, open the zipper, and remove the backrest.



7.3. Removing the Armrests (Right/ Left)

1. Unfasten two hooks and loop fasteners on the bottom of the armrests, roll up the leather cover, and remove the screws (two each on right and left).
2. Lift the armrests upwards and remove them.
3. When removing air hoses (one each on right and left) on the right armrest, remove the Controller relay connector.

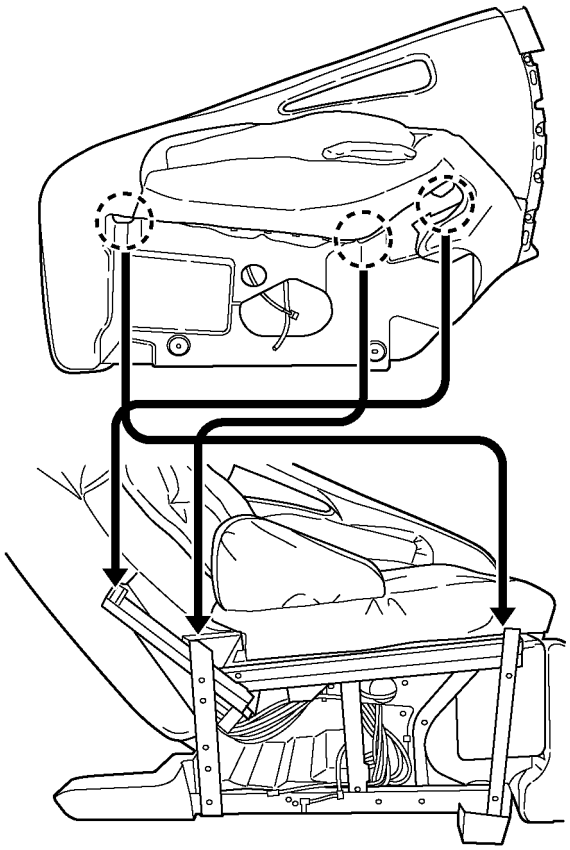


Caution:

- Be careful not to roll up the leather cover roughly. (It may result in wrinkles.)

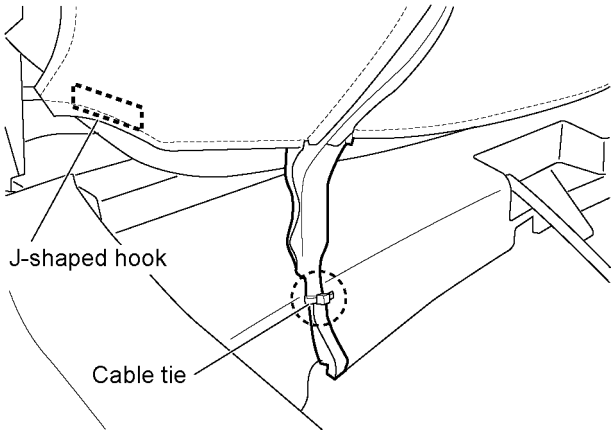
Caution:

- When assembling, fit the armrests in place as in the following figure.

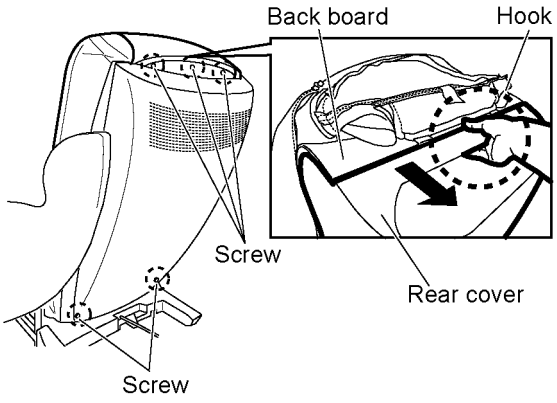


7.4. Removing the Rear Cover

1. Remove the backrest (see 7.2).
2. Pull the tips of the zippers sewn into the inside of the lower part of the back cover (two each on right and left) to the outside.
3. Cut the cable ties T18S on the tips of the zippers, and pull the zippers (two each on right and left) upwards to open.
4. Remove the J-shaped hooks (two each on right and left), and roll up the back cover so that the rear cover is visible.
   Caution:
   • A gap will appear on the joins between the rear cover and the back board on the top surface and two sides. This is not a fault.

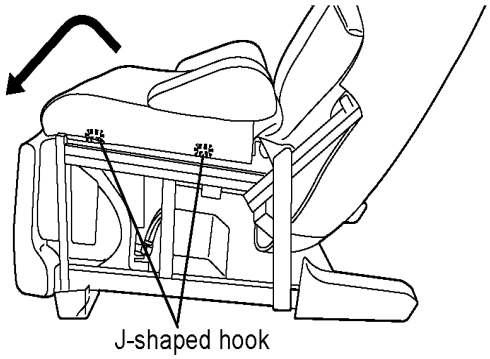


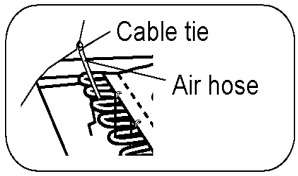
5. Remove the screws (three on top, two on bottom) attaching the rear cover in place, and pull the rear cover forwards, taking care of the hook.
   For easier removing procedure, remove the lower two screws first, and then remove the upper three screws.
   Caution:
   • A gap will appear between the back board and the rear cover. This is not a fault.



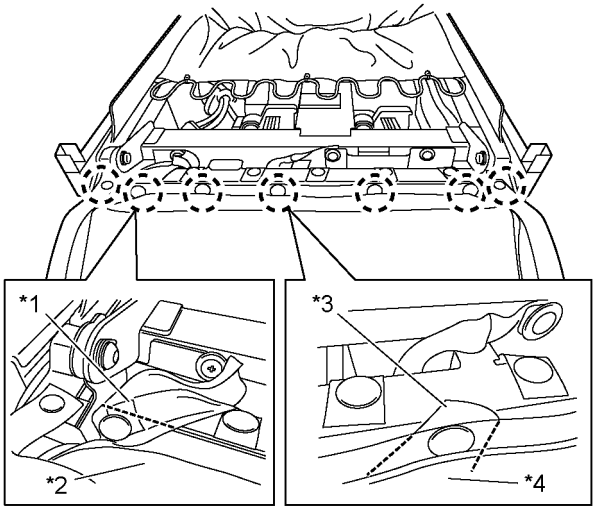
7.5. Removing the Seat Cushion

1. Remove the armrests (see 7.3).
2. Remove the J-shaped hooks (two each on right and left).
3. Lift the seat cushion slightly, cut the cable tie T18S, and remove the air hose.





4. Remove seven brushclips attaching the seat cushion to the main body.
   Caution:
   • When assembling, follow the instructions for the two positions below (*1-4).



*1 Lift protection cloth on the front side
*2 Seat cushion on the rear side
*3 Lift protection cloth on the rear side
*4 Seat cushion on the front side

7.6. Removing the Back Cover

1. Remove the backrest (see 7.2).
2. Remove the armrests (see 7.3).
3. Remove the rear cover (see 7.4).
4. Remove the seat cushion (see 7.5).
5. Cut three cable ties T30R fixing the apron-like black fabric of the back cover.

   Caution:

   • Be sure not to cut the fabric.

   • When attaching the cable ties T30R, be careful so that a cut side of cable tie is not facing upwards.
   (Please fix the cable tie to the first line of the S-shaped spring.)

   • When assembling the back cover, use a tool with Y-shaped tip for easier assembly work (see Fig.1).
6. Unfasten the velcro (hook and loop fastener) on the bottom of the back cover (two each on right and left), and remove the back cover.
7. Remove three J-shaped hooks on the bottom of the apron.

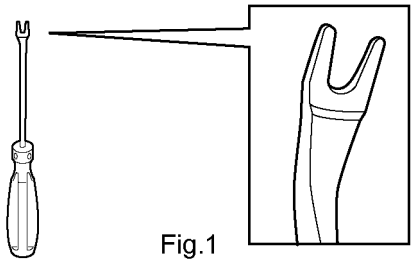
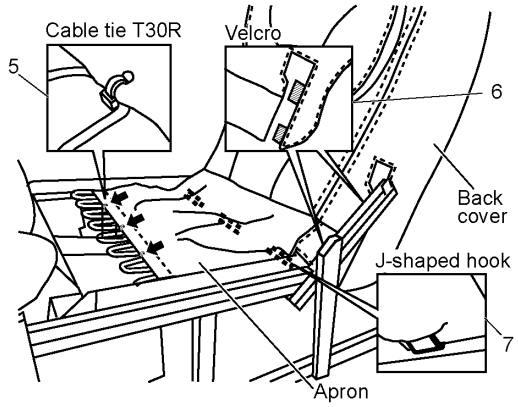
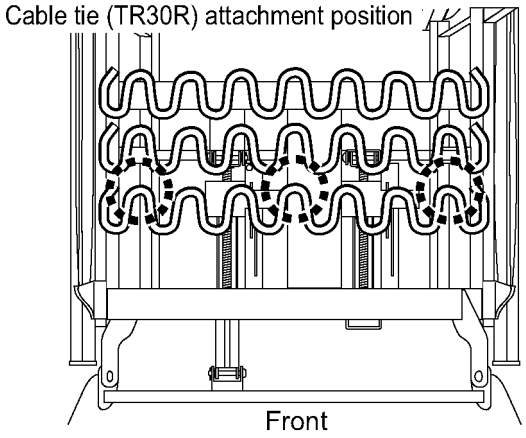


Fig.1





8. Remove two J-shaped hooks and one plate from the top of the back cover.
9. Remove the hooks (five each on right and left) from the rear frame.

   Caution:

   • During assembly, ensure that the plate on the top of the back cover is pushed to the back of the hooks on the back board.

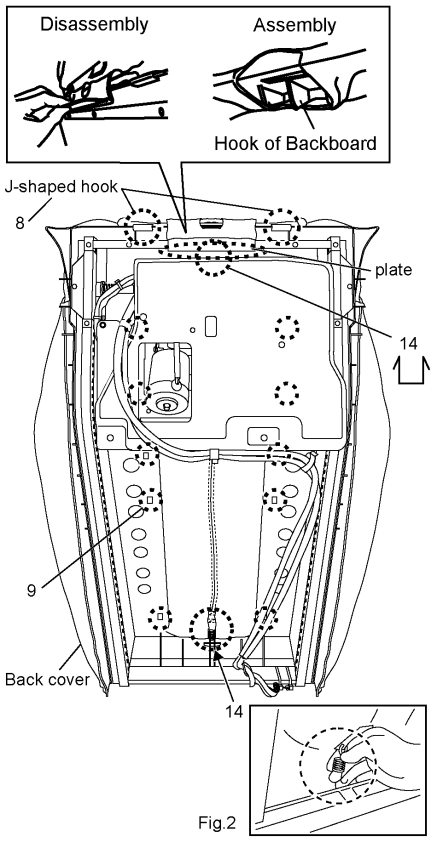
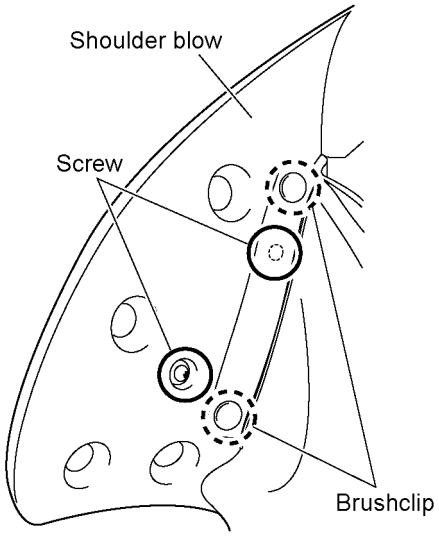


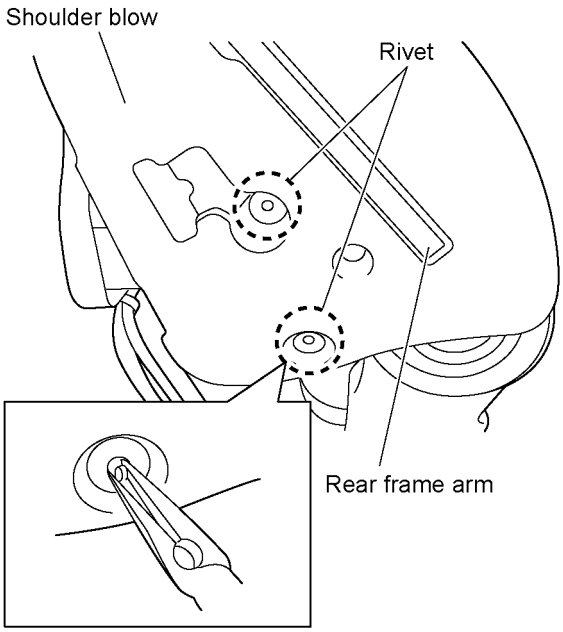
Fig.2

10. Attach the back cover and shoulder blow and remove the brushclips (two each on right and left inside).



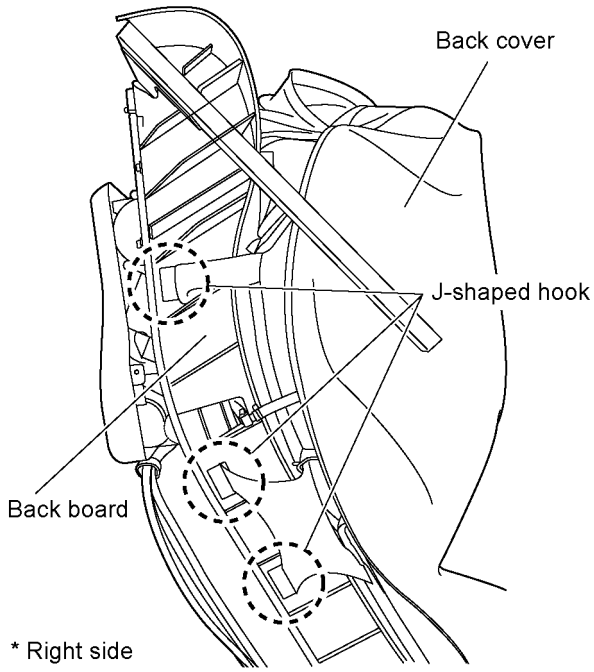
* Right side

11. Remove the rivets attaching the shoulder side air bag and shoulder blow (two each on right and left outside).
Point:
Use radio pliers, etc. to catch the tips of the rivets from the outside and remove them.



* Right side

12. Remove the screws attaching the shoulder blowand rear frame arm and remove the shoulder blow (two each on right and left inside). (See step 10.)
13. Remove the hooks attaching the back cover and back board (three each on right and left).

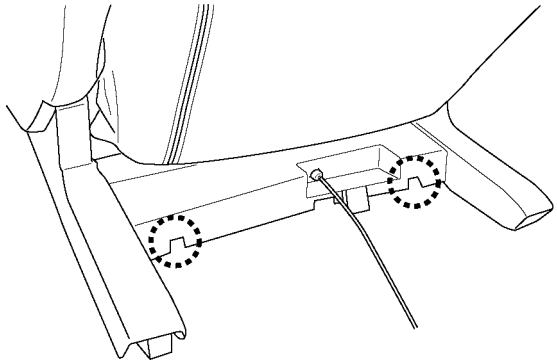


* Right side

14. Remove the center belt pulling springs and hooks using radio pliers, etc (see Fig.2).
Stretch the tip of the hooks to straight and remove them.
* After assembly, the tips of the hooks must be the same shape as before. (Otherwise, abnormal sound may result.)

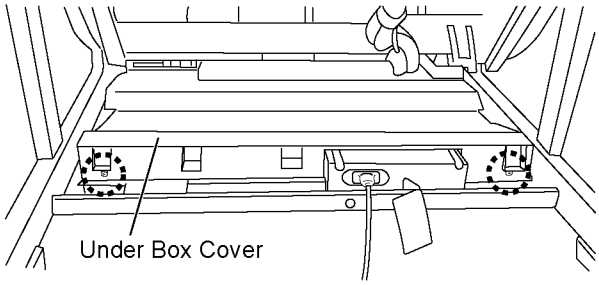
7.7. Removing the Leg Cover

1. Remove two screws from the leg cover.

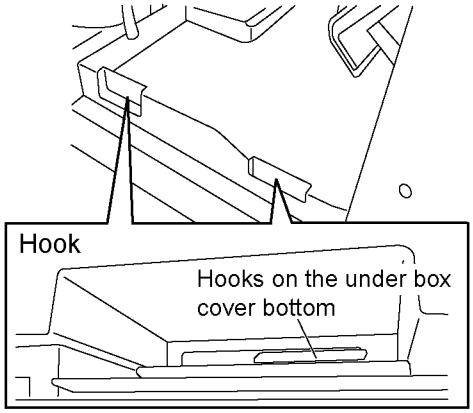


7.8. Removing the Under Box Cover

1. Remove the rear cover (see 7.4).
2. Remove the leg cover (see 7.7).
3. Remove two screws fixing the under box cover in place, and pull forwards.



Caution:
• During assembly, align the grooves on the top of the under box cover with the hooks (two each on rigt and left) on the bottom of the under box to attach.



* The figure shows the condition when the parts are fitted in.

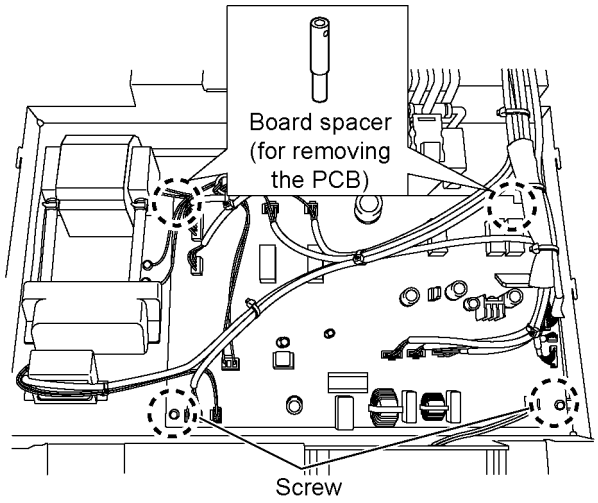
7.9. Removing the Sub PCB

1. Remove the rear cover (see 7.4).
2. Remove the leg cover (see 7.7).
3. Remove the under box cover (see 7.8).
4. Remove all the connectors.
5. Remove two screws fixing the Sub PCB in place, and two board spacers.

   Caution:

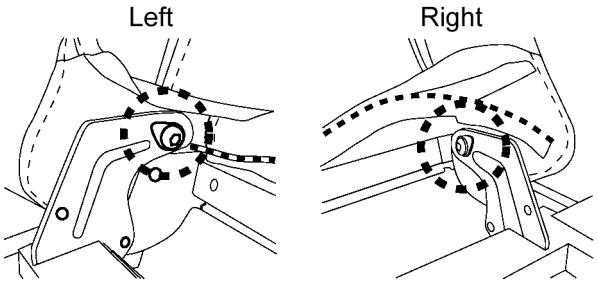
   • Ensure that the hooks are released before removing the connectors. Failure to do so may result in damage to the PCB or connectors.

   • When removing the board spacer, use a jig for easier disassembly work.

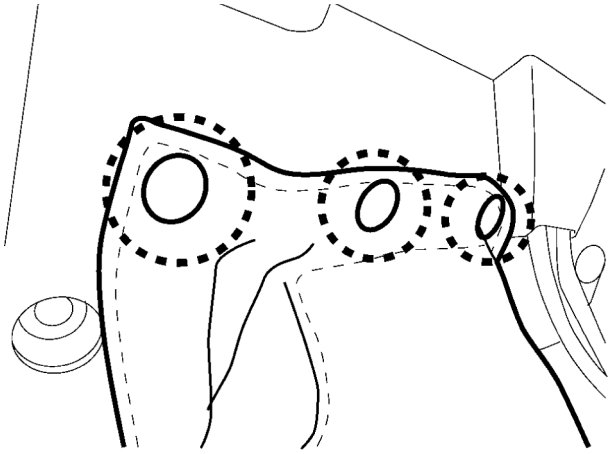


7.10. Removing the Ottoman

1. Remove the left Handrail.
2. Proceed the procedures of 3-5 of 7.5. Removing the Seat cushion.
3. Remove one screw each on right and left sides on the Leg installing stand.



4. Remove three Brushclips fixing the Seat under cover and the Under cloth.

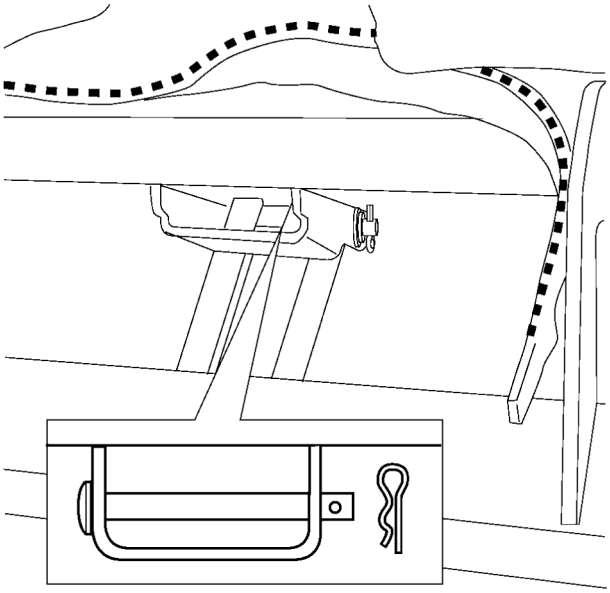


5. Remove the Spring pin on the Ottoman lift unit.

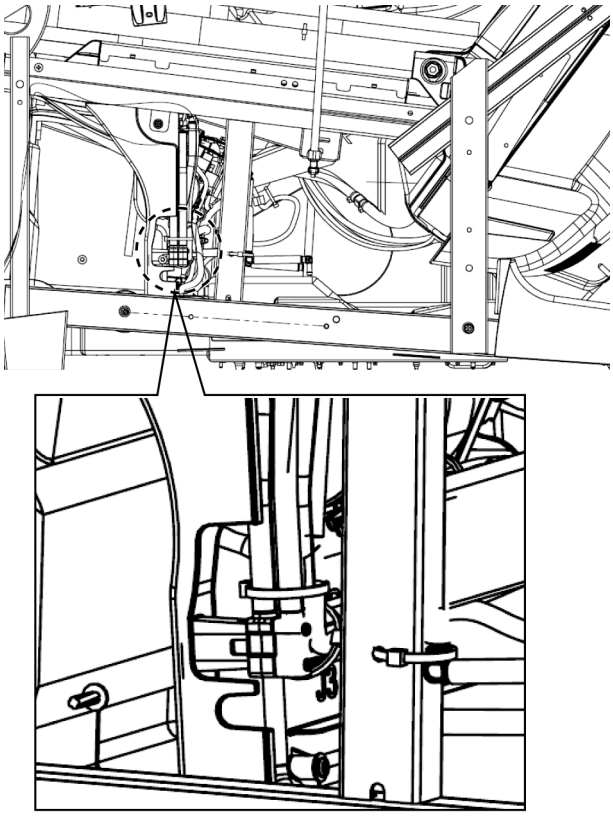
   Caution:

   • Holding the Ottoman lift unit, remove the Hinge pin so that the Ottoman block does not fall suddenly and harm you.

   • When installing the Ottoman block, insert the Hinge and install it with a Hinge pin.

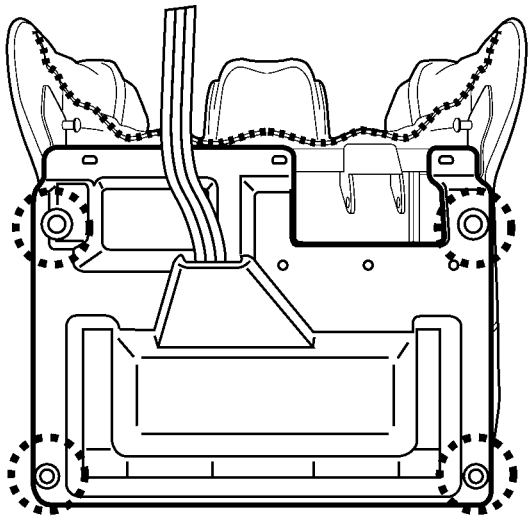


6. Cut two Cable ties installing Hoses and a Cable tie installing the connector, and remove four Hoses and one Connector.



7. Remove the Ottoman block.

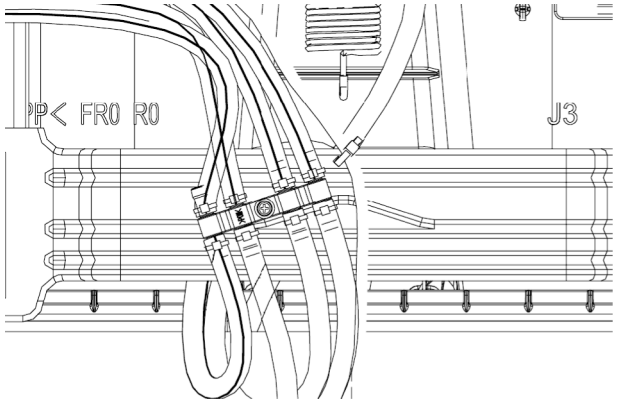
8. Remove four screws installing the Ottoman under cover, and remove the Ottoman under cover.



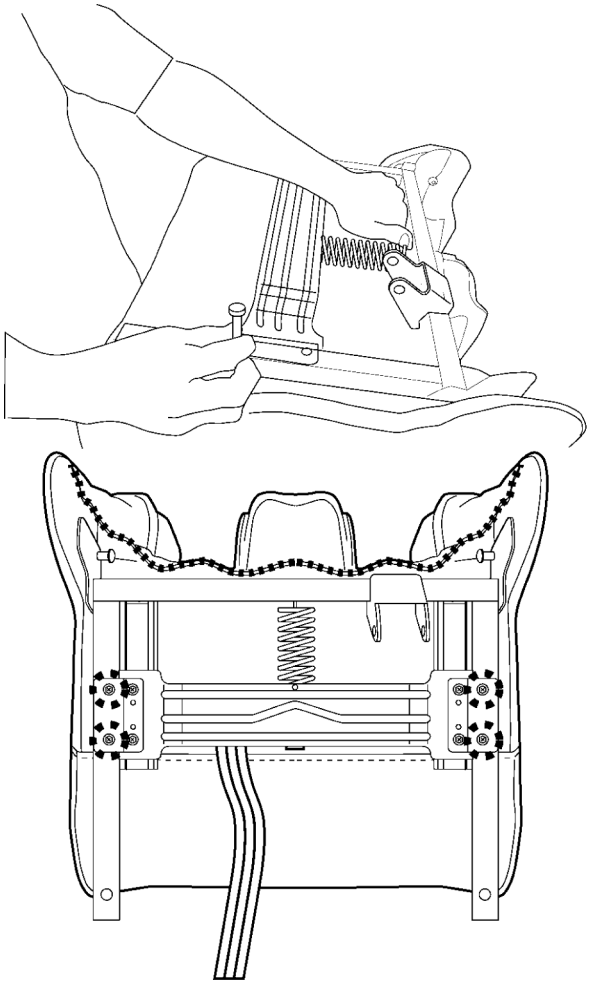
Caution:

- Install the Hoses, black, orange, gray, and small black from left in row.

9. Remove one screw on the Lead wire of the Connecting cord for heater and cut one Cable tie fixing the Hose for sole heater.



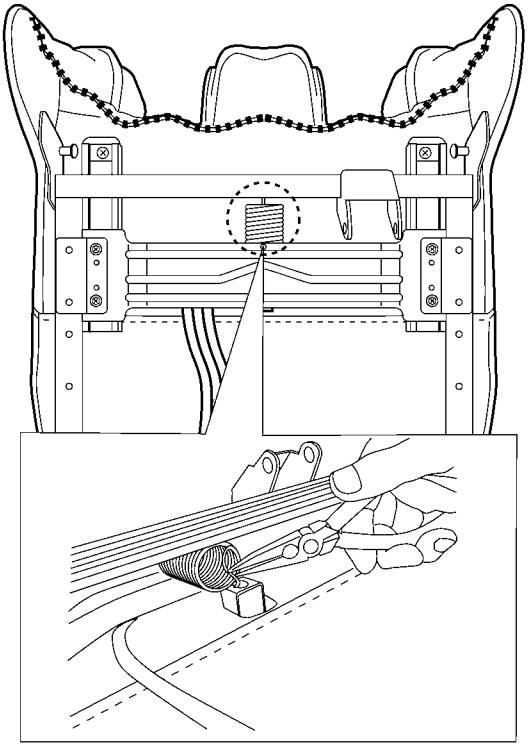
10. Move the Slide holder, and remove four screws adjusting springs.



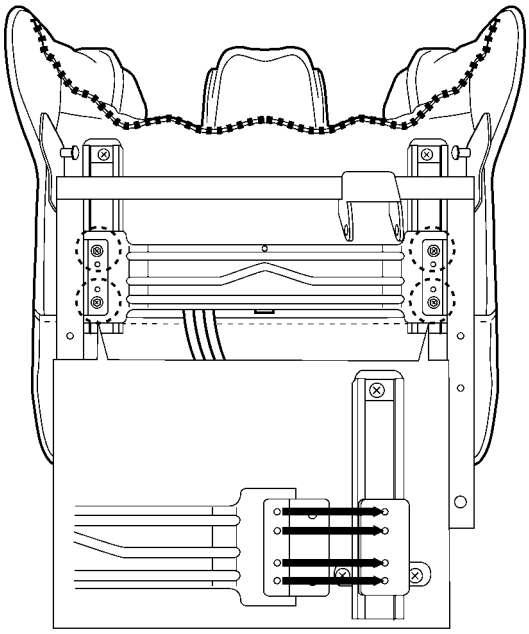
Caution:

- Install the Ottoman block moving the Slide holder and tightening four screws.

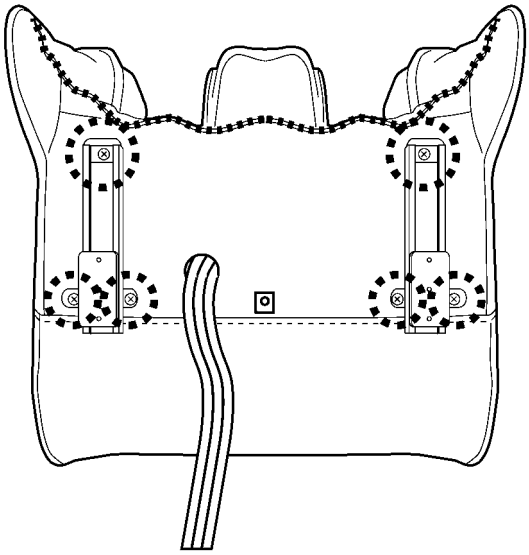
11. Install the Spring.



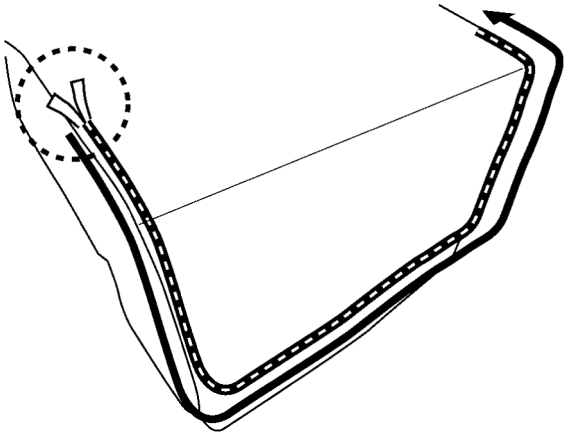
12. Remove four internal screws fixing the Holder.
Caution:
- This procedure is not necessary to replace the Cloth.
- Fix the Holder with screws.



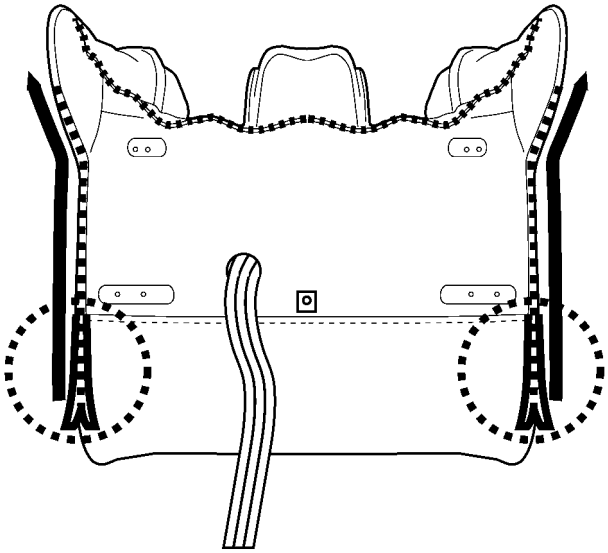
13. Remove three screws each on right and left fixing the Rails, and remove the Slide brakes.



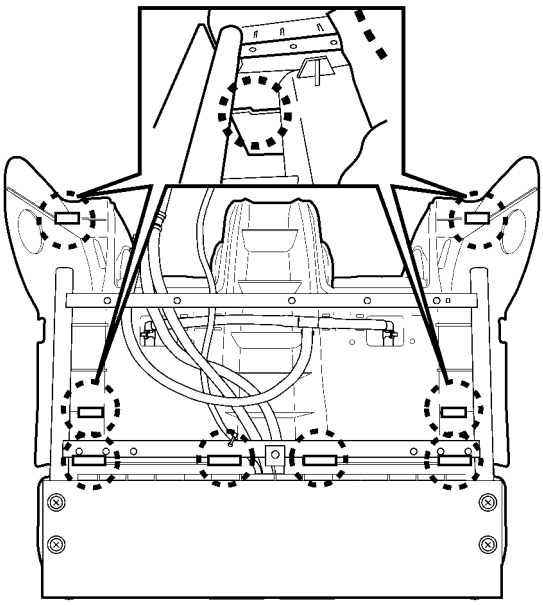
14. Open the Zippers.



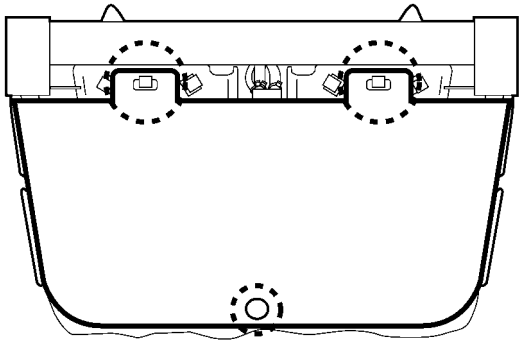
15. Open two Zippers each on right and left sides.



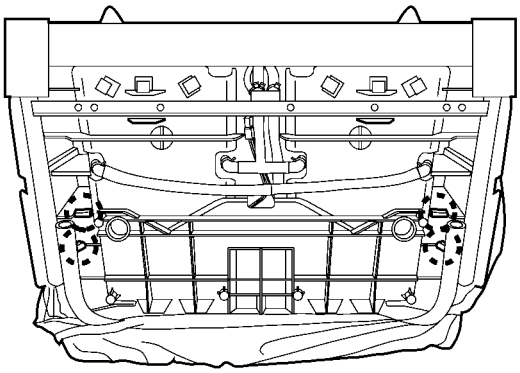
16. Remove 8 J-shaped hooks.
Caution:
- Hook four J-shaped hooks on the depression with arrows in the figure.



17. Remove two Hooks and one Brushclip, and remove the Foot cover.



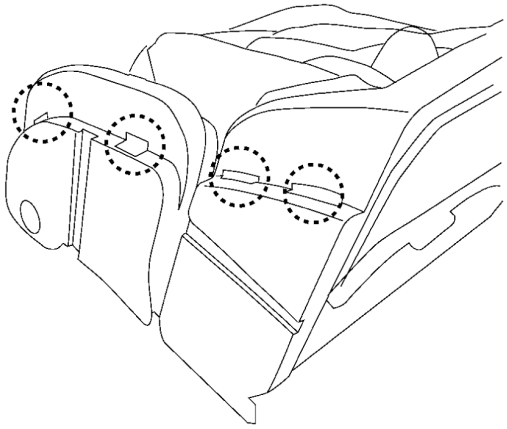
18. Remove four J-shaped hooks.



19. Remove the Cloth from the Ottoman block.

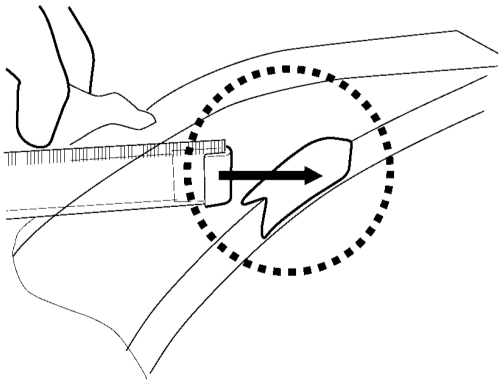
Caution:

- If you hook four Hooks each on right and left sides and four on the center in advance, the work would be easier.



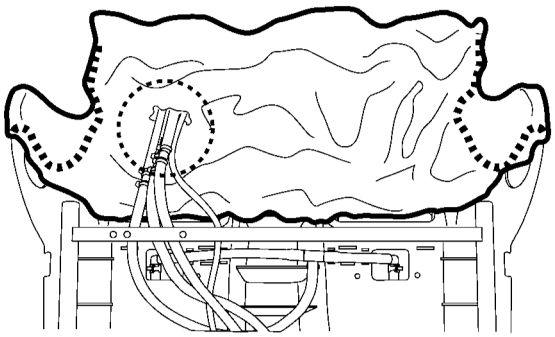
Caution:

- J-shaped hook can be removed easier if you use a 15cm or longer ruler.

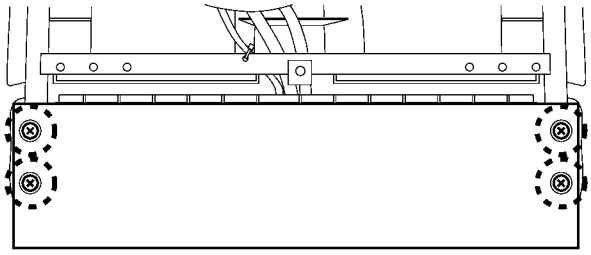


Caution:

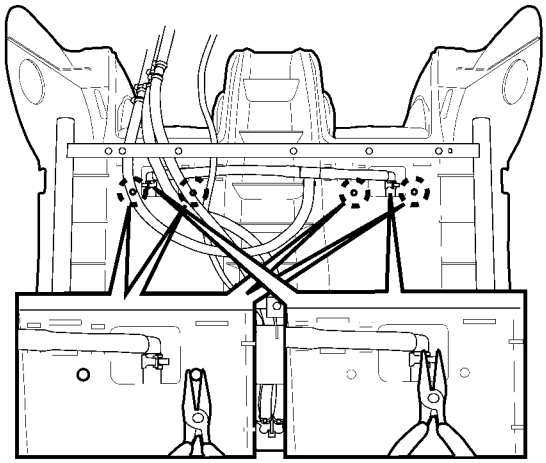
- Check if Air bags are placed in pockets when the Ottoman cloth is installed.



20. Remove four screws, and remove the Cover.



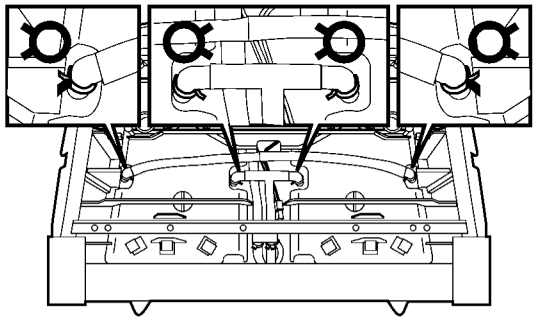
21. Remove one Soft clips each on right and left sides and two Anchor clips each on right and left sides, and remove a Cushion and Air bags.



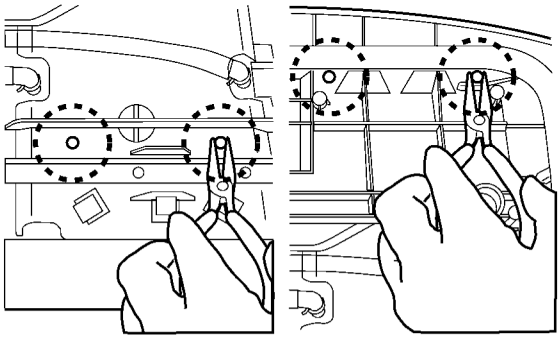
22. Remove two Tube clips each on right and left sides.

Caution:

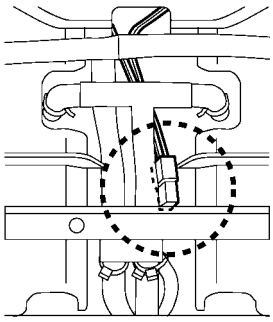
- Install the Tube clips securely without having Hose clips touch Hoses.

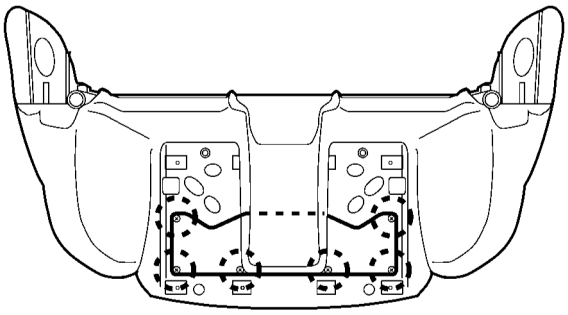


23. Remove four Anchor holders each on right and left sides, and remove Air bags.



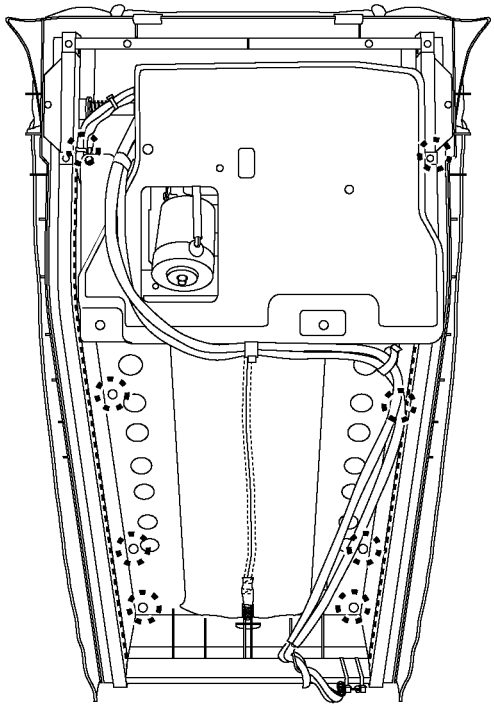
24. Cut one Cable tie on the Heating wire and remove one Connector for Heater and six screws on the Heater, and remove the Heater.



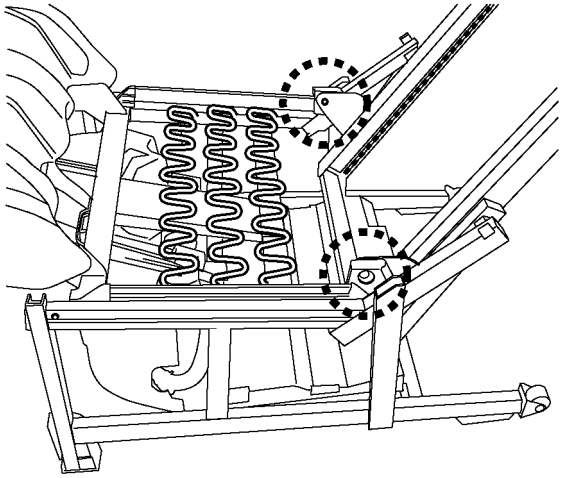


7.11. Removing the Rear Frame

1. Remove the backrest (see 7.2).
2. Remove the armrests (see 7.3).
3. Remove the rear cover (see 7.4).
4. Remove the seat cushion (see 7.5).
5. Remove the back cover (see 7.6).
6. Remove the massage mechanism block (see 7.15).
7. Remove the screws (four each on right and left) connecting the rear frame to the back board.

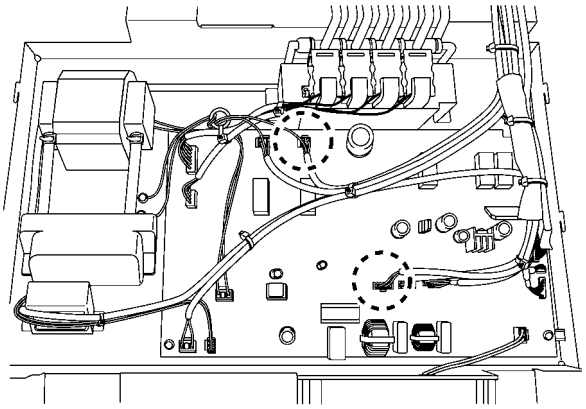


8. Remove the bolts (one each on right and left) connecting the rear frame to the seat frame.
   Caution:
   - The rear frame may topple backwards when the bolts connecting the rear frame to the seat frame are removed. Support the rear frame (with your hand, etc) and take care when performing this step.



7.12. Removing the Ottoman Lift Unit

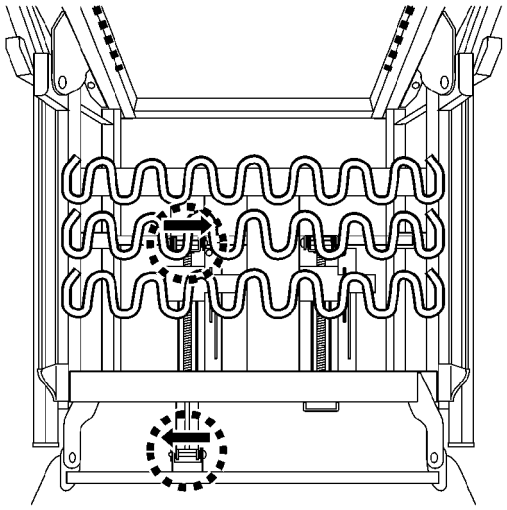
1. Remove the backrest (see 7.2).
2. Remove the armrests (see 7.3).
3. Remove the rear cover (see 7.4).
4. Remove the seat cushion (see 7.5).
5. Cut three cable ties T30R fixing the apron-like black fabric of the back cover (see 7.6.5).
6. Remove the under box cover (see 7.8).
7. Remove the red Ottoman lift unit connecting cord (CN952/CN954) and the earth terminal from the Sub PCB.



8. Remove the six cable ties attached to the Ottoman lift unit connecting cord removed in step 7, then two lift pins and two snap pins from the Ottoman lift unit. Finally, remove the Ottoman lift unit.

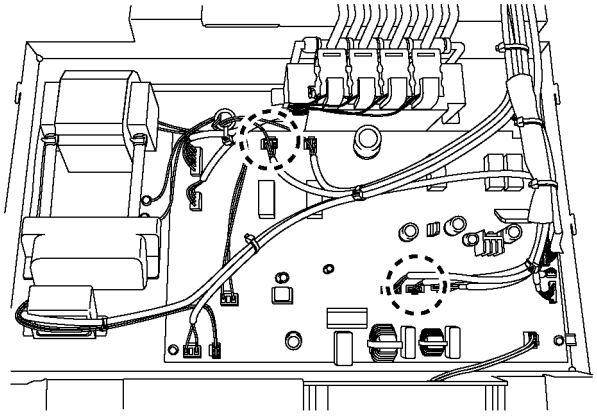
Caution:

• During assembly, insert the lift pin in the direction of the arrow, then fix the snap pin in place.



7.13. Removing the Reclining Lift Unit

1. Remove the backrest (see 7.2).
2. Remove the armrests (see 7.3).
3. Remove the rear cover (see 7.4).
4. Remove the seat cushion (see 7.5).
5. Cut three cable ties T30R fixing the apron-like black fabric of the back cover (see 7.6.5).
6. Remove the under box cover (see 7.8).
7. Remove the blue reclining lift unit connecting cord (CN951/CN953) and the earth terminal from the Sub PCB.

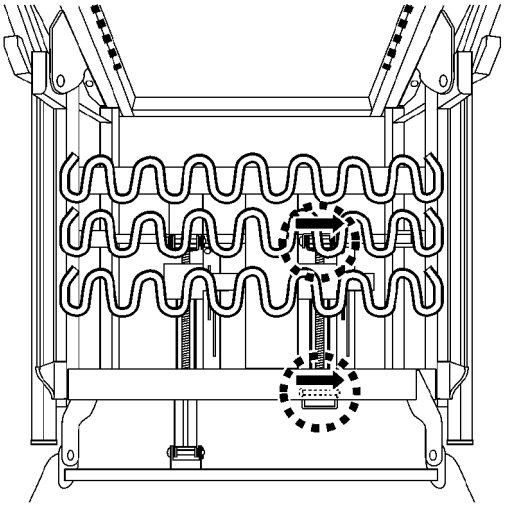


8. Remove three push-turn rivets fixing the lift protection cloth, seat front cover (black molded cover), and seat frames (one set).
9. Remove the screws (one each on right and left) fixing the seat front cover (black molded cover).
10. Remove the five cable ties fixing the reclining lift unit connecting cord that has been removed in step 7, remove two lift pins and two snap pins of the reclining lift unit, and then remove the reclining lift unit.

Caution:

• During assembly, insert the lift pin in the direction of the arrow, then fix the snap pin in place.

• Performing the above steps 9 and 10 makes the disassembly work easier.

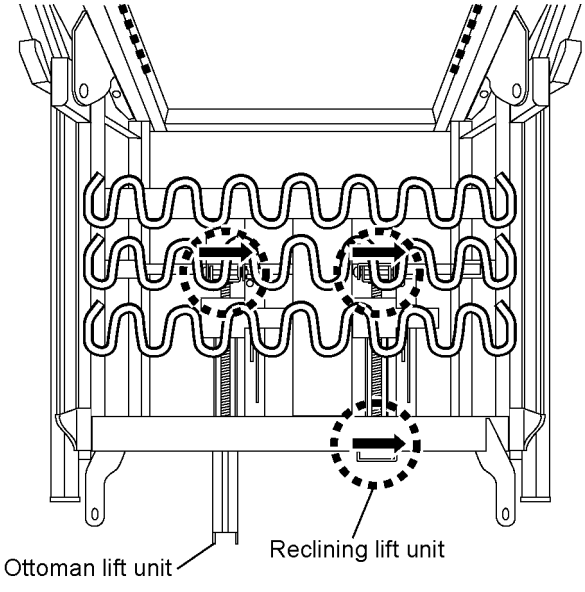


7.14. Removing the Seat Frame Unit

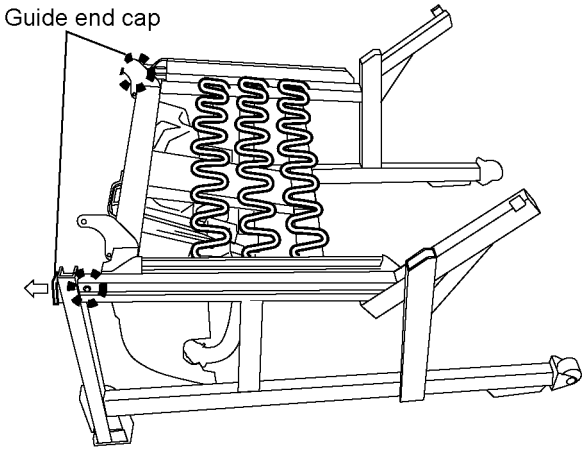
1. Remove the backrest (see 7.2).
2. Remove the armrests (see 7.3).
3. Remove the rear cover (see 7.4).
4. Remove the seat cushion (see 7.5).
5. Remove the back cover (see 7.6).
6. Remove the ottoman unit (see 7.12).
7. Remove the reclining lift unit (see 7.13).
8. Remove the massage mechanism block (see 7.15).
9. Remove the rear frame (see 7.11).
10. Remove three lift pins and three snap pins connecting the seat frame unit to the Ottoman lift unit and the reclining lift unit.

Caution:

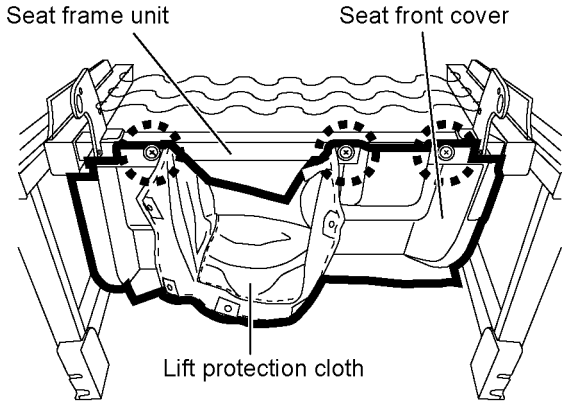
• During assembly, insert the lift pin in the direction of the arrow, then fix the snap pin in place.



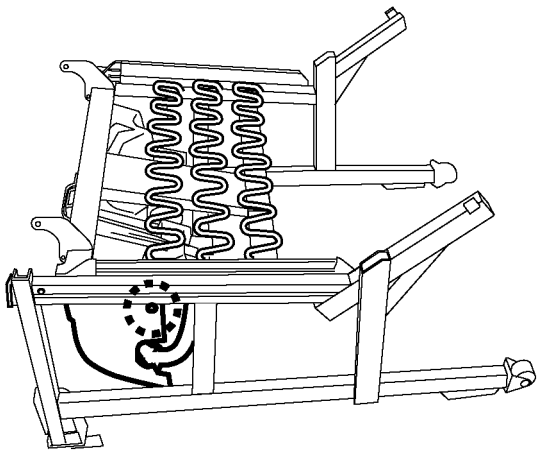
11. Remove the screws (one each on right and left) fixing the guide end caps in place, and remove the guide end caps.



12. Remove three push-turn rivets attached to the lift protection cloth, the seat front cover (black molded cover), and the seat frame unit.

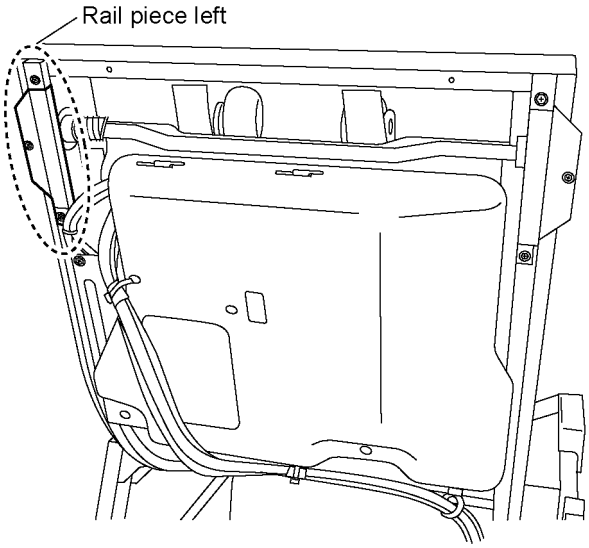


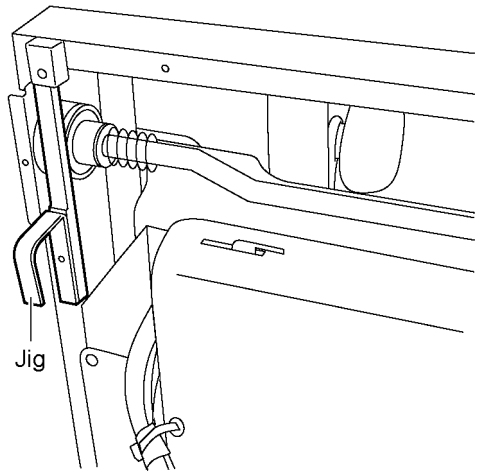
13. Remove the screws (one each on right and left) attached to the seat front cover (black molded cover).



7.15. Removing the Massage Mechanism Block

1. Remove the backrest (see 7.2).
2. Remove the rear cover (see 7.4).
3. Remove three screws and the rail piece left and install the jig.

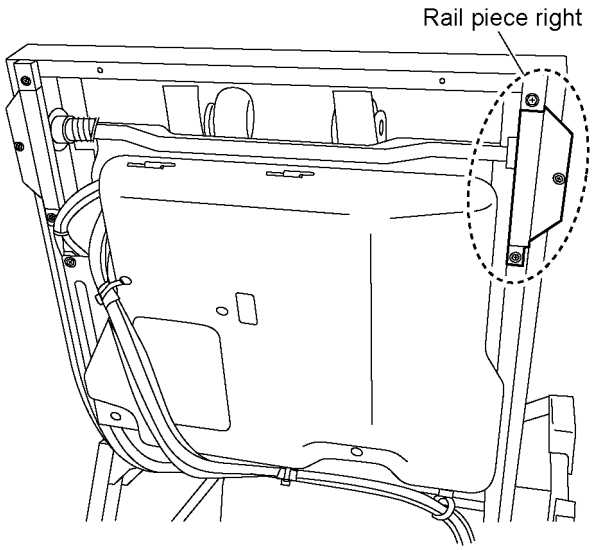




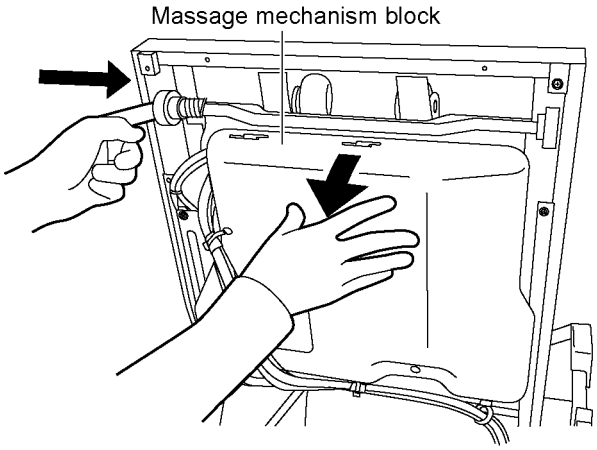
4. Or holding the massage mechanism block, remove three screws and the rail piece right.

   Caution:

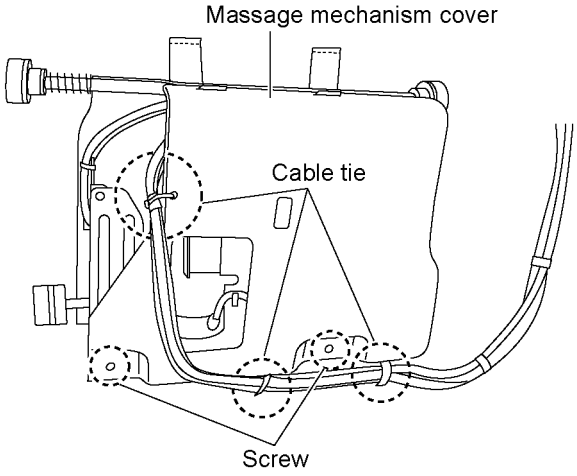
   • Hold the massage mechanism block (with your hand) so that it may not fall down.



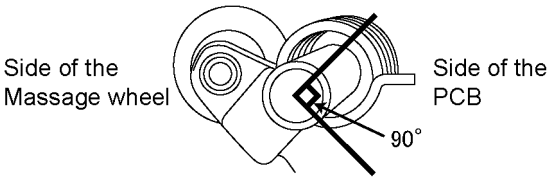
5. Holding the massage mechanism block, remove the jig.
   Caution:
   • Be careful that the massage mechanism block may fall down after the jig is removed.
6. Holding the guide roller, remove the massage mechanism block.
   (Otherwise, the guide roller may pop out.)

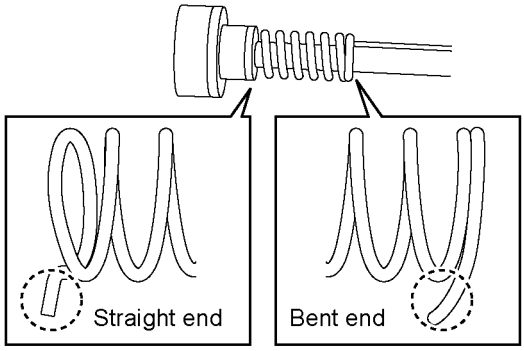


7. Cut three cable ties T30R and remove two screws and remove the massage mechanism cover.



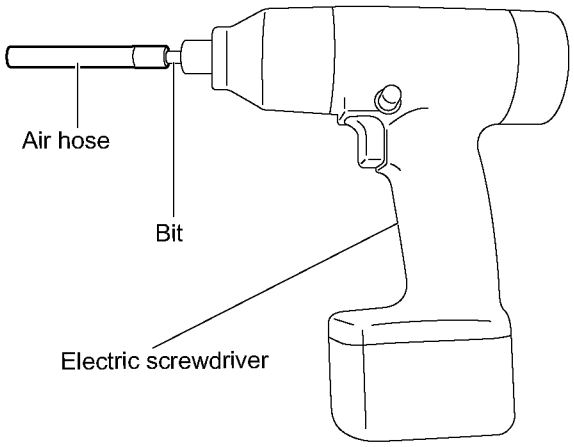
8. Remove each Lead wire and remove the massage mechanism block totally.
   Caution in installing:
   Install the guide roller spring, Washer, and Guide roller in order.
   *Install the guide roller spring with its straight end on the side of the Washer. (See following figure.)
   Otherwise, it may lead to the abnormal noise when in up/down operation.



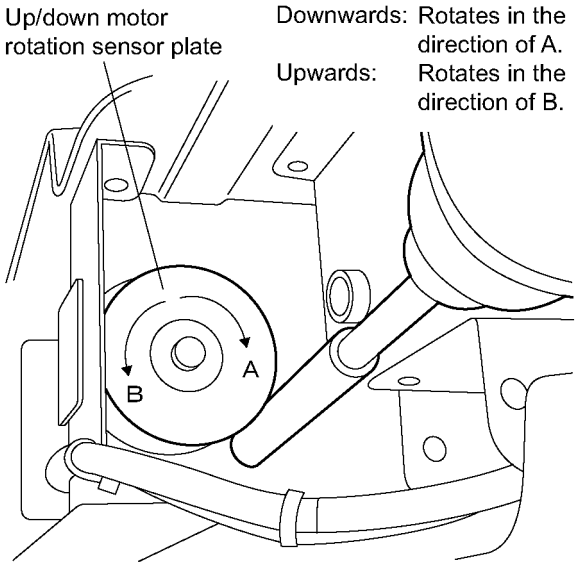


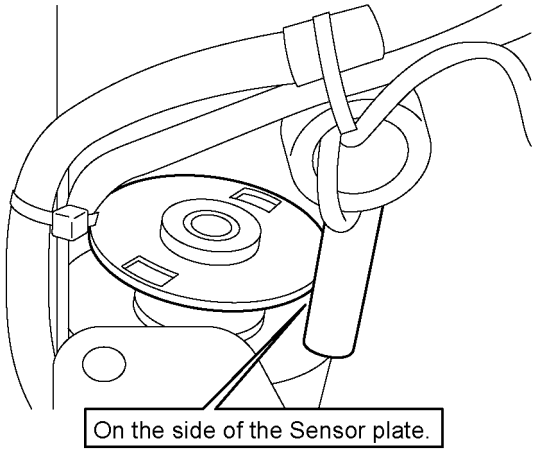
If you cannot move the massage mechanism block up and down due to the malfunction of the Up/down motor, move the massage mechanism block as follows;

1. Necessary products
   Air hose x 1pc (approx. 8cm)
   Bit x 1pc (approx. 8cm)
   Electric screwdriver x 1pc
   As the figure, install the air hose on the bit



2. Place the air hose-covered bit on the up/down motor rotation sensor plate, and turn on the electric screwdriver.





Caution:

- Operate the electric power tool at low speed.
  *Be careful of the cords or sharp metal edges.

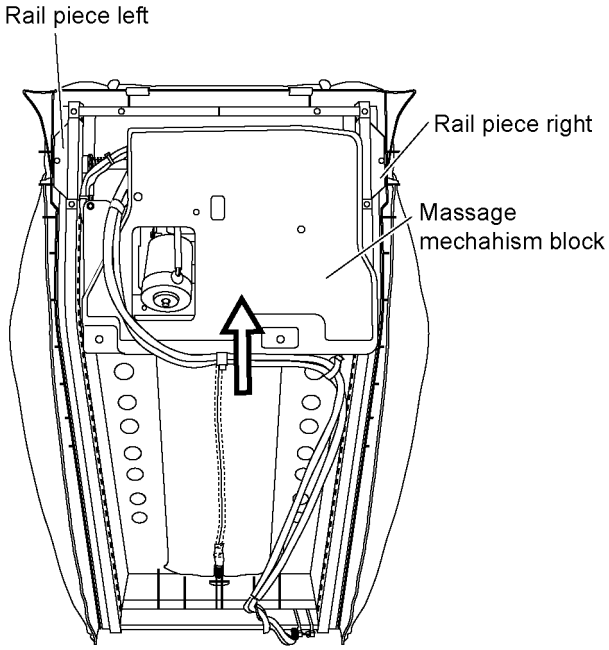
7.16. Disassembly of Massage Mechanism Block

7.16.1. Adjustment of Massage Mechanism Block Up/Down Sensor Gear

When the massage mechanism is dismounted from the rear frame, the position of the up/down sensor gear and, consequently, the up/down stop position will be changed. Be sure to adjust the up/down stop position accordingly, using the up/down sensor gear.

Dismounting the Massage Mechanism Block

1. Before dismounting the massage mechanism from the rear frame, use Manual Mode (E) to move it to the top.
2. Next, rotate the up/down sensor gear by 2-4 turns in a clockwise direction (figure below), and move the massage mechanism upwards.
   Note: Failure to perform step 2 above will result in the up-down axle pinion becoming engaged with the rear frame, preventing it from being dismounted.



3. Remove the three screws fixing each of the rail pieces in place, and remove the rail pieces. (It does not matter whether the left or the right rail piece is removed first. Use the appropriate jig for the first rail piece to be removed, and hold the guide roller (round plastic component) in place.)
   * The jig is used to prevent the massage mechanism block toppling forwards when the rail piece is removed. This task may still be performed without using the jig.
4. Remove the massage mechanism block from the rear frame.
   Note: A spring is attached to the left-hand side of the guide roller. Hold the guide roller in place when dismounting the massage mechanism block to prevent it from springing out.

Installing the Massage Mechanism Block

1. Before installing the massage mechanism onto the rear frame, use Manual Mode (E) to move it to the top.
   Note: Failure to perform this step before installing the massage mechanism onto the rear frame will mean that the vertical position will not be able to be detected during operation. This may lead to overrunning and the up/down gear being dislodged.
2. Mount the massage mechanism block onto the rear frame.
3. Use the appropriate jig to install either the left or the right rail piece, holding the guide roller (round plastic component) in place.
4. Fix each of the rail pieces (left and right) in place with the three screws.
5. There are two lines (A), top and bottom, on the rear frame. Use a metal scale or similar to adjust the height of the up/down sensor gear plate and ensure that it lies between these lines (Fig.2).
   Instructions for adjustment are shown below.
   (1) Rotate the up/down sensor gear and ensure that it fits between the top and bottom lines (A).
   (2) Use Manual Mode (E) to move the massage mechanism block up and down 2-3 times.
   (While holding down the [▲] button on the controller, move the massage mechanism block to the top until you hear a beeping sound.)
   (3) The adjustment process is complete once the up/down sensor gear plate lies between the two lines (A).
   Note: Move the massage mechanism block and check to see if it is mounted horizontally. (see Fig.3)
   *** If the massage mechanism block is mounted horizontally, this may lead to an abnormal sound or the cause of failure.**

   Note: If the massage mechanism block is allowed to overrun, this will break the worm gear.
   *** A rotation of one thread on the up/down sensor gear adjusts the stroke by 4mm.**

Fig.2

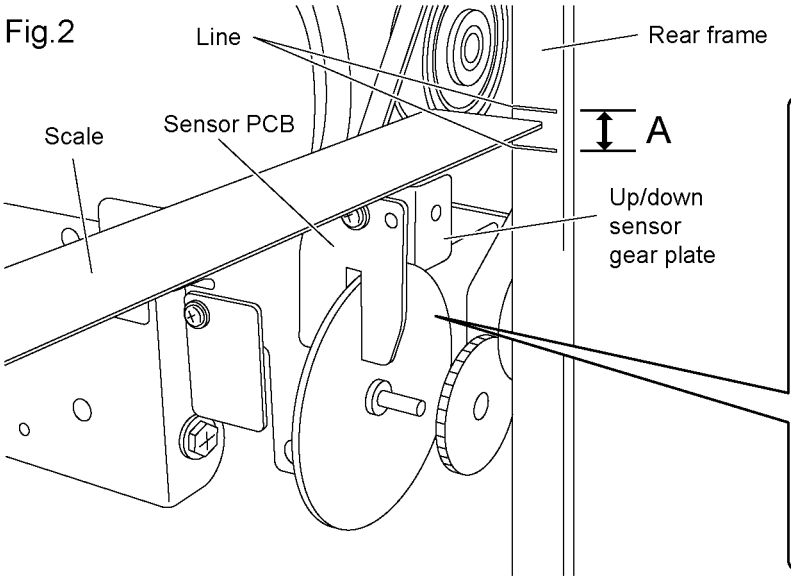
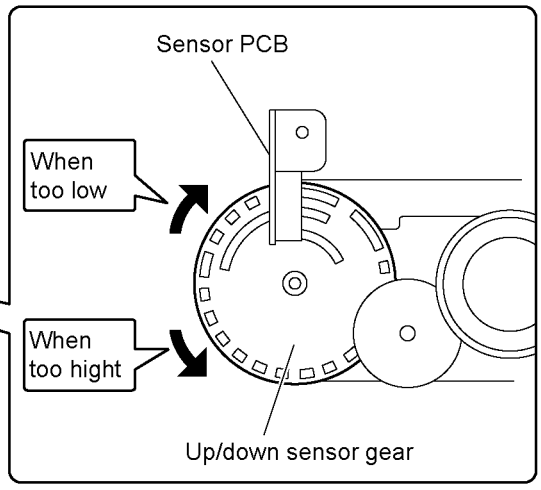


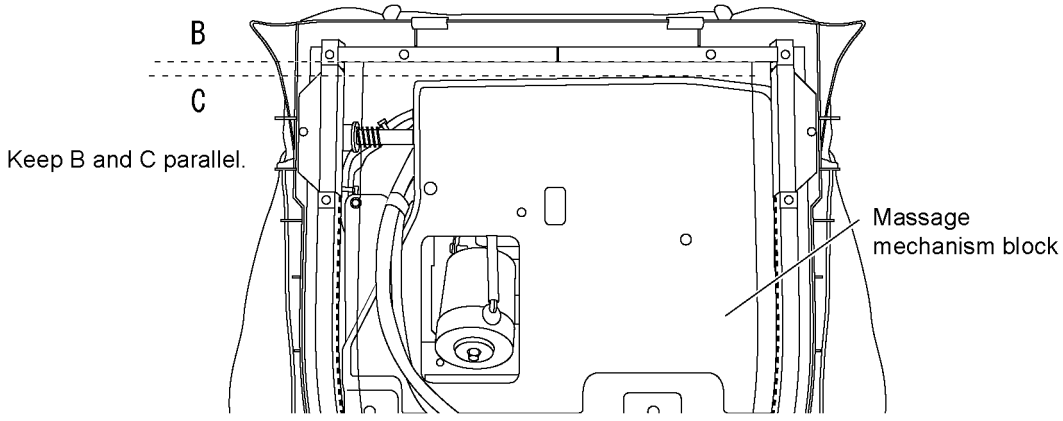
Fig.1



Massage mechanism block side view from the right

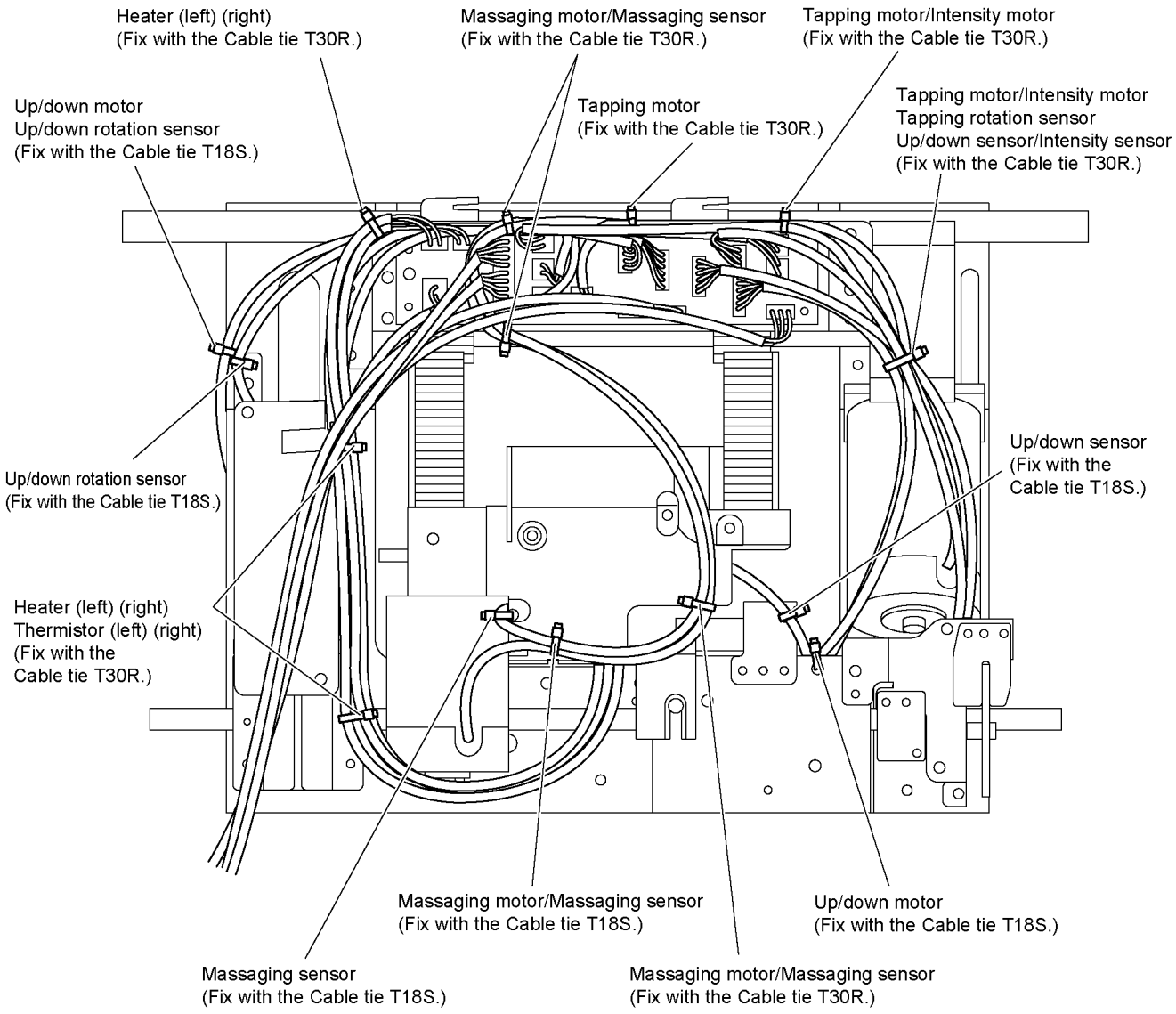
If the massage mechanism block is too high. → Turn the up/down sensor gear counterclockwise.
If the massage mechanism block is too low. → Turn the up/down sensor gear clockwise.

Fig.3

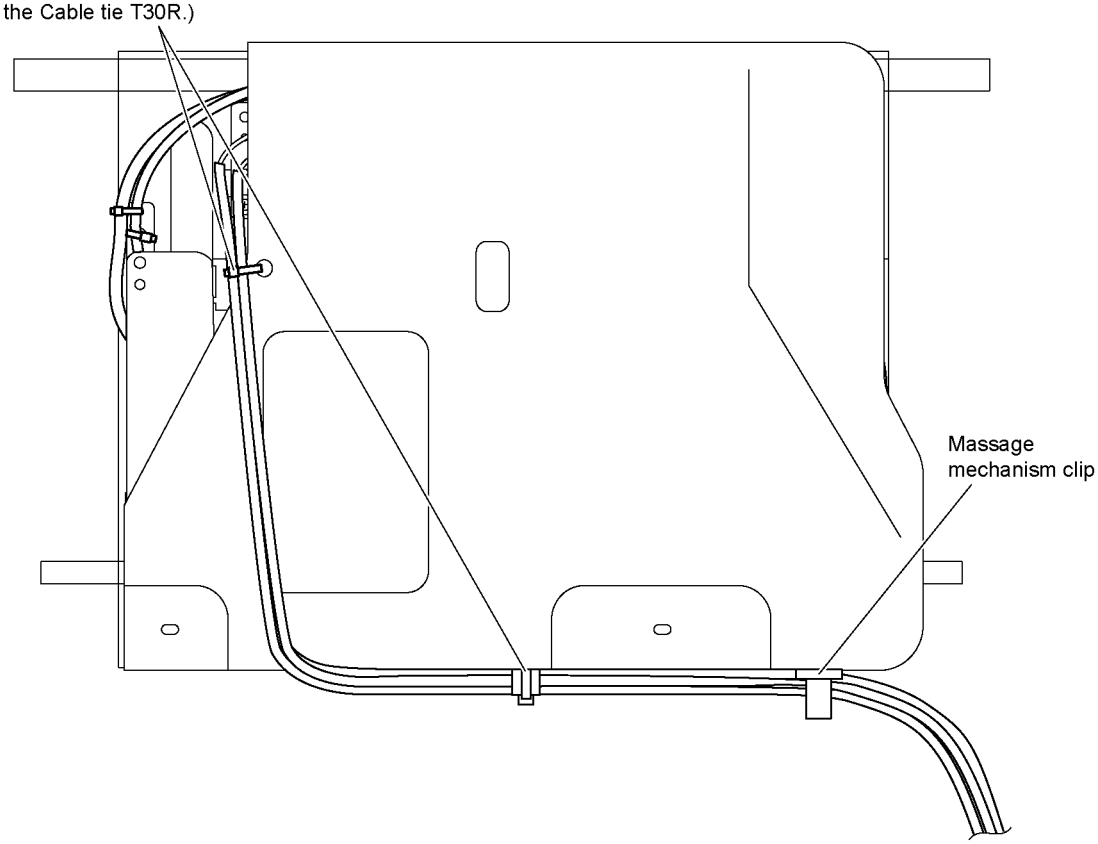


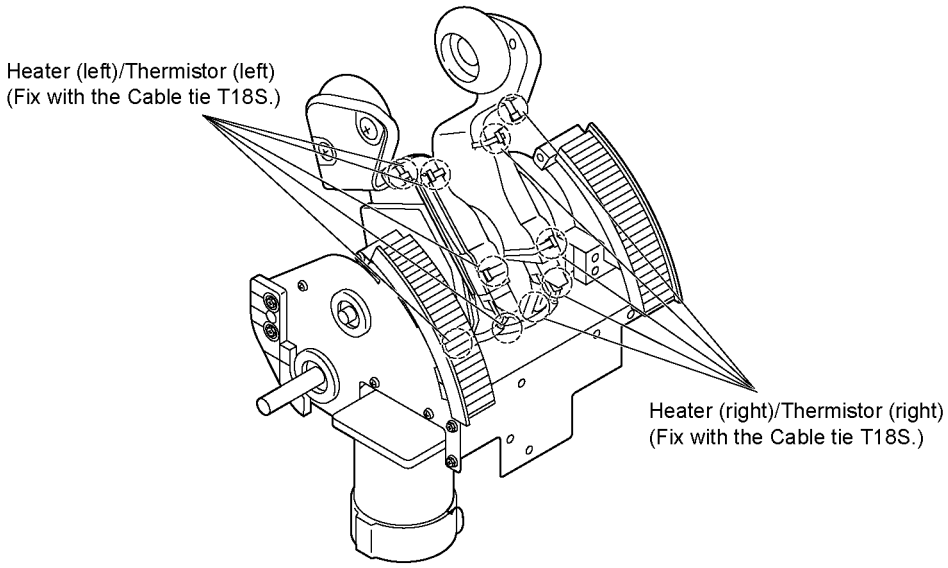
7.16.2. Allocation of the Lead Wires from Massage Mechanism Block

The fixed method of the Connecting PCB, each sensors and other parts, and cable ties which are mounted to the massage mechanism is as follows;



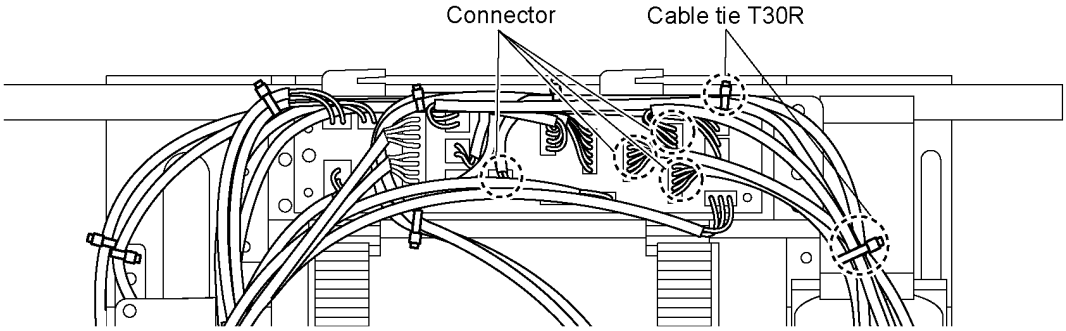
Connecting cord for power source (for motor, sensor, thermistor, heater)
(Fix with the Cable tie T30R.)



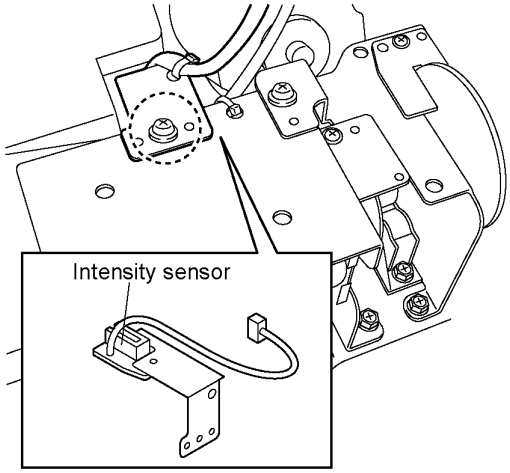


7.16.3. Removing the Tapping Rotation Sensor, Up/Down Sensor, and the Tapping Motor

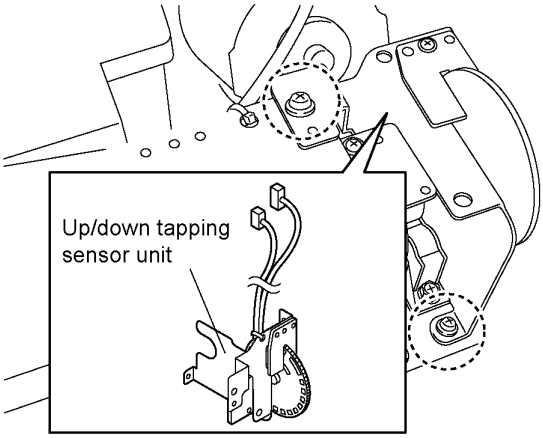
1. Remove the massage mechanism block (see 7.15).
2. Disconnect four connectors (CN5, CN9, CN10, CN11) and cut two cable ties T30R on the Connecting PCB.



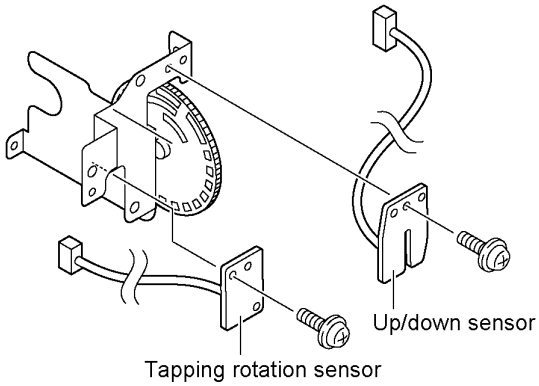
3. Remove one screw, and remove the Intensity sensor install plate.



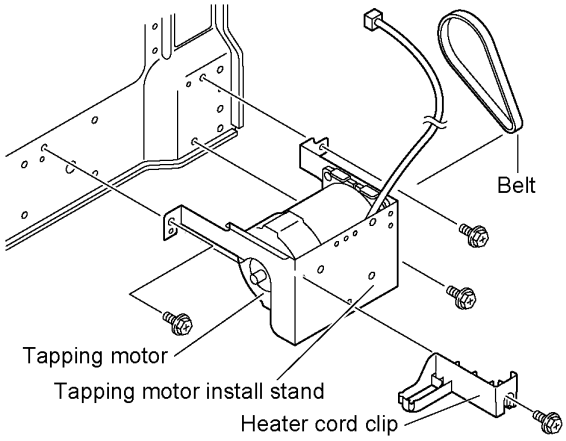
4. Remove two screws, and remove the up/down tapping sensor unit.



5. Disassemble the up/down tapping sensor unit, tapping rotation sensor, and the up/down sensor.



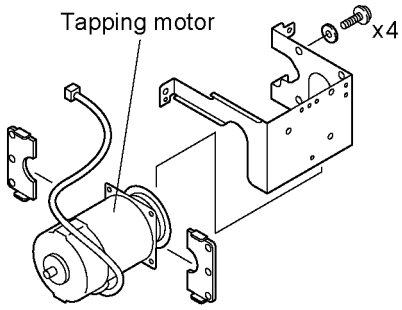
6. Remove one screw and the heater cord clip.
7. Remove the belt and unscrew three screws, and remove the tapping motor with the tapping motor install stand.



8. Disassemble each parts.

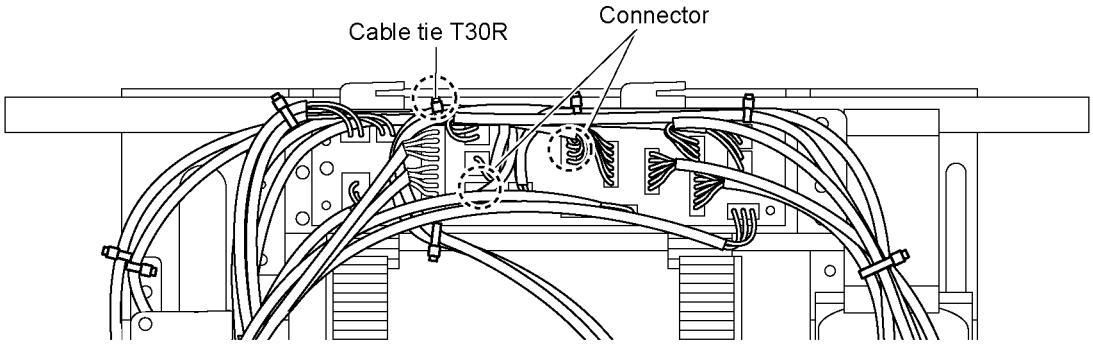
Caution:

- Be careful of the directions of the Motor when installing it.

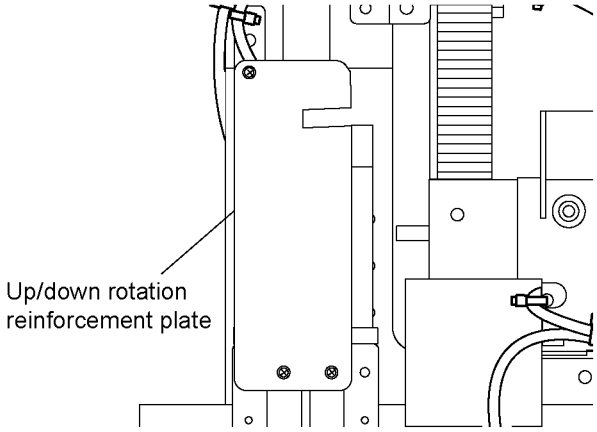


7.16.4. Removing the Up/Down Motor and the Up/Down Rotation Sensor

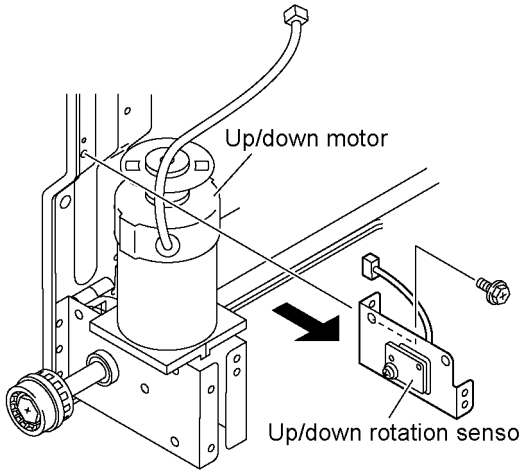
1. Remove the massage mechanism block (see 7.15).
2. Disconnect two Connectors (CN4, CN8) and cut one cable tie (T30R) on the Connecting PCB.



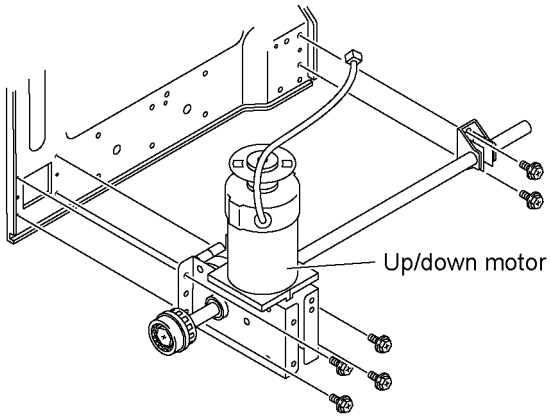
3. Remove three screws, and remove the up/down rotation reinforcement plate.



4. Remove one screw, and remove the up/down sensor install plate.



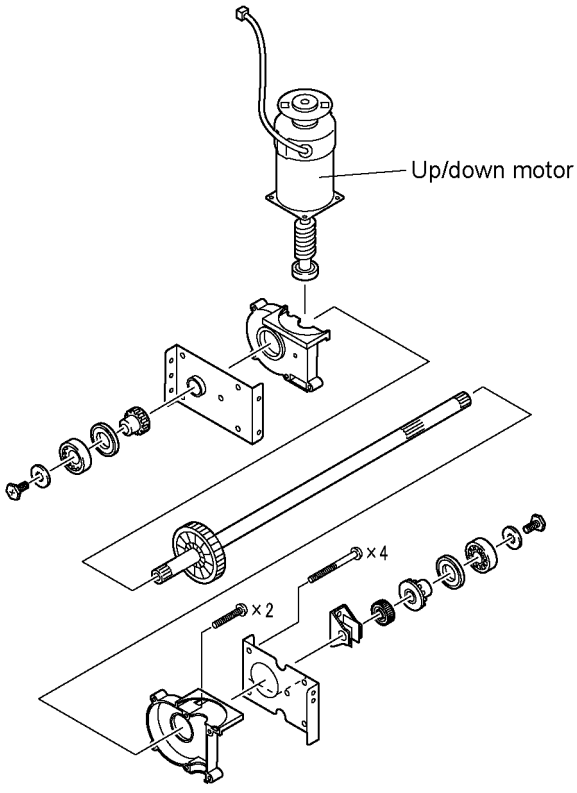
5. Remove six screws, and remove the up/down motor block.



6. Disassemble each parts.

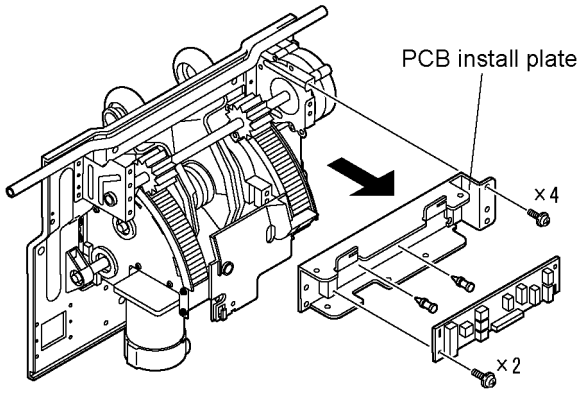
Caution:

- Be careful of the directions of the motor when installing it.



7.16.5. Removing the Intensity Motor

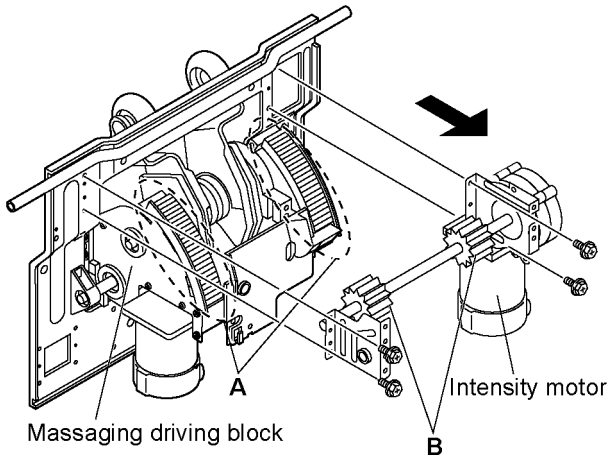
1. Remove the massage mechanism block (see 7.15).
2. Remove the up/down motor and up/down rotation sensor (see 7.16.4 steps 1 to 5).
3. Disconnect all the connectors on the Connecting PCB.
4. Remove four screws and remove the PCB install plate.



5. Remove the four screws and remove the whole intensity driving block.

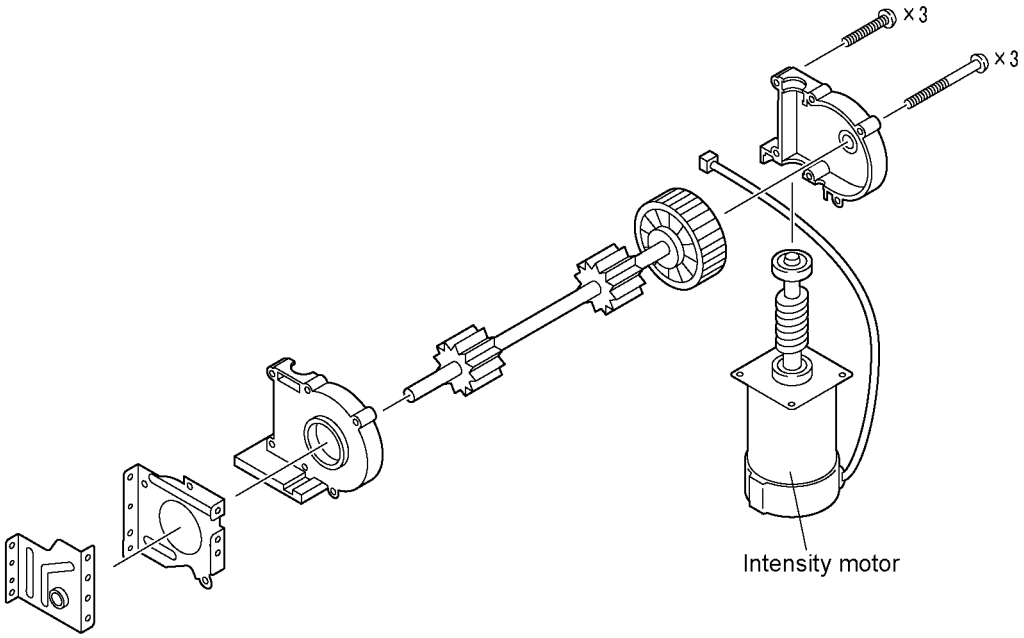
Cautions for assembly

Use gears with the same number of cogs for the right and left gears to mesh the Intensity gear A (white resin) and Intensity pinion B. (Operating with wrong gears installed may damage the gears.)



6. Remove the six screws and disassemble the intensity driving block.

When assembling, be careful of the directions of the motor.

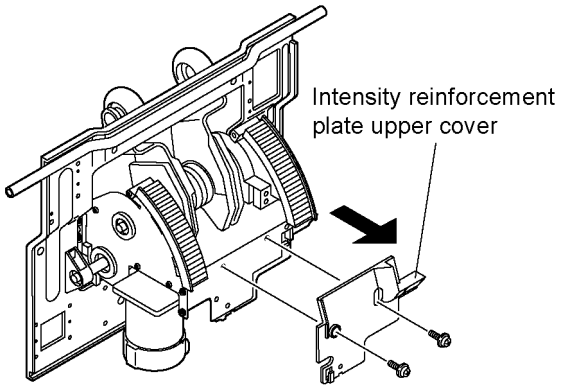


7.16.6. Removing the Massaging Driving Block

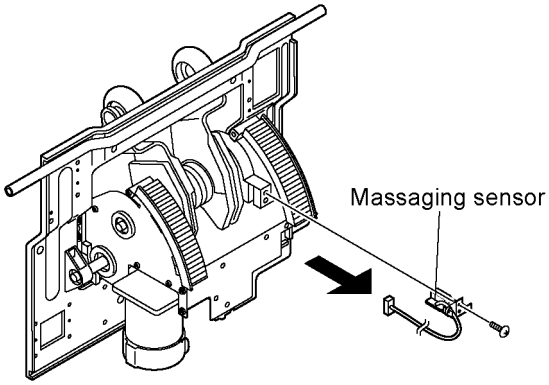
Note:

A heater and thermistor, which can not be replaced alone for quality assurance reasons, are installed inside the massage driving block. If they are damaged, replace the whole massage driving block.

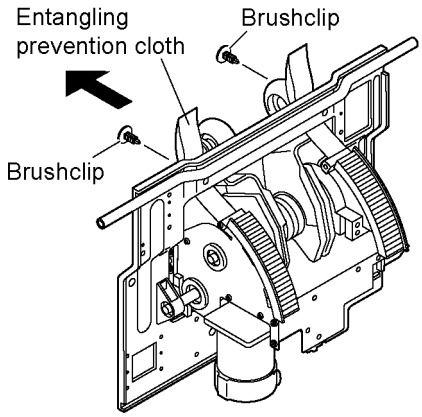
1. Remove the massage mechanism block (see 7.15).
2. Remove the tapping rotation sensor, up/down sensor, and tapping motor (see 7.16.3).
3. Remove the up/down motor and up/down rotation sensor (see 7.16.4 steps 1 to 5).
4. Remove the intensity motor (see 7.16.5 steps 1 to 5).
5. Remove two screws and remove the intensity reinforcement plate upper cover.



6. Remove one screw and then remove the whole massaging sensor install plate.



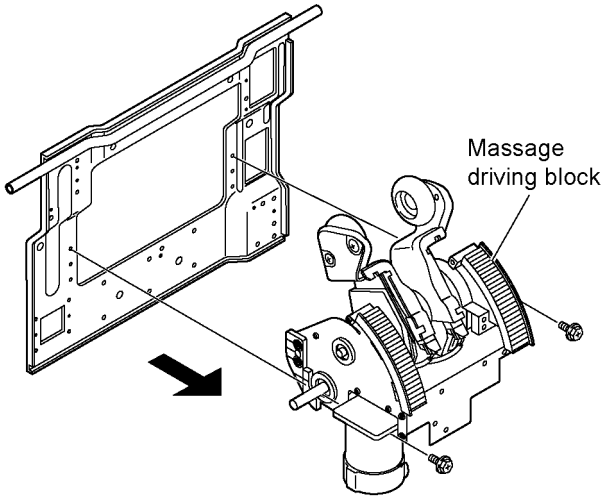
7. Remove two brushclips.



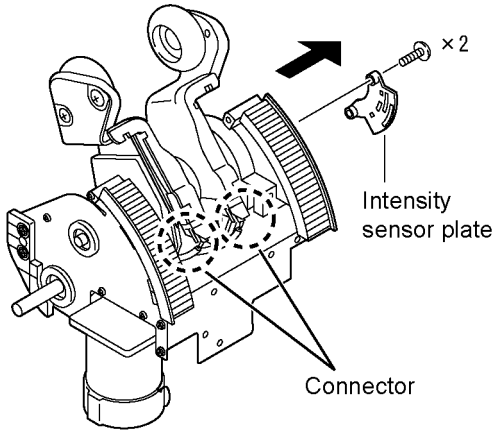
8. Remove the four screws and remove the massage driving block.

   Caution:

   • Remove the massage driving block while holding it with hands.

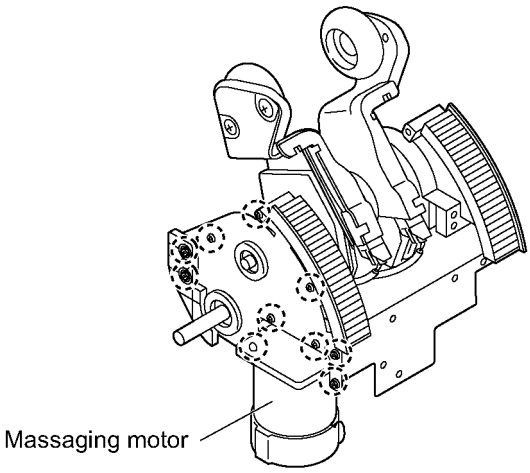


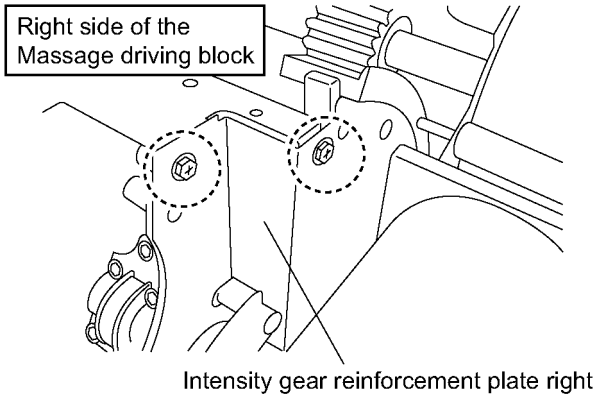
9. Remove two screws and remove the Intensity sensor plate.
10. Remove the cable ties T18S (three each on right and left) and disconnect the connectors (one each on right and left).

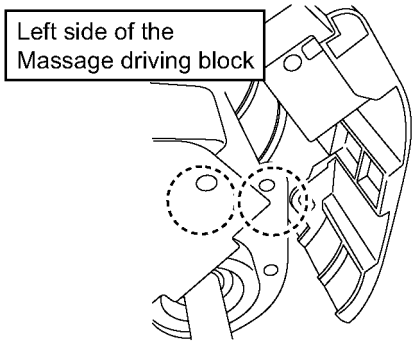


7.16.7. Removing the Massaging Motor

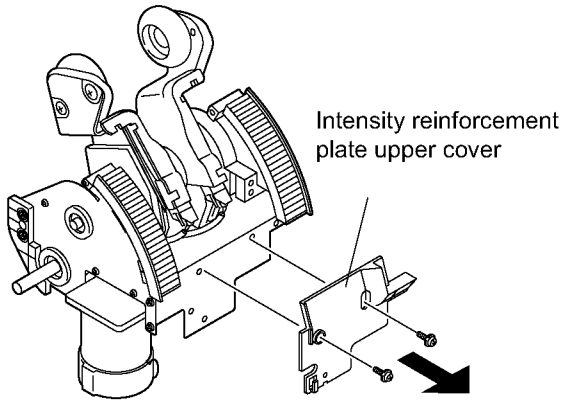
1. Remove the massage mechanism block (see 7.15).
2. Remove the tapping rotation sensor, up/down sensor, and tapping motor (see 7.16.3).
3. Remove the up/down motor and up/down rotation sensor (see 7.16.4 steps 1 to 5).
4. Remove the intensity motor (see 7.16.5 steps 1 to 5).
5. Remove the massage driving block (see 7.16.6).
6. Remove the screws fixing the Intensity gear reinforcement plate right and left (four on the right, 10 on the left).



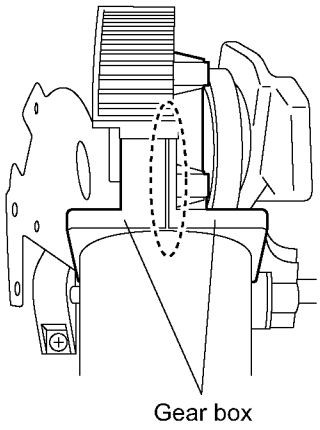




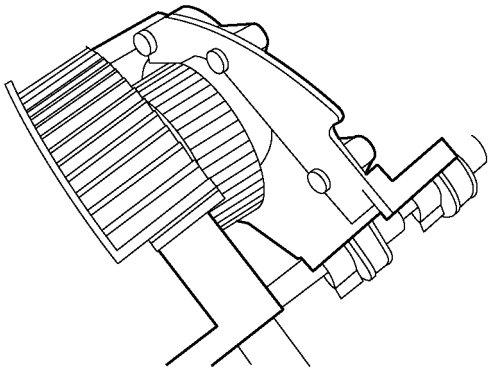
7. Remove two screws fixing the Intensity reinforcement plate upper cover.



8. Open the gear box inserting a slotted screwdriver in the indicated location.

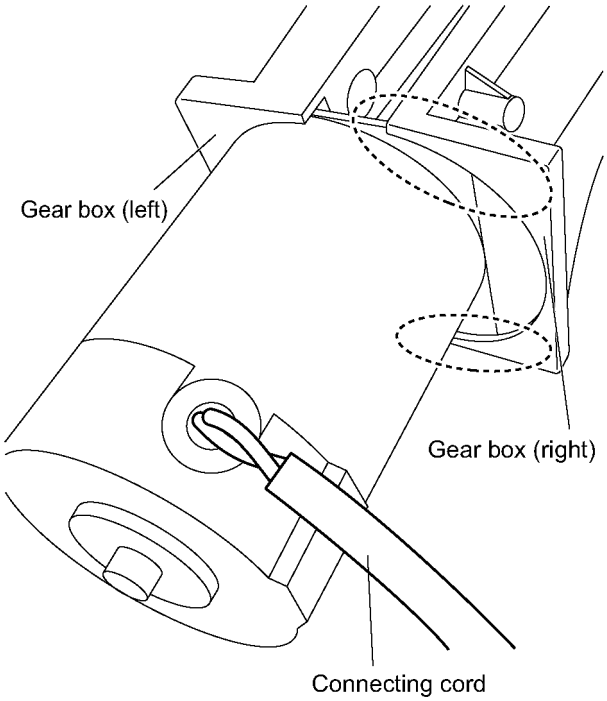


After the motor is removed from the gear box



Point:

When assembling the massaging motor, insert the motor plate into the groove of the gear box (left) first, and then attach the gear box (right) for easier assembly work.



Caution:

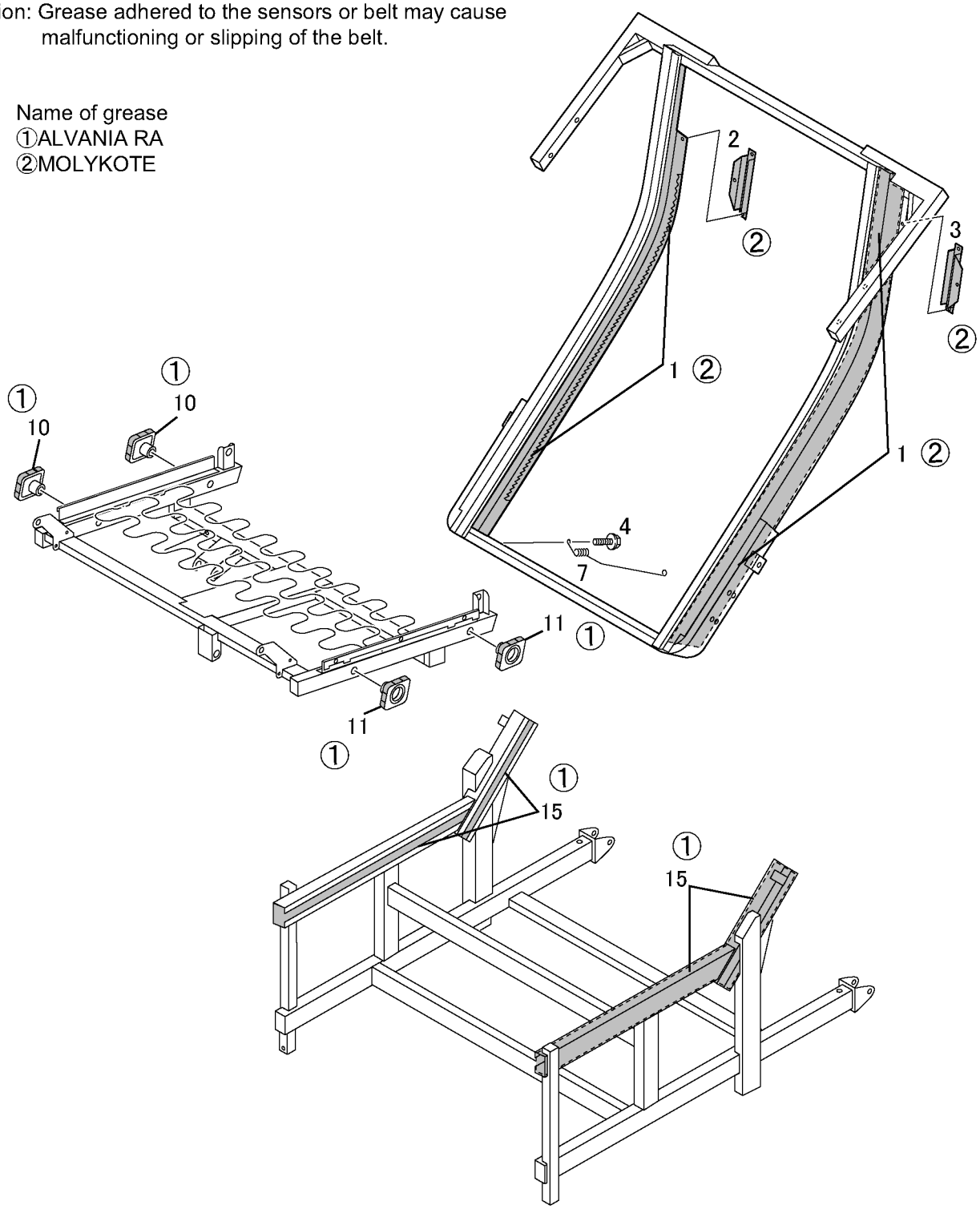
- Be careful of the directions of the Motor when assembling it. (Connecting cord is on the top as the figure above.)
  * Otherwise, the Connecting cord becomes shorter and cannot be allocated properly.

7.17. Grease

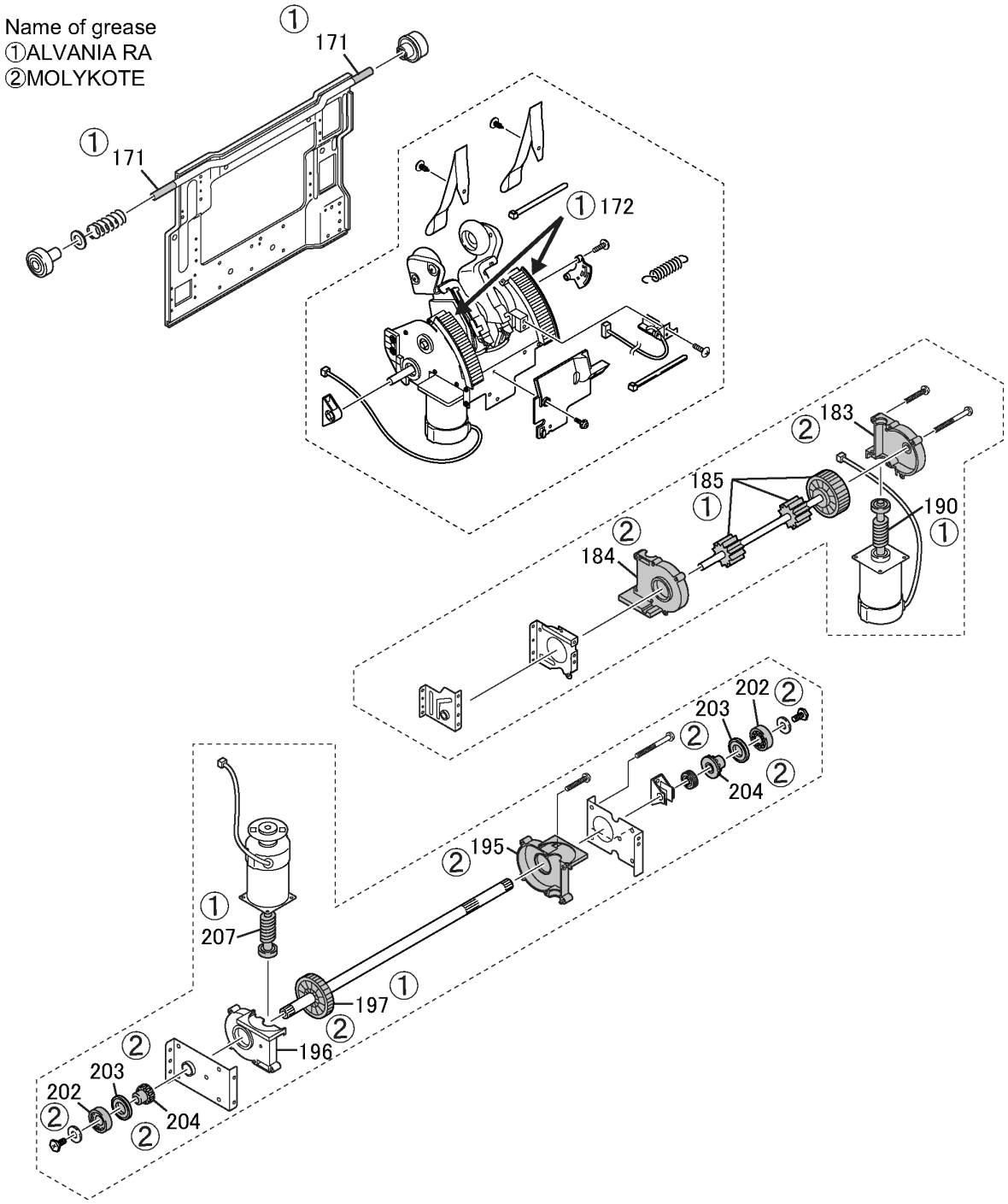
Be sure to grease the parts ▒ every time you repair the products.

Caution: Grease adhered to the sensors or belt may cause malfunctioning or slipping of the belt.

Name of grease
①ALVANIA RA
②MOLYKOTE



Be sure to grease the parts ▒ every time you repair the products.

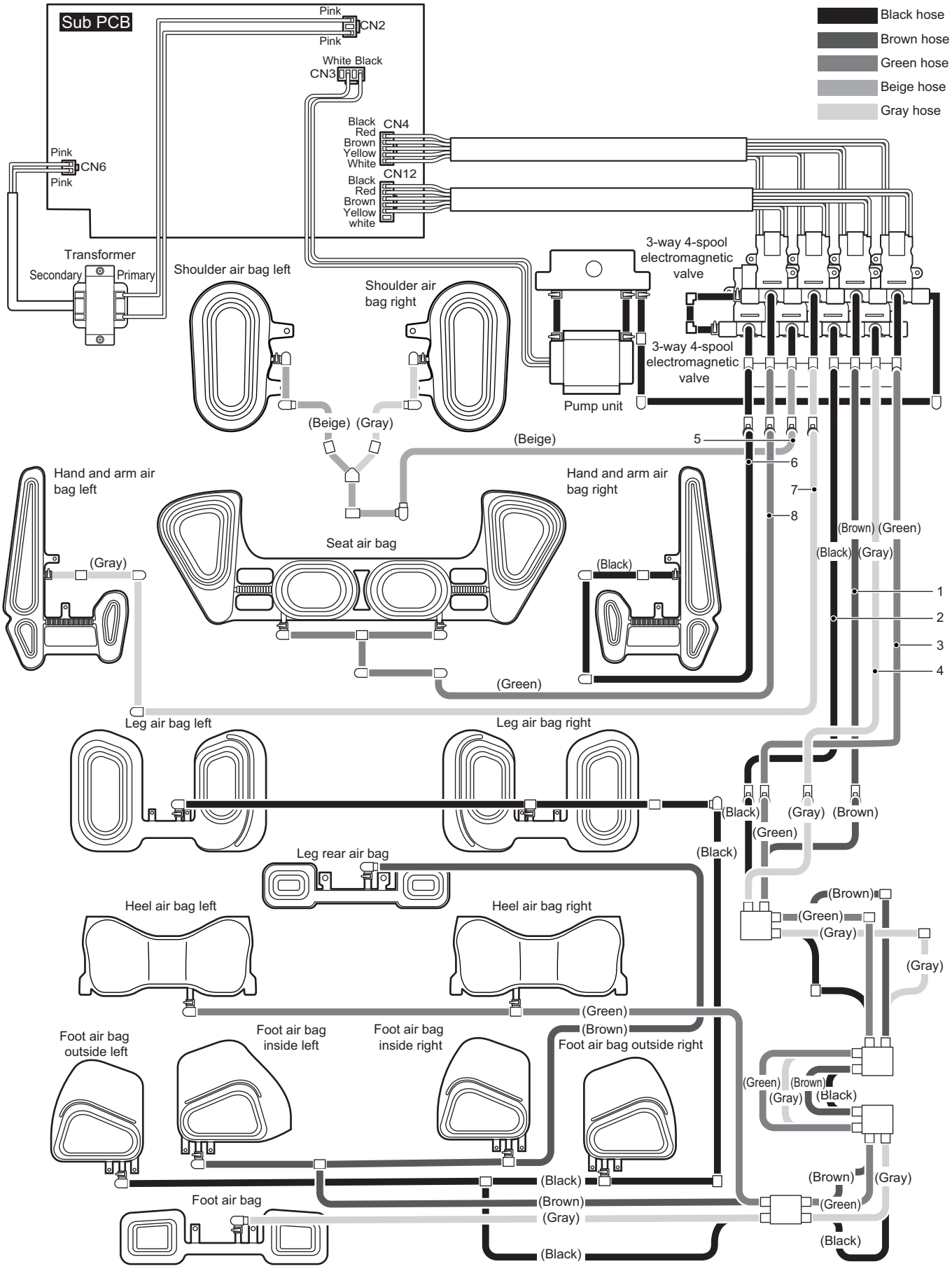


No. in the exploded view	Parts names	Grease	Grease No.
10, 11	Slide guide, Slide linear (rubbed sides)	ALVANIA RA (Light brown)	WEP003T8907
15	Inner side of Under pipe (rubbed sides)		
171	Main frame (shafts for Guide rollers)		
172	Intensity gear (fan-shaped, two pieces)		
185	Intensity driving shaft (one set) (overall worm gear cog surface, two pinions)		
190	Intensity motor (overall shaft)		
197	Up/down driving shaft (overall worm gear cog surface)		
207	Up/down motor (overall shaft)		

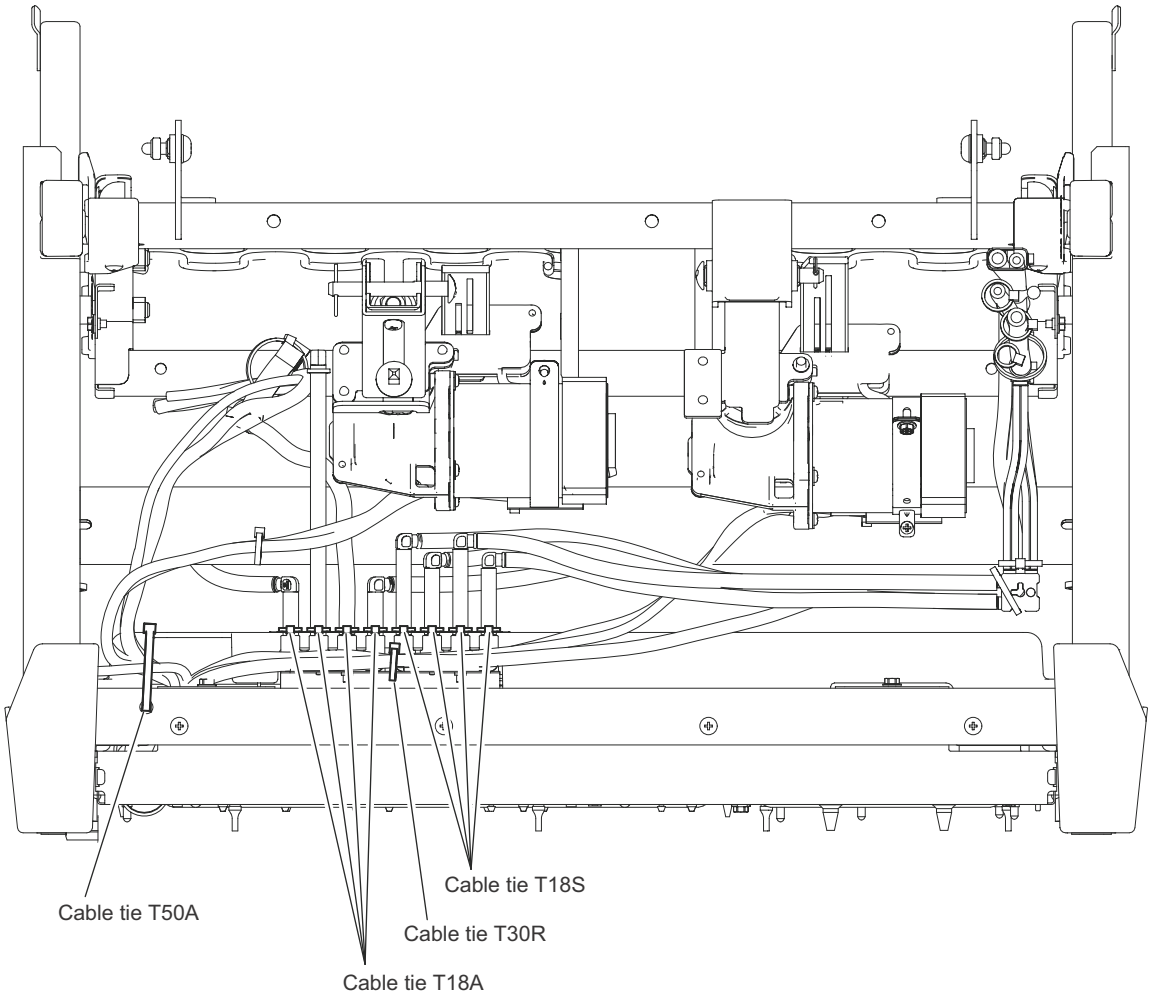
No. in the exploded view	Parts names	Grease	Grease No.
1, 2, 3	Rear frame (inside of the Guide rails), inside of Rail pieces	MOLYKOTE (White)	WEP003W8927
183, 184	Inside the Intensity gear box, sliding contact part of the shaft holder and gear cog surface		
195, 196	Shaft holder in Up/down gear box, and rubbed side of threads		
202, 203, 204	Guider rollers, Pinions, Rubber rings		

8 Wiring Connection Diagram

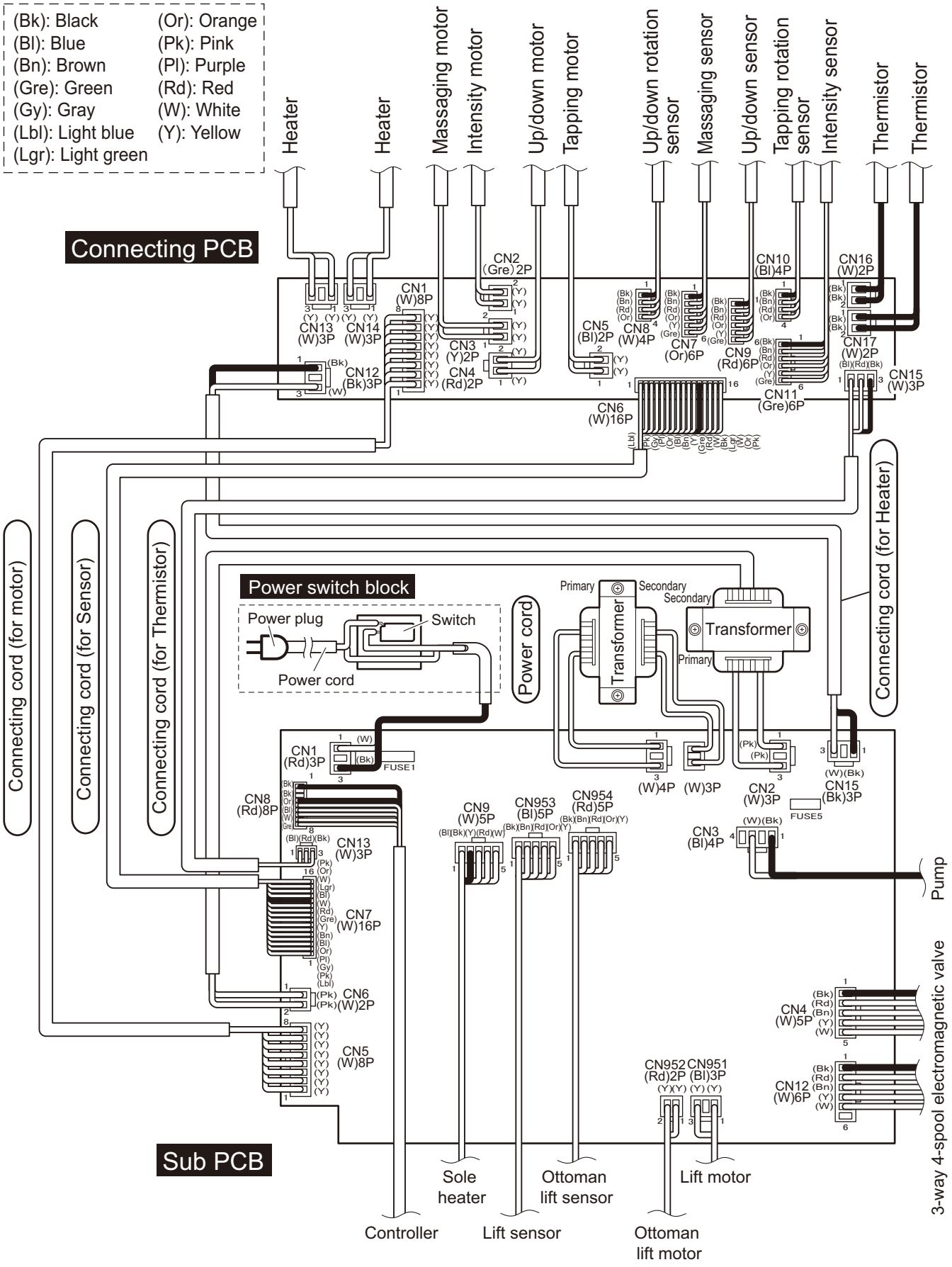
8.1. Air Hoses



8.2. Wiring (Sub PCB — Air Hoses/Ottoman)

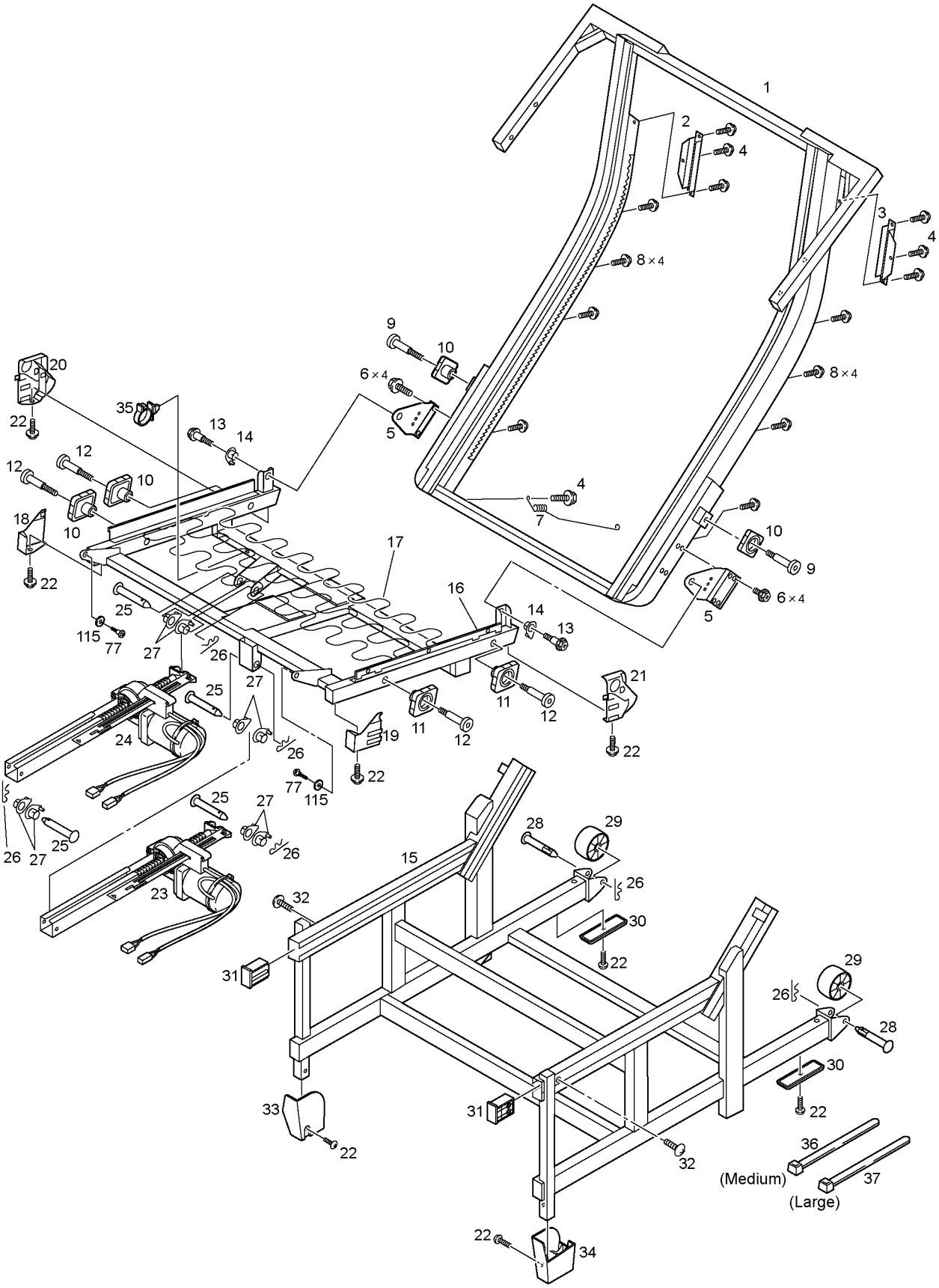


8.3. Wiring Diagram of Main PCB and Sub PCB

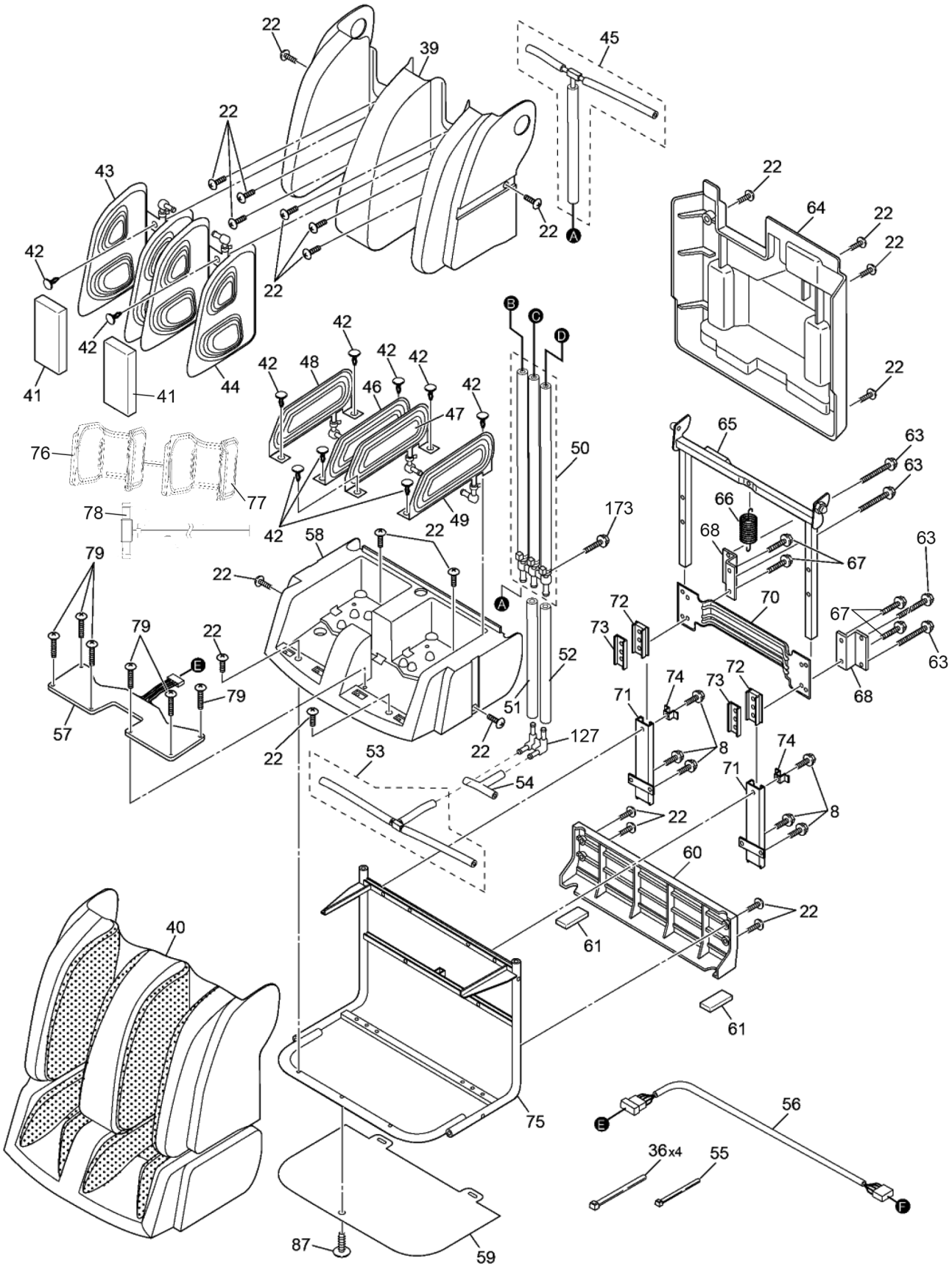


9 Exploded View and Replacement Parts List

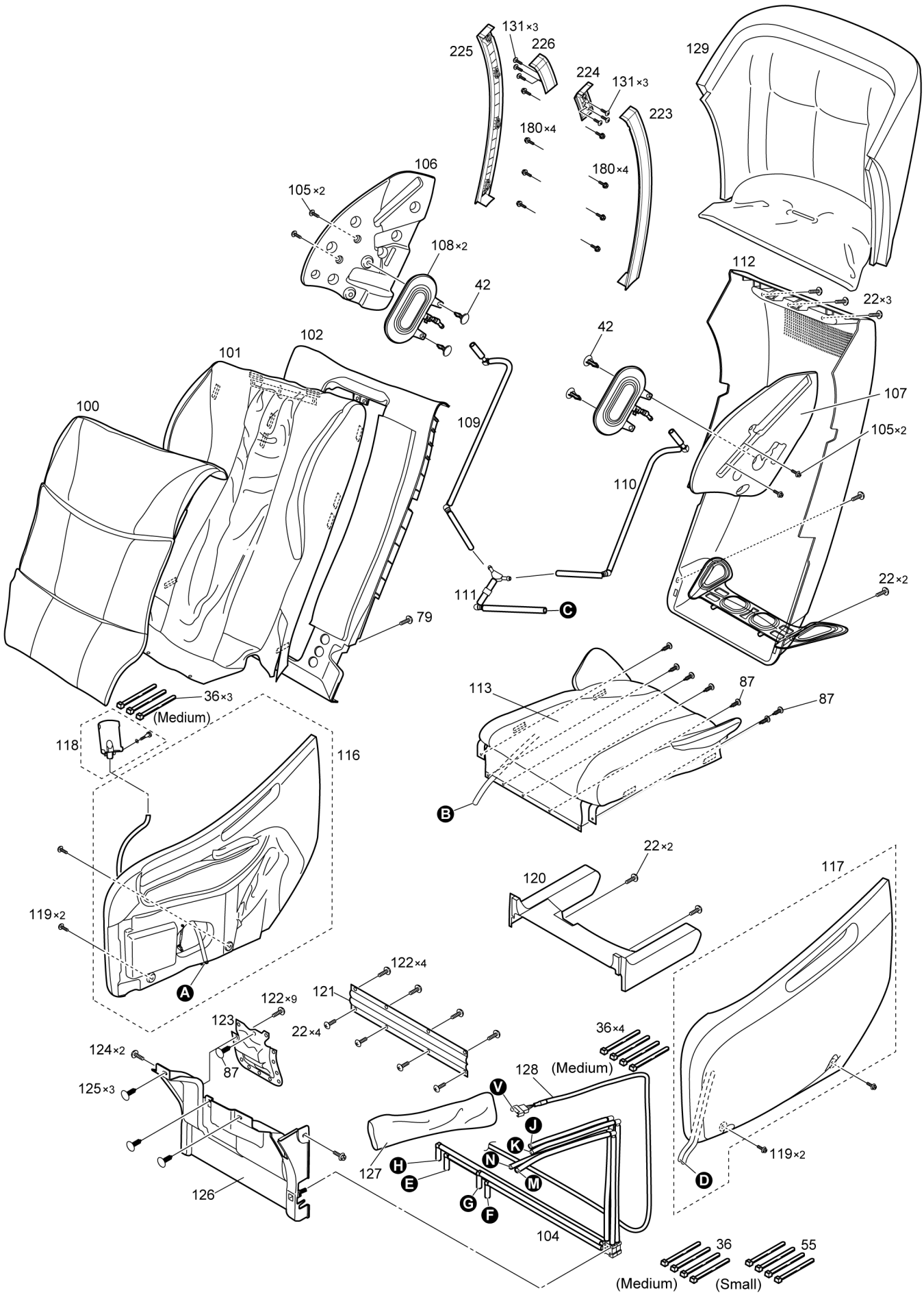
9.1. EP-MA32 Exploded View 1



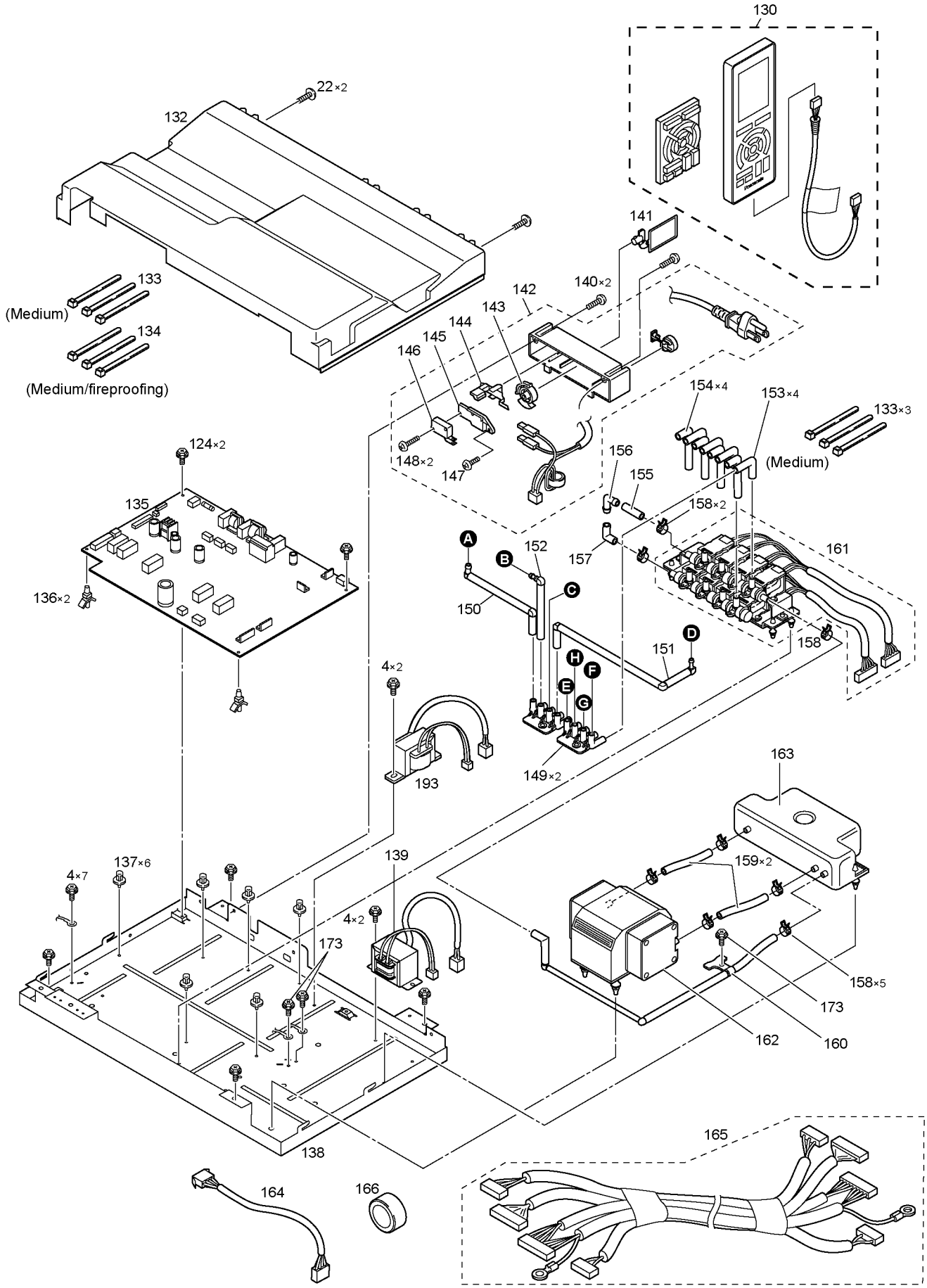
9.2. EP-MA32 Exploded View 2



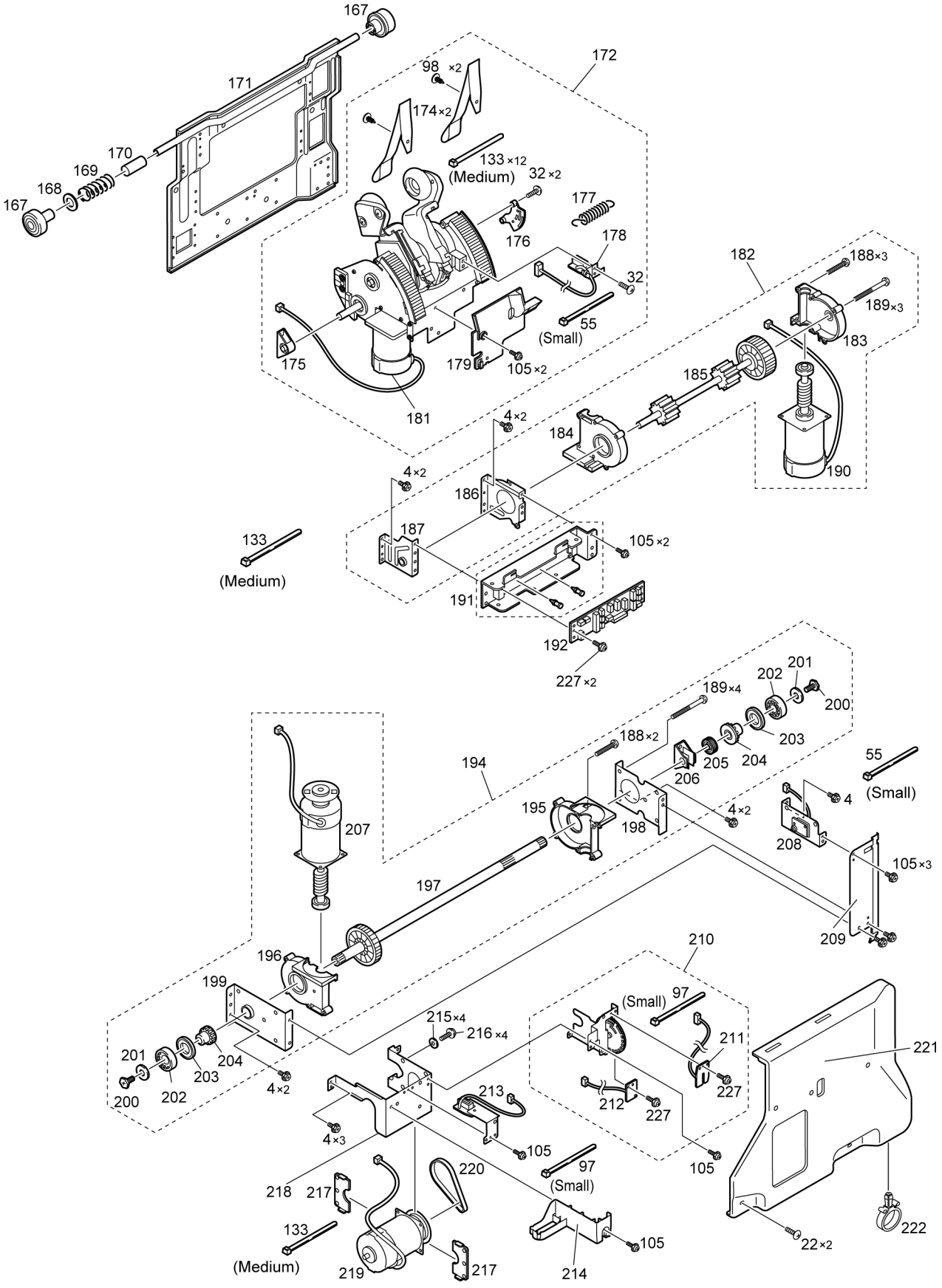
9.3. EP-MA32 Exploded View 3



9.4. EP-MA32 Exploded View 4



9.5. EP-MA32 Exploded View 5



9.6. EP-MA32 Parts List

Safety	Ref.No.	Part No.	Part Name & Description	Qty	Remarks
	1	WEPMA34L0087	REAR FRAME	1	
	2	WEPMP62L0767	RAIL PIECE RIGHT	1	
	3	WEPMP62L0777	RAIL PIECE LEFT	1	
	4	WEPMA31L9568	SCREW	45	
	5	WEPMP62L0007	SIDE HINGE	2	
	6	WEP3530L6717	SCREW	8	
	7	WEP2005L0687	CORD WIRE	1	
	8	WEPMA31L9578	SCREW	8	
	9	WEPMP62L6027	BOLT	2	
	10	WEPMP62L1417	SLIDE GUIDE	4	
	11	WEPMP62L1407	SLIDE LINEAR	2	
	12	WEPMP62L6047	BOLT	4	
	13	WEPMP62L6037	BOLT	2	
	14	WEP3200L0887	RESIN BUSHING	2	
	15	WEPMP62K0097	UNDER PIPE	1	
	16	WEPMA32K0128	SEAT FRAME	1	
	17	WEPMP62L0497	S SHAPED SPRING	1	
	18	WEPMP62L0817	SIDE SPACER RIGT	1	
	19	WEPMP62L0857	SIDE SPACER LEFT	1	
	20	WEPMP62L0897	SIDE SPACER RIGHT BACK	1	
	21	WEPMP62L0907	SIDE SPACER LEFT BACK	1	
	22	WEPMA31S9028	SCREW	25	
	23	WEPMP62L1537	RECLINING LIFT UNIT	1	
	24	WEPMA34L1527	OTTOMAN LIFT UNIT	1	
	25	WEPMA53S3118	OTTOMAN LIFT PIN LONG	4	
	26	WEPMA11L6748	SNAP PIN	6	
	27	WEPMA31L0888	RESIN BUSHING	12	
	28	WEPMS40L0918	HINGE PIN	2	
	29	WEPMS40K3908	CASTOR	2	
	30	WEPMP62K3397	BOTTOMA PLATE	2	
	31	WEPMP62K0607	GUIDE END CAP	2	
	32	WEPMA31L9698	SCREW	2	
	33	WEPMP64K3377	FRONT SOLE PLATE RIGHT	1	
	34	WEPMP64K3387	FRONT SOLE PLATE LEFT	1	
	35	WEP3200L0277	HOSE CLIP 1J98	1	
	36	WEP005W8517	INSULATED TIE (MEDIUM)	10	
	37	WEP005W8527	INSULATED TIE	2	
	38	WEPMA10S9027	SCREW	24	
	39	WEPMA32K0557	LEG COVER	1	
	40	WEPMA32K3758	LEG CLOTH K	1	for K*
	40	WEPMA32H3758	LEG CLOTH H	1	for H*
	41	WEPMA03L0317	LEG URETHANE	1	
	42	WEPMA50L0467	ANCHOR CLIP	16	
	43	WEPMA03L0827	LEG AIR BAG RIGHT	1	
	44	WEPMP62K0297	LEG AIR BAG LEFT	1	
	45	WEPMA03L0807	LEG AIR TUBE	1	
	46	WEPMA32L0988	SOLE INSIDE RIGHT AIR BAG	1	
	47	WEPMA32L0998	SOLE INSIDE LEFT AIR BAG	1	
	48	WEPMA32L0908	SOLE OUTSIDE RIGHT AIR BAG	1	
	49	WEPMA32L0918	SOLE OUTSIDE LEFT AIR BAG	1	
	50	WEPMA32L0878	SEAT CONNECTING HOSE	1	
	51	WEPMA32L0848	FOOT HOSE SIDE OUTSIDE	1	
	52	WEPMA32L0798	FOOT HOSE SIDE INSIDE	1	
	53	WEPMA32L0688	FOOT HOSE SIDE OUTSIDE	1	
	54	WEPMA03L0707	T SHAPED TUBE	1	
	55	WEP005W8507	INSULATED TIE	12	

Safety	Ref.No.	Part No.	Part Name & Description	Qty	Remarks
⚠	56	WEPMA32L2058	CONNECTING CORD FOR HEATER	1	
⚠	57	WEPMA03L2527	HEATER	1	
	58	WEPMA32L0568	FOOT COVER	1	
	59	WEPMA03L2327	FOOT REVERSE SHEET	1	
	60	WEPMA03L0577	FOOT BOTTOM COVER	1	
	61	WEPMP62L0327	FOOT BOTTOM URETHANE	1	
	62	WEPMA31L0928	HINGE PIN	1	
	63	WEPMA03L9667	SCREW	4	
	64	WEPMA03K0237	OTTOMAN SIDE REVERSE COVER	1	
	65	WEPMA03L0077	SLIDE BASE	1	
	66	WEPMA03L0177	SLIDE PULLING SPRING	1	
	67	WEP3530L6327	SCREW	4	
	68	WEPMA03L0478	CONNECTING REINFORCED PLATE	1	
	70	WEPMA03L0488	SLIDER CONNECTING PLATE	1	
	71	WEPMA03L0147	SLIDE GUIDE	1	
	72	WEP3200L1407	LINEAR SLIDE	1	
	73	WEP3200L1498	SLIDE PLATE	1	
	74	WEP3530L1507	SLIDE STOPPER	2	
	75	WEPMA03L0307	OTTOMAN FRAME	1	
	76	WEPMA32L0747	HEEL AIR BAG RIGHT	1	
	77	WEPMA32L0737	HEEL AIR BAG LEFT	1	
	78	WEPMA32L0968	HEEL AIR TUBE	1	
	79	WEPMA31L9578	SCREW	8	
	87	WEP3200K0457	BRUSHCLIP	14	
	98	WEPMA31L0438	BRUSHCLIP	2	
	100	WEPMA32K3618	REAR CUSHION K	1	for K*
	100	WEPMA32H3618	REAR CUSHION H	1	for H*
	101	WEPMA32K3888	REAR COVER K	1	for K*
	101	WEPMA32H3888	REAR COVER H	1	for H*
	102	WEPMA32L3898	BACK BOARD	1	
	104	WEPMA31L0418	CONNECTING CORD FOR UNDER OTTOMAN	1	
	105	WEP3530L9677	SCREW	4	
	106	WEPMA34L3217	SHOULDER BLOW RIGHT	1	
	107	WEPMA34L3227	SHOULDER BLOW LEFT	1	
	108	WEPMA34L0647	SHOULDER AIR BAG	2	
	109	WEPMA34L0577	SHOULDER HOSE RIGHT	1	
	110	WEPMA34L0587	SHOULDER HOSE LEFT	1	
	111	EPMA34L0697	CONNECTING CORD FOR SHOULDER	1	
	112	WEPMA34K3177	REAR COVER	1	
	113	WEPMA32K3688	SEAT CUSHION K	1	for K*
	113	WEPMA32H3688	SEAT CUSHION H	1	for H*
	116	WEPMA32K3628	ARMREST RIGHT K TAIWAN	1	for K*
	116	WEPMA32H3628	ARMREST RIGHT H TAIWAN	1	for H*
	117	WEPMA32K3708	ARMREST LEFT K	1	for K*
	117	WEPMA32H3708	ARMREST LEFT H	1	for H*
	118	WEPMA31K7188	CONTROLLER HOLDER	1	
	119	WEPMA31L9598	SCREW	4	
	120	WEPMA32K3118	LEG COVER	1	
	121	WEPMP64K3807	UNDER CLOTH	1	
	122	WEPMA70L9647	SCREW	13	
	123	WEPMA32K3768	LIFT PROTECTION CLOTH	1	
	124	WEPMA31L6018	SCREW	2	
	125	WEP596K0457	PUSH TURN RIVET	3	
	126	WEPMA34K3787	SEAT FRONT COVER	1	
	127	WEPMA03L0368	2 ROLL L SHAPED JOINT	1	
⚠	128	WEPMA34L2077	CONNECTING CORD FOR UNDER HEATER	1	
	129	WEPMA32K3678	OUTSIDE BLOW K	1	for K*
	129	WEPMA32H3678	OUTSIDE BLOW H	1	for H*

Safety	Ref.No.	Part No.	Part Name & Description	Qty	Remarks
	130	WEPMA32S4468	CONTROLLER BLOCK TAIWAN	1	
	131	WEPMA31L6828	SCREW	6	
	132	WEPMA34L0267	UNDER BOX COVER	1	
	133	WEP005W8628	INSULATED TIE MEDIUM	2	
	134	WEP005T8517	INSULATED TIE MEDIUM	17	
⚠	135	WEPMA32L2188	SUB PCB TAIWAN	1	
	136	WEPMA34L0517	BOARD SUPPORT	2	
	137	WEPMA34L6967	PCB BUSHING C	7	
	138	WEPMA34L3517	UNDER BOX BOTTOM	1	
⚠	139	WEPMA31L2248	POWER SOURCE TRANSFORMER	1	
	140	WEPMA86S9087	SCREW	2	
	141	WEP353MH7867	LOCK KEY	1	
⚠	142	WEPMA03K2008	POWER SOURCE SWITCH BLOCK	1	
	143	WEPMA03K3288	LOCK BUTTON	1	
	144	WEPMA03K3258	SWITCH	1	
	145	WEP3510L2327	MICRO SWITCH SHEET	1	
	146	WEP3010L2027	MICRO SWITCH	1	
	147	WEPMA31S9088	SCREW	1	
	148	WEPMA31L9068	SCREW	2	
	149	WEPMA34L0027	L SHAPED JOINT	2	
	150	WEPMA34L0537	CONNECTING HOSE FOR ELBOW RIGHT	1	
	151	WEPMA34L0547	CONNECTING HOSE FOR ELBOW LEFT	1	
	152	WEPMA34L0917	CONNECTING HOSE FOR SEAT	1	
	153	WEPMA50L0787	L SHAPED HOSE C	4	
	154	WEPMA34L0507	L SHAPED HOSE A	4	
	155	WEPMA34L0487	L SHAPED HOSE D	1	
	156	WEPMP62L0647	L SHAPED JOINT C	1	
	157	WEPMA50L667	L SHAPED HOSE B	1	
	158	WEP3210L0357	HOSE CLAMP	7	
	159	WEPMA34L0257	UNDER HOSE E	2	
	160	WEPMA34L0197	UNDER HOSE	1	
	161	WEPMA34L2437	ELECTROMAGNETIC VALVE	1	
	162	WEPMA31L4478	PUMP UNIT	1	
	163	WEPMA34L0287	SURGE TANK	1	
	164	WEPMP62L2877	CONNECTING CORD	1	
⚠	165	WEPMAC8L2898	CONNECTING CORD FOR POWER SOURCE B	1	
	166	WEPMA31L5048	FERRITE CORE	1	
	167	WEP3530L0157	GUIDE ROLLER	2	
	168	WEPMA31L6528	WASHER	1	
	169	WEPMS40L0167	GUIDE ROLLER SPRING	1	
	170	WEPMS40L0528	PROTECTION TUBE	1	
	171	WEPMA34L0047	MAIN FRAME	1	
	172	WEPMA34L1437	MASSAGE DRIVING BLOCK	1	
	173	WEPMA31L6848	SCREW	1	
	174	WEPMS40L0338	PROTECTION CLOTH	2	
	175	WEPMS40L0677	MASSAGE SHAFT HOLDER	1	
	176	WEPMA34L0477	INTENSITY SENSOR PLATE	1	
	177	WEPMS40L0138	TAPPING ROD SPRING	1	
	178	WEPMS40L4948	MASSAGE SENSOR	1	
	179	WEPMS40L0638	INTENSITY TOP COVER	1	
	180	WEPMA31L6838	SCREW	8	
	181	WEPMS40L1038	MASSAGE MOTOR	1	
	182	WEPMS40L1478	INTENSITY DRIVING BLOCK	1	
	183	WEPMS40L0438	INTENSITY GEAR BOX OUTSIDE	1	
	184	WEPMS40L0228	INTENSITY GEAR BOX INSIDE	1	
	185	WEPMS40L1488	INTENSITY DRIVING SHAFT	1	
	186	WEPMS40L0628	INTENSITY GEAR BOX REINFORMENT PLATE INSIDE	1	
	187	WEPMS40L1498	INTENSITY SHAFT HOLDER STAND	1	

Safety	Ref.No.	Part No.	Part Name & Description	Qty	Remarks
	188	WEPMA31L9488	SCREW	5	
	189	WEPMA31L9538	SCREW	7	
	190	WEPMS40L1028	INTENSITY MOTOR	1	
	191	WEPMA34L0037	PCB INSTALL PLATE	1	
	192	WEPMA34L2107	CONNECTING PCB	1	
⚠	193	WEPMP62L2248	2ND TRANSFORMER TAIWAN	1	
	194	WEPMS40L1468	UP/DOWN DRIVING BLOCK	1	
	195	WEPMS40L1768	UP/DOWN GEAR BOX INSIDE	1	
	196	WEPMS40L1798	UP/DOWN GEAR BOX OUTSIDE	1	
	197	WEPMS40L0378	UP/DOWN SHAFT	1	
	198	WEPMS40L0188	UP/DOWN GEAR BOX PLATE IN	1	
	199	WEPMS40L0408	UP/DOWN GEAR BOX PLATE OUT	1	
	200	WEP3510L6057	UP/DOWN BOLT	2	
	201	WEPMS41L3537	FITTING	2	
	202	WEP545H1937	GUIDE ROLLER B	2	
	203	WEPMA31L0318	RUBBER RING	2	
	204	WEPMS41L0427	UP/DOWN PINION	2	
	205	WEPMS40L4677	UP/DOWN SENSOR DRIVING GEAR	1	
	206	WEPMS40L0327	UP/DOWN SHAFT HOLDER	1	
	207	WEPMS40L1007	UP/DOWN MOTOR	1	
	208	WEPMS40L2197	UP/DOWN ROTATION SENSOR	1	
	209	WEPMA34L0497	UP/DOWN ROTATION REINFORCEMENT PLATE	1	
	210	WEPMP62L2167	UP/DOWN TAPPING SENSOR	1	
	211	WEPMS62L2188	UP/DOWN SENSOR	1	
	212	WEPMS62L2208	TAPPING SENSOR	1	
	213	WEPMS40L4957	INTENSITY SENSOR	1	
	214	WEPMA34L0057	HEATER CORD CLIP	1	
	215	WEPMS40L0117	RESIN WASHER	4	
	216	WEPMA31L6717	SCREW	4	
	217	WEPMS40L0108	MOTOR INSULATION PLATE	2	
	218	WEPMS40L0598	MOTOR INSTALL STAND	1	
	219	WEPMS40L1048	TAPPING MOTOR	1	
	220	WEP526L1088	BELT B	1	
	221	WEPMP64L0547	MASSAGE BLOCK COVER	1	
	222	WEP780L0447	COVER CLIP	1	
	223	WEPMA32L0368	CONNECTING COVER OUTSIDE/LEFT K	1	for K*
	223	WEPMA32H0368	CONNECTING COVER OUTSIDE/LEFT H	1	for H*
	224	WEPMA32L0378	CONNECTING COVER INSIDE/LEFT K	1	for K*
	224	WEPMA32H0378	CONNECTING COVER INSIDE/LEFT H	1	for H*
	225	WEPMA32L0388	CONNECTING COVER OUTSIDE/RIGHT K	1	for K*
	225	WEPMA32H0388	CONNECTING COVER OUTSIDE/RIGHT H	1	for H*
	226	WEPMA32L0398	CONNECTING COVER INSIDE/RIGHT K	1	for K*
	226	WEPMA32H0398	CONNECTING COVER INSIDE/RIGHT H	1	for H*
	227	WEPMA31L6028	SCREW	9	
	–	WEPMA34L4127	MASSAGE MECHANISM BLOCK	1	
	–	WEPMA32K8228	PACKAGING K TAIWAN	1	
	–	WEPMA32H8228	PACKAGING H TAIWAN	1	
	–	WEPMA32L8708	OPERATING INSTRUCTIONS TAIWAN	1	

* for K: for color black model

* for H: for color ivory model