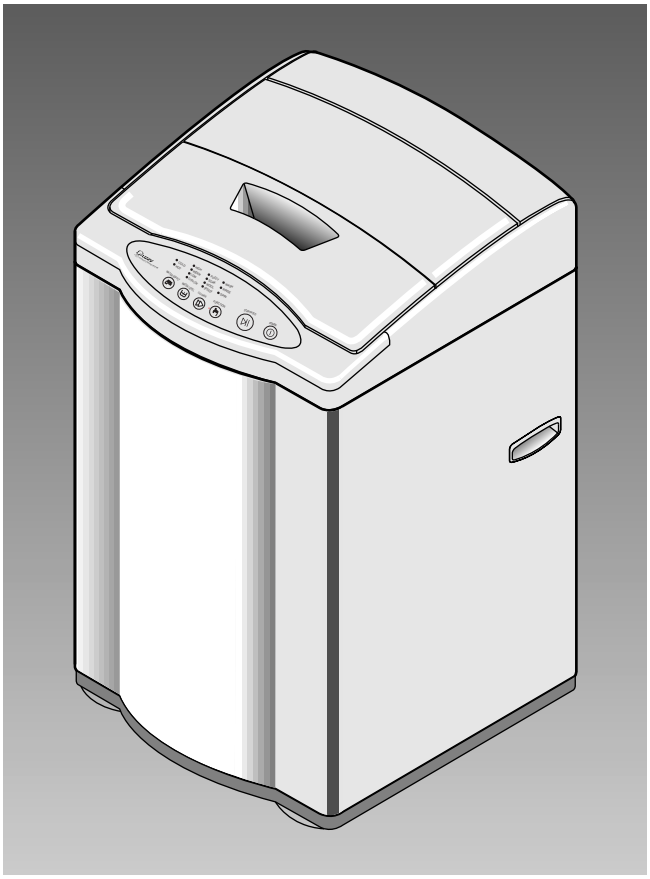
SAMSUNG

WASHING MACHINE

SW80W1(P)
SW80W2(P)

SERVICE Manual

WASHING MACHINE



CONTENTS

1. Precautions

When performing trouble - shooting and part replacement during servicing note the following safety precautions.

1-1 Safety Precautions

1-1-1 Use Genuine Parts

The components of the washing machine have safety - features such as non - combustibility and voltage withstanding. Therefore, always use the same part as used when replacing parts. In particular, be sure to use only designated parts in case of major safety parts identified by the making.

1-1-2 Grounding

Connect the grounding wire to the shell plate, and bury it under at least 25cm of earth ; alternatively, connect the ground wire to the appropriate pin on a properly grounded power receptacle.

- Never ground it to the telephone line, lightning rod, or gas pipe.

1-2 Servicing Precautions

1-2-1 Observe warnings

Be sure to follow special warnings and precautions that are described on part labels and in the owner's manual.

1-2-2 Special Precautions for Parts Assembly and wiring

When assembling parts that use safety - insulation material (such as tube and tape), or when installing internal wiring, be sure to restore all parts and wiring to their original positions.
Take special care to avoid contact with sharp edges.

1-2-3 Safety Checks after Servicing

After servicing, check to see that the screws, parts, and wiring are restored to their original positions, and check the insulation between the external metals and the socket plug. In addition, place the washing machine in a level position (less than 1° of grade) to prevent vibration and noise during operations.

1-2-4 Insulation Check

Pull out the plug from the power receptacle, pour water into the spin tub, and then set the timer. Check to see that the insulation resistance between the terminals of the plug and the exposed metal is greater, than 1 MΩ.

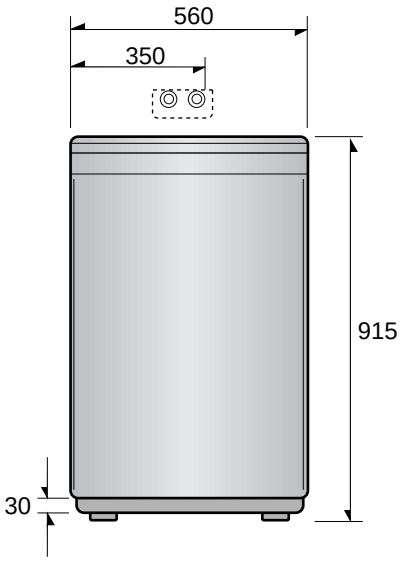
Note : When it is impossible to perform the insulation check with a 500V insulation resistance tester, use other testers for inspection.

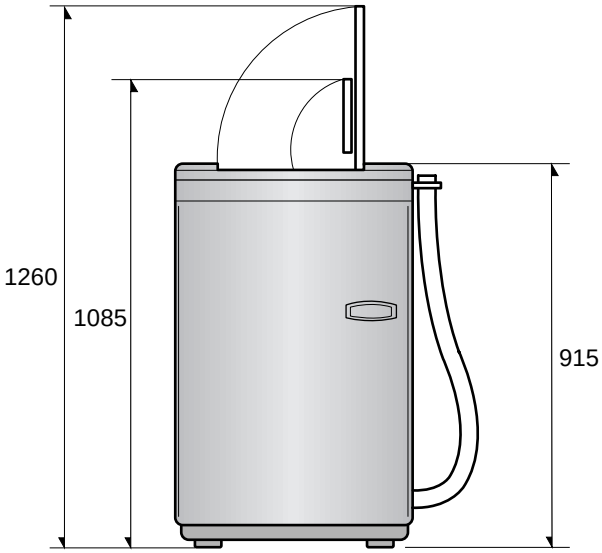
2. Specifications

Classifications		Specifications
Washing and Dehydrating Capacity		6.0 kg
Washing Method		Heavy duty rotation type (centripetal current)
Standard Volume of Water	High Level	57 *l*
	Medium Level	46 *l*
	Low Level	38 *l*
	Extra low level	32 *l*
Applicable Volume of Water		160 *l* (high level of water)
Rotation of the Pulsator		128rpm
Rotation of the Spin Tub		770rpm
Power Consumption	Washing	330 W
	Spinning	270 W
Dehydration Method		Centrifugal dehydration type
Drain Control		Motor driven
Applicable Water Pressure		0.5 kg f / cm^2 ~ 8.0 kg f / cm^2
Weight	Gross	38kg
	Net	35kg
Dimension	Gross	W 580mm X D 620mm X H 890mm
	Net	W 560mm X D 580mm X H 915mm
Accessories		Water supply hose, drain hose, owner's manual

3. Features

3-1 Dimensions

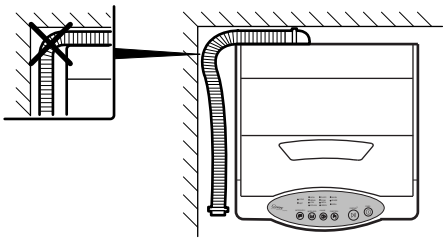




3-2 Installation

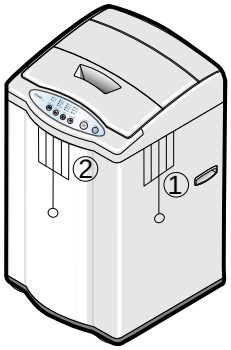
3-2-1 Level Specifications and Wall - Clearance Distances

1. Install the washing machine on a solid and level floor.
2. Place the machine at least 40cm away from the wall.
3. Placement on an inclined, weak or rough floor may cause abnormal trembling.



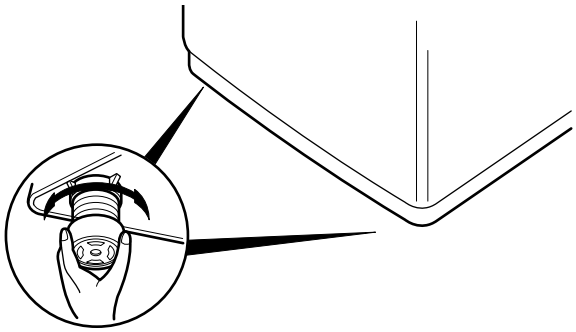
3-2-2 Balance

1. Adjust horizontally : First ①, Then ②.
2. If the thread is not within the limit, adjust the height of the legs.



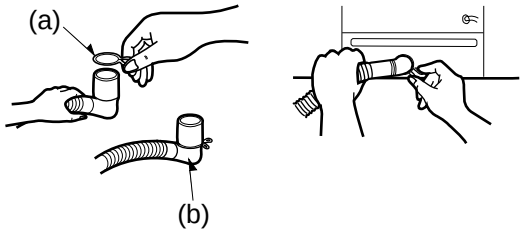
3-2-3 Controlling the Front Adjustable Leg

To control the height, turn the adjustable leg.



3-2-4 Connecting the Drain Hose

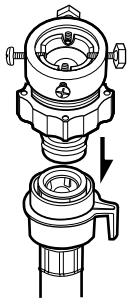
1. After pressing the joint ring(a), insert the drain hose (b) in the drain direction. (Same as pump model.)



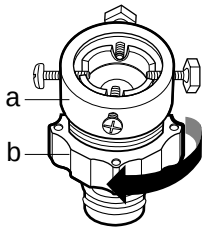
2. Install the drain hose about 70~80cm above the ground (for pump model).

3-2-5 Connecting the water supply hose

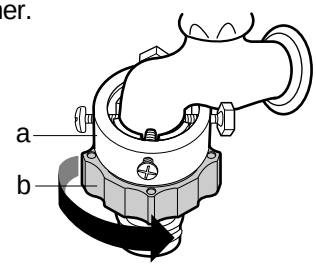
1. Romove the adaptor from the water supply hose.



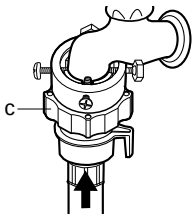
2. First, using a "+" type screwdriver, loosen the three screws on the adaptor.
   Next, take the adaptor and hold parts (a) and (b) with a gap about 5mm between them.



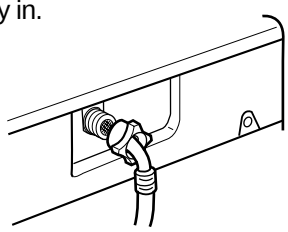
3. Connect adaptor to the water tap by firmly tightening the screws. Then turn part (b), following the arrow, and put (a) and (b) together.



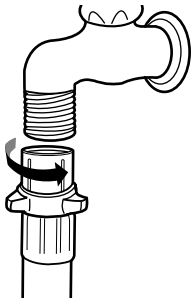
4. Connect the water supply hose to the adaptor. Pull down part (c) of the water supply hose. When part (c) is released, the hose is automatically connected to the adaptor, and makes a 'click' sound.



5. Connect the other end of the water supply hose to the inlet water valve at the back of the washer.
   Screw the hose clockwise, all the way in.

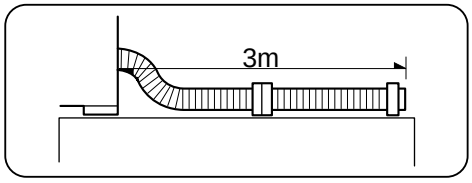


If the water tap is a screw type, connect a water supply hose that fits to the tap as shown.

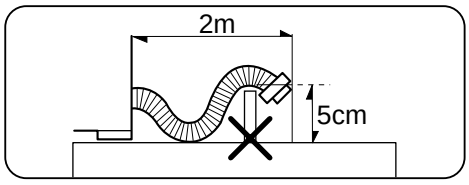


3-2-6 Positioning the Drain Hose

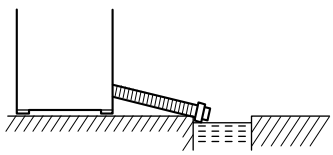
1. When there is no threshold, the length of the drain hose should not exceed 3m.
2. When it is necessary to connect the drain hose with the drain outlet located far away, connect the extension hose and applicable parts (available from dealers or service centers).



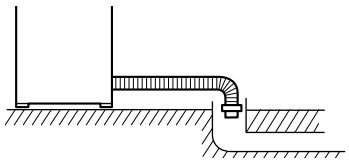
3. Do not install the drain hose where it must extend over a threshold of 5cm or more ; do not install where there is a threshold and the hose must extend for more than 2m.



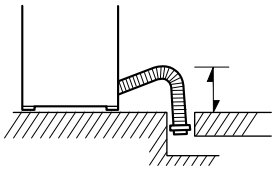
4. Other precautions



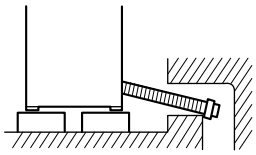
Do not put the end of the drain hose into the water.



Do not place the hose below the floor level of the drain outlet.



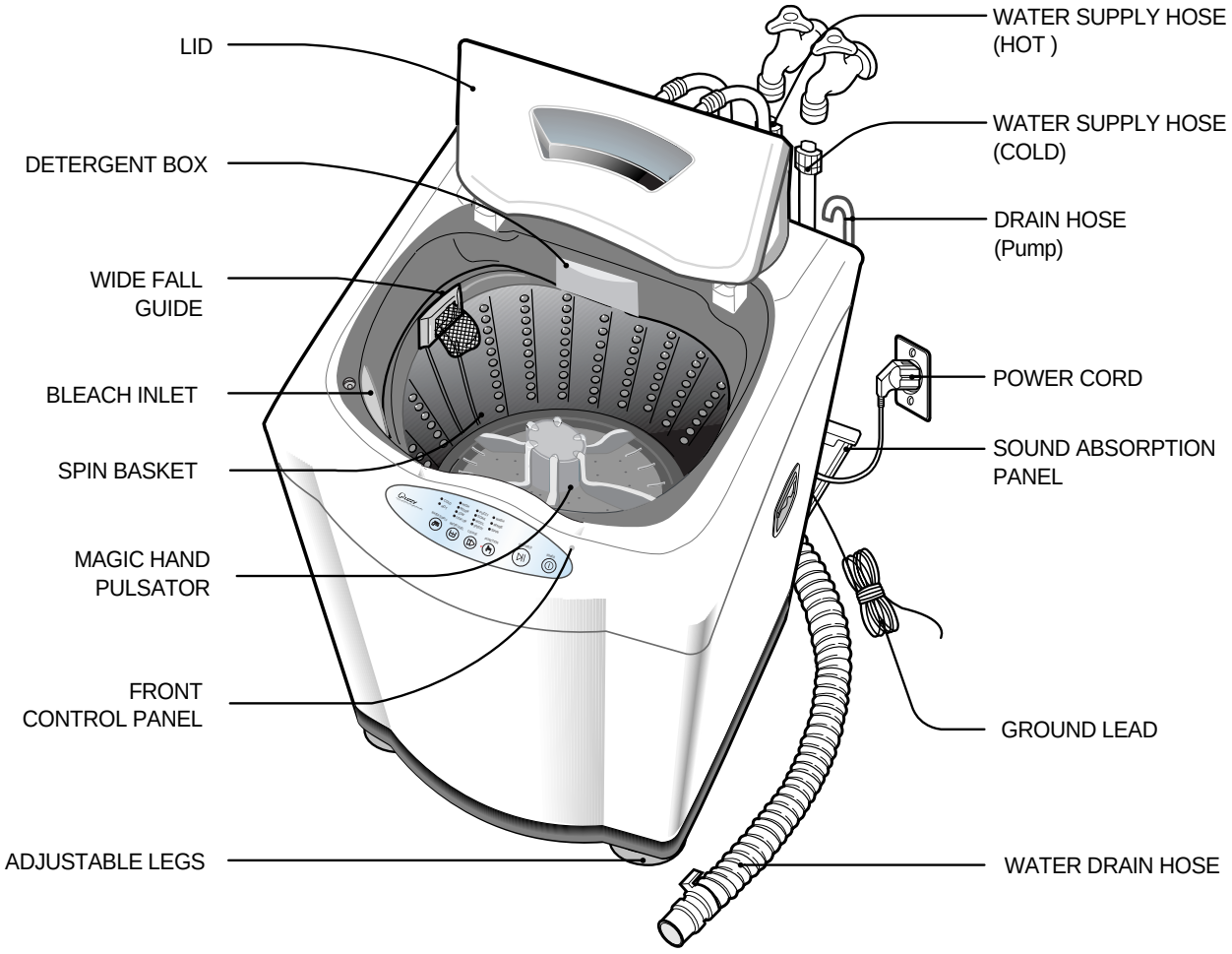
Do not make the mid part of the hose than the ends positioned higher.



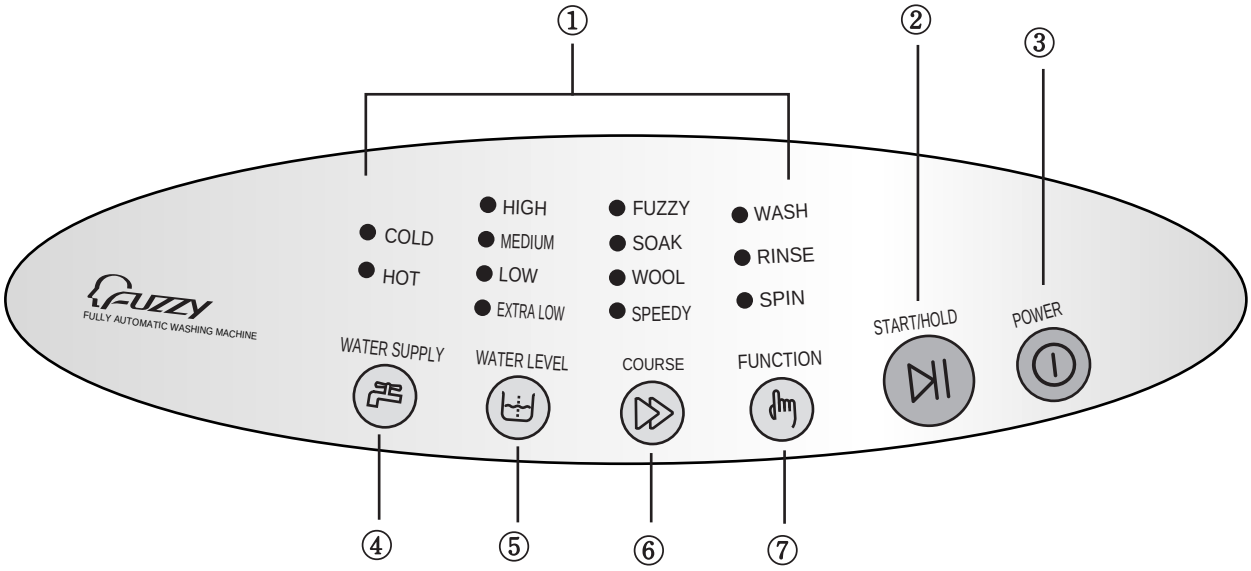
If the drain hose must be positioned at a high angle, install the washing machine so that it is in an even higher position.

4. Operating Instructions

4-1 Component Identification



4-2 Control Panel



4-2-1 Function Indicator Light

1. In use indicated by a flashing symbol.
2. The light goes out at the end of the function.

4-2-2 Start/Hold

1. Press this button to alternately 'start' or 'hold'.
2. This button is a convenient way to change washing courses or a commands.

4-2-3 Power

1. Press this button for power ON/OFF.
2. When the washing operation is completed, the power automatically turns off and the buzzer sounds off 5 times.
3. Allow at least a 3-second interval before turning the washing machine again .

4-2-4 Water Supply (option)

1. Press this button to select water temperature.
2. The selection order is :
   Cold →Cold+Hot → Hot → Cold
3. Selecting the Wool Course automatically selects cold water (to protect the wool fabric)

4-2-5 Water Level

1. Press this button to select the water height.
2. The selection order is :
   High → Medium → Low → Extra low
3. Selecting the Wool Course limits the water levels to high or medium.

4-2-6 Course

1. Press this button to select the type of washing cycle.

4-2-7 Function

1. The selection order is :
   Fuzzy → Soak → Wool → Speedy

4-3 Function Descriptions

4-3-1 Water Supply

1. In all the cases of prior to the first press of START/HOLD key, during operating or hold state, they follow the below sequences.
   → COLD → COLD +HOT → HOT
2. When wool course is selected, water supply is selected automatically to cold water without key input.
3. Once water supply is changed by key input, this water supply keeps on the changed course.
   In case of wool course, cold water is selected automatically, but if the user'd like to change it to other course, the course will return to the previous course.
4. While water supplying, the lamp selected is flashing(one second ON/OFF)

4-3-2 Water Level

1. In all the cases of prior to the first press of START/HOLD key, during operating or hold state, they follow the below sequences.
   → HIGH → MEDIUM → LOW → EXTRA LOW
2. When WOOL is selected, only HIGH & MEDIUM water level is possible.
3. If you change the course to WOOL, in case previous water level is low or medium, the water level is automatically selected High level and in case previous water level is over Low, the water level is not changed.
4. While water is supplying, if the water level is changed, the remaining time is changed.

4-3-3 Course

1. If this key is pressed before the first press of START/HOLD key or during HOLD state, the selection order is as follow. Even if manual washing is selected already, the selected course is cancelled, and the course is selected as follow.
   → FUZZY → SOAK → WOOL → SPEEDY
2. During operating, all keys except for COURSE SELECTION key are valid.
   But, only START/HOLD is vaild during spin operation.
3. During operating, If anykey is pressed after pressing the START/HOLD key, new Selection course is performed, not related to previous course.
4. This key is invalid during operation.

4-3-4 Function Button

1. This key is valid except for weight sensing operation.
2. After START/HOLD during operation or under reset condition, as pressing this key display is changing as follows.
   → WASH → RINSE → SPIN → WASH+RINSE →
   RINSE+SPIN → WASH+RINSE+SPIN
3. The beginning conditions are as follows when function key is selected.

FUNCTION	TIME
WASH	23 min
RINSE	15 min
SPIN	9 min
WASH+RINSE	43 min
RINSE+SPIN	24 min
WASH+RINSE+SPIN	52 min

4. This key is used as adjusting function.
   ① Rinsing times are added by one time when function key is pressed under general course operation (FUZZY, SOAK, WOOL and SPEEDY) and function operation (RINSE, WASH+RINSE, RINSE+SPIN, WASH+RINSE+SPIN) as pressing this key.
   Display is changing as follows.
   → 2 (times) → 3 → 4 → 5 → 1
   ② Washing time is adjusted by press of function key during washing only operation.
   → 20 (min) → 21 → 23 → 25 → 3 → 5 → 7 → 9 ••• → 17 → 19
   ③ Spinning time is adjusted by press of function key during spinning only operation.
   → 7 (min) → 1 → 2 → ••• → 6

4-3-6 Start/Hold

1. Available only after selecting a course.
2. Sequence : → START → HOLD → START
3. The display shows the remaining time, including the current function, when in 'start' status.
   The time decreases 1-min at a time.
   When in 'Hold' status, the time stays as it is.

4-3-7 Power

1) This key is always available when the power cord is connected.
2) sequence : → ON → OFF → ON
3) After finishing operation, this key is automatically turned off.

4-4 Description of Technical Points

4-4-1 Weight Recognizing Function

1. Weight recognizing function works first washing operating before water is supplied, not in WOOL course and Manual function operation (Wash, Rinse, Spin, ...)

2. Weight recognizing function is cancelled when water level key is pressed prior to the completion of weight recognizing function.

3. If the current water level is above lowest at the beginning of weight sensing, it is automatically decided as a high level.

4. If you change courses after sensing weight, the high water level is automatically selected irrespective of the water level decided by the sensing of weight.

4-4-2 Water Supplying Function

1. Relations between water level, frequency & water supply capacity.

unit :*l* fre : KHz

	amount of water supplied	fre
RESET	0	24.8
MIN	32 *l*	23.8
LOW	38 *l*	23.4
MEDIUM	46 *l*	23.0
HIGH	57 *l*	22.6

2. Relations between Hot/Cold selection & cycle.

Hot/Cold selection	Wash	Rinse	Supplementary Water supply	Pre spinning	Remarks
Cold	Cold	Cold	Cold	Cold	
Hot / Cold	Hot / Cold	Hot / Cold	Hot / Cold	Hot / Cold	
Hot	Hot	Hot / Cold	Hot / Cold	Hot / Cold	

3. If the water level does not reach to the water level selected for 60minutes after starting water supplying, the water supplying Error is displaying on the display.

4. Supplementary water supplying is performed every Washing or Rinsing operating. The steps are as follows.
   - supply water to the water level selected,
   - perform the washing or Rinsing operation for 1.5 minutes.
   - sense the present water level after stopping Motor.
   - compare the present water level to the water level selected.
   - if present water level < the water level selected, supply water to the water level selected.
     if present water level $\geq$ the water level selected, continue the washing or Rinsing operation.
   - But total time of supplementary water supplying is not over 30 seconds.

4-4-3 Soak Function

1. This course works only when Soak washing is selected by course select key.

2. It works repeatedly during set time by every 5 minutes(operation for 1 minute and pause for 4 minutes) for 30 minutes after water is filled to selected water level.

3. If water level is set higher during the Soak procedure, Soak procedure stops and water is refilled, and then, keeps on going the Soak procedure.

4. Washing cycle of 20 minutes begins after Soak function completion.
   Rinsing times can be adjusted according to Soak washing procedure.

4-4-4 Fuzzy Function

This function recognizes the quantity of laundry load and selects the water level by itself and keep on going washing operation automatically.

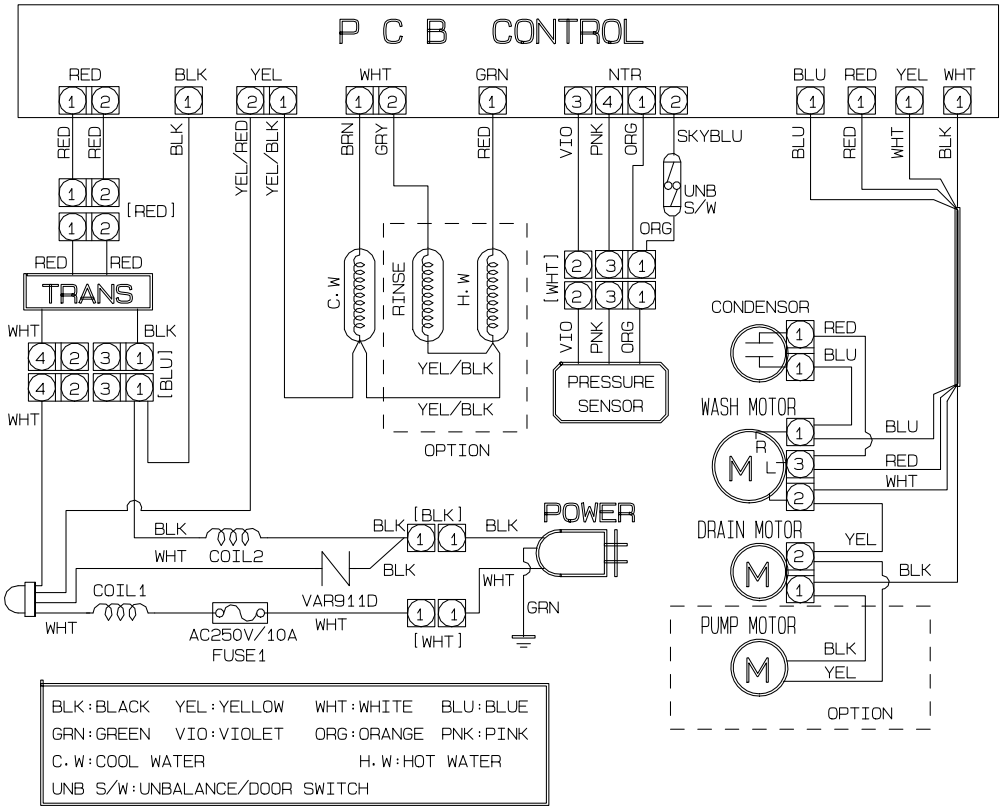
4-5 Program Chart

FREQUENCY	COURSE	WATER LEVEL	WASH			RINSE 2						RINSE 1						SPIN				TOTAL TIME
			WATER SUPPLY	SOAK	WASH	DRAIN	INTER-MITTENT	SPIN	STOP	WATER SUPPLY	RINSE	DRAIN	INTER-MITTENT	SPIN	STOP	WATER SUPPLY	RINSE	DRAIN	INTER-MITTENT	SPIN	STOP	MIN
50Hz / 60Hz	FUZZY	HIGH	3'		20'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	5'	1'	51'30"
		MEDIUM	2'30"		20'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	5'	1'	49'15"
		LOW	2'		20'	1'	1'	1'30"	1'	2'	2'	1'	1'	1'30"	1'	2'	2'	1'	1'	4'	1'	46'
		EXTRA LOW	1'30"		20'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	4'	1'	43'45"
	SOAK	HIGH	3'	30'	20'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	5'	1'	81'30"
		MEDIUM	2'30"	30'	20'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	5'	1'	79'15"
		LOW	2'	30'	20'	1'	1'	1'30"	1'	2'	2'	1'	1'	1'30"	1'	2'	2'	1'	1'	4'	1'	76'
		EXTRA LOW	1'30"	30'	20'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	4'	1'	73'45"
	WOOL	HIGH	3'		10'	1'30"	1'	1'	1'	3'	2'	1'30"	1'	1'	1'	3'	2'	1'30"	1'	1'	1'	36'30"
		MEDIUM	2'30"		10'30''	1'15"	1'	1'	1'	2'30"	2'	1'15"	1'	1'	1'	2'30"	2'	1'15"	1'	1'	1'	34'15"
	SPEEDY	HIGH	3'		8'	1'30"	1'	1'	1'	3'	2'	1'30"	1'	1'	1'	3'	2'	1'30"	1'	5'	1'	38'30"
		MEDIUM	2'30"		8'	1'15"	1'	1'	1'	2'30"	2'	1'15"	1'	1'	1'	2'30"	2'	1'15"	1'	5'	1'	36'15"
		LOW	2'		8'	1'	1'	1'	1'	2'	2'	1'	1'	1'	1'	2'	2'	1'	1'	4'	1'	33'00"
		EXTRA LOW	1'30"		8'	45"	1'	1'	1'	1'30"	2'	45"	1'	1'	1'	1'30"	2'	45"	1'	4'	1'	30'45"

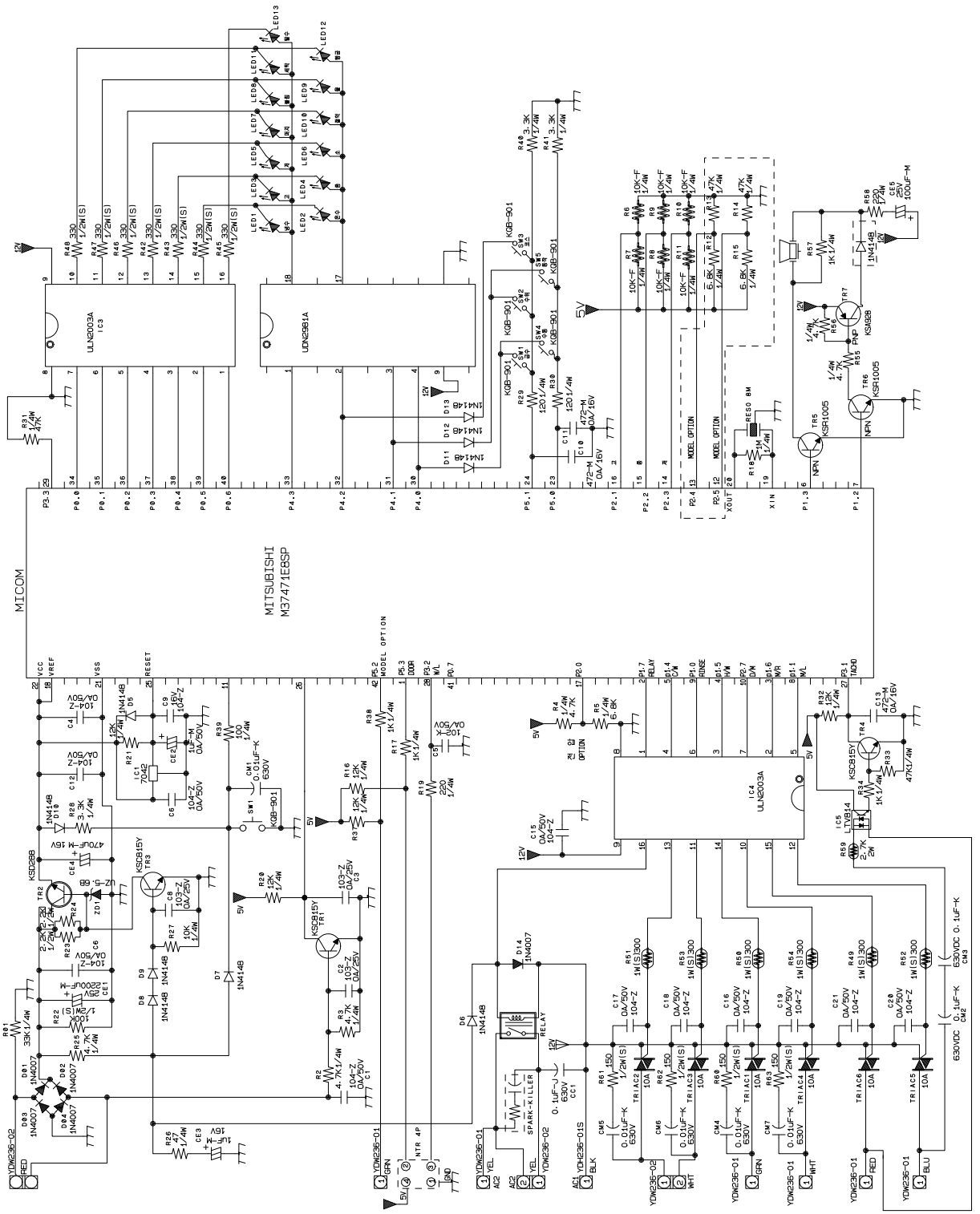
FREQUENCY	COURSE	WATER LEVEL	WASH		RINSE 2						RINSE 1						SPIN				TOTAL TIME
			WATER SUPPLY	WASH	DRAIN	INTER-MITTENT	SPIN	STOP	WATER SUPPLY	RINSE	DRAIN	INTER-MITTENT	SPIN	STOP	WATER SUPPLY	RINSE	DRAIN	INTER-MITTENT	SPIN	STOP	MIN
50Hz / 60Hz	WASH	HIGH	3'	20'																	23'00"
		MEDIUM	2'30"	20'																	22'30"
		LOW	2'	20'																	22'
		EXTRA LOW	1'30"	20'																	21'30"
	RINSE	HIGH							3'	2'	1'30"	1'	1'30"	1'	3'	2'					15'
		MEDIUM							2'30"	2'	1'15"	1'	1'30"	1'	2'30"	2'					13'45"
		LOW							2'	2'	1'	1'	1'30"	1'	2'	2'					12'30"
		EXTRA LOW							1'30"	2'	45"	1'	1'30"	1'	1'30"	2'					11'15"
	SPIN	HIGH															1'30"	1'	5'	1'	8'30"
		MEDIUM															1'15"	1'	5'	1'	8'15"
		LOW															1'	1'	4'	1'	7'
		EXTRA LOW															45"	1'	4'	1'	6'45"
	WASH RINSE	HIGH	3'	20'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	1'30"	1'	3'	2'					43'
		MEDIUM	2'30"	20'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	1'30"	1'	2'30"	2'					41'
		LOW	2'00"	20'	1"	1'	1'30"	1'	2'	2'	1'	1'	1'30"	1'	2'	2'					39'
		EXTRA LOW	1'30"	20'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	1'30"	1'	1'30"	2'					37'
	RINSE SPIN	HIGH							3'	2'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	5'	1'	23'30"
		MEDIUM							2'30"	2'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	5'	1'	22'
		LOW							2'	2'	1'	1'	1'30"	1'	2'	2'	1'	1'	4'	1'	19'30"
		EXTRA LOW							1'30"	2'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	4'	1'	18'
	WASH RINSE SPIN	HIGH	3'00"	20'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	1'30"	1'	3'	2'	1'30"	1'	5'	1'	51'30"
		MEDIUM	2'30"	20'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	1'30"	1'	2'30"	2'	1'15"	1'	5'	1'	49'15"
		LOW	2'	20'	1'	1'	1'30"	1'	2'	2'	1'	1'	1'30"	1'	2'	2'	1'	1'	4'	1'	46'
		EXTRA LOW	1'30"	20'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	1'30"	1'	1'30"	2'	45"	1'	4'	1'	43'45"

5. Schematic and Wiring Diagrams

5-1 Wiring Diagram



5-2 PCB and Pattern Diagram

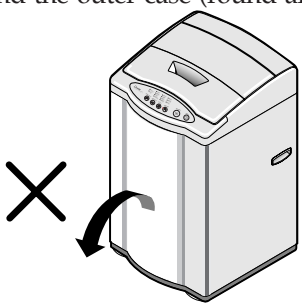


6. Disassembly and Reassembly

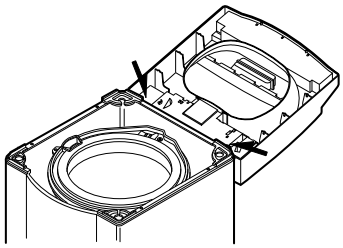
6-1 Cautions for Disassembly and Reassembly

6-1-1 Before Servicing

1. When laying down the washing machine for repair, do not place the front side downwards. This may cause the following :
- The round front face may be deformed.
- The top-cover and the outer-case (round area) may not match.



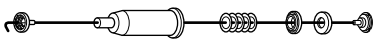
2. When removing the top-cover from the outer-case, do not let the wire bundle fall downwards and touch the sharp edge of the outer-case. Also, do not allow tension to stress the wires.

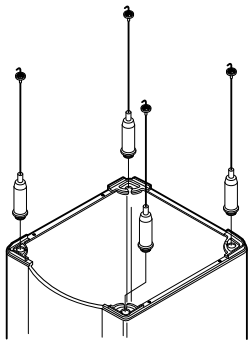


3. When moving the washing machine to a place with a rough floor, do not drag it. If it is dragged, the rubber may get loose, thereby causing severe vibration and noise during washing.

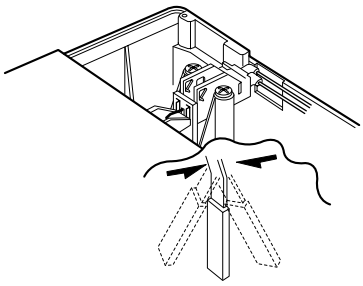
6-1-2 During Servicing

1. When replacing the suspension-bar, be sure to check both the front and rear suspension-bar assemblies. This prevents installation of the front and rear sides in the reverse order.
2. Reversal may cause a severe vibration that might rock the washing machine.

Shape				
	CASE-D	BAR-S	SPRING	COLLOR-S
Front	White	White	Yellow	White
Rear	White	Yellow	Yellow	White

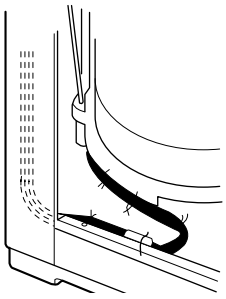


3. When replacing the suspension-bar, only use parts for this model.
4. Since the length of the bar varies among on models, installing the wrong size may cause severe vibration.
5. Do not deform the check-S/W rod of the top-cover.
6. The installation of a deformed check-S/W rod will result in malfunction of the safety switch during severe vibration, thus causing an unbalanced error.

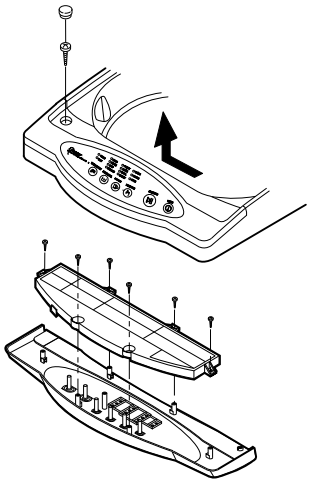
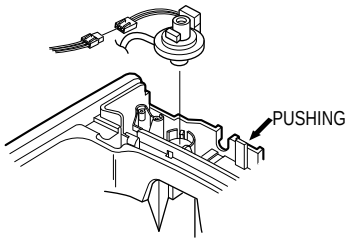
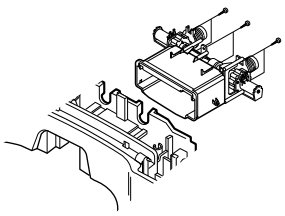
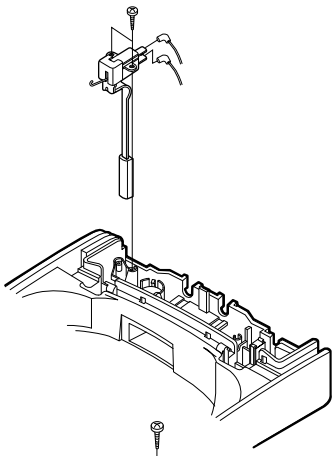
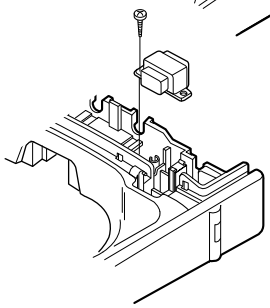


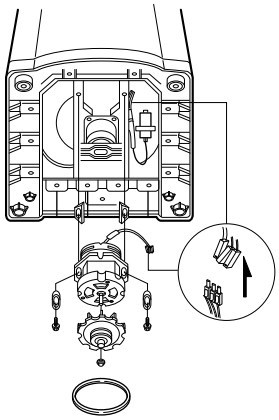
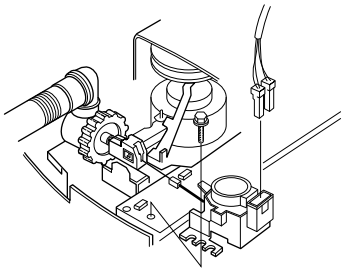
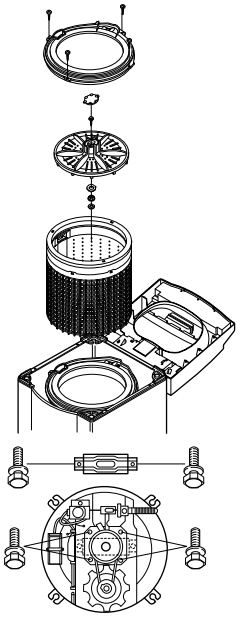
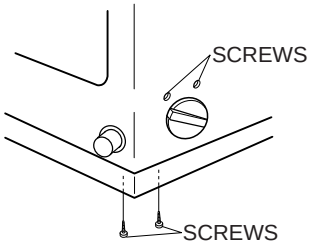
6-1-3 After Servicing

1. Check the level of the washing machine.
2. When setting the wire bundle in the lower section, make sure that the wire bundle is not stressed by any tension due to tilting of the tub assembly.
3. When setting the wires, do not let the wires touch any sharp edges.
4. Remove any moisture on the wire bundle, and on areas surrounding the wire connector.

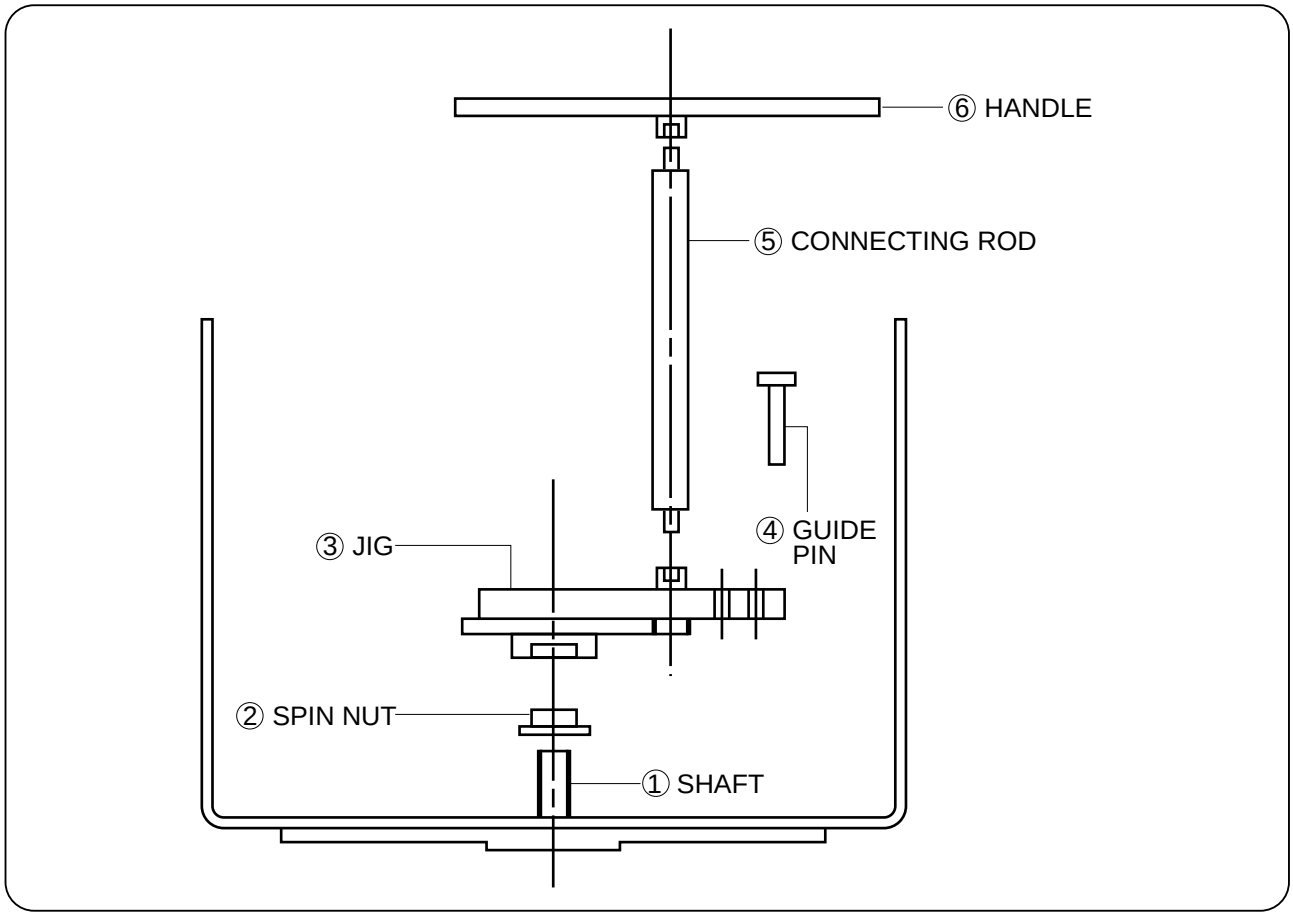


6-2 Disassembly

Disassembly Procedure	Illustration	Remarks
❍ Removing the PCB Assembly 1) Open the Lid. 2) Remove the Screw. 3) Lift up the Control Panel while pushing it from right to left. 4) Turn the Control Panel "up" 5) Remove the six Screws connecting the Control Panel and the PCB Assembly. 6) Disconnect the Wire Harness of the PCB Assembly. 7) Pull away the PCB Assembly. 8) Do the reassembly in reverse order.		
❍ Removing the Pressure-Sensor, Water-Valve, Checker Assembly, and Transformer 1) Remove two Screws fixing the Top-Cover and the Cover T.C. 2) Lift up the Cover TC while pushing it in the direction of the arrow. ◗ Pressure Sensor 1) Pull out the Lead Wire Terminal of the Pressure Sensor. 2) Remove the Pressure Sensor. 3) Pull out the Air Hose. ◗ PreWater Valve 1) Pull out the Lead Wire Terminals. 2) Remove the Screws which fix the detergent box to the top-cover. ◗ PreChecker 1) Pull out the Lead Wire Terminals. 2) Remove the two Screws. 3) Lift out the Checker. ◗ PreWire Harness 1) Pull out the Lead Wire Terminals from the PCB. 2) Pull out the Lead Wire Terminals from the parts in back of the Top Cover. 3) Remove the Wire Harness. ◗ PreTransformer 1) Pull out the Lead Wire Terminals. 2) Remove the Screw. 3) Remove the Transformer.	   	

Disassembly Procedure	Illustration	Remarks
❍ Removing the Motor 1) Remove the Back Cover. 2) Lay down the Washing Machine with the rear side facing the floor. 3) Pull out the Sound Absorption Panel. 4) Remove the Wire Housing. 5) Remove the V Belt. 6) Remove the two Bolts fastening the Motor. 7) Remove the Motor Pulley. 8) Pull out the Motor		
❍ Removing the Drain Motor 1) Lay down the Washing Machine with the rear side facing the floor. 2) Pull out the Lead Wire Terminal. 3) Remove the Bolt. 4) Remove the Drain Motor Wire from the Link. 5) Lift out the Drain Motor		
❍ Removing the Shaft Assembly 1) Remove the four Screws fixing the Top Cover, and lift up the Top Cover gently tilt the Top Cover back to expose the Tub Cover. 2) Remove the four Screws fixing the Tub Cover. 3) Remove the Bolt fixing the Pulsator. 4) Remove the Spin Nut fixing the flange Shaft and the Shaft and pull out the Spin Basket. **Caution** •Disassemble the Spin Nut in a counterclockwise direction. 5) Lay down the Washing Machine with the rear side facing the floor. 6) Remove the two Bolts fixing the Saddle. 7) Remove the four Bolts fixing the Shaft using the Box and take out the Shaft Assembly.		
❍ Removing the Pump Assy 1) Remove the Back Cover. 2) Remove the Lead Wire Terminal and the Earth Wire. 3) Remove the Two Hoses. 4) Remove the 2screws which fix the filter. 5) Lay down the Washer with the right side facing the Floor. 6) Remove the 2 Screws which fix the pump. 7) Lift out the Pump.		

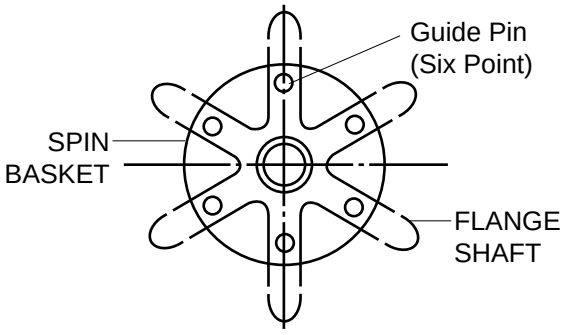
6-3 Spin - Nut Repairing Box



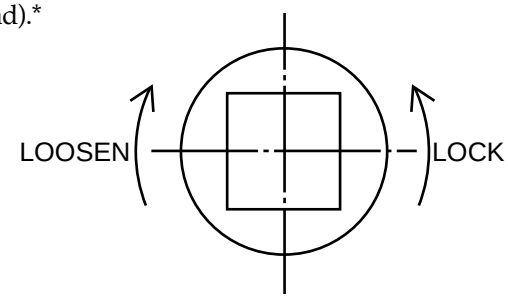
6-3-1 Procedure

1. Insert the jig ③ into the spin-nut ②.

2. Insert the guide pin ④ into the groove of the flange - shaft by rotating it to the right and left.



3. Insert the connecting rod ⑤ and handle ⑥ into the square box. Then turn the handle clockwise on the axis of the small box to disassemble (Right-hand thread).*



*To disassemble the box, give three to four times of instantaneous shocks to the handle in the loosening direction, then disassemble it by turning the handle when the nut is loosened.

4. To disassemble the box, strike the handle three or four times-quick shocks to loosen it-then complete the disassembly by turning the handle as the nut is loosened.
5. Reassemble in reverse order.

7. Troubleshooting

7-1 Self - diagnostic Functions (Buzzer Alarm)

If there is a problem during operation, the following error conditions are shown on the LED display, and the washing machine stops its operation.

Error	Condition	Buzzer	Solution
Water level sensor error WASH	Water level sensor fails to send signal for longer than 15 seconds.	The buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Press the "Power" button. No other buttons work.
Auto - off error RINSE	Power does not turn off despite 3 power-off trials by program	the buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Press the "Power" button. Another buttons do not work.
Water supply error WOOL	No frequency change for 60 minutes from water supply.	The buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Press the "Power" button. No other buttons work.
Drain error SPEEDY	Water level does not decrease to the reset point within 6 minutes from draining water.	The buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Press the "Power" button. No other buttons work.
Door open error SPIN	Door is open during dehydration cycle.	The buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Close the door.
Unbalance error FUZZY	An unbalanced load is sensed three times during dehydration cycle.	The buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Open the door. Balance the laundry. Close the door.

7-2 Test Mode

7-2-1 Test Mode : WATER LEVEL+POWER

1. Entering : Press the power key while pressing down the WATER LEVEL button.

→ 01 → 02 → 03 → 04 → 05 → 06 ┐

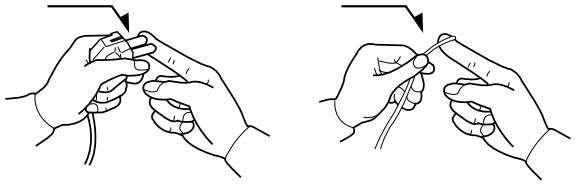
2. Each mode description

MODE NO	TEST METHOD	TEST DESCRIPTION	REMARKS
1	· PRESS the START/HOLD key	Aging test in driving part and then, driving part and display are turned ON/OFF for 1 second.	
2	· PRESS the COURCE key once · PRESS the START/HOLD key	Repeating 5 min. dehydration and 3 min. stop without draining. It read Lid open and unbalance and shows them. It shows this on the indicator.	
3	· PRESS the COURCE key once · PRESS the START/HOLD key	Operate the washing cycle after suppling water to high level.	

7-3 Servicing Precautions

When trouble shooting or parts, be sure to observe the following.

1. Be sure to let the resistance of 1 MΩ contact the human body before grounding. When it is impossible to ground, let the human body contact the power plug and the grounding wire once to eliminate the potential damaging shock hazard.
- After replacing the controller, the defective parts should be returned to the suppliers of these parts for root-cause analysis and incorporation into for future product planning. At the time of return, be sure to pack them together with repair parts. Otherwise, it is impossible to perform root cause analysis due to the static electricity.



<Notice on disassembly and repair>

2. The wiring should be properly connected in accordance with the wiring diagram. Erroneous wiring may cause faulty operation, smoke, or fire.

3. Be sure to pull out the power plug during repair.

4. Special attention should be paid to connection, insulation treatment, and wiring work for the lead wire.
- The lead wire should be soldered, and insulation-treated with vinyl tape, or connected to the pressure connection terminal for drain treatment.
- When connecting the lead wire, take care not to let it touch hight components of metal sugared. This is a "wloow"

5.Be sure to use only authorized replacement parts.

6. AC 110V-220V is applied between T1 and T2 of the triac on the P.C.B Therefore, touching the radiating plate accidentally may cause electric shock. Also, the P.C.B. Both high and low voltages exist on the P.C.B.

7. Do not replace any parts on the board, except the tact switch on the P.C.B. assembly is in trouble. The P.C.B assembly is treated with an insulation coating, the enhanced moisture-proofing.

8. When you suspect that the operation of the micom is faulty, take actions in accordance with the specified troubleshooting procedures. Do not attempt to replace the entire P.C.B. assembly without first doing a root-cause analysis.

9. Because the parts installed in the P.C.B. are treated with a urethane coating, they cannot be inspected by the test bar. Therefore, first check the lower parts for any abnormality using the lead wire of the housing (LP-09-1). Going down connected with the P.C.B.

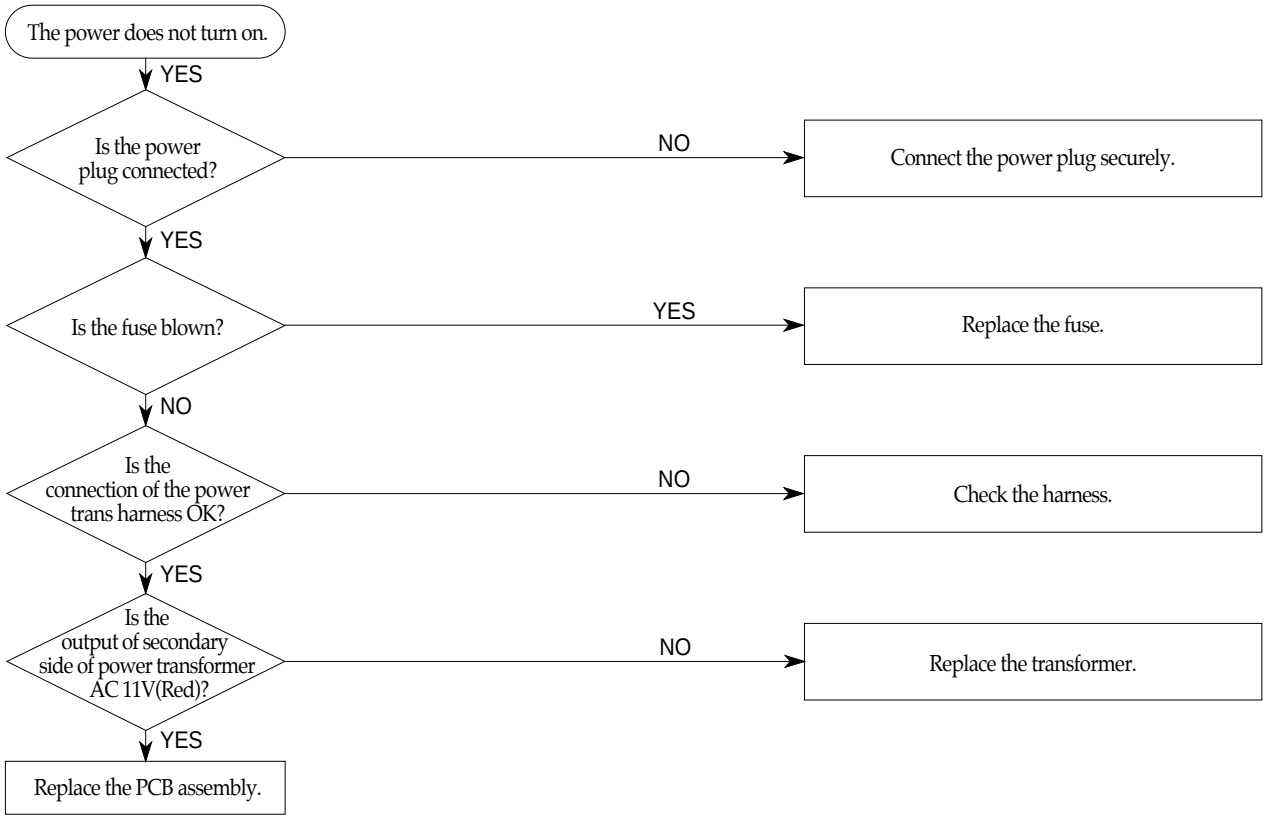
7-4 Troubleshooting

7-4-1 Troubleshooting of the Power Supply Board

If any of the following occurs, the PCB is defective. Replace the PCB.

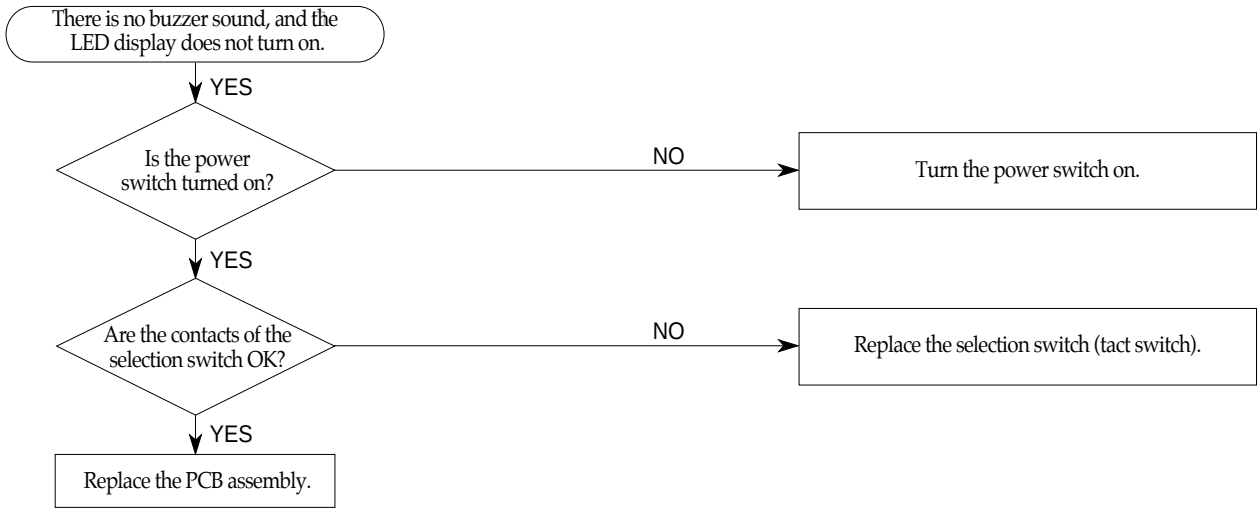
1. Pressing a selection button illuminates the LED display, but the buzzer does not sound.
2. Pressing a selection button sounds the buzzer, but does not illuminate the LED.
3. Pressing a selection button illuminates the wrong LED.

Insert the power plug into the receptacle and press the Power button. If the stored parameters do not display, check the following :



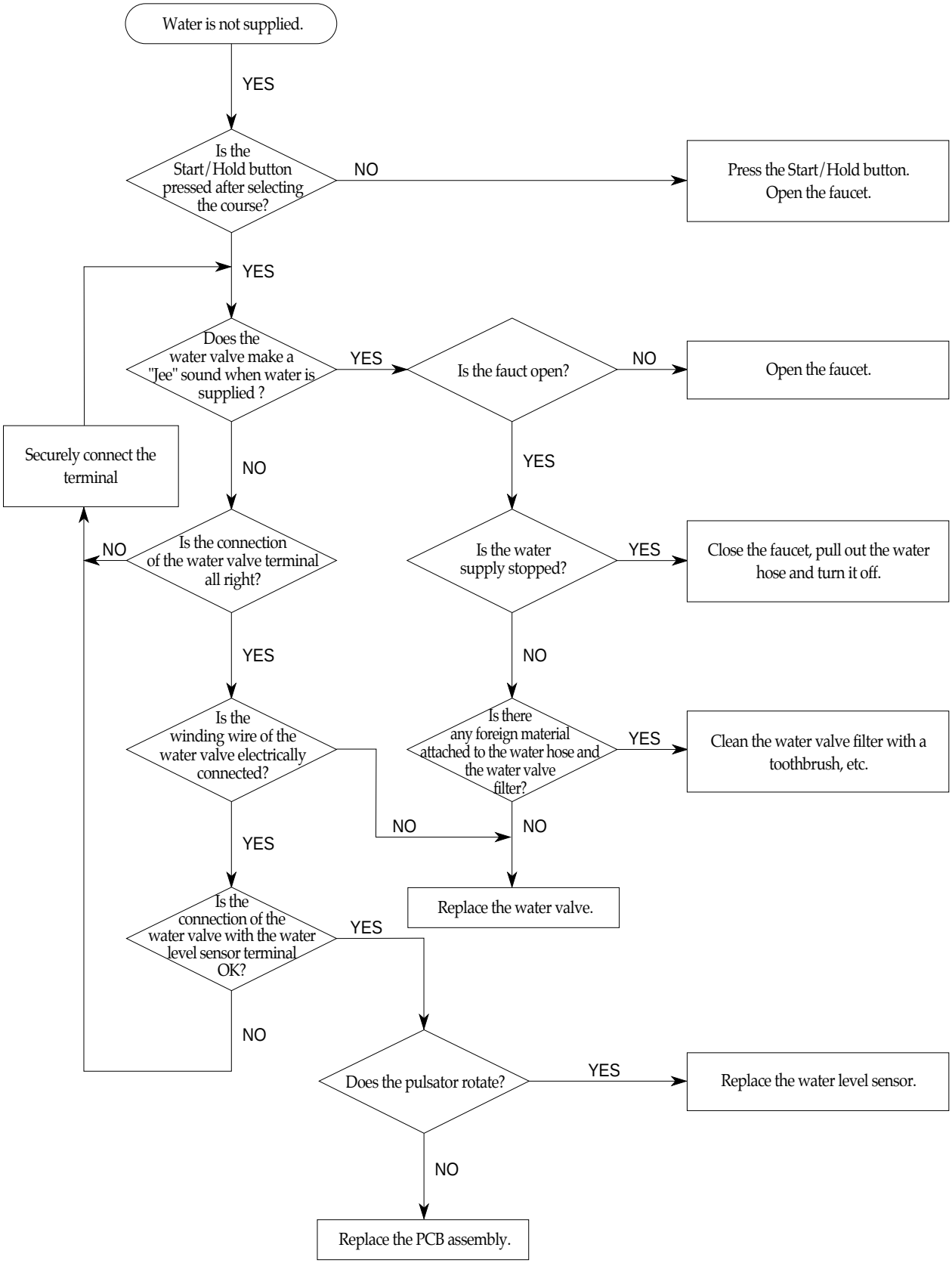
7-4-2 Keyboard

• When pressing a selection button, the buzzer does not sound, or the LED does not display.

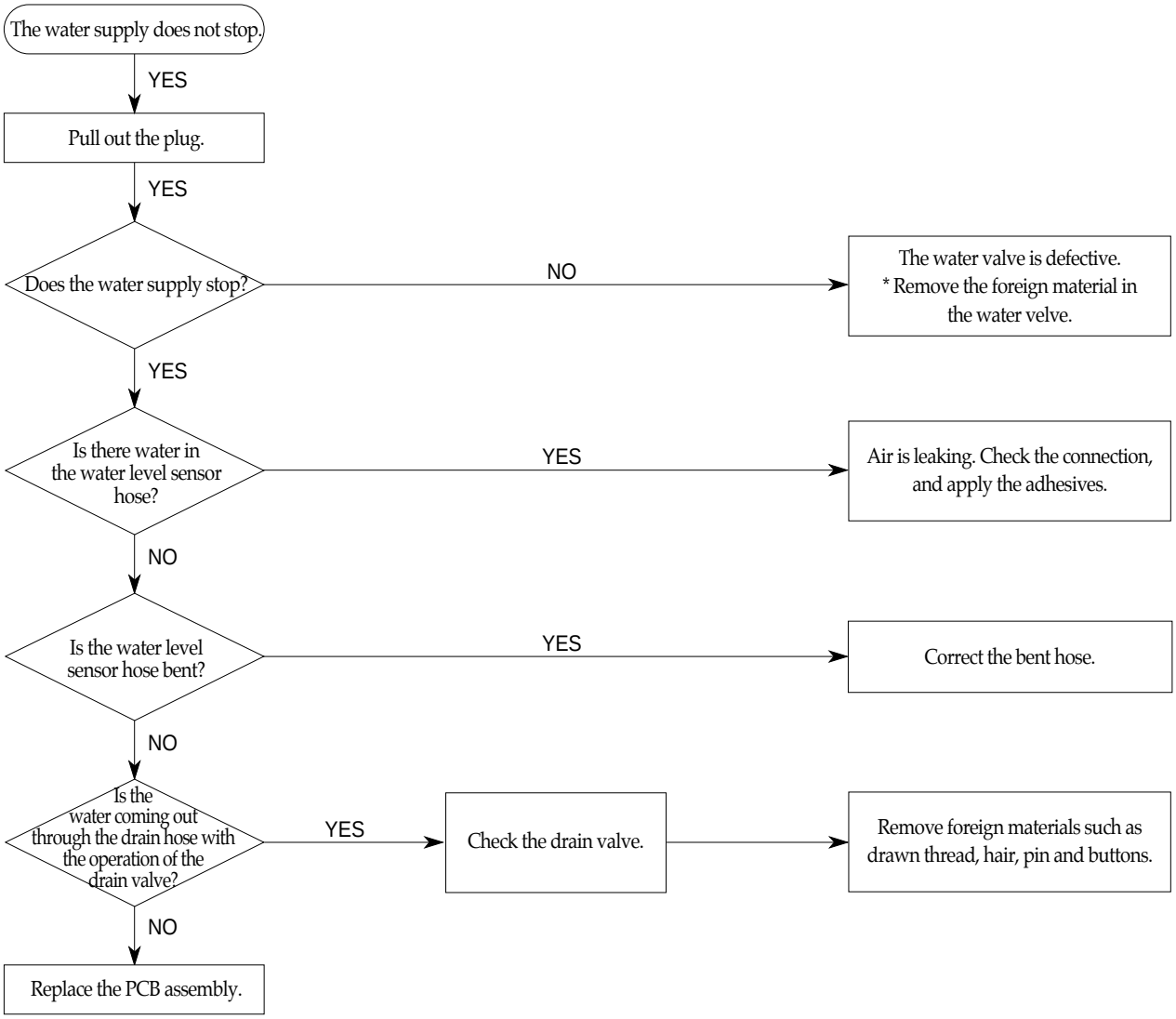


7-4-3 Driving Unit

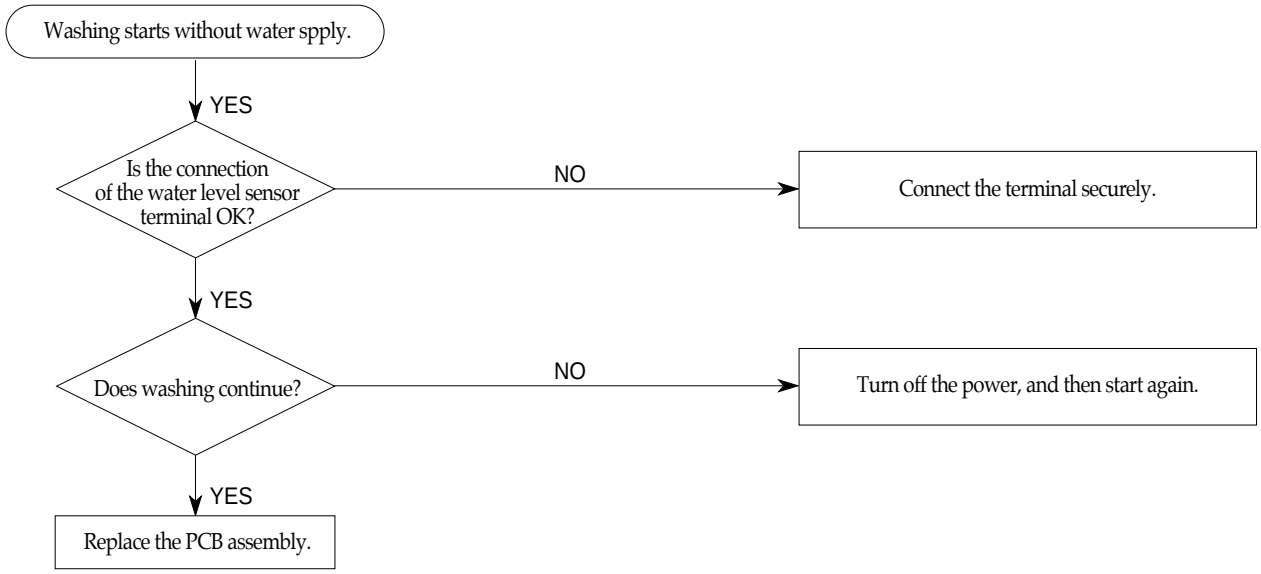
• Water supply Error



• Water Stop Error

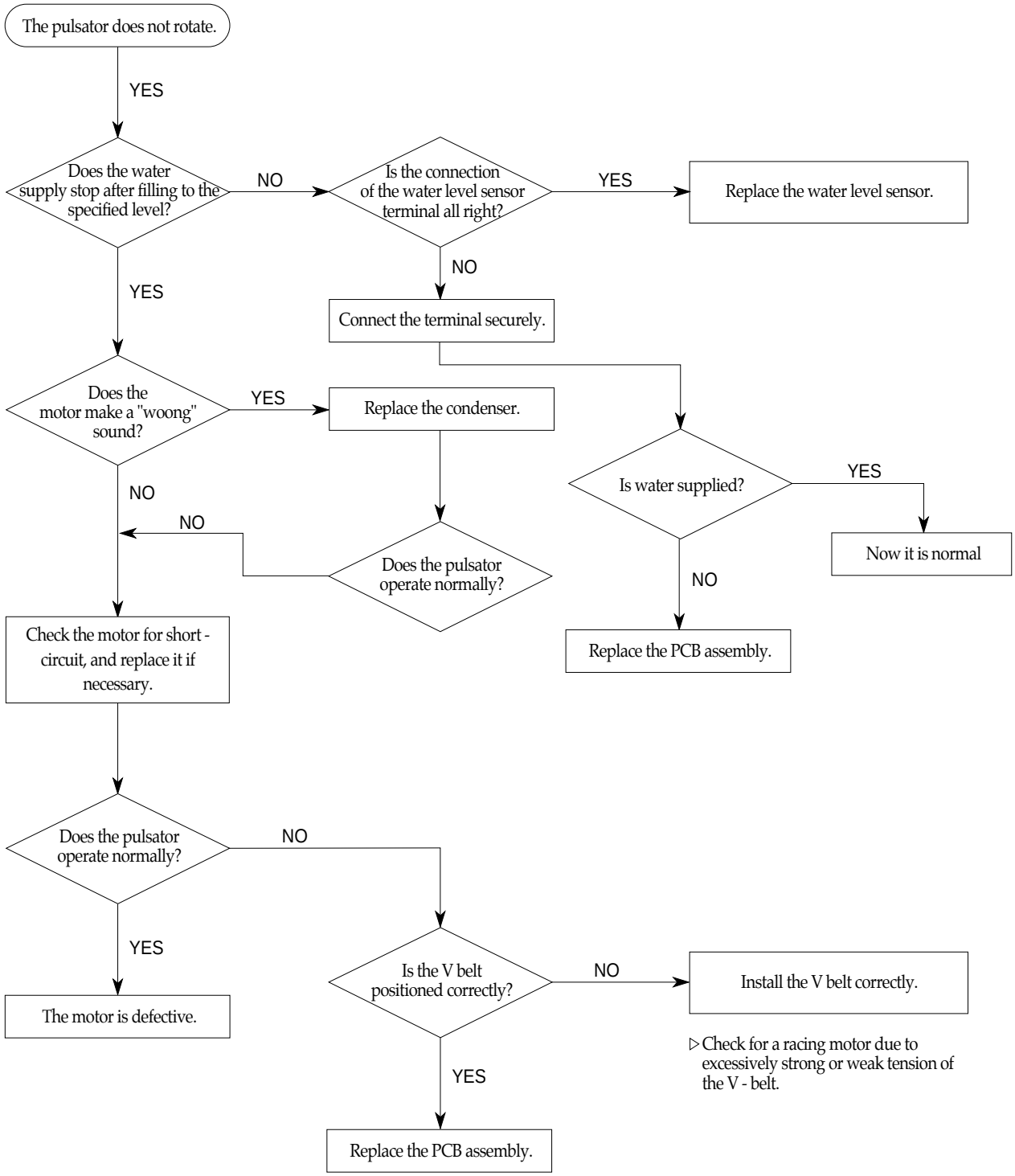


• Washing is started without water supply.

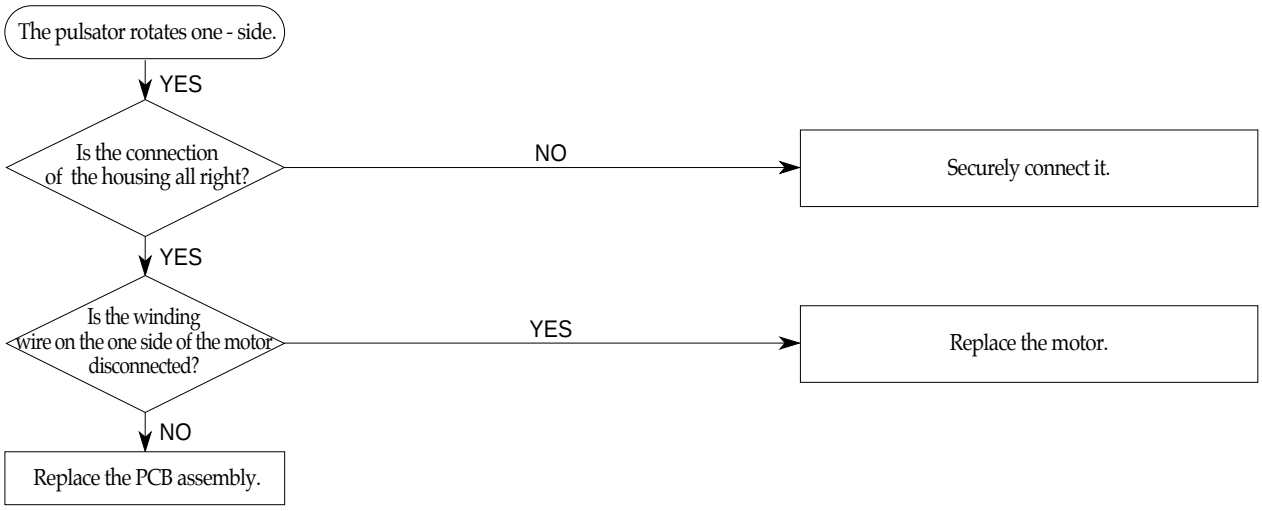


• The pulsator does not rotate during washing.

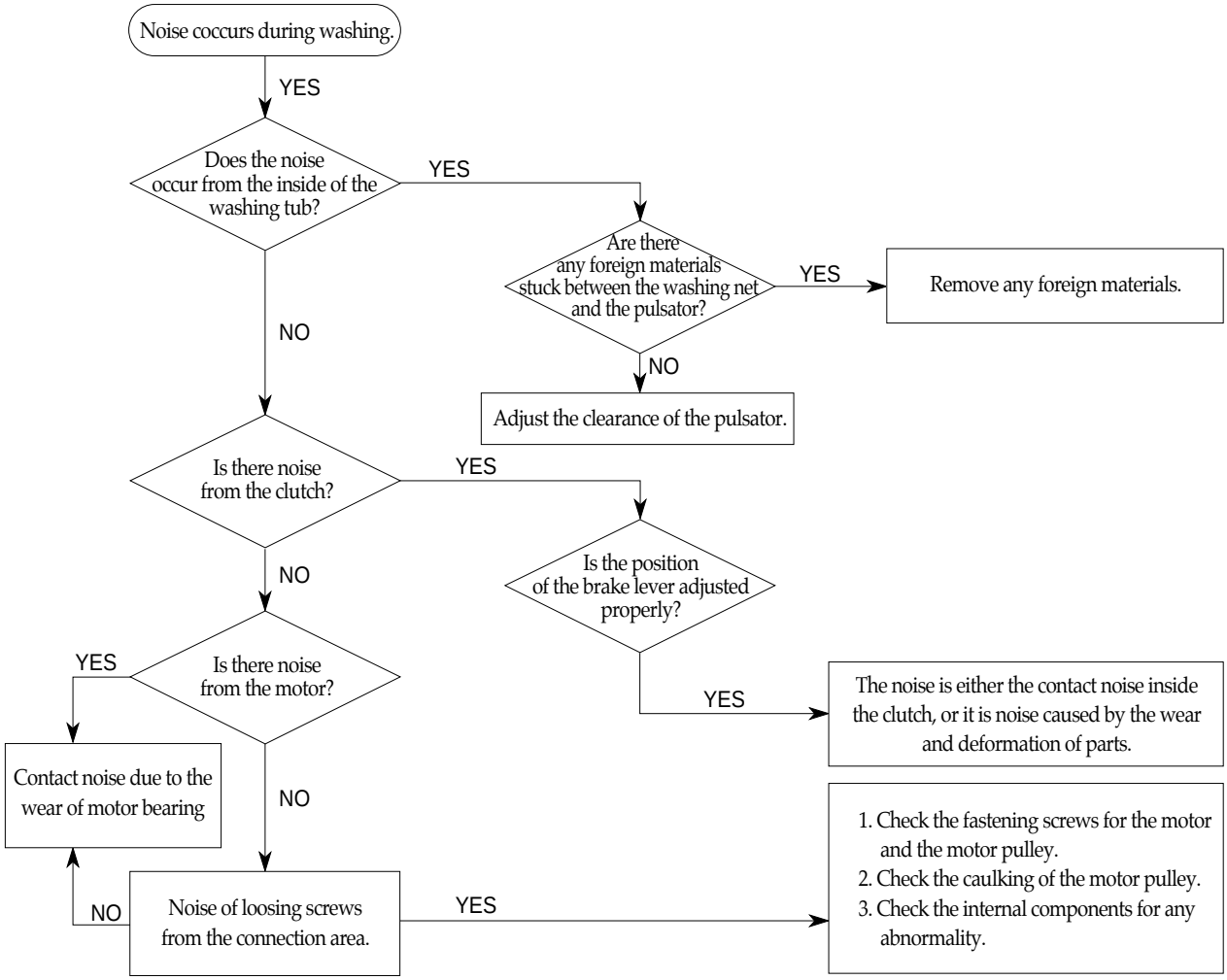
➢ This malfunction may be caused by defective contacts of the wire harness.



• Defective Rotation during Washing

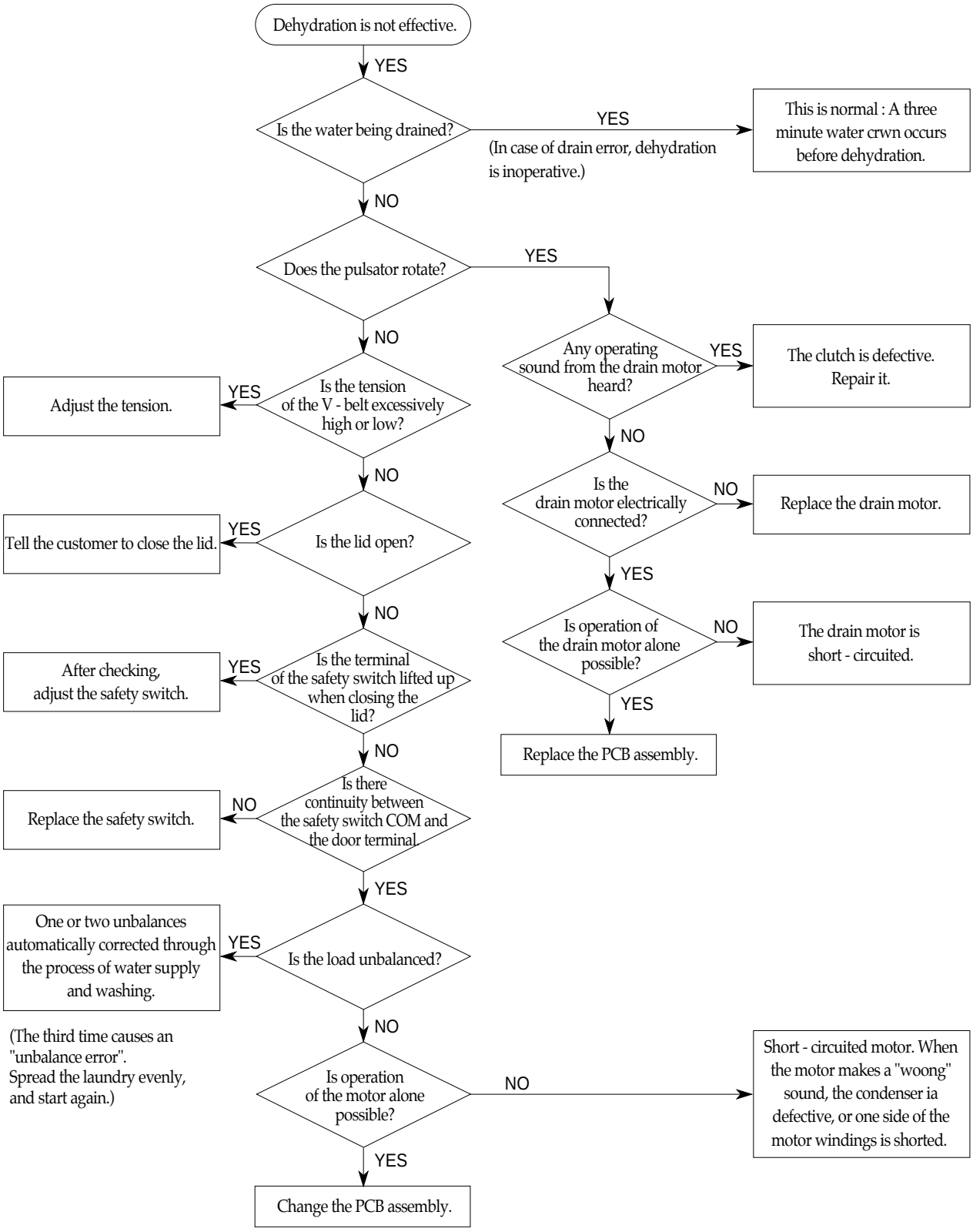


• Noise Occurs during Washing.

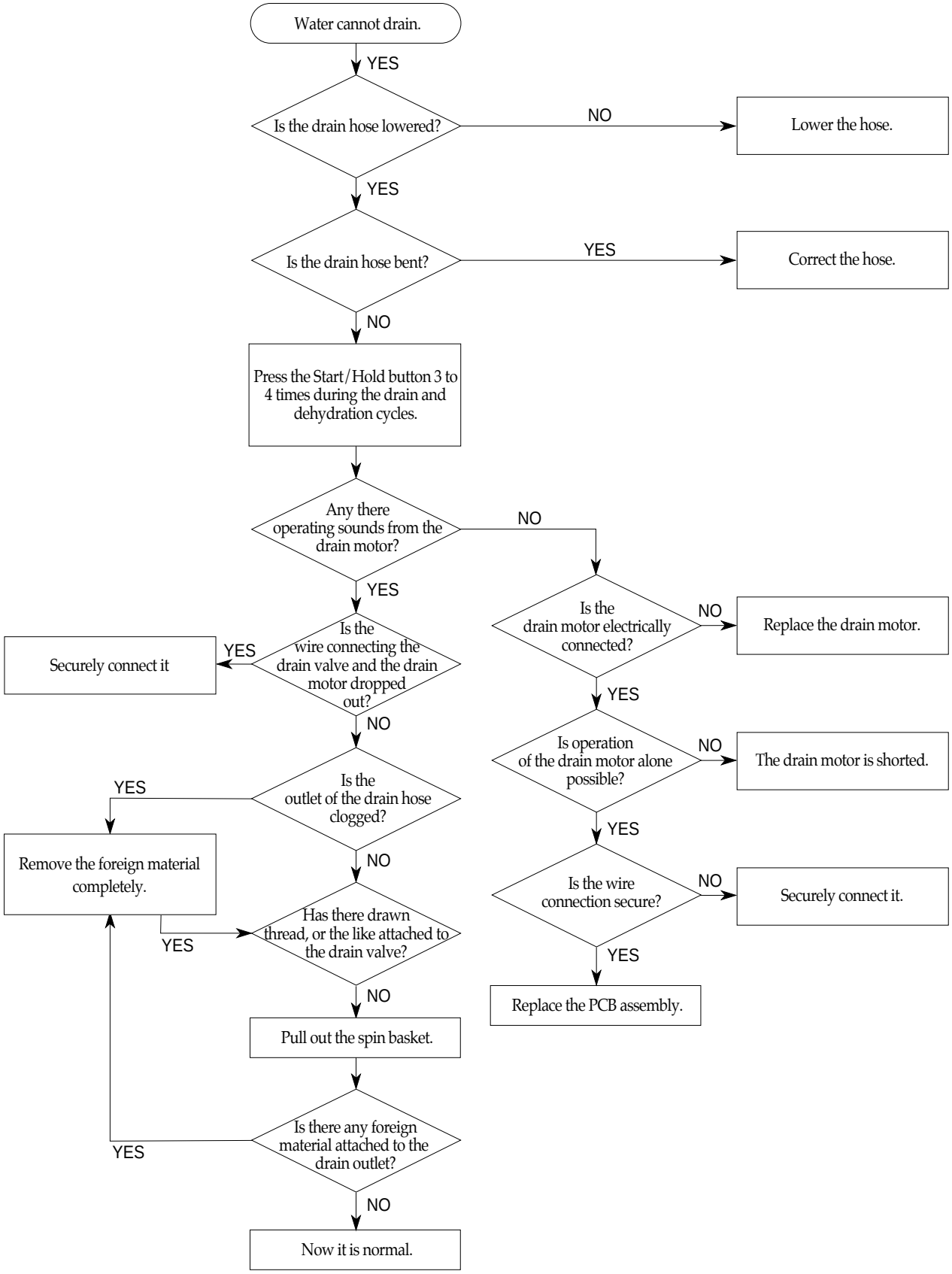


(The following soond does not indicate any problem :
The "Sha" sound generated during the stop of the dehydration tub is the sound of the water moving by automatic balance in the dehydration tub.)

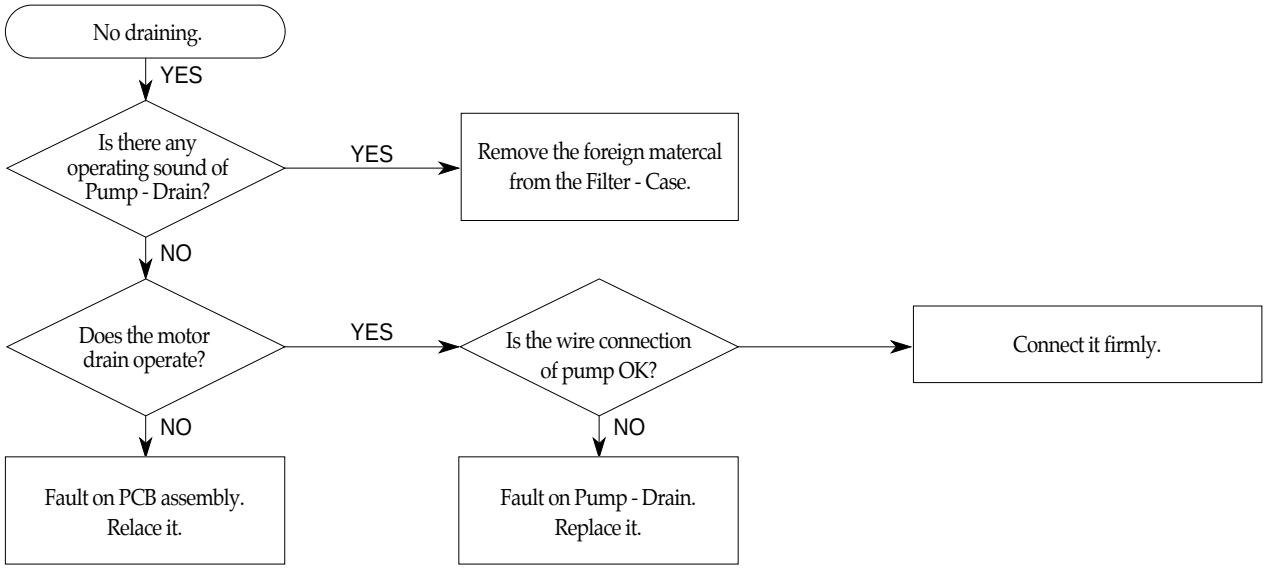
• Defective Dehydration



• Draining Water is not Possible.



• No draining. (With PUMP MODEL)

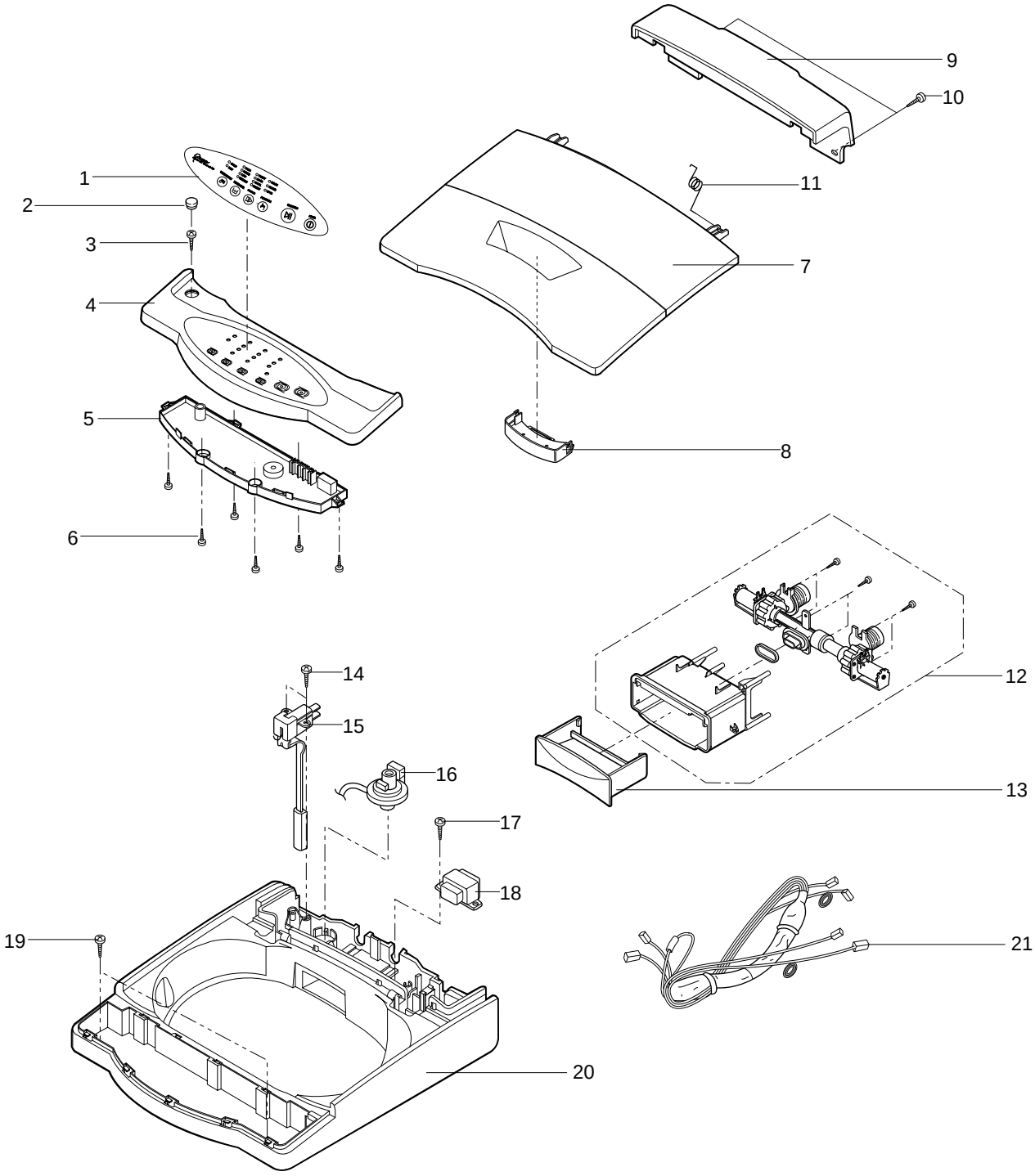


7-4-4 Inspection After Repair

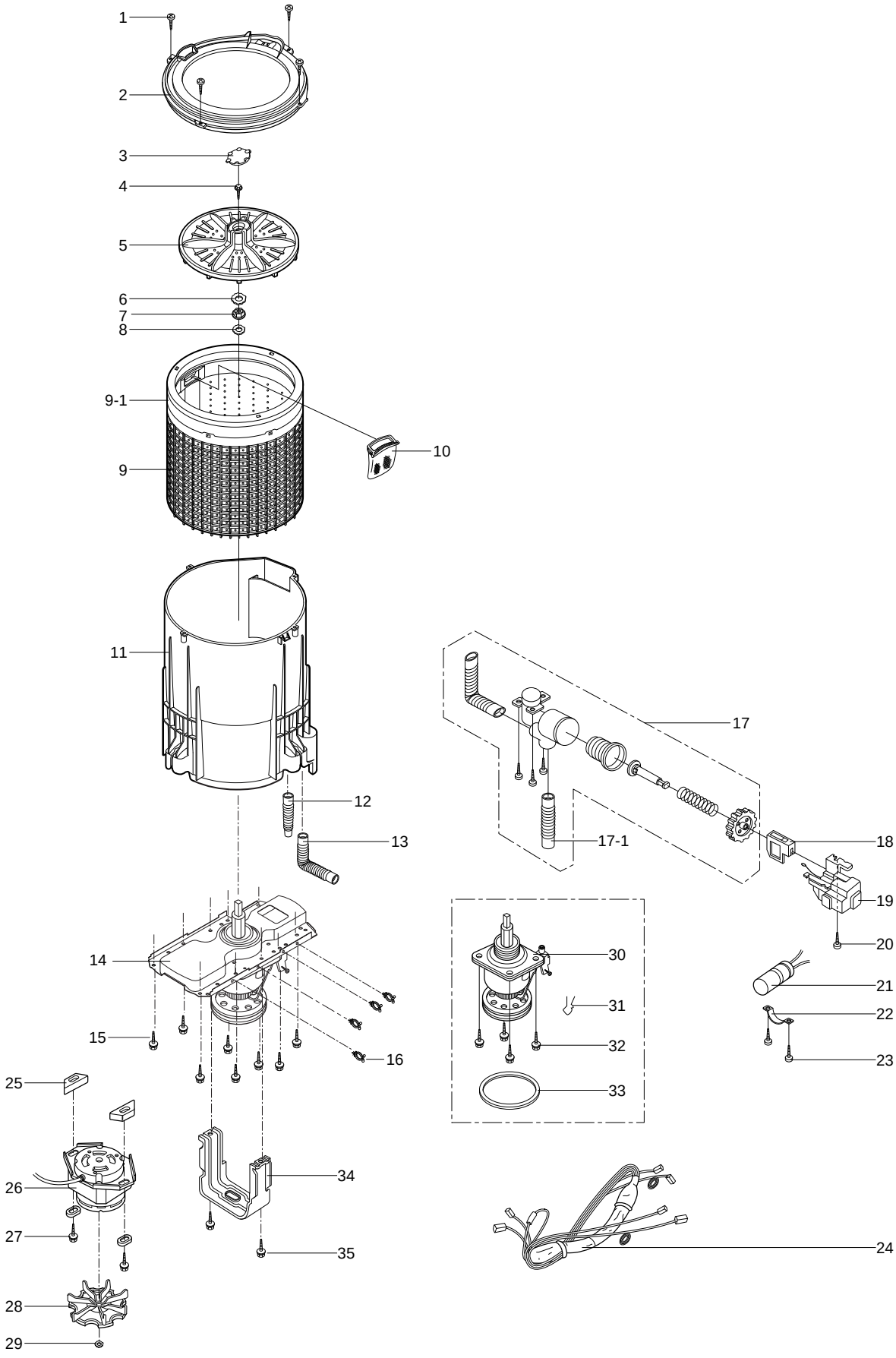
Inspection Item	Description
Check grounding	Check that the original grounding wire of the washing machine is securely grounded. Connection of the grounding wire? wire to a gas or water pipe made of vinyl chloride is very dangerous.
Check the safety system	Check the operation of the brake. If the following braking times are exceeded, readjust or repair the brake system.
Dressing the lead wires	Tie the lead wires with a separate wire to prevent them from scattering. Check that they are securely connected.
Check the locking nuts and screws	Check that the nuts and screws are securely locked, and be sure to apply screw lock.
Check inside the washing machine	Check for any vinyl wires, screws, or foreign materials inside the washing machine.
Check for oil (lubricant) or water leakage	In particular, check the surrounding areas of driving units for oil (lubricant) leakage, and check the moving parts of the drain valve for water leakage.
Checking the connection of the power cord	Check the power cord, plug, and receptacle for any damage. Make sure they comply with the working voltage.
Adjustment of horizontal level of the washing machine	Adjust the height of the two adjusting legs (front of the washing machine) so that the washing machine is horizontally level.

Load	Braking Time
No load	Below 7 seconds
Rated load (5.0/5.5kg)	Below 10 seconds

8. Exploded Views



Location No.	⚠	Code No.	Description	Specification	Q'ty	Remarks
1		DC64 - 30086A	INLAY - PANEL	PC	1	
2		DC61 - 10331R	COVER - SCREW	ABS	1	L/GRY
3		DC60 - 20054F	SCREW - TAPPING	1 - 4 X 14	1	
4		DC61 - 10663A	PANEL - CONTROL	PP	1	L/GRY
5		DC90 - 11124A	ASS'Y - P.C.B URETHAN	SW80W1	1	220V/50Hz(H/C)
6		DC60 - 20054F	SCREW - TAPPING	1 - 4 X 14	6	
7		DC91-11997A	ASS'Y LID T.C	PP	1	
8		DC61 - 20087A	LID - HANDLE	ABS	1	L/GRY
9		DC61 - 10661A	COVER - T.C	PP	1	L/GRY
10		DC60 - 20057B	SCREW - TAPPING	1 - 5 X 16 STS	2	
11		DC61 - 70215A	SPRING - Q (R)	STS 304	1	
12		DC91 - 11928A	ASS'Y - DETERGENT	220/240V 50/60Hz	1	HOT+COLD
		DC91 - 11928B	ASS'Y - DETERGENT	110/120V 50/60Hz	1	HOT+COLD
		DC91 - 11928C	ASS'Y - DETERGENT	220/240V 50/60Hz	1	COLD
		DC91 - 11928D	ASS'Y - DETERGENT	110/120V 50/60Hz	1	COLD
		DC91 - 11928E	ASS'Y - DETERGENT	220/240V 50/60Hz	1	HOT+COLD+RINSE
		DC91 - 11928F	ASS'Y - DETERGENT	110/120V 50/60Hz	1	HOT+COLD+RINSE
		DC91 - 11928G	ASS'Y - DETERGENT	220/240V 50/60Hz	1	COLD+RINSE
		DC91 - 11928H	ASS'Y - DETERGENT	110/120V 50/60Hz	1	COLD+RINSE
13		DC91 - 11923A	ASS'Y - CASE DETERGENT	L/GRY	1	
		DC91 - 11923B	ASS'Y - CASE DETERGENT	L/GRY	1	FOR RINSE
14		DC60 - 20054F	SCREW - TAPPING	1 - 4 X 14	2	
15	⚠	DC90 - 10104E	ASS'Y - CHECKER S/W		1	
16	⚠	DC32 - 30006F	SENSOR - PRESSURE	DN-S1	1	
17		DC60 - 20054F	SCREW - TAPPING	1 - 4 X 14	1	
18	⚠	DC26 - 10153D/F	TRANS - FORMER	220/240V 50/60Hz	1	
	⚠	DC26 - 10153C/E	TRANS - FORMER	110/120V 50/60Hz	1	
19		DC60 - 20058B	SCREW - TAPPING	1 - 5 X 20	2	
20		DC61 - 10662A	COVER - TOP	PP	1	L/GRY
21		DC90 - 11121A	ASS'Y - MAIN WIRE HARNESS	SW80W1	1	HOT+COLD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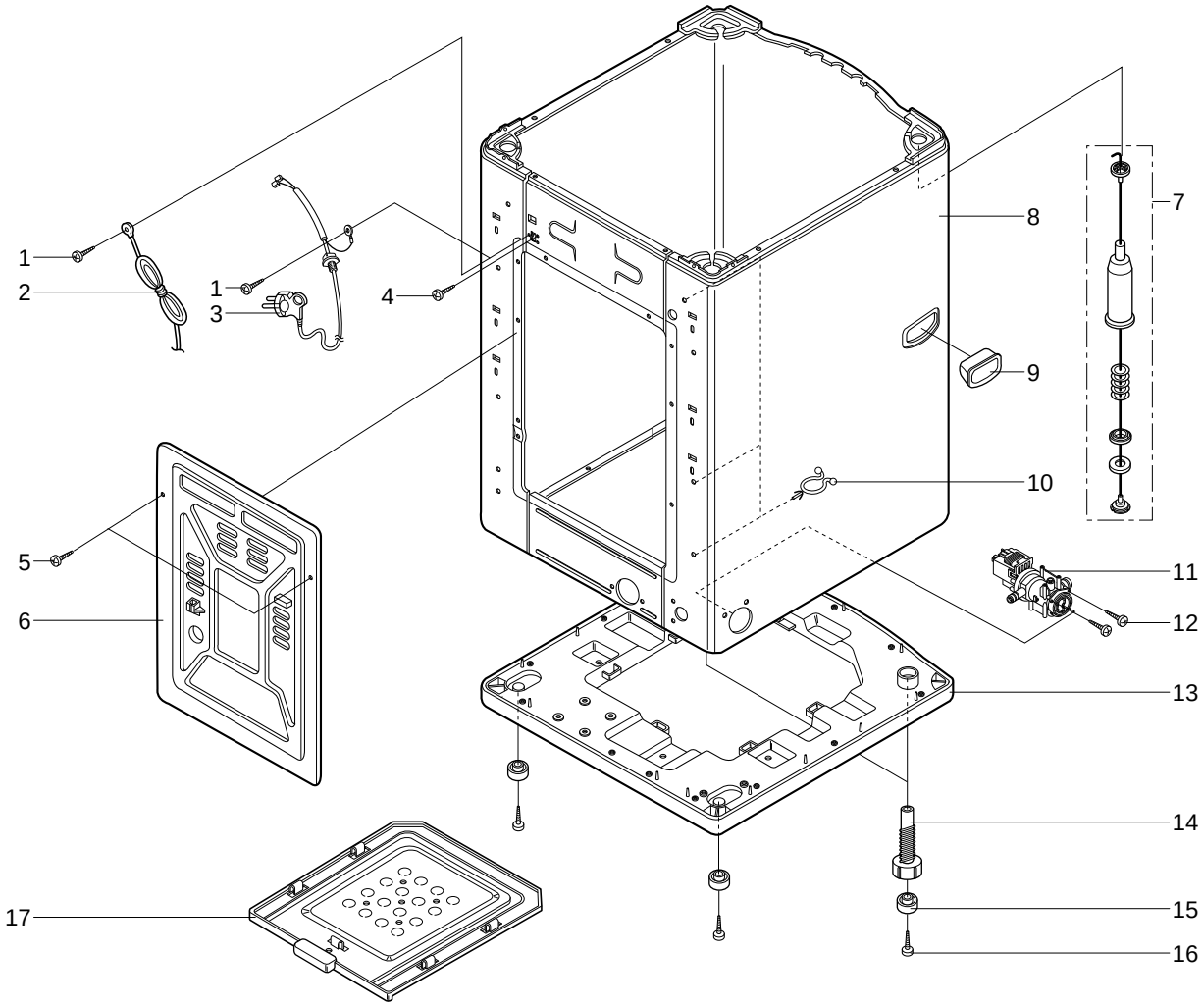
Location No.	⚠	Code No.	Description	Specification	Q'ty	Remarks
1		6002 - 000443	SCREW - TAPPING	2 - 4 X 20 STS	4	
2		DC61 - 10403A	COVER - TUB	PP	1	
3		DC66 - 50028B	CAP - PULSATOR	ABS	1	
4		DC91 - 11258S	ASS'Y - SCREW PULSATOR	M6 X 20.5	1	
5		DC66 - 50183A	PULSATOR	PP	1	
6		DC60 - 60003B	WASHER - PULSATOR		1	
7		DC60 - 50004A	NUT - SPIN	ALDC M24	1	
8		DC60-60015A	WASHER-PLAIN	24.2 x 35	1	
9		DC91 - 12010A	ASS'Y - BASKET SPIN	SW80WI(P)	1	PP
9-1		DC91 - 12040A	ASS'Y - BLANCER		1	
10		DC91 - 11774Q	ASS'Y - CASE NET		2	
11		DC61 - 30323A	TUB - OUTER	PP	1	
12		DC62 - 10295A	HOSE - DRAIN	EPDM	1	PUMP
13		DC62 - 10294A	HOSE - PUMP	EPDM	1	PUMP
14		DC61 - 70063A	DIE - MOTOR	SBHG 1	1	
15		DC60 - 20064C	SCREW - TAPPING	2 - 6.2 X 20	8	
16		6046 - 000311	STAND OFF	NYLON 66	5	
17		DC91 - 10255B	ASS'Y - CASE D.V		1	NO PUMP
17-1		DC91 - 10363B	ASS'Y - CUFF HOSE	EPDM (169 mm)	1	NO PUMP
18		DC66 - 30027C	LINK	POM	1	BLK
19		DC31 - 20009F	MOTOR - DRAIN	220/240V 50/60Hz	1	
	⚠	DC31 - 20009G	MOTOR - DRAIN	110/120V 50/60Hz	1	
20	⚠	DC91 - 11258M	ASS'Y - SCREW	M5 X 15	1	
21		DC62 - 50011F	CONDENSER - M.F	400VAC 12 uF	1	
	⚠	DC62 - 50011D	CONDENSER - M.F	220 VAC 42 uF	1	
22	⚠	DC61 - 40077A	HOLDER - CONDENSER	PP	1	
23		DC60 - 20058B	SCREW - TAPPING	1 - 5 x 20	2	
24		DC90 - 11120A	ASS'Y - WIRE HARNESS	SW80W1P	1	PUMP
		DC90 - 11155A	ASS'Y - WIRE HARNESS	SW80W1	1	NO PUMP
25		DC61 - 60026A	CUSHION - MOTOR	FRPP	2	
26		DC31 - 10025C	MOTOR - WASH	220/240V 50/60Hz	1	
	⚠	DC31 - 10025B	MOTOR - WASH	110/120V 50/60Hz	1	
27	⚠	DC91 - 11258B	ASS'Y - SCREW	M8 x 40	2	
28		DC66 - 10174A	PULLEY - MOTOR	50 Hz	1	
		DC66 - 10175A	PULLEY - MOTOR	60 Hz	1	
29		DC60 - 50150A	NUT - HEX	M8 x 6.5	1	
30		DC91 - 10057D	ASS'Y - SHAFT	SEM - 50D	1	
31		DC60 - 80017B	PIN - LINK	M8 x 16	1	
32		DC91 - 11258E	ASS'Y - SCREW	M8 x 40	4	
33		DC66 - 10045B	BELT - V	M20.5	1	50 Hz
		DC66 - 10045C	BELT - V	M20	1	60 Hz
34		DC61 - 40053A	SADDLE	SBHG1 - A	1	
35		DC60 - 20064C	SCREW - TAPPING	6.2 x 20	2	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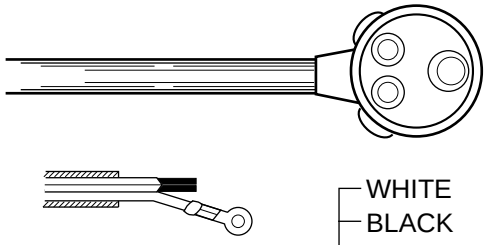
Location No.	⚠	Code No.	Description	Specification	Q'ty	Remarks
1		DC60 - 10003C	SCREW - MACHINE	M4 x 8 BS	1	
2		DC90 - 10318A	ASSY - WIRE EARTH	2.6m	1	OPTION
3	⚠		ASS'Y - POWER CORD		1	R
4		DC60 - 10003C	SCREW - MACHINE	M4 x 8 BS	1	
5		DC60 - 20060A	SCREW - TAPPING		2	
6		DC61 - 10226A	COVER - BACK	PP	1	
7		DC91 - 11378K	ASS'Y - DAMPER	FRONT/WHT	2	
		DC91 - 11378L	ASS'Y - DAMPER	REAR/YEL	2	
8		DC92 - 11195A	ASS'Y - PAINT	SBHG1 - A	1	
9		DC61 - 20018J	HANDLE	PP	2	
10		6406-000310	STAND OFF		7	
11	⚠	DC90 - 11110A	ASS'Y - PUMP DRAIN	220/240V 50Hz	1	
	⚠	DC90 - 11110B	ASS'Y - PUMP DRAIN	220/60Hz	1	
	⚠	DC90 - 11110C	ASS'Y - PUMP DRAIN	120/60Hz	1	
12		DC60 - 20054F	SCREW - TAPPING	1 - 4 x 14	4	
13		DC61 - 30321A	BASE	PP	1	
14		DC61 - 50009A	LEG - ADJUST	FRPP	2	
15		DC61 - 50160A	LEG - RUBBER	BUTYL	4	
16		DC60 - 20054F	SCREW - TAPPING	1 - 4 x 14	4	
17		DC61 - 20211A	PAN - SILENT	PP	1	OPTION

9. Power - Cord

BP3 (DC90 - 10838A)



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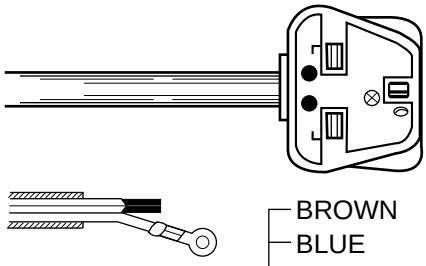
BF3 (DC61 - 60035A)



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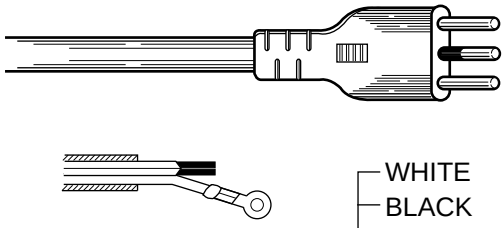
CP3 (DC39 - 10001C)



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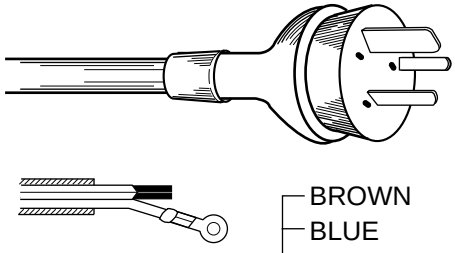
AP3 (DC39 - 10144A)



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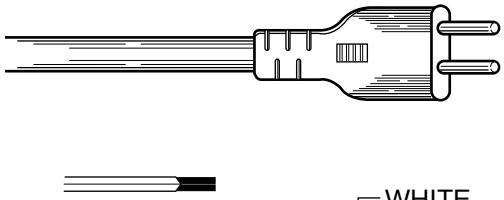
CP2 (DC61 - 60034A)



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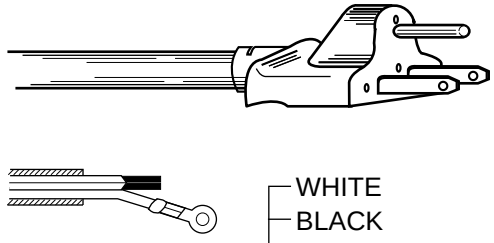
EP3 (DC61 - 60055B)



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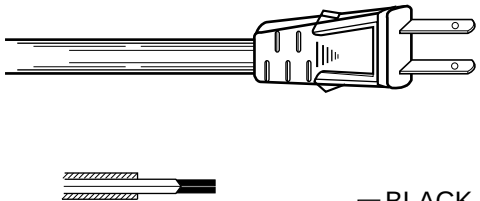
EP2 (DC61 - 60041A)



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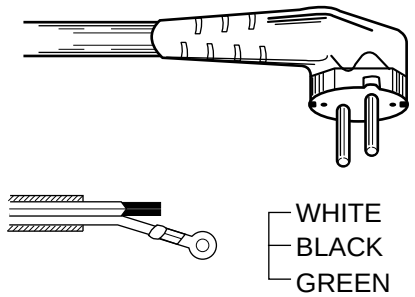
CP2-D (DC90 - 10065C)



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