







## 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
<b>Water level sensor error</b> 	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.
<b>Water supply error</b> 	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.
<b>Drain error</b> 	Water level does not decrease to the reset point within 15 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.
<b>Door open error</b>  Pressing "START" button stop the buzzer. No buttons work.	Door is open during dehydration cycle. Only to raise at spin.	The buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Close the door.
<b>Unbalance error</b>  Pressing "START" button stops the buzzer. No other buttons work.	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.
<b>Overflow error</b>  Put off the power and restart.	It takes place in case the overflow rises for three times.	The buzzer sounds five times with a 0.5sec. ON/0.5sec. OFF cycle.	Put off the power and restart.

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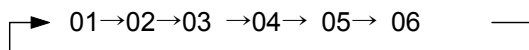
## 7-2 Test Mode

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

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1. Entering : Press the power key while pressing down the WATER LEVEL button.
2. “ -- “ is displayed on the display.
3. If you press the COURSE key, the test mode changes step by step.



4. The test is conducted if you press the START/HOLD key when the test mode is in a display state.
5. Each mode description

MODE NO	DISPLAY	TEST DESCRIPTION	REMARKS
1	01	Aging test in driving part and then, driving part and display are turned ON/OFF for 1 second.	
2	02	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	03	Operate the washing cycle after supplying water to high level.	
4	05	Indicate the input value of weight sensing pulse with hex value.	

\* Mode 04, 05 are only for manufacturing process.

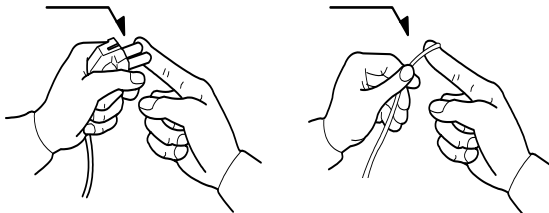
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## 7-3 Servicing Precautions

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

1. Be sure to let the resistance of 1 Mcontact 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 high 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.

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## 7-4 Troubleshooting

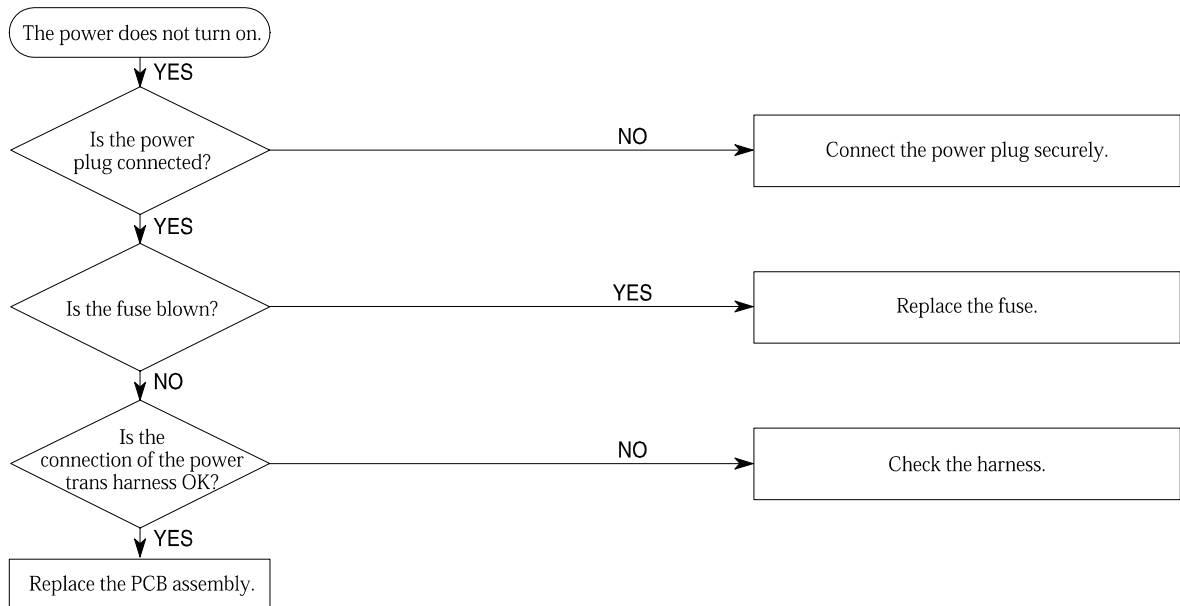
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### 7-4-1 Troubleshooting of the Power Supply Board

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

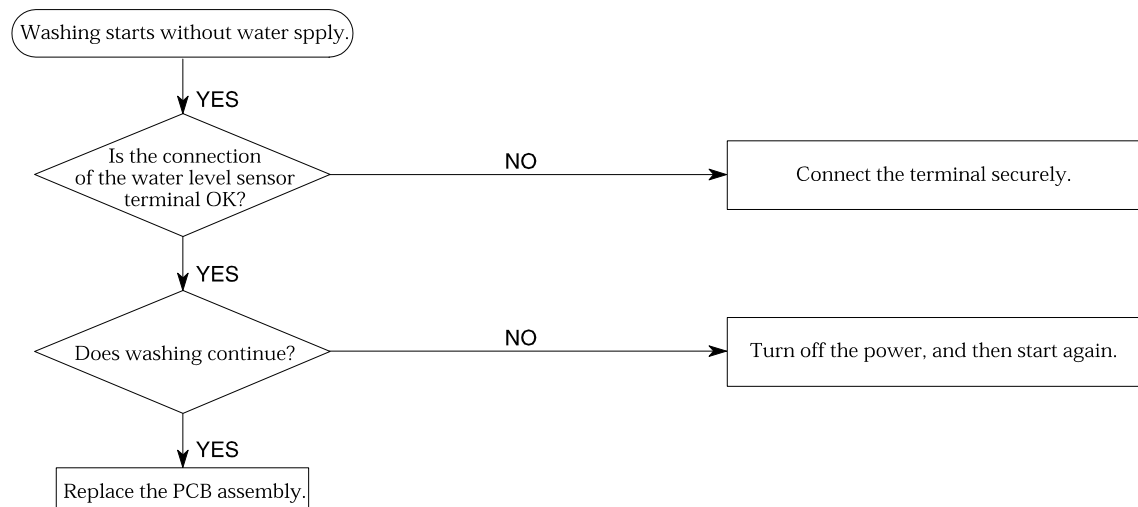
1. Pressing a selection button illuminates the LED display, but the buzzer does not sound.
2. Pressing a selection button sounds the buzzer, but does not illuminate the LED.
3. Pressing a selection button illuminates the wrong LED.

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



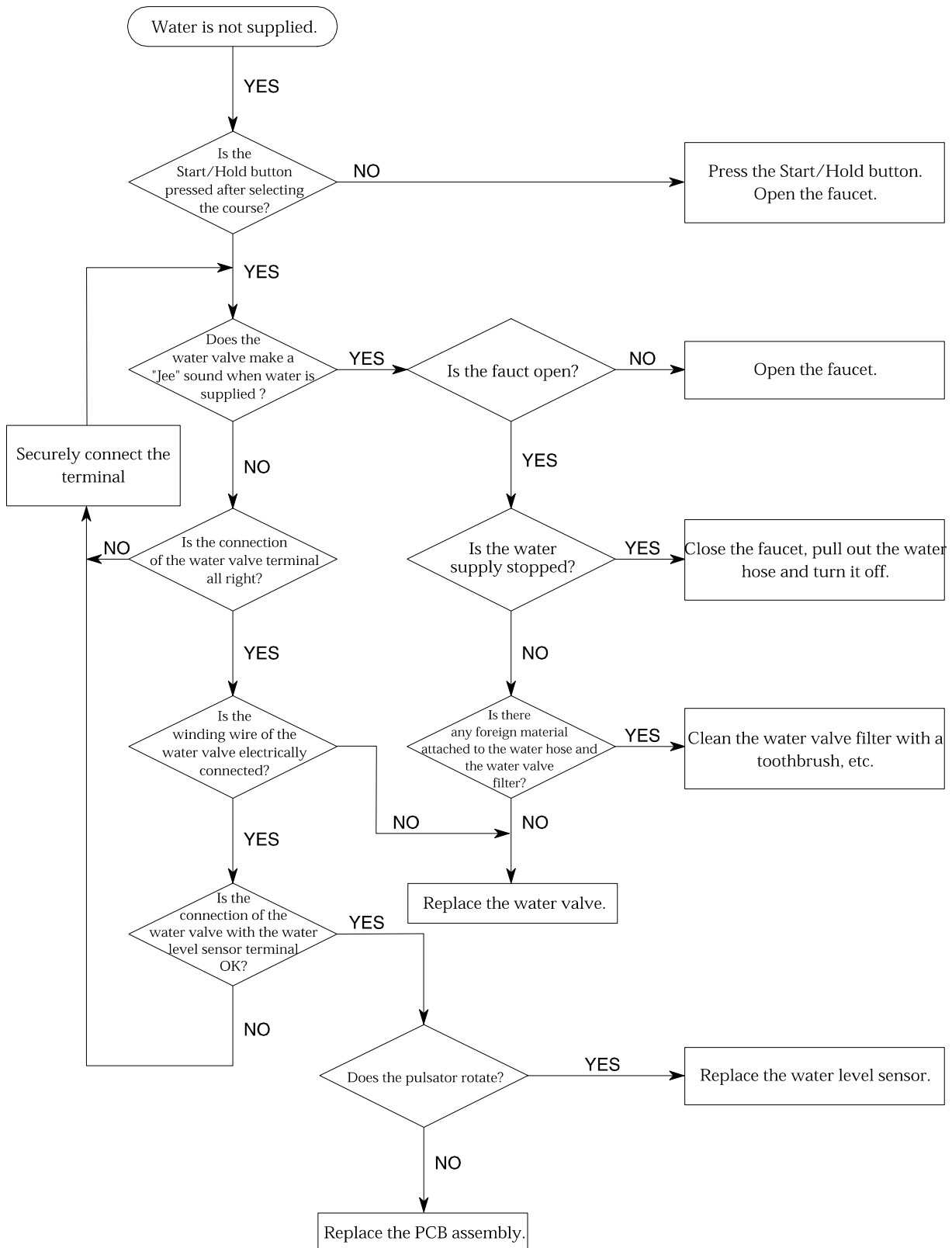
### 7-4-2 Keyboard

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

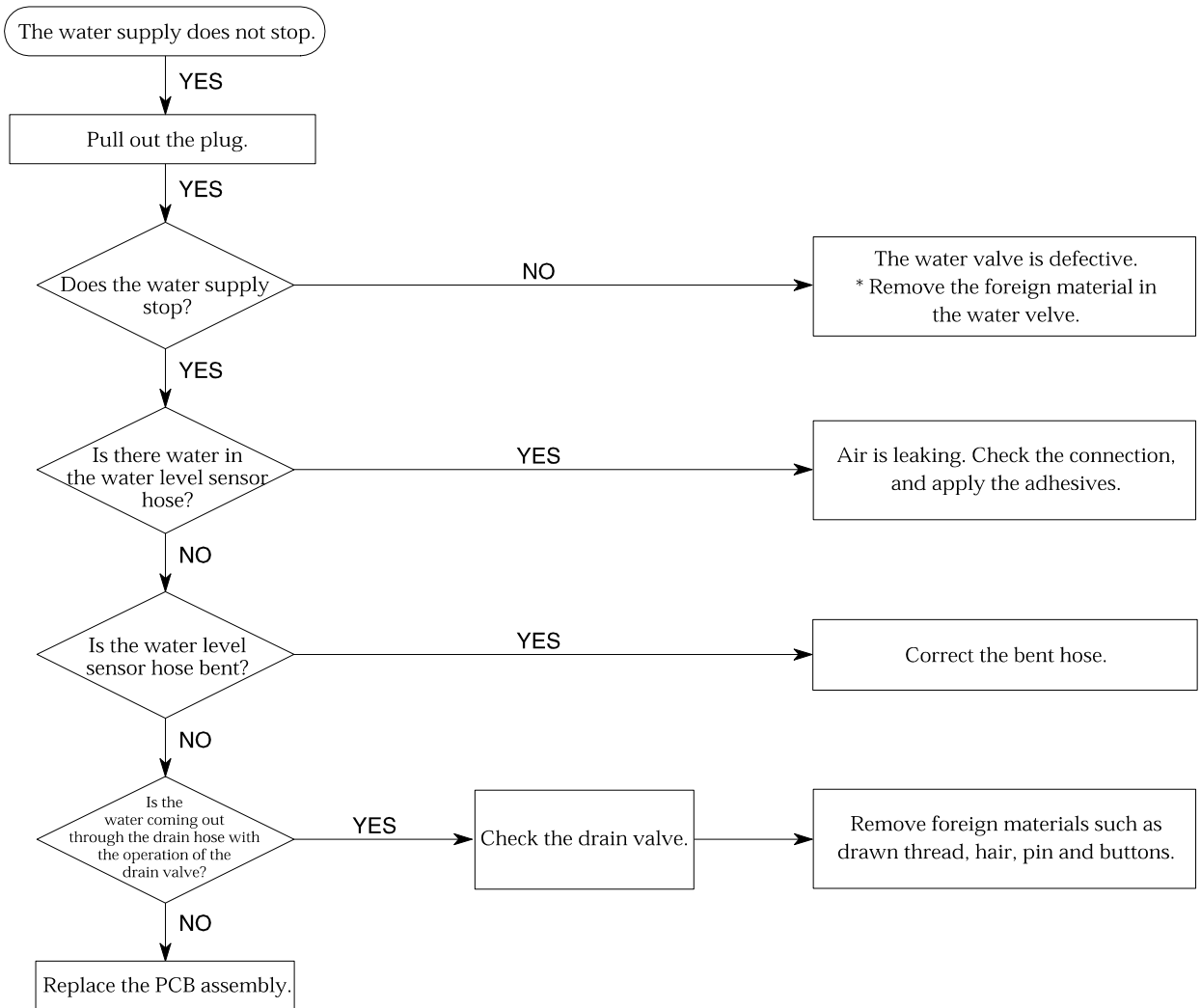


### 7-4-3 Driving Unit

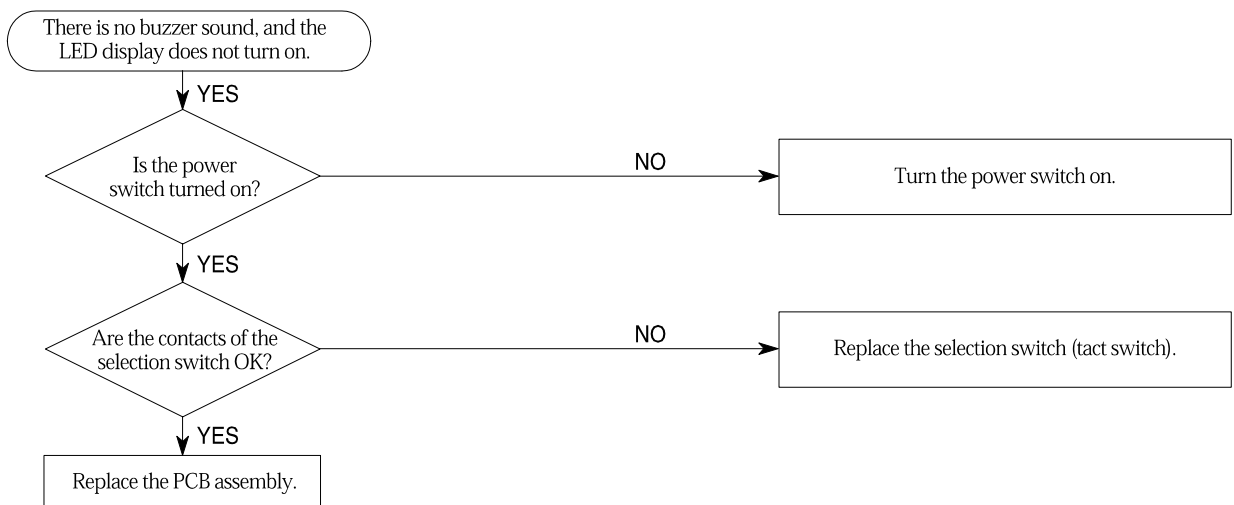
- Water supply Error



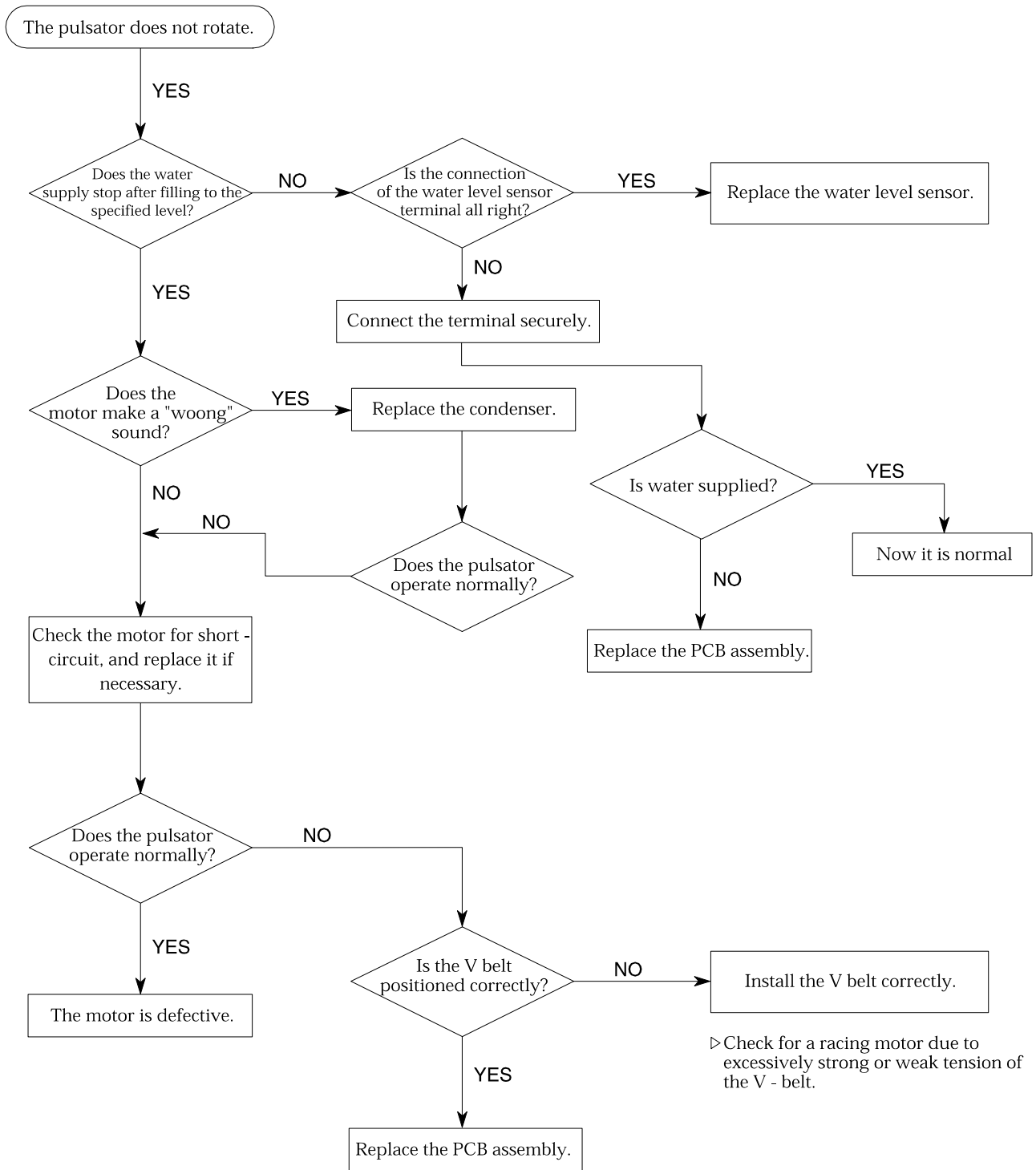
• Water Stop Error



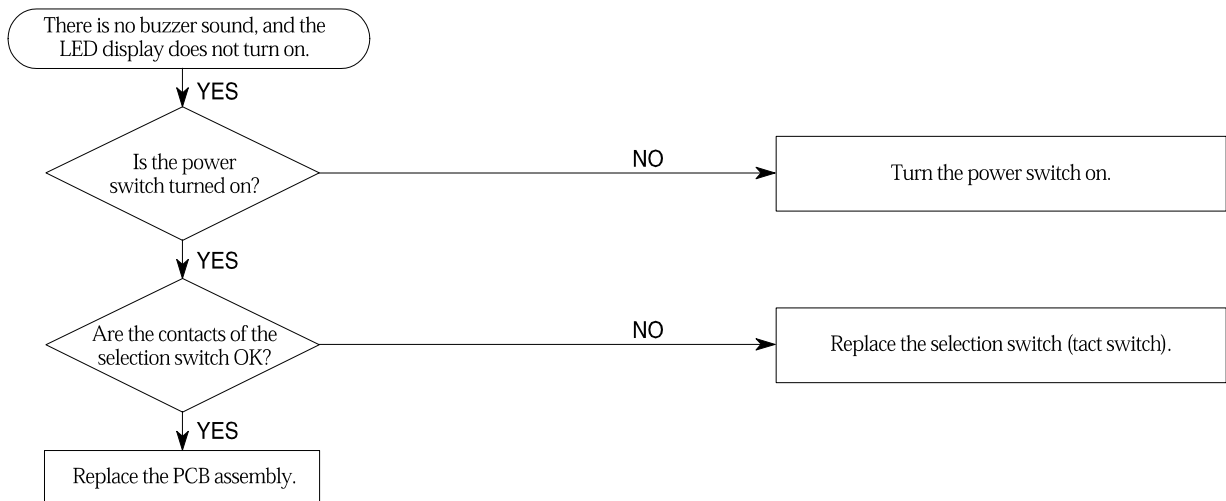
• Washing is started without water supply.



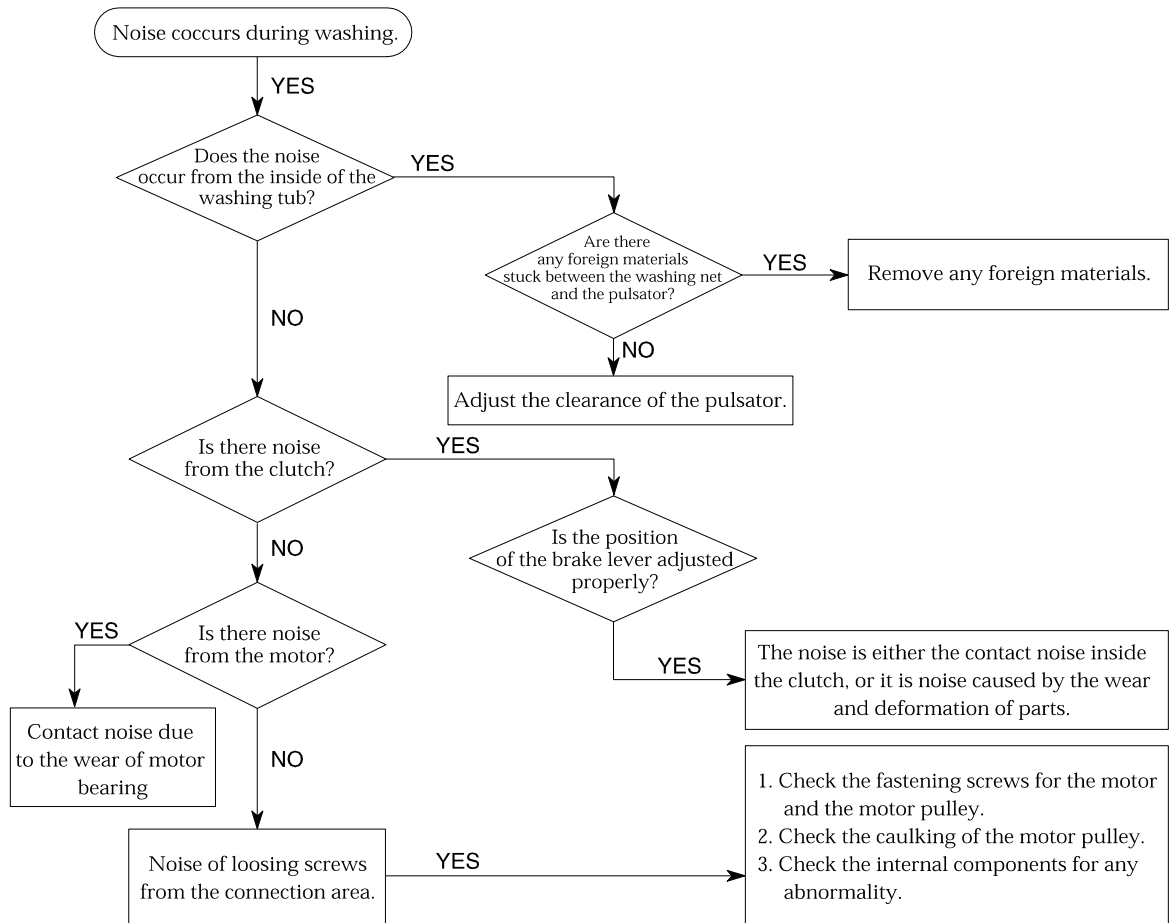
- The pulsator does not rotate during washing.
- „ This malfunction may be caused by defective contacts of the wire harness.



• Defective Rotation during Washing



• Noise Occurs during Washing.

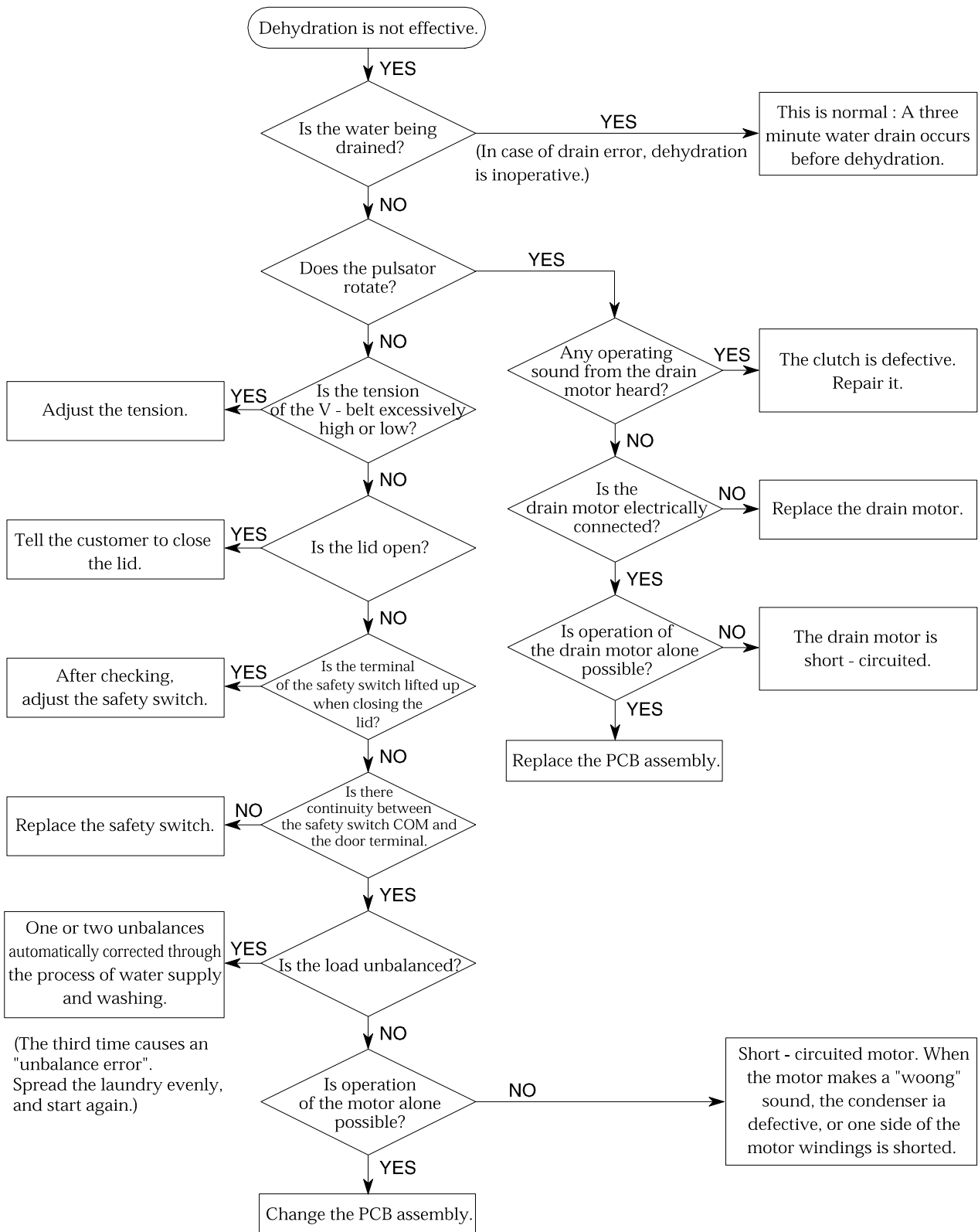


(The following sound does not indicate any problem :

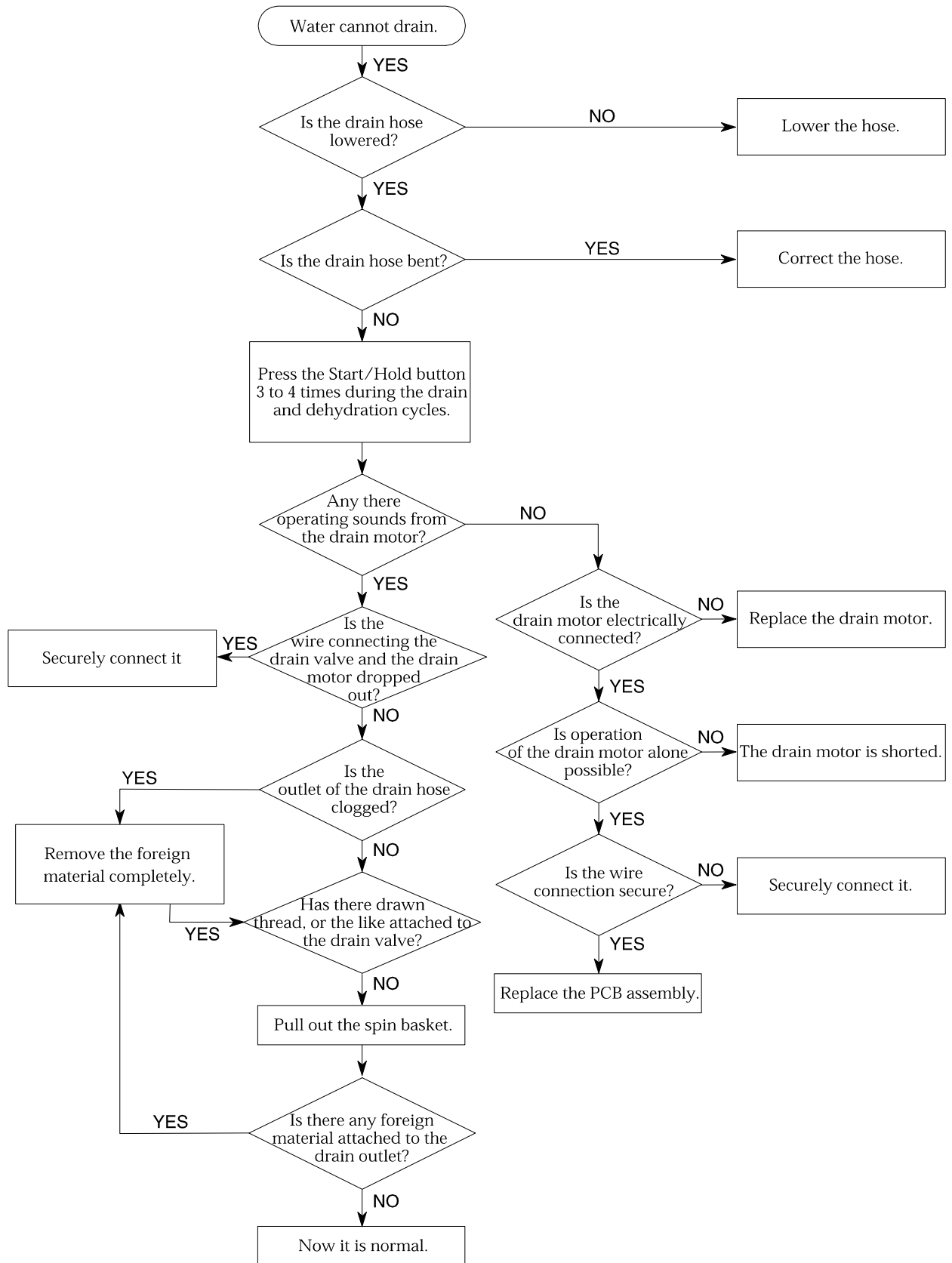
The "Sha" sound generated during the stop of the dehydration tub is the sound of the water moving by automatic balance in the dehydration tub.)



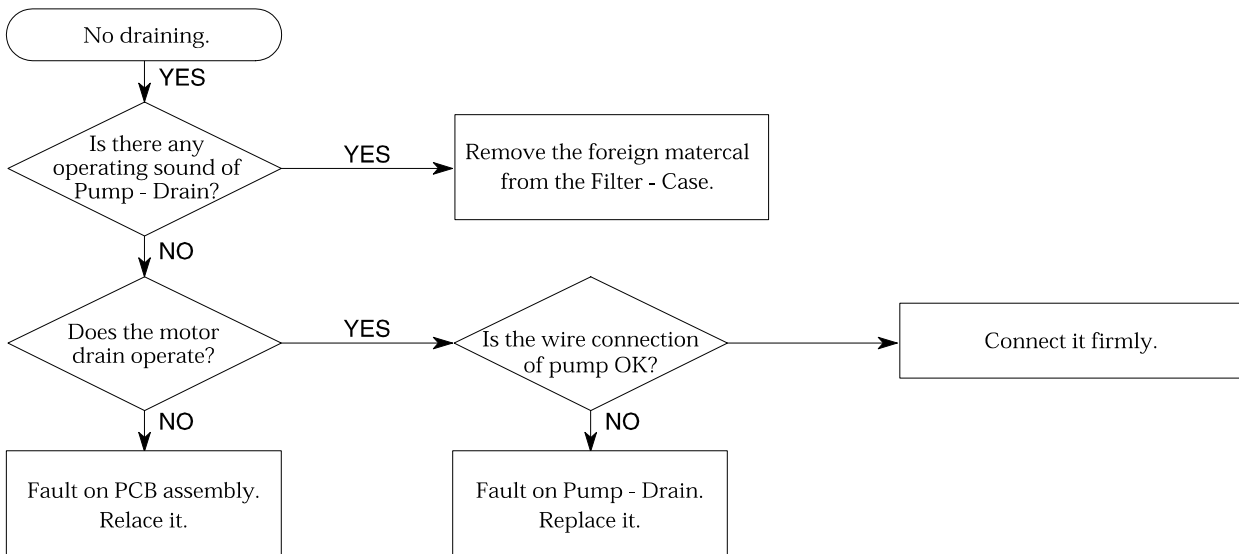
• Defective Dehydration



• 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. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Load</th> <th>Braking Time</th> </tr> </thead> <tbody> <tr> <td>No load</td> <td>Below 7 seconds</td> </tr> <tr> <td>Rated load (5.0/6.0kg)</td> <td>Below 10 seconds</td> </tr> </tbody> </table>	Load	Braking Time	No load	Below 7 seconds	Rated load (5.0/6.0kg)	Below 10 seconds
Load	Braking Time						
No load	Below 7 seconds						
Rated load (5.0/6.0kg)	Below 10 seconds						
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.						