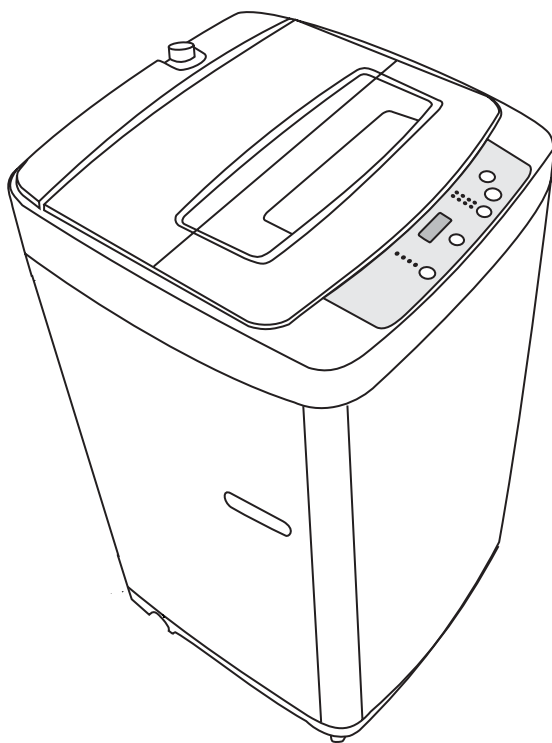


## Automatic Washing Machine

Model NO: HLP24E



### 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 products dealt with in this service information by anyone else could

## Chapter 1: General Infomation

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## 1-2. General Guidelines

When servicing, observe the original lead dress. If a short circuit is found, replace all parts which are overheated or damaged by the short circuit. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields are properly installed. Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the service places serviced or not. And be sure safety of that.

## 1-3. Caution and Warning symbols

(You will see them in Matters needing attention )



Any instructions in this service manual with this Warning sign must be followed strictly.



To prevent damage to the washing machine, any instructions in this manual with this Stop sign must be followed strictly.

## 1-4. Function indication symbols

(You will see them in the specification table)



Signify the washing machine has this function.



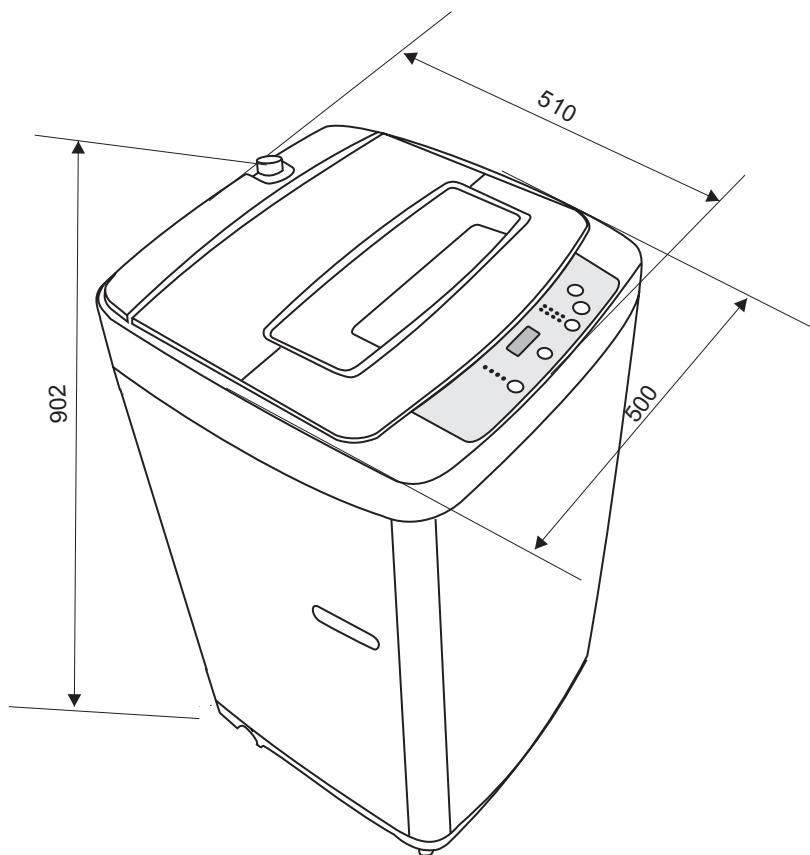
Signify the washing machine doesn't have this function.

## Chapter 2: General Infromation

### 2-1 FEATURES

- Soak wash, make cleaner wash.
- Fashionable appearance, transparent top lid
- Efficaciously reduce noise
- Automaticly power off function
- Self-adjustment to unbalance of laundry in spinning
- Fuzzy computer control, self-program function, more convenient washing

### 2-2 Net Dimension



Unit:mm

## 2-2 SPECIFICATIONS

Model		HLP24E
Free standing		✓
Built under		×
EAN code		7704353033123
Energy efficiency class		—
Features for use		
Wash capacity	Kg	5.0
Spin capacity	Kg	5.0
Level/Volume	L	Small/Medium/Large/Super
Preset	H	✓
Residual dampness	%	<115
Control model		
Controller		×
Normal computerized		
Fuzzy computerized		✓
Frequency conversion		×
Service features		
Programs		8
Short cycle		✓
Inlet water select		×
Heating selection		×
Spinning cycle (selector)		×
Spinning cycle (variable)		×
Start/Pause		✓
Automatic balancing		✓
Aesthetics		
Cabinet material (P=Plastic/Z=Zincking /C=Cold rolled stainless steel )		C
Inner drum (stainless steel=s / plastic=p)		S
Drain type		Drain up
Door (glass=g / plastic=p)		G
Adjustable feet		✓
Technical data		
Voltage/frequency	V/Hz	120/60
Energy consumption	kwh/kg	—
Water consumption	L/kg	24
Wash power	w	325
Spin power	w	255
Special function		
Air-Bubble		×
Feet wheel		×
Spray current		✓
Dimensions (measurements)		
Height / built under	mm	902
Width (include drain pipe)	mm	500
Depth / with open door	mm	510
Dimensions packed ( measurements packed)		
Height	mm	986
Width	mm	582
Depth	mm	582
Net weight	kg	28
Gross weight	kg	30
20'Container load	Sets	60
40'Container load	Sets	120
40H' Container load	Sets	168

## Chapter 3. Safety Precautions

### 3-1. Safety

Please plug the power plug on special receptacle. Be sure to use three-pins power receptacle. Ensure that the earthing prong of the power receptacle is earthed reliably. Use leakage protector if possible.



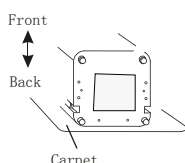
The washing machine must be positioned so that the plug is accessible. Be sure to pull the plug off and close the water faucet in following cases: power failure, delivering the machine, setting the machine idle or cleaning the machine. Do not plug or pull the power plug with wet hand.



- Do not bend ,extend, twist, bind by force. Do not press or nip it with weight.
- Keep the pin of the power plug clean, if the power plug is polluted with dust, please wipe with dry cloth carefully.
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.



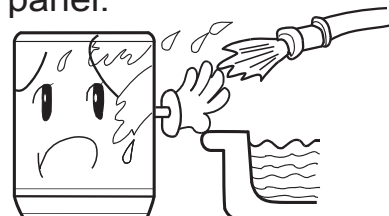
In case the washing machine is installed on ground with carpet, do not block the ventilation hole with carpet. Ensure carpet does not obstruct the opening in the bases.



Do not use water hotter than 50°C.



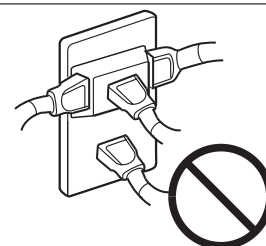
Do not put the machine at damp place like the bathroom. Never wash it with water. Do not put wet laundries on the control panel.



Do not wash water-proof laundries like the raincoat, bike covers etc. to avoid abnormal vibrations in spinning. Wash the clothes that can float on the water surface easily, please be careful especially, for fear damage.



Do not let the machine share one receptacle with other electric appliances. If the plugging into the receptacles loose, do not use the plug any more.

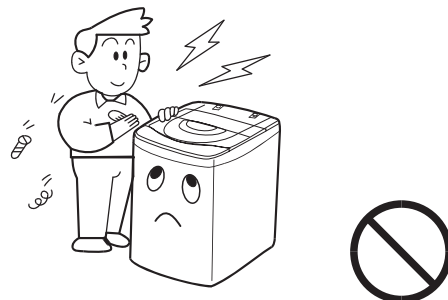


## 3-2.Warning and Cautions

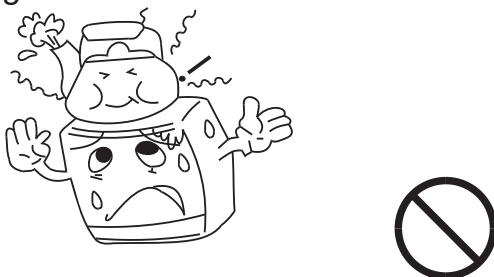
Do not stretch hands into the working machine. It is dangerous even if the rotation is slow. Take special care of the children.



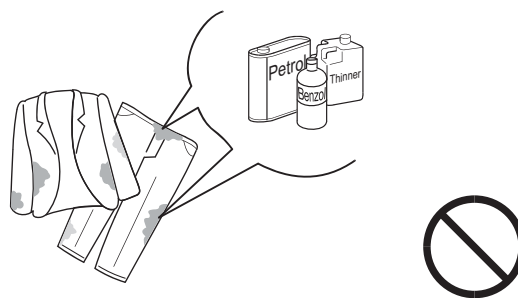
Do not decompose, repair or alter the machine by yourself.



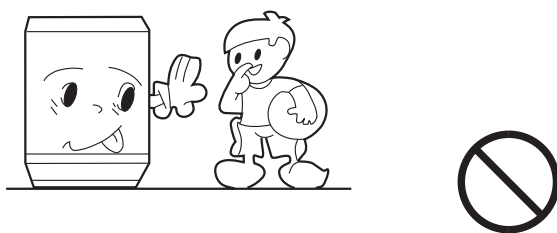
Do not put any hot or heavy items (such as the kettle with hot water) on the washing machine.



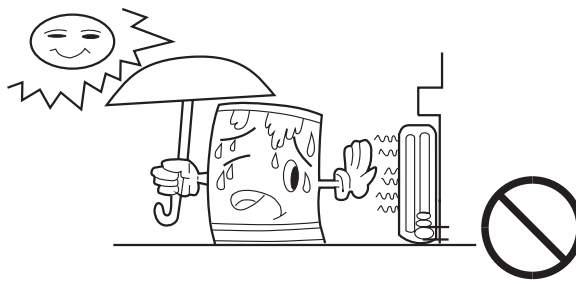
Do not wash laundries with volatile materials (such as thinner, petrol etc.)



The children shall not approach the working washing machine.



Keep the machine away from direct sunlight and heat source like the heater.



- Please check if the water faucet is open, and if the connection of the water inlet pipe is proper.
- It is suggested to use foamless washing powder.
- Please don't use the washer in the environment below 0°C; if the washer has been stored below 0°C, please be sure to ensure the washer is placed under the room temperature more than 2 hours and then use otherwise the washing effects may be lowered or the washer may be damaged.

## Chapter4 Installation and accessory parts

### 4-1.Key points in installation

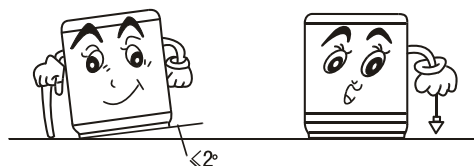
Please install and adjust the machine according to the requirement of the manual. It is very important to your security and correct operating the machine.

### 4-2 Adjustment of the installation position

The washing machine away from wall should be overrun 20mm. The largest allowable slope of the shank base of the machine is 2°. The slanting or rough ground will result in unstable running or stoppage of the machine. Please adjust it with following methods:

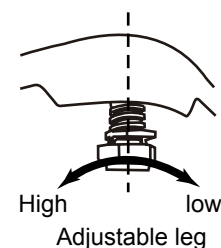
Confirm it's horizontal:

Hang the lead line to check if it is horizontal.



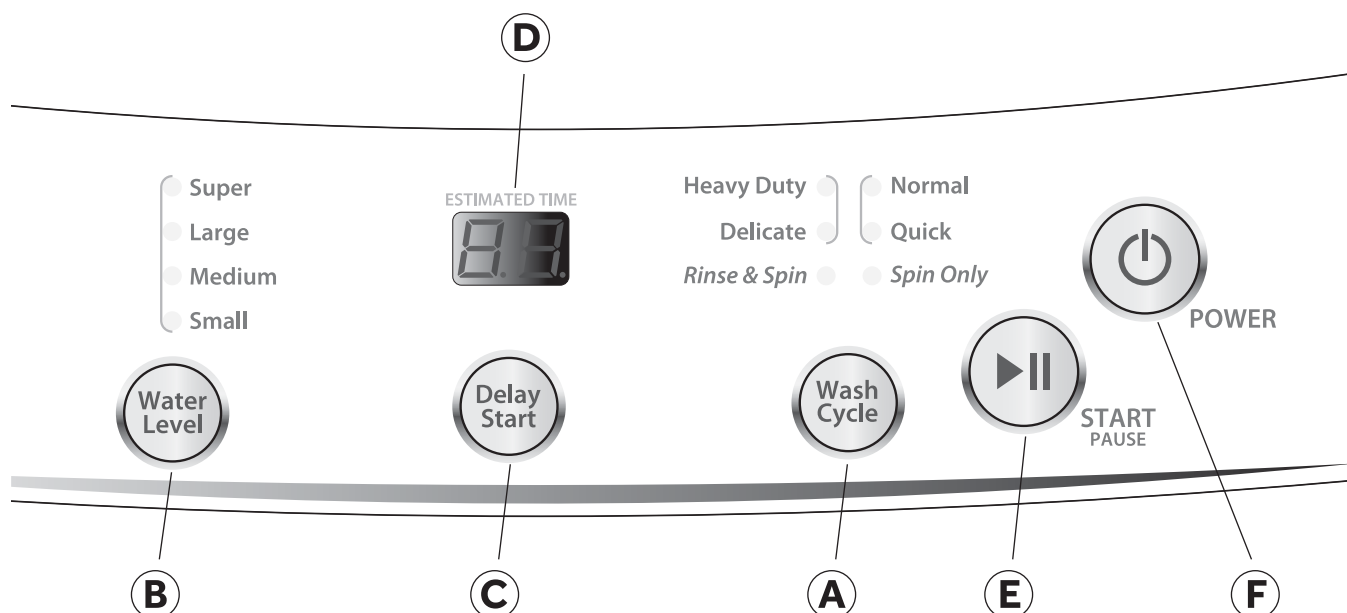
Adjust the adjustable leg:

Please lift up the side of the leg slightly, twist the adjustable leg, make sure to keep the washing machine in balance





## 4-4.Usage of operation buttons



### A WASH CYCLE BUTTON

- Use this button to select the desired cycle for your wash load.
- The standard default settings of each cycle will be displayed; the default settings can be changed by using the Setting button - Water Level.
- There are 6 cycles to choose from:

**Heavy Duty** - Use this cycle for heavily soiled durable garments. This cycle can also be used for towels, sports gear, children's clothes, etc.

**Normal** - Use this cycle for normally soiled cottons and mixed fabric loads.

**Delicate** - Use this cycle to wash lightly soiled garments and delicate clothes that need gentle washing.

**Quick** - Use this cycle to wash small, lightly soiled loads that are needed in a hurry.

**Rinse & Spin** - Use this cycle for removing excess detergent and refreshing clean garments.

**Spin Only** - Use this cycle to extract water from sink washed or clean wet garments.

### B SETTING BUTTON

#### Water Level Button

- Use this button to select an appropriate water level for your load. Small is the lowest water level and Super is the highest.

## Ⓒ DELAY START BUTTON

- Press this button to delay the start of your wash cycle between 1 - 24 hours in one hour increments.
- Use this button to select a delayed start of the washer. The number of hours will be shown in the Estimated Time Remaining Display. Each press of the Delay Start Button will increase the time by 1 hour.
- One button press after 24 will cancel the Delay Start feature. You can also cancel the Delay Start feature by turning off power to the washer with the POWER Button.
- The START/PAUSE Button must be selected to begin the countdown.

## Ⓓ ESTIMATED TIME REMAINING DISPLAY

- The Estimated Time Remaining Display shows the estimated cycle time in minutes.
- When the Delay Start option is being used, the Estimated Time Remaining Display will show the delay time in hours.

## Ⓔ START/PAUSE BUTTON

- Press this button to start a selected cycle or to pause an operating cycle.

**NOTE:** After starting the wash cycle, you must pause the operating cycle to change the Water Level setting.

## Ⓕ POWER BUTTON

- Press the POWER button to turn on the washer.

**NOTE:** If the washer is turned on, but START/PAUSE is not pressed, the power will automatically turn off after 5 minutes.

## 4-5 Product Brief

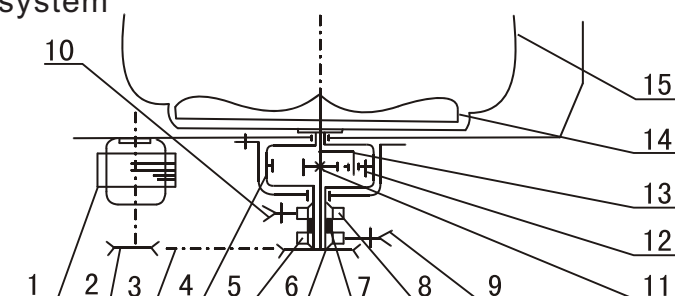
### 1)Computer sequencer

It adopts pouring seal with polyurethane on the surface. The light-emitting diode is sealed with insulation bushing to avoid humidity. To avoid splashing, the surface of computer plate and box and the operation components of the control panel seat are coated with control panel film.

### 2)Structure of the top lid

The top lid adopts transparent view window structure. If the top lid is closed, you can observe the running of the washing machine through the transparent lid.

### 3)Power transmission system



During washing, the rotation of Motor 1 is transferred to Follower 6 from Drive Wheel 2 through Belt 3. Meanwhile, the puller makes the first action. The brake belt is departed. Pawl 9 and 10 brake the Ratchet 5 and 8 by the action of spring. The force will be transferred to Center Gear 11, and then be retarded and transferred to Tie-rod 13 through a planetary gear mechanism consisting of Center Gear 11, Planet Gear 12 and Spin Shaft 4 (inner gear), then Tie-rod 13 is connected to Pulsator 14 via a spline shaft. The Pulsator 14 will move along with the clockwise and counterclockwise rotation of the Motor 1. The Spin tub 15 rotates to the opposite direction against the pulsator by the action of the retarder planetary gear mechanism.

During spinning, the rotation of Motor 1 is transferred to Follower 6 from Drive Wheel 2 through Belt 3. Meanwhile, the puller will make the second action. The Pawl 9 and 10 will leave Ratchet 5 and 8 by the action of the puller. Clutch Reed 7 is twisted tightly on the down part of Spin Shaft 4. The Spin 15 and Spin shaft 4 adopt flange connection. The movement of Motor 1 is retarded by V-belt 3, and make Spin tub 15 spin through Spin shaft 4.

### 4)Damping system

Please pay attention in installation of the hangers that the spring of the hanger at the motor side (two) is different from those installed on the other hangers (two).

## Key points in disassembly

### General attention

Be sure to pull off the power plug in disassembly or maintenance

Use stipulated crimo terminals in connecting the wires between the conducting wires as far as possible ,and fix with suitable tools ,and insulate with insulation tape completely .

In inserting the conducting wires ,be sure to plug the pins to the root and make it hard to be pulled out .

If welding is needed ,be careful not to touch the plastic or other insulation parts and the parts with the iron .

When connecting the wires ,be sure not to make the wire touch the mobile parts like the belt ,radiating pulley and jib ect.,and the sharp protruding parts and the parts with high temperature (motor) . Connect and fix the wires as per their original mode .

If there is metal object at the wire fixing point,be sure to insulate with insulation materials,

Retain the dismantled screws of future usage in installation ,

### Points of attention in usage of electric components

In case that the power is on ,the earthing circuit of the computer sequencer can have 120V voltage to earth.Take care not to get electric shock .

Store the computer sequencer and driver under 4 degree to 30 degree ,

Avoid direct sunlight .

In trouble -shooting ,it may require hot-line work .Please be extremely .

## 1.Method of opening panel seat

A.Open the back cover .Loosen the locking belt fixed on the cabinet(used inner wiring ),to loosen the inner wiring

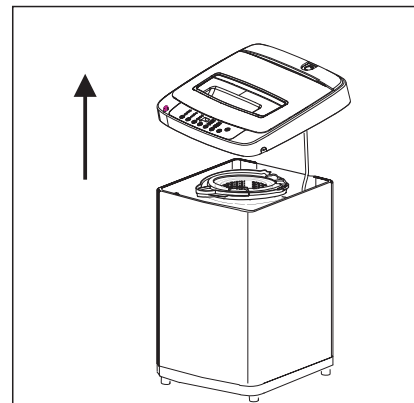
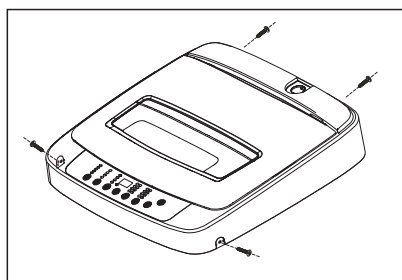
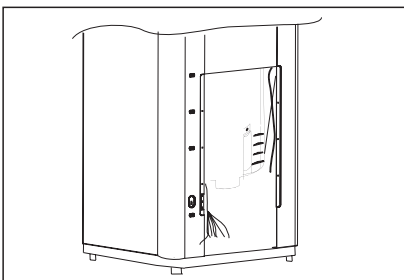
B. Loosen the four screws used to install the control panel seat (rear and side)

C.Lift the rear upwards.Loosen the control panel seat from the inlay of

### Attention :

- Do not lift the control panel seat by force ,otherwise the safety switch control rod may get transformed.and the jointer part of the connecting pipe of the water level sensor may be loosened ,therefore influence the normal operation of the microswitch and water level sensor .
- After opening the control panel seat ,hold it with one hand or lean it on supporter like the wall .Do not put it down .

First loosen the screws when dismantling the computer controller .

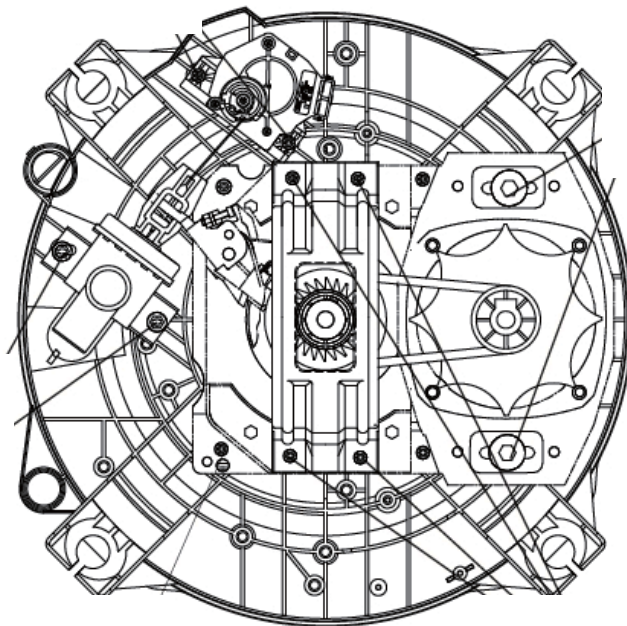


## Attention :

- Do not lift the control panel seat by force ,otherwise the safety switch control rod may get transformed.and the jointer part of the connecting pipe of the water level sensor may be loosened ,therefore influence the normal operation of the microswitch and water level sensor .
- After opening the control panel seat ,hold it with one hand or lean it on supporter like the wall .Do not put it down .
- First loosen the screws when dismantling the computer controller .

## 3)Method cabinet and outer tub of disassembling

- A.Loosen the two motor bolt unit to dismantle the motor.To adjust the tension of the belt ,loosen the bolts and move the motor left and right .
- B.Loosen the four fastening screws to dismantle the delivery shield .
- C.Loosen the three fastening screws to dismantle the drain motor .
- D.dismantle the drain pipe ,
- E.In dismantling the inner tub ,first take off the outer tub cover ,then dismantle the pulsator ,finally dismantle the inner tub .Handle with care when taking the inner tub off from the outer tub .

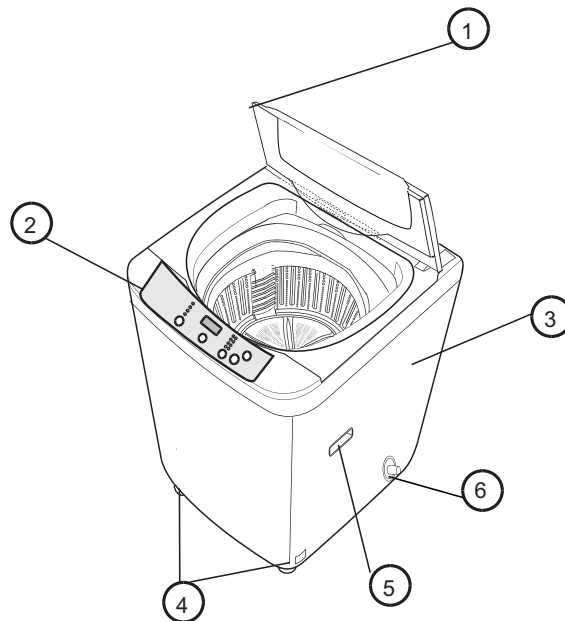


## 4)Points of attention in assembly

- In installation of the drain pipe ,please smear a piece of 801 glue at the connection part between the drain pipe and outer tub and between the overflow hose and drain hose to guarantee that the drain pipe will not leak .
- In fastening the screws ,make it tight without sliding .
- Take care not to scratch the cabinet and influence the appearance of the machine .

## Chaper5.PARTS AND FUNCTIONS

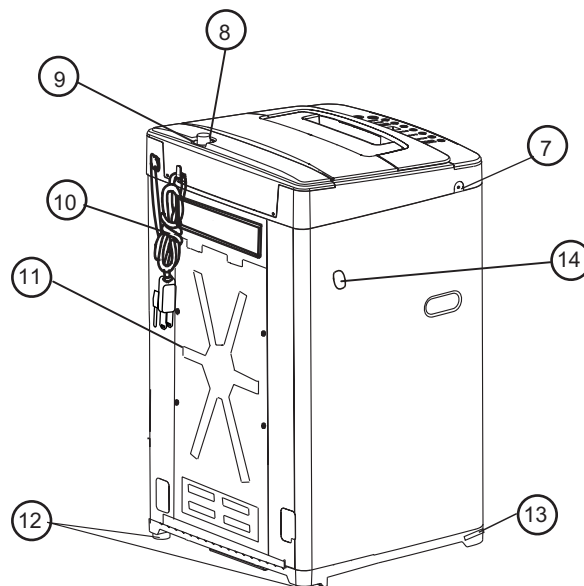
Front View



- 1. Top Lid
- 2. Control Panel
- 3. Washer Cab inet
- 4. Adjustable Leg

- 5. Cab inet Handle (loca ted on both sidesof thewasher)
- 6.Drain bushing
- 7. Screw cover

Back View



- 8. Water inlet valve
- 9. Water absorption cushion
- 10. Power cord(120Volt/60Hz)

- 11. Back cover
- 12. Fixed foot
- 13. Adjustable foot film
- 14. Hanging hole

## Chapter. 6 MAINTENANCE SERVICE AND TROUBLE SHOOTING

Phenomena		The reason	How to settle
The digitron displays <b>dO</b> .		The top lid is open during reserve procedure.	<ul style="list-style-type: none"> <li>Close the top lid.</li> </ul>
The drainage cannot work, or is too slow. The digitron displays <b>Ld</b> .		Is the drain hose blocked?	<ul style="list-style-type: none"> <li>Put down the drain hose . Open and close the top lid once.</li> <li>Clean the foreign material. Open and close the top lid once.</li> </ul>
It stops running in midway. The digitron displays <b>dO</b> .		The top lid is not closed. <b>When using the child lock function, if the top cover is opened, the machine will stop and display dO alarm. After 5 minutes the machine will automatic drainage</b>	<ul style="list-style-type: none"> <li>Close the top lid.</li> <li><b>clear the dO alarm, please close the top cover and press the "START/PAUSE" button. Then dO alarm will be cleared.</b></li> </ul>
The safety switch acts, and the spinning cannot work. The digitron displays <b>uL</b> .		Are the laundries put slantingly? Is the machine slanting?	<ul style="list-style-type: none"> <li>Reorder the laundries. Close the top lid.</li> <li>Place the machine horizontally, open and close the top lid once.</li> </ul>
The water filling does not work, or is slow, the digitron displays <b>LF</b> .		Is the water tap opened, or is there water supply failure? Is the water inlet valve blocked? Is the water pressure too low?	<ul style="list-style-type: none"> <li>Open the water tap. Open and close the top lid once.</li> <li>Clean the water inlet valve then open and close the top lid once.</li> <li>Use after the water pressure is normal.</li> </ul>
The digitron displays <b>FA</b> .		The water level sensor is bad.	<ul style="list-style-type: none"> <li>Please contact the after-sales service department.</li> </ul>
The machine does not act	Not wash	Is there power failure? Is the power plug inserted tightly? Is the water level reached preset position?	<ul style="list-style-type: none"> <li>Please use it when there s power supply.</li> <li>Insert the power plug tightly.</li> <li>Fill water to the preset position.</li> </ul>
	Not spin	Is the power plug inserted tightly? Is the top lid closed reliably? Are the laundries set flat?	<ul style="list-style-type: none"> <li>Insert the power plug tightly.</li> <li>Close the top lid.</li> <li>Set the laundries flat.</li> </ul>
There is abnormal sound inside the machine		Is the machine slanting? Are the laundries put slantingly in spinning? Are there any foreign materials?	<ul style="list-style-type: none"> <li>Adjust the machine to be even</li> <li>Reorder the laundries and close the top lid.</li> <li>Remove the foreign materials.</li> </ul>
The water tap leaks		Is the screw of the jointer of water inlet hose loose or awry?	<ul style="list-style-type: none"> <li>Fasten the screw of the jointer properly.</li> </ul>

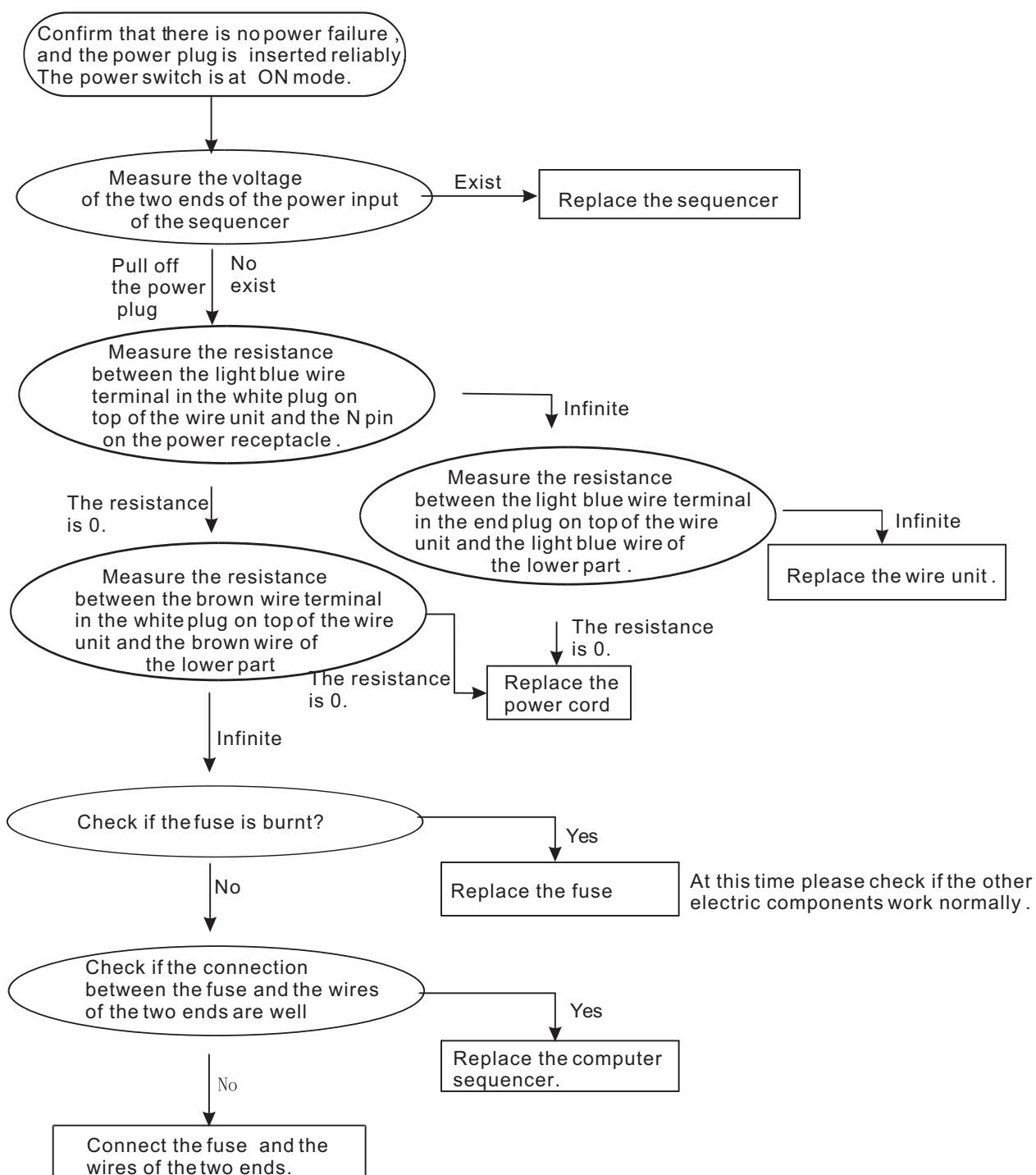
Phenomena	Explanation
The spinning is intermittent when it starts.	Balance the laundries to avoid slanting.
Push the "spin" button to select "Spin", but it doesn't work.	The program is setting the drain time. Some time is needed before it starts spinning.
There may be some water flowing out of the drain hose in the first use of the machine.	It is the water remained in the factory inspection of performance.
The wash procedure is paused .	The cloth sensor is checking the cloth, it will add water after 48 seconds.
The pulsator pauses during water inlet in wash and rinse.	It is to avoid splashing during water inlet.
When the power plug is inserted,computer board indicator is switched on, and the machine starts working.	It is the special resume function. In the case of power failure or the power plug is loose during washing, the machine can save the running program, and resume the program after the power supply is recovered. You do not need to set the program again.



## 6-2 Trouble-shooting charts

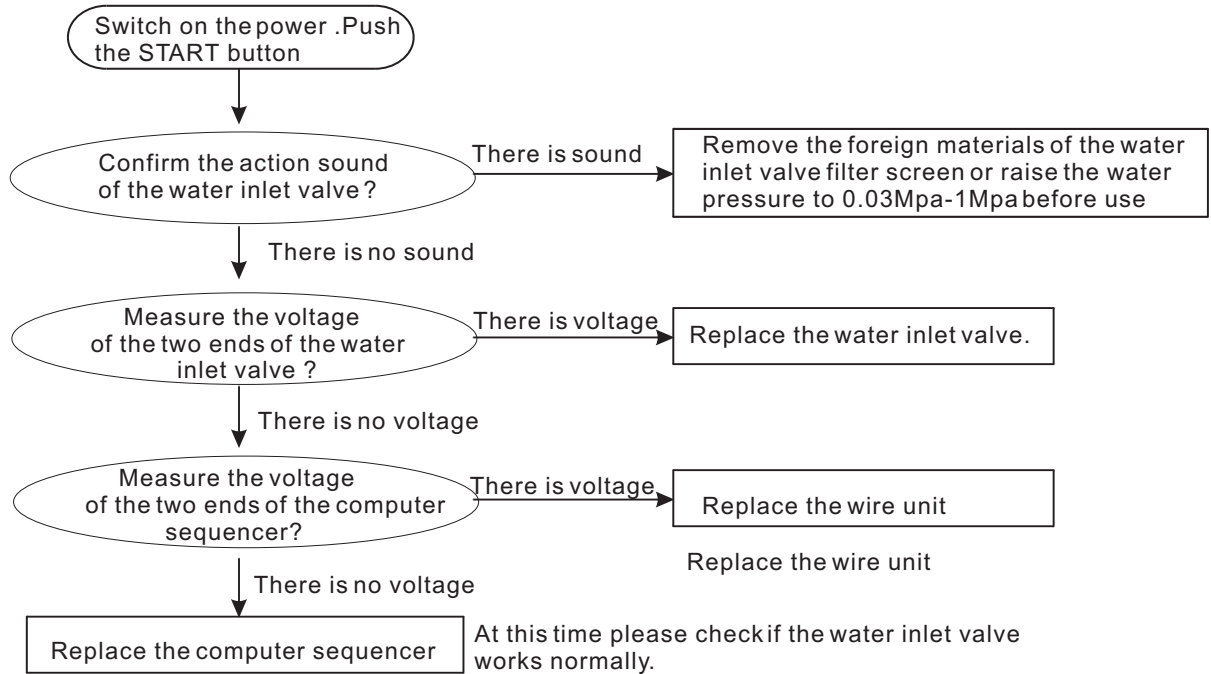
If you replace the computer sequencer without checking the other components carefully, the computer sequencer may be damaged again. Therefore, please first check if the other components working normally before replacing the computer sequencer in maintenance.

### 6-2-1 No acting (The indicator is off)

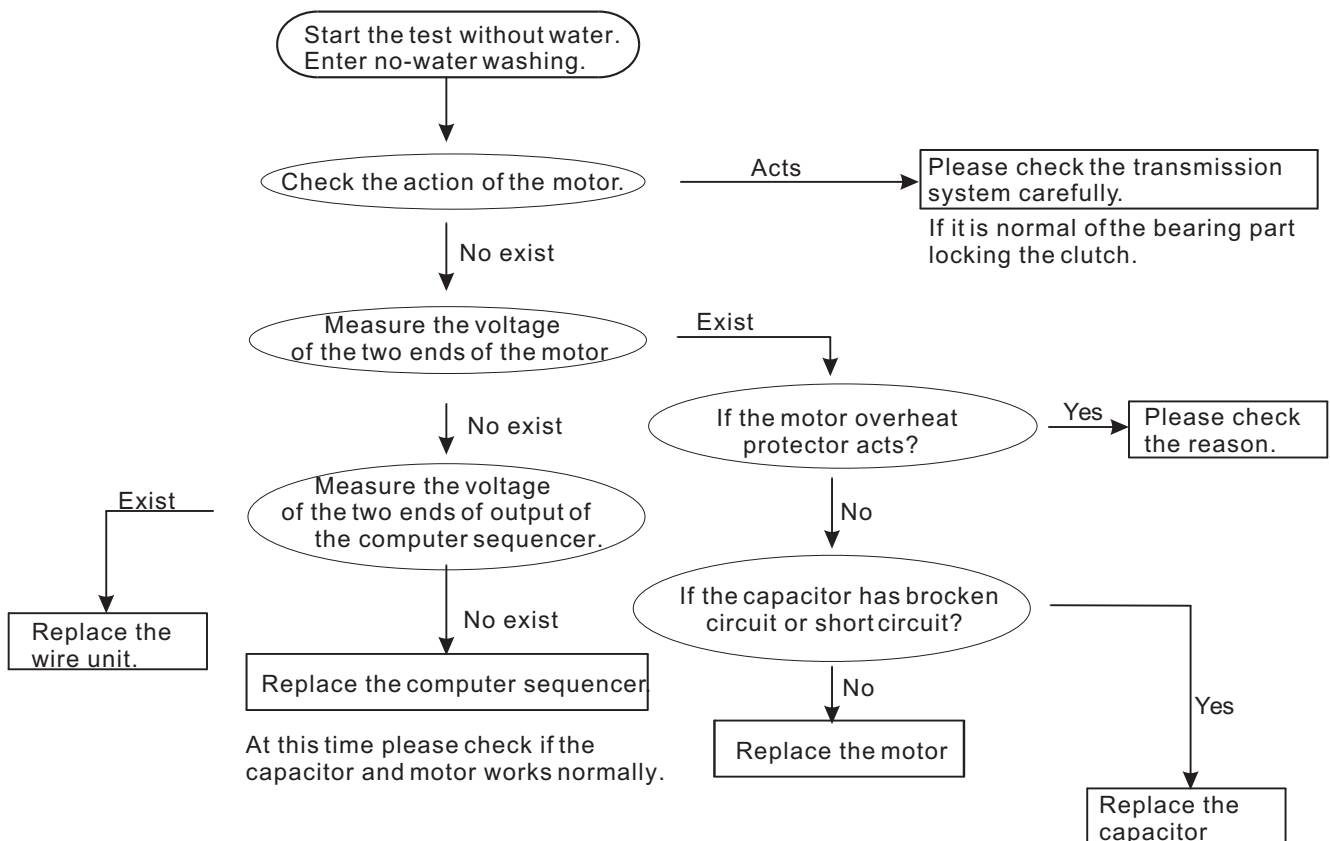




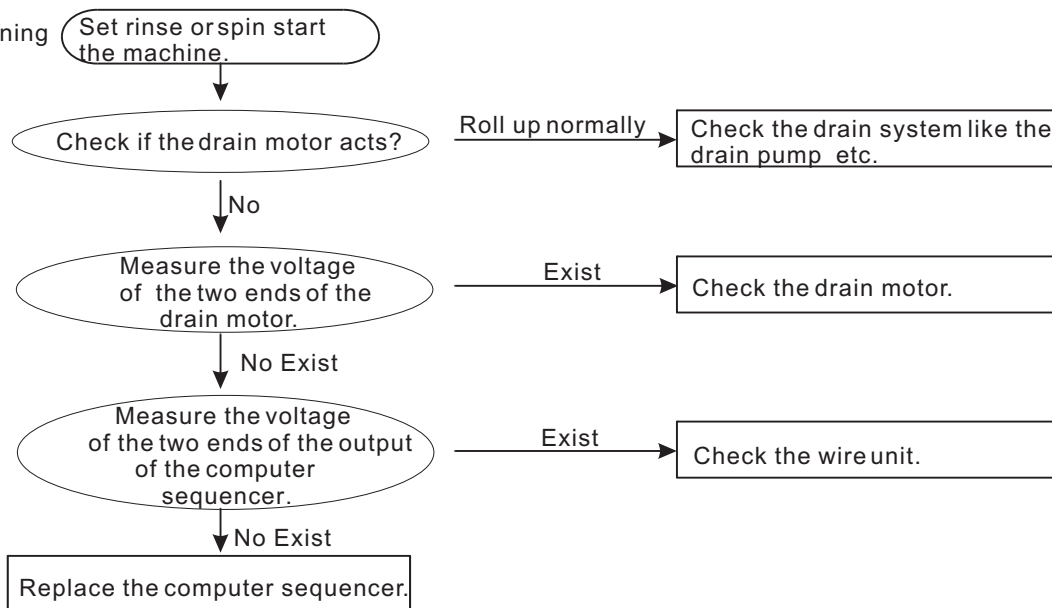
## 6-2-2 No water filling



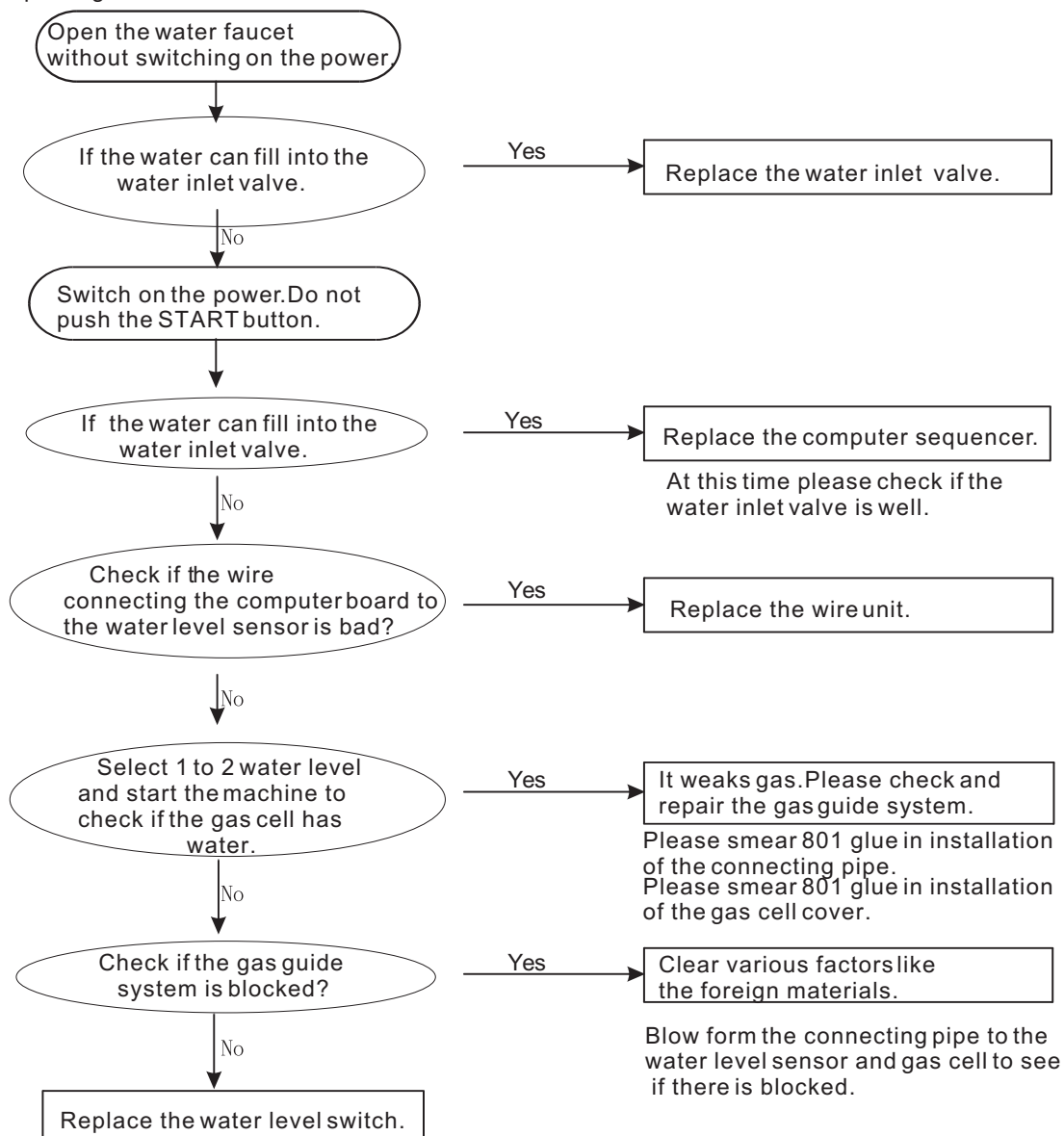
## 6-2-3 No rotation in washing (or rotate to one direction only)



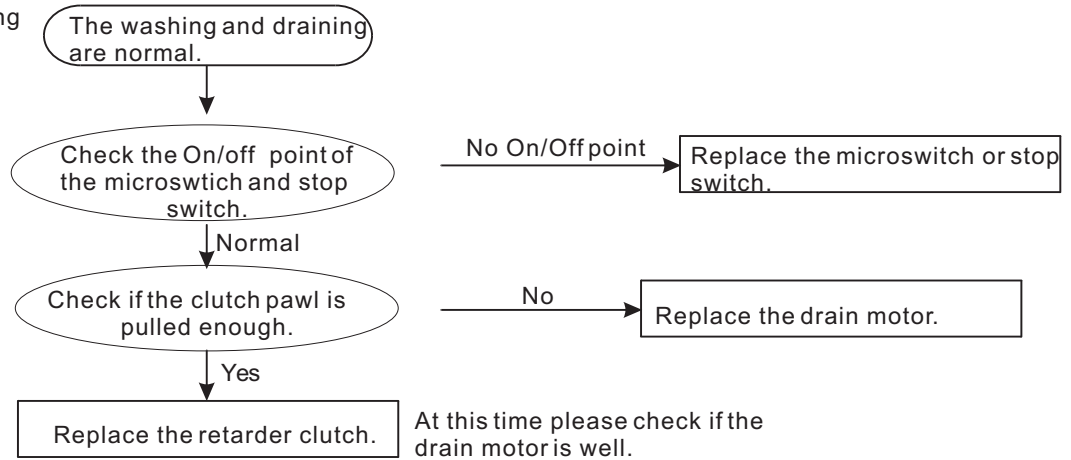
## 6-2-4 No draining



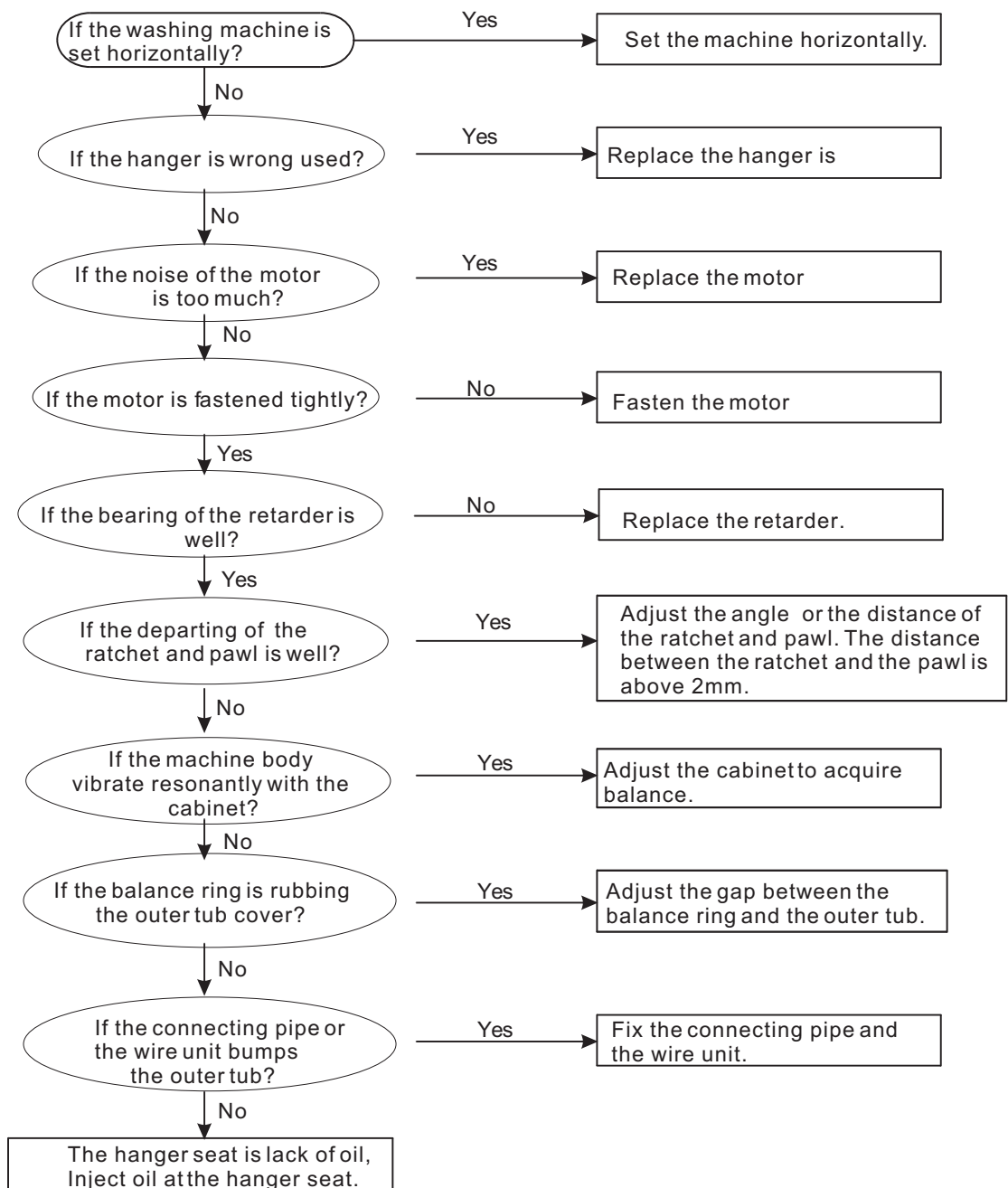
## 6-2-5 Keep filling water



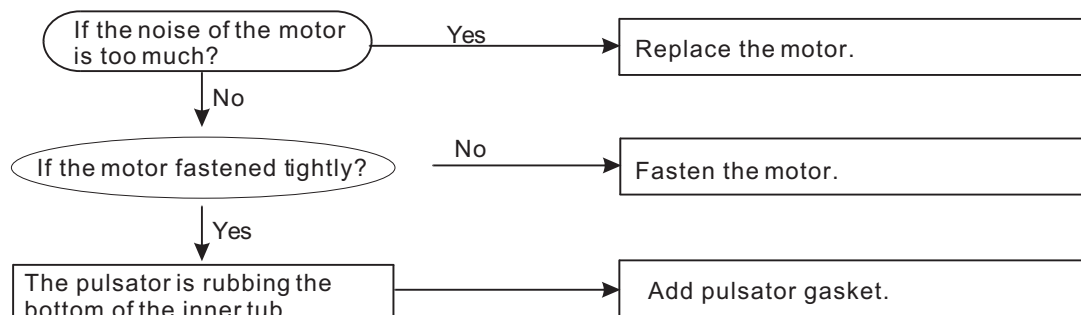
## 6-2-6 No spinning



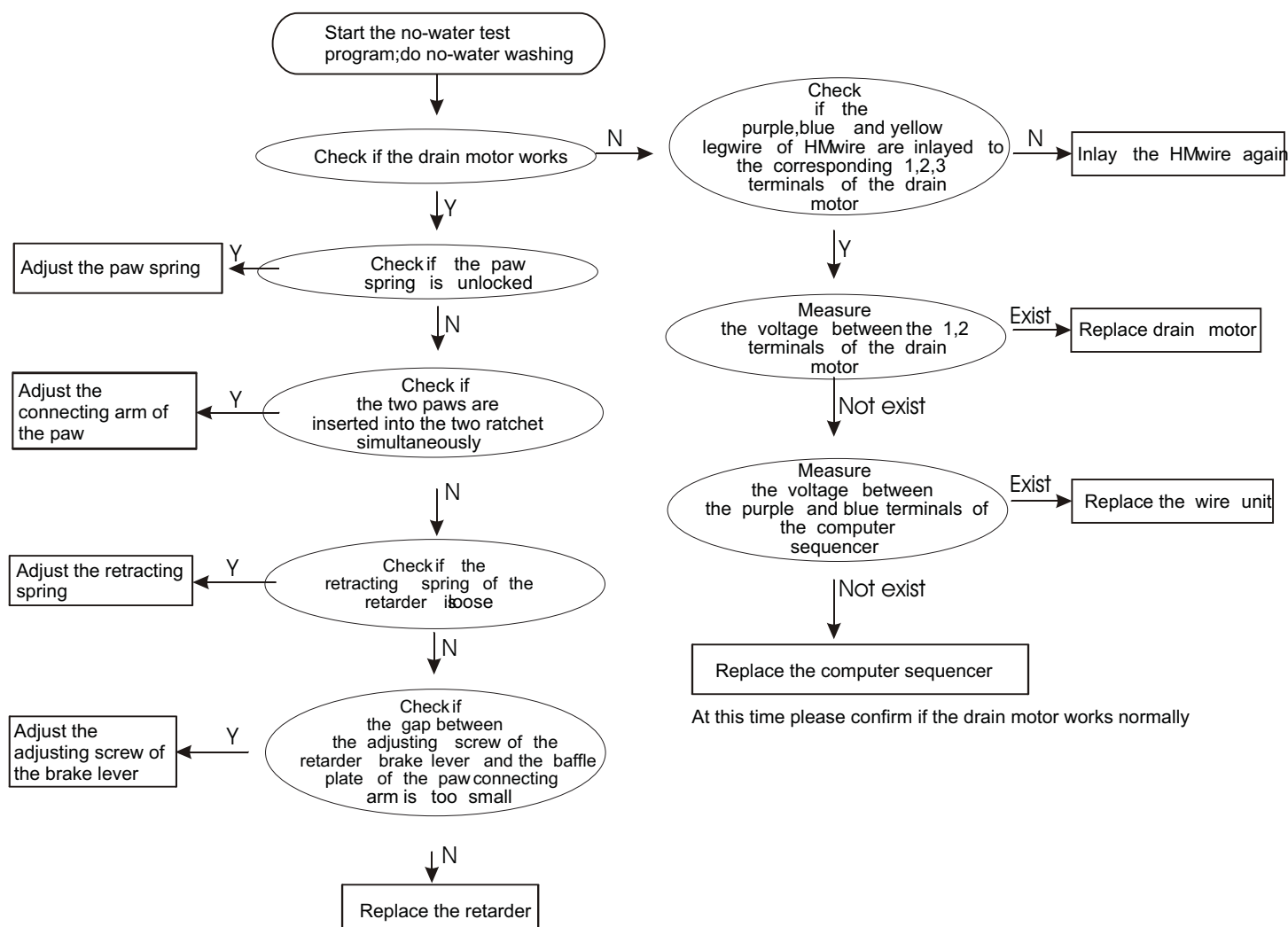
## 6-2-7 Toomuch spinning noise



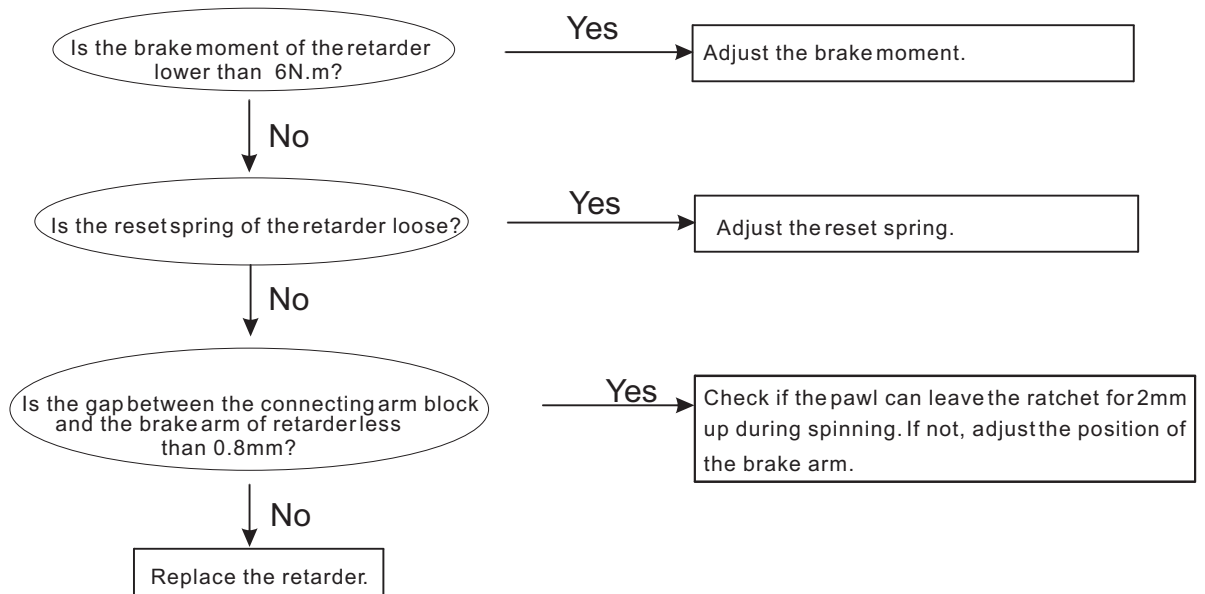
## 6-2-8 Too much noise in washing



## 6-2-9. The tub rotates to one direction (in washing)

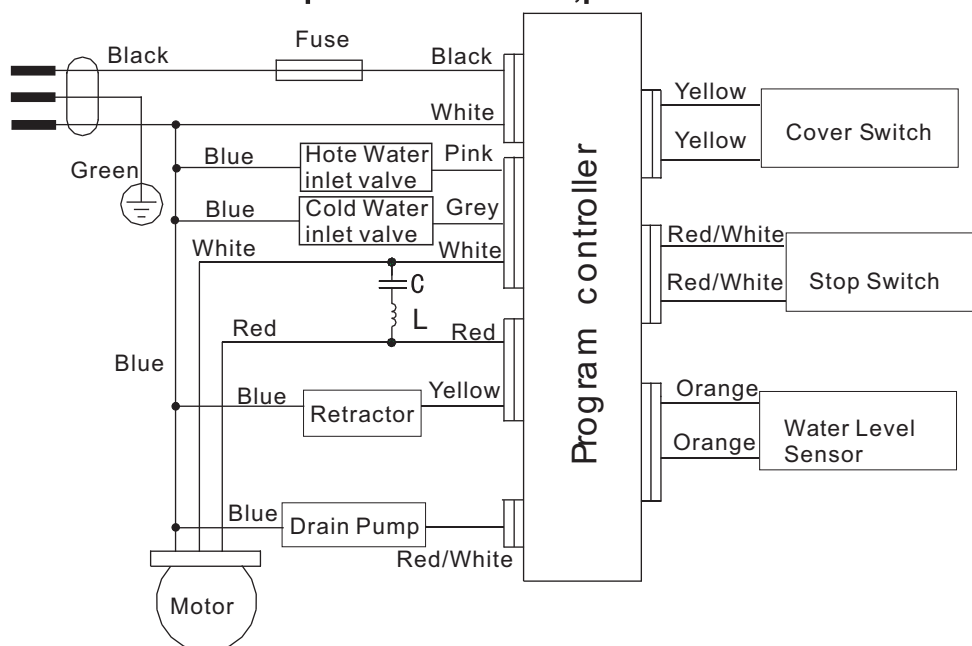


## 6-2-10 Brake time out

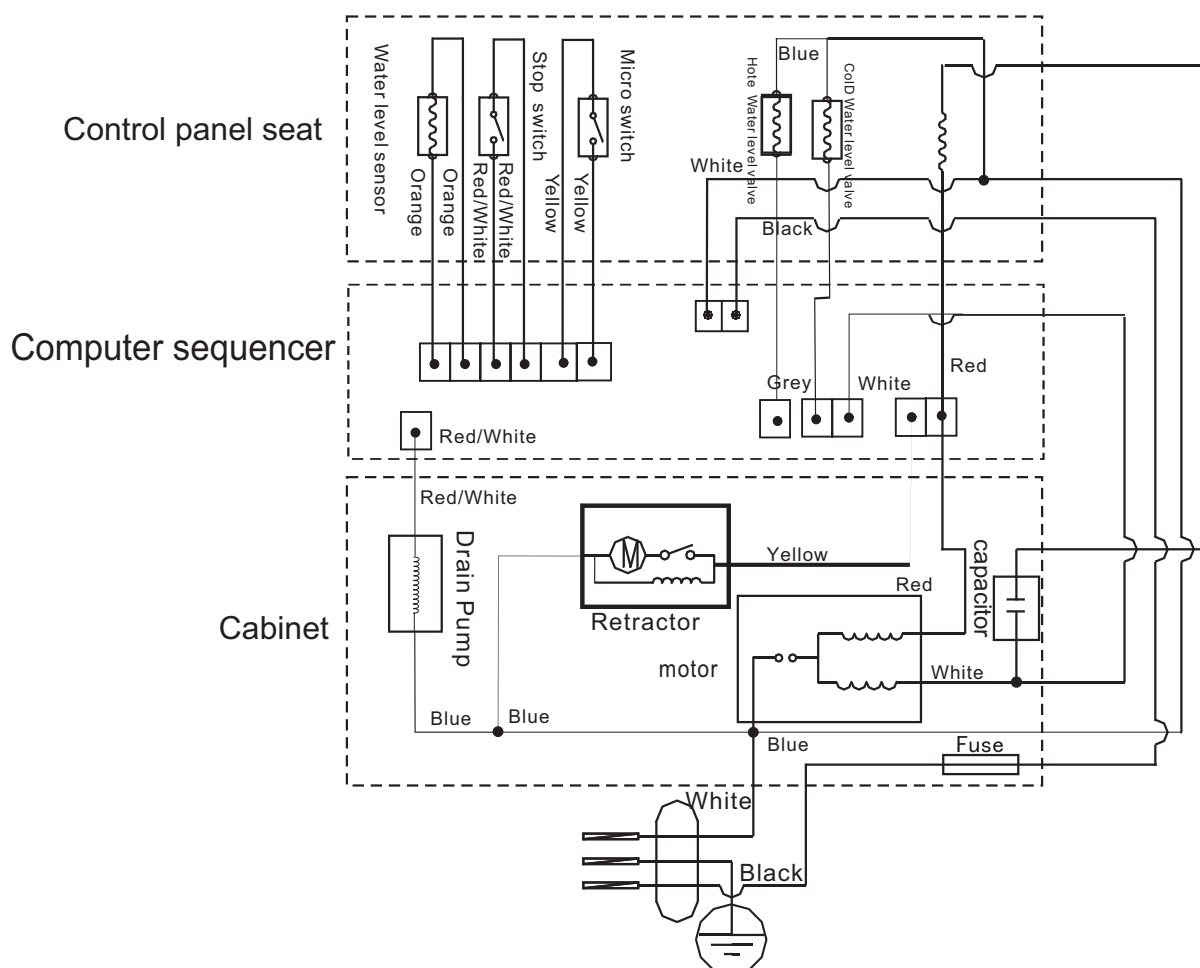


## Chapter 7 WIRING DIAGRAM

The coil L is used to protect the circuit, please do not dismantle it



- There is overload protector installed in the motor. In case that the motor is overload or meets breakdown in working, the protector will act and stop the motor. When the breakdown is removed, the motor will resume normal working.
- Actual Circuit Diagram



# **Sincere Forever**

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