

# WASHING MACHINE SERVICE MANUAL

## CAUTION

BEFORE OFFERING SERVICE, READ THIS MANUAL  
CAREFULLY TO DIAGNOSE  
TROUBLES CORRECTLY.

**MODEL : WF-T851 / T852 / T853 / T802 / T902  
WF-T652(T652A) / T452(T452A) / 402**

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## CAUTION !

DISASSEMBLE POWER CORD BEFORE SERVING  
RECONNECT ALL GROUNDING DEVICES

### IMPORTANT SAFETY NOTICE !

This service information is intended for individuals possessing adequate backgrounds of electrical, electronic and mechanical experience.

Any attempt to repair this appliance may result in personal injury or property damage.

The manufacturer or seller can not be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

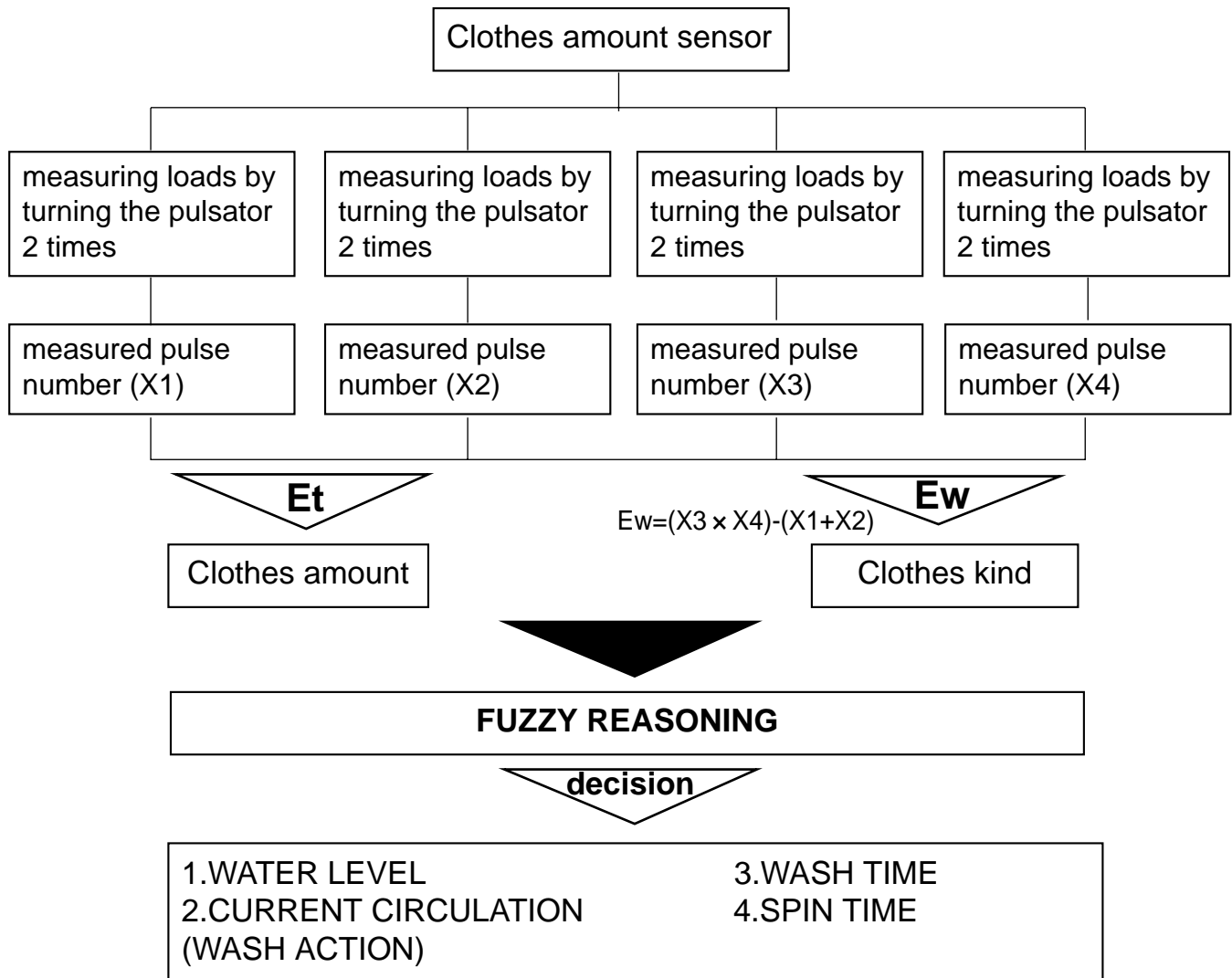
# 1. SPECIFICATIONS

ITEM		WF-T902	WF-T851	WF-T853	WF-T802/T852	WF-T652(A)	WF-T452(A)	WF-402
POWER SOURCE		Refer to rating label on the back of washer						
CAPACITY		Refer to rating label on the back of washer						
WASH TYPE		IMPELLER TYPE						
WEIGHT(NET)		47 kg				41 kg	32 kg	
DIMENSION(mm)		632(W)x688(D) x1045(H)mm	632(W)x688(D) x1029(H)mm	625(W)x625(D)x1007(H)mm		590(W)x606(D) x958(H)mm	540(W)x540(D) x850(H)mm	530(W)x540(D) x850(H)mm
WATER LEVEL (7 LEVELS)	EX-LARGE	98	94			78	55	
	LARGE	76	70			64	48	
	MEDIUM	62	55			54	35	
	SMALL	45	40			44	25	
STANDARD WATER CONSUMPTION (NORMAL & EX-LARGE WATER LEVEL)		190				170	110	
OPERATION WATER PRESSURE		30kpa ~ 800kpa(4 p.s.i ~ 115 p.s.i)						
PULSATOR rpm		110 ~ 140						
SPIN rpm		660				740	730	
WASHING PROGRAMS		NORMAL, SPEEDY, JEAN, DELICATE, WOOL, FAVOURITE	NORMAL, HEAVY, SPEED, WOOL		NORMAL, DELICATE, SPEEDY, JEAN, WOOL, FAVOURITE	NORMAL, HEAVY, SPEEDY, WOOL		
LINT FILTER		DOUBLE				SINGLE		
PULSATOR(Ø)		395				375	325	
PUNCH(Ø)		Ø 90					Ø 74	
WATER FALL		THREE					TWO	ONE
SOFTENER DISPENSER		AUTOMATIC <sup>o</sup>						

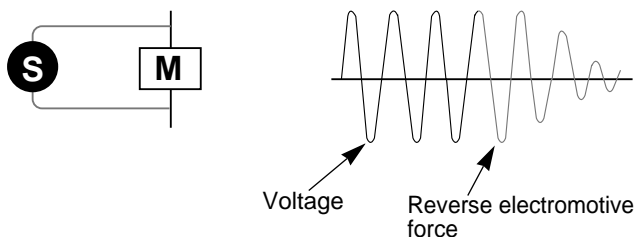
## 2. FEATURES & TECHNICAL EXPLANATION

### FUZZY LOGIC CONTROL

#### 2-1.FUZZY CONTROL DIAGRAM

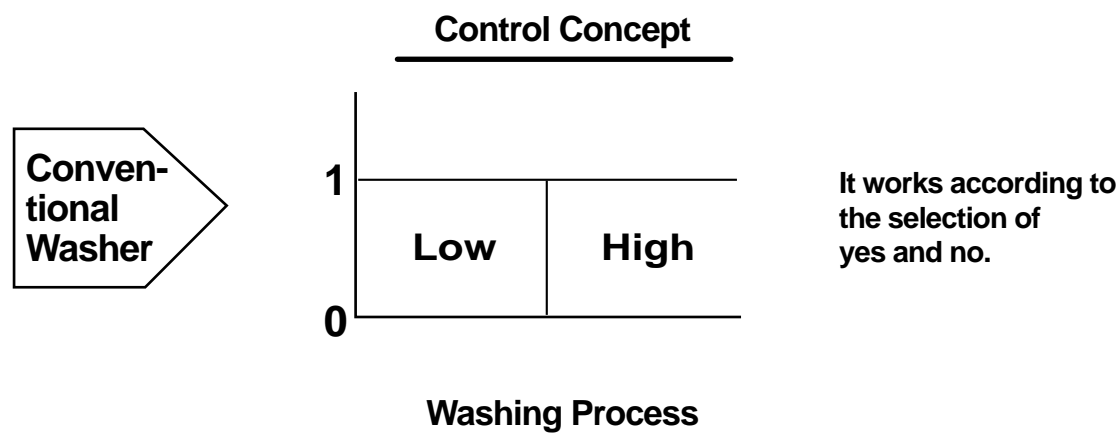
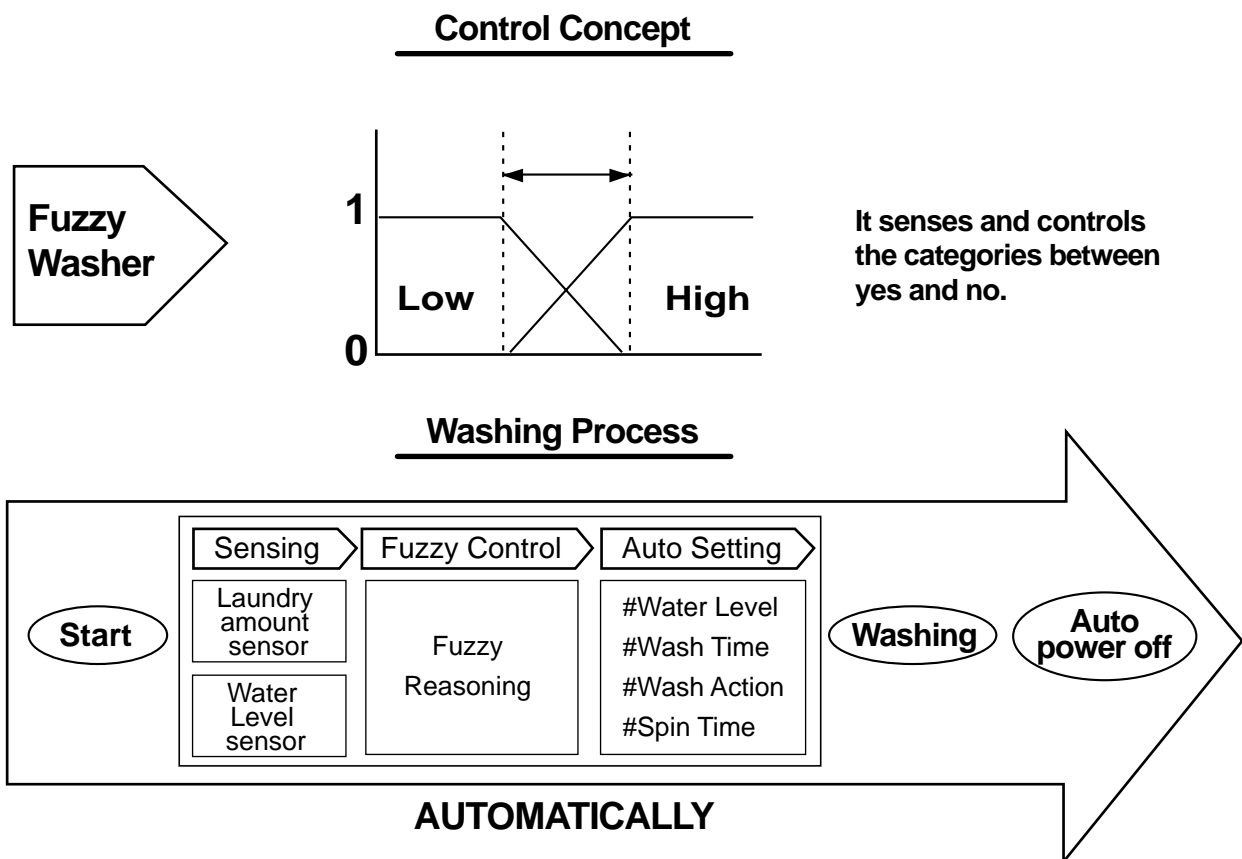


#### <How to measure the pulse number>



The clothes amount sensor detects loads working on the motor by measuring pulse number of the electromotive force which occurred after motor power is off.

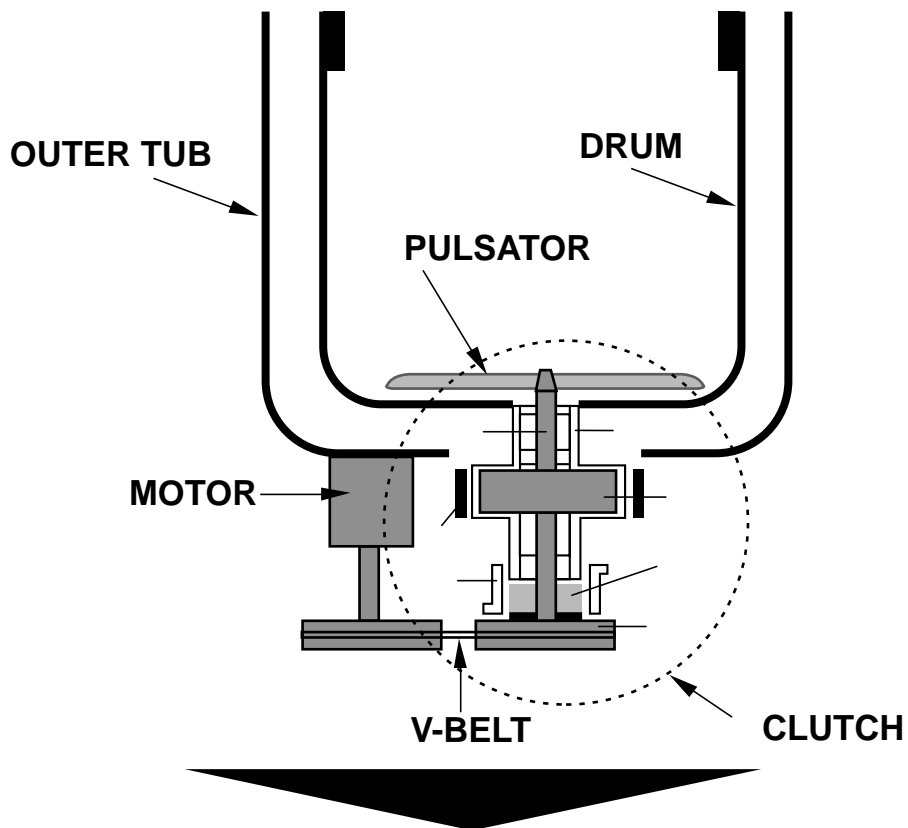
## 2-2.COMPARISON OF FUZZY WASHER & CONVENTIONAL WASHER



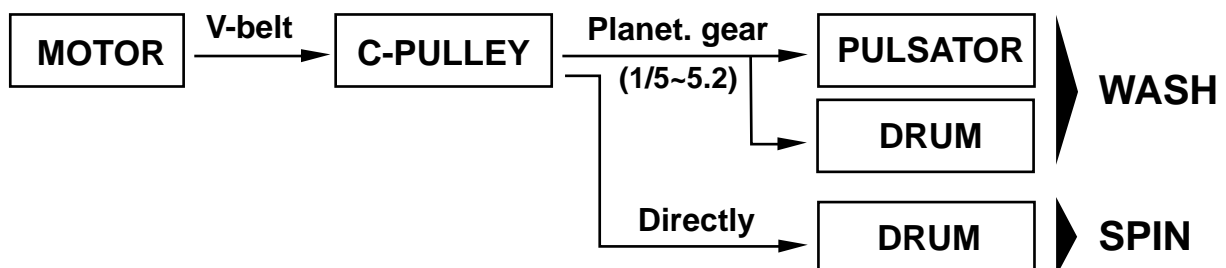
## 2-3. TURBO DRUM WASH (Except for WF-4020)

### A) FUNCTIONAL PRINCIPLE

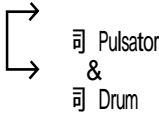
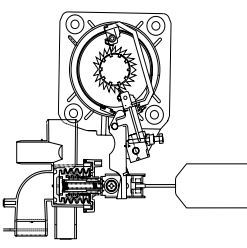
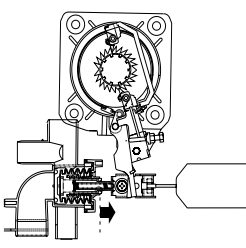
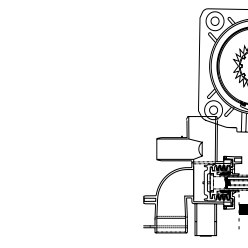
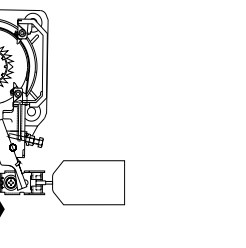
Pulsator rotates right & left direction by motor driving force and drum rotates in the opposite direction to the pulsator by inertia force & motor driving force, that is achieved by the new clutch and the new drain motor, while only pulsator rotates right & left in a conventional washer.



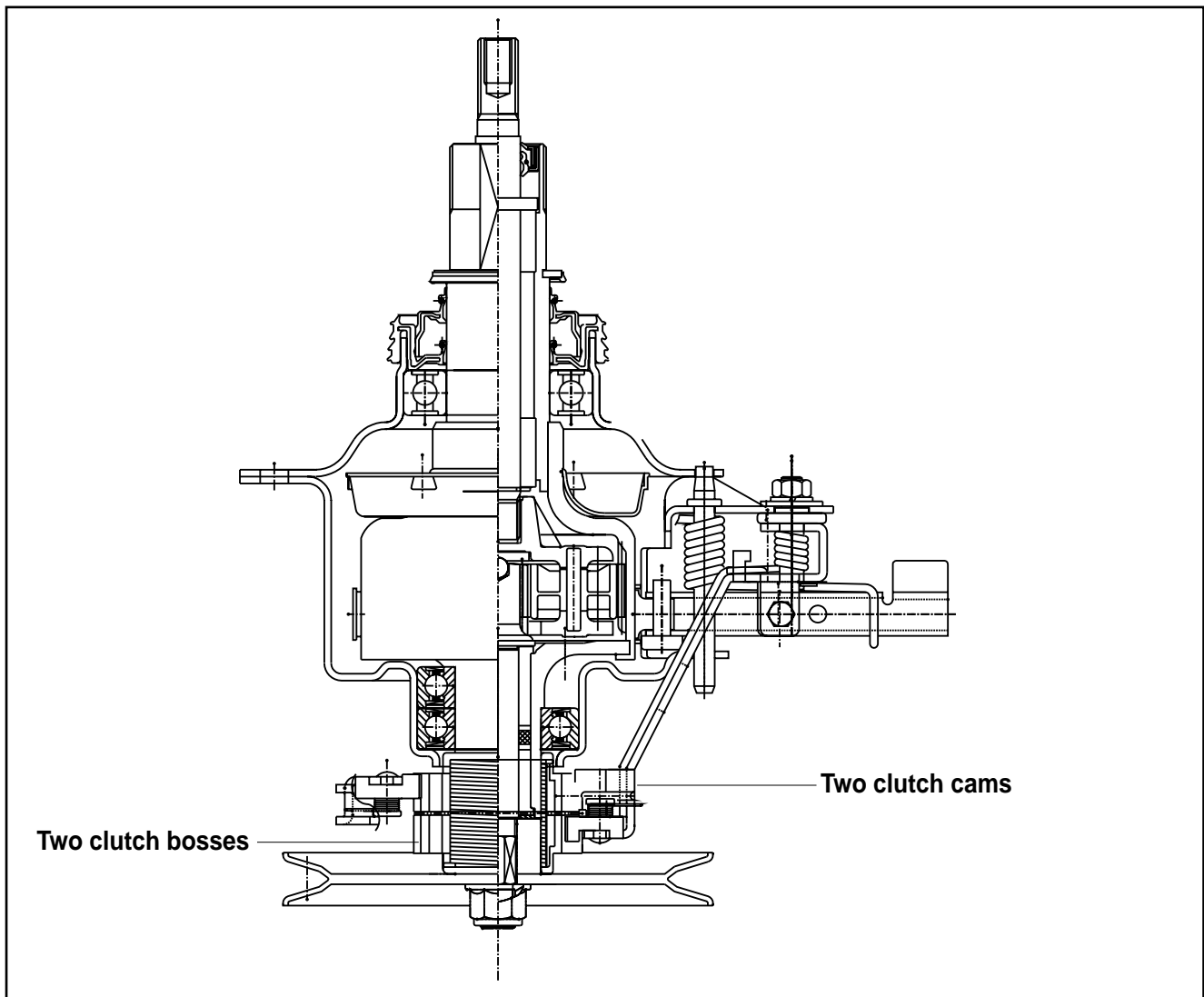
- The drum is possible to rotate by the new clutch removing the counter revolution-protecting device, changing the clutch spring-B to the dual actuating type and releasing the brake band which is activated by the new drain motor operated with two steps.
- Revolution speed step down as follows.



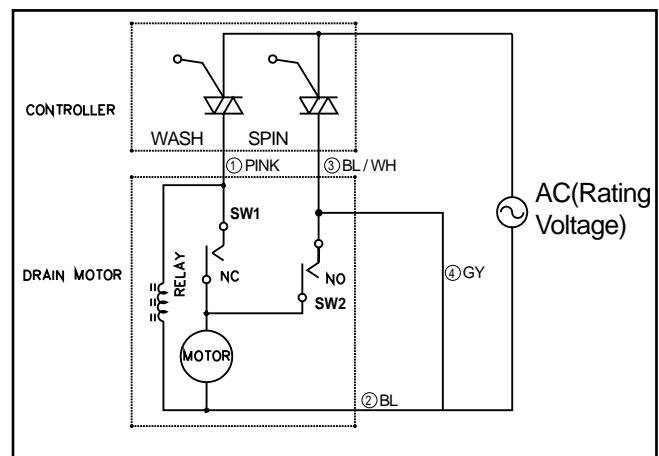
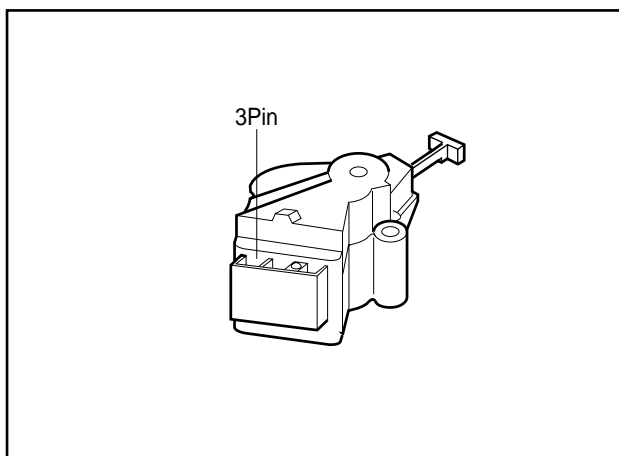
B) WORKING PRINCIPLE BY PROCESS

	SENSING LAUNDRY AMOUNT	WASH or RINSE	DRAIN	SPIN
1. Clutch mechanism · Clutch Spring-B( ) · Brake Band( ) · Clutch Lever	· Released · Fastened · Do not work	· Released · Released · 1st step moved	· Fastened · Released · 2nd step moved	· Fastened · Released · 2nd step moved
2. Drain Motor · SW1 · SW2	Do not work OFF OFF	1st step moved ON OFF	2nd step moved (Drain Valve open) ON ON	2nd step moved (Drain Valve open) ON ON
3. Wash Motor	Rotates at bidirection	Rotates at bidirection	Doesn't rotate	Rotates at one direction
4. Power transmitting Sequence		 (Drum rotates mainly by reacted force to pulsator action)		
5. Working State of Clutch & Drain Motor				
	Pulsator rotates at bidirection	Pulsator & Drum rotates at bidirection each other	Pulsator & Drum doesn't rotates	Drum rotates at one direction

### C) STRUCTURE OF THE NEW CLUTCH

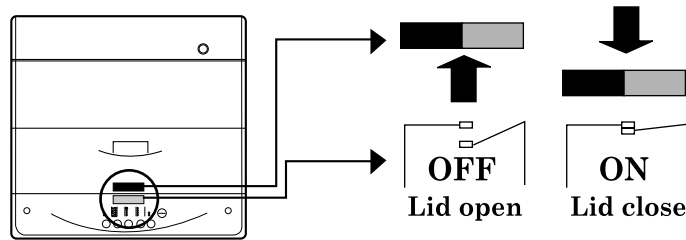


### D) DRAIN MOTOR & CIRCUIT DIAGRAM





## 2-4. REED SWITCH FOR APPLIANCE SAFETY(WF-402, T652A, T452A)



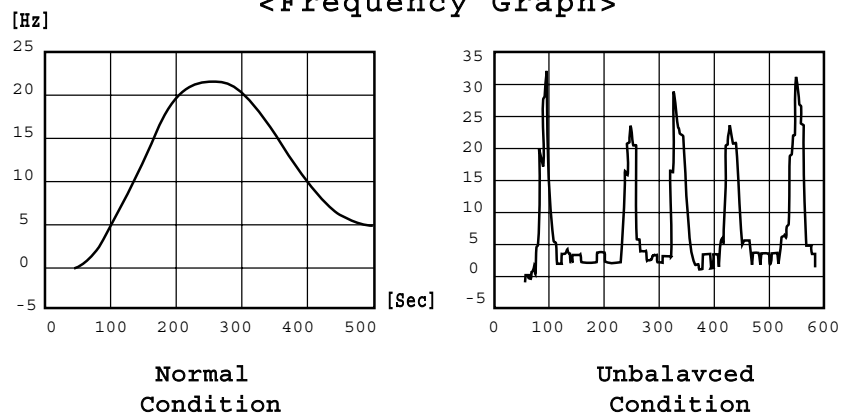
Interrupt system of reed S/W is differed from safety S/W incorporated in the previous models. Reed S/W is located on PWB ASM and operated with a magnetic incorporated inside of Lid-B systemically. If Lid is the closed position, the magnetic operates the contact of Lid S/W. In this case, the machine can do the normal operation because the current pass through the contacts. On the other hand, the contacts is open after Lid is the open position, the machine is stoped because the magnetic is far from the Reed S/W. So do not place any electric appliance with a charging battery, magnetically-driven appliance and magnetic body on the washer. It makes misoperation of washing machine process.

## 2-5. BALL PRESSURE SENSOR

<Ball Movement>

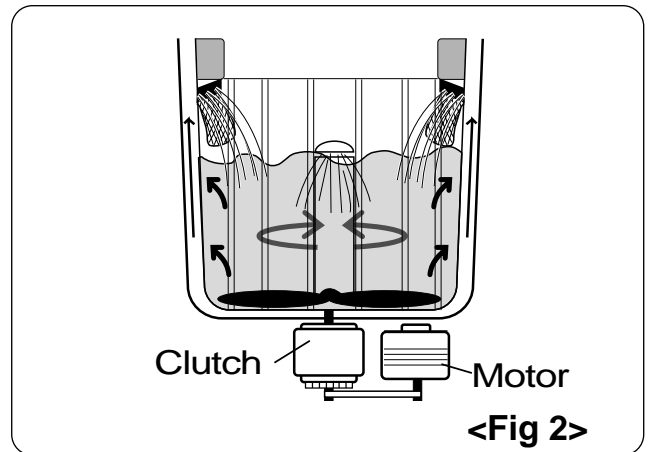
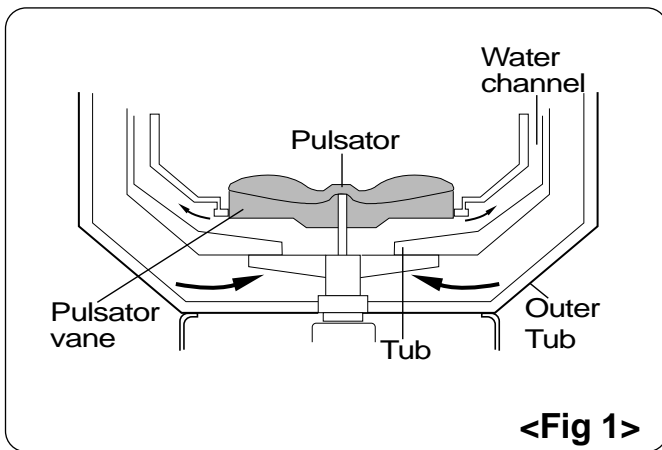


<Frequency Graph>



To detect unbalance, the electronic sensing system is used which is differ from safety S/W incorporated in the previous models. In the abnormal operation like unbalance of clothes during spinning, etc, the ball inside of sensor is moved. In this case the inductance of sensor is differ from the initial condition. So micom sense the unbalance condition by ball movement. Ball pressure sensing system is higher safety performance, sensing vertical movements and no deformation and noise by over of safety S/W.

## 2-6. TRIPLE WATER FALL SYSTEM



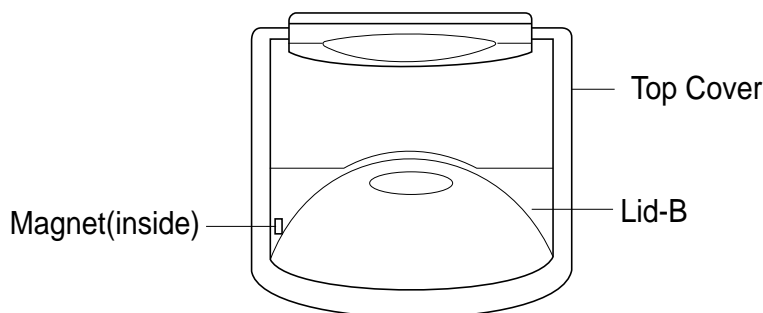
The washing and rinsing effects have been improved by adopting the water system in which water in the tub is circulated in a designed pattern. When the pulsator operates during the washing or rinsing process, water below the pulsator is sucked upwards by the rotation of the pulsator vanes, creating a water flow as shown in Fig 1. The water is then discharged from the upper part of the tub through the water channel provided. circulating water with level and clothes load only and regular water flow as shown in Fig 2.

## 2-7. AUTOMATIC CORRECTION FOR THE UNBALANCED LAUNDRY DURING SPINNING

When an unbalance of laundry occurs during spinning the unbalance will be automatically corrected 1times but 2nd unbalance will make the machine stop and “UE” is on the DISPLAY. In that case, open the lid, correct the unbalance and press the START/PAUSE button.

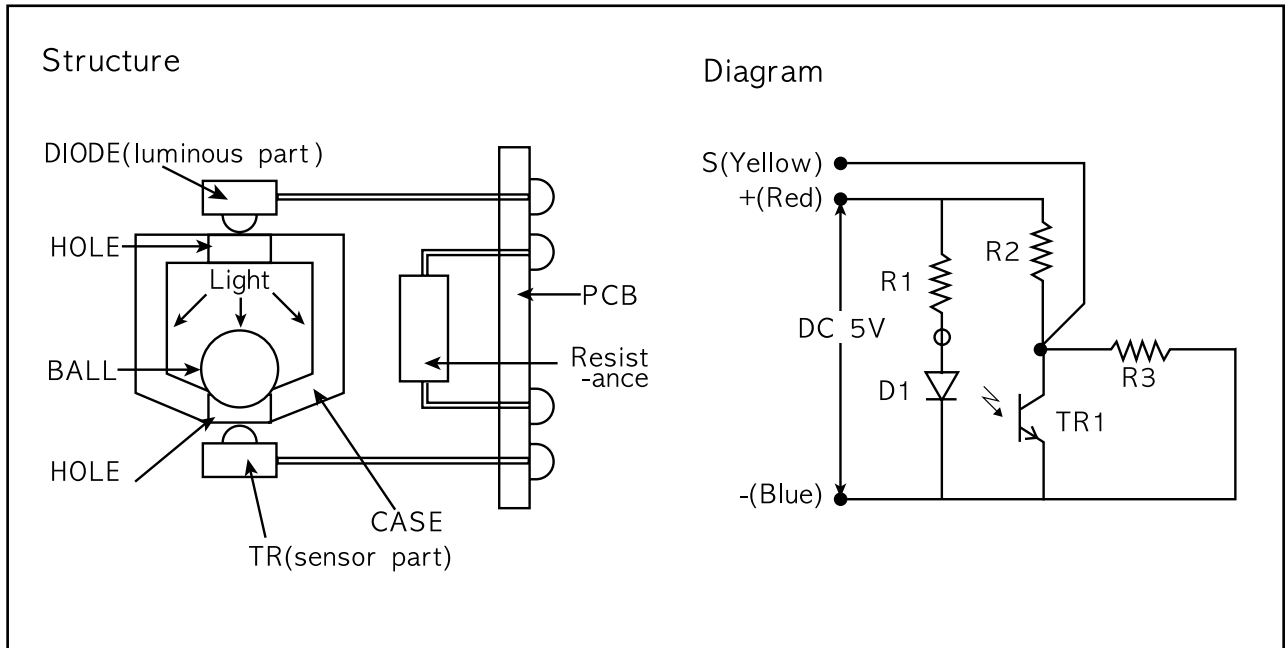
## 2-8. LID SWITCH FOR APPLIANCE SAFETY (WF-T851, T902)

Interrupt system of LID SWITCH is differed from SAFETY SWITCH incorporated in the others models. LID SWITCYH is located on TOP COVER and operated with a magnetic incorporated inside of LID-B systemically. If LID is the closed position, the magnetic operates the contact of LID SWITCH. In this case, the machine can do the normal operation because the current pass through the contacts. On the other hand the contacts is open after LID is the open position, the machine is stopped because the magnetic is far from the LID SWITCH.



## 2-9. NEW UNBALANCE SENSOR (OPTICAL BALL SENSOR) / WF-T851, T902

To detect unbalance, the optical sensor, BALL SENSOR, is used, which is differed from SAFETY SWITCH incorporated in others models. In normal operation, +5 of voltage is applied between DIODE and TR. In the abnormal operation like unbalance of clothes during spinning, etc, the ball inside of case is moved from the hole. In this case any voltage is not applied between DIODE and TR. That is unbalance detection system of this model.

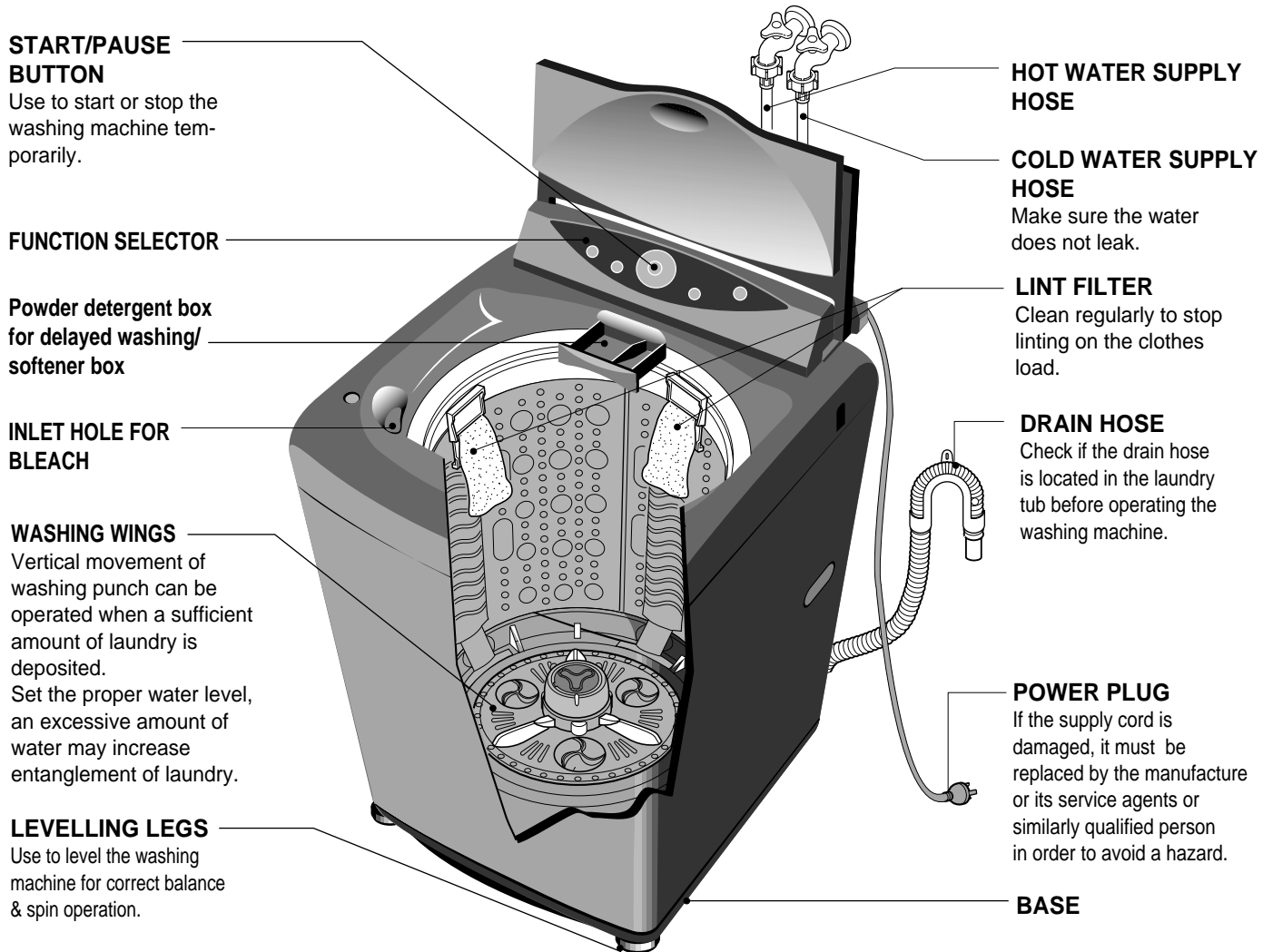


## 2-10. AUTO POWER OFF

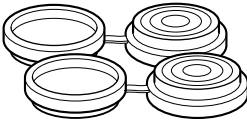
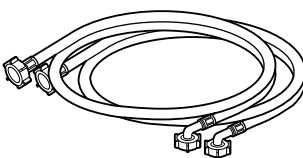
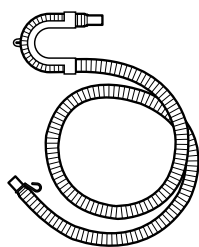
Power is automatically cut 10 seconds after wash program finishes.

### 3. PARTS IDENTIFICATION

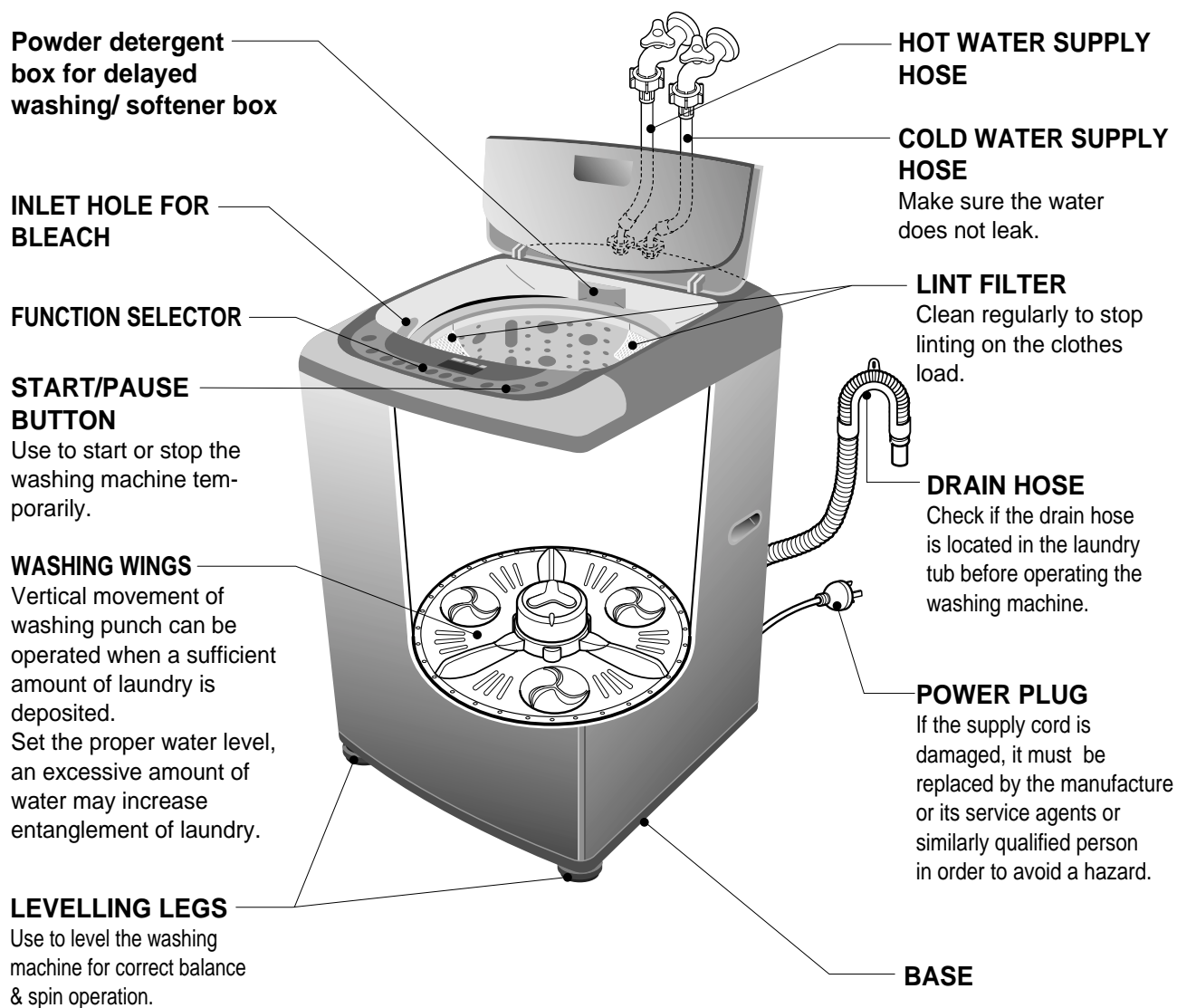
#### 1) WF-T851, T902



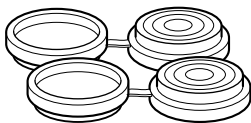
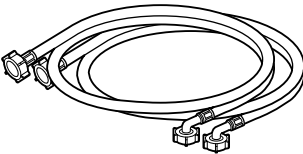
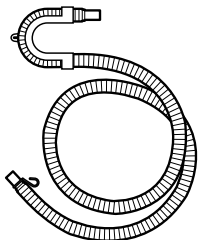
### Accessories

Height adjustment plate	Inlet hose	Drain hose
 <p>2 Pieces</p>	 <p>1 Each for cold and hot water</p>	

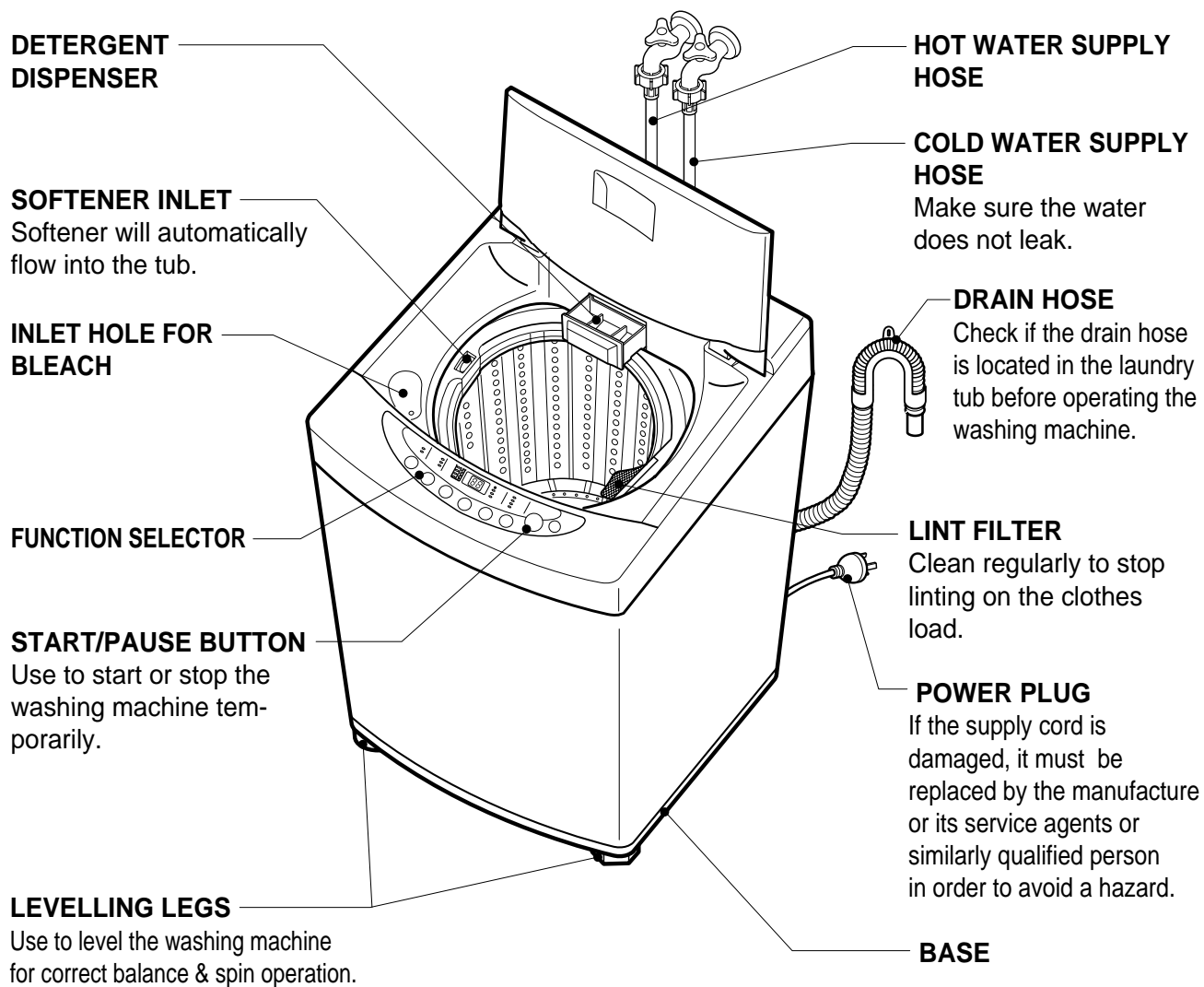
## 2) WF-T802, T852, T853, T652, T652A



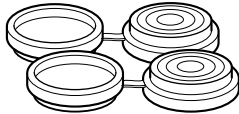
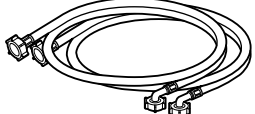
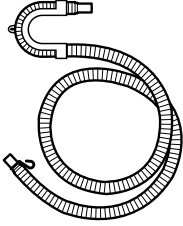
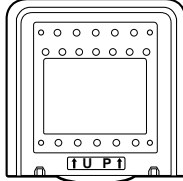
## Accessories

Height adjustment plate	Inlet hose	Drain hose
 <p>2 Pieces</p>	 <p>1 Each for cold and hot water</p>	

### 3) WF-T452, T452A, 402



## Accessories

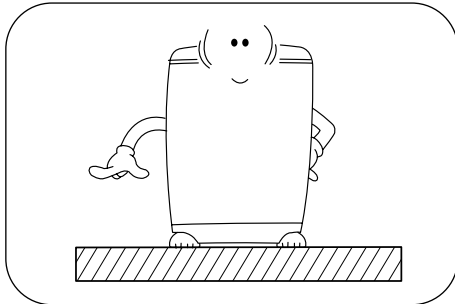
Height adjustment plate	Inlet hose	Drain hose	Silent cover
 <p>2 Pieces</p>	 <p>1 Each for cold and hot water</p>		

## 4. INSTALLATION INSTRUCTION

### A.HOW TO INSTALL THE WASHING MACHINE

#### Selection of the installing place

Install the washer on the horizontal solid floor. If the washer is installed on an unsuitable floor, it could make considerable noise and vibration.



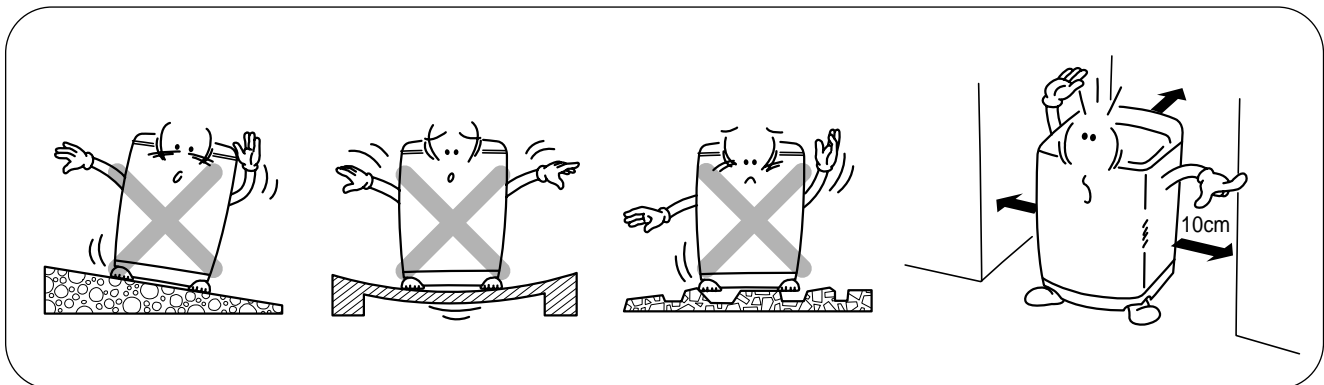
#### Do not install the washer in the following places

- Where the washer is exposed to direct sunlight.
- Near a heater or heating appliance.
- Where the washer is exposed to freezing temperatures.
- In damp environments such as bathrooms or harmful environments such as near a coal gas source.

The proper installation of the washing machine can increase the wash effectiveness and the life of it.

If the washer is installed on an inclined floor, it could make considerable noise and vibration and could cause a malfunction.

Use the height adjust rubber to adjust the washing so that it sits properly.

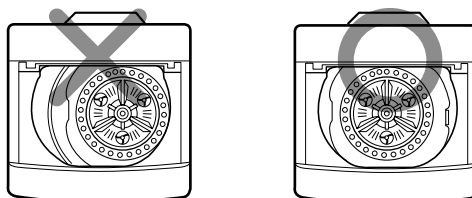


- Install the washing machine on a level and firm surface.
- Keep the washing machine more than 10cm from the wall to prevent vibration noise during spinning
- The base opening must not be obstructed by carpeting when the washing machine is installed on a carpeted floor.
- Wooden floors may need reinforcing to prevent the normal vibration which occurs with an unbalanced load.

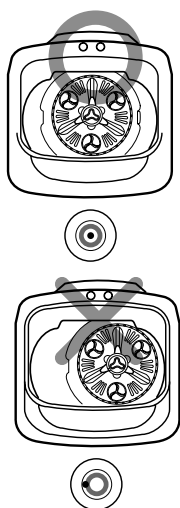
## B.HOW TO LEVEL THE WASHING MACHINE

- Check the level of the washing machine using a spirit level on the side of the washer cabinet
- You can check the level also by visually lining up the washer with the fills, adjacent walls or cabinets.

**WF-T652(A)**  
**WF-T452(A), 402**



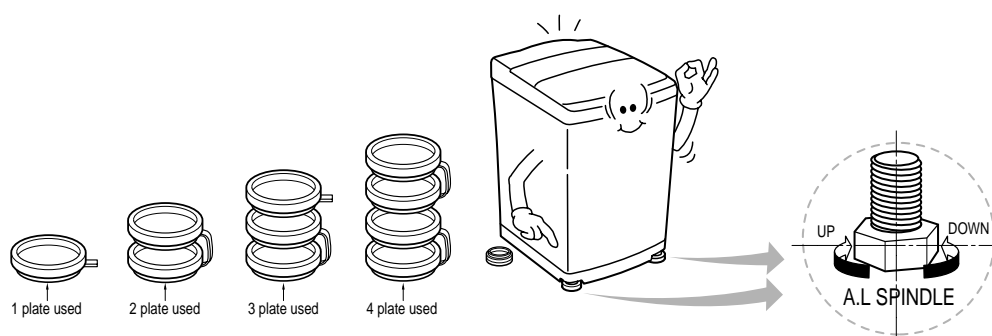
**WF-T902, T851, T853, T802, T852**



### Horizontal Setting

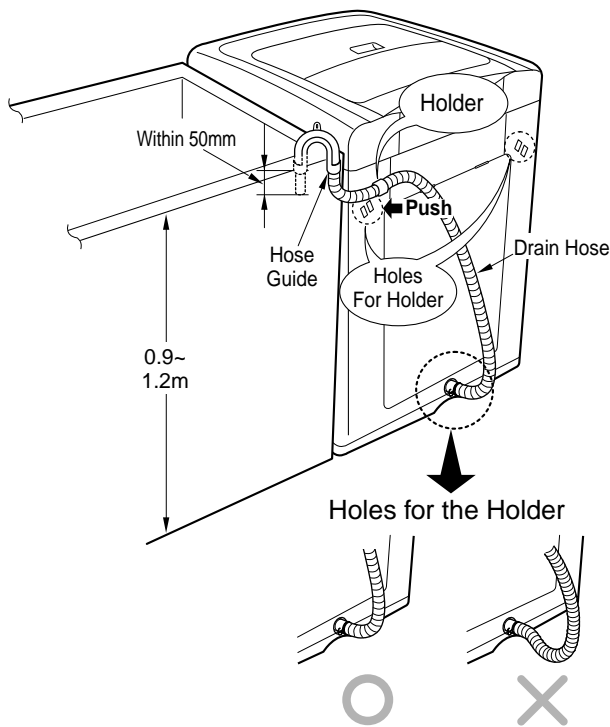
Location of drop	Cause	How to adjust
	When the front is lower.	• Adjust the front adjusting plate with the adjustable legs(2), or adjust the adjustable legs.
	When the rear is lower.	• Adjust the rear adjusting plate with the adjustable legs(2), or adjust the supporting plate.
	When the left is lower.	• Adjust the left part of the front and rear adjusting plates or the supporting plate.
	When the right is lower.	• Adjust the right part of the front and rear adjusting plates or the supporting plate.

- You can level the washer using the A.L spindle fitted to the cabinet.
- Screw the A.L SPINDLE legs up or down as required.
- Additional height adjustment plates are provided in the accessory bag. These fit under A.L SPINDLE if required to allow for greater adjustment of the legs.
- When washing machine does not even out, turn A.L SPINDLE right or left to be level.
- Should the height adjustment exceed the maximum allowed by the A.L SPINDLE, please height adjustment plates provided under the legs as shown in the diagram.

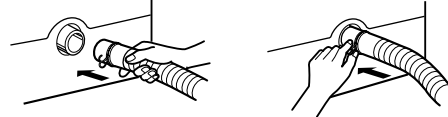




## C. How to install the drain hose



1. Fit the machine end of the drain hose to the outlet of the drain pump and tighten the clamp.



2. Put the other end of the drain hose over the standpipe or wash tub.
3. Fit the plastic holder into either holes for the holder at the rear of the machine. The holder is possible to fit at either direction according to location of the standpipe. Make sure that the holder keeps firmly the drain hose so that the drain hose should not fall down as shown in the fig. (WF-T851, T853, T802, T852)

### NOTE :

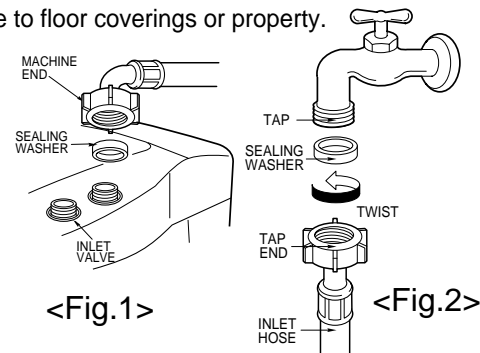
- To prevent syphoning, the drain hose should not extend more than 50 mm from the end of the hose guide.
- The discharge height should be approximately 0.9~1.2m from the floor.

## D. Flooding drainage

- You machine requires a floor drainage slope (or hole) that will SAFELY DISPOSE of the FULL FLOW of any water that may leak out should the machine malfunction. It is therefore the OWNER'S RESPONSIBILITY to make sure this machine is installed in an area with a drain hole (or slope) that will prevent any possibility of water damage to floor coverings or property.

## E. Connect inlet hose

- Check that sealing washers are firmly seated.
- Attach the curved end of the hose to the inlet valve of the washing machine; Tighten the coupling nuts securely by hand. (Fig. 1)
- Attach the straight end of the hose to the tap. Tighten the coupling nuts securely by hand. (Fig. 2)
- Either hose can be attached to hot inlet valve and tap.
- Turn on the taps and check for leaks. Tighten the coupling nuts firmly if there is any leakage. If water pressure is strong, close the water tap completely then open it slightly.

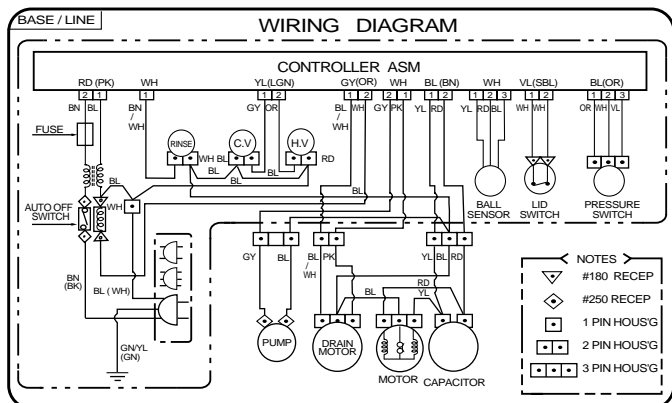


### CAUTION

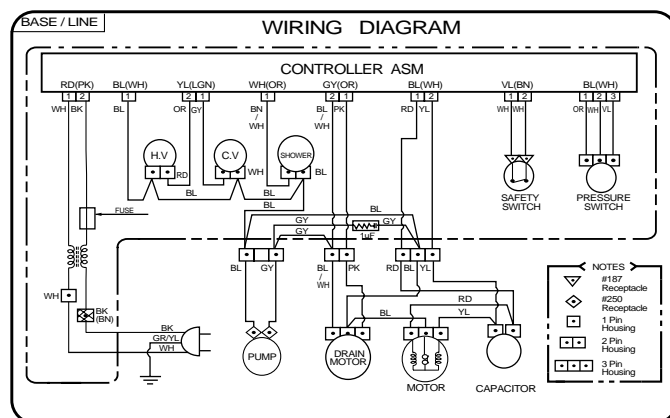
- Do not install the washer where it is directly exposed to sunlight, wind, rain etc.
- Plug the power cord of this washer into a properly installed standard power point that is switched & earthed.
- Your machine requires a floor drainage slope(or hole) that will SAFELY DISPOSE of the FULL FLOW of any water that may leak out should the machine malfunction. It is therefore the OWNER'S RESPONSIBILITY to make sure this machine is installed in an area with a drain hole (or slope) that will prevent any possibility of water damage to floor coverings or property.
- Permissible water temperature : Max 70°C (160°F)
- Permissible water pressure : Max 116psi (800kpa, 8kg/cm<sup>2</sup>), Min 4psi (30kpa, 0.3kg/cm<sup>2</sup>)
- If water temperature & pressure is greater than above, it may cause damage to the machine. If you have uncontrolled water temperature & pressure you should fit a temperature & pressure relief valve to ensure that water temperature & pressure remains within the safe limits. Consult a plumber or electrician if you are unable to adjust water temperature and pressure.
- Do not over tighten the coupling nuts with a tool. Inlets are plastic : Do not strip or cross thread.

## 6. SCHEMATIC DIAGRAM

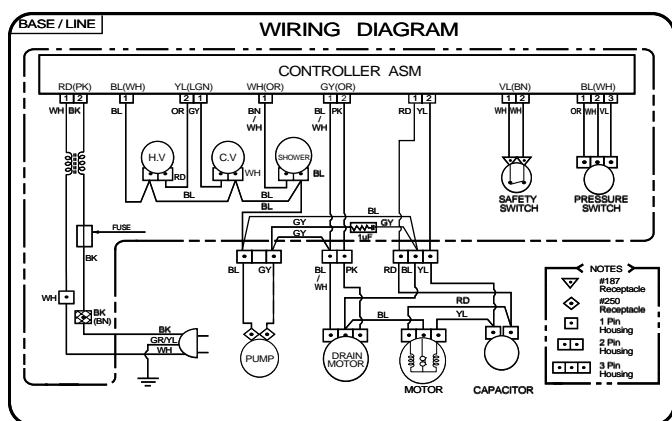
WF-T851



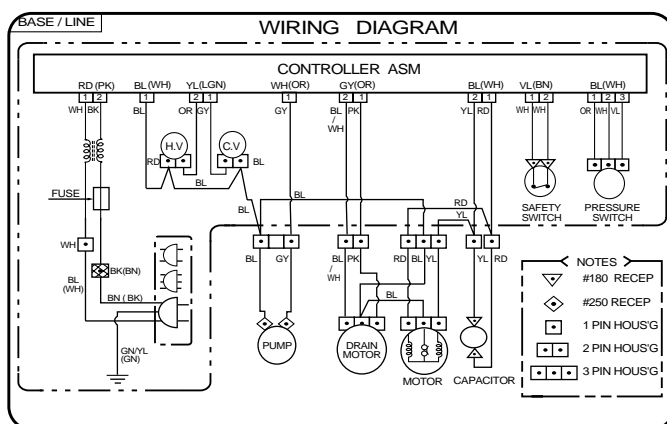
WF-T853



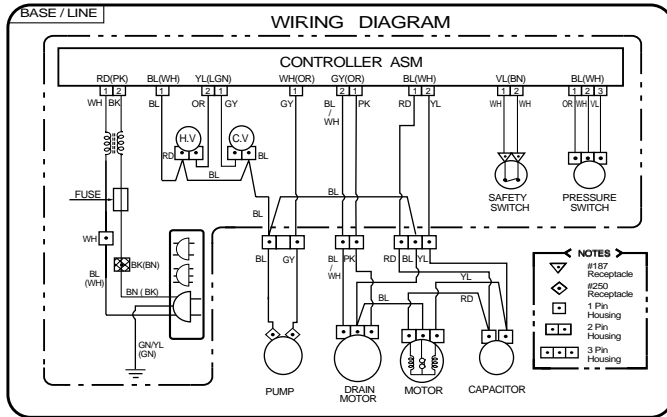
WF-T802/T852



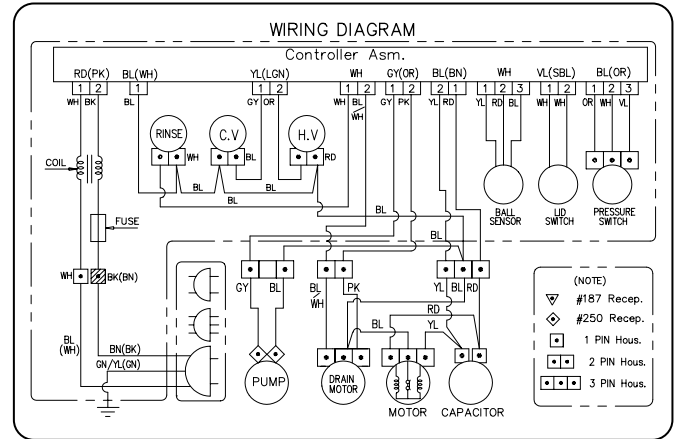
WF-T452



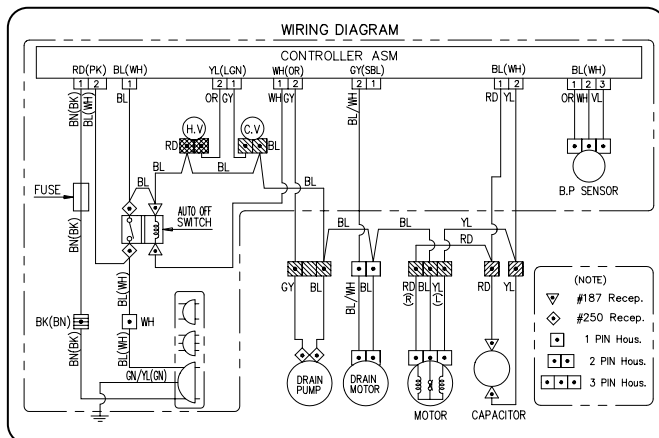
## WF-T652



## WF-T902



## WF-402



6. OPERRATING INSTRUCTION

1) WF-T851

Fully automatic control

- The Normal program is used for average day to day washing.
  - Press POWER ON button.
  - Load clothes.
- Add detergent, bleach and conditioner as desired.
  - Close the lid and press START/PAUSE button.
  - The water level lights will scroll up and down while the washer is working out the optimum water level for your clothes load.

Preparation before wash

Sort your washing into separate wash loads

- Each load of washing should contain clothing which needs the same washing conditions. For example, you should not wash delicate clothes with very dirty work clothes.
- Some fabrics are lint collectors and can pick up lint,dirt and colour from other fabrics, which are lint producers. Some examples are listed below.

LINT COLLECTORS

Corduroy  
Synthetics  
Permanent press fabrics

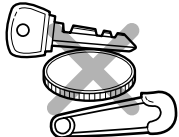
LINT PRODUCERS

Towels  
Nappies  
Chenille / Candlewick

Make sure that you wash lint collectors separately from lint producers.



- Check if laundry is washable in water.



- Be sure to remove things such as keys, pins and coins from the laundry.



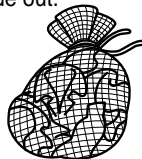
- Wash oily or dyed laundry separately.



- Wash fluffy lanundry by turning it inside out.



- Wash fluffy laundry by turning it inside out



- Wash delicate clothes, wrapping them in a nylon net.

Manual control

- Other programmes are selected as follows.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Select temperature, level, process, program and options as described below.
- Close the lid and press START/PAUSE button.

Detergent deposit display

¥ Upon loading laundry, it displays the correct amount of detergent to be added according to the amount of laundry(based on concentrated detergent).

Wash process display

¥ Indicates the current washing status.  
¥ Next step is lit, current step blinks and finished step is turned off.

How to select a washing program

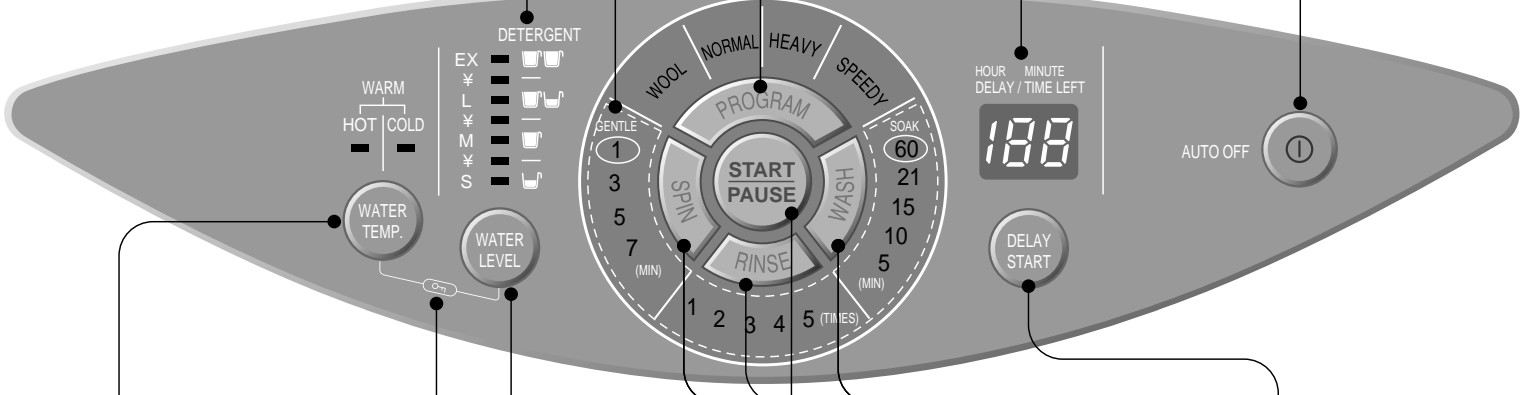
¥ Use it to select washing programs.  
¥ By pressing the button, it cycles [NORMAL → HEAVY → SPEEDY → WOOL].

Display

¥ Used to indicate the time left of all processes or reservation.  
¥ In case of abnormal operation, the following indications are displayed.  
Abnormal water supply : **HE** lamp blinks.  
Abnormal drainage : **DE** lamp blinks.  
Abnormal spin : **UE** lamp blinks.  
Abnormal water level sensing : **PE** lamp blinks.  
Abnormal lid open : **LE** lamp blinks.  
Abnormal over flooding sensing : **OF** lamp blinks.

Power switch

¥ Use it turn on and turn off.  
By pressing the button [turn on turn off] are repeated.  
¥ Electric power automatically turns off 10 seconds after the washing cycle finishes with "boo-" sound.



How to select temp.

¥ Used to select proper water temperature of washing water, [ WARM(HOT+COLD) → HOT →COLD] mode repeats.  
¥ Use it to select hot or cold water. (When hot water only is selected, hot water is supplied for washing and cold water are supplied for rinsing)

Child Lock

¥ Used to lock or unlock the control buttons to prevent all the setting from being changed by a child.  
¥ For locking, push both buttons simultaneously and for unlocking, push them one more in washing process.

How to adjust the water level

¥ By pressing the button, it cycles [LARGE → LARGE ¥ EX-LARGE → EX-LARGE → SMALL → SMALL ¥ MEDIUM → MEDIUM → MEDIUM ¥ LARGE → LARGE].  
¥ At NORMAL, HEAVY or SOAK program, water level is automatically based on the amount of laundry.  
¥ Water level can be adjusted ever when the washer is in operation.

How to use delayed washing

¥ Use this function for delayed washing.  
¥ Use it to set the delay time.  
¥ By pressing the button, it cycles [3 → 4 → 5 → ... → 11 → 12 → 14 → 16 → ... → 46 → 48 → 3] hours. (up to 48 hours can be delayed)  
¥ To cancel delay time, turn the power switch off.

Start and temporary pause

¥ Use it to start or pause temporarily.  
¥ Pressing the button repeats start and temporary pause.  
¥ After 10 minutes in a temporary pause state, the power will automatically turn off.

How to adjust wash conditions

¥ **Wash :**  
Use it to change washing time.  
By pressing the button[21min → SOAK 5min → SOAK 10min → SOAK 15min → SOAK 21min → OFF → 5min → 10min → 15min]  
SOAK is used to remove old or hardened dirt more effectively.  
Soak time is about 60 minutes. (You cannot change in WOOL program.)  
¥ **Rinse :**  
Use it to change the frequency of rinse.  
By pressing the button.  
[rinse 1 → rinse 2 → rinse 3 → rinse 4 → rinse 5 → OFF → rinse 1] are repeated.  
When you select rinse only, the operation starts with water supply.  
¥ **Spin :**  
Use it to change the spinning time.  
By pressing the button [5 min → 7 min → OFF → 1 min → 3 min → 5 min].

2) WF-T853

Fully automatic control

- The Normal program is used for average day to day washing.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Close the lid and press START/PAUSE button.
- The water level lights will scroll up and down while the washer is working out the optimum water level for your clothes load.

Preparation before wash

Sort your washing into separate wash loads

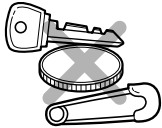
- Each load of washing should contain clothing which needs the same washing conditions. For example, you should not wash delicate clothes with very dirty work clothes.
- Some fabrics are lint collectors and can pick up lint,dirt and colour from other fabrics, which are lint producers. Some examples are listed below.

LINT COLLECTORS	LINT PRODUCERS
Corduroy	Towels
Synthetics	Nappies
Permanent press fabrics	Chenille / Candlewick

Make sure that you wash lint collectors separately from lint producers.



- Check if laundry is washable in water.



- Be sure to remove things such as keys, pins and coins from the laundry.



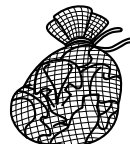
- Wash oily or dyed laundry separately.



- Wash fluffy lanundry by turning it inside out.



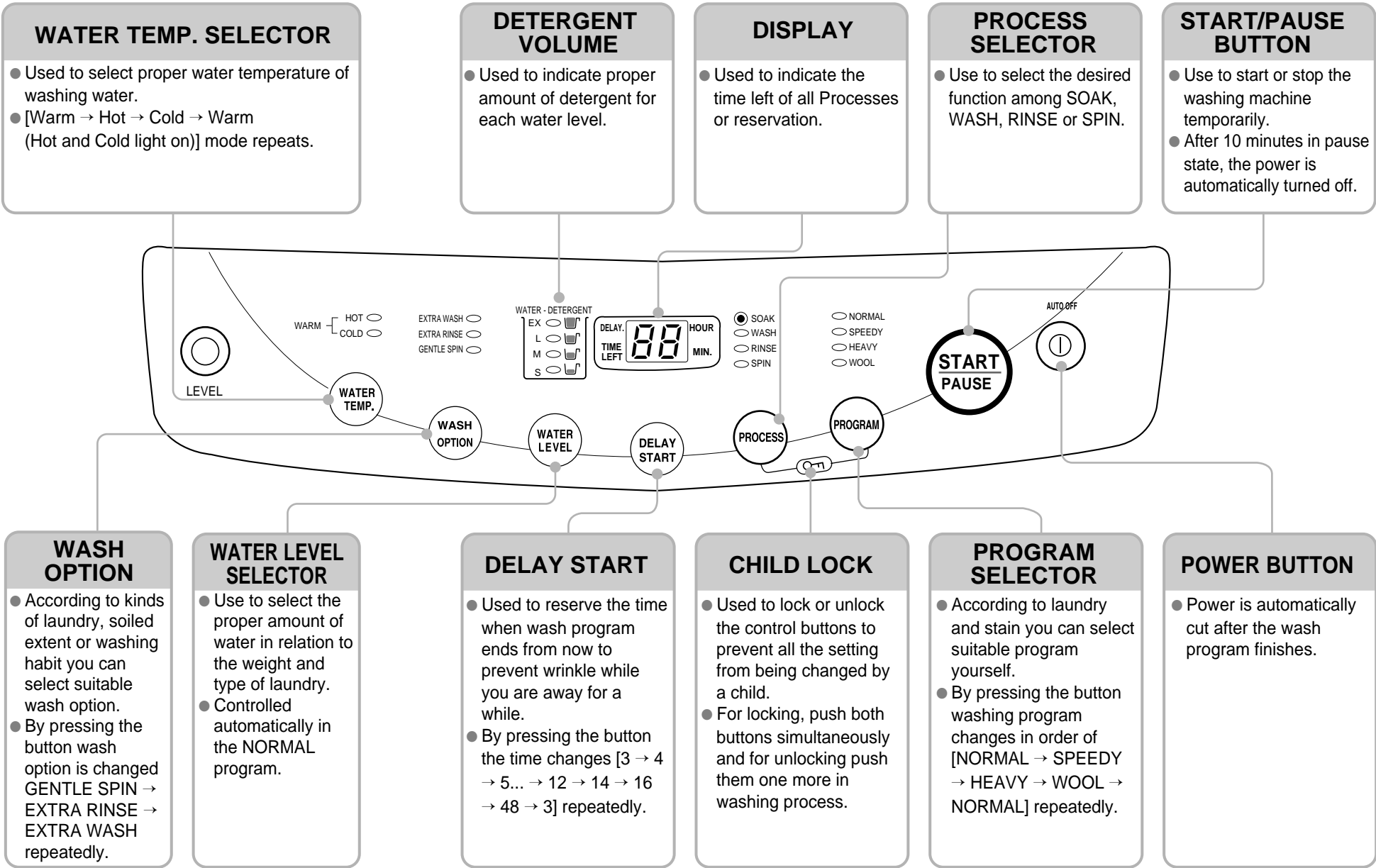
- Wash fluffy laundry by turning it inside out



- Wash delicate clothes, wrapping them in a nylon net.

Manual control

- Other programmes are selected as follows.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Select temperature, level, process, program and options as described below.
- Close the lid and press START/PAUSE button.



3) WF-T802, T852

Fully automatic control

- The Normal program is used for average day to day washing.
  - Press POWER ON button.
- Load clothes.
  - Add detergent, bleach and conditioner as desired.
  - Close the lid and press START/PAUSE button.
  - The water level lights will scroll up and down while the washer is working out the optimum water level for your clothes load.


Preparation before wash

**Sort your washing into separate wash loads**

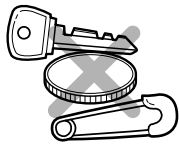
- Each load of washing should contain clothing which needs the same washing conditions. For example, you should not wash delicate clothes with very dirty work clothes.
- Some fabrics are lint collectors and can pick up lint,dirt and colour from other fabrics, which are lint producers. Some examples are listed below.

LINT COLLECTORS	LINT PRODUCERS
Corduroy	Towels
Synthetics	Nappies
Permanent press fabrics	Chenille / Candlewick


*Make sure that you wash lint collectors separately from lint producers.*




- Check if laundry is washable in water.




- Be sure to remove things such as keys, pins and coins from the laundry.



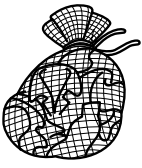
- Wash oily or dyed laundry separately.



- Shake loose dirt off before washing.



- Wash fluffy laundry by turning it inside out.



- Wash delicate clothes, wrapping them in a nylon net.

Manual control

- Other programmes are selected as follows.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Select temperature, level, process, program and options as described below.
- Close the lid and press START/PAUSE button.

**DETERGENT DEPOSIT DISPLAY**

- Upon loading laundry, it displays the correct amount of detergent to be added according to the amount of laundry(based on concentrated detergent).

**WASH POWER**

- Use it to adjust the strength of water current.
- By pressing the button, it cycles [S] → [G] → [N].
- Strength of the water current can be adjusted at any course. At the beginning, it starts with MED [S].

**WASH PROCESS DISPLAY**

- Indicates the current washing status.
- Next step is lit, current step blinks and finished step is turned off.

**NOTE** In contents of display part the meanings of M, T, M are minutes, times and minutes.

**DISPLAY ABNORMAL OPERATION**

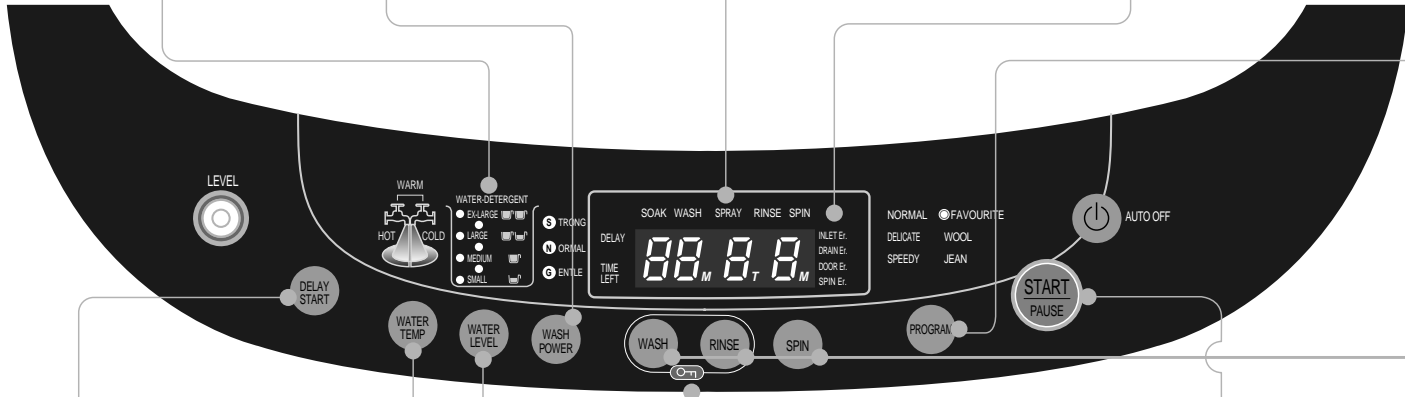
- In case of abnormal operation, the following indications are displayed.
- Abnormal water supply** : INLET Er. lamp blinks.
- Abnormal drainage** : DRAIN Er. lamp blinks.
- Abnormal spin** : SPIN Er. lamp blinks.
- Abnormal water level sensing** : **PE** displayed.
- Abnormal lid open** : DOOR Er. lamp blinks.

**HOW TO SELECT A WASHING PROGRAM**

- Use it to select washing programs.
- By pressing the button, it cycles [NORMAL → DELICATE → SPEEDY → JEAN → WOOL → FAVOURITE → NORMAL]

**FOR MANUAL WASH, RINSE AND SPIN**

- Wash:  
Use it to change washing time.  
By pressing the button [21min → 25min → 40min → 60min → 90min → OFF → 3min → 6min → 9min → 12min → 15min → 18min → 21min] SOAKING is used to remove old or hardened dirt more effectively.  
Soaking time is about 40, 60, 90minutes (You cannot choose in WOOL and DELICATE program.).
- Rinse:  
Spray rinse/Deep 1 is preset in the NORMAL wash program.  
[Spray rinse + Deep 1 → Deep 1 → Spray rinse + Deep 2 → Deep 2 → Off → Spray rinse + Deep 1] mode repeats.  
Use it to change the frequency of rinses. By pressing the button are repeated. When you select rinse only, the operation starts with water supply.
- Spin:  
Use it to change the spinning time.  
By pressing the button, [6min → 8min → OFF → 1min → 2min → 4min → 6min].



3) WF-T902, T852

Fully automatic control

- The Normal program is used for average day to day washing.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Close the lid and press START/PAUSE button.
- The water level lights will scroll up and down while the washer is working out the optimum water level for your clothes load.

Manual control

- Other programmes are selected as follows.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Select temperature, level, process, program and options as described below.
- Close the lid and press START/PAUSE button.

Preparation before wash

Sort your washing into separate wash loads

- Each load of washing should contain clothing which needs the same washing conditions. For example, you should not wash delicate clothes with very dirty work clothes.
- Some fabrics are lint collectors and can pick up lint, dirt and colour from other fabrics, which are lint producers. Some examples are listed below.


LINT COLLECTORS

Corduroy  
Synthetics  
Permanent press fabrics

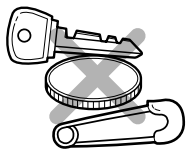
LINT PRODUCERS

Towels  
Nappies  
Chenille / Candlewick


Make sure that you wash lint collectors separately from lint producers.




- Check if laundry is washable in water.




- Be sure to remove things such as keys, pins and coins from the laundry.



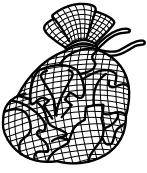
- Wash oily or dyed laundry separately.



- Shake loose dirt off before washing.



- Wash uffy laundry by turning it inside out.



- Wash delicate clothes, wrapping them in a nylon net.

**FAVOURITE SELECT**

- Pressing the FAVOURITE button allows you to store your favourite wash conditions in the NORMAL cycle memory and than recall it for use at a later time.

**STAIN LEVEL SELECT**

- Default is MEDIUM. By pressing button [HEAVY ▶ LIGHT ▶ MEDIUM] mode repeats.
- Available during washing.
- \* Except for WOOL and DELICATE program.

**DISPLAY ABNORMAL OPERATION**

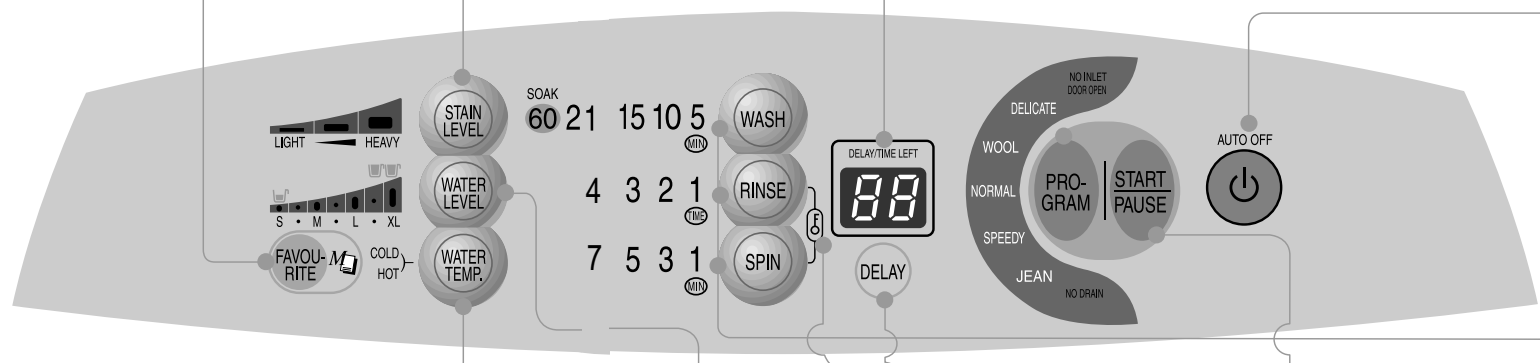
- In case of abnormal operation, the following indications are displayed.  
**Abnormal water supply** : NO INLET. lamp blinks.  
**Abnormal drainage** : NO DRAIN. lamp blinks.  
**Abnormal spin** : **UE** displayed.  
**Abnormal water level sensing** : **PE** displayed.  
**Abnormal lid open** : DOOR OPEN. lamp blinks.

**HOW TO SELECT A WASHING PROGRAM**

- Use it to select washing programs.
- By pressing the button, it cycles [NORMAL → SPEEDY → JEAN → DELICATE → WOOL → NORMAL]

**POWER**

- Use it turn on and off. By pressing the button [On→Off] are repeated.
- Electric power automatically turns off in 10sec, after the washing cycle finishes with "boo-" sound.
- Electric power automatically turns off after 10min.in 'Parse' condition



**HOW TO SELECT TEMP.**

- Used to select proper water temperature of washing water. [WARM(Hot and cold light turn on) → HOT → COLD → WARM] mode repeats.

**HOW TO USE DELAYED WASHING**

- Use this function for delayed washing.
- Use it to set the delay time.
- By pressing the button, it cycles [3 → 4 → 5 → ... → 11 → 12 → 14 → 16 → ... → 46 → 48 → 3] hours. (Up to 48 hours can be delayed).
- To cancel delay time, turn the power switch off.
- \* Except for WOOL and DELICATE program.

**HOW TO ADJUST THE WATER LEVEL**

- By pressing the button, it cycles [LARGE → LARGE ≠EX-LARGE → EX-LARGE → SMALL → SMALL ≠MEDIUM → MEDIUM → MEDIUM ≠LARGE → LARGE]
- At FUZZY and JEAN program, water level is selected automatically based on the amount of laundry.
- Water level is set to LARGE for WOOL and DELICATE program.
- Water level is set to MEDIUM for SPEEDY program.
- Water level can be adjusted even when the washer is in operation.
- For appropriate quantity of detergent follow the detergent manufacturer's instruction

**START AND TEMPORARY PAUSE**

- Use it to start or pause. By pressing the button [Start▶Pause] are repeated.

**CHILD LOCK**

- Used to lock or unlock the control buttons to prevent all the setting from being changed by a child
- For locking, push both buttons simultaneously and for unlocking, push them once more during the washing process.

**FOR MANUAL WASH, RINSE AND SPIN**

- Wash:  
Use it to change washing time. By pressing the button [21min → SOAK 5min → SOAK 10min → SOAK 15min → SOAK 21min → OFF → 5min → 10min → 15min] SOAK is used to remove old or hardened dirt more effectively. Soak time is about 60minutes (You cannot choose in WOOL program.)
- Rinse:  
Use it to change the frequency or rinse. By pressing the button. [rinse 1 → rinse 2 → rinse 3 → rinse 4 → OFF → rinse 1] are repeated. When you select rinse only, the operation starts with water supply.
- Spin:  
Use it to change the spinning time. By pressing the button, [5min → 7min → OFF → 1min → 3min → 5min].

5) WF-T652, WF-T652A

Fully automatic control

- The Fuzzy program is used for average day to day washing.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Close the lid and press START/PAUSE button.
- The water level lights will scroll up and down while the washer is working out the optimum water level for your clothes load.


Preparation before wash

**Sort your washing into separate wash loads**

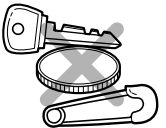
- Each load of washing should contain clothing which needs the same washing conditions. For example, you should not wash delicate clothes with very dirty work clothes.
- Some fabrics are lint collectors and can pick up lint,dirt and colour from other fabrics, which are lint producers. Some examples are listed below.

<b>LINT COLLECTORS</b>	<b>LINT PRODUCERS</b>
Corduroy	Towels
Synthetics	Nappies
Permanent press fabrics	Chenille / Candlewick


*Make sure that you wash lint collectors separately from lint producers.*




- Check if laundry is washable in water.




- Be sure to remove things such as keys, pins and coins from the laundry.



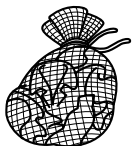
- Wash oily or dyed laundry separately.



- Wash fluffy lanudry by turning it inside out.



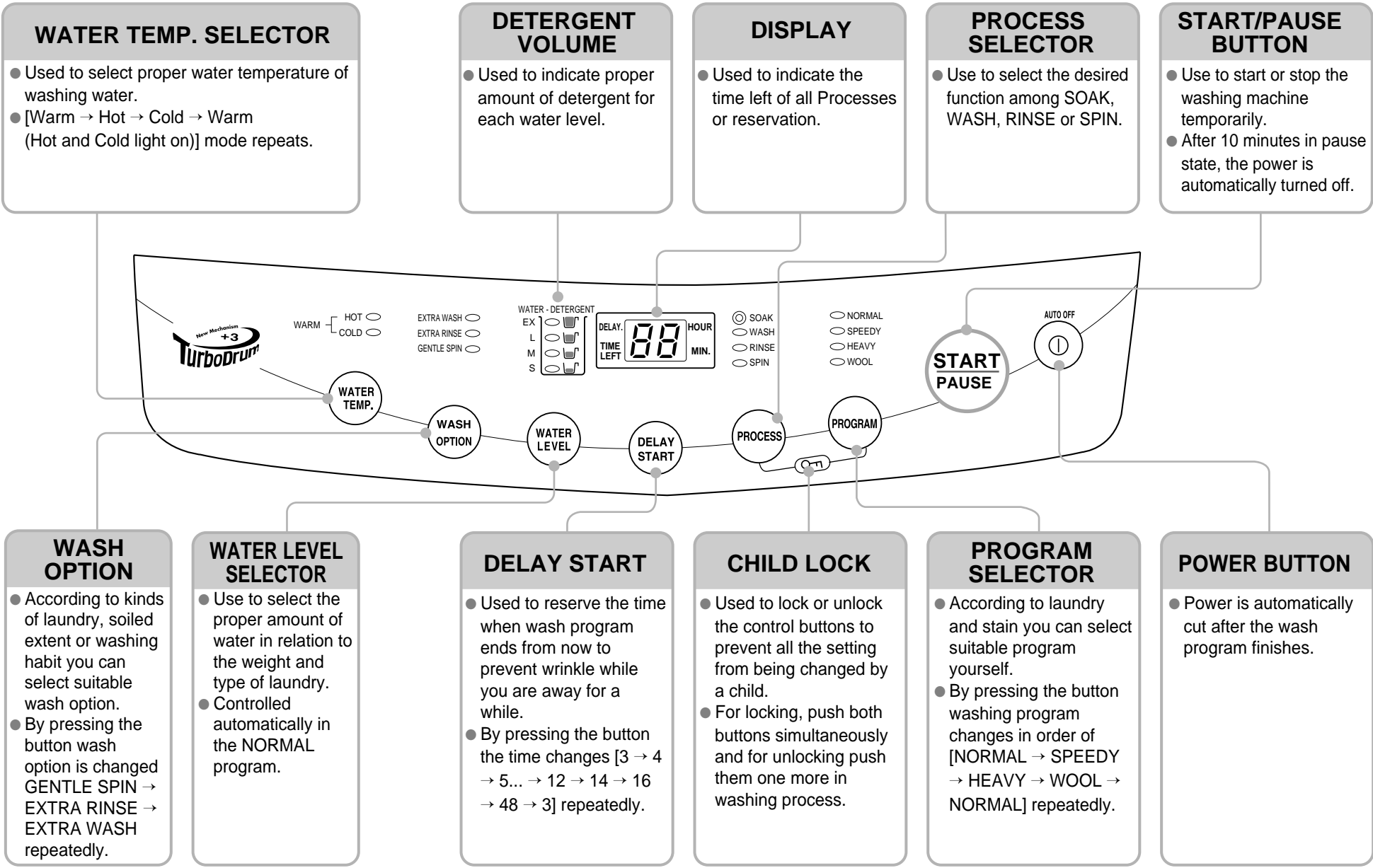
- Wash fluffy laundry by turning it inside out



- Wash delicate clothes, wrapping them in a nylon net.

Manual control

- Other programmes are selected as follows.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Select temperature, level, process, program and options as described below.
- Close the lid and press START/PAUSE button.





6) WF-T452, T452A

Fully automatic control

- The Normal program is used for average day to day washing.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Close the lid and press START/PAUSE button.
- The water level lights will scroll up and down while the washer is working out the optimum water level for your clothes load.


Preparation before wash

**Sort your washing into separate wash loads**

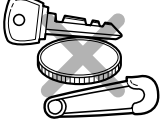
- Each load of washing should contain clothing which needs the same washing conditions. For example, you should not wash delicate clothes with very dirty work clothes.
- Some fabrics are lint collectors and can pick up lint,dirt and colour from other fabrics, which are lint producers. Some examples are listed below.

LINT COLLECTORS	LINT PRODUCERS
Corduroy	Towels
Synthetics	Nappies
Permanent press fabrics	Chenille / Candlewick


*Make sure that you wash lint collectors separately from lint producers.*



- Check if laundry is washable in water.



- Be sure to remove things such as keys, pins and coins from the laundry.



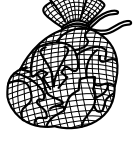
- Wash oily or dyed laundry separately.



- Wash fluffy lanudry by turning it inside out.



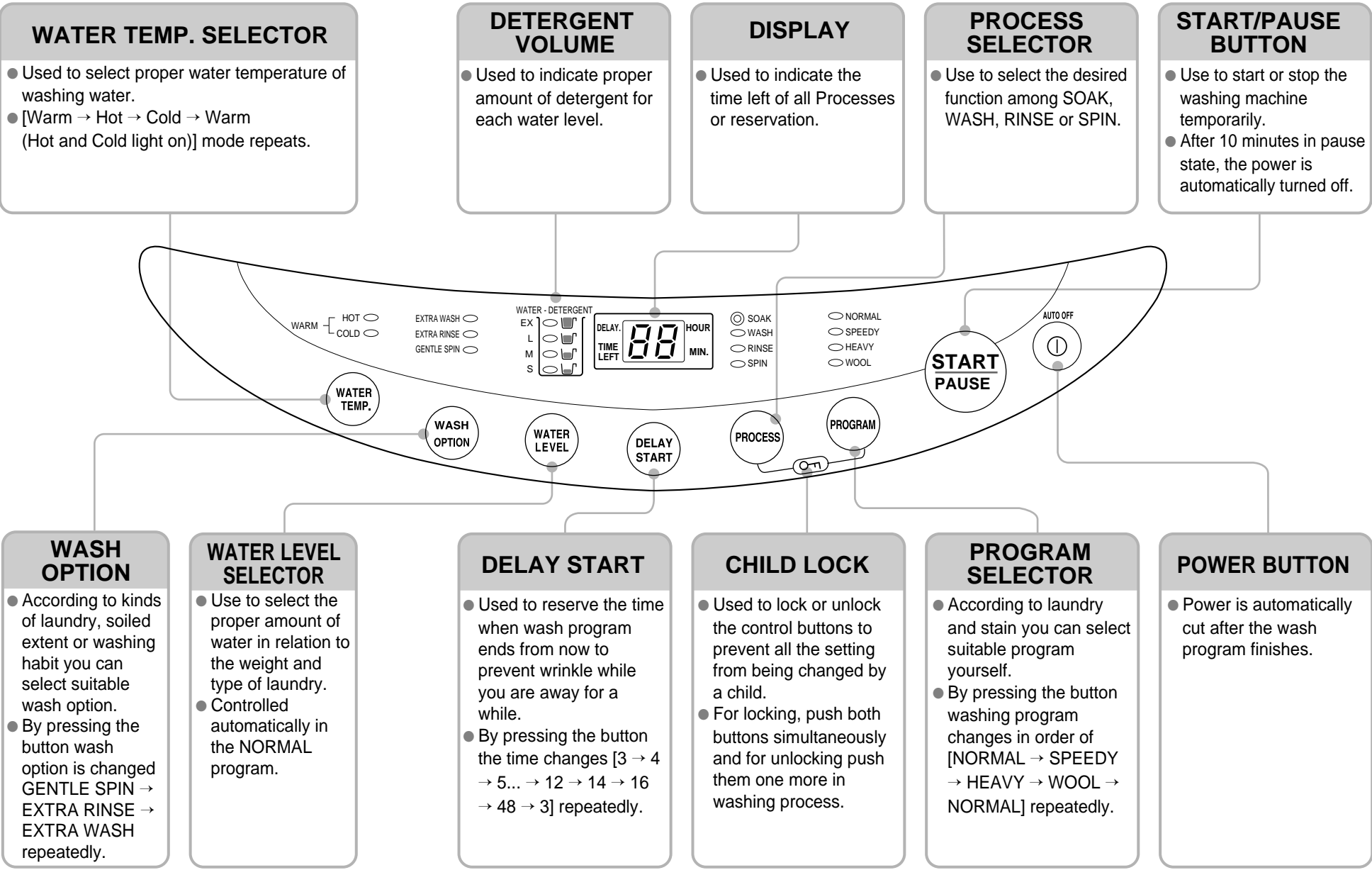
- Wash fluffy laundry by turning it inside out



- Wash delicate clothes, wrapping them in a nylon net.

Manual control

- Other programmes are selected as follows.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Select temperature, level, process, program and options as described below.
- Close the lid and press START/PAUSE button.



5) WF-402

Fully automatic control

- The Fuzzy program is used for average day to day washing.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Close the lid and press START/PAUSE button.
- The water level lights will scroll up and down while the washer is working out the optimum water level for your clothes load.

Preparation before wash


Preparation before wash

**Sort your washing into separate wash loads**

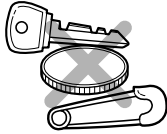
- Each load of washing should contain clothing which needs the same washing conditions. For example, you should not wash delicate clothes with very dirty work clothes.
- Some fabrics are lint collectors and can pick up lint, dirt and colour from other fabrics, which are lint producers. Some examples are listed below.

LINT COLLECTORS	LINT PRODUCERS
Corduroy	Towels
Synthetics	Nappies
Permanent press fabrics	Chenille / Candlewick


Make sure that you wash lint collectors separately from lint producers.




- Check if laundry is washable in water.




- Be sure to remove things such as keys, pins and coins from the laundry.



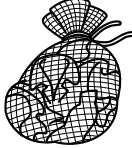
- Wash oily or dyed laundry separately.



- Shake loose dirt off before washing.



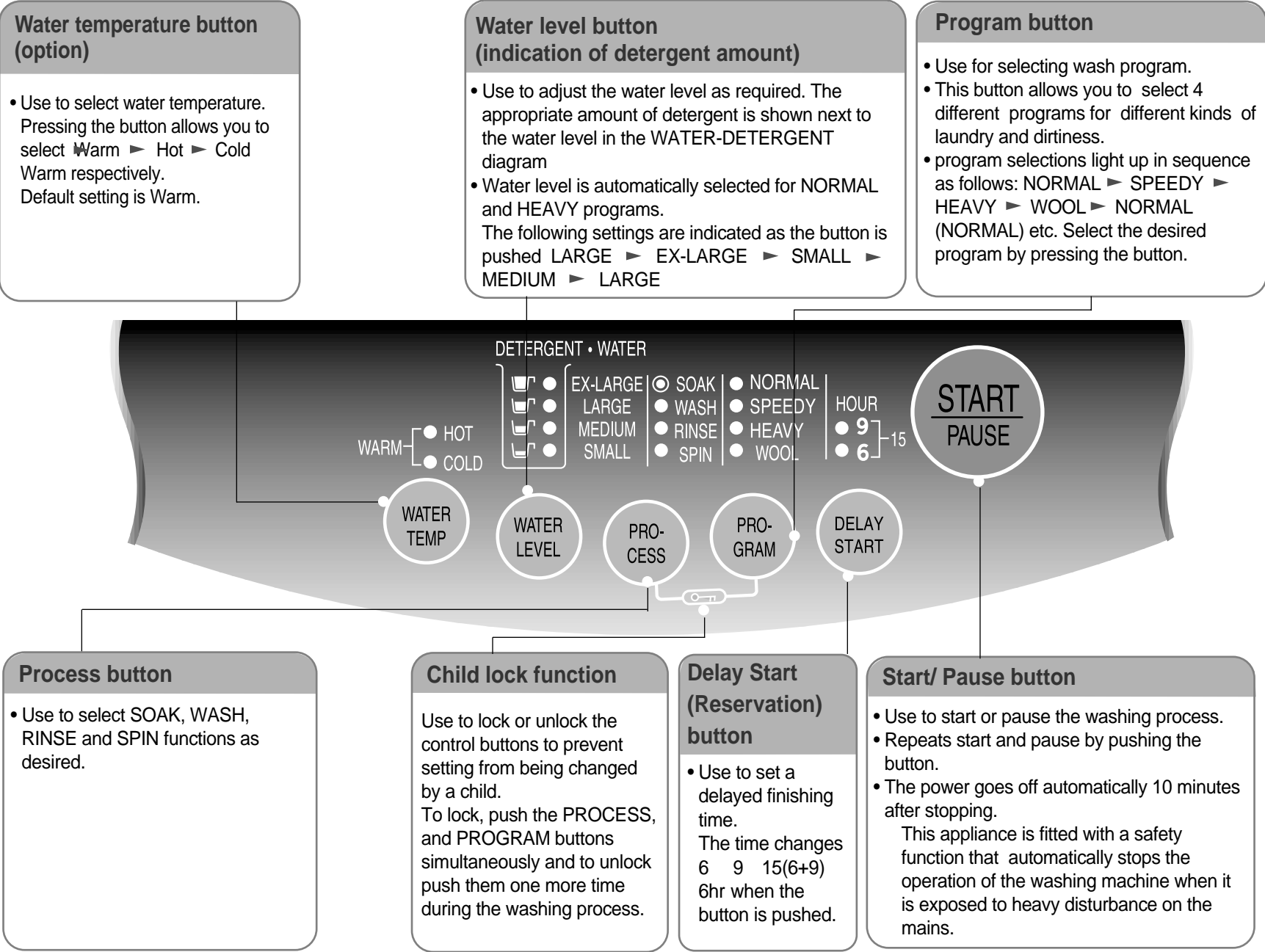
- Wash uffy laundry by turning it inside out.



- Wash delicate clothes, wrapping them in a nylon net.

Manual control

- Other programmes are selected as follows.
- Press POWER ON button.
- Load clothes.
- Add detergent, bleach and conditioner as desired.
- Select temperature, level, process, program and options as described below.
- Close the lid and press START/PAUSE button.



# 7. PROGRAM CHART

## 1) WF- T902 (Time chart)

	Wash		1st Deep Rinse								2nd Deep Rinse				Spin			
	Water Supply	Washing	Drain	Intermittent Spin	No Power Spin	Rotate Shower	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Water Supply	Rinsing	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Power Off	
Normal	Ex-Large	7 21	4 4	135°	2	30°	4 4	128°	20°	2	7 7	3 3	4 4	194°	5 5	25	10°	
	Ex-L	6 21	4 4	135°	2	30°	4 4	128°	20°	2	6 6	3 3	4 4	194°	5 5	2	10°	
	Large	6 15	4 4	135°	2	30°	4 4	128°	20°	2	6 6	3 3	4 4	194°	5 5	2	10°	
	L-M	5 15	3 3	135°	1.5	30°	3 3	128°	20°	1.5	5 5	3 3	3 3	194°	5 5	2	10°	
	Medium	5 10	3 3	135°	1.5	30°	3 3	128°	20°	1.5	5 5	3 3	3 3	194°	5 5	1.5	10°	
	M-S	4 10	3 3	135°	1.5	30°	3 3	128°	20°	1.5	4 4	3 3	3 3	194°	3 3	1.5	10°	
Small	3 10	3 3	135°	1.5	30°	3 3	128°	20°	1.5	3 3	3 3	3 3	194°	3 3	1.5	10°		
Speedy	Ex-Large	7 10	-	-	-	-	-	-	-	-	-	-	4 4	194°	3 3	2	10°	
	Ex-L	6 10	-	-	-	-	-	-	-	-	-	-	4 4	194°	3 3	2	10°	
	Large	6 10	-	-	-	-	-	-	-	-	-	-	4 4	194°	3 3	2	10°	
	L-M	5 10	-	-	-	-	-	-	-	-	-	-	3 3	194°	3 3	2	10°	
	Medium	5 10	-	-	-	-	-	-	-	-	-	-	3 3	194°	3 3	2	10°	
	M-S	4 10	-	-	-	-	-	-	-	-	-	-	3 3	194°	3 3	2	10°	
Small	3 10	-	-	-	-	-	-	-	-	-	-	3 3	194°	3 3	2	10°		
Jean	Ex-Large	7 21	4 4	194°	-	-	-	-	2 2	2 2	7 7	3 3	4 4	194°	5 5	25	10°	
	Ex-L	6 21	4 4	194°	-	-	-	-	2 2	2 2	6 6	3 3	4 4	194°	5 5	2	10°	
	Large	6 15	4 4	194°	-	-	-	-	2 2	2 2	6 6	3 3	4 4	194°	5 5	2	10°	
	L-M	5 15	3 3	194°	-	-	-	-	2 1.5	2 1.5	5 5	3 3	3 3	194°	5 5	2	10°	
	Medium	5 15	3 3	194°	-	-	-	-	2 1.5	2 1.5	5 5	3 3	3 3	194°	5 5	1.5	10°	
	M-S	4 10	3 3	194°	-	-	-	-	2 1.5	2 1.5	4 4	3 3	3 3	194°	3 3	1.5	10°	
Small	3 10	3 3	194°	-	-	-	-	2 1.5	2 1.5	3 3	3 3	3 3	194°	3 3	1.5	10°		
Wool	Ex-Large	7 5	4 4	194°	-	-	-	-	2 2	2 2	7 7	3 3	4 4	194°	-	2	10°	
	Ex-L	6 5	4 4	194°	-	-	-	-	2 2	2 2	6 6	3 3	4 4	194°	-	2	10°	
	Large	6 5	4 4	194°	-	-	-	-	2 2	2 2	6 6	3 3	4 4	194°	-	2	10°	
	L-M	5 5	3 3	194°	-	-	-	-	2 2	2 2	5 5	3 3	3 3	194°	-	2	10°	
	Medium	5 5	3 3	194°	-	-	-	-	2 2	2 2	5 5	3 3	3 3	194°	-	2	10°	
	M-S	4 5	3 3	194°	-	-	-	-	2 2	2 2	4 4	3 3	3 3	194°	-	2	10°	
Small	3 5	3 3	194°	-	-	-	-	2 2	2 2	3 3	3 3	3 3	194°	-	2	10°		
Delicate	Ex-Large	7 10	4 4	194°	-	-	-	-	2 2	2 2	7 7	3 3	4 4	194°	-	2	10°	
	Ex-L	6 10	4 4	194°	-	-	-	-	2 2	2 2	6 6	3 3	4 4	194°	-	2	10°	
	Large	6 10	4 4	194°	-	-	-	-	2 2	2 2	6 6	3 3	4 4	194°	-	2	10°	
	L-M	5 10	3 3	194°	-	-	-	-	2 2	2 2	5 5	3 3	3 3	194°	-	2	10°	
	Medium	5 10	3 3	194°	-	-	-	-	2 2	2 2	5 5	3 3	3 3	194°	-	2	10°	
	M-S	4 10	3 3	194°	-	-	-	-	2 2	2 2	4 4	3 3	3 3	194°	-	2	10°	
Small	3 10	3 3	194°	-	-	-	-	2 2	2 2	3 3	3 3	3 3	194°	-	2	10°		
WASH OPTION																		
Wash Time	5, 10, 15, 21min																	
Rinse Times	1, 2, 3, 4																	
Spin Time	1, 3, 5, 7min																	

\* No Power Spin : Spin by remained power  
 \* Time Unit is minute in the chart (34° : 34 second)  
 \* Total time for full process can be changeable depending on the water pressure.

## 2) WF-T851(Time chart)

	Wash			1st Deep Rinse										2nd Deep Rinse						Spin				
	Water Supply	Washing	Drain	Intermittent Spin	No Power Spin	Rotate Shower	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Water Supply	Rinsing	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Power Off							
Normal	Ex-large	7	21	4	128"	2	1.5	4	128"	20"	2	7	3	4	225"	5	2.5	10"						
	Ex-L	6	21	4	128"	2	1.5	4	128"	20"	2	6	3	4	225"	5	2	10"						
	Large	6	15	4	128"	2	1	4	128"	20"	2	6	3	4	225"	5	2	10"						
	L-M	5	15	3	128"	1.5	1	3	128"	20"	1.5	5	3	3	225"	5	2	10"						
	Medium	5	15	3	128"	1.5	45"	3	128"	20"	1.5	5	3	3	225"	5	1.5	10"						
	M-S	4	10	3	128"	1.5	45"	3	128"	20"	1.5	4	3	3	225"	3	1.5	10"						
	Small	3	10	3	128"	1.5	45"	3	128"	20"	1.5	3	3	3	225"	3	1.5	10"						
Speedy	Ex-large	7	10	-	-	-	-	-	-	-	-	-	-	4	225"	20"	2	7	3	4	225"	3	2	10"
	Ex-L	6	10	-	-	-	-	-	-	-	-	-	-	4	225"	20"	2	6	3	4	225"	3	2	10"
	Large	6	10	-	-	-	-	-	-	-	-	-	-	4	225"	20"	2	6	3	4	225"	3	2	10"
	L-M	5	10	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	5	3	3	225"	3	2	10"
	Medium	5	10	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	5	3	3	225"	3	2	10"
	M-S	4	10	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	4	3	3	225"	3	2	10"
	Small	3	10	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	3	3	3	225"	3	2	10"
Jean	Ex-large	7	21	4	225"	-	-	-	-	2	2	7	3	4	225"	5	2.5	10"						
	Ex-L	6	21	4	225"	-	-	-	-	2	2	6	3	4	225"	5	2	10"						
	Large	6	15	4	225"	-	-	-	-	2	2	6	3	4	225"	5	2	10"						
	L-M	5	15	3	225"	-	-	-	-	2	1.5	5	3	3	225"	5	2	10"						
	Medium	5	15	3	225"	-	-	-	-	2	1.5	5	3	3	225"	5	1.5	10"						
	M-S	4	10	3	225"	-	-	-	-	2	1.5	4	3	3	225"	3	1.5	10"						
	Small	3	10	3	225"	-	-	-	-	2	1.5	3	3	3	225"	3	1.5	10"						
Wool	Ex-large	7	5	4	225"	-	-	-	-	2	2	7	3	4	225"	-	2	10"						
	Ex-L	6	5	4	225"	-	-	-	-	2	2	6	3	4	225"	-	2	10"						
	Large	6	5	4	225"	-	-	-	-	2	2	6	3	4	225"	-	2	10"						
	L-M	5	5	3	225"	-	-	-	-	2	2	5	3	3	225"	-	2	10"						
	Medium	5	5	3	225"	-	-	-	-	2	2	5	3	3	225"	-	2	10"						
	M-S	4	5	3	225"	-	-	-	-	2	2	4	3	3	225"	-	2	10"						
	Small	3	5	3	225"	-	-	-	-	2	2	3	3	3	225"	-	2	10"						
WASH OPTION																								
Wash Time	3, 6, 9, 12, 15, 18, 21, 25min																							
Rinse Times	1, 2, 3, 4, 5																							
Spin Time	1, 2, 4, 6, 8min																							

\* No Power Spin : Spin by remained power  
 \* Time Unit is minute in the chart (34" : 34 second)  
 \* Total time for full process can be changeable depending on the water pressure.

### 3) WF-T802(Time chart)

	Wash										1st Deep Rinse										2nd Deep Rinse										Spin				
	Water Supply		Washing		Drain		Intermittent Spin		No Power Spin		Rotate Shower		Drain		Intermittent Spin		High Speed Spin		No Power Spin		Water Supply		Rinsing		Drain		Intermittent Spin		High Speed Spin		No Power Spin		Power Off		
Normal	Ex-Large	7	21	4	128"	2	1.5	4	128"	20"	2	7	3	4	225"	2	2	7	3	4	225"	2	6	3	4	225"	6	2.5	6	2	10"				
	Ex-L	6	21	4	128"	2	1.5	4	128"	20"	2	6	3	4	225"	2	2	6	3	4	225"	2	6	3	4	225"	4	2	10"						
	Large	6	15	4	128"	2	1	4	128"	20"	2	6	3	4	225"	2	2	6	3	4	225"	4	2	3	4	225"	4	2	10"						
	L-M	5	15	3	128"	1.5	1	3	128"	20"	1.5	5	3	3	225"	2	1.5	5	3	3	225"	4	2	3	3	225"	4	2	10"						
	Medium	5	15	3	128"	1.5	45"	3	128"	20"	1.5	5	3	3	225"	2	1.5	5	3	3	225"	4	1.5	3	3	225"	4	1.5	10"						
	M-S	4	9	3	128"	1.5	45"	3	128"	20"	1.5	4	3	3	225"	2	1.5	4	3	3	225"	4	1.5	3	3	225"	2	1.5	10"						
	Small	3	9	3	128"	1.5	45"	3	128"	20"	1.5	3	3	3	225"	2	1.5	3	3	3	225"	2	1.5	3	3	225"	2	1.5	10"						
Speedy	Ex-Large	7	6	-	-	-	-	-	-	-	-	-	-	4	225"	20"	2	7	3	4	225"	2	7	3	4	225"	2	2	10"						
	Ex-L	6	6	-	-	-	-	-	-	-	-	-	-	4	225"	20"	2	6	3	4	225"	2	6	3	4	225"	2	2	10"						
	Large	6	6	-	-	-	-	-	-	-	-	-	-	4	225"	20"	2	6	3	4	225"	2	6	3	4	225"	2	2	10"						
	L-M	5	6	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	5	3	3	225"	2	5	3	3	225"	2	2	10"						
	Medium	5	6	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	5	3	3	225"	2	5	3	3	225"	2	2	10"						
	M-S	4	6	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	4	3	3	225"	2	4	3	3	225"	2	2	10"						
	Small	3	6	-	-	-	-	-	-	-	-	-	-	3	225"	20"	2	3	3	3	225"	2	3	3	3	225"	2	2	10"						
Jean	Ex-Large	7	21	4	225"	-	-	-	-	-	-	-	-	4	225"	2	2	7	3	4	225"	6	2.5	4	4	225"	6	2.5	10"						
	Ex-L	6	21	4	225"	-	-	-	-	-	-	-	-	4	225"	2	2	6	3	4	225"	6	2	4	4	225"	4	2	10"						
	Large	6	15	4	225"	-	-	-	-	-	-	-	-	4	225"	2	2	6	3	4	225"	4	2	3	4	225"	4	2	10"						
	L-M	5	15	3	225"	-	-	-	-	-	-	-	-	3	225"	2	1.5	5	3	3	225"	4	1.5	3	3	225"	4	1.5	10"						
	Medium	5	15	3	225"	-	-	-	-	-	-	-	-	3	225"	2	1.5	5	3	3	225"	4	1.5	3	3	225"	4	1.5	10"						
	M-S	4	9	3	225"	-	-	-	-	-	-	-	-	3	225"	2	1.5	4	3	3	225"	2	1.5	3	3	225"	2	1.5	10"						
	Small	3	9	3	225"	-	-	-	-	-	-	-	-	3	225"	2	1.5	3	3	3	225"	2	1.5	3	3	225"	2	1.5	10"						
Wool	Ex-Large	7	3	4	225"	-	-	-	-	-	-	-	-	4	225"	-	2	7	3	4	225"	-	2	7	3	4	225"	-	2	10"					
	Ex-L	6	3	4	225"	-	-	-	-	-	-	-	-	4	225"	-	2	6	3	4	225"	-	2	6	3	4	225"	-	2	10"					
	Large	6	3	4	225"	-	-	-	-	-	-	-	-	4	225"	-	2	6	3	4	225"	-	2	6	3	4	225"	-	2	10"					
	L-M	5	3	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	5	3	3	225"	-	2	5	3	3	225"	-	2	10"					
	Medium	5	3	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	5	3	3	225"	-	2	5	3	3	225"	-	2	10"					
	M-S	4	3	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	4	3	3	225"	-	2	4	3	3	225"	-	2	10"					
	Small	3	3	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	3	3	3	225"	-	2	3	3	3	225"	-	2	10"					
Delicate	Ex-Large	7	6	4	225"	-	-	-	-	-	-	-	-	4	225"	-	2	7	3	4	225"	-	2	7	3	4	225"	-	2	10"					
	Ex-L	6	6	4	225"	-	-	-	-	-	-	-	-	4	225"	-	2	6	3	4	225"	-	2	6	3	4	225"	-	2	10"					
	Large	6	6	4	225"	-	-	-	-	-	-	-	-	4	225"	-	2	6	3	4	225"	-	2	6	3	4	225"	-	2	10"					
	L-M	5	6	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	5	3	3	225"	-	2	5	3	3	225"	-	2	10"					
	Medium	5	6	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	5	3	3	225"	-	2	5	3	3	225"	-	2	10"					
	M-S	4	6	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	4	3	3	225"	-	2	4	3	3	225"	-	2	10"					
	Small	3	6	3	225"	-	-	-	-	-	-	-	-	3	225"	-	2	3	3	3	225"	-	2	3	3	3	225"	-	2	10"					
WASH OPTION																																			
Wash Time		36.9/12.15/18.21/25min																																	
Spin Time		1.2/4.6/8min																																	

\* No Power Spin : Spin by remained power  
 \* Time Unit is minute in the chart (34" : 34 second)  
 \* Total time for full process can be changeable depending on the water pressure.

#### 4) WF-T853(Time chart)

	Wash		1st Deep Rinse										2nd Deep Rinse						Spin					
			Water Supply	Washing	Drain	Intermittent Spin	No Power Spin	Rotate Shower	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Water Supply	Rinsing	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Power Off					
Normal	Ex-large	7	21	4	128"	2	1.5	4	128"	20"	2	7	3	4	225"	2	2	7	3	4	225"	6	2.5	10"
	Large	6	15	4	128"	2	1	4	128"	20"	2	6	3	4	225"	2	2	6	3	4	225"	4	2	10"
	Medium	5	15	3	128"	1.5	45"	3	128"	20"	1.5	5	3	3	225"	2	1.5	5	3	3	225"	4	1.5	10"
	Small	3	9	3	128"	1.5	45"	3	128"	20"	1.5	3	3	3	225"	2	1.5	3	3	3	225"	2	1.5	10"
Extra Rinse/Option																								

Speedy	Ex-large	7	6	-	-	-	-	-	-	4	225"	20"	2	7	3	4	225"	2	2	10"
	Large	6	6	-	-	-	-	-	-	4	225"	20"	2	6	3	4	225"	2	2	10"
	Medium	5	6	-	-	-	-	-	-	3	225"	20"	2	5	3	3	225"	2	2	10"
	Small	3	6	-	-	-	-	-	-	3	225"	20"	2	3	3	3	225"	2	2	10"
Default																				

<b>Heavy</b>	Ex-large	7	21	4	225"	-	-	-	-	2	2	7	3	4	225"	2	2	7	3	4	225"	6	2.5	10"
	Large	6	15	4	225"	-	-	-	-	2	2	6	3	4	225"	2	2	6	3	4	225"	4	2	10"
	Medium	5	15	3	225"	-	-	-	-	2	1.5	5	3	3	225"	2	1.5	5	3	3	225"	4	1.5	10"
	Small	3	9	3	225"	-	-	-	-	2	1.5	3	3	3	225"	2	1.5	3	3	3	225"	2	1.5	10"

Wool	Ex-large	7	6	4	225"	-	-	-	-	2	7	3	4	225"	-	2	7	3	4	225"	-	2	10"
	Large	6	6	4	225"	-	-	-	-	2	6	3	4	225"	-	2	6	3	4	225"	-	2	10"
	Medium	5	6	3	225"	-	-	-	-	2	5	3	3	225"	-	2	5	3	3	225"	-	2	10"
	Small	3	6	3	225"	-	-	-	-	2	3	3	3	225"	-	2	3	3	3	225"	-	2	10"
Default																							

<b>WASH OPTION</b>																																					
<b>Extra Wash</b>		Wash time will be added 3min. More. (Except for Speedy & Wool)																																			
<b>Extra Rinse</b>		2nd deep rinse will be added. (Except for Speedy & Wool)																																			
<b>Gentle Spin</b>		High speed spin is not operated.																																			

- \* No Power Spin : Spin by remained power
- \* Time Unit is minute in the chart (34" : 34 second)
- \* Total time for full process can be changeable depending on the water pressure.

## 5) WF-T652, T652A(Time chart)

		Wash		1st Deep Rinse										2nd Deep Rinse						Spin				
Normal	Ex-large	4	21	3	103"	2	30"	3	103"	20"	2	4	3	3	173"	2	4	3	3	173"	4	2.5	10"	
	Large	3	14	3	103"	2	30"	3	103"	20"	2	3	3	3	173"	2	3	3	3	173"	4	2	10"	
	Medium	2	13	2	103"	1.5	30"	2	103"	20"	1.5	2	3	3	173"	2	2	3	3	173"	3	1.5	10"	
	Small	2	9	2	103"	1.5	30"	2	103"	20"	1.5	2	3	3	173"	2	2	3	3	173"	3	1.5	10"	
Extra Rinse/Option																								

<b>Speedy</b>	Ex-large	4	4	-	-	-	-	-	-	-	-	-	-	3	173"	20"	2	4	3	3	173"	2	2	10"
	Large	3	4	-	-	-	-	-	-	-	-	-	-	3	173"	20"	2	3	3	3	173"	2	2	10"
	Medium	2	4	-	-	-	-	-	-	-	-	-	-	2	173"	20"	2	2	3	2	173"	2	2	10"
	Small	2	4	-	-	-	-	-	-	-	-	-	-	2	173"	20"	2	2	3	2	173"	2	2	10"

<b>Heavy</b>	Ex-large	4	21	3	173"	-	-	-	-	2	2	4	3	3	173"	2	2	4	3	3	173"	4	2.5	10"
	Large	3	14	3	173"	-	-	-	-	2	2	3	3	3	173"	2	2	3	3	3	173"	4	2	10"
	Medium	2	13	2	173"	-	-	-	-	2	1.5	2	3	2	173"	2	1.5	2	3	2	173"	3	1.5	10"
	Small	2	9	2	173"	-	-	-	-	2	1.5	2	3	2	173"	2	1.5	2	3	2	173"	3	1.5	10"

<b>Wool</b>	Ex-large	4	6	3	173"	-	-	-	-	2	2	4	3	3	173"	-	2	4	3	3	173"	-	2	10"
	Large	3	6	3	173"	-	-	-	-	2	2	3	3	3	173"	-	2	3	3	3	173"	-	2	10"
	Medium	2	6	2	173"	-	-	-	-	2	2	2	3	2	173"	-	2	2	3	2	173"	-	2	10"
	Small	2	6	2	173"	-	-	-	-	2	2	2	3	2	173"	-	2	2	3	2	173"	-	2	10"

<b>WASH OPTION</b>																						
Extra Wash	Wash time will be added 3min. More. (Except for Speedy & Wool)																					
Extra Rinse	2nd deep rinse will be added. (Except for Speedy & Wool)																					
Gentle Spin	High speed spin is not operated.																					

- \* No Power Spin : Spin by remained power
- \* Time Unit is minute in the chart (34" : 34 second)
- \* Total time for full process can be changeable depending on the water pressure.



## 6) WF-T452, T452A (Time chart)

		Wash		1st Deep Rinse										2nd Deep Rinse						Spin															
		Water Supply		Washing		Drain		Intermittent Spin		No Power Spin		Rotate Shower		Drain		Intermittent Spin		High Speed Spin		No Power Spin		Water Supply		Rinsing		Drain		Intermittent Spin		High Speed Spin		No Power Spin		Power Off	
Normal	Ex-large	3	21	2	91"	1.5	30"	2	91"	20"	1.5	3	2	113"	2	1.5	3	3	2	113"	4	2.5	10"												
	Large	2	17	2	91"	1.5	30"	2	91"	20"	1.5	2	2	113"	2	1.5	2	3	2	113"	4	2	10"												
	Medium	2	17	1	91"	1	30"	1	91"	20"	1	2	3	1	113"	2	1	2	3	1	113"	3	1.5	10"											
	Small	1	9	1	91"	1	30"	1	91"	20"	1	1	3	1	113"	2	1	1	3	1	113"	3	1.5	10"											
		Extra Rinse/Option																																	

<b>Speedy</b>	Ex-large	3	4	-	-	-	-	-	-	-	-	-	2	113"	20"	2	3	3	2	113"	2	2	10"
	Large	2	4	-	-	-	-	-	-	-	-	-	2	113"	20"	2	2	3	2	113"	2	2	10"
	Medium	2	4	-	-	-	-	-	-	-	-	-	1	113"	20"	2	2	3	1	113"	2	2	10"
	Small	1	4	-	-	-	-	-	-	-	-	-	1	113"	20"	2	1	3	1	113"	2	2	10"

<b>Heavy</b>	Ex-large	3	21	2	113"	-	-	-	-	2	1.5	3	2	113"	2	1.5	3	3	2	113"	4	2.5	10"
	Large	2	17	2	113"	-	-	-	-	2	1.5	2	2	113"	2	1.5	2	3	2	113"	4	2	10"
	Medium	2	17	1	113"	-	-	-	-	2	1	2	1	113"	2	1	2	3	1	113"	3	1.5	10"
	Small	1	9	1	113"	-	-	-	-	2	1	1	1	113"	2	1	1	3	1	113"	3	1.5	10"

<b>Wool</b>	Ex-large	3	6	2	113"	-	-	-	-	113"	3	3	2	113"	-	2	3	3	2	113"	-	2	10"
	Large	2	6	2	113"	-	-	-	-	113"	2	3	2	113"	-	2	2	3	2	113"	-	2	10"
	Medium	2	6	1	113"	-	-	-	-	113"	2	3	1	113"	-	2	2	3	1	113"	-	2	10"
	Small	1	6	1	113"	-	-	-	-	113"	1	3	1	113"	-	2	1	3	1	113"	-	2	10"

<b>WASH OPTION</b>																						
Extra Wash	Wash time will be added 3m in. More. (Except for Speedy & Wool)																					
Extra Rinse	2nd deep rinse will be added. (Except for Speedy & Wool)																					
Gentle Spin	High speed spin is not operated.																					

- \* No Power Spin : Spin by remained power
- \* Time Unit is minute in the chart (34" : 34 second)
- \* Total time for full process can be changeable depending on the water pressure.



## 7) WF-402 (Time chart)








	Wash		1st Deep Rinse										2nd Deep Rinse				Spin								
	Water Supply	Washing	Drain	Intermittent Spin	No Power Spin	Rotate Shower	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Water Supply	Rinsing	Drain	Intermittent Spin	High Speed Spin	No Power Spin	Power Off								
Normal	Ex-large	3	21	2	91"	1.5	30"	2	91"	20"	1.5	3	3	2	113"	2	1.5	3	3	2	113"	4	2.5	10"	
	Large	2	17	2	91"	1.5	30"	2	91"	20"	1.5	2	3	2	113"	2	1.5	2	3	2	113"	4	2	10"	
	Medium	2	17	1	91"	1	30"	1	91"	20"	1	2	3	1	113"	2	1	2	3	1	113"	3	1.5	10"	
	Small	1	9	1	91"	1	30"	1	91"	20"	1	1	3	1	113"	2	1	1	3	1	113"	3	1.5	10"	
Heavy Course																									
Speedy	Ex-large	3	4	-	-	-	-	-	-	-	-	-	-	2	113"	20"	2	2	3	3	2	113"	2	2	10"
	Large	2	4	-	-	-	-	-	-	-	-	-	-	2	113"	20"	2	2	2	3	2	113"	2	2	10"
	Medium	2	4	-	-	-	-	-	-	-	-	-	-	1	113"	20"	2	2	2	3	1	113"	2	2	10"
	Small	1	4	-	-	-	-	-	-	-	-	-	-	1	113"	20"	2	1	1	3	1	113"	2	2	10"
Default																									
Heavy	Ex-large	3	21	2	113"	-	-	-	-	2	1.5	3	3	2	113"	2	1.5	3	3	2	113"	4	2.5	10"	
	Large	2	17	2	113"	-	-	-	-	2	1.5	2	3	2	113"	2	1.5	2	3	2	113"	4	2	10"	
	Medium	2	17	1	113"	-	-	-	-	2	1	2	3	1	113"	2	1	2	3	1	113"	3	1.5	10"	
	Small	1	9	1	113"	-	-	-	-	2	1	1	3	1	113"	2	1	1	3	1	113"	3	1.5	10"	
Wool	Ex-large	3	6	2	113"	-	-	-	-	113"	3	3	2	2	113"	-	2	3	3	2	113"	-	2	10"	
	Large	2	6	2	113"	-	-	-	-	113"	2	3	2	2	113"	-	2	2	3	2	113"	-	2	10"	
	Medium	2	6	1	113"	-	-	-	-	113"	2	3	1	1	113"	-	2	2	3	1	113"	-	2	10"	
	Small	1	6	1	113"	-	-	-	-	113"	1	3	1	1	113"	-	2	1	3	1	113"	-	2	10"	
Default																									

\* No Power Spin : Spin by remained power  
 \* Time Unit is minute in the chart (34" : 34 second)  
 \* Total time for full process can be changeable depending on the water pressure.

## 8.TEST RUNNING WITHOUT WATER

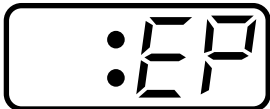
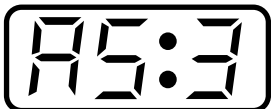

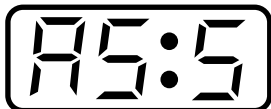

### 1) WF-T851, T902

- To use the CHECK PROGRAM (QC TEST MODE),while pressing the WATER LEVEL button, press the POWER button.Do not deposit any laundry in the wash tub while in this mode.
- In QC TEST MODE all LEDs are on and press START(PAUSE) button to check over the following items.

NO	CHECK METHOD	DISPLAY		CHECK ITEM
		WF-T851	WF-T902	
1	Initial state	<ul style="list-style-type: none"> <li>• water level frequency is on DISPLAY in the condition of no water in TUB.</li> </ul>		<ul style="list-style-type: none"> <li>• All LEDS ON. 64~70 DISPLAY. (The meaning of 64~70 number is 264~270kHz really)</li> </ul>
2	Press once	<ul style="list-style-type: none"> <li>• After detecting laundry amount the number of pulse is on the DISPLAY.</li> </ul>		<ul style="list-style-type: none"> <li>• Laundry amount test.</li> </ul>
3	Press twice			<ul style="list-style-type: none"> <li>• COLD water ON.</li> </ul>
4	Press 3 times			<ul style="list-style-type: none"> <li>• HOT water ON.</li> </ul>
5	Press 4 times			<ul style="list-style-type: none"> <li>• SHOWER water ON.</li> </ul>
6	Press 5 times			<ul style="list-style-type: none"> <li>• If the LID is opened,  is on the DISPLAY. In that case, close the LID.</li> <li>• DRAIN MOTOR ON.</li> </ul>
7	Press 6 times			<ul style="list-style-type: none"> <li>• DRAIN MOTOR and DRAIN PUMP ON.</li> </ul>
8	Press 7 times	<ul style="list-style-type: none"> <li>• AUTO OFF.</li> </ul>		<ul style="list-style-type: none"> <li>• All LEDS OFF.</li> </ul>













## 2) WF-T802, T852

- To use the CHECK PROGRAM (QC TEST MODE), while pressing the WATER LEVEL button, press the POWER button. Do not deposit any laundry in the wash tub while in this mode.
- In QC TEST MODE all LEDs are on and press START(PAUSE) button to check over the following items.

NO	CHECK METHOD	DISPLAY	CHECK ITEM
1	Initial state	<ul style="list-style-type: none"> <li>• water level frequency is on DISPLAY in the condition of no water in TUB.</li> </ul>	<ul style="list-style-type: none"> <li>• All LEDS ON. 264~270 DISPLAY.</li> </ul>
2	Press once	<ul style="list-style-type: none"> <li>• After detecting laundry amount the number of pulse is on the DISPLAY.</li> </ul>	<ul style="list-style-type: none"> <li>• Laundry amount test.</li> </ul>
3	Press twice		<ul style="list-style-type: none"> <li>• COLD water ON.</li> </ul>
4	Press 3 times		<ul style="list-style-type: none"> <li>• HOT water ON.</li> </ul>
5	Press 4 times		<ul style="list-style-type: none"> <li>• SHOWER water ON.</li> </ul>
6	Press 5 times		<ul style="list-style-type: none"> <li>• If the LID is opened, alarm sound. In that case, close the LID.</li> <li>• DRAIN MOTOR ON.</li> </ul>
7	Press 6 times		<ul style="list-style-type: none"> <li>• DRAIN MOTOR and DRAIN PUMP ON.</li> </ul>
8	Press 7 times	<ul style="list-style-type: none"> <li>• AUTO OFF.</li> </ul>	<ul style="list-style-type: none"> <li>• All LEDS OFF.</li> </ul>

### 3) WF-T853, T652, T652A, T452, T452A

- To use the CHECK PROGRAM (QC TEST MODE), while pressing the WATER LEVEL&PROCESS buttons, press the POWER button. Do not deposit any laundry in the wash tub while in this mode.
- In QC TEST MODE all LEDs are on and press START(PAUSE) button to check over the following items.

NO	CHECK METHOD	DISPLAY		CHECK ITEM
		WF-T853/T652/T652A	WF-T452/T452A	
1	Initial state	<ul style="list-style-type: none"> <li>• water level frequency is on DISPLAY in the condition of no water in TUB.</li> </ul>		<ul style="list-style-type: none"> <li>• All LEDS ON. 64~70 DISPLAY. (The meaning of 64~70 number is 264~270kHz really)</li> </ul>
2	Press once	<ul style="list-style-type: none"> <li>• After detecting laundry amount the number of pulse is on the DISPLAY.</li> </ul>		<ul style="list-style-type: none"> <li>• Laundry amount test.</li> </ul>
3	Press twice			<ul style="list-style-type: none"> <li>• COLD water ON.</li> </ul>
4	Press 3 times			<ul style="list-style-type: none"> <li>• HOT water ON.</li> </ul>
5	Press 4 times			<ul style="list-style-type: none"> <li>• If the LID is opened,  is on the DISPLAY. In that case, close the LID.</li> <li>• DRAIN MOTOR (1)ON.</li> </ul>
6	Press 5 times			<ul style="list-style-type: none"> <li>• If the LID is opened,  is on the DISPLAY. In that case, close the LID.</li> <li>• DRAIN MOTOR (2)ON.</li> </ul>
7	Press 6 times			<ul style="list-style-type: none"> <li>• DRAIN PUMP ON.</li> </ul>
8	Press 6 times	<ul style="list-style-type: none"> <li>• AUTO OFF.</li> </ul>		<ul style="list-style-type: none"> <li>• All LEDS OFF.</li> </ul>

## WF-T402

- To use the CHECK PROGRAM (QC TEST MODE), press WATER LEVEL key, at the same time and then the POWER switch on without depositing any laundry.

NO	CHECK METHOD	LED INDICATOR	CHECK ITEM
1	Initial state	<ul style="list-style-type: none"> <li>• All LED on.</li> <li>• After 2~3 seconds water level frequency is displayed on LED.</li> </ul>	
2	Press once	<ul style="list-style-type: none"> <li>• After laundry amount detecting, LED indicates laundry amount and WATER LEVEL.</li> <li>• Pump model: MEDIUM water level Led ON.</li> <li>• Non-pump model: water level MEDIUM water level Led OFF.</li> </ul>	<ul style="list-style-type: none"> <li>• Laundry amount test.</li> <li>• After checking laundry amount, motor is on. (Left &amp; Right)</li> </ul>
3	Press twice		• Cold water
4	Press 3 times		• Hot water.
5	Press 4 times		<ul style="list-style-type: none"> <li>• Drain motor is 1st state is play.</li> <li>• If lid is opened door error display. (wash and spin LED blinks)</li> </ul>
6	Press 5 times		• Drain motor is 2nd state.(Only WF-T Series
7	Press 6 times		• Drain pump is on.
8	Press 7 times		• AUTO off switch.

- WATER LEVEL FREQUENCY & LAUNDRY AMOUNT ARE DISPLAY BY THE LED (WATER LEVEL, PROCESS, PROGRAM)

Ex) Water level check ; Frequency : 26.7 KHz

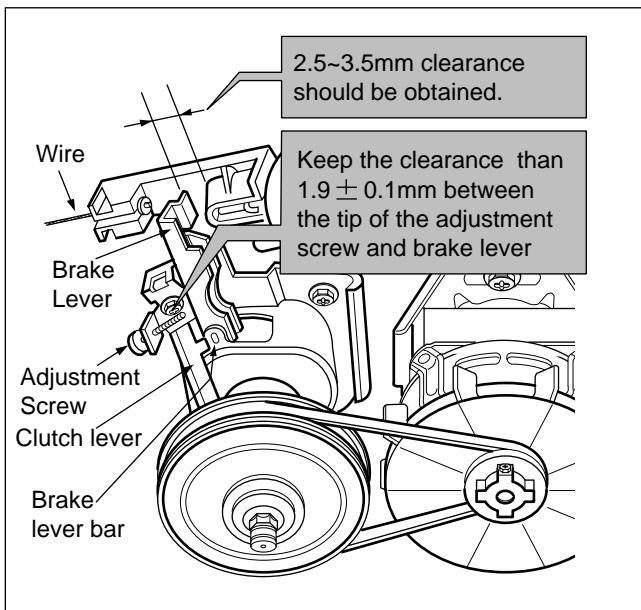
8 ○ EX-LARGE	8 ○ SOAK	8 ○ FUZZY
4 ○ LARGE	4 ● WASH	4 ● ECONOMY
2 ● MEDIUM	2 ● RINSE	2 ● JEAN
1 ○ SMALL	1 ○ SPIN	1 ● WOOL

Ex) Laundry amount ; Water level : MEDIUM

Pulse : 25

8 ○ EX-LARGE	8 ○ SOAK	8 ○ FUZZY
4 ○ LARGE	4 ○ WASH	4 ● ECONOMY
2 ● MEDIUM	2 ● RINSE	2 ○ JEAN
1 ○ SMALL	1 ○ SPIN	1 ● WOOL

## 9. ADJUSTMENT

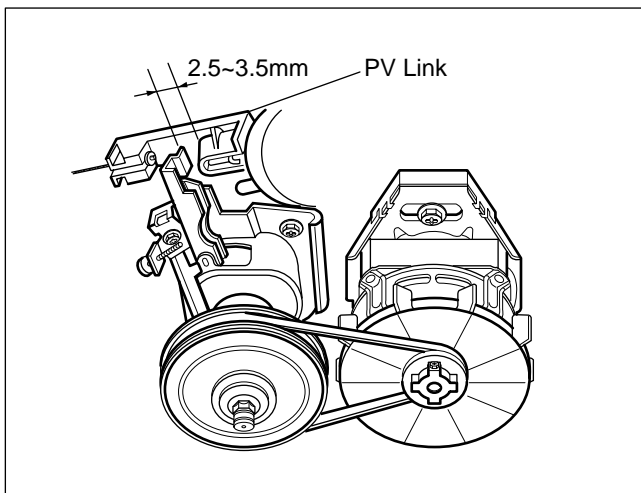


### 9-1. BRAKE LEVER ADJUSTMENT

- Shown as in the figure, untighten the adjustment screw to keep clearance  $1.9 \pm 0.1\text{mm}$  between the tip and the brake lever. And turn on the lock nut then paint it red.

#### CAUTION

- Painting part is adjusted in factory, it does not need adjusting.
- Adjust the screw properly if the brake doesn't work during spin.

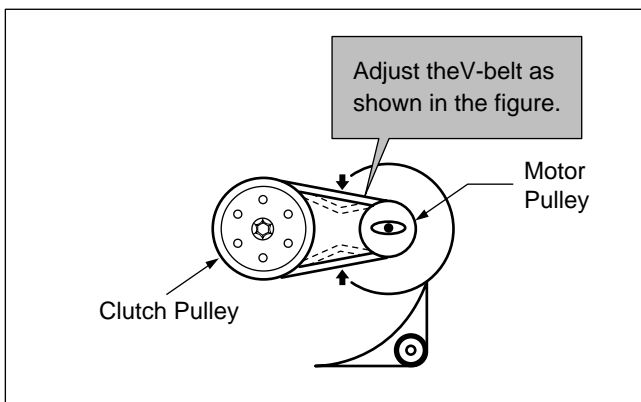


### 9-2. KEEPING CLEARANCE

- Keep the clearance about 2.5~3.5mm between brake lever and P.V link as shown in the figure.

#### CAUTION

- Clutch pulley must be turning to one side when P.V link is pulling the brake lever.
- Clutch pulley must be turning to the left and the right when P.V link does not pull the brake Lever.



### 9-3. V-BELT ADJUSTMENT

- Adjust the motor pulley by pushing the motor like arrow , to make V-belt tension parallel when pushed at the point of arrow .

#### CAUTION

- When the V-belt is not properly adjusted, the motor will not be running or the belt will be slipping.

## 10. DISASSEMBLY AND FUSE REPLACEMENT

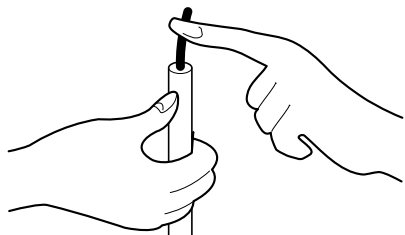


Fig.1

Be sure to unplug the power to repair and replace electric parts.

### CAUTION FOR ELECTROSTATICS

Be sure to make earth connection for trouble diagnosis and parts replacement. If impossible, touch earth wire on the body to remove electric deviation between the body and product before work.

### 10-1. Replacement of Controller Part

#### WF-T851, T902

1. Disassemble inlet valve ring.
2. Loosen the two screws on the back side and disassemble back panel(joined control panel) from top cover.

#### WF-T853, T852, T802, T652, T652A, T452

#### WF-T452A , 402

1. Disassemble the two screw caps in the front of washing machine using sharp tool, and loosen the two special screws. Push the panel to left side then pull out.
2. Use boxer if special screw head is worn out.

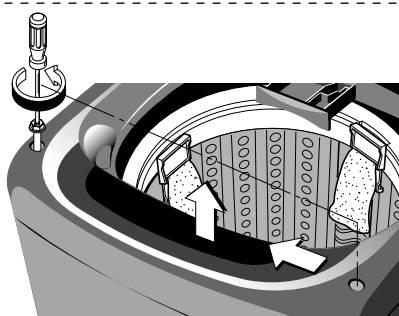
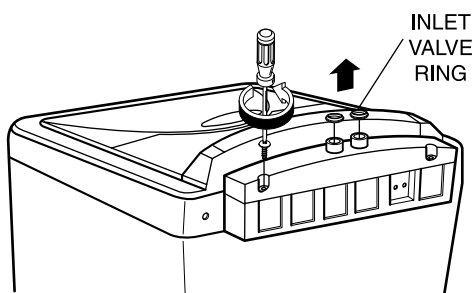


Fig.2

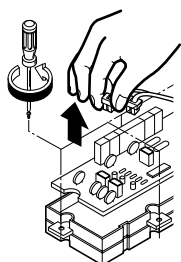
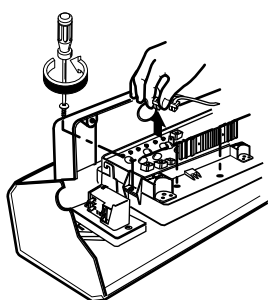


Fig.3

#### WF-T851, T902

Take off all controller connectors and loosen four fixing screws to remove the controller from the right panel.

#### WF-T853, T852, T802, T652, T652A, T452

#### WF-T452A, 402

Take off all controller connectors and loosen four fixing screws to remove the controller from the right panel.

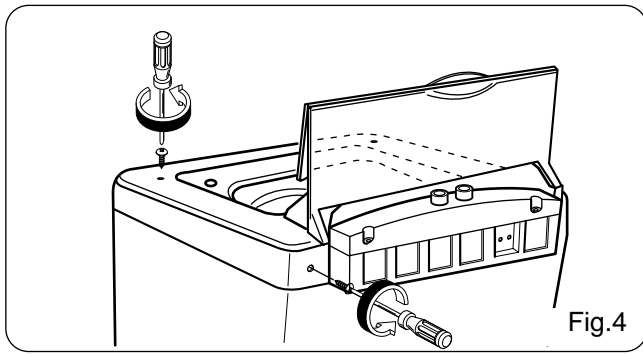


Fig.4

## 10-2. Disassembling of Top Cover

Loosen the two front special screws and the two fixing screws in the back side(Fig.4) and disassemble top cover from washing machine.

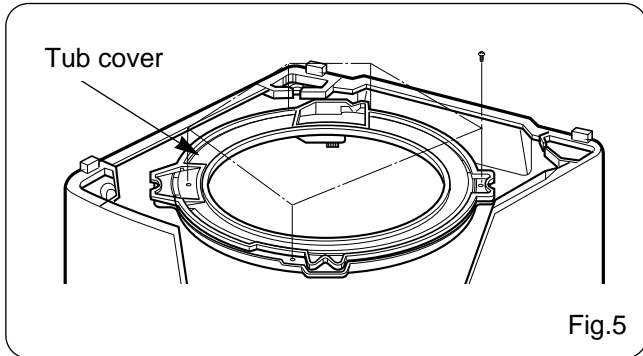


Fig.5

## 10-3. Replacement of Tub Parts

As in Fig.6, disassemble top cover and loosen the 5 screws on tub cover.

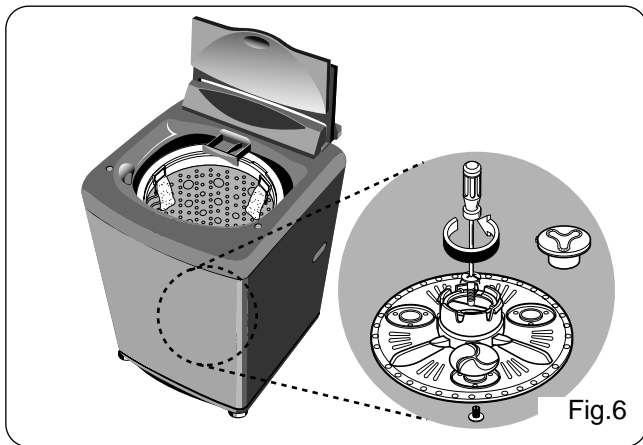


Fig.6

Take out pulsator cam assembly with " " type driver. Loosen pulsator fixing screw and lift the pulsator.

### CAUTION

In disassembling pulsator, be careful not to fall the washer below pulsator into washing/dry tub.

LOC.No.;A180

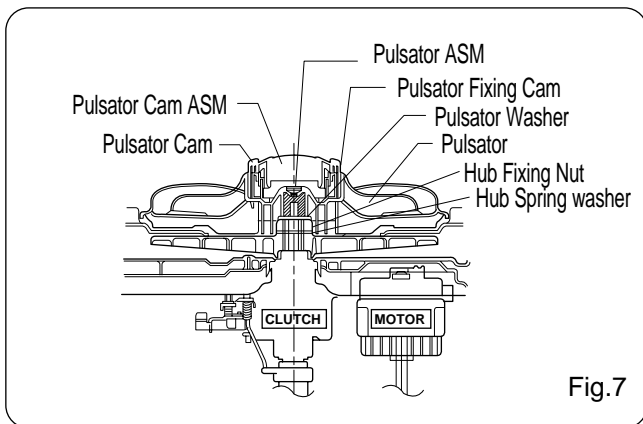
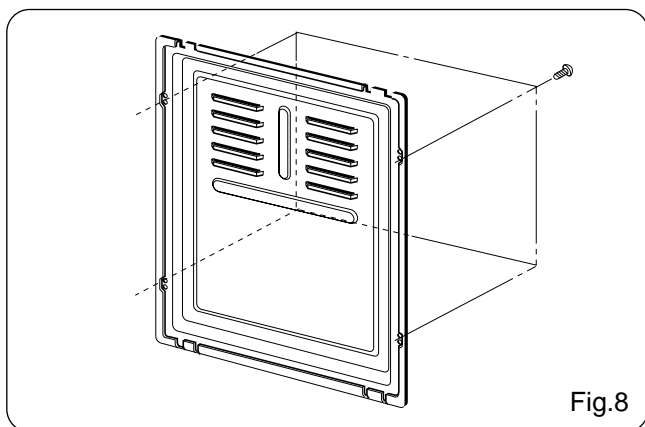


Fig.7

1. As in Fig.7, take out pulsator cam assembly with " " type driver and disassemble pulsator. Unscrew one pulsator washer, one hub fixing nut and then one hub spring washer. Pull up washing/dry tub.
2. To disassemble clutch, loosen four fixing bolts below tub with washing machine slopped.





## 10-4. Replacement of Outcase and Suspension Asm

Open the back cover on the back of machine and disassemble all lead wires.

(Pull out the pressure switch tube and connector housing.)

Separate top cover from washing machine.

As in Fig.10, lift snubber bar and take it out of out case with out tub.

Damper assembly shall not be disassembled.  
Replace damper as assembly.

For assembly, refer to Fig.10.

WF-T851, T902, T853, T852, T802, T652, T652A

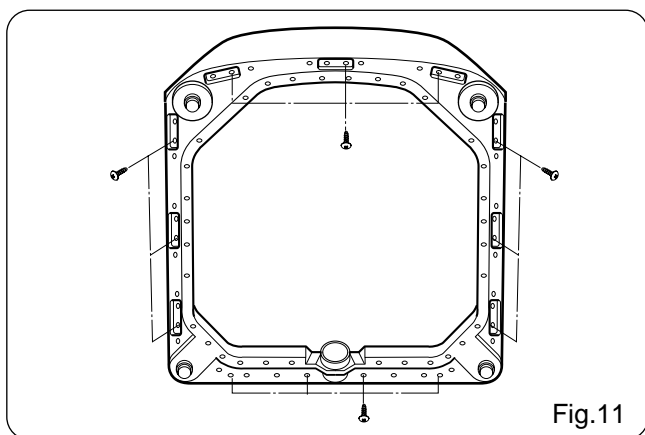
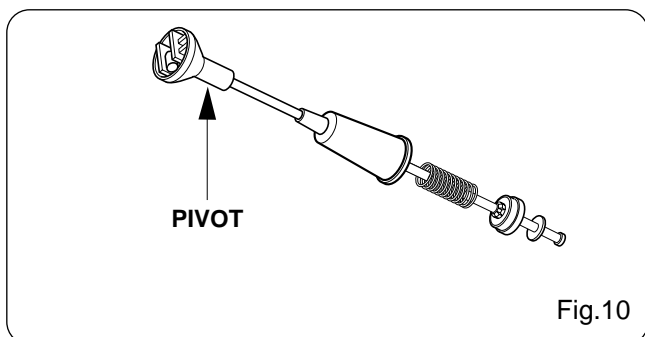
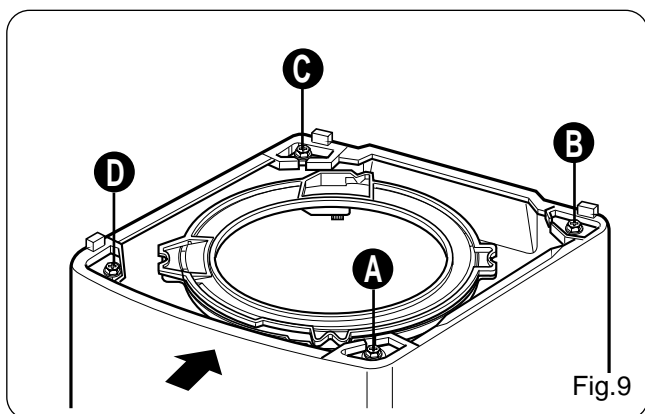
Class	LOC. No.	PIVOT(Color)
<b>A,B</b>	K102	Blue
<b>C,D</b>	K101	Natural

SVC should be replaced as damper set.

WF-T452, T452A, 402

Class	LOC. No.	PIVOT(Color)
<b>A,D</b>	K101	Natural
<b>C,B</b>	K102	Blue

SVC should be replaced as damper set.



Disassemble base by loosening the fixing screws on the bottom side of base and replace the

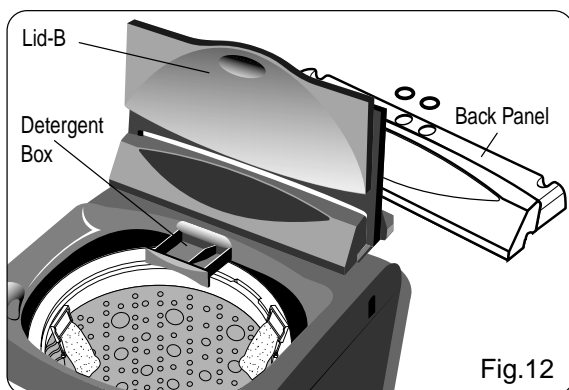


Fig.12

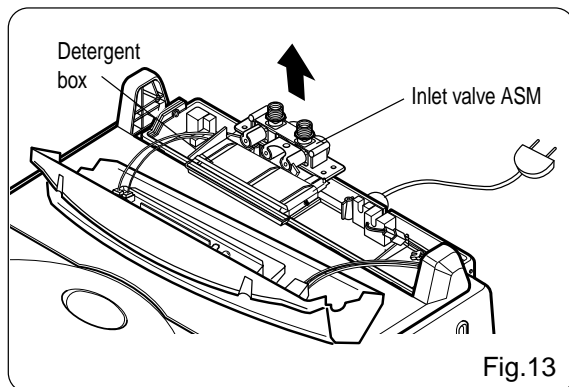


Fig.13

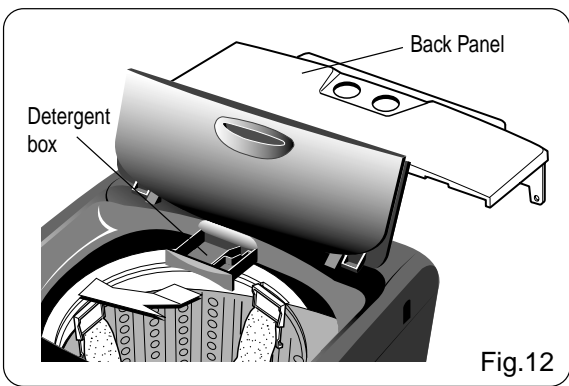


Fig.12

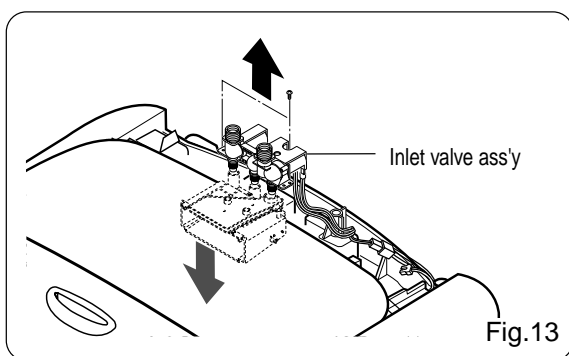


Fig.13

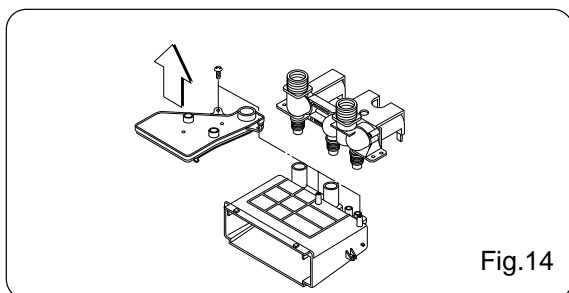


Fig.14

## 10-5. Disassembly of Inlet Valve ASM and D.T Housing ASM

### WF-T851, T902

1. Open lid assembly and disassemble detergent box.
2. Disassemble back panel(joined control panel)from top cover.
3. Remove two inlet valve screws and pull up inlet valve from D.T housing as in Fig. 13.

Be careful that the silicon rubber of D.T housing for sealing is not missing.

4. Inlet valve assembly is disassembled by pulling out the lead wire attached on inlet valve assembly, as in Fig.13.

5. To disassemble D.T housing assembly, loosen the three screws tightened with the top cover as in Fig.13, and then pull the assembly back slopped down.

### WF-T853, T852, T802, T652, T652A, T452 WF-T452A, 402

1. Open lid assembly and disassemble detergent box.
2. Disassemble back panel.
3. Remove two inlet valve screws and pull up inlet valve from D.T housing as in Fig.13

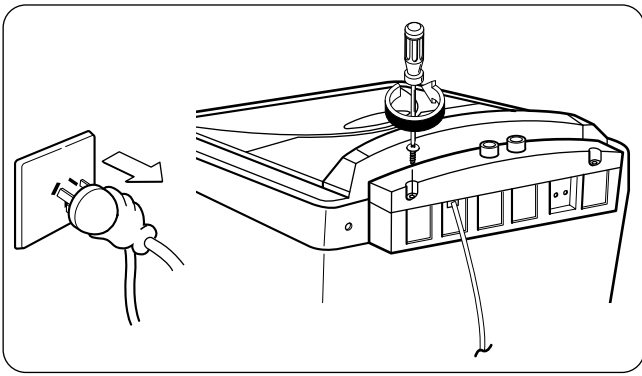
Be careful that the silicon rubber of D.T housing for sealing is not missing.

4. Inlet valve assembly is disassembled by pulling out the lead wire attached on inlet valve assembly, as in Fig.13

5. To disassemble D.T housing assembly, loosen the two screws tightened with the top cover as in Fig.13, and then pull the assembly back slopped down.

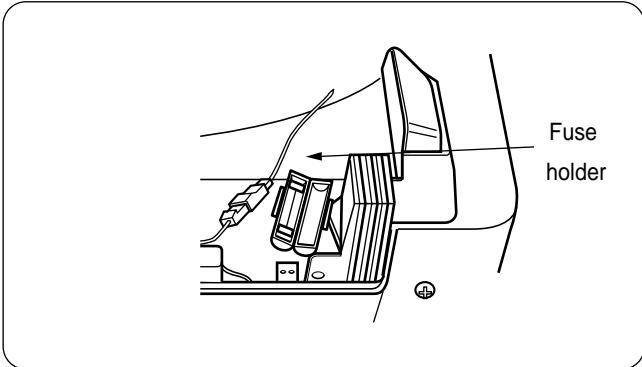
6. To disassemble shower rinse assembly, loosen the fixing screw attached with D.T housing and pull it up and back.

Be careful that the silicon rubber attached on D.T housing for sealing is not missing.

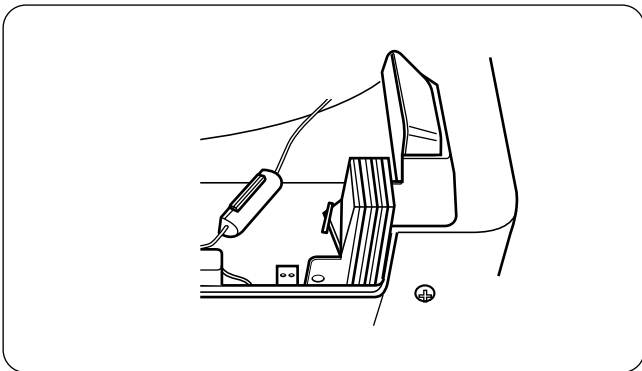


## 10-6. Fuse Replacement

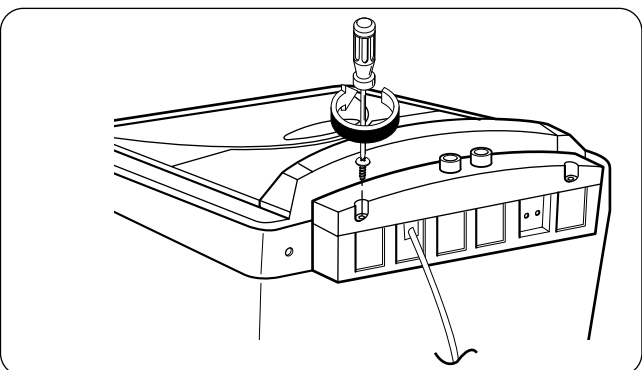
1. Be sure to unplug the power.
2. Disassemble back panel (Joined control panel) from top cover.



3. Take out the fuse holder on the back and open it.
4. Remove fuse from the fuse holder and replace it.



5. Put fuse into the fuse holder and close the fuse holder. Insert it into original position.



6. Assemble the back panel and then tighten the screw.

### CAUTION

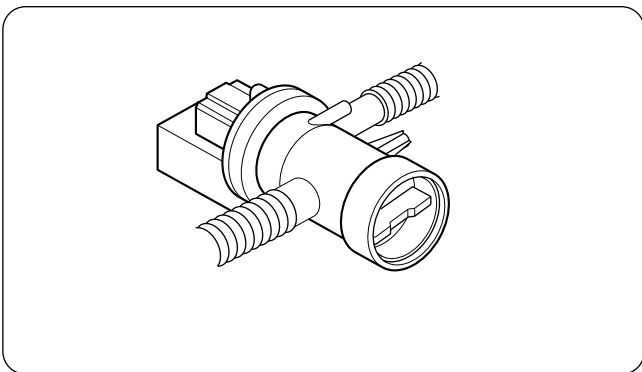
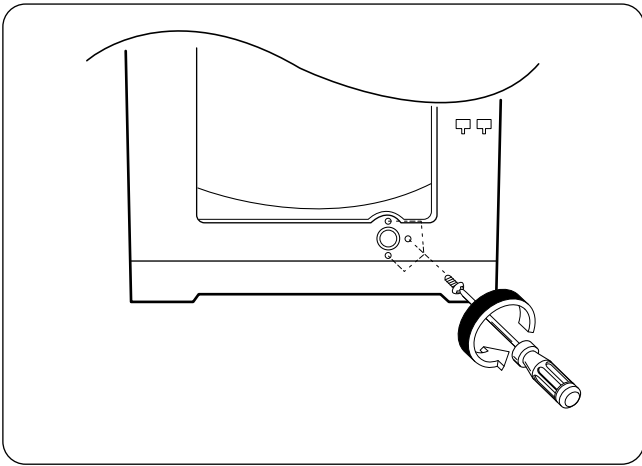
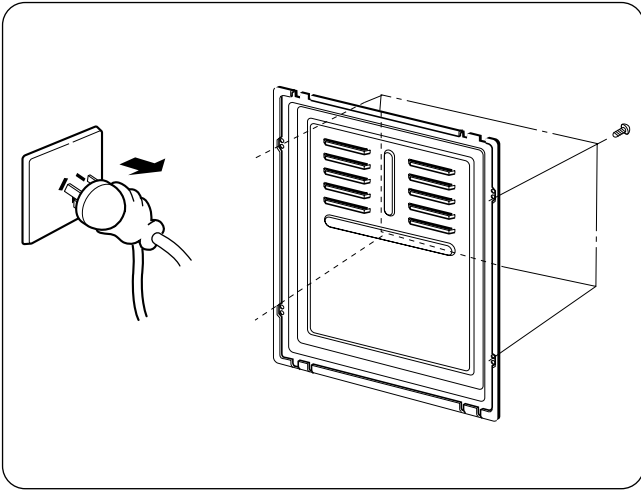
Use the rated fuse. For fuse contact the nearest service center.

Fuse rating : 250V, 6A (fusing type-For 220~240V)

## 10-7. Replacement of Drain pump.

Check water is remained before the drain pump servicing.







1. Be sure to unplug the power.
2. Loosen the 4 screw on the back side and disassemble back cover from the machine.
3. Disconnect the pump lead wire housing.
4. Loosen the 3 screw from the lower plate and disassemble the drain pump.
5. Change the drain pump asm, assemble it tighten the screw.
6. Assemble the back cover.







# 11.TROUBLE SHOOTING METHODS ACCORDING TO DISPLAYED ERROR MODE

## 1) WF-T851, T852, T853, T802, T652, T652A, T452, T452A

### ERROR DECISION BASIS AND CHECKING METHODS

ERROR	ERROR DECISION BASIS	CAUSE FOR ERROR OCCURRENCE	REMEDY
WATER SUPPLY	<ul style="list-style-type: none"> <li>Water level does not rise to the set level in 30 minutes. WF-T851/T853/T652/T652A/T452/T452A</li> </ul>  <p>displayed</p> <p>WF-T802/T852/T952</p>  <p>lamp blinks</p>	<ul style="list-style-type: none"> <li>Water faucet is closed?</li> <li>Water supply is interrupted.</li> <li>Inlet V/V is clogged with dirt.</li> <li>Connector has bad contact to the inlet valve.</li> <li>Yellow(YL) 2 pin connector has bad contact to the P.W.B ASM.</li> </ul>	<ul style="list-style-type: none"> <li>Open water faucet.</li> <li>Wait until water supply is resumed.</li> <li>Clean or replace filter.</li> <li>Correct the connector contact.</li> <li>Same as above.</li> </ul>
DRAINAGE	<ul style="list-style-type: none"> <li>Water is not completely drained in 12 minutes. WF-T851/T853/T652/T652A/T452/T452A</li> </ul>  <p>displayed</p> <p>WF-T802/T852/T902</p>  <p>lamp blinks</p>	<ul style="list-style-type: none"> <li>Is the drain hose located properly?</li> <li>Drain hose is folded or clogged due to freeze or dirt.</li> <li>Bad Drain Motor part or WHITE(WH) 2 pin connector to the P.W.B ASM has bad connection.</li> </ul>	<ul style="list-style-type: none"> <li>Hung up drain hose at 0.9~1.2m high. (For pump)</li> <li>Unclose the foreign objects within drain hose.</li> <li>Replace Drain Motor or correct the connector contact.</li> </ul>
UNBALANCE	<ul style="list-style-type: none"> <li>Laundry unbalance during spin. WF-T851/T853/T652/T652A/T452/T452A</li> </ul>  <p>displayed</p> <p>WF-T802/T852/T902</p>  <p>lamp blinks</p>	<ul style="list-style-type: none"> <li>Laundry in the INNER TUB is filled unevenly.</li> <li>Washer is tilted.</li> <li>S.F S/W is too closed to the washing tub, or has bad contact.</li> </ul>	<ul style="list-style-type: none"> <li>Try to fill laundry uniformly in the inner tub.</li> <li>Adjust the leg.</li> <li>Check and replace S.F S/W or BALL SENSOR ( WF-T851).</li> </ul>

ERROR	ERROR DECISION BASIS	CAUSE FOR ERROR OCCURRENCE	REMEDY
DOOR OPEN	<ul style="list-style-type: none"> <li>LID is opened in the course of intermittent spin, normal spin or processing reservation.</li> </ul> <p>WF-T851/T853/T652/T652A/T452/T452A</p>  <p>displayed</p> <p>WF-T802/T852/T902</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">DOOR Er.</div> <p>lamp blinks</p> <ul style="list-style-type: none"> <li>SIGNAL continuously ringing.</li> </ul>	<ul style="list-style-type: none"> <li>Lid is opened during intermittent spin or normal spin?</li> <li>Lid is opened while processing reservation?</li> <li>Connector to the S.F S/W or VIOLET(VL) 2 PIN CONNECTOR to the P.W.B ASM has bad connection.</li> <li>S.F S/W is bad or bad contact.</li> </ul>	<ul style="list-style-type: none"> <li>Closed the lid.</li> <li>Closed the lid.</li> <li>Correct the connector contact.</li> <li>Check and replace S.F S/W. or BALL SENSOR.(WF-T851)</li> </ul>
PRESSURE SENSOR	<ul style="list-style-type: none"> <li>Water Pressure Switch is off.</li> </ul> 	<ul style="list-style-type: none"> <li>Connector the PRESSURE S/W ASM or BLUE(BL) 3 pin connector to P.W.B ASM has bad connection.</li> <li>PRESSURE S/W is bad. (In the initial state of QC TEST MODE, the number on the DISPLAY is less than 63 or more than 70)</li> </ul>	<ul style="list-style-type: none"> <li>Correct the connector contact.</li> <li>Replace PRESSURE S/W ASM.</li> </ul>
AUTO OFF	<ul style="list-style-type: none"> <li>AUTO OFF relay S/W is out of order.</li> </ul> 	<ul style="list-style-type: none"> <li>BLUE(BL) 1pin connector to P.W.B ASM has bad connection.</li> </ul>	<ul style="list-style-type: none"> <li>Correct the connector contact.</li> <li>Change P.W.B ASM.</li> </ul>
OVER FLOODING ERROR		<ul style="list-style-type: none"> <li>Check water leakage or whether the drain hose is hung on to drainage which is min 0.9 above from floor.</li> <li>Check blockage of air hole or air tube.</li> <li>Check &amp; repair air leakage at the air hole of outer tub the air tube or connection parts.</li> </ul>	<ul style="list-style-type: none"> <li>Hang drain hose which is minimum 0.9m above from floor.</li> <li>Replace pressure sensor switch</li> <li>Remove the foreign objects in pressure sensor switch</li> </ul>

## 2) WF-402

### ERROR MESSAGE AND CHECKING METHODS

ERROR	ERROR DECISION BASIS	CAUSE FOR ERROR OCCURRENCE	REMEDY
WATER SUPPLY & INLET V/V.	<ul style="list-style-type: none"> <li>Water level does not rise to the set level in 40 minutes.</li> <li>Wash and rinse LED blink.</li> </ul>	<ul style="list-style-type: none"> <li>Water faucet is closed?</li> <li>Water supply is interrupted.</li> <li>Inlet V/V is clogged with dirt.</li> <li>Connector has bad contact to the inlet valve.</li> <li>Yellow(YL) 2 pin connector has bad contact to the P.W.B ASM.</li> </ul>	<ul style="list-style-type: none"> <li>Open water faucet.</li> <li>Wait until water supply is resumed.</li> <li>Clean or replace filter.</li> <li>Correct the connector contact.</li> <li>Same as above.</li> </ul>
DRAINAGE	<ul style="list-style-type: none"> <li>Water is not completely drained in 10 minutes.</li> <li>Rinse and spin LED blink.</li> </ul>	<ul style="list-style-type: none"> <li>Is the drain hose located properly?</li> <li>Drain hose is not lowered.</li> <li>Drain hose is folded or clogged due to freeze or dirt.</li> <li>Bad Drain Motor part or GRAY(GY) 2 pin connector to the P.W.B ASM has bad connection.</li> </ul>	<ul style="list-style-type: none"> <li>Hung up drain hose at 0.9~1.3m high. (For pump)</li> <li>Put the hose lower. (For : Non-pump)</li> <li>Unclog the drain hose.</li> <li>Replace Drain Motor or correct the connector contact.</li> </ul>
UNBALANCE	<ul style="list-style-type: none"> <li>Laundry unbalance during spin.</li> <li>Wash, Rinse and Spin LED blink.</li> </ul>	<ul style="list-style-type: none"> <li>Laundry in the INNER TUB is filled unevenly.</li> <li>Washer is tilted.</li> <li>Is the CONNECTOR of Ball pressure sensor disconnected or badly touched?</li> </ul>	<ul style="list-style-type: none"> <li>Try to fill laundry uniformly in the inner tub.</li> <li>Adjust the leg.</li> <li>Check B.P SENSOR CONNECTOR or replace B.P sensor</li> </ul>
OVER FLOODING ERROR	<ul style="list-style-type: none"> <li>In the second QC Mode the following message is displayed.</li> <li>All of process LED blinks.</li> </ul>	<ul style="list-style-type: none"> <li>Check INLET valve</li> </ul>	

ERROR	ERROR DECISION BASIS	CAUSE FOR ERROR OCCURRENCE	REMEDY
DOOR OPEN	<ul style="list-style-type: none"> <li>• LID is opened in the course of intermittent spin, normal spin or processing reservation.</li> <li>• Wash and Spin LED blink.</li> <li>• SIGNAL continuously ringing.</li> </ul>	<ul style="list-style-type: none"> <li>• Lid is opened during intermittent spin or normal spin?</li> <li>• Lid is opened while processing reservation?</li> <li>• Is placed magnetic in Lid-B</li> </ul>	<ul style="list-style-type: none"> <li>• Closed the lid.</li> <li>• Closed the lid.</li> <li>• charg the Lid-B.</li> </ul>
BALL PRESSURE SENSOR	<ul style="list-style-type: none"> <li>• BALL PRESSURE SENSOR is off.</li> <li>• All water level LED blinks.</li> </ul>	<ul style="list-style-type: none"> <li>• Connector the BALL PRESSURE SENSOR or BLUE(BL) 3 pin connector to P.W.B ASM has bad connection.</li> <li>• PRESSURE S/W is bad. (In the initial state of QC TEST MODE, the number on the DISPLAY is less than 63 or more than 70)</li> </ul>	<ul style="list-style-type: none"> <li>• Correct the connector contact.</li> <li>• Replace BALL PRESSURE SENSOR.</li> </ul>
AUTO OFF	<ul style="list-style-type: none"> <li>• AUTO OFF relay S/W is out of order.</li> </ul>	<ul style="list-style-type: none"> <li>• BLUE(BL) 1pin connector to P.W.B ASM has bad connection.</li> </ul>	<ul style="list-style-type: none"> <li>• Correct the connector contact.</li> <li>• Change AUTO OFFswitch ASM.</li> </ul>



## 12.HOW TO DIAGNOSE AND REPAIR BY SYMPTOM

### 12-1. Washer is not energized.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b>Household Power supply</b>			
1. Check whether connection between the plug and the electrical is poor	Poor	Defect of the electrical	Change the electrical.
2. Measure voltage of the electrical.	Around rating	No defect	
	0V	Defect of household power supply	Call for power supply company
<b>Wiring of the Washer</b>			
1. Measure resistance between both ends of the power supply cord with both the plug pins short-circuited.	Less than 1	No defect	
		Open circuit of the power supply cord	Change the power supply cord.
2. Check whether every connector in the bundle of connectors has a good connection.	Male & female connectors separated	Poor connection.	Remove the cause to give strain and reconnect them.
3. Check resistance of every wire to find out a open wire.		Wire is opened.	Change the lead wire.
<b>Electrical component</b>			
1. Check resistance with power relay switch turned on	Less than 0.5	No defect	
	More than 1.0	Poor contact	Change the Auto Off Switch
2. Check the secondary voltage of the transformer.	10~14V	No defect	
	0V	Coil is open	Change the transformer.
3. Measure resistance to check whether the T.P of the motor is blown out.	and motor is hot	T.P blown out	Remove cause to overload the motor
4. Check whether the fuse is open.	Open	Defect of the fuse	Change the fuse. <b>CAUTION</b> Check the fuse rating AC220~240V:250V 6A
<b>Controller</b>			
If there are no defects in the above, it should be defect of the controller. If supply voltage is 120% higher than rating the varistar in the controller may be broken. Check supply voltage.	Over 120% voltage than rating check		Change the controller if all the electrical parts have no defects.

## 12-2.Defects on displaying function

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b>Main voltage</b>			
1. Measure mains voltage at the wall outlet	Less than 85% of the rating.	Low voltage.	To explain that it is caused by low voltage in electric supply and recommend using a transformer if voltage has been continuously low.
2. Measure voltage at the extended outlet that the washer is plugged in if the extended outlet is used and voltage at the electrical outlet is normal in the above.	Less than 85% of the rating	The dia of the lead wire is smaller or many loads are connected at the same outlet	To use a transformer having a enough capacity if using a transformer.
<ul style="list-style-type: none"> <li>• <b>HIC(hybrid IC) / WF-T851</b></li> <li>1. Measure the secondary voltage of the HIC</li> </ul>	Less than AC 4.6V or More than 5.3V	Defect of the HIC.	Change the controller.
<ul style="list-style-type: none"> <li>• <b>Transformer</b></li> <li>( WF-T853/T802/T852/T652/T452)</li> <li>1. Measure the secondary voltage of transformer</li> </ul>	Less than AC 10V	Defect of the transformer	
<b>Controller</b>			
1. Defect of LED. 2. Defect of LED driving circuit. 3. Defect of micom.		Defect of controller.	Change the controller.

## 12-3.Reset During operation

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b>Mains Voltage</b>			
1. Measure voltage of the outlet that the washer is plugged into during wash and spin.	Less than 80% of the rating.	Mains voltage is too low or size of a lead wire is too small.	Explain that it is caused by low voltage in electric mains and recommend using a suitable size of leads.
2. Reset symptom happens at specific time zone repeatedly.		External noise intruded.	Explain it is caused by using environment. (It happens when equipment with high frequency is used around)
3. Check whether a transformerless power cut happens. (Fluorescent lamp is transformerlessly blinked.)			Explain it is a problem of electric supply environment.

### 12-3.Reset During operation

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Drain Motor</u></b> 1. Operate washer setting spin only, then press the start/pause button when the wash motor starts to work and then press the start/pause button again in order for the drain motor to work intermittently.	Reset happens after the drain motor works.	Defect of the drain motor (A noise generated when the internal relay works.)	Change the drain motor
<b><u>Controller</u></b> 1. If mains voltage and the drain motor have no defects a defect of the controller is highly possible.			Change the controller.

### 12-4. Water doesn't come into the wash tub.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Inlet Valve</u></b> 1. If water doesn't come though the inlet valve works(electric sound occurs) 1) Check whether water mains is cut. 2) Check whether tabs are turned on. 3) Hot & cold tab are opposite connected. 4) Wrongly select water temperature option. 5) If there are no problems in the above, check the inlet valve filters after disconnecting the water supply hoses. 6) If there are no problems in the above a diaphragm hole in the valve is blocked by foreign substance or the plunger in it is locked.	Water mains cut. Don't turned on. Connected opposite. Selected opposite. Filters blocked by foreign substance.	Mains cut. Mistake of use. Wrong installation. Mistake of use. Don't clean. Defect of the inlet valve.	Explain. Turn on the tap. Correct their locations and turn on the tap. Explain how to use. Clean them by brush and explain cleaning regularly them. Change the inlet valve.
2. If the inlet valve doesn't work(there is no electric sound)during filling cycle. 1) Check whether it's connectors are taken off or they have poor connection. 2) Check resistance of the inlet valve.	A connector is taken off.	Defect of contact. Coil is open	Reconnect it or remove the causes to make poor connection. Change the inlet valve.

## 12-4. Water doesn't come into the wash bowl.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Pressure Switch</u></b> 1. Is there PE error on the display which means pressure switch error	PE Error displayed.	Connector is taken off, or lead or coil is open.	Reconnect the connector or change leads. Change the pressure switch if coil is open.
2. Check frequency of the pressure switch without load if wash is proceeding without filling.	Less than 26.2kHz	Defect of the pressure switch.	Change the pressure switch.
<b><u>Controller</u></b> 1. Defect of controller is highly possible if inlet valve and pressure switch have no defects in the above.			Change the controller.

## 12-5. Water fills continuously or intermittently.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Wrong Installation/Leakage</u></b> 1. Check whether the drain hose is laying down on the floor. (For pump model)	Drain hose laying down.	Wrong installation.	The drain hose should be hung on the stand-pipe or the tub. Change the part.
2. Check where water leaks.	Water leaks from a part.	Defect of the part.	Repair it.
<b><u>Pressure Switch</u></b> 1. Check the pulsator is rotating when water fills continuously.	It doesn't rotate.	Water pressure is not sensed.	Check the tube of the pressure switch, if it is bent or blocked, repair that.
2. If there is no defect in the pressure switch, check whether the air hole of the outer tub is blocked.	Blocked.	Air hole blocked.	Repair the blocked hole.
<b><u>Inlet Valve</u></b> 1. Does water fill even though it is not energized (power is off)?	Water fills.	Defect of the inlet valve.	Change the inlet valve.
<b><u>Controller</u></b> 1. Does water fill immediately after the power switch turns on before pushing the start/pause button.		Short circuit of the triac of the controller.	Change the controller.
<b><u>Ball Pressure Sensor (WF-T652A, T452A, 402)</u></b> 1. Check the pulsator is rotating when water fills continuously.	It doesn't rotate.	Water pressure is not sensed.	Check the tube of the Ball Pressure Sensor, it is bent or blocked, repair that.
2. If there is no defect in the Ball Pressure Sensor, check whether the air hole of the outer tub is blocked.	Blocked.	Air hole blocked.	Repair the blocked hole.

## 12-6. Pulsator doesn't rotate normally.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Pulsator rotates at one direction.</u></b> 1. In the case the pulsator doesn't rotates either clockwise or counterclockwise from the beginning of wash cycle: 1) Check resistance of the wash motor if there is no motor-working sound.	Resistance is normal.	Defect of controller or poor contact of connectors of motor leads.	Change the controller if there are no contact defects in the leads of the motor.
	V-belt is loose.	Loose the belt.	Adjust belt tension by changing motor fixing location and change the belt if it is impossible to adjust belt tension.
	Clutch locked.	Defect of the clutch.	Change the clutch if the clutch pulley is locked when making it rotated clockwise and counterclockwise by hand.
2. The pulsator doesn't rotate at both directions. 1) Check whether motor rotates at both directions if there is motor-working sound when it's energized.	Motor rotates at both directions.	Loose the belt.	Adjust belt tension or change the belt if it is impossible to adjust.
		The pulsator locked.	Remove cause locking the pulsator
		Defect of the clutch.	Change the clutch.
	Motor doesn't rotates at both directions.	Defect of the capacitor.(check the capacitor's capacitance)	Change the motor if the motor is locked when having its shaft rotated by hand.
		Defect of the motor.	Change the capacitor if there is no contact defect in capacitor's lead
2) Check resistance of the motor if there is no motor-working sound.		Motor coil is open.	Change the motor.
	Normal resistance.	Contact defect of the leads.	Remove the causes.

## 12-6. Pulsator doesn't rotate normally.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
3. Pulsator weakly rotates. 1) Check voltage at the power outlet where the washer is plugged into.	Less than 85% of rating.	Lower voltage.	Explain the causes and a transformer should be used if necessary.
2) Check capacitance of the capacitor.	Indicating needle rises and immediately indicates .	Capacitor is normal.	
	The needle is stopped after it is raised.	Lack of capacitance of the capacitor.	Change the capacitor.
	The needle doesn't move.	Capacitor is fully discharged.	Change the capacitor.

## 12-7. Water does not drain.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Drain Pump</u></b> 1. Check whether there is drain pump working sound.	There is pump working sound.	Drain pump is blocked by foreign objects.	Disassemble the drain pump cap and remove the foreign objects in the pump casing.
2. Check resistance between terminals if there is no working sound of the drain pump.		It's coil is open.	Change the drain pump.
3. Check connection parts of the leads if there is no working sound and its resistance is normal.	Defect in connection part.	Defect in connection part.	Repair defected connection.
	Connection part has no defects.	Defect of the controller.	Change the controller.
<b><u>Drain Hose</u></b> 1. Check whether the drain hose is put in a narrow space and kinked.	Kinked.	Defect of installation.	Reinstall so that it should not be kinked.
2. Check whether the drain hose is blocked by foreign objects. It may happen in case of the hose is a little kinked.	Blocked.	Blocked hose.	Remove the objects and reinstall so that it can't be kinked.

## 12-8. Water drains though it is not the time of drain.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Drain Hose</u></b> 1. Check whether the drain hose is installed properly so that the discharge height is about 0.9~1.2m from the floor.	The discharge height is lower than recommendation.	Wrong installation of the drain hose.	Put the outlet of drain hose between 0.9m and 1.2m.
<b><u>Controller</u></b> 1. Check whether the drain motor or the drain pumpworks immediately after power is turned on.	Works	Defect of the controller. (Triac defect)	Change the controller.

## 12-9. Drain error happens while water drains normally.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Pressure Switch</u></b> 1. Check generation frequency of the pressure switch without water.	Less than 26.3 kHz	Defect of the pressure switch.	Change the pressure switch.
	26.3~27.1 kHz	Defect of the controller.	Change the controller.

## 12-10. Spin extraction is not proceeded.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Motor</u></b>			
1. In the case that the wash motor does not spin during spin extraction; 1) Check there is motor working sound, or	There is motor working sound.	Defect of the capacitor or Mechanically locked.	Change the capacitor after checking defect of capacitor. check whether the washing clutch or the washing tub is blocked if the motor rotates after removing the V-belt. Check whether the motor is locked if the motor does not rotates even though the V-belt being removed.
2) If there is no motor-working sound; Check frequency of the pressure switch, under no load, or	Less than 26.3kHz	Defect of the pressure switch.	Change the pressure switch
Check contact defect of the safety switch, defect of connection parts and whether the lid is open if door error is displayed. Check resistance of the motor.	The lid is open.	Mistake in use.	Explain" The lid is close during operation"
	Defect of connection part.		Reconnect the connectors.
	Contact defect of the safety switch.		Change the safety switch.
		Coil is open.	Change the motor.
<b><u>Drain Motor/Clutch</u></b>			
1. In the case the motor rotates but the inner tub does not rotates; 1) Check resistance of the drain motor if the drain motor doesn't work, or	Resistance is normal	Coil is open. Defect of connection part or defect of the controller.	Change the drain motor. Change the controller after checking connection parts.
2) Check gap between the PV link and the brake lever if the inner tub does not rotates while the drain motor works.	The clearance is less than 2.5mm or more then 3.5mm	Assembling defect of the drain motor or the clutch	Reassemble the drain motor or the clutch to keep the clearance.
	The gap is normal . (2.5~3.5mm)	Defect of the clutch.	Change the clutch.



## 12-11. Spining is going on even though the lid is open.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Lid Switch (WF-T851, T902, 402)</u></b> 1. Check resistance between both terminals of the lid switch with the lid open.	0~9	Contact points of the lid switch or S.F switch are welded.	Change the lid switch or S.F switch.
<b><u>Safety Switch</u></b> <b>(WF-T853,T802,T852,T652, T652A, T452, T452A)</b> 1. Check resistance between both terminals of the safety switch with the lid open.		Defect of the controller.	Change the controller.

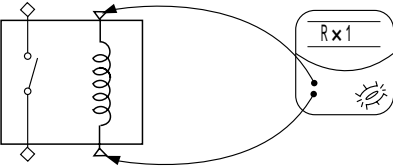
## 12-12. Spin basket doesn't reach to full speed(normal rpm)

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Main voltage</u></b> 1. Check voltage at the power outlet where the washer is plugged into.	Less than 85% of rating	Tool low voltage	Explain the cause and recommend using a transformer if necessary.
<b><u>Starting Capacitor</u></b> 1. Check the capacitance of the starting capacitor.	Lack of capacitance	Defect of capacitor	Change the capacitor
<b><u>Clutch Assembling</u></b> 1. Check the clearance between the PV link and the brake lever and clearance between the clutch lever and the adjustment bolt.	The clearance is less than 2.5mm or more than 3.5mm		Adjust PV lever bolt and paint it red. Reassemble the drain motor or the clutch.
	Bolt clearance is out of range $1.9 \pm 0.1\text{mm}$	Defect of the clutch	Adjust the bolt clearance.
<b><u>Blocked by foreign objects</u></b> 1. Check whether the drain pump & the drain hose are blocked by foreign objects so that it makes water-splashing noise in the tub.			Remove the foreign objects.

## 12-13. Vibration, Noise or Unbalance Error happens during spin.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b><u>Using conditions such as installation etc.</u></b>			
1. Check whether the washer is leveled. (Check clearance with out tub and out case the left gap is the same as the right and the rear gap is 1.5~2 time bigger than the front gap, between the cabinet and the wash bowl, when it is leveled.)	Not leveled.	Defect of installation	Level the washer.
2. Check whether laundry in the wash bowl is out of balance that can cause severe vibration & noise.	Laundry is unbalanced.		Explain that it is not out of order and it may happen when big & long laundry is washed.
3. Check whether the pulsator doesn't rotate during spin. (To check that, remove the front lid and than run the spin only cycle.)	The pulsator rotates initially then the inner tub rotates.	Defect of the clutch	Change the clutch spring-B or the clutch asm.
<b><u>Ball sensor (WF-T851, T902)</u></b>			
1. Check voltage between blue terminal and yellow terminal of the ball sensor	0 ~ 1V	Defect of the ball sensor	Change the ball sensor
	More than 1V	Defect of the controller	Change the controller
<b><u>Safety Switch (WF-T853, T802, T852, T652, T652A, T452, WF-T452A)</u></b>			
1. Check whether the lever of the safety switch touches the outer tub if touching noise happens.	The lever is bented.	Defect of the safety switch.	Change the safety switch. Don't repair and reuse it because it creates another problem if it is wrongly repaired.
<b><u>Suspension</u></b>			
1. Check whether the outer tub cover hit the top cover without load during spin.	Hit	Defect of the Suspension	Change four suspensions simultaneously. (In assembling, check the position to suspension asm)
It is very important to find out what kinds of noise & where comes from to settle noise during spin and accumulately service experiance.			

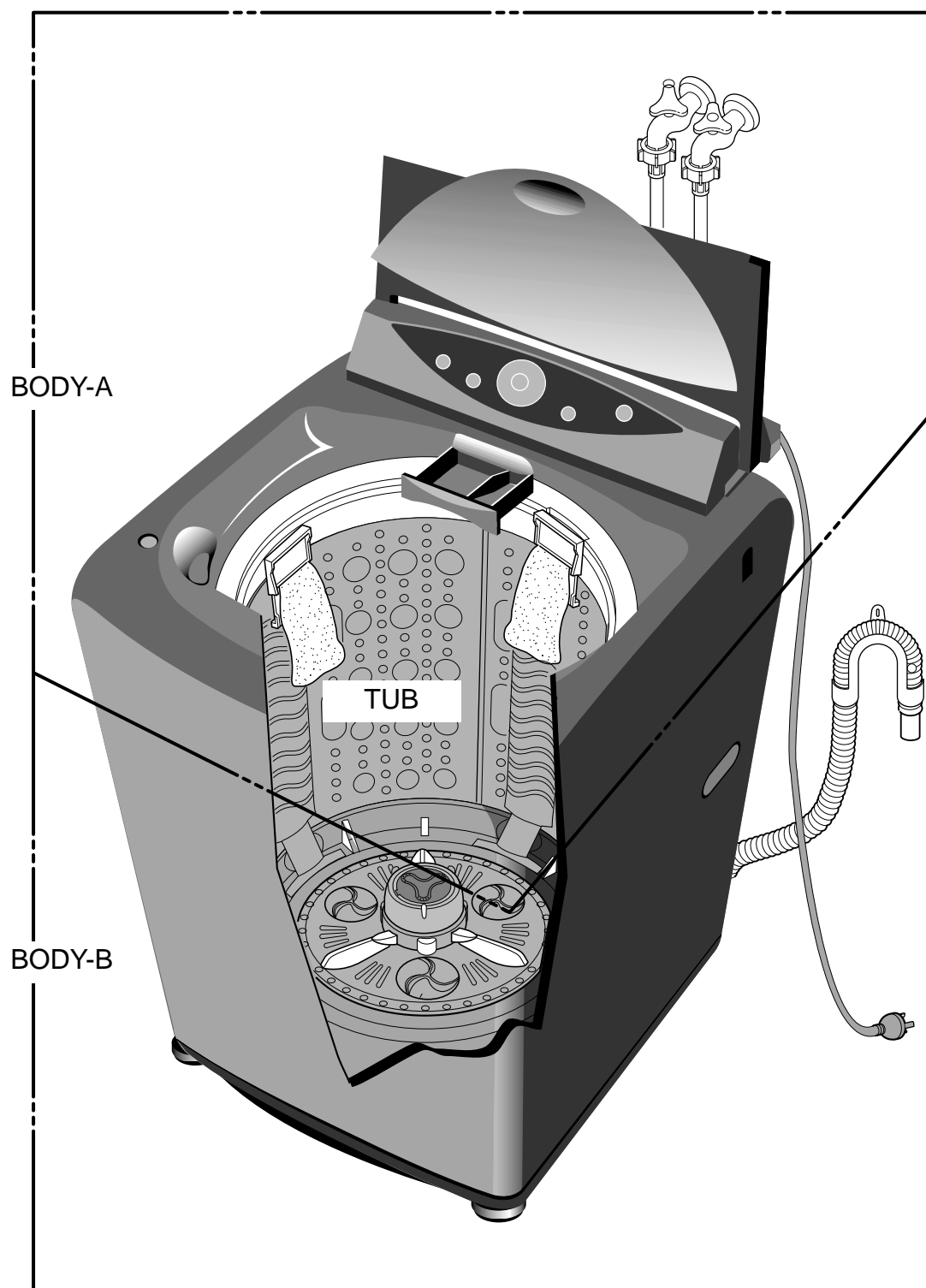
## 12-14. Power is not automatically turned off.

Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b>Auto Off Switch (WF-T851/402)</b> 1. Check whether there is something to push the power button.	There is something to press it.		Remove it.
2. Check coil resistance of the auto-off-switch 	About 1kΩ	Coil is open. Defect of the controller	Remove the switch Change the controller.

## 12-15. Power is automatically turned off during operation or immediately turning on the power button.

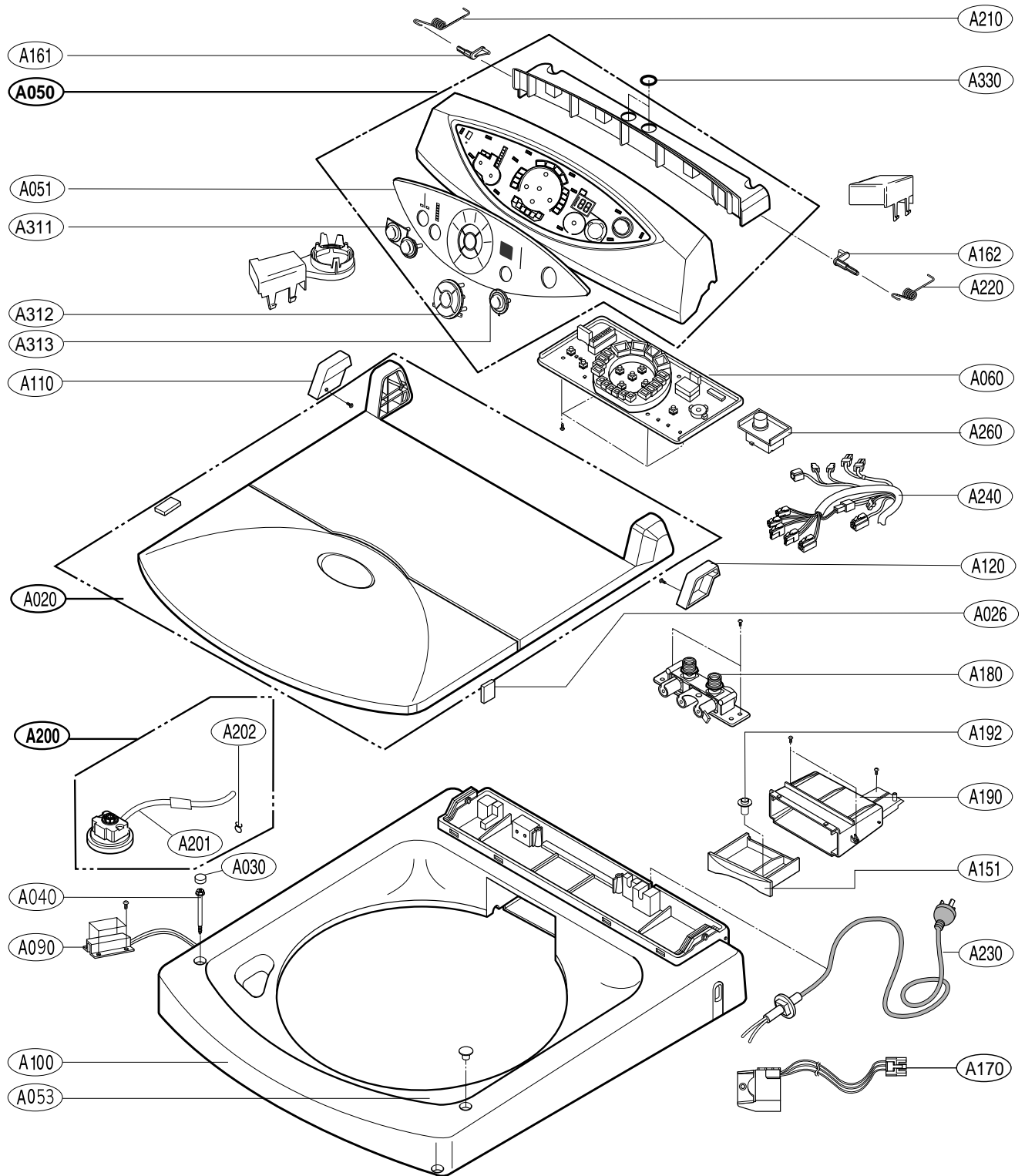
Where, what & how to check?	Result of Check	Possible Cause	How to repair & settle
<b>Mains voltage</b> 1. It is mostly caused by noise from mains or transient power cut.		Defect in mains	Explain the cause (It happens specially when a high frequency equipment is a used around the washer or in the case voltage fluctuation is big.)
<b>Auto Off Switch or Controller(WF-T851/402)</b> 1.Check whether power is automatically turned off when turning on the power switch after unplugging the power cord from the outlet <b>Auto Power Relay or Controller (Except for WF-T851, 402)</b> 1.Check whether power is automatically turned off when turning on the power switch after unplugging the power cord from the outlet.	Automatically turned off	Mechanical defect of the power switch	Change the switch.
2. It would be defect of the controller if power is automatically turned off immediately when turning on the power switch even though there is no defects in the power switch.			Change the controller.

## 13. EXPLODED VIEW

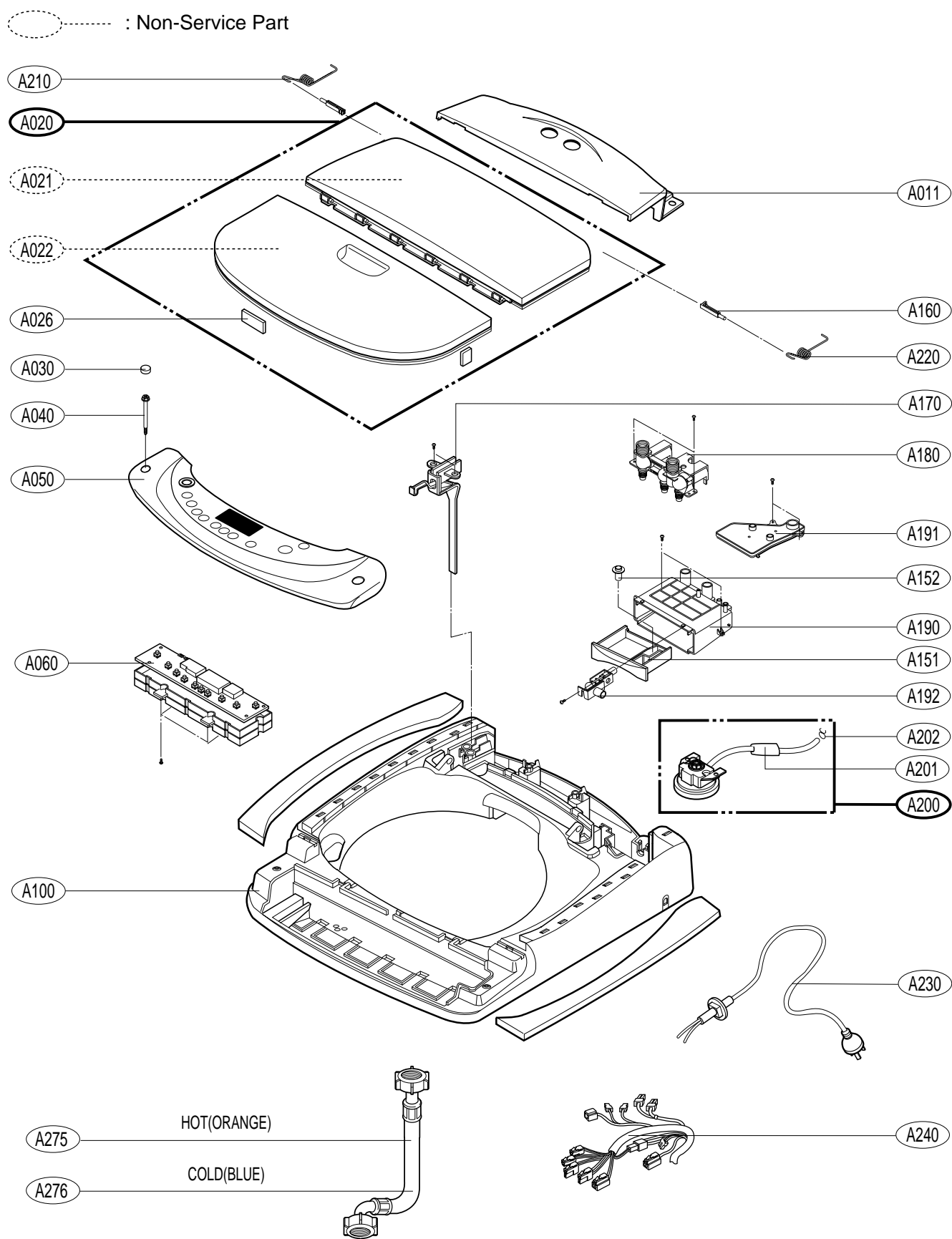


## 13-1.THE EXPLODED VIEW OF THE BODY-A (WF-T851)

○:Non-Service Part

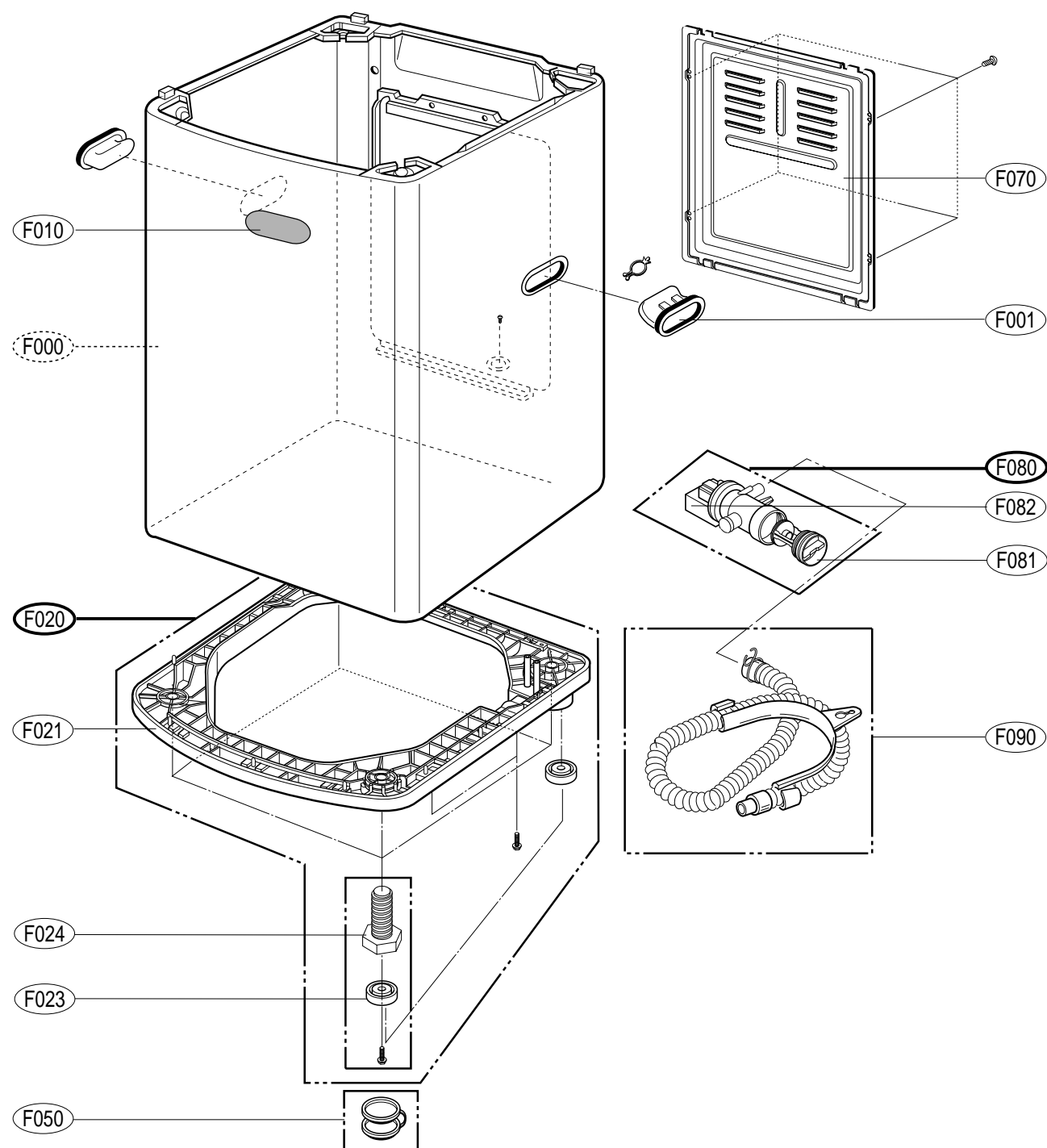


## 13-2.THE EXPLODED VIEW OF THE BODY-A (WF-T853, T802, T652, T452)

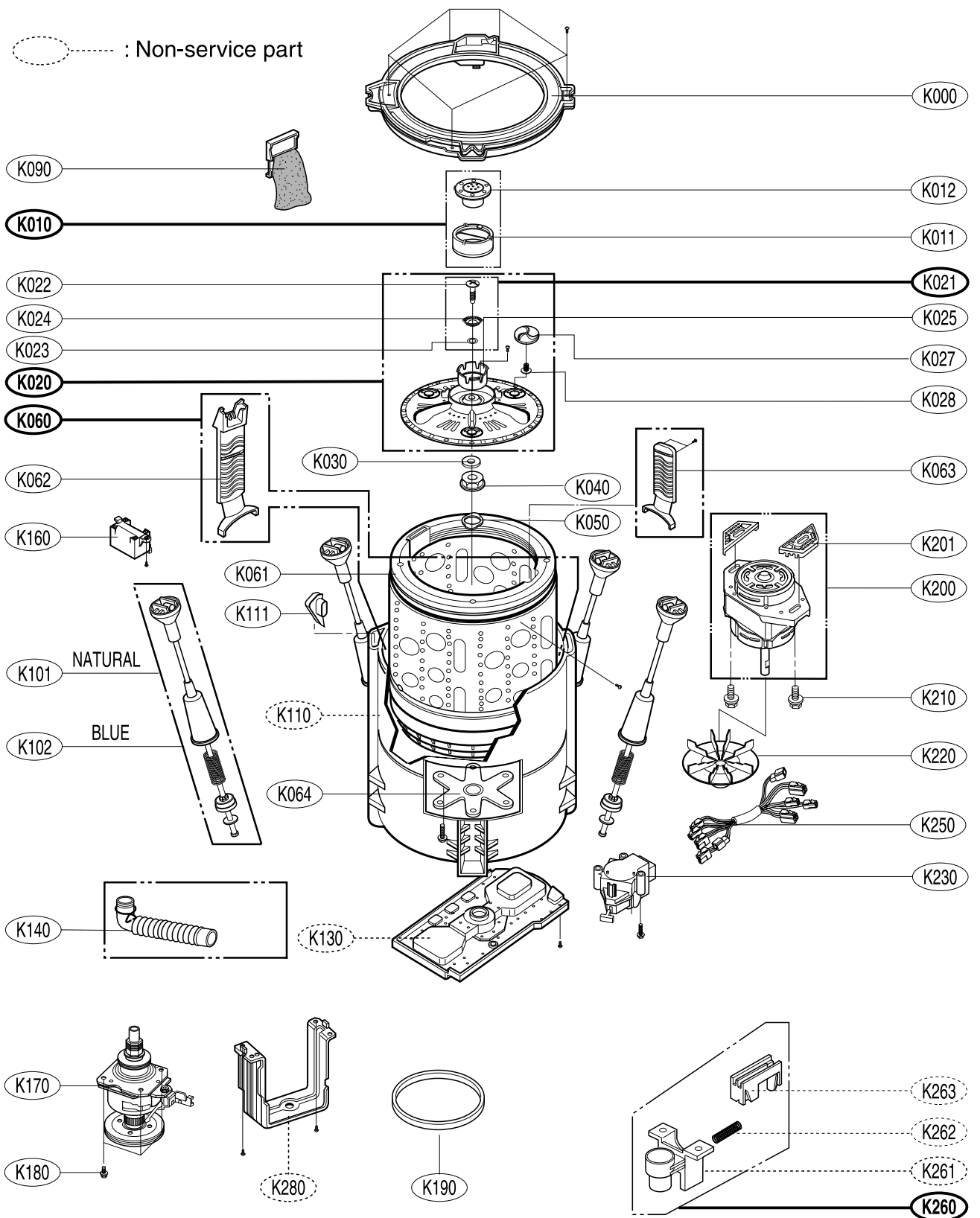


### 13-3.THE EXPLODED VIEW OF THE BODY-B

○:Non-Service Part



## 13-4.THE EXPLODED VIEW OF THE TUB ASS'Y







FEB. 2000 PRINTED IN KOREA

P/No : 3828EA3001Y

