



**ABS Laundry  
Samsung Front Load Washer  
Model WF316L**

**Notes:**



# WASHING MACHINE

Model : WF316L

Model code : WF316LAW/XAA

# **SERVICE** *Manual*

## WASHING MACHINE



## THE FEATURE OF PRODUCT

1. SilverCare
2. SuperSize Capacity
3. Direct Drive Motor
4. Child Lock
5. My Cycle

Refer to the service manual in the itself (<http://itself.sec.samsung.co.kr/>) for the more information.



**ELECTRONICS**

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# 1. Precautions

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## 1-1. Safety Precautions

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**1. Do not allow the customer to repair the product.**

☞ It may cause personal injury or product damage when the unit is serviced by unqualified personnel.

**2. Disconnect power to the appliance before servicing.**

☞ Be aware of the possibilities of an electric shock.

**3. Do not use multi-plug.**

☞ Power outlet may be overloaded causing the socket to overheat.

**4. Check for any damage on power plug or power outlet.**

☞ Replace it immediately if it has problem. (It may cause an electric shock or fire)

**5. Make sure to earth the product.**

☞ May cause electric shock.

**6. Do not clean the product with water.**

☞ May cause electric shock / fire or shorten product life.

**7. The wiring harness should be free from moisture and connected properly during serving.**

☞ It should be proof against any external force.

**8. Remove any dust or dirt in the product, wiring section and connections during servicing.**

☞ Protect against possibilities of fire due to tracking etc.

**9. Check for any water trace on electrical parts, harness, etc.**

☞ Replace the parts and /or wipe dry the water.

**10. Check the assembled status of the parts after servicing.**

☞ Check if the product is assembled in the same status as before servicing.

**11. Be sure not to pull on the power cord but to unplug it by holding the plug.**

☞ Beware of possibility of electric shock or fire when the power cord is damaged.

**12. Unplug the power plug from the outlet when the washing machine is not used.**

☞ Beware of possibility of electric shock or fire while lightning.

**13. Do not use or put flammable materials (including gasoline, alcohol, thinner etc) around the washing machine.**

☞ Flammable materials may spark an explosion or fire.

**14. Do not put a water containing bowl or wet laundry on the washing machine.**

☞ It may cause an electric shock or fire, or shorten the product life when its water penetrates into the washing machine.

**15. Do not install the washing machine in a place where it is exposed to snow or rain etc.**

☞ It may cause an electric shock or fire and shorten the product life.

**16. Do not press control buttons with pointed objects such as pins, needles, etc.**

☞ It may cause an electric shock or other problems.

**17. Check the washing machine is leveled horizontally on the floor and is installed properly.**

☞ Vibration may shorten the product life.

**18. Make sure to use connectors when connecting wires.**

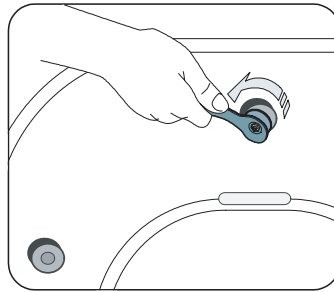
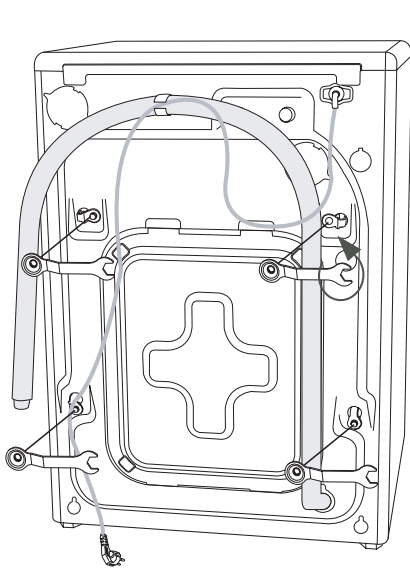
☞ If wires are connected without connectors, it may cause a tracking fire.

**19. When the washing machine is to be laid down for servicing, put a pad on the floor and lay the product on its side slowly.**

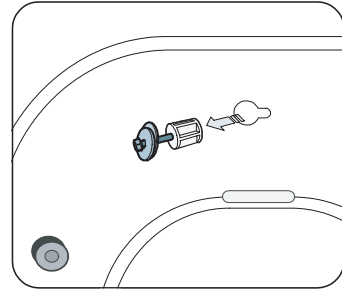
☞ If the wash machine is laid on its front, internal components may be damaged by the tub.

## 1-2. Precautions upon Installation

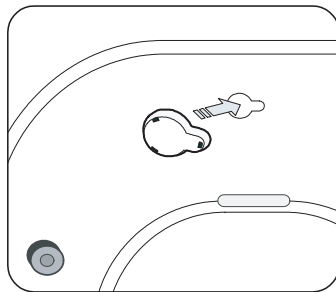
### ■ How to Remove Shipping Bolts



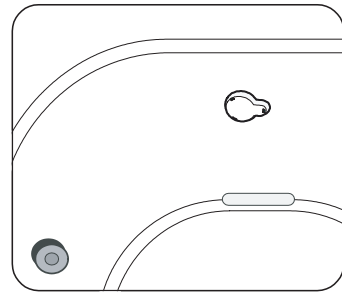
1. Remove the screws by using the supplied spanner.



2. Remove the shipping bolts from the back of the unit.

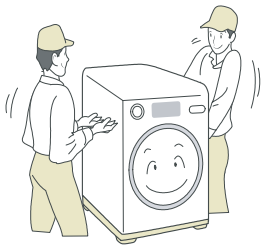


3. Fill the holes with the supplied plastic caps.

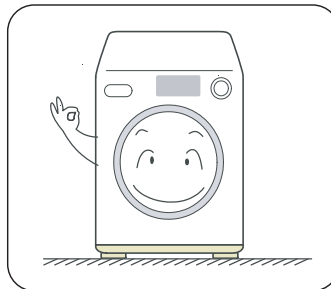


4. Keep the shipping bolts and screws for future use.

### ■ Precautions before Installation



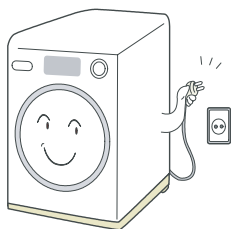
The unit is quite heavy. So, make sure to have 2 or more personnel move it.



Make sure that the unit stands on a firm and leveled floor.



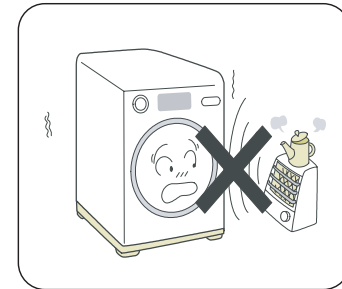
Keep it away from direct sunlight or high humidity, and install it in a place with good ventilation.



Install the unit at a place with a wall outlet easily accessible.



Keep the unit away from places in which it is freezing, especially in winter.



Keep the unit away from heat appliances such as a heater.



## 1-2. Precautions upon Installation

### ■ Grounding

- ▶ Make sure to ground the unit to prevent electric leakage or shock.

#### With a grounded receptacle

- ▶ It does not need an additional grounding.

### ■ Water Drainage

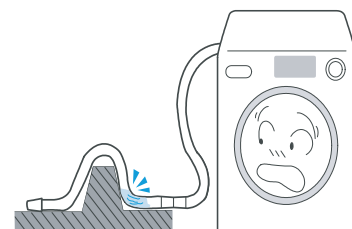
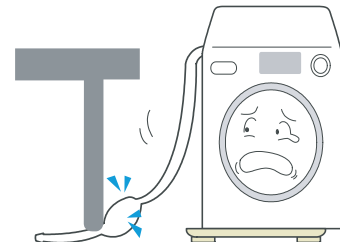
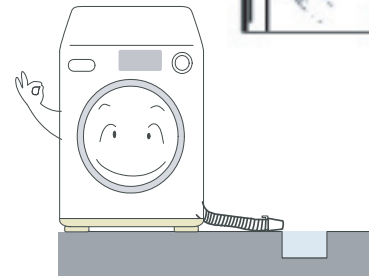
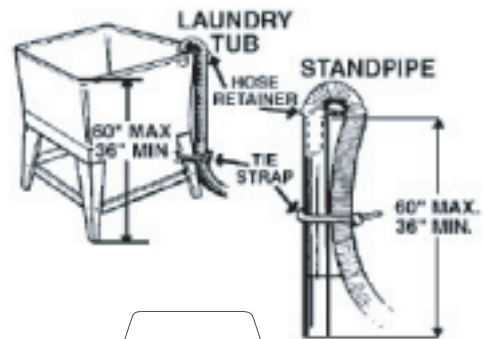
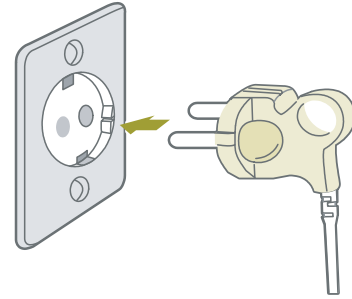
- ▶ Hook the drain hose over the Wash Basin or Laundry Tub or plug the end of the drain hose into the Standpipe
- Hook the drain hose over the Wash Basin or Laundry Tub or plug the end of the drain hose into the Standpipe
- The outlet end of the drain hose must be at least 60-90 cm above the base of the machine.

- ▶ Seal the drain pipe connections
- If not, it may cause water leakage.

- ▶ Prevent water from siphoning away
- If the end of the drain hose is put in water, it could siphon away water during washing.  
So, make sure that the end of the drain hose is not put in water.

Note: Caution must always be exercised to avoid collapsing or damaging the drain hose.

For best performance the drain hose should not be restricted in any way, through elbows, couplings or excessive lengths.

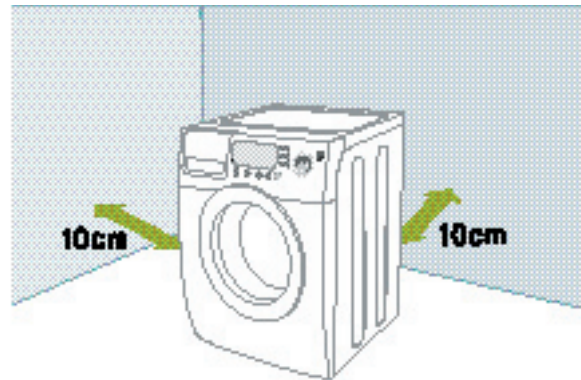


## 1-2. Precautions upon Installation

### ■ How to Level the Unit

1. Select an installation place.

- ▶ Install the unit with 10cm or more clearance from its surrounding walls.

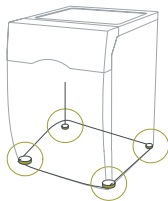


2. Check if the unit is leveled.

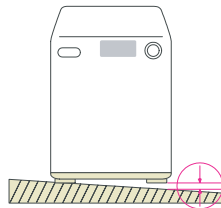
- ▶ If the unit wobbles, adjust the leveling legs.



3. Adjust the leveling legs.

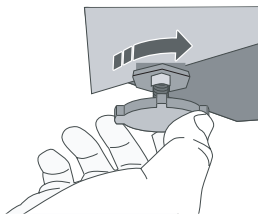


- ▶ The 4 leveling legs should touch the floor all together.

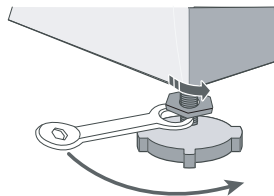


### When the unit is not leveled

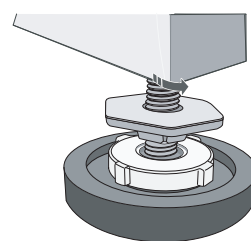
- ▶ Lift up the unit a little bit and adjust the shortest.
- ▶ Turn the leveling bolt counter clockwise as shown in the picture above (The leveling leg gets longer.)



- ▶ Slide your Washer into position.



- ▶ Level your Washer by turning the leveling legs in or out as necessary by hand. When your Washer is level, tighten the nuts using the wrench included with your Washer.



#### ※ CAUTION ※

Tighten the lock nut after the leveling.  
If not, it could generate vibrations & noises.

- ▶ If you install your washer on soft floor, you should place the rubber cup under adjustable leg. Before put rubber cup, please remove film for double-side tape attached on rubber cup.

## 2. PRODUCT SPECIFICATIONS

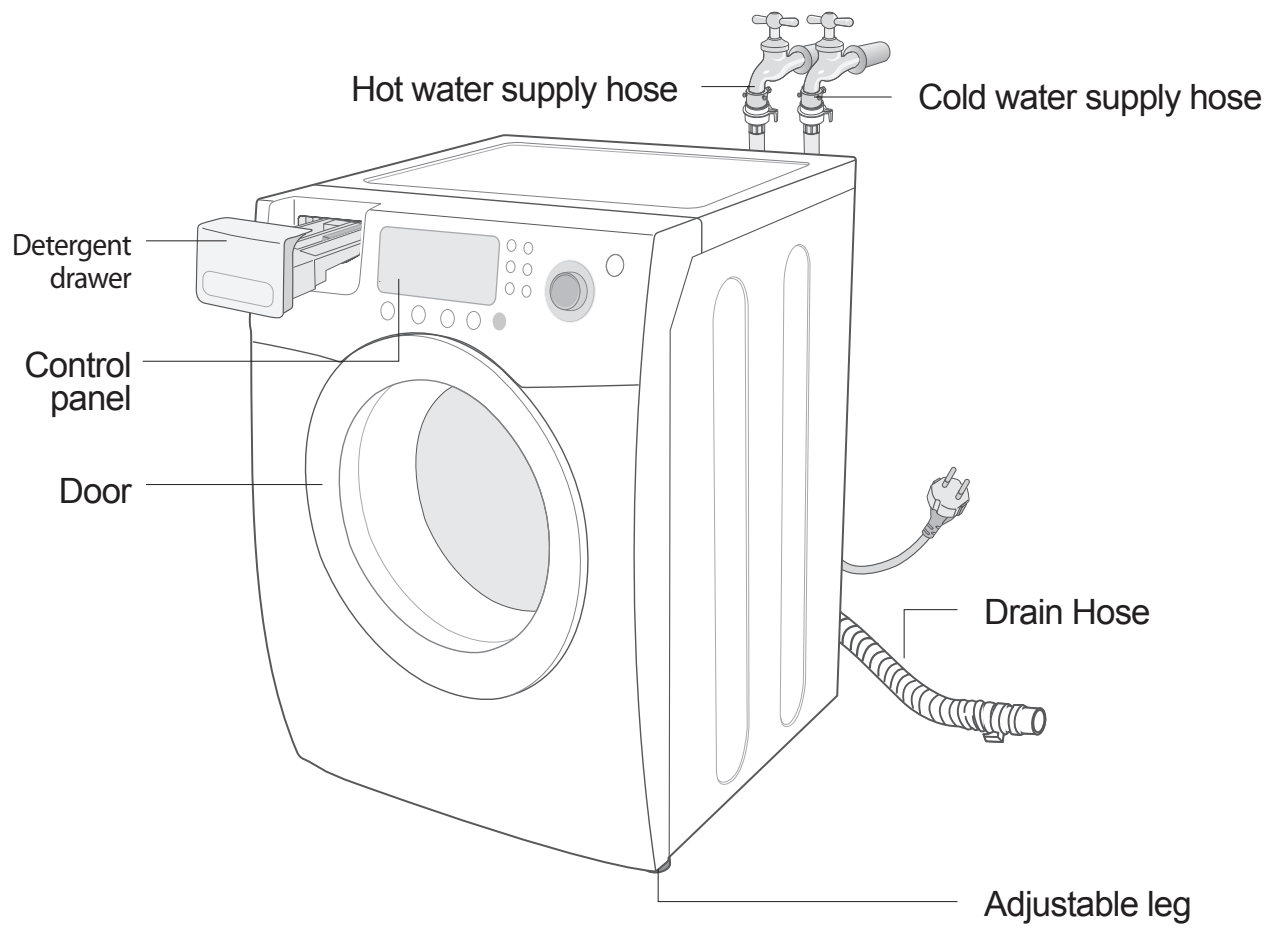
### 2-1. SPECIFICATIONS OF PRODUCT

TYPE	FRONT LOADING WASHER			
DIMENSION	Div	Inches (cm)	Div	Inches (cm)
	A. Height-Overall	38 (96.5)	C. Depth With Door Open 90°	49 (124.5)
	B. Width	27 (68.6)	D. Depth	30.25 (77.0)
WATER PRESSURE			50 kPa ~ 800 kPa	
WEIGHT			89.9 kg	
CAPACITY			3.29 Cu.ft	
POWER CONSUMPTION	WASHING		120V	226W
	WASHING AND HEATING		120V	997W
	SPIN		120V	379W
	DRAIN		120V	41W
SPIN REVOLUTION	WF326 *		1200rpm	
	WF316*		1100rpm	
	WF306 *		1000rpm	

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## 2-2. OVERVIEW OF THE WASHING MACHINE

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## 2-3. THE COMPARATIVE SPECIFICATIONS OF PRODUCT


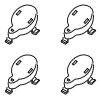
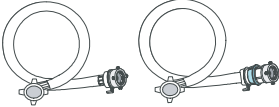
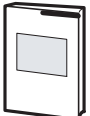
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Item	Samsung (WF316LAW)	Whirlpool (GHW9250M)	LG (WM2432HW)	Bosch (WFMC6400)
Capacity (Cu.ft)	3.29 (DOE)	3.21 (DOE)	3.22 (3.72)	2.93 (DOE)
Volume of Spinner (ℓ)	93.4	90	91	83
Motor	Direct Drive	3-Phase	Direct Drive	3-Phase
User Interface	LED	LED	LED	LCD (red)
Cycle Time	57	52	59	66
Wash Performance	1.01	1.00	0.99	1.02
Water Consumption/Cycle	48 Liter	56 Liter	49 Liter	61 Liter
Energy Consumption (W/O Heater Wh/Cycle)	128	105	114	189
RPM	1,100	1,100	1,200	1,200
Noise	57 dB	59 dB	66 dB	62 dB

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## 2-4. OPTION SPECIFICATIONS

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Item	Item Name	CODE.NO	Remark
	SPANNER	DC60-4014 6A	
	HOLE COVER	DC61-10688A	
	HOSE DRAIN	DC97-07126A for HOT DC97-07127A for COLD	
	MANUAL-BOOK	DC68-02291A	

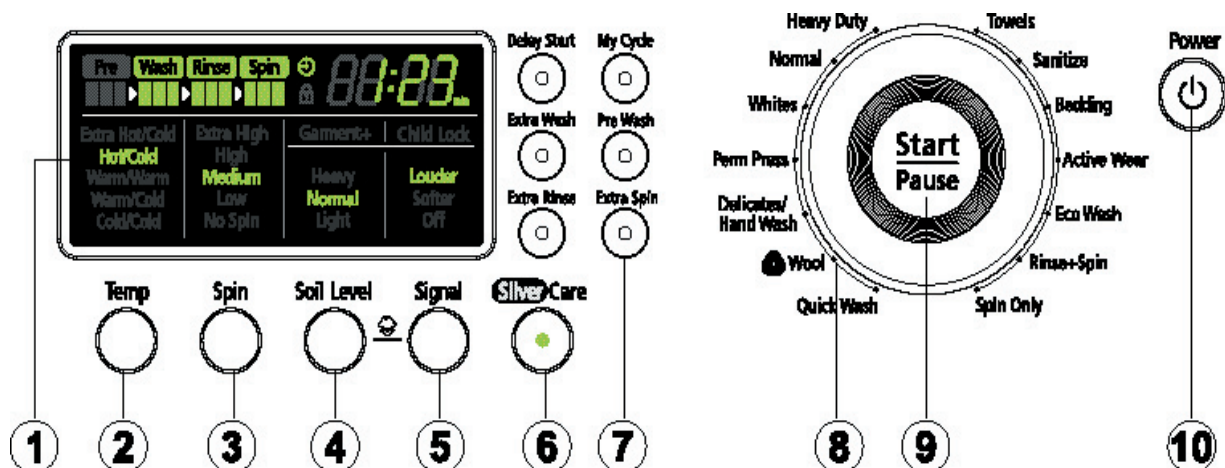
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## **Memo**

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## 3. OPERATING INSTALLATION AND INSTALLATION

### 3-1. OVERVIEW OF THE CONTROL PANEL



1. Digital graphic display  
Displays the remaining wash time, all wash information, and error messages.
2. Temperature selection button  
Press the button repeatedly to cycle through the different water temperature options.  
**Extra Hot/Cold** - Heavily soiled, colorfast items. Only available with the Sanitize cycle.  
**Hot/Cold** - Whites and heavily soiled, colorfast items.  
**Warm/Warm** - Colorfast items. When warm rinse is selected, only the final rinse will be warm. The other rinses will be cold to conserve energy.  
**Warm/Cold** - Moderately soiled, colorfast items; most wrinkle-free items.  
**Cold/Cold** - Brightly colored, very lightly soiled items; washable woolsens.
3. Spin selection button  
Press the button repeatedly to cycle through the different spin speed options.  
**Extra High** - Removes more water from loads during spin.  
NOTE: To minimize wrinkling of wrinkle-free and no-iron fabrics, DO NOT use the Extra High spin option for these loads, nor overload your Washer.  
**High** - Use for underwear, t-shirts, jeans and sturdy cottons.  
**Medium** - Use for jeans, wrinkle-free or wash-and-wear items and synthetics.  
**Low** - Use for delicate items needing a slow spin speed because of fabric and construction.  
**No Spin** - Drains your Washer without spinning. Use for extremely delicate items that cannot tolerate any spin.
4. Soil Level selection button  
Press the button to select the Soil Level/washing time.  
**Heavy** - For heavily soiled loads.  
**Normal** - For moderately soiled loads. This setting will be appropriate for most loads.  
**Light** - For lightly soiled loads.
5. Signal selection button  
Press the button to increase or decrease the end of cycle signal volume or turn off the signal.
6. SilverCare button  
Silver ions are added during the wash and rinse cycles to maximize the sanitizing and antibiotic effects.



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## 3-1. OVERVIEW OF THE CONTROL PANEL

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### 7. Select Cycle Option

**Delay Start** - Any cycle can be delayed for up to 12, 19 or 24 hours (select models) in one-hour increments. Displayed hour indicates the time at which the wash will be finished.

**Extra Wash** - Add additional time to the wash for better stain removal.

**Extra Rinse** - Add an additional rinse at the end of the cycle to more thoroughly remove laundry additives and perfumes.

**Extra Spin** - Add additional time to remove more water from loads

**My Cycle** - Choose your favorite cycle including temperature, spin, soil level, option, etc.

**Pre Wash** - Add detergent to the Pre Wash selection of the detergent compartment. Washer fills with cold water and detergent, tumbles, then drains and advances to the selected wash cycle. Some cycles cannot be selected with this option.\*

\* You can't select PreWash option in Delicate/Hand Wash, Wool, Quick Wash and Active Wear cycles.

### 8. Cycle Selector

Select the appropriate cycle for the type of load.

This will determine the tumble pattern and spin speed for the cycle.

NOTE: To minimize wrinkling of loads, select the Perm Press cycle.

**Heavy Duty** - For sturdy, colorfast fabrics and heavily soiled garments.

**Normal** - For most fabrics including cottons, linens, and normally soiled garments.

**Whites** - For white fabrics with or without bleach.

**Perm Press** - For wash-and-wear, synthetic fabrics, and lightly to normally soiled garments.

**Delicates/Hand Wash** - For sheer fabrics, bras, lingerie silk, and other handwash-only fabrics. For best results, use liquid detergent.

**Wool** - For machine-washable wool. Loads should be under 8 pounds.



The wool wash cycle of this machine has been approved by Woolmark for the washing of machine washable Woolmark products provided that the products are washed according to the instructions on the garment label and those issued by the manufacturer of this washing machine, M0509.

**Quick Wash** - For lightly soiled or wrinkled garments needed quickly.

**Towels** - For bath towels and washcloths. Do not load too many towels because they absorb lots of water.

**Sanitize** - For heavily soiled, colorfast garments. This cycle heats the water to 150°F to eliminate bacteria.

NOTE: If Pause is selected during the heating portion of the Sanitize Cycle, your Washer door will remain locked for your safety.

**Bedding** - For bulky items such as blankets and sheets.

**Active Wear** - For washable sportswear.

**Eco Wash** - For geographic areas where energy and water conservation is needed.

**Rinse + Spin** - Use for loads that need rinsing only or to add rinse-added fabric softener to a load.

**Spin Only** - Provides a spin to remove more water from the load.

### 9. Start/Pause selection button

Press to pause and restart programs.

### 10. Power button

Press once to turn your Washer on, press again to turn your Washer off. If your Washer is left on for more than 10 minutes without any buttons being touched, the power automatically turns off.

NOTE: Cycles and options vary by model. Refer to cycle chart in Appendix.

## 3-2. PROGRAMME CHART

326LAW, 326LAS

	Functions													Options						Time			
	Temp					Spin					Soil Level			Delay Start	Extra Wash	Extra Rinse	My Cycle	Pre Wash	Extra Spin		Silver Care		
	EH/C	H/C	W/W	W/C	C/C	EH	H	M	L	NS	H	N	L										
Heavy Duty		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	90	
Normal		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	53
Whites		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	60
Perm Press			√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	45
Delicates/Hand Wash			√	√	√				√	√	√	√	√	√	√	√	√					√	39
Wool					√				√	√		√		√		√							57
Quick Wash		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√					√	33
Towels		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	64
Sanitize	√					√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	110
Bedding			√	√	√			√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	69
Active Wear			√	√	√		√	√	√	√	√	√	√	√	√	√	√					√	49
Eco Wash		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	45
Rinse + Spin					√	√	√	√	√	√				√		√	√				√	√	18
Spin Only						√	√	√	√	√				√			√						9

306LAW

	Functions												Options				Time							
	Temp				Spin				Soil Level				Delay Start	Extra Wash	Extra Rinse	Silver Care								
	H/C	W/W	W/C	C/C	H	M	L	NS	H	N	L													
Heavy Duty	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	65	
Normal	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	53
Whites	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	60
Perm Press		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	45
Delicates/Hand Wash		√	√	√				√	√	√	√	√	√	√	√	√					√	√	39	
Wool				√				√	√		√		√		√								57	
Quick Wash	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√					√	√	33	
Towels	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	64
Rinse + Spin				√	√	√	√	√	√					√			√	√			√	√	18	

### 3-2. PROGRAMME CHART

316LAW, 316BAW, 316BAC

	Functions													Options					Time	
	Temp					Spin					Soil Level			Delay Start	Extra Wash	Extra Rinse	My Cycle	Pre Wash		Silver Care
	EH/C	H/C	W/W	W/C	C/C	EH	H	M	L	NS	H	N	L							
<b>Heavy Duty</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	90
<b>Normal</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	53
<b>Whites</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	60
<b>Perm Press</b>			√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√	45
<b>Delica-tes/ Hand Wash</b>			√	√	√				√	√	√	√	√	√	√	√	√	√	√	39
<b>Wool</b>					√				√	√		√		√		√				57
<b>Quick Wash</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	33
<b>Towels</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	64
<b>Sani-tize</b>	√					√	√	√	√	√	√	√	√	√	√	√	√	√	√	110
<b>Bed-ding</b>			√	√	√			√	√	√	√	√	√	√	√	√	√	√	√	69
<b>Rinse + Spin</b>					√	√	√	√	√					√		√			√	18
<b>Spin Only</b>						√	√	√	√	√				√						9

306BHW

	Functions												Options				Time			
	Temp					Spin					Soil Level			Delay Start	Extra Wash	Extra Rinse		Silver Care		
	EH/C	H/C	W/W	W/C	C/C	H	M	L	NS	H	N	L								
<b>Heavy Duty</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	65
<b>Normal</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	53
<b>Whites</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	60
<b>Perm Press</b>			√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	45
<b>Delicates/ Hand Wash</b>			√	√	√			√	√	√	√	√	√	√	√	√	√	√	√	39
<b>Wool</b>					√			√	√		√		√		√					57
<b>Quick Wash</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	33
<b>Towels</b>		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	64
<b>Sanitize</b>	√					√	√	√	√	√	√	√	√	√	√	√	√	√	√	110
<b>Bedding</b>			√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√	69
<b>Rinse + Spin</b>					√	√	√	√	√					√		√			√	18
<b>Spin Only</b>						√	√	√	√					√						9

---

## 3-3. MAIN FUNCTION

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### CHILD LOCK

A function that prevents children from playing with your Washer.

If you want to activate/deactivate the Child Lock function, press the **Soil Level** and **Signal** buttons at the same time for 3 seconds.

#### How It Works:

1. Child Lock can be activated while your Washer is running.
2. Once you activate Child Lock, all controls (except for the Power button) will be locked until you deactivate Child Lock.
3. The Child Lock button will be lit while it is in effect.  
**Note:** When buttons, other than the Power button, do not respond, please check if the Child Lock button is on.

### GARMENT +

You can add or take laundry items even after the wash has started, as long as the Garment+ light is on. Pushing the Start/Pause button unlocks the door, unless the water is too hot or if there is too much water in your Washer. If you are able to unlock the door and wish to continue the wash cycle, close the door and press the Start/Pause button.

### MY CYCLE

Allows you to activate your custom wash (temperature, spin, soil level, etc.) with one-button convenience.

By pushing the My Cycle button, you activate the settings used during the last My Cycle mode. The My Cycle light will indicate activation.

#### You can select all options as follows in My Cycle mode.

1. Select cycle using Cycle Selector dial.
2. After cycle selection, set each option.  
**Note:** At this time, the option will follow as per each cycle's default option selection.

Then you can start My Cycle by pushing the Start/Pause button in My Cycle mode.

The cycle and options you select will be displayed next time you choose My Cycle.

---

### 3-3. MAIN FUNCTION

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#### FOR SILVERCARE WASHING

Silver ions are added during the wash and rinse cycles to maximize the sanitizing and antibiotic effects, treating fabrics with a microscopic coating protection that kills more than 650 kinds of bacteria.

1. Open the door, put in the clothes and close the door again.
2. Press the Power button.
3. Select a Cycle by turning the Cycle Selection dial.
4. Press SilverCare button.
5. Add detergent in the dispenser tray for main washing, and add fabric softener up to the marked line.
  - : For Pre Wash, put a supplementary detergent in the dispenser.
  - SilverCare: If it is used together with fabric softener, its effect may be decreased.
6. Press Start/Pause button.
  - : Automatically selects optimal washing conditions by sensing the laundry's weight.

**Note:**

FOR HOME USE ONLY– COMMERCIAL USERS SHOULD NOTIFY THEIR LOCAL WASTE TREATMENT AUTHORITIES BEFORE USE

You can find # of times you used SilverCare option by pushing signal and SilverCare button.

LU3 :less than 1000 times

LU2 :between 1000 to 2000 times

LU1 :between 2000 to 2999 times

LU0 :over 2999 times

You should replace the silver kit when it display "LU0". Contact 1-800-SAMSUNG.

**Note:**

For some model which has no heater if you choose SilverCare, Temp will be fixed to Cold/Cold. If you change Temp selection, SilverCare will be canceled.

### 3-4. TECHNICAL POINT

#### 1) Motor on/off time at each course

unit:sec

Course	Washing				Motor r.p.m
	Cw	Off	Ccw	Off	
Heavy Duty	13	4	13	4	52
Normal	12	8	12	8	50
Whites	7	8	7	8	40
Perm Press	5	10	5	10	40
Delicate/Hand wash	2	48	2	48	50
Wool	2	58	2	58	50
Quick Wash	12	8	12	8	50
Towels	10	10	10	10	50
Sanitize	8	12	8	12	45
Bedding	10	10	10	10	45
Rinse + Spin	5	10	5	10	40

#### 2) Final dehydrating r.p.m at each course

unit:rpm

Course	Model
	<b>WF316L</b>
Heavy Duty	1200
Normal	1200
Whites	1200
Perm Press	800
Delicate/Hand wash	800
Wool	400
Quick Wash	1200
Towels	400
Sanitize	1200
Bedding	1200
Rinse + Spin	800
Spin Only	1200

### 3-4. TECHNICAL POINT

#### 3) The water supply control at each process cycle

Process cycle \ Model	WF316, WF306
Pre Washing	Cold water 5L/min
Washing	Cold water 10L/min + (Hot water 10L/min)
Rinse	Cold water 10L/min
Final rinse	Cold water 10L/min + Cold water 5L/min

#### 4) The water level data at each course

unit:Khz

Course \ Model	Default water level (kHz)	Supplementary water START (kHz)	Supplementary water End (kHz)
Heavy Duty	Washing	24.25	23.60
	Rinse	23.60	24.60
Normal	Washing	24.25	23.60
	Rinse	23.60	24.60
Whites	Washing	24.40	24.75
	Rinse	23.60	24.60
Perm Press	Washing	23.80	24.30
	Rinse	23.65	24.30
Delicate/Hand wash	Washing	23.45	24.00
	Rinse	23.15	24.00
Wool	Washing	24.40	24.70
	Rinse	23.80	24.70
Quick Wash	Washing	24.25	23.60
	Rinse	23.50	24.60
Towels	Washing	24.25	24.60
	Rinse	23.50	24.60
Sanitize	Washing	24.25	24.60
	Rinse	23.50	24.60
Bedding	Washing	24.25	24.60
	Rinse	23.50	24.60
Rinse + Spin	Washing	24.25	24.60
	Rinse	23.50	24.60

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# Memo

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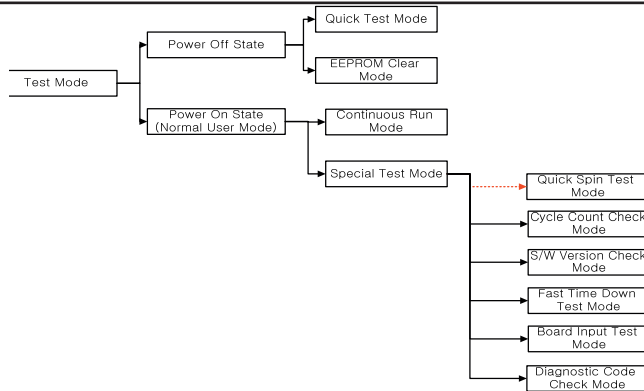


## 4. ALIGNMENT AND ADJUSTMENTS

### 4-1. GENERAL ERROR FUNCTION

NO	LED Display	Diagnostic Code	Description	Corrective Action
1	nd	1	The water level fails to drop below the Reset Water Level within 15 minutes.	Go to "Will Not Drain" Troubleshooting Section.
2	LO	2	Door fails to unlock after 3 attempts.	Go to "Will Not Unlock" Troubleshooting Section.
3	nF	3	When the filling continues for more than 16 minutes or there is no change of water level for 3 minutes	Go to "No Water Fill" Troubleshooting Section.
4	FL	4	Door fails to lock after 3 attempts.	Go to "Will Not Lock" Troubleshooting Section.
5	LE	8	Water Level Sensor Trouble. (When the input signal from the water level sensor is out of range, the unit will send out beeping sounds and halts the cycle.)	Go to "No Water Fill" Troubleshooting Section.
6	OE	E	A fault is detected in the water level sensor. Data (frequency) shows the water level is at or above the overflow water level. (When this condition is detected, the machine will automatically starts draining water until the water level falls below the overflow water level)	First check to see that all of water valves are not stuck. If water valves are OK, check water level sensor.
7	dc	10	Unbalance or cabinet bump is detected during final spin, which prevents the drum from spinning over 400 rpm. (Never exceeds 400 RPM due to unbalanced load)	Go to "Wet Clothes" Troubleshooting Section.
8	-	11	EEPROM Fault. (Program settings are being reset.)	Go to "EEPROM Clear Mode" If display shows "FAIL", Replace Machine Control Board.
9	E2	15	Jammed Key. (When key input signals are coming out for more than 30 seconds, it is regarded as a jam.)	Check all of keys. If a key is sensed to be pressed, all keys will do not respond.
10	dL	18	Door is detected as open when the motor is operating.	Check for loose wire connections. Go to "Quick Test Mode" and then do Door lock/Unlock Test and Motor Test.
11	dS	22	Door is detected as open while it is trying to lock the door.	Go to "Quick Test Mode" and then do Door Lock/Unlock Test
12	bE	25	Motor hall sensor signals come out without motor operation.	Replace Machine Control Board.
13	tE	29	Abnormal high/low temperature or resistance (Thermal sensor or PBA) resistance.	Go to "Board Input Test" and check Water Temperature. Check loose or pinched wires. Replace PCB or thermistor.
14	E3	2E	MICOM is attempting to drive the motor but is not getting any response signals from the hall sensor. Visual check shows motor is not running. (Locked, Defective Hall Sensor or Overload)	Evaluate wire harness for loose or unhooked connections. Go to "Quick Test Mode" and test Motor.
15	Sr	34	System Relay (Main Relay) Failure. (PCB does not notice the relay operation when there should be.)	Replace PCB.
16	Hr	36	Heater Relay Failure (No Heater Relay Check Signal)	Replace PCB
17	3E	3E	Over-current is detected. Motor won't turn. (IPM detects over-current.)	Evaluate wire harness for loose or unhooked connections. Go to "Quick Test Mode" to test Motor.
18	2E	91	Voltage for motor control bus is over specified limit.	Replace PCB
19	2E	92	Voltage for motor control bus is under specified limit.	Replace PCB
20	8E	8E	MEMS Sensor Failure. (No MEMS Sensor Check Signal)	Check MEMS PCB ,Main PCB & Wire-harness
21	7E	7E	Silver Care Kit (Silver Care PCB) Failure.	Check Silver Care PCB ,Main PCB & Wire-harness
22	PF	-	It occurs when there is power failure during the washing. ("PF" is not an error. It is to inform the user of power failure.)	-
23	SUdS	-	Suds is detected during the washing session. ("SUdS" is not an error. If the washer is in suds period, "SUdS" will light up instead of remaining time.)	Guide a user to reduce amount of detergent usage.

## 4-2. TEST MODE



### Test Mode

Each Test Mode for the Frontier Washer is as follows in the coming pages. The test modes indicated by the red arrows are the modes unable to get an access once the washing cycle has started due to safety reasons.

### 4-2-1. Quick Test Mode

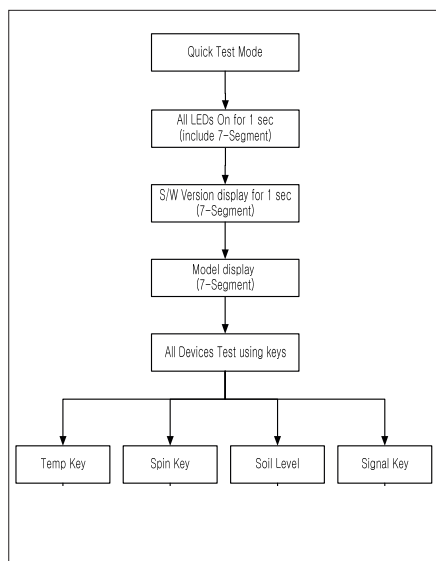


#### Definition of Quick Test Mode:

- Check operation of all LED's (Verify faulty LED).
- Check model and software version.
- Check different operating modes (e.g. water valve, motor, door, drain pump, etc.).

#### How to Enter:

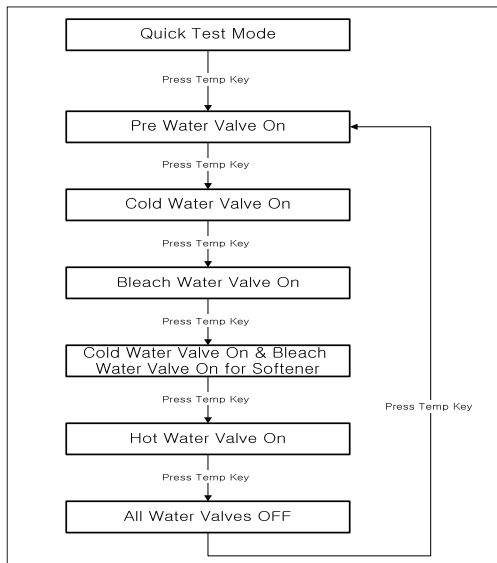
- Plug in and turn on the unit.
- Press Spin Key, Soil Level Key and Power Key at the same time.  
(Same for all Frontier models.)



#### Quick Test Mode:

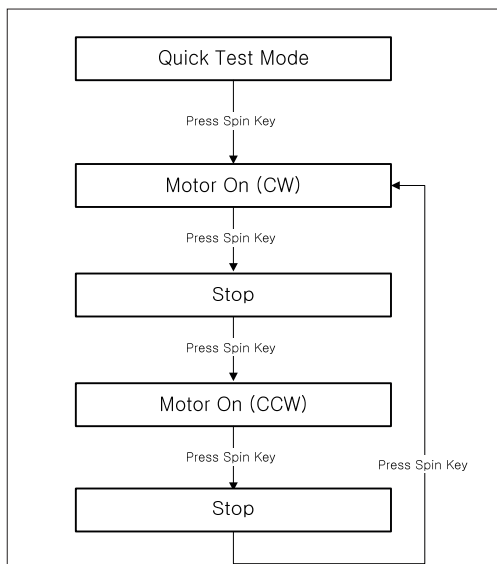
1. All LED's light up and it sends out Beep Sound when it enters into the Quick Test Mode. (Including 7-Segment)
2. Displays software version for a sec.  
(Ex. If S/W Version is 60, 7-Segment will display U060)
3. After displaying the software version, 7-Segment will display the following information for each model.
  - F1 : WF326LAW, WF326LAS
  - F2 : WF316LAW
  - F2b: WF316BAC, WF316BAW
  - F3 : WF306LAW
  - F8b: WF306BHW
  - EEEE : Model option Error (Need to replace PCB Assy.)
4. When model information is being displayed, press the following keys to test various components.
  - Temp Key : Water Valve Test
  - Spin Key : Motor Test
  - Soil Level Key : Door Lock/Unlock Test
  - Signal Key : Drain Pump Test.

## 4-2-1. Quick Test Mode



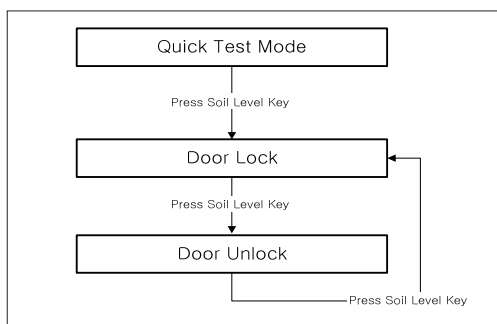
### Water Valve Test:

1. To enter the Water Valve Test, press the Temp Key while model information is being displayed during the Quick Test Mode.
2. Each time the Temp Key is pressed, it will cycle through the operations on the left flow chart. But, WF306LAW(F3) and WF306BHW(F8b) do not have the pre water valve. So, it will skip Pre Water Valve On and jump to Cold Water Valve On.
3. If the Temp Key is pressed during All Water Valve OFF, the machine will return to the beginning as shown in the flow chart.
4. The door needs to be secured for the Water Valve to operate. Therefore, the door lock will be on during the water valve operation.
5. If there is any problem with Water Valve, PCB Assy. or Wire Harness, the water valves could not operate. So, to make sure for the water valves to operate, check visually if water comes out with each Water Valve On mode.



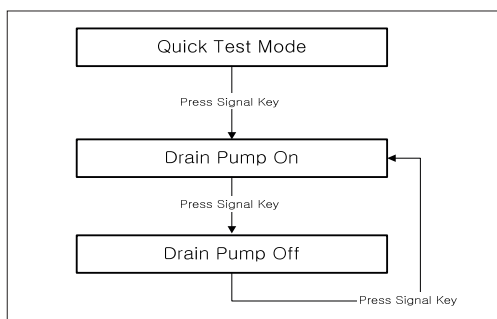
### Motor Test:

1. To enter the Motor Test, press the Spin Key while model information is being displayed during the Quick Test Mode.
2. Each time the Spin Key is pressed, it will cycle through the operations on the left flow chart.
3. The Door Lock will be on during the motor operation.
5. If there is any problem with Motor, PCB Assy. or Wire Harness, related error codes will be displayed.



### Door Lock/Unlock Test:

1. To check the Door Lock/Unlock operation, press the Soil Level Key while model information is being displayed during the Quick Test Mode.
2. Each time the Soil Level Key is pressed, it will cycle through the Door Lock/Unlock operations on the left flow chart.
3. If the Soil Level Key is pressed during Door Lock and Water Valve, Motor or Drain Pump operation, all of the operations will stop. And, when the Soil Level Key is pressed again, the door will be released.
4. If there is any problem with Door Switch, PCB Assy. or Wire Harness, related error codes will be displayed.



### Drain Pump Test:

1. To check the Drain Pump operation, press the Signal Key while model information is being displayed during the Quick Test Mode.
2. Each time the Signal Key is pressed, it will cycle through the operations on the left flow chart.
3. The Drain Pump operation is independent. Therefore, it will operate regardless of Door Lock/Unlock.
4. If there is any problem with Drain Pump, PCB Assy. or Wire Harness, the Drain Pump will not operate. So, its operation needs a visual inspection.

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## 4-2-2. EEPROM Reset Mode

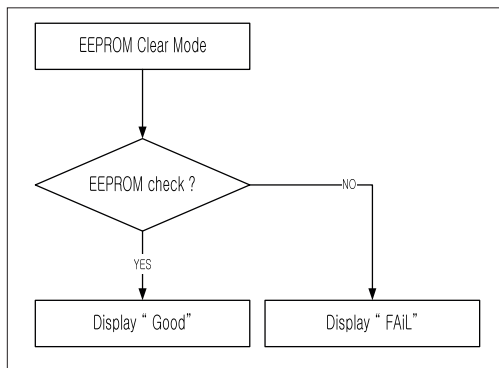
---

Definition of EEPROM Reset Mode:

- EEPROM initialization.
- All course/option settings are to be reset to default values after EEPROM initialization.
- When Service arises and it needs PCB replacement, EEPROM should be reset.

How to Enter:

- The unit needs to be on.
- Press Delay Start Key, Signal Key and Power Key at the same time.  
(Same for all Frontier models.)



EEPROM Reset Mode:

1. EEPROM can be reset once the user enters the EEPROM Clear Mode.
2. If there is any problem with EEPROM, 7-Segment will display "FAIL". "Good" will be displayed if everything is OK.
3. PCB assy. needs replacing if "FAIL" is displayed during EEPROM reset.
4. If PCB assy. is replaced for some reason, EEPROM needs resetting.
5. If problem occurs with Sticky Function, My Cycle and Power Failure Compensation, it may be due to EEPROM. Check EEPROM's condition at EEPROM Clear Mode.

---

## 4-2-3. Continuous Run Mode

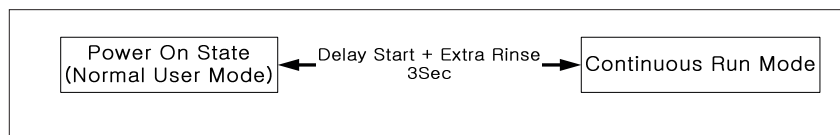
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Definition of Continuous Run Mode:

- Will continuously repeat the current cycle until the Continuous Run Mode is cancelled.

How to Enter:

- Press Delay Start Key and Extra Rinse Key together for 3 sec.  
(Same for all Frontier models.)



Continuous Run Mode:

1. Press Delay Start + Extra Rinse Key for 3 sec during Power On State (Normal User Mode).
2. Once in Continuous Run Mode, 7-Segment will blink "cc" and the remaining time in turns.
3. The Continuous Run Mode will repeat the previous cycle until continuous run mode is cancelled.
4. During Continuous Run Mode, press Delay Start + Extra Rinse Key for 3 seconds to return to normal user mode. 7-segment will no longer display "cc", but only display the remaining time.

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## 4-2-4. Special Test Mode

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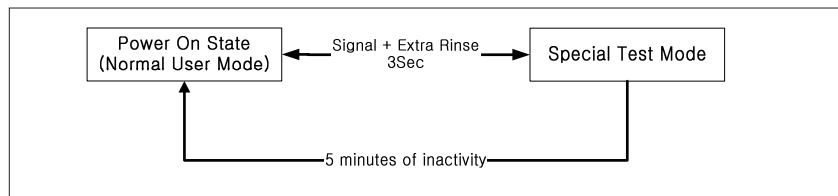
Definition of Special Test Mode:

- Special Test Mode enables service technicians to verify the operation of the washing machine and do troubleshooting.
- Special Test Mode can be entered during all washing cycle without interrupting the cycle except some of test modes.
- Various tests can be done with Special Test Mode. So, troubleshooting can be done based on the resulting diagnostic codes.

How to Enter:

- To enter the Special Test Mode, press the Signal and Extra Rinse Keys for 3 seconds or until the unit sends out beeping sounds. (same for all Frontier models.)

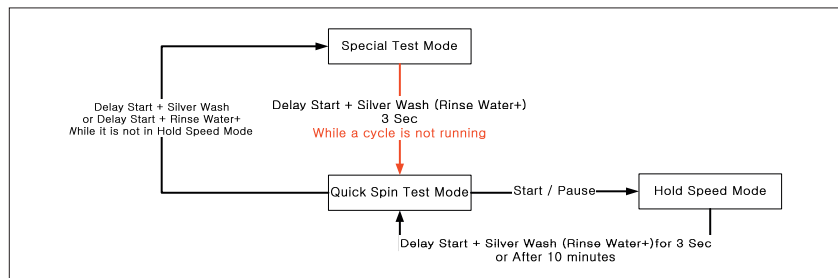
## 4-2-4. Special Test Mode



Special Test Mode:

1. The washer must be on to go into the Special Test Mode.
2. The motor speed will be displayed when started (It displays 0 when the motor does not spin).
3. The present state of the machine will not be changed.  
(i.e., the current cycle in progress will not be interrupted and only the display will change)
4. All LED's will be turned off except the "Door Lock" LED. It will continue to display the condition of the door lock.
5. To exit Special Test Mode, press Signal and Extra Rinse Keys for 3 second again, or Power Key.  
If no key is operated during Special Test Mode for 5 minutes, the machine will return to normal user mode.

## 4-2-5. Quick Spin Test Mode



Definition of Quick Spin Test Mode:

- Quick Spin Test Mode is to do Spin Check. (High RPM)

How to Enter:

- During Special Test Mode, press the Delay Start and Silver Wash Keys (Rinse Water + Key) for 3 seconds to enter Quick Spin Test Mode. (same for all Frontier models.)
- Cannot enter once the washing cycle has started.

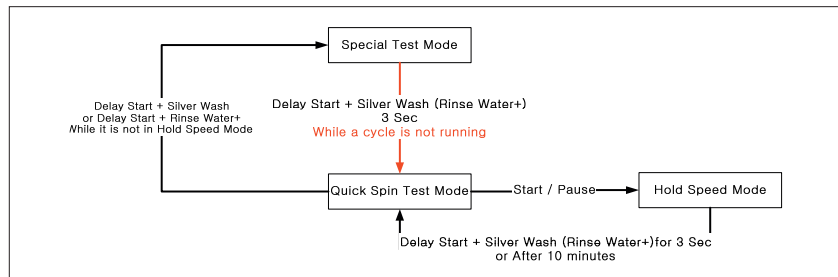
Quick Spin Test Mode:

As it enters into the Quick Spin Test Mode, it starts spinning and reaches to its maximum RPM. And then, it stays at its maximum speed for 2 minutes before it exits the Quick Spin Test Mode.

To hold Quick Spin Test Mode (entering Speed Hold Mode), press the Start/Pause button. If the Start/Pause button is pressed during Quick Spin Test Mode, it will stop accelerating and hold its spinning speed for 10 minutes before going back to Quick Spin Test Mode.

Also, to cancel the hold and allow Quick Spin Test Mode to continue, press the Delay Start and Silver Wash Keys together for 3 seconds.

## 4-2-6. Cycle Count Check Mode



Definition of Cycle Count Check Mode:

- Cycle Count Check Mode is to tally up the number of washings.

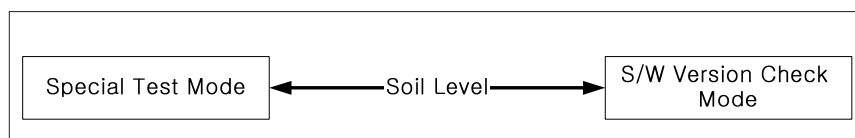
How to Enter:

- To enter the Cycle Count Check Mode, press the Signal Key during Special Test Mode.  
(same for all Frontier models.)

Cycle Count Check Mode:

1. Activate the Special Test Mode in advance.
2. When the Signal key is pressed, the total number of washings will light up and a signal LED will glow (Louder, Softer, Off LED).
3. The maximum number of cycles will be 2999.  
The counter will roll over to 0 and start counting again after 2999.
4. The counting will be carried out at the end of the normal cycle.  
(During Continuous Run Mode, it does not Do not count any cycle in Continuous Run Mode)
5. To exit the Cycle Count Check Mode, press the "Signal" key again.  
Then, it returns to the Special Test Mode with motor RPM illuminating.

## 4-2-7. S/W Version Check Mode



Definition of S/W Version Check Mode:

- S/W Version Check Mode is to bring up S/W Version information.

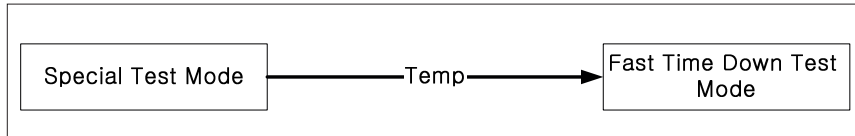
How to Enter:

- To enter the S/W Version Check Mode, press the Soil Level Key during Special Test Mode.  
(same for all Frontier models.)

S/W Version Check Mode:

1. Activate the Special Test Mode in advance.
2. Press the Soil Level Key to bring up its software Version  
Ex) Generate U005 at U005
3. To exit the S/W Version Check Mode, press the Soil Level S/W once again.  
Then, it returns to the Special Test Mode with motor RPM illuminating.

## 4-2-8. Fast Time Down Test Mode



Definition of Fast Time Down Test Mode:

- Fast Time Down Test Mode is to forward the program to the next cycle stage.

How to Enter:

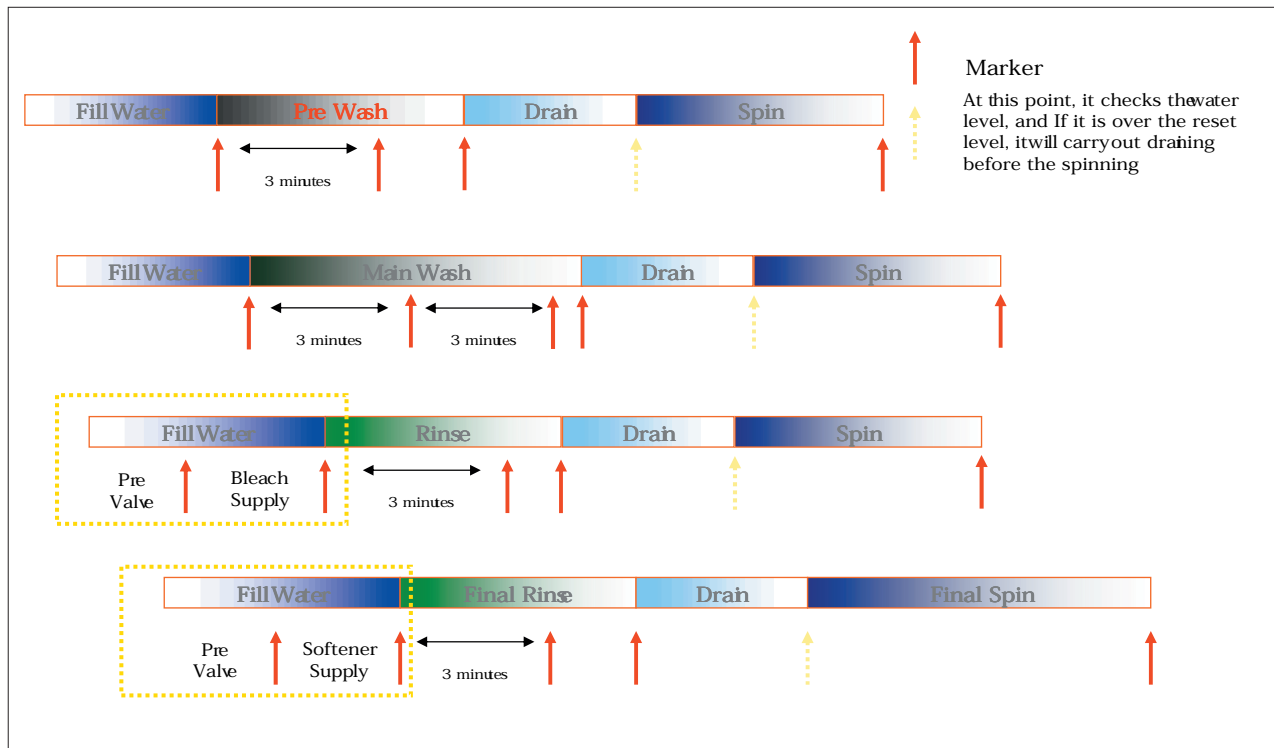
- To enter the Fast Time Down Test Mode, press the Temp key during Special Test Mode. (same for all Frontier models.)

Fast Time Down Test Mode:

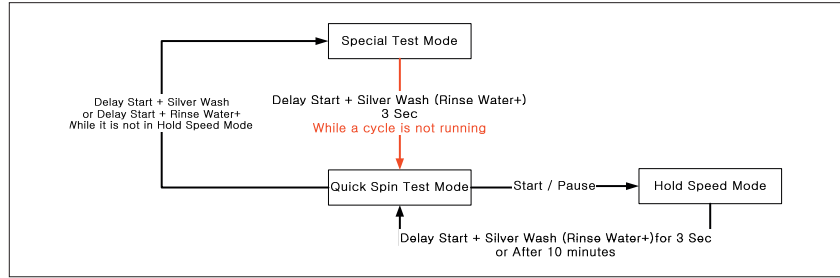
1. Activate the Special Test Mode in advance.
2. To forward the program to the next cycle stage, press the Temp key.

Each stage is located at key points of a complete cycle as follows:

- End of Each Fill (Beginning of Wash or Rinse Tumble Session)
- Beginning of Drain Session
- Beginning of Spin Session (Here, it checks the water level. So, if it is over the reset level, it carries out draining before the spinning.)
- Beginning of Fill Session
- Beginning of Bleach Fill
- Beginning of Fabric Softener Fill
- Every 3 minutes during Wash and Rinse Tumble Session



## 4-2-9. Board Input Test Mode



Definition of Board Input Test Mode:

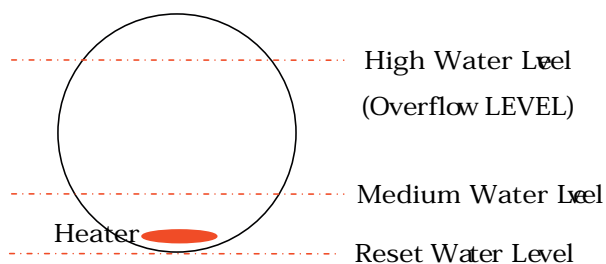
- Board Input Test Mode is to displays a specified input after a key press.

How to Enter:

- To enter the Board Input Test Mode, press the Extra Wash key during Special Test Mode.  
(same for all Frontier models.)

Board Input Test Mode:

1. Activate the Special Test Mode first.
2. Press the Extra Wash key to start Board Input Test.
3. Water Temperature Display in Celsius Dial the Rotary Cycle Selector to "Heavy Duty" and press the Start/Pause dial.
4. Water Temperature Display in Fahrenheit Dial the Rotary Cycle Selector to "Normal" and press the Start/Pause dial.
5. Door Position (Open/Close) Display Dial the Rotary Cycle Selector to "Whites" and press the Start/Pause dial: "OP" will illuminate if open, "CL" if closed.
6. Door Status (Lock/Unlock) Display Dial the Rotary Cycle Selector to "Perm Press" and press the Start/Pause dial: "UL" will illuminate if unlocked, "LO" if locked.
7. Overflow Water Level Display Dial the Rotary Cycle Selector to "Delicate/Hand Wash" and press the Start/Pause dial: "0" will illuminate if below level, "1" if above level (Overflow). The above water level is defined as the overflow water level.
8. Heater-On Water Level Display Dial the Rotary Cycle Selector to "Wool" and press the Start/Pause dial: "0" will illuminate if below level, "1" if above level (Heater-On). The Medium water level is defined as the level needed for the heater to turn on.
9. Reset Water Level Display Dial the Rotary Cycle Selector to "Quick Wash" and press the Start/Pause dial: "0" will illuminate if below level (Reset), "1" if above level.
10. Water Level Display (Frequency) Dial the Rotary Cycle Selector to "Towels" and press the Start/Pause dial: If it illuminates "2435", it indicates 24.35 kHz.
11. AG Kit Status Dial the Rotary Cycle Selector to "Rinse+Spin" and press the Start/Pause dial. Then, it will display the Ag Kit Status in 3 seconds: "-" if AG kit is operated properly. "7E" if AG kit is out of order (check wire harness & PCB)
12. MEMS Sensor Kit Status. Dial the Rotary Cycle Selector to "Spin Only" and press the Start/Pause dial. Then, it will display the MEMS Sensor Kit status after displaying "00" for 3 seconds: "-" if MEMS Sensor kit is operated properly. "8E" if MEMS Sensor kit is out of order (check wire harness & PCB)

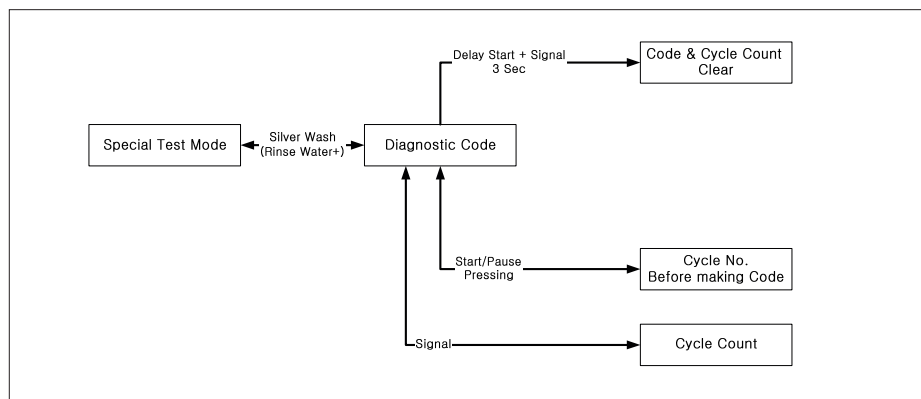




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## 4-2-10. Diagnostic Code Check Mode

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Definition of Diagnostic Code Check Mode:

- Diagnostic Code Check Mode is to bring up the stored diagnostic codes (reference codes for service technicians).

How to Enter:

- To enter the Diagnostic Code Check Mode with code "d" flashing, press the Silver Wash (Rinse Water +) during Special Test Mode. (same for all Frontier models.)

Board Input Test Mode:

1. Activate the Special Test Mode first.
2. Press the "Silver Wash (Rinse Water +)" key to start Diagnostic Code Check Mode with Code "d" flashing.
3. To cycle through the diagnostic codes (d1,d2,d3~d9), turn the Rotary Cycle Selector in one direction (either Clockwise or Counterclockwise).
4. Now, when turning the Rotary Selector Key in the same direction, it shows diagnostic codes from the latest (d1).
5. When turning it in the opposite direction, it shows the diagnostic codes in the reverse order.  
Ex) When it stops at d5 and turns backward, it shows from d4 down to "d".
6. EEPROM holds the codes up to 9 of them. So, when it goes beyond it, "-" and "d" will light up.  
Ex) "d" - d1~d9 - "-"
7. When there are only 6 codes stored in EEPROM, it will display "- -" after them.

Refer to Diagnostic Code.

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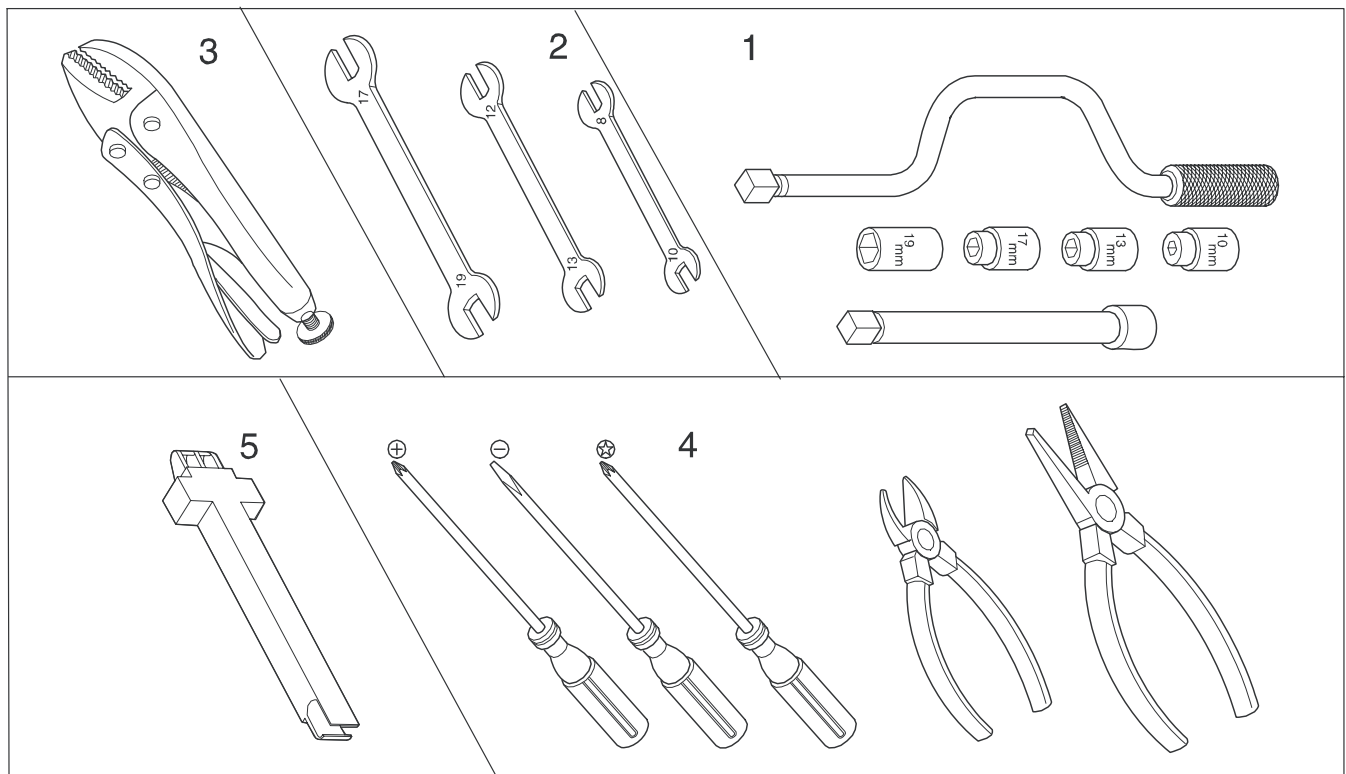
# Memo

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## 5. ASSEMBLY AND DISASSEMBLY


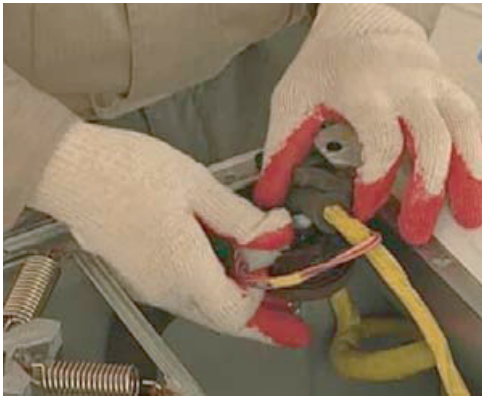
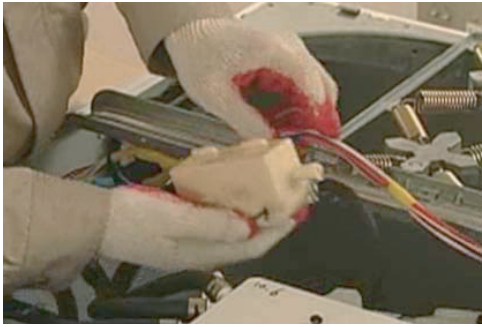
### 5-1. TOOLS FOR DISASSEMBLY AND ASSEMBLY

NO.	TOOL		
1	Box driver	10mm 13mm 19mm	Heater (1) Motor (1), Balance (5), 2 holes of each left and right of the shock absorber 1 Pulley hole
2	Double-ended spanner	10, 13,19mm	Replaceable for the box driver. Since the bolt runs idle when the box driver is used, use the box driver 17mm.
3	Vice pliers		Tool to protect the idle and abrasion of the bolt for the box driver.
4	Other(Driver, Nipper, Long nose)		General tools for the after service.
5	JIG for the Tub		1 (Disassemble and Assemble)

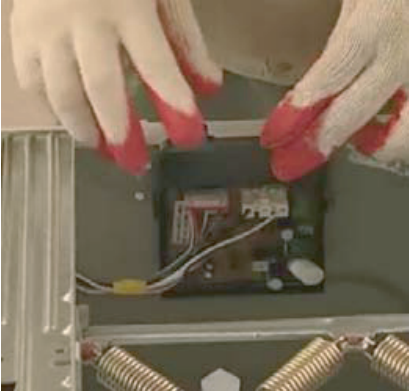

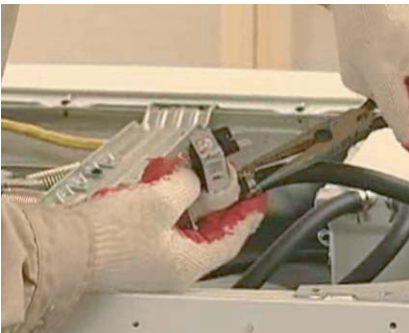
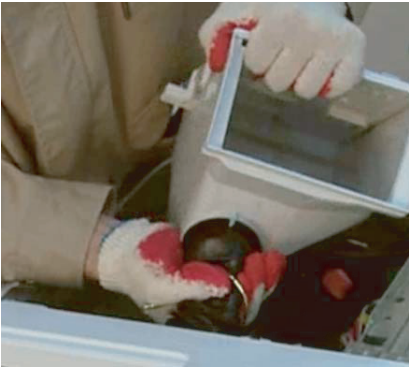


## 5-2. DISASSEMBLY





Warning! To avoid risk of electrical shock, personal injury or death, disconnect the power to the washing machine.

Part Name	Descriptive Picture	How To Do
<b>Top Cover</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove screws(2ea) at the back.</li> <li>3. Slide Top Cover back and lift it up.</li> </ol>
<b>Water Level Sensor</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover.</li> <li>3. Remove the screw(1ea).</li> <li>4. Disconnect the wire harness.</li> <li>5. Take out Pressure Hose.</li> </ol>
<b>Ag Kit</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover.</li> <li>3. Remove screws(2ea) from the rail.</li> <li>4. Disconnect the wire harness.</li> <li>4. Remove clamps and hoses.</li> </ol>


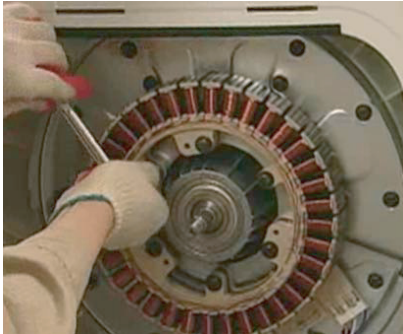

## 5-2. DISASSEMBLY

Part Name	Descriptive Picture	How To Do
<b>Ag PCB</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover.</li> <li>3. Flip open the PCB cover.</li> <li>4. Disconnect the wire harness.</li> <li>5. Remove screws (2ea) on the frame.</li> </ol>
<b>EMI Filter</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover.</li> <li>3. Remove the earth screw.</li> <li>3. Remove the acorn nut (13mm) and disconnect the wire harness.</li> </ol>
<b>Water Valve</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover.</li> <li>3. Remove two screws for each Single Hot and 3-Combo Cold Valve.</li> <li>4. Remove clamps and hoses.</li> </ol>
<b>Dispenser</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover.</li> <li>3. Remove Dispenser Drawer.</li> <li>4. Remove screws(3ea) on the top.</li> <li>5. Plug out all the connectors.</li> <li>6. Unscrew(6ea) PCB and separate it from Console.</li> </ol>


## 5-2. DISASSEMBLY

Part Name	Descriptive Picture	How To Do
<b>Console</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover.</li> <li>3. Remove Dispenser Drawer.</li> <li>4. Remove screws(3ea) on the top.</li> <li>5. Plug out all the connectors.</li> <li>6. Unscrew(6ea) PCB and separate it from Console.</li> </ol>
<b>Door</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove screws(2ea) and takeout Door Assy from Front Panel.</li> <li>3. Remove screws along the perimeter of Glass Retainer.</li> <li>4. Remove Glass Retainer.</li> <li>5. Remove Door Glass.</li> <li>6. Remove Hinge.</li> <li>7. Remove Outer Window Panel.</li> </ol>
<b>Front Panel</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Top Cover, Dispenser, Console and Door.</li> <li>4. Snap up the boot at 6 o'clock and pull out the clamp spring.</li> <li>5. Pull the boot from the lip formed into the front opening.</li> <li>6. Remove screws(2ea) on the bottom.</li> <li>7. Remove screws(4ea) on the top.</li> <li>8. Plug out the connectors to Door Lock.</li> <li>9. Lift out Front Panel.</li> </ol>
<b>Boot</b>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Knock the unit down to Front Panel (included).</li> <li>3. Unscrew the boot clamp at 12 o'clock.</li> <li>4. Pull out the boot.</li> </ol>

## 5-2. DISASSEMBLY

Part Name	Descriptive Picture	How To Do
<p><b>Heater</b></p>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Knock the unit down to Front Panel (included).</li> <li>3. Remove the wire connectors.</li> <li>4. Remove the nut (10mm) in the center and take out Heater.</li> </ol>
<p><b>Motor</b></p>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. After removing screws(2ea) on Back Cover, take out Back Cover by sliding it up.</li> <li>4. Rotate Motor Cover to locate a slot in Stator. Insert a Phillips screwdriver into the slot to lock Stator.</li> <li>5. Remove the nut (19mm).</li> <li>6. Grab Motor Cover at 3 and 9 o'clock and pull it out.</li> <li>7. Remove the bolts (6ea, 10mm) securing Stator Coil to Tub.</li> <li>8. Remove the wire connectors.</li> </ol>
<p><b>Drain Pump</b></p>		<ol style="list-style-type: none"> <li>1. Unplug the unit.</li> <li>2. Remove Back Cover.</li> <li>3. Remove the wire connector.</li> <li>4. Remove Clamp and Drain Hose.</li> <li>5. Remove Clamp and Pump Hose.</li> <li>6. Remove the bolts (3ea, 13mm) securing Drain Pump to Cabinet Bottom.</li> <li>7. Remove the screw securing Drain Pump to the support bracket. Twist Drain Pump clockwise to remove.</li> </ol> <p>* Make sure to put an empty container under Drain Pump to hold water inside.</p>

## 5-2. DISASSEMBLY

Part Name	Descriptive Picture	How To Do
<p><b>Outer Tub and Spinner(1)</b></p>		<ol style="list-style-type: none"> <li>1. After the above knock-down to Drain Pump, do the following.</li> <li>2. Remove screws holding the wire harness.</li> <li>3. Remove the bolts (2ea,13mm) securing Rear Struts to Cabinet Bottom.</li> <li>4. Swing Struts up against Tub to make it easy to remove Tub Assy.</li> <li>5. Remove bolts (2ea each side, 13mm) securing Counter Weights.</li> <li>6. Remove the screw holding the wire harness.</li> <li>7. Remove bolts (2ea each side, 13mm) securing Front Struts to Cabinet Bottom and swing Struts up against Tub..</li> <li>8. Loop the wire harness and Water Pressure Hose out of its retaining holders.</li> <li>9. Remove screws (7ea) securing Rail Frame and take it off.</li> <li>10. Remove Clamp and Vent Hose.</li> <li>11. Loop out Suspension Spring by lifting it up (each side).</li> <li>12. Take out Tub and put it on block supports (4" wood blocks or their equivalents) to prevent shaft damage.</li> <li>13. Remove screws (10mm) around the perimeter of the tub.</li> <li>14. Separate Front and Back Tubs from each other.</li> <li>15. Take out Spinner Drum.</li> <li>16. Remove screws to disassemble Baffles.</li> </ol> <p>* When assembling, make sure that Front and Back Tubs are fastened up tightly. If not, it will cause water leakage.</p>



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**Memo**

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## 6. TROUBLE SHOOTING

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### 6-1. TROUBLE DIAGNOSIS

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- As the micom wash machine is configured of the complicate structure, there might be the service call.

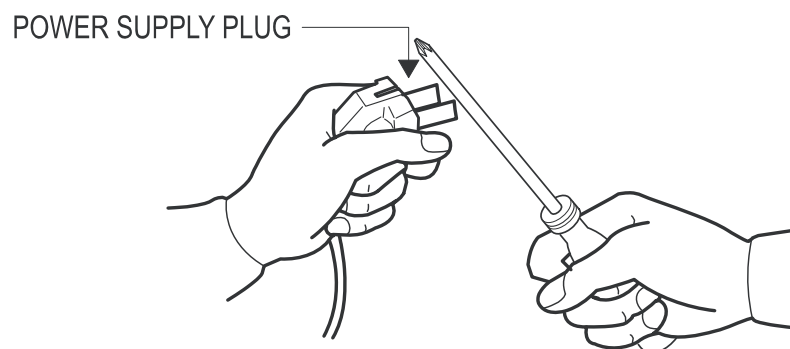
Below information is prepared for exact trouble diagnosis and suitable repair guide.

### Caution for the Repair and Replacement

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Please follow below instruction for the trouble diagnosis and parts replacement.

- 1) As some electronic components are damaged by the charged static electricity from the resin part of wash machine or the human body, prepare the human body earth or remove the potential difference of the human body and wash machine by contacting the power supply plug when the work contacting to PCB is executed.



- 2) Since AC220~240V is applied to the triac T1 and T2 on P.C.B, the electric shock may occur by touching and be careful that the strong and weak electricity are mixed.
- 3) As the P.C.B assembly is designed for no trouble, do not replace the P.C.B assembly by the wrong diagnosis and follow the procedure of the trouble diagnosis when the micom is not operated normally.

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## 6-1. TROUBLE DIAGNOSIS

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### WARNING

To avoid risk of electrical shock, personal injury or death, disconnect power to unit before servicing, unless testing requires power.

### Will Not Start

- Plug the unit into the wall outlet. Check for proper voltage.
- Check fuse or reset circuit breaker.
- Push any key to turn on the washer and press the Start/Pause key to run the washer.
- Close door and push the Start/Pause key to run the washer.
- Check if washer is in a pause, soak or suds process.  
Wait briefly and it may start. (If the washer is in suds period, Suds will light up instead of remaining time.)
- Check for restricted drain system.  
(If there is electrical problem in drain system, "nd" error will occur after 15 minutes.)
- Check Water Supply.
- Check the line or water valve screen filter.
- Check if PCB connectors are assembled properly.
- Check if CN5, CN6 terminals on PCB are in good condition.  
(Refer to PCB Connector Check.)
- Replace PCB.

### Leaking

- Start a normal cycle with the drum empty and fill her up to check its tumbling.
- Perform Quick Test Mode or Quick Spin Test  
(Carry it out without laundry in the unit.)
- Check for loose connections at PCB, Water Level Sensor, Motor, Hall Sensor Wire Harness, etc. (Refer to the Component Testing Procedure)
- Check motor windings resistance.  
(CN9 1 & 3 = 11.6 ohms ( $\pm 7\%$  20°C basis),  
CN9 1 & 2 = 11.6 ohms ( $\pm 7\%$  20°C basis),  
CN9 2 & 3 = 11.6 ohms ( $\pm 7\%$  20°C/68°F basis))
- If it doesn't tumble after all of the above tests, change PCB. When the problem persists, change the motor.

### No Tumble

- Start normal cycle with an empty machine and allow a fill to check tumble.
- Perform Quick Spin Test. (Before test, make sure that the tumbler is empty.)
- Check for loose connections at Machine Control Board, Pressure Switch, Motor, Tach Harness and Motor Control. (Refer to the component testing procedure)
- Check motor windings resistance.  
CN9 pins 1 & 3 = 11.6ohms  $\pm 7\%$ ,  
Pins 1 & 2 = 11.6ohms  $\pm 7\%$ ,  
Pins 2 & 3 = 11.6 ohms  $\pm 7\%$
- Faulty Main Control Board.
- Faulty motor.

### Will Not Spin

- Make sure to close the door completely.
- Check for water left inside the washer. If so, go to "Will Not Drain".
- Perform Quick Test Mode or Quick Spin Test.  
Does the washer spin? (Before the test, empty the unit inside.)  
If it doesn't tumble after the above, change PCB.  
When the problem persists, change the motor.
- Perform Quick Test Mode or Quick Spin Test.  
Does the washer spin? If it does, Check Possible unbalanced load scenario in normal mode.
- Check for loose connections at PCB, Water Level Sensor, Motor, Hall Sensor Wire Harness. (CN8,CN9,CN3)  
(Refer to the Component Testing Procedure.)
- Check motor windings resistance.  
(CN9 Pin1&3 = 11.6 ohms (at  $\pm 7\%$  20°C/68°F),  
Pin1&2 = 11.6ohms (at  $\pm 7\%$  20°C),  
Pin2&3 = 11.6 ohms (at  $\pm 7\%$  20°C))

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## 6-1. TROUBLE DIAGNOSIS

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### No Water Fill

- Perform Quick Test Mode.  
Check all of Water Valves visually.  
(Pre Wash Valve, Cold Water Valve, Bleach Water Valve, Softener dispenses using Cold & Bleach Water Valve, and Hot Water Valve.)
- Check if water taps are turned on fully.
- Check Water Valves and Water Level Sensor (Refer to PCB Connector Check)
- Check if there is any kink in inlet hoses.
- Check if inlet screens are clogged up.
- Check if water has enough pressure. If so, find out its contributors.
- Check if there is any frozen area in the unit (Drain Hose, etc)
- Measure the resistance of Water Valve Coil.  
(It should read 1.18K ohms. Check Pin#1 of CN5 and PIN#1,2,3,4 of CN10)
- Check Pressure S/W and PCB for loose connections.  
(Refer to PCB Connector Check.)

### Tub Full of Suds

- Go to “Will Not Drain” and “Will Not Spin” and check the draining.
- Check PCB and Drain Pump for any loose wire connection.
- Perform Quick Test Mode or Board Output Test to drain.
- Use HE (High-Efficiency) or low sudsing detergent specially formulated for front load washers.
- Reduce the amount of detergent for that specific load size and soil level. Keep in mind that towel creates more suds generally.
- Reduce the amount of detergent when water is soft, or laundry is small or lightly soiled.
- Do one more washing cycle with cold water and a table spoon of salt without detergent.

### Wet Clothes

- Unbalance due to not enough load. Put additional load.
- Due to excessive suds by using general detergent.  
Use HE (High-Efficiency) or reduce its quantity.
- Low Spin Speed or Drain Only was selected.
- Go to “ Will Not Spin”.

### Will Not Lock

- Door is not aligned or closed properly.
- Perform Quick Test Mode.  
Check Door Lock.  
Check the output voltage of Door Lock Coil.  
If it reads 120V, change Door Lock Switch, and if not, change PCB.  
(Refer to PCB Connector Check.)
- Read Lock Switch and PCB (CN10).  
(Refer to PCB Connector Check.)
- Try Door Lock and check for 120V to Door Lock Connector.  
If 120V present, change Main Control Board and if not, change Door Lock switch.

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## 6-1. TROUBLE DIAGNOSIS

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### Will Not Unlock

- Check if the door is being pushed out, which may keep it from unlocking.
- Door locks itself when the water level is too high. Opening door will result in water draining from door opening.
- Check the following with Board Input Test Mode.  
Water Level (frequency): Over 23.80 KHz.  
→ If so, refer to "Will Not Drain".  
Temperature (Inside Drum): Higher than 60°C/140°C.  
→ If so, wait until it drops.  
When everything is normal, check PCB connectors and Door Lock Switch.
- Drain manually after removing the plastic drain hose holder.
- Display shows "LO". Turn off and on the unit.  
If "LO" keeps illuminating, check PCB and Door Lock Switch.
- Read Lock Switch and PCB (CN10 & CN7).  
(Refer to PCB Connector Check.)
- Perform Quick Test Mode.  
Check Door Lock.  
Check the output voltage of Door Lock Coil.  
If it reads 120V, change Door Lock Switch, and if not, change PCB.  
(Refer to PCB Connector Check.)

### No Key Operation

- Option and Function buttons respond differently according to each cycle.
- Child Lock is being activated. To exit, hold down Soil Level Key and Signal Key simultaneously until it sends out a beeping sound.
- When "End" illuminates on the display, only Power button works. Press Power button and make new cycle selections.

### Will Not Drain

- Check for any kink on the drain hose. If any, straight it out.
- Check for any restriction in the drain hose.
- Close the door and press the Cycle Selector dial. For safety reasons, the washer does not tumble or spin with the door open.
- When it is freezing outside, check if it is frozen inside the drain hose.
- Check if the water level signal input is correct. Go to Board Input Test Mode.
- Go to Quick Test Mode and do Drain Pump Test.
- Check if there is any twist in the hose (the one between Tub and Drain Pump).
- Check if it reads AC 120V at the pump when a spin cycle is selected.
- Read the winding resistance of the pump motor. (14.2 7% Ohms)
- Check the pump at CN10 (Pin6) on PCB. It should read AC 110~120V. (Refer to PCB Connector Check)

### Wrong Water Temperature

- Check if both of the water taps are fully open.
- Make sure the domestic water heater is set to deliver water lower than 120°F (49°C) hot water at the tap.  
Also check water heater capacity and recovery rate.
- If the water heater is located far from the washer, screw out the hot water tap and let its water pass until you get hot water.
- Too Hot/Too Cold: Reduced amount of water is supplied while PCB controls the influx to regulate the actual temperature of the water in the tub. This may appear to be significantly hotter/colder than expected.
- Check if the temperature selection is correct.
- Disconnect inlet hoses from the Water Valve and remove any residue in the inlet screens.

### Noisy and/or Vibration/Walking

- Check if the washer is leveled and the lock nuts are tightened up on the bottom plate.
- Check if all of the shipping bolts and spacers are removed from the back panel.
- Check if load is big enough and there is no unbalance. If there is not enough load, put in a few towels to balance it.
- Check if the motor is fastened enough.
- Remove various trouble contributors (such as dust coat on the floor).

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## 6-1. TROUBLE DIAGNOSIS

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### **Rubber Feet Leaving Marks on Floor**

- Use a pencil eraser to remove mark.
- Walk washer into location, do not drag.

### **Additive Cups Full of Water**

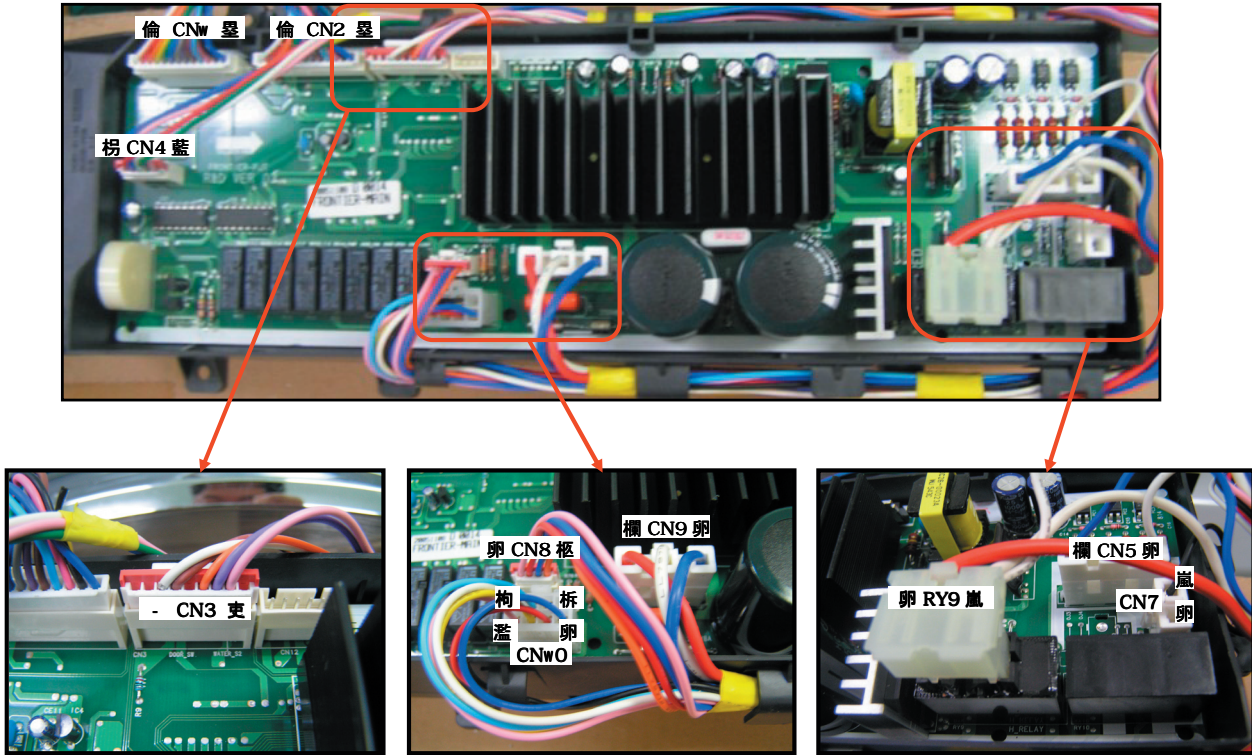
- Small amount of water in bottom of additive cups is normal.
- Remove and wash Dispenser Tray, removable Cup, and Rinse Cap.
- Level washer.

### **Buttons do not Respond**

- Option and Function buttons respond differently according to each cycle.
- Child Lock feature has been selected. To disable feature press and hold Temp and Spin simultaneously until a beep is heard.
- When display shows "End", only the Power button will function. Press Power and make new cycle selections.

## 6-2. PROBLEM CHECKING AND METHOD OF PCB

-If you plug in the power cord and turn Power S/W on, memorized data is displayed.  
If any data is not displayed, check the followings.



### Thermistor Check

Check Voltage at Pin #6 and #3 of CN3  
Tester Check = DC2.5V  
If it reads 5V, check if its connector is engaged properly.

### Door Switch Check

Check Voltage at Pin #6 and #4 of CN3  
When Door Open = DC5V  
When Door Close = DC0V

### Water Sensor Check

Check Voltage and Frequency at Pin #6 and #7 of CN3  
Reset water level = DC2.5V, 25.8KHz  
Check Voltage and Frequency at Pin #6 and #8 of CN3  
Reset water level = DC2.5V, 25.8KHz

### Sump Sensor Check

Check Voltage at Pin #4 and #2 of CN8  
Tester Check = DC0V or 3.75V  
Check Voltage at Pin #4 and #3 of CN8  
Tester Check = DC0V or 3.75V

### Motor Check

Resistance at Pin #1 and #2 of CN9 = 11.6Ω  
Resistance at Pin #1 and #3 of CN9 = 11.6Ω  
Resistance at Pin #2 and #3 of CN9 = 11.6Ω

### Door Lock Check

Check Voltage at Pin #1 of CN5 and Pin #7 of CN10  
When Door Lock = AC120V  
Check Voltage at Pin #1 of CN5 and Pin #2 of CN7  
When Door Lock = AC120V

### Door Unlock Check

Check Voltage at Pin #1 of CN5 and Pin #8 of CN10  
When Door Unlock = AC120V

### Drain Motor Check

Check Voltage at Pin #1 of CN5 and Pin #6 of CN10  
When Drain Pump operates = AC120V

### Water Valve Check

Check Voltage at Pin #1 of CN5 and Pin #1,2,3,4 of CN10  
When each Valve operates = AC120V

### AC Power Check

Check Voltage at Pin #1 and #3 of CN5  
Check Voltage at Pin #1 of CN5 and Pin #1 of CN6  
Tester Check = AC120V

### Heater Relay Check

Check Voltage at Pin #1 of CN5 and Pin #2 of RY9  
When Heater Relay operates = AC120V

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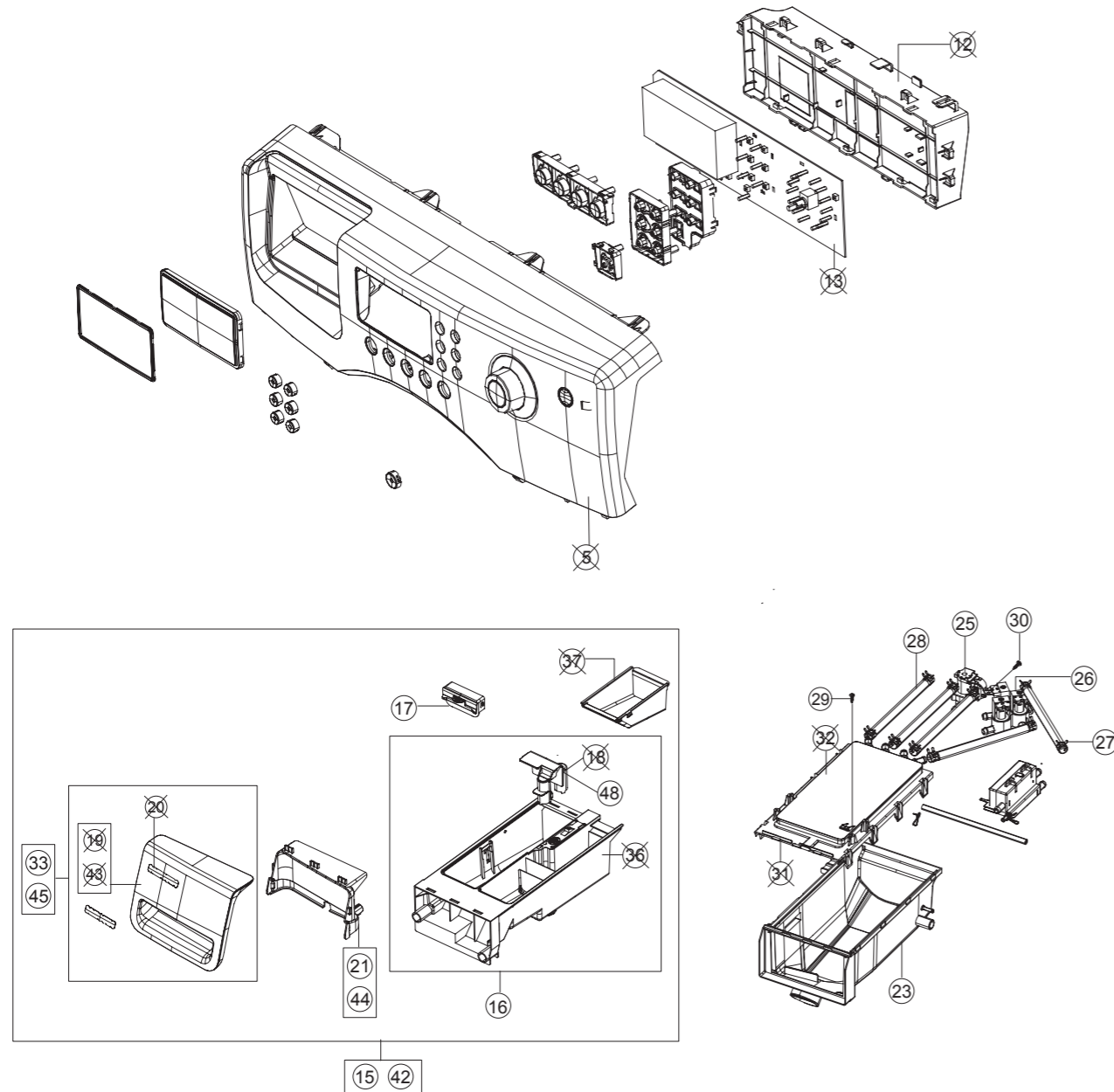
## **Memo**

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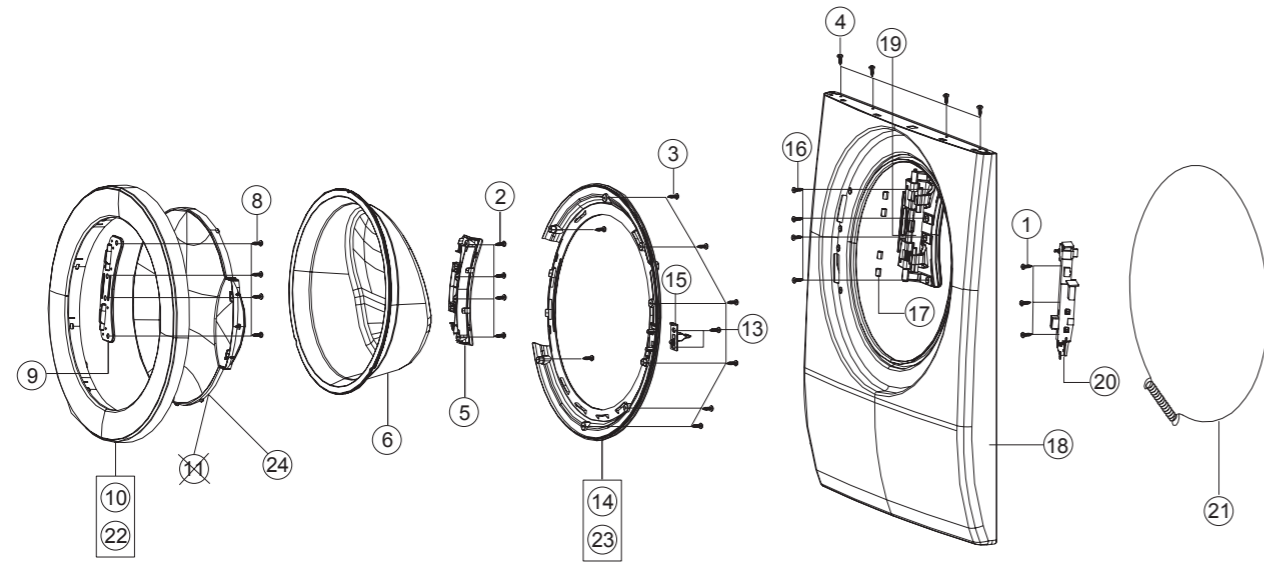
## 7. EXPLODED VIEW AND PARTS LIST

### 7-1. THE CONTROL PARTS



NO.	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC Code	SA/SNA
1	DC64-01106A	KNOB-ENCODER	WF326LAW,ABS,-,-,-,WHT,-,	1	C0104	SNA
2	DC97-10795A	ASSY-PANEL CONTROL	WF316LAW,LOWES	1	C0002	SNA
3	DC64-01050A	PANEL-CONTROL	WF316LAW,ABS,-,-,-,WHT,I	1	C0082	SNA
4	DC64-01105A	BUTTON-PUSH(P)	WF326LAW,ABS,-,-,WHT,FRON	1	C0044	SA
5	DC64-01126A	INLAY-PANEL	WF316LAW,PET,T0.188,-,-,WHT,	1	A0242	SNA
6	DC64-01112A	WINDOW-ENCODER	WF326LAW,SAN,-,-,-,TRAN	1	C0008	SNA
7	DC66-00413A	LEVER-POWER	GW-PJT,POM,-,-,-,NTR,ENTRY	1	C0108	SA
8	MFS-F2WLHA-T0	ASSY PCB PARTS(M)	MFS-F2WLHA-T0	1	Y0161	SA
9	MFS-FTWTHA-00	ASSY PCB PARTS(M)	MFS-FTWTHA-00	1	Y0161	SA
10	MES-AG3MOD-S2	ASSY PCB PARTS(S)	MES-AG3MOD-S2	1	Y0162	SA
11	MFS-MEMS-00	ASSY PCB PARTS(S)	MES-MEMS-00	1	Y0162	SA
12	MFS-F2WLHA-S0	ASSY PCB PARTS(S)	MFS-F2WLHA-S0	1	Y0162	SA
13	DC61-01164A	GUIDE-PCB	GW-PJT,ABS(V0),-,-,NTR,STAND	1	Y0002	SNA
14	DC61-01514A	GUIDE-LED(B)	WF-G106AW,HIPS,-,-,NTR,FR	1		SNA
15	DC61-01516A	GUIDE-LED(C)	WF-G106AW,HIPS,-,-,NTR,FR	1		SNA
16	DC97-10336A	ASSY-DRAWER	WF316LAW,NEAT-WHT	1	R0014	SA
17	DC97-08774A	ASSY-S. DRAWER	MAH9700AWW	1		SNA
18	DC61-01171A	GUIDE-LIQUID	GW-PJT,ABS,-,-,WHT,-	1	R0085	SA
19	DC67-00121B	CAP-RINSE	MAH9700,PP(TB53),-,-,MUNSELL	1	R0157	SA
20	DC64-01114A	PANEL-DRAWER	WF326LAW,ABS,-,-,-,WHT,LO	1	A0328	SNA
21	DC64-01158A	MASCOT	WF326LAW,NICKEL,T0.5,W10.5,L65	1	C0106	SNA
22	DC64-01113A	HANDLE-DRAWER	WF326LAW,ABS,-,-,-,WHT,F	1	R0155	SNA
23	DC97-07125C	ASSY-HOUSING DRAWER	WF326LAW,FRONTIER	1	R0019	SA
24	DC61-01167C	HOUSING-DRAWER(L)	WF326LAW,PP(TB-53),-,-	1	R0096	SA
25	DC61-01168A	HOUSING-DRAWER(M)	GW-PJT,PP(TB-53),-,-	1	R0097	SNA
26	DC61-01169A	HOUSING-DRAWER(U)	GW-PJT,PP(TB-53),-,-	1	R0098	SNA
27	DC62-00142D	VALVE-WATER	GW-PJT,NYLON,3WAY,MAX 10BAR,	1	W0032	SA
28	DC62-30314H	VALVE-WATER	GW-PJT,NYLON,-,MAX10BAR,NTR,	1	W0032	SA
29	DC67-00051B	HOSE-DRAWER	Q1636GW/XEU,EPDM,ID9.0,OD14.	1.48	R0158	SA
30	DC65-00008A	CLAMPER HOSE	SEW-DR605,SK5,-,-,YEL,ID14.	10	N0009	SA
31	DC65-00014A	CLAMPER HOSE	GW-PJT,HSWR,-,ID82,ZPC2,HOS	1	N0018	SA
32	DC65-00009A	CLAMPER HOSE	TS85-PJT,HSWR,-,-,YEL,OD24/	1	N0010	SA
33	DC61-00118A	CLAMPER HOSE	P1291,LYLON6/6,ID27,OD30,-,	1	N0012	SNA
34	DC61-00118A	CLAMPER HOSE	P1291,LYLON6/6,ID27,OD30,-,	1	N0012	SNA
35	DC61-00133A	CLAMPER HOSE	P1291,PP(BJ-730),ID24.5,OD2	1	N0001	SNA
36	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	3	Z0008	SA
37	6002-001374	SCREW-TAPPING	TH,+WE,-,M4,L12,ZPC3 (WHT	6	Z0055	SA
38	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	4	Z0056	SA
39	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	11	Z0008	SA
40	6002-001279	SCREW-TAPPING	PWH,+,-,1,M4,L12,PASS,STS4	2	Z0013	SA
41	6002-000630	SCREW-TAPPING	PH,+,-,2S,M3,L8,ZPC(YEL),S	1	Z0062	SA
42	6002-001374	SCREW-TAPPING	TH,+WE,-,M4,L12,ZPC3 (WHT	15	Z0055	SA
43	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	5	Z0056	SA
44	6002-001373	SCREW-TAPPING	HEX,+,-,2,M6.5,L40,ZPC3(WH	12	Z0046	SA
45	6002-001374	SCREW-TAPPING	TH,+WE,-,M4,L12,ZPC3 (WHT	1	Z0055	SA
46	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	1	Z0008	SA
47	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
48	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	3	Z0008	SA
49	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	2	Z0008	SA
50	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	3	Z0056	SA
51	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
52	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
53	6002-001306	SCREW-TAPPING	TH,+,-,1,M4,L14,ZPC(YEL)	5	Z0015	SC
54	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(YEL),S	8	Z0006	SNA
55	6002-001294	SCREW-TAPPING	BH,+,-,M4,L16,ZPC(BLK)	3	Z0062	SNA
56	DC61-01168A	HOUSING-DRAWER(M)	GW-PJT,PP(TB-53),-,-	1	R0097	SNA
57	DC61-01169A	HOUSING-DRAWER(U)	GW-PJT,PP(TB-53),-,-	1	R0098	SNA
58	DC61-01170A	BODY-DRAWER	GW-PJT,PP(TB-53),-,-,WHT	1	R0036	SNA
59	DC61-01267A	CASE-PRE WASH	WINGS-PJT,PP(TB53),-,-,W	1	J0028	SC
60	DC63-00516A	COVER-DETERGENT	GW-PJT,PP(TB-53),-,-	1	R0173	SNA
61	DC64-01106A	KNOB-ENCODER	WF326LAW,ABS,-,-,-,WHT,-,	1	C0104	SNA
62	DC97-10795A	ASSY-PANEL CONTROL	WF316LAW,LOWES	1	C0002	SNA
63	DC64-01105A	BUTTON-PUSH(P)	WF326LAW,ABS,-,-,WHT,FRON	1	C0044	SA
64	DC97-10336A	ASSY-DRAWER	WF316LAW,NEAT-WHT	1	R0014	SA
65	DC64-01114A	PANEL-DRAWER	WF326LAW,ABS,-,-,-,WHT,LO	1	A0328	SNA
66	DC64-01113A	HANDLE-DRAWER	WF326LAW,ABS,-,-,-,WHT,F	1	R0155	SNA
67	DC67-00121B	CAP-RINSE	MAH9700,PP(TB53),-,-,MUNSELL	1	R0157	SA

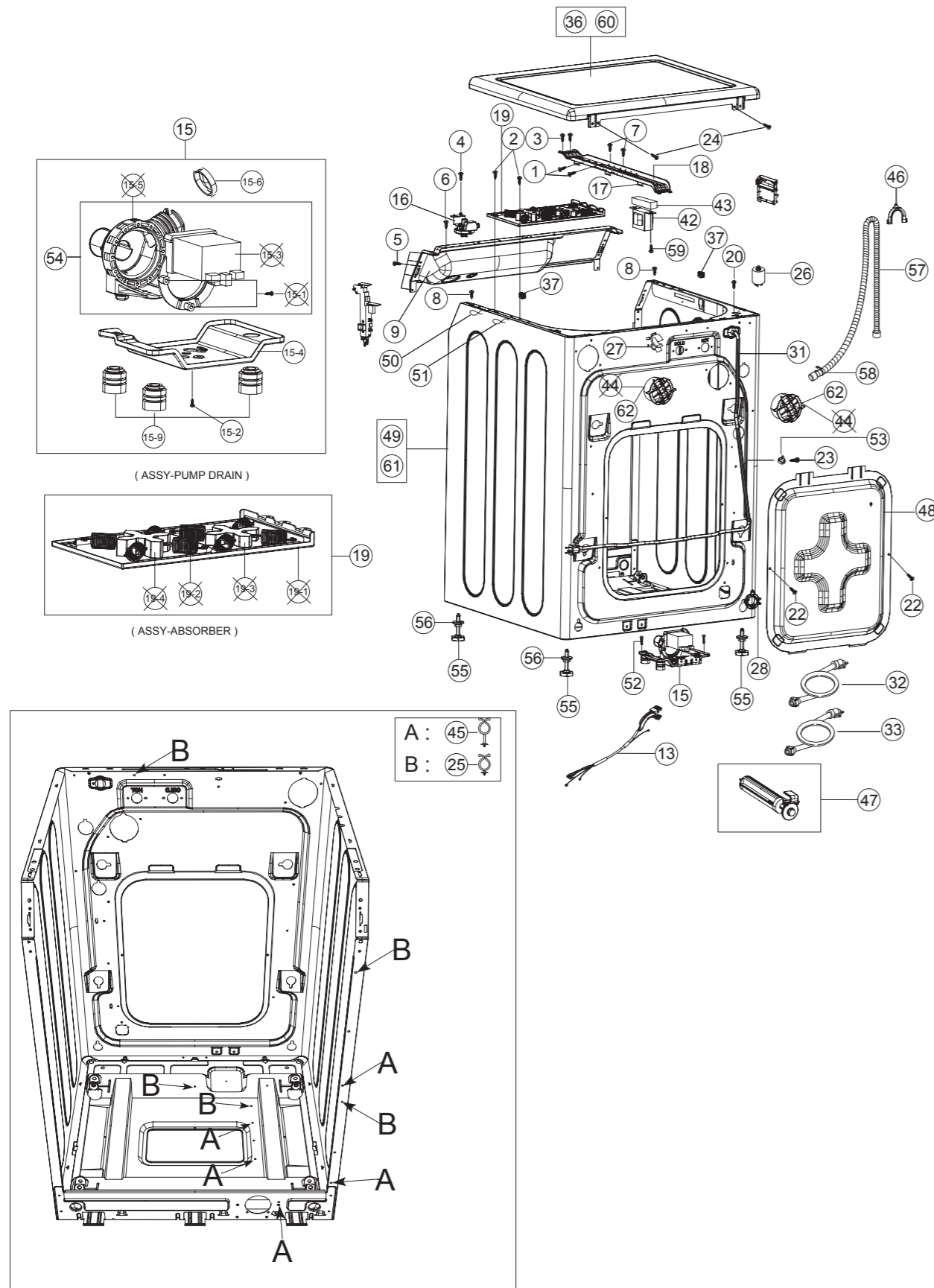
## 7-2. THE DOOR PARTS



NO.	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC Code	SA/SNA
1	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	3	Z0008	SA
2	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	3	Z0008	SA
3	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	2	Z0008	SA
4	6002-001374	SCREW-TAPPING	TH,+WE,-,M4,L12,ZPC3 (WHT	6	Z0055	SA
5	6002-001374	SCREW-TAPPING	TH,+WE,-,M4,L12,ZPC3 (WHT	15	Z0055	SA
6	6002-001374	SCREW-TAPPING	TH,+WE,-,M4,L12,ZPC3 (WHT	1	Z0055	SA
7	DC64-00504A	DOOR-GLASS	TS85-PJT,BOROSILICATE,-,-,-,-	1	D0061	SC
8	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	4	Z0056	SA
9	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	5	Z0056	SA
10	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
11	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	3	Z0056	SA
12	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
13	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
14	DC63-00673A	COVER-DOOR	WF316LAW,ABS,T2.8,-,-,-,-,CR-	1	D0106	
15	DC64-01120A	DOOR-SAFETY	WF326LAW,PET,T2.8,-,-,-,-,NTR,	1	D0066	SA
16	6002-001279	SCREW-TAPPING				
17	DC61-01520A	HOLDER-GLASS	WF326LAW,PP(TB53),T2.8,-,-,	1	D0081	SA
18	DC66-00326A	LEVER-DOOR	TS85-PJT,POM,-,W24,L54,-,WHT,	1	D0107	SA
19	6001-001773	SCREW-MACHINE	TH,+,-,M5,L12,PASS,STS430,	2	Z0027	SA
20	DC61-01518A	FRAME-FRONT	WF326LAW,SECC,-,-,WHT,T0.8,W	1	F0103	
21	DC97-10718A	ASSY-HINGE DOOR	FRONTIER-PJT,SINGLE	1		
22	DC97-04973A	ASSY-WIRE DIAPHRAGM	TS85-PJT,FRAME-FRONT	1	R0030	SA
23	DC63-00673A	COVER-DOOR	WF316LAW,ABS,T2.8,-,-,-,-,CR-	1	D0106	
24	DC64-01120A	DOOR-SAFETY	WF326LAW,PET,T2.8,-,-,-,-,NTR,	1	D0066	SA



## 7-4. THE FRAME PARTS



NO.	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC Code	SA/SNA
1	6002-001374	SCREW-TAPPING	TH,+WE,-M4,L12,ZPC3 (WHT)	6	Z0055	SA
2	6002-001374	SCREW-TAPPING	TH,+WE,-M4,L12,ZPC3 (WHT)	15	Z0055	SA
3	6002-001374	SCREW-TAPPING	TH,+WE,-M4,L12,ZPC3 (WHT)	1	Z0055	SA
4	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	4	Z0056	SA
5	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	5	Z0056	SA
6	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
7	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	3	Z0056	SA
8	6009-001458	SCREW-SPECIAL	CH,+,-,M4,L10,ZPC3(BLK),SW	2	Z0047	SA
9	DC61-01166A	FRAME-PLATE(U)	GW-PJT,EGI,-,-,T1.6,-,-	1	F0125	SA
10	DC67-00172A	CAP-O.F	GW-PJT,PP,T2.8,-,-,GRY,OVER FL	1	A0047	SNA
11	DC96-00774A	ASSY-PUMP DRAIN	WINGS-PJT,80W(120V/60Hz)	1	J0013	SA
12	6002-001294	SCREW-TAPPING	BH,+,-,M4,L16,ZPC3(BLK)	3	Z0062	SNA
13	DC31-00054A	PUMP-DRAIN	-,120V,60Hz,40mm,80W/3600RPM	1	J0025	SNA
14	DC61-01424A	BRACKET-PUMP	WINGS-PJT,GA,T1.2,W185,L115	1	J0017	SA
15	DC61-01254A	CASE-PUMP	WINGS-PJT,PP(5113MF6),T3,W110,	1	J0019	SNA
16	DC62-00202A	VALVE-CHECK	WINGS,EPDM,PO30,1~10BAR,BLK,	1	F0223	SA
17	DC63-00619A	CUSHION-PUMP	MAH9700AWW,EPDM,-,-,-,WIN	1	J0029	SA
18	DC97-03716C	ASSY-SENSOR PRESSURE	SEW-3HW123,DN-S14T/	1	Q0006	SA
19	DC61-00553C	HOLDER-WIRE SADDLE	-,NYLON66,-,-,-,NTR,D	3	M0048	SA
20	DC61-01200A	GUIDE-WIRE	GW-PJT,SBHG1-A,T1.0,W52,-,NTR	1	U0161	SA
21	DC97-08635D	ASSY-ABSORBER	FRONTIER,970/1080	1	U0380	SA
22	DC61-01403A	BRACKET-ABSORBER	GW27,SBHG1-A,T1.0,W170,	1	U0378	SNA
23	DC61-01404A	SPRING-ABSORBER	GW-PJT,SWC,CD2,ID16,OD20	8	U0379	SNA
24	DC67-00170A	WEIGHT-ABSORBER	GW-PJT,ZNDC,WEIGHT390G,-	1		SNA
25	DC67-00170B	WEIGHT-ABSORBER	GW-PJT,ZNDC,WEIGHT305G,-	1		SNA
26	6009-001476	SCREW-HEX	HEX,+,-,M5,L10,ZPC3(BLK),SWRCH	2	Z0048	SA
27	6502-000127	CABLE CLAMP	DAWH-18NB,ID15,-,NYLON66,NTR	5	U0363	SA
28	DC29-00013A	FILTER-EMI	LFT-215G,WINGS PJT,250VAC,15A	1	W0036	SA
29	DC61-00133A	CLAMPER HOSE	P1291,PP(BJ-730),ID24.5,OD2	1	N0001	SNA
30	DC61-00274A	GUIDE-HOSE	P/PV/M,PP,-,-,-,WHT,FRAME/DRA	1	A0083	SA
31	DC61-01432A	LEG-RUBBER	MAH9700AWW,BUTYL,-,GRY,-,WING	1	B0073	SNA
32	DC63-00522A	COVER-BACK	GW-PJT,GI,T0.4,W426,L507,-,-,	1	A0282	SA
33	DC96-00757A	ASSY POWER CORD	GW-PJT,GW,UL/CSA,3/16AWG	1	W0002	SA
34	DC97-07126A	ASSY-HOSE WATER	GW-PJT,HOT	1	I0040	SC
35	DC97-07127A	ASSY-HOSE WATER	GW-PJT,COLD	1	I0040	SC
36	DC97-07128D	ASSY-HOSE DRAIN(I)	MAH9700AWW,WINGS-PJT	1	I0023	SA
37	DC72-00001D	BAND-RING	WINGS-PJT,HSWR,T2.4,-,-,YEL,ID	2	W0031	SA
38	DC72-00035A	BAND-RING	WINGS-PJT,HSWR,T4,-,-,YEL,HOSE	2	W0031	SA
39	DC72-00001A	BAND-RING	DRUM-MODEL,HSWR,-,-,-,YEL,ID6	1	W0031	SA
40	DC97-08634A	ASSY-COVER TOP	GW-PJT,-	1	P0001	SA
41	DC61-01256A	GUIDE-SPRING	GW-PJT,POM,-,-,-,NTR,-	2	A0352	SNA
42	DC61-01180A	FRAME	WINGS-PJT,PCM,-,-,WHT,T1.0,-,-	1	F0094	SNA
43	DC61-01182B	BRACKET-SPRING(L)	WINGS-PJT,SBHG1-A,T1.6	1	F0079	SNA
44	DC61-01183B	BRACKET-SPRING(R)	WINGS-PJT,SBHG1-A,T1.6	1	U0364	SNA
45	DC97-06994A	ASSY-PLATE BOTTOM	GW-PJT,SBHG1-A/T1.6	1	F0066	SNA
46	DC97-08740C	ASSY-CAP O.F	GW-PJT,SUDS	2	A0372	SA
47	DC61-40081A	HOLDER-WIRE	DAWH-2NC,NYLON66,-,-,-,NTR	5	N0006	SA
48	DC62-10278A	HOSE-HANGER	-,PP(JS20),-,-,-,NTR,-	1	I0030	SA
49	DC97-07448A	ASSY-FIXER TUB	GW-PJT,POWER CORD	4	A0025	SA
50	DC97-06995A	ASSY-FRAME	GW-PJT,H+COLD	1	F0028	SA
51	DC66-10003B	WIRE-VINYL	SEW-100JL,PVC,-,T2.0*L150,-	2		SNA
52	DC66-10003B	WIRE-VINYL	SEW-100JL,PVC,-,T2.0*L150,-	2		SNA
53	6011-001565	BOLT-HEX	M6,L35.1,ZPC(YEL),SWCH25K,TAPP	3	U0320	SA
54	DC61-00118A	CLAMPER HOSE	P1291,LYLON6/6,ID27,OD30,-,	1	N0012	SNA
55	DC61-01432A	LEG-RUBBER	MAH9700AWW,BUTYL,-,GRY,-,WING	1	B0073	SNA
56	6021-001203	NUT-HEXAGON FLANGE	1C,M10,ZPC(YEL),SCP-1	1	B0076	SNA
57	DC97-07128D	ASSY-HOSE DRAIN(I)	MAH9700AWW,WINGS-PJT	1	I0023	SA
58	DC61-00219C	CLIP-HOSE	SK-5,WLS1100A,ID35 OD37.4,ZPC	1	N0020	SA
59	6002-001306	SCREW-TAPPING	TH,+,-,1,M4,L14,ZPC(YEL)	5	Z0015	SC
60	DC63-00523A	COVER-TOP	GW-PJT,SECC(EGI),T1.0,W684,L56	1	P0053	SNA
61	DC97-06995A	ASSY-FRAME	GW-PJT,H+COLD	1	F0028	SA
62	DC97-08740C	ASSY-CAP O.F	GW-PJT,SUDS	2	A0372	SA

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**Memo**

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## 8. ELECTRICAL PARTS LIST

-You can search for updated part codes through ITSELF web site.

URL : <http://itself.sec.samsung.co.kr/>

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
..2	6001-001773	SCREW-MACHINE	TH,+,-,M5,L12,PASS,STS430,	2	Z0027	SA
..2	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	3	Z0008	SA
..2	6002-001374	SCREW-TAPPING	TH,+ WE,-,M4,L12,ZPC3 (WHT	6	Z0055	SA
..2	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	4	Z0056	SA
..2	6003-001563	SCREW-TAPTITE	TH,+,-,S,M4,L8,ZPC3(BLK),S	2		SA
..2	6009-001476	SCREW-HEX	HEX,+,-,M5,L10,ZPC3(BLK),SWRCH	2	Z0048	SA
..2	DC63-00522A	COVER-BACK	GW-PJT,GI,T0.4,W426,L507,-,-,	1	A0282	SA
..2	DC97-04973A	ASSY-WIRE DIAPHRAGM	TS85-PJT,FRAME-FRONT	1	R0030	SA
..2	DC97-07448A	ASSY-FIXER TUB	GW-PJT,POWER CORD	4	A0025	SA
..2	DC97-08634A	ASSY-COVER TOP	GW-PJT,-	1	P0001	SA
..2	DC97-10336A	ASSY-DRAWER	WF316LAW,NEAT-WHT	1	R0014	SA
...3	DC61-01171A	GUIDE-LIQUID	GW-PJT,ABS,-,-,-,WHT,-	1	R0085	SA
...3	DC67-00121B	CAP-RINSE	MAH9700,PP(TB53),-,-,-,MUNSELL	1	R0157	SA
..2	DC97-10340A	ASSY-FRAME FRONT	WF326LAW,FRONTIER	1	F0064	SA
...3	DC61-01222A	BRACKET-HINGE	WINGS-DRYER,SECC(EGI),T1.6	1	D0048	SA
...3	DC72-00034B	SPONGE-EPDM	MAH2400,EPDM,-,T1,W15,L500,W	3	D0111	SA
...3	DC97-10338A	ASSY-COVER DOOR	WF326LAW,FRONTIER	1	D0010	SA
....4	DC64-01120A	DOOR-SAFETY	WF326LAW,PET,T2.8,-,-,-,NTR,	1	D0066	SA
...3	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	11	Z0008	SA
...3	6002-001279	SCREW-TAPPING	PWH,+,-,1,M4,L12,PASS,STS4	2	Z0013	SA
...3	6009-001476	SCREW-HEX	HEX,+,-,M5,L10,ZPC3(BLK),SWRCH	1	Z0048	SA
...3	DC61-01520A	HOLDER-GLASS	WF326LAW,PP(TB53),T2.8,-,-,	1	D0081	SA
...3	DC66-00326A	LEVER-DOOR	TS85-PJT,POM,-,W24,L54,-,WHT,	1	D0107	SA
....4	DC61-00891A	GUIDE-HINGE	HAUZEN(DOM),POM,-,-,-,WHT,HI	4	D0072	SA
....4	DC61-01532A	HINGE-DOOR	WF326LAW,ZNDC,T3.8,-,-,-,FR	1	D0108	SA
...3	DC64-01108A	BUTTON-ENCODER	WF326LAW,ABS,-,-,WHT,FRON	1	C0105	SA
...3	DC97-10511A	ASSY-KNOB ENCODER	FRONTIER,LOWES	1	C0029	SA
....4	MFS-F13DL-S0	ASSY PCB PARTS(S)	MFS-F13DL-S0 FRONTIER	1	Y0162	SA
....5	DC41-00045A	PCB-SUB	FRONTIER,FR-1,NL 1,-,T1.6,197x	1		SA
...3	DC97-10513A	ASSY-S.PANEL CONTROL	WF316LAW,WHT	1		SA
....4	DC64-01105A	BUTTON-PUSH(P)	WF326LAW,ABS,-,-,WHT,FRON	1	C0044	SA
....4	DC66-00413A	LEVER-POWER	GW-PJT,POM,-,-,-,NTR,ENTRY	1	C0108	SA
...3	MFS-F2WLHA-T0	ASSY PCB PARTS(M)	MFS-F2WLHA-T0	1	Y0161	SA
....4	MFS-F2WLHA-S0	ASSY PCB PARTS(S)	MFS-F2WLHA-S0	1	Y0162	SA
....5	DC41-00045A	PCB-SUB	FRONTIER,FR-1,NL 1,-,T1.6,197x	1		SA
....4	MFS-FTWTHA-00	ASSY PCB PARTS(M)	MFS-FTWTHA-00	1	Y0161	SA
....5	6002-000630	SCREW-TAPPING	PH,+,-,2S,M3,L8,ZPC(YEL),S	1	Z0062	SA
...3	DC61-01445A	GUIDE-CUSHION	MAH98700AWW,PP,T2.8,-,-,-,	1	X0050	SA
..2	6002-001374	SCREW-TAPPING	TH,+ WE,-,M4,L12,ZPC3 (WHT	15	Z0055	SA
..2	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	5	Z0056	SA
..2	6003-001563	SCREW-TAPTITE	TH,+,-,S,M4,L8,ZPC3(BLK),S	4		SA
..2	6009-001458	SCREW-SPECIAL	CH,+,-,M4,L10,ZPC3(BLK),SW	2	Z0047	SA
..2	6011-001559	BOLT-HEX	M10,L41,ZPC3(WHT),SM10C,-	4	U0320	SA
..2	DC29-00013A	FILTER-EMI	LFT-215G,WINGS PJT,250VAC,15A	1	W0036	SA
..2	DC61-01166A	FRAME-PLATE(U)	GW-PJT,EGI,-,-,-,T1.6,-,-	1	F0125	SA
..2	DC64-00519B	DOOR-LOCK S/W	GW-PJT,PP-GF,-,-,-,BLK,1	1	C0058	SA
..2	DC97-07125C	ASSY-HOUSING DRAWER	WF326LAW,FRONTIER	1	R0019	SA
...3	DC65-00008A	CLAMPER HOSE	SEW-DR605,SK5,-,-,YEL,ID14.	10	N0009	SA
...3	DC67-00051B	HOSE-DRAWER	Q1636GW/XEU,EPDM,ID9.0,OD14.	1.48	R0158	SA
...3	DC61-01167C	HOUSING-DRAWER(L)	WF326LAW,PP(TB-53),-,-	1	R0096	SA
...3	DC61-70029C	SPRING-CLIP	SEW-HW125,HSWR67,CD1.2,ID8.5	2	N0008	SA
...3	DC62-00142D	VALVE-WATER	GW-PJT,NYLON,3WAY,MAX 10BAR,	1	W0032	SA
...3	DC62-30314H	VALVE-WATER	GW-PJT,NYLON,-,MAX10BAR,NTR,	1	W0032	SA
...3	DC67-00089F	HOSE-WATER	WF326LAW,EPDM,ID5,OD9,T2,L190	1	I0003	SA
...3	DC97-08800A	ASSY-S.HOUSING DRAWER	MAH9700AWW,-	1	R0159	SA
...3	DC61-00553C	HOLDER-WIRE SADDLE	-,NYLON66,-,-,-,NTR,D	3	M0048	SA
...3	DC61-01200A	GUIDE-WIRE	GW-PJT,SBHG1-A,T1.0,W52,-,NTR	1	U0161	SA
..2	DC97-08635D	ASSY-ABSORBER	FRONTIER,970/1080	1	U0380	SA
..2	MES-AG3MOD-S2	ASSY PCB PARTS(S)	MES-AG3MOD-S2	1	Y0162	SA

## 8. ELECTRICAL PARTS LIST

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC_Code	SA
..2	MFS-MEMS-00	ASSY PCB PARTS(S)	MES-MEMS-00	1	Y0162	SA
..2	DC63-00693A	COVER-DOOR SWITCH	FRONTIER,PP(V0),-,-,-,	1	D0106	SA
..2	6002-001373	SCREW-TAPPING	HEX,+,-,2,M6.5,L40,ZPC3(WH	12	Z0046	SA
..2	6002-001374	SCREW-TAPPING	TH,+WE,-,M4,L12,ZPC3(WHT	1	Z0055	SA
..2	6011-001554	BOLT-ETC	M6,L56,ZPC3(WHT),SWRCH10A,P1.0	6	U0097	SA
..2	6031-001523	WASHER-WAVE	SK5,-,ID35,OD45,T0.6,ZPC2,-	1	U0354	SA
..2	DC31-00049A	MOTOR-DRUM	NEWMOTECH,SEW-HW125,-,-,-,1	1	H0075	SA
..2	DC47-00006G	HEATER	-,GW-PJT,STS316L,1000W,7.92~8.	1	U0358	SA
..2	DC60-50148B	NUT-HEX	SM20C(NYLON),M12,-,-,ZPC3(YEL)	1	Z0004	SA
..2	DC60-60044A	WASHER-PLAIN	-,ID10.5,OD30,T3,-,STS304	1	U0353	SA
..2	DC60-60049A	WASHER-SPRING	-,ID10.5,OD18,T2.5,-,SIR	1	U0362	SA
..2	DC67-00139A	WEIGHT-BALANCER(F)	GW-PJT,GC,-,-,-,RED,F	2	U0086	SA
..2	DC97-02412F	ASSY-BOLT	MAH2400AWW,MOTOR/M8*L62	4	U0365	SA
..2	DC97-03716C	ASSY-SENSOR PRESSURE	SEW-3HW123,DN-S14T/	1	Q0006	SA
...3	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	1	Z0008	SA
...3	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3(WHT)	1	Z0056	SA
...3	6011-001557	BOLT-HEX	M8,L66,ZPC3(WHT),SM10C,-	2	U0320	SA
...3	DC60-60044A	WASHER-PLAIN	-,ID10.5,OD30,T3,-,STS304	2	U0353	SA
...3	DC61-00219C	CLIP-HOSE	SK-5,WLSL1100A,ID35 OD37.4,ZPC	1	N0020	SA
...3	DC61-01338A	BRACKET-HOUSING BEARING	GW-PJT,SBHG1-A(G	1	U0112	SA
...3	DC62-00156A	SEAL-OIL	TS85-PJT,NBR(SD45.5),BLK,-,-,-	1	U0016	SA
...3	DC65-00014A	CLAMPER HOSE	GW-PJT,HSWR,-,ID82,ZPC2,HOS	1	N0018	SA
...3	DC65-20008C	CABLE CLAMP	DA-8N,NYLON#66,-,-,NTR,ID13.	1	U0363	SA
...3	DC67-00123A	HOSE-O.F	GW-PJT,EPDM,-,-,T2.0,-,BLK,-	1	I0047	SA
...3	DC67-00126A	HOSE-DRAIN	GW-PJT,EPDM,OD 68,-,T2.0,-,BL	1	I0043	SA
...3	DC67-00155A	HOSE-O.F(I)	WINGS-PJT,EPDM,-,-,T2.0,-,BL	1	U0185	SA
...3	DC69-00804A	PACKING-TUB	GW-PJT,EPDM-FORM,-,Pi8,W624,	1	U0364	SA
...3	DC72-00001D	BAND-RING	WINGS-PJT,HSWR,T2.4,-,-,YEL,ID	2	W0031	SA
...3	DC72-00035A	BAND-RING	WINGS-PJT,HSWR,T4,-,-,YEL,HOSE	2	W0031	SA
...3	DC61-01431A	BRACKET-TUB(B)	WINGS-PJT,SBHG1-A,T0.4,-,	1	U0385	SA
...3	DC61-01482A	BRACKET-HEATER	GW-PJT,STS430/304,T0.5,W9	1	U0359	SA
...3	DC66-00343A	DAMPER-SHOCK	SEW-HW125,-,-,-,-,30-50	2	U0133	SA
..2	DC97-10337A	ASSY-DRUM	WF326LAW,FRONTIER	1	R0001	SA
...3	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	3	Z0008	SA
...3	6011-001491	BOLT-FLANGE	M8,L38.5,PASS,STS304,P1.25,H	6	Z0023	SA
...3	DC66-00434A	DRUM-LIFTER	WF326LAW,PP(TI42),-,L314,G	3	R0006	SA
...3	DC97-06986A	ASSY-FLANGE SHAFT	GW-PJT,ALDC+SM45C/DD-T	1	R0007	SA
...3	6002-000444	SCREW-TAPPING	TH,+,-,2S,M4,L14,PASS,STS4	2	Z0008	SA
...3	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3(WHT)	3	Z0056	SA
...3	6011-001557	BOLT-HEX	M8,L66,ZPC3(WHT),SM10C,-	2	U0320	SA
...3	DC60-60044A	WASHER-PLAIN	-,ID10.5,OD30,T3,-,STS304	2	U0353	SA
...3	DC61-01172A	GUIDE-WATER	GW-PJT,FRPP(GF15%),T2.5,-,-,	1	P0148	SA
...3	DC61-70029C	SPRING-CLIP	SEW-HW125,HSWR67,CD1.2,ID8.5	1	N0008	SA
...3	DC63-10002D	SPONGE-HARNES	-,PU-FOAM,-,T10,W100,L80,	1	W0059	SA
...3	DC64-00802A	DOOR-DIAPHRAGM	GW-PJT,EPDM,T1.5,-,-,-,GR	1	U0029	SA
...3	DC65-00009A	CLAMPER HOSE	TS85-PJT,HSWR,-,-,YEL,OD24/	1	N0010	SA
...3	DC66-00343C	DAMPER-SHOCK	GW-PJT,-,-,-,-,-,60N	2	U0133	SA
...3	DC67-00122A	HOSE-DRAWER TUB	GW-PJT,EPDM,-,-,-,-,BLK,	1	I0046	SA
...3	DC72-00001A	BAND-RING	DRUM-MODEL,HSWR,-,-,-,-,YEL,ID6	1	W0031	SA
....4	DC67-00124A	HOSE-PRESSURE	GW-PJT,EPDM,-,-,-,-,BLK,-	1	I0078	SA
...3	DC97-08650A	ASSY-SEMI TUB FRONT	WINGS-PJT,SAMBAK	1	U0079	SA
...3	DC61-01414A	BRACKET-TUB(F)	WINGS-PJT,SBHG1-A,T0.4,-,	1	U0384	SA
...3	DC63-10003E	SPONGE-HOSE AIR	GW-PJT,HB22-GREY,-,T130,	1	U0367	SA
...3	DC97-04981D	ASSY-CLAMP DIAPHRAGM	WINGS-PJT,HSWR/ZPC4	1	U0038	SA
...3	DC60-40146A	BOLT-SPANER	-,OD36,T2.5,L52,FE,FZY,-,P	1	A0034	SA
...3	DC61-10688A	CAP-FIXER	SWF-P12,PP(TB53),-,-,-,WHT,-,	6	A0043	SA
...3	DC62-10278A	HOSE-HANGER	-,PP(JS20),-,-,-,-,NTR,-	1	I0030	SA
..2	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3(WHT)	1	Z0056	SA
..2	6011-001565	BOLT-HEX	M6,L35.1,ZPC(YEL),SWCH25K,TAPP	3	U0320	SA

## 8. ELECTRICAL PARTS LIST

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
..2	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
..2	6011-001565	BOLT-HEX	M6,L35.1,ZPC(YEL),SWCH25K,TAPP	3	U0320	SA
..2	6502-000127	CABLE CLAMP	DAWH-18NB,ID15,-,NYLON66,NTR	5	U0363	SA
..2	DC61-00274A	GUIDE-HOSE	P/PV/M,PP,-,-,-,WHT,FRAME/DRA	1	A0083	SA
..2	DC61-01257A	SPRING-HANGER	GW-PJT,HSWR,4,ID26,OD30,L2	2	A0351	SA
..2	DC61-40081A	HOLDER-WIRE	DAWH-2NC,NYLON66,-,-,-,NTR	5	N0006	SA
..2	DC96-00757A	ASSY POWER CORD	GW-PJT,GW,UL/CSA,3/16AWG	1	W0002	SA
..2	DC96-00774A	ASSY-PUMP DRAIN	WINGS-PJT,80W(120V/60Hz)	1	J0013	SA
...3	6002-001376	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC3 (WHT)	1	Z0056	SA
...3	DC62-00202A	VALVE-CHECK	WINGS,EPDM,PO30,1~10BAR,BLK,	1	F0223	SA
...3	DC61-01424A	BRACKET-PUMP	WINGS-PJT,GA,T1.2,W185,L115	1	J0017	SA
...3	DC99-00704A	ASSY-CUSHION PUMP	MAH9700AWW,WINGS-WASHE	3		SA
....4	6031-001531	WASHER-PLAIN	SCP1,-,ID7,OD14,T0.8,ZPC2(Y	1	U0353	SA
....4	DC63-00619A	CUSHION-PUMP	MAH9700AWW,EPDM,-,-,-,WIN	1	J0029	SA
..2	DC96-01043A	ASSY-M.WIRE HARNESS	WF326LAW,SILVER KIT	1	W0004	SA
..2	DC97-06995A	ASSY-FRAME	GW-PJT,H+COLD	1	F0028	SA
..2	DC97-07128D	ASSY-HOSE DRAIN(I)	MAH9700AWW,WINGS-PJT	1	I0023	SA
...3	DC61-00219C	CLIP-HOSE	SK-5,WLSL1100A,ID35 OD37.4,ZPC	1	N0020	SA
...3	DC62-10022G	HOSE-PUMP	SWF-P12,PP(BB110),ID21,OD26,-,	1	W0030	SA
..2	DC97-08740C	ASSY-CAP O.F	GW-PJT,SUDS	2	A0372	SA
...3	DC67-00172A	CAP-O.F	GW-PJT,PP,T2.8,-,-,GRY,OVER FL	1	A0047	SA
..2	DC97-08838A	ASSY-LEG	MAH9700AWW,GRY/BUTYL+BOLT	4	B0070	SA
...3	DC61-01267A	CASE-PRE WASH	WINGS-PJT,PP(TB53),-,-,-,W	1	J0028	SC
...3	DC64-00504A	DOOR-GLASS	TS85-PJT,BOROSILICATE,-,-,-,-	1	D0061	SC
...3	6002-001306	SCREW-TAPPING	TH,+,-,1,M4,L14,ZPC(YEL)	5	Z0015	SC
...3	DC97-07126A	ASSY-HOSE WATER	GW-PJT,HOT	1	I0040	SC
...3	DC97-07127A	ASSY-HOSE WATER	GW-PJT,COLD	1	I0040	SC
0.1	DC96-01053A	ASSY-CONTROL	WF316LAW,BETTER/WHT	1	C0027	
...3	DC61-01539A	PLATE-STEEL	MAH9700AWW,SBHG1-(GI),T0.4,W	1	Y0159	
..2	DC63-10001K	SPONGE-EPDM	SWF-P12,EPDM,-,T3,W15,L530,B	1	D0111	
..2	DC69-00209A	WOOD-STAY	SEW-PH100,NAWANG,-,T20,W570,L3	2		
..2	DC69-00923A	CUSHION-DOOR	MDE9700AYW,PS-FOAM,T8,W40,L	1	D0053	
..2	DC69-00935A	PACKING CASE-DESIGN	WF326AW,SW3,-,-,W748	1	A0015	
..2	DC69-00967A	CUSHION-TOP	WF326LAW,PS-FOAM,-,-,-,-,N	1	A0197	
...3	DC60-60044B	WASHER-PLAIN	SBC,ID8.4,OD30,T3,-,-,-	1	U0353	
...3	DC61-01253A	FIXER-TUB	GW-PJT,TB52,T8.0,WHT,OD25/L110	1	U0144	
...3	DC61-01272A	FIXER-WASHER	GW-PJT,NYLON,T2.0,NTR,FIXER	1		
...3	6011-001549	BOLT-HEX	M8,L155,ZPC(YEL),SWRCH18A,TAPP	1	U0320	
...3	DC61-01406A	FIXER-RUBBER	GW-PJT,EPDM,T5.0,NTR,-	1		
...3	DC63-00523A	COVER-TOP	GW-PJT,SECC(EGI),T1.0,W684,L56	1	P0053	
...3	DC63-10002Q	SPONGE-HARNESS	KS-PJT,PU-FOAM,-,T3,W100,	1	W0059	
...3	DC61-01170A	BODY-DRAWER	GW-PJT,PP(TB-53),-,-,-,-,WHT	1	R0036	
...3	DC63-00672A	COVER-DRAWER	WF326LAW,ABS,-,-,-,-,WHT,	1		
...3	DC64-01113A	HANDLE-DRAWER	WF326LAW,ABS,-,-,-,-,WHT,F	1	R0155	
...3	DC64-01114A	PANEL-DRAWER	WF326LAW,ABS,-,-,-,-,WHT,LO	1	A0328	
...3	DC63-00516A	COVER-DETERGENT	GW-PJT,PP(TB-53),-,-,-,-	1	R0173	
...3	DC64-01158A	MASCOT	WF326LAW,NICKEL,T0.5,W10.5,L65	1	C0106	
...3	DC61-01577A	SPRING-DRAWER	FRONTIER,STS304,C/D 0.8,I/	1	R0122	
...3	DC61-01518A	FRAME-FRONT	WF326LAW,SECC,-,-,WHT,T0.8,W	1	F0103	
..2	DC97-10671A	ASSY-DOOR	WF316LAW,STS-DECO	1	D0001	
....4	DC63-00673A	COVER-DOOR	WF316LAW,ABS,T2.8,-,-,-,-,CR-	1	D0106	
....4	DC64-01121A	DECORATION-DOOR	WF326LAW,STS430,T0.6,-,-	1		
....4	0203-001838	TAPE-DOUBLE FACE	4930,EPDM,T0.6,W41,R213	10		
...3	6002-000213	SCREW-TAPPING	TH,+,-,1,M4,L12,ZPC(YEL),S	8	Z0006	
...3	DC61-01576A	SUPPORT-HINGE	FRONTIER-PJT,STS430,T1.2,-	1	D0105	
...3	DC97-10718A	ASSY-HINGE DOOR	FRONTIER-PJT,SINGLE	1		
..2	DC97-10795A	ASSY-PANEL CONTROL	WF316LAW,LOWES	1	C0002	
....4	DC64-01084A	KNOB-ENCODER(I)	K4-PJT,ABS,-,-,-,-,WHT,-	1	C0075	
....4	DC64-01106A	KNOB-ENCODER	WF326LAW,ABS,-,-,-,-,WHT,-	1	C0104	



## 8. ELECTRICAL PARTS LIST

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
.....5	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	8		
.....5	0601-001028	LED	ROUND,Y-GRN,3mm,569nm	25	Y0063	
.....5	0601-001751	LED	ROUND,RED,3MM,630NM,-	1	Y0063	
.....5	1003-000337	IC-DARLINGTON DRIVER	KID65783AP,DIP,18P,	1	Y0051	
.....5	2003-000642	R-METAL OXIDE(S)	300ohm,5%,1W,AA,TP,3.3x	11		
.....5	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1		
.....5	3404-001022	SWITCH-TACT	15V,20mA,130±40gf,6x6x5mm,S	11	Y0087	
.....5	3711-000651	HEADER-BOARD TO CABLE	BOX,12P,1R,2.5mm,S	1		
.....5	3711-003133	HEADER-BOARD TO CABLE	BOX,13P,1R,2.5mm,S	1		
.....5	DC07-00038A	LED DISPLAY	CSV-KSW07EG,FRONTIER-PJT,-,7	1	C0011	
.....5	DC34-00003A	SWITCH PRESSURE	V7 PJT,DC28V,10mA,24,-,J	1		
.....5	DC61-01207A	GUIDE-PCB(S)	WINGS-DRYER,HIPS,-,-,-,NTR,	1		
.....5	DC61-01514A	GUIDE-LED(B)	WF-G106AW,HIPS,-,-,-,NTR,FR	1		
.....5	DC61-01516A	GUIDE-LED(C)	WF-G106AW,HIPS,-,-,-,NTR,FR	1		
.....5	DE02-00036A	CHEMICALS-FLUX SOLDER	KS-77S,-,-,-,-,KOK	2		
.....5	DE02-00060A	CHEMICALS-ALCOHOL	ALL,MODEL,-,-,-,-,-	1		
.....5	DE02-00083A	SOLDER-WIRE	S63S,D3.0,-,-,-,-,-	10		
.....5	DE02-00086A	SOLDER-WIRE FLUX	RS60S,-,D1.2,60SN/40PB,	1		
.....5	DE13-20017A	IC-DRIVE	KID65003AP,DIP,16P,STICK,TR-AR	2	Y0052	
.....5	DE39-60001A	WIRE-SO COPPER	,PI0.6,SN,T,52MM TAPING W	53		
.....4	DC61-01517B	GUIDE-ENCODER	WF316LAW,ABS,-,-,-,CR-COAT	1		
.....4	DC64-01050A	PANEL-CONTROL	WF316LAW,ABS,-,-,-,WHT,I	1	C0082	
.....4	DC64-01110A	BUTTON-PUSH(F)	WF326LAW,ABS,-,-,WHT,FRON	1	C0043	
.....4	DC64-01112A	WINDOW-ENCODER	WF326LAW,SAN,-,-,-,TRAN	1	C0008	
.....4	DC64-01118A	BUTTON-PUSH(AG)	WF326AW,ABS,-,-,TRANSPAR	1		
.....4	DC64-01126A	INLAY-PANEL	WF316LAW,PET,T0.188,-,-,WHT,	1	A0242	
.....4	DC64-01139A	BUTTON-PUSH(C)	WF326LAW,ABS,-,-,TRANS,FR	1		
.....5	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	8		
.....5	0601-001028	LED	ROUND,Y-GRN,3mm,569nm	35	Y0063	
.....5	0601-001751	LED	ROUND,RED,3MM,630NM,-	1	Y0063	
.....5	1003-000337	IC-DARLINGTON DRIVER	KID65783AP,DIP,18P,	1	Y0051	
.....5	2003-000642	R-METAL OXIDE(S)	300ohm,5%,1W,AA,TP,3.3x	12		
.....5	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1		
.....5	3404-001022	SWITCH-TACT	15V,20mA,130±40gf,6x6x5mm,S	12	Y0087	
.....5	DC07-00036A	LED DISPLAY	CSV-KSW05EG,FRONTIER-PJT,-,7	1	C0011	
.....5	DC34-00003A	SWITCH PRESSURE	V7 PJT,DC28V,10mA,24,-,J	1		
.....5	DC61-01514A	GUIDE-LED(B)	WF-G106AW,HIPS,-,-,-,NTR,FR	1		
.....5	DC61-01516A	GUIDE-LED(C)	WF-G106AW,HIPS,-,-,-,NTR,FR	1		
.....5	DC97-07814A	ASSY-JUMP WIRE	WINGS-PJT,13P/130MM/WHT,-	2		
.....5	DE02-00036A	CHEMICALS-FLUX SOLDER	KS-77S,-,-,-,-,KOK	2		
.....5	DE02-00060A	CHEMICALS-ALCOHOL	ALL,MODEL,-,-,-,-,-	1		
.....5	DE02-00083A	SOLDER-WIRE	S63S,D3.0,-,-,-,-,-	10		
.....5	DE02-00086A	SOLDER-WIRE FLUX	RS60S,-,D1.2,60SN/40PB,	1		
.....5	DE13-20017A	IC-DRIVE	KID65003AP,DIP,16P,STICK,TR-AR	2	Y0052	
.....5	DE39-60001A	WIRE-SO COPPER	,PI0.6,SN,T,52MM TAPING W	51		
.....5	0103-002581	RESIN-PUR	CPU-55B/UEP 700FB,-,-,94V0	160.7		
.....5	0103-002582	RESIN-PUR	UEP 700FA/CPU-55A,-,-,94V0	80.3		
.....5	0201-001354	ADHESIVE-A.C.F	IR-100 BOND-EPOXY	1		
.....5	0205-001027	OIL-SILICON	G746,-,-	1		
.....5	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	8		
.....5	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	3		
.....5	0402-000137	DIODE-RECTIFIER	1N4007,1KV,1A,DO-41,TP	1		
.....5	0402-000351	DIODE-RECTIFIER	1N4937,600V,1A,DO-41,TP	3		
.....5	0402-001194	DIODE-RECTIFIER	SHG2D,200V,2A,-,TP	1		
.....5	0402-001404	DIODE-BRIDGE	GBJ1506,600V,15A,SIP-4,ST	1	E0001	
.....5	0103-002581	RESIN-PUR	CPU-55B/UEP 700FB,-,-,94V0	160.7		
.....5	0103-002582	RESIN-PUR	UEP 700FA/CPU-55A,-,-,94V0	80.3		
.....5	0201-001354	ADHESIVE-A.C.F	IR-100 BOND-EPOXY	1		
.....5	0205-001027	OIL-SILICON	G746,-,-	1		
.....5	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	8		
.....5	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	3		
.....5	0402-000137	DIODE-RECTIFIER	1N4007,1KV,1A,DO-41,TP	1		

## 8. ELECTRICAL PARTS LIST

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
.....5	0402-000351	DIODE-RECTIFIER	1N4937,600V,1A,DO-41,TP	3		
.....5	0402-001194	DIODE-RECTIFIER	SHG2D,200V,2A,-,TP	1		
.....5	0402-001404	DIODE-BRIDGE	GBJ1506,600V,15A,SIP-4,ST	1	E0001	
.....5	0403-000537	DIODE-ZENER	1N4749A,5%,1000mW,DO-41,TP	1		
.....5	0501-000316	TR-SMALL SIGNAL	KSA928A-Y,PNP,1000mW,TO-	2		
.....5	0504-001080	TR-DIGITAL	KRC246S,NPN,200mW,2.2K/10K,SO	2	E0002	
.....5	0604-000118	PHOTO-COUPLER	TR,20-300%,200mW,DIP-4,ST	3		
.....5	0801-000168	IC-CMOS LOGIC	4069,INVERTER,SOP,14P,150M	1	Y0050	
.....5	1103-001183	IC-EEPROM	24C04,512x8,SOP,8P,5x4mm,2.5/5	1	Y0053	
.....5	1202-000001	IC-VOLTAGE COMP.	7533,TO-92,3P,-,SINGLE,	1		
.....5	1404-000230	THERMISTOR-PTC	27ohm,20%,-,265V,1.5A,360	1	Y0088	
.....5	2001-000110	R-CARBON	100HM,5%,1/4W,AA,TP,2.4X6.4MM	3		
.....5	2001-000561	R-CARBON	27KOHM,5%,1/4W,AA,TP,2.4X6.4MM	1		
.....5	2001-001153	R-CARBON(S)	47ohm,5%,1/2W,AA,TP,2.4x6.4m	2		
.....5	2002-000321	R-COMPOSITION	1.5MOHM,5%,1/4W,AA,TP,2.5X	3		
.....5	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x1	1		
.....5	2003-002036	R-METAL OXIDE(S)	51Kohm,5%,2W,AA,TP,4x12	6		
.....5	2003-002299	R-METAL OXIDE	240KOHM,5%,1W,AC,TP,3.3X9.	2		
.....5	0402-000351	DIODE-RECTIFIER	1N4937,600V,1A,DO-41,TP	3		
.....5	0402-001194	DIODE-RECTIFIER	SHG2D,200V,2A,-,TP	1		
.....5	0402-001404	DIODE-BRIDGE	GBJ1506,600V,15A,SIP-4,ST	1	E0001	
.....5	0403-000537	DIODE-ZENER	1N4749A,5%,1000mW,DO-41,TP	1		
.....5	0501-000316	TR-SMALL SIGNAL	KSA928A-Y,PNP,1000mW,TO-	2		
.....5	0504-001080	TR-DIGITAL	KRC246S,NPN,200mW,2.2K/10K,SO	2	E0002	
.....5	0604-000118	PHOTO-COUPLER	TR,20-300%,200mW,DIP-4,ST	3		
.....5	0801-000168	IC-CMOS LOGIC	4069,INVERTER,SOP,14P,150M	1	Y0050	
.....5	1103-001183	IC-EEPROM	24C04,512x8,SOP,8P,5x4mm,2.5/5	1	Y0053	
.....5	1202-000001	IC-VOLTAGE COMP.	7533,TO-92,3P,-,SINGLE,	1		
.....5	1404-000230	THERMISTOR-PTC	27ohm,20%,-,265V,1.5A,360	1	Y0088	
.....5	2001-000110	R-CARBON	100HM,5%,1/4W,AA,TP,2.4X6.4MM	3		
.....5	2001-000561	R-CARBON	27KOHM,5%,1/4W,AA,TP,2.4X6.4MM	1		
.....5	2001-001153	R-CARBON(S)	47ohm,5%,1/2W,AA,TP,2.4x6.4m	2		
.....5	2002-000321	R-COMPOSITION	1.5MOHM,5%,1/4W,AA,TP,2.5X	3		
.....5	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x1	1		
.....5	2003-002036	R-METAL OXIDE(S)	51Kohm,5%,2W,AA,TP,4x12	6		
.....5	2003-002299	R-METAL OXIDE	240KOHM,5%,1W,AC,TP,3.3X9.	2		
.....5	2004-000218	R-METAL	10Kohm,1%,1/8W,AA,TP,1.8x3.2mm	1		
.....5	2007-000293	R-CHIP	100ohm,5%,1/4W,TP,3216	10		
.....5	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	11		
.....5	2007-000468	R-CHIP	1Kohm,5%,1/8W,TP,2012	11		
.....5	2007-000477	R-CHIP	1Mohm,5%,1/8W,TP,2012	2		
.....5	2007-000496	R-CHIP	2.2Kohm,5%,1/4W,TP,3216	2		
.....5	2007-000546	R-CHIP	20Kohm,5%,1/8W,TP,2012	2		
.....5	2007-000575	R-CHIP	220ohm,5%,1/4W,TP,3216	9		
.....5	2007-000671	R-CHIP	2Kohm,5%,1/8W,TP,2012	1		
.....5	2007-000872	R-CHIP	4.7Kohm,5%,1/8W,TP,2012	10		
.....5	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1		
.....5	2009-001121	R-METAL PLATE	0.03OHM,5%,5W,CL,BK,26X5X1	1		
.....5	2201-000879	C-CERAMIC,DISC	2.2NF,10%,1KV,Y5P,BK,10X4	1		
.....5	2202-000127	C-CERAMIC,MLC-AXIAL	10nF,+80-20%,25V,Y5V	3		
.....5	2203-000206	C-CER,CHIP	100nF,10%,50V,X7R,2012	22		
.....5	2203-000239	C-CER,CHIP	0.1nF,5%,50V,C0G,2012	1		
.....5	2203-000260	C-CER,CHIP	10nF,10%,50V,X7R,2012	7		
.....5	2203-000444	C-CER,CHIP	1nF,10%,50V,X7R,2012	4		
.....5	2203-000889	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,2012	3		
.....5	2301-000131	C-FILM,LEAD-PEF	100nF,5%,630V,TP,27.5x12	1		
.....5	2401-000598	C-AL	1uF,20%,50V,GP,TP,4x7,5	1		
.....5	2401-001573	C-AL	47uF,20%,50V,GP,TP,6.3x11,2.5	1		
.....5	2401-001998	C-AL	1000uF,20%,25V,GP,TP,10x20,5mm	2		
.....5	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5	4		
.....5	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11,5,5	1		
.....5	2401-003862	C-AL	820UF,20%,250V,GP,BK,30X40MM,1	2		

## 8. ELECTRICAL PARTS LIST

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
....5	2802-001202	RESONATOR-CERAMIC	16MHZ,±0.5%,TP,5.5X6.	1	Y0115	
....5	3002-001080	BUZZER-PIEZO	85DB,12V,-,2.0KHZ,ST	1		
....5	3501-001154	RELAY-MINIATURE	12Vdc,200mW,3000mA,1Form	8	Y0118	
....5	3501-001269	RELAY-POWER	12VDC,-,25000MA,1FORMA,20MS,	1	Y0116	
....5	3501-001272	RELAY-POWER	12VDC,-,25000mA,1FormA,20mS,	1	Y0116	
....5	3601-001168	FUSE	250V,8A,FAST-ACTING,-,5.6x21mm	1		
....5	3711-000833	HEADER-BOARD TO CABLE	BOX,2P,1R,8MM,STRA	1		
....5	3711-004783	HEADER-BOARD TO CABLE	BOX,8P,2R,4.2mm,ST	1		
....5	3711-004929	HEADER-BOARD TO CABLE	BOX,3P,1R,10MM,STR	2		
....5	3711-005680	CONNECTOR-HEADER	BOX,5P,1R,2.5mm,STRAIGH	1	Y0117	
....5	3711-005688	HEADER-BOARD TO CABLE	BOX,13P,1R,2.5mm,S	2		
....5	3711-005695	HEADER-BOARD TO CABLE	BOX,9P,1R,2.5mm,ST	1		
....5	3711-005699	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5mm,ST	1		
....5	3711-005706	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,ST	1		
....5	6001-000115	SCREW-MACHINE	BH,+ ,M3,L10,ZPC(YEL),SWRCH	2		
....5	DC13-00071A	PLD-MICOM	TMP88PS43F/OTP,QFP,80PIN	1	C0010	
....5	DC13-00160A	IC HYBRID	BP5049-15,IC HYBRID,7 PIN,-,25	1	Y0049	
....5	DC13-00161A	IC HYBRID-IPM	PS21963,-,25,-,20~100,DIP,1	1		
....5	DC26-00023A	TRANS SWITCHING	EE2229,MES-5HR123A-00,K1	1	Y0090	
....5	DC41-00046A	PCB-MAIN	FRONTIER,FR-4,NL 1,-,T1.6,D 19	1		
....5	DC61-01164A	GUIDE-PCB	GW-PJT,ABS(V0),-,-,-,NTR,STAND	1	Y0002	
....5	DC62-00208A	HEAT SINK	MA8800AW,AL,T2,W30,L35,WHT,-,C	1	Y0044	
....5	DC62-00232A	HEAT SINK	FRONTIER,-,-,W40,L115,BLK,-,-,	1	Y0044	
....5	DE02-00036A	CHEMICALS-FLUX SOLDER	KS-77S,-,-,-,-,KOK	5		
....5	DE02-00060A	CHEMICALS-ALCOHOL	ALL_MODEL,-,-,-,-,-,-	1		
....5	DE02-00083A	SOLDER-WIRE	S63S,D3.0,-,-,-,-,-,-	20		
....5	DE02-00086A	SOLDER-WIRE FLUX	RS60S,-,D1.2,60SN/40PB,	1		
....5	DE13-20016A	IC-VOLT REGU	KA7805A,TO-220AB,1A,0/125C,	1	Y0057	
....5	DE13-20017A	IC-DRIVE	KID65003AP,DIP,16P,STICK,TR-AR	2	Y0052	
....5	DE39-60001A	WIRE-SO COPPER	PI0.6,SN,T,52MM TAPING W	7		
....5	2401-000455	C-AL	10uF,20%,35V,GP,TP,4x7mm,5	1		
..2	DC99-00739A	ASSY-CUSHION BOTTOM	WF316LAW,LOWES	1	X0049	
...3	DC69-00966A	CUSHION-BOTTOM	WF-G126,PS-FOAM,-,-,-,-,-	1	X0007	
...3	DC69-90008A	TAPE-OPP	-,-,-,-,W50,-,-,YEL/WHT,-,-	2		
0.1	DC97-10567A	ASSY-COVER DRUM	WF326LAW,FRONTIER	1	R0010	
..2	DC66-10003B	WIRE-VINYL	SEW-100JL,PVC,-,T2.0*L150,-	2		
...3	DC97-10417A	ASSY-GUIDE WATER	WF326LAW,FRONTIER	1	R0021	
....4	DC61-01530A	GUIDE-WATER(U)	WF326LAW,ABS,-,-,-,-,20X8	1	R0088	
....4	DC61-01531A	PLATE-SILVER	WF326LAW,SIL,T0.8,W80,H20,S	2	R0111	
....4	DC61-01558A	GUIDE-WATER(L)	WF-G126AW,ABS,-,-,-,-,20X	1	R0087	
....4	DC61-01168A	HOUSING-DRAWER(M)	GW-PJT,PP(TB-53),-,-,-	1	R0097	
....4	DC61-01169A	HOUSING-DRAWER(U)	GW-PJT,PP(TB-53),-,-,-	1	R0098	
..2	DC97-08632A	ASSY-GUIDE WIRE	WINGS-PJT,SPONGE/HOLDER	1		
...3	DC61-01403A	BRACKET-ABSORBER	GW27,SBHG1-A,T1.0,W170,	1	U0378	
...3	DC61-01404A	SPRING-ABSORBER	GW-PJT,SWC,CD2,ID16,OD20	8	U0379	
...3	DC67-00170A	WEIGHT-ABSORBER	GW-PJT,ZNDC,WEIGHT390G,-	1		
...3	DC67-00170B	WEIGHT-ABSORBER	GW-PJT,ZNDC,WEIGHT305G,-	1		
...3	0103-002581	RESIN-PUR	CPU-55B/UEP 700FB,-,-,94V0	20		
...3	0103-002582	RESIN-PUR	UEP 700FA/CPU-55A,-,-,94V0	30		
...3	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	2		
...3	0402-000137	DIODE-RECTIFIER	1N4007,1KV,1A,DO-41,TP	4		
...3	0402-001194	DIODE-RECTIFIER	SHG2D,200V,2A,-,TP	1		
...3	0403-000161	DIODE-ZENER	1N4751,28.5-31.5(5%),1000MW,	2		
...3	0501-000316	TR-SMALL SIGNAL	KSA928A-Y,PNP,1000mW,TO-	4		
...3	0604-000139	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST	5		
...3	1203-000259	IC-POSI.FIXED REG.	7818,TO-220,3P,-,PLAS	1		
...3	1203-002545	IC-PWM CONTROLLER	266,DIP,8P,300MIL,PLAS	1	Y0055	
...3	1404-000230	THERMISTOR-PTC	27ohm,20%,-,265V,1.5A,360	1	Y0088	
...3	2001-000009	R-CARBON	20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1		
...3	2001-000023	R-CARBON	47OHM,5%,1/4W,AA,TP,2.4X6.4MM	1		
...3	2001-000028	R-CARBON(S)	100OHM,5%,1/2W,AA,TP,2.4X6.4	2		
...3	2001-000034	R-CARBON	220OHM,5%,1/4W,AA,TP,2.4X6.4MM	1		
...3	2001-000085	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4X6.	1		

## 8. ELECTRICAL PARTS LIST

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
...3	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	4		
...3	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	12		
...3	2003-000616	R-METAL OXIDE(S)	27ohm,5%,2W,AA,TP,4x12m	1		
...3	2006-001083	R-CEMENT	120ohm,5%,5W,CJ,TP,14x10x27mm	1		
...3	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,1	1		
...3	2201-000879	C-CERAMIC,DISC	2.2NF,10%,1KV,Y5P,BK,10X4	1		
...3	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	2		
...3	2401-000455	C-AL	10uF,20%,35V,GP,TP,4x7mm,5	2		
...3	2401-000598	C-AL	1uF,20%,50V,GP,TP,4x7,5	1		
...3	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	4		
...3	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	12		
...3	2003-000616	R-METAL OXIDE(S)	27ohm,5%,2W,AA,TP,4x12m	1		
...3	2006-001083	R-CEMENT	120ohm,5%,5W,CJ,TP,14x10x27mm	1		
...3	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,1	1		
...3	2201-000879	C-CERAMIC,DISC	2.2NF,10%,1KV,Y5P,BK,10X4	1		
...3	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	2		
...3	2401-000455	C-AL	10uF,20%,35V,GP,TP,4x7mm,5	2		
...3	2401-000598	C-AL	1uF,20%,50V,GP,TP,4x7,5	1		
...3	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	4		
...3	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	12		
...3	2003-000616	R-METAL OXIDE(S)	27ohm,5%,2W,AA,TP,4x12m	1		
...3	2006-001083	R-CEMENT	120ohm,5%,5W,CJ,TP,14x10x27mm	1		
...3	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,1	1		
...3	2201-000879	C-CERAMIC,DISC	2.2NF,10%,1KV,Y5P,BK,10X4	1		
...3	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	2		
...3	2401-000455	C-AL	10uF,20%,35V,GP,TP,4x7mm,5	2		
...3	2401-000598	C-AL	1uF,20%,50V,GP,TP,4x7,5	1		
...3	2401-001573	C-AL	47uF,20%,50V,GP,TP,6.3x11,2.5	1		
...3	2401-001778	C-AL	470uF,20%,25V,GP,TP,10x16,5	1		
...3	2401-003505	C-AL	10uF,20%,450V,GP,TP,10X20mm,5	1		
...3	3711-004929	HEADER-BOARD TO CABLE	BOX,3P,1R,10MM,STR	1		
...3	3711-005695	HEADER-BOARD TO CABLE	BOX,9P,1R,2.5mm,ST	1		
...3	DC26-00025A	TRANS SWITCHING	EE1616-H,AG-KIT,-,80 ~ 1	1	Y0090	
...3	DC27-00003A	COIL-INDUCTOR	ADR3102J,1000uH,5%,radial,	1		
...3	DC41-00041A	PCB-MAIN	2ND AG-KIT/HI ACTIVE,FR-1,1,-,	1		
...3	DC61-01519A	GUIDE-PCB(S)	WF-G126AW,HIPS(V0),T2.8,-,-	1		
...3	DE02-00083A	SOLDER-WIRE	S63S,D3.0,-,-,-,-,-,-	1		
...3	DE02-00086A	SOLDER-WIRE FLUX	RS60S,-,D1.2,60SN/40PB,	1		
...3	DE13-20007A	IC-OP AMP	KA2904,DIP,-,-,-,-,-	1		
...3	DE13-20025A	IC-LINEAR	LM393/A,DIP,COMPARATOR,-,-,-,-	1	Y0054	
...3	DE39-60001A	WIRE-SO COPPER	,PI0.6,SN,T,52MM TAPING W	10		
...3	DE70-00179A	PIN-EYELET	-,BRASS,-,-,-,ID1.5 OD2.8	3		
...3	0103-002581	RESIN-PUR	CPU-55B/UEP 700FB,-,-,94V0	12		
...3	0103-002582	RESIN-PUR	UEP 700FA/CPU-55A,-,-,94V0	8		
...3	0201-001354	ADHESIVE-A.C.F	IR-100 BOND-EPOXY	1		
...3	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	1		
...3	2007-000033	R-CHIP	0ohm,5%,1/4W,TP,3216	1		
...3	2007-000293	R-CHIP	100ohm,5%,1/4W,TP,3216	1		
...3	2007-000872	R-CHIP	4.7Kohm,5%,1/8W,TP,2012	3		
...3	2203-000206	C-CER,CHIP	100nF,10%,50V,X7R,2012	3		
...3	2203-000260	C-CER,CHIP	10nF,10%,50V,X7R,2012	2		
...3	2401-000455	C-AL	10uF,20%,35V,GP,TP,4x7mm,5	2		
...3	3711-005706	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,ST	1		
...3	DC32-00011A	SENSOR-MEMS	LIS2L02AS4,MAH9600,-40 to 85	1		
...3	DC41-00047A	PCB-SUB	MFS-MEMS-00,FR-1,1.5,T1.6,-,-,	1		
...3	DC61-01562A	GUIDE-PCB(M)	WF326LAW,PP,T2.8,-,-,NTR,ME	1	Y0003	
...3	DE02-00036A	CHEMICALS-FLUX SOLDER	KS-77S,-,-,-,-,KOK	1		
...3	DE02-00060A	CHEMICALS-ALCOHOL	ALL,MODEL,-,-,-,-,-,-	1		
...3	DE02-00083A	SOLDER-WIRE	S63S,D3.0,-,-,-,-,-,-	5		
...3	DE02-00086A	SOLDER-WIRE FLUX	RS60S,-,D1.2,60SN/40PB,	1		
...3	DE13-20007A	IC-OP AMP	KA2904,DIP,-,-,-,-,-	1		
...3	DE39-60001A	WIRE-SO COPPER	,PI0.6,SN,T,52MM TAPING W	1		

## 8. ELECTRICAL PARTS LIST

Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
..2	DC97-07130A	ASSY-TUB BACK	GW-PJT,WASH-ONLY	1	U0013	
...3	6011-001553	BOLT-ETC	M7.5,L30,ZPC3(WHT),SWRCH18A,HE	20	U0097	
...3	6601-001207	BEARING-BALL	6307ZZ,ID35,OD80,L21,STS304	1		
...3	6601-001208	BEARING-BALL	6306ZZ,ID30,OD72,L19,STS304	1		
...3	DC97-08649A	ASSY-SEMI TUB BACK	WINGS-PJT,SAMBAK	1	U0078	
....4	DC61-01174A	TUB-BACK	GW-PJT,FRPP(GF15%),PI 602,PI 6	1	U0024	
....5	0103-002522	RESIN-FRPP	SUPRAN 2315SDR,NTR,2315SDR,-	5,395.00		
....4	DC61-40348B	BRACKET-NUT	SBHG-R,P1291,T3,-,-,NO-PAI	2	U0023	
....4	DC68-02060A	LABEL-TUB	W/M,-,YUPO,-,W60,L20,-,WHT,-,-	1		
....4	DC97-06991A	ASSY-HOUSING BEARING	GW-PJT,6306/6307ZZ	1	U0017	
....5	6601-001338	BEARING-BALL	6207ZZ,ID35,OD72,L17,STS304	1		
....5	DC61-01178A	HOUSING-BEARING	GW-PJT,ALDC8,T5,W205,L11	1	U0021	
....5	DC61-01196A	BUSH-BEARING	GW-PJT,SMF-4030,SM15C,ID72,	1		
...3	DC66-10003B	WIRE-VINYL	SEW-100JL,PVC,-,T2.0*L150,-	1		
...3	DC66-00386A	DRUM-FRONT	GW-PJT,STS430 H/L NO4,-,ID561	1	R0002	
...3	DC66-00387A	DRUM-BACK	GW-PJT,STS430 H/L NO4,ID561,OD	1	R0005	
...3	DC66-00388B	DRUM-WRAPPER	GW-PJT,STS430 H/L NO4,T0.6,	1	R0003	
....4	DC60-00037A	FLANGE-SHAFT	GW-PJT,ALDC,T3.5,-,-,NTR,	1	R0009	
....4	DC97-07098A	ASSY-SHAFT	GW-PJT,DD-TYPE(3.3)	1	R0028	
....5	DC61-00841A	BUSH-SHAFT	TS85-PJT,ALDC,-,-,-,-,-	1	U0377	
....5	DC66-00384A	SHAFT	GW-PJT,SM45C,L219.9,OD 35,NTE,	1		
..2	DC97-07131A	ASSY-TUB FRONT	GW-PJT,3.3CuFt	1	U0026	
...3	DC61-00118A	CLAMPER HOSE	P1291,LYLON6/6,ID27,OD30,-,	1	N0012	
...3	DC97-08633A	ASSY-HOSE PRESSURE	WINGS-PJT,PU/TUB-FR	1	I0044	
....4	DC67-00194A	HOSE-PVC	MAH9700AWW,PVC,-,O26.4,T0.7,L6	1		
....4	DC63-10056P	SPONGE-CUSHION	SEW-3HR125,KIMOJI-PU-FOAM	2	A0365	
....4	DC61-01173A	TUB-FRONT	GW-PJT,FRPP(GF15%),ID602,OD608	1	U0030	
....5	0103-002522	RESIN-FRPP	SUPRAN 2315SDR,NTR,2315SDR,-	2,430.00		
....4	DC61-40348B	BRACKET-NUT	SBHG-R,P1291,T3,-,-,NO-PAI	6	U0023	
...3	DC66-10003B	WIRE-VINYL	SEW-100JL,PVC,-,T2.0*L150,-	4		
...3	6502-000168	CABLE CLAMP	DA-6N,ID10.0,T1.0,NYLON6/6,N	1	U0363	
....4	6011-001556	BOLT-HEX	M4,L60,ZPC3(WHT),SM10C,-	1	U0320	
....4	DC60-50010A	NUT-DIAPHRAGM	EGI,M4,-,-,2.5TX20X8	1	U0204	
....4	DC60-50010B	NUT-DIAPHRAGM	EGI,M4.2,-,-,2.5TX20X8	1	U0204	
....4	DC61-01498B	BRACKET-WIRE	ALL MODEL,SCP,T0.5,-,L58.4,	1		
....4	DC66-10001F	WIRE-DIAPHRAGM	WINGS-PJT,HSWR,-,OD2,L147	1	U0276	
0.1	DC97-10569A	ASSY-CASE	WF326LAW,FRONTIER	1	A0001	
..2	0203-001508	TAPE-OPP	W50,,YEL	0.8		
..2	6801-001310	CARD-REGISTRATION	USA,XAA,ENGLISH,MOJOJI	1	V0007	
..2	6902-000009	BAG PE	HDPE,T0.03,L400,W240,TRP,8,2,P	1		
..2	6902-000215	BAG SHEET	NITRON/HDPE,T0.5/T0.012,W1000,	1		
..2	DC65-60115A	BAND-PP	-,PP,T0.8,W17.5,-,WHT,-	14.2		
..2	DC68-02173A	LABEL-PACKING	W/M,-,ART,-,W90,L175,-,WHT	1		
..2	DC68-02217A	LABEL-WARNING	MAYTAG,-,ART+LAMI,-,W108,L	1	V0004	
..2	DC68-02219A	LABEL-WARNING	MAYTAG,-,ART+LAMI,-,W170,L	1	V0004	
..2	DC68-02291A	MANUAL-BOOK	WF326,SEA,ENGLISH,U.S,100MOJ	1	A0243	
..2	DC68-02294A	LABEL-ENERGY	WF326,SEA,ART,-,-,-,-,COV	1	V0005	
..2	DC68-02295A	LABEL RATING	WF326,SEA,YUPO,-,W25,L110,-	1	V0002	
..2	DC68-02296A	MANUAL-GUIDE	WF326,SEA,ENGLISH,U.S,100MO	1		
..2	DC68-02297A	LABEL-CAUTION	WF326,SEA,ART+LAMI,-,-,-,-	1	A0244	
..2	DC68-02298A	LABEL-POWER CORD	WF326,SEA,ART+LAMI,-,W1	1		
..2	DC68-02299A	LABEL-CLEARANCE	WF326,-,ART+LAMI,-,-,-,-	1		
..2	DC68-02300A	LABEL-WARNING	WF326,SEA,ART+LAMI,-,W230,	1	V0004	
..2	DC68-02301A	LABEL-HOSE	WF326,SEA,ART+LAMI,-,W285,L48	1		
..2	DC68-20091B	LABEL-BAR CODE	MOJO,W32,L125.5,-,-	1		
..2	DC69-90009A	TAPE-SCOTCH PAR	FILAMENT-TAPE,-,W50,-,-	1.2		
..2	DC99-00646A	ASSY-ACCESSORY	MAH9700AWW,WINGS-PJT	1		
...3	6902-000212	BAG PE	HDPE,T0.03,W350,L450,TRP,8,2	1		
...3	6902-000304	BAG PE	LDPE,T0.05,L230,W180,TRP,8,2,P	1		
0.1	DC99-00693A	ASSY-PAINT	WF316LAW,NEAT-WHT	1	F0062	
..2	DC61-00118A	CLAMPER HOSE	P1291,LYLON6/6,ID27,OD30,-,	1	N0012	
..2	DC61-00133A	CLAMPER HOSE	P1291,PP(BJ-730),ID24.5,OD2	1	N0001	
..2	DC61-01256A	GUIDE-SPRING	GW-PJT,POM,-,-,-,NTR,-	2	A0352	

## 8. ELECTRICAL PARTS LIST

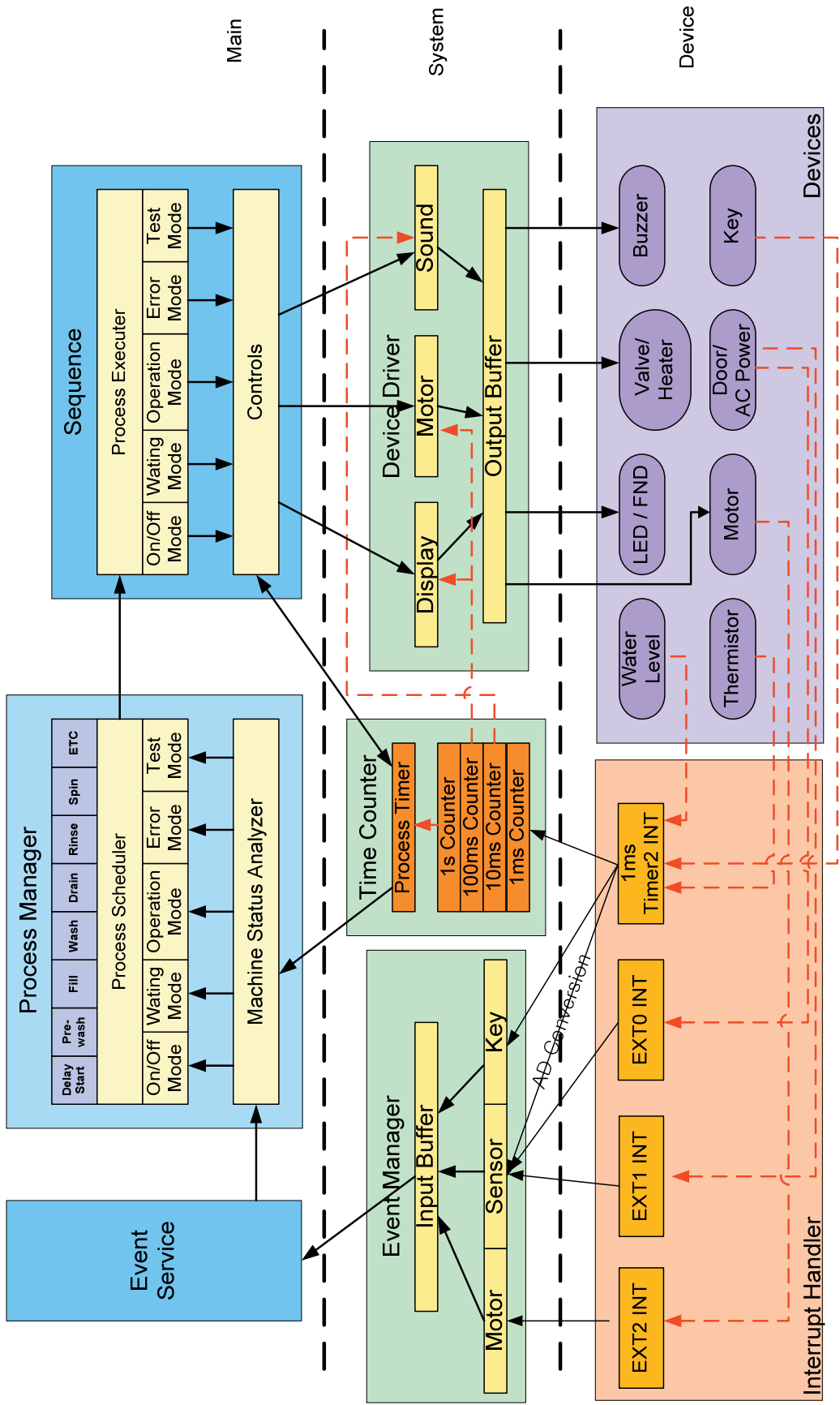
Level	CODE NO.	DESCRIPTION	SPECIFICATION	QTY	SVC-Code	SA
..2	DC72-00013D	SPONGE-HARNESS	SEW-5G105A,PU-FOAM,-,T10,	4	W0059	
...3	6002-001294	SCREW-TAPPING	BH,+,,M4,L16,ZPC(BLK)	3	Z0062	
...3	DC31-00054A	PUMP-DRAIN	-,120V,60Hz,40mm,80W/3600RPM	1	J0025	
...3	DC61-01254A	CASE-PUMP	WINGS-PJT,PP(5113MF6),T3,W110,	1	J0019	
...3	DC72-00034E	SPONGE-EPDM	MAH9700,EPDM,-,T1.0,W15,L100	1	D0111	
...3	6041-001035	RIVET-RH	K1661-0512,AL(A5052),OD3.9,L11	4	F0117	
...3	DC61-01180A	FRAME	WINGS-PJT,PCM,-,-,WHT,T1.0,-,-	1	F0094	
....4	DC61-01405A	PLATE-STEEL	WINGS-PJT,SBHG1-A,T1.0,W961.	1	Y0159	
...3	DC61-01182B	BRACKET-SPRING(L)	WINGS-PJT,SBHG1-A,T1.6	1	F0079	
...3	DC61-01183B	BRACKET-SPRING(R)	WINGS-PJT,SBHG1-A,T1.6	1	U0364	
...3	DC97-06994A	ASSY-PLATE BOTTOM	GW-PJT,SBHG1-A/T1.6	1	F0066	
....4	DC61-01181A	PLATE-BOTTOM	GW-PJT,SBHG1-A,T1.6,W682,L6	1	X0014	
....4	DC61-01552A	BRACKET-LEG	WINGS-PJT,SWRCH6A,T2.0,-,-,Y	4	B0075	
...3	DC61-01290A	BUSH-HOSE(L)	WINGS-PJT,TPE(EPDM+PP),-,-,	1	I0024	
...3	DC64-00970A	SHUTTER-SUDS	GW-PJT,PP,T1.0,W63,L66,NTR,	1		
...3	DC69-00920B	PACKING-SUDS	GW-PJT,EPDM,PACKING,T6.0,W6	1		
...3	DC72-00013E	SPONGE-HARNESS	MAH9700AWW,PU-FOAM,-,T10,	1	W0059	
...3	6021-001203	NUT-HEXAGON FLANGE	1C,M10,ZPC(YEL),SCP-1	1	B0076	
...3	DC61-01432A	LEG-RUBBER	MAH9700AWW,BUTYL,-,GRY,-,WING	1	B0073	

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**Memo**

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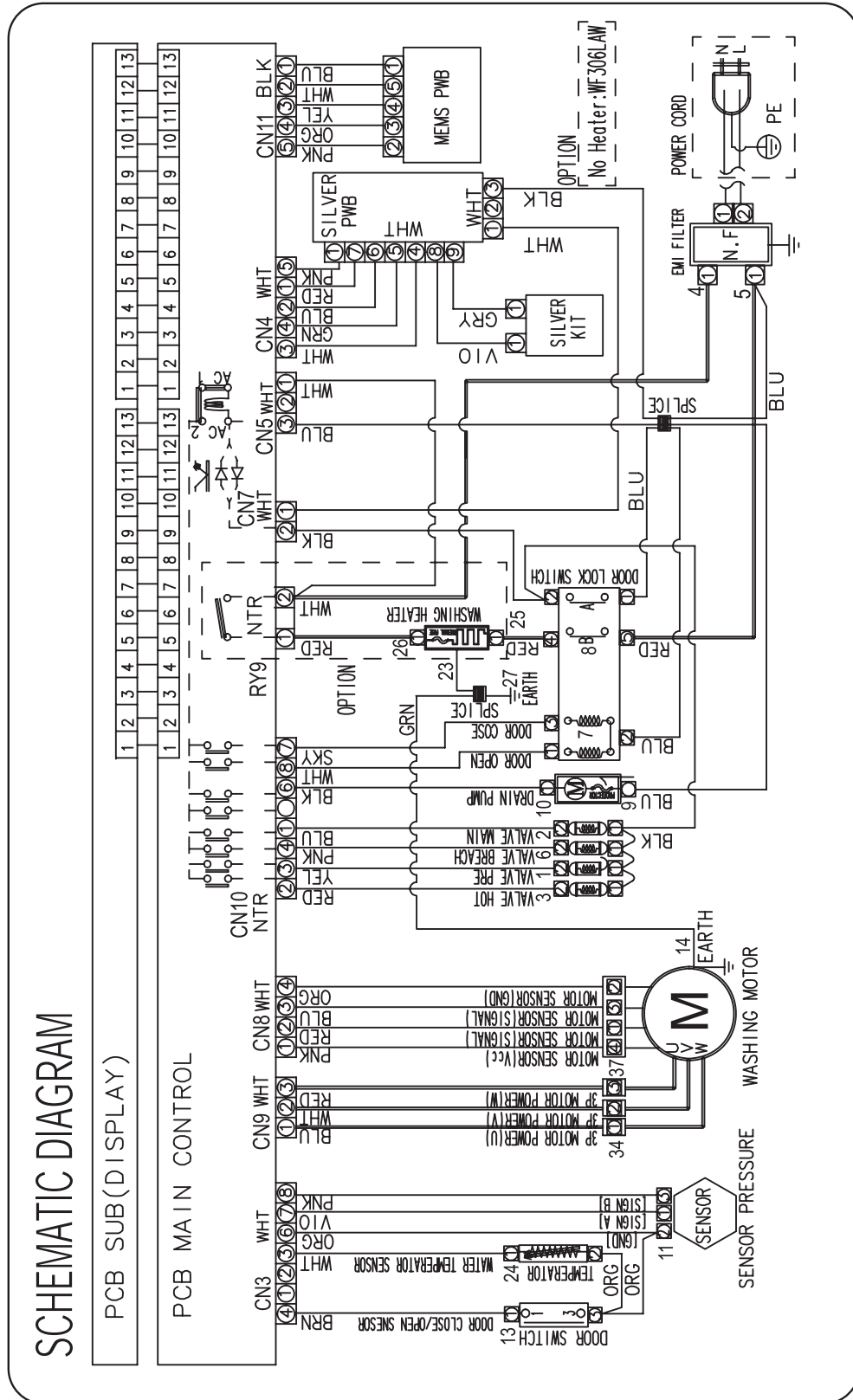
# 9. BLOCK DIAGRAM





# Memo

# 10. WIRING DIAGRAM



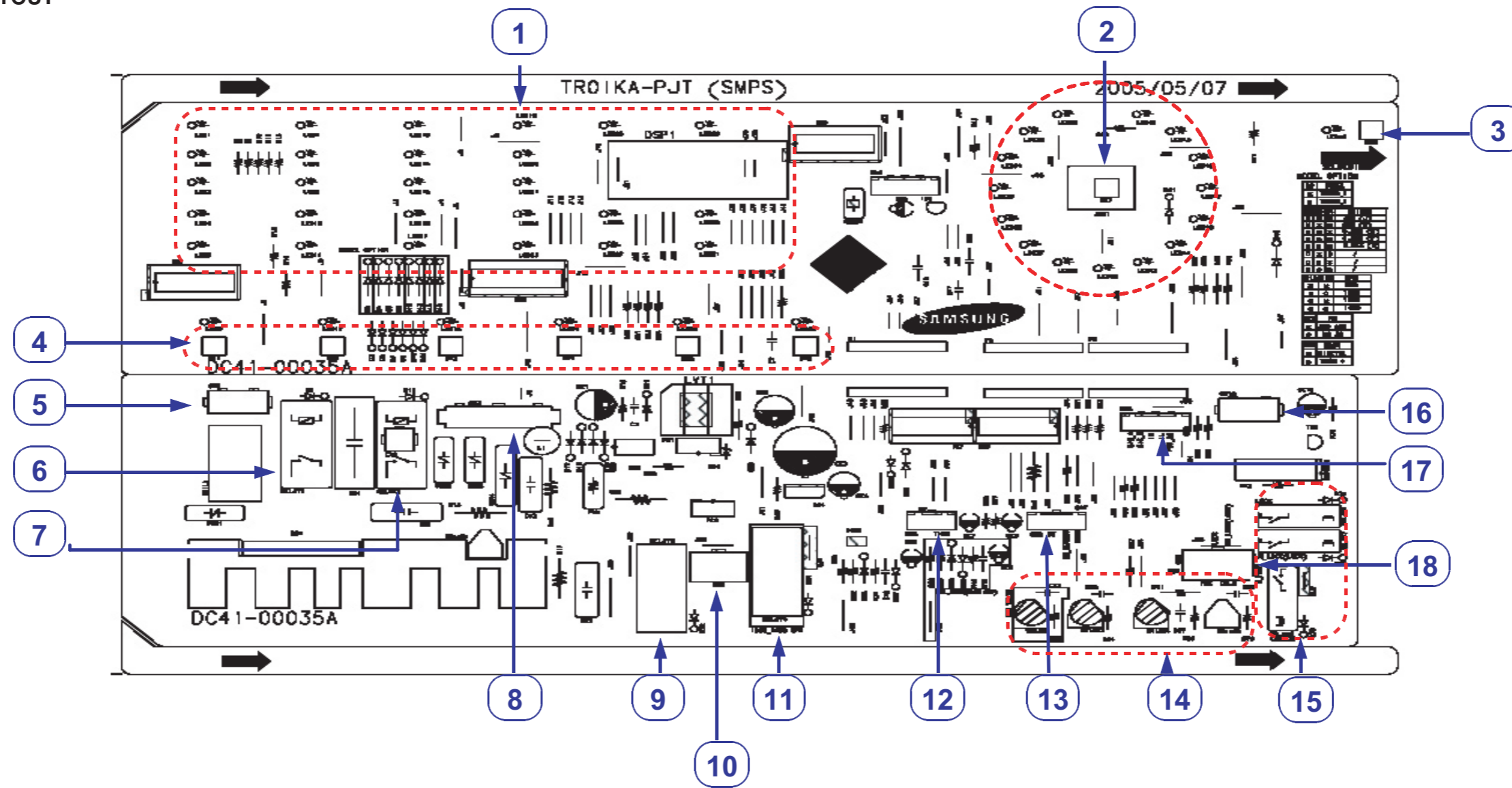
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# Memo

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# 11. PCB DIAGRAM

## 11-1 MAIN PCB LAYOUT

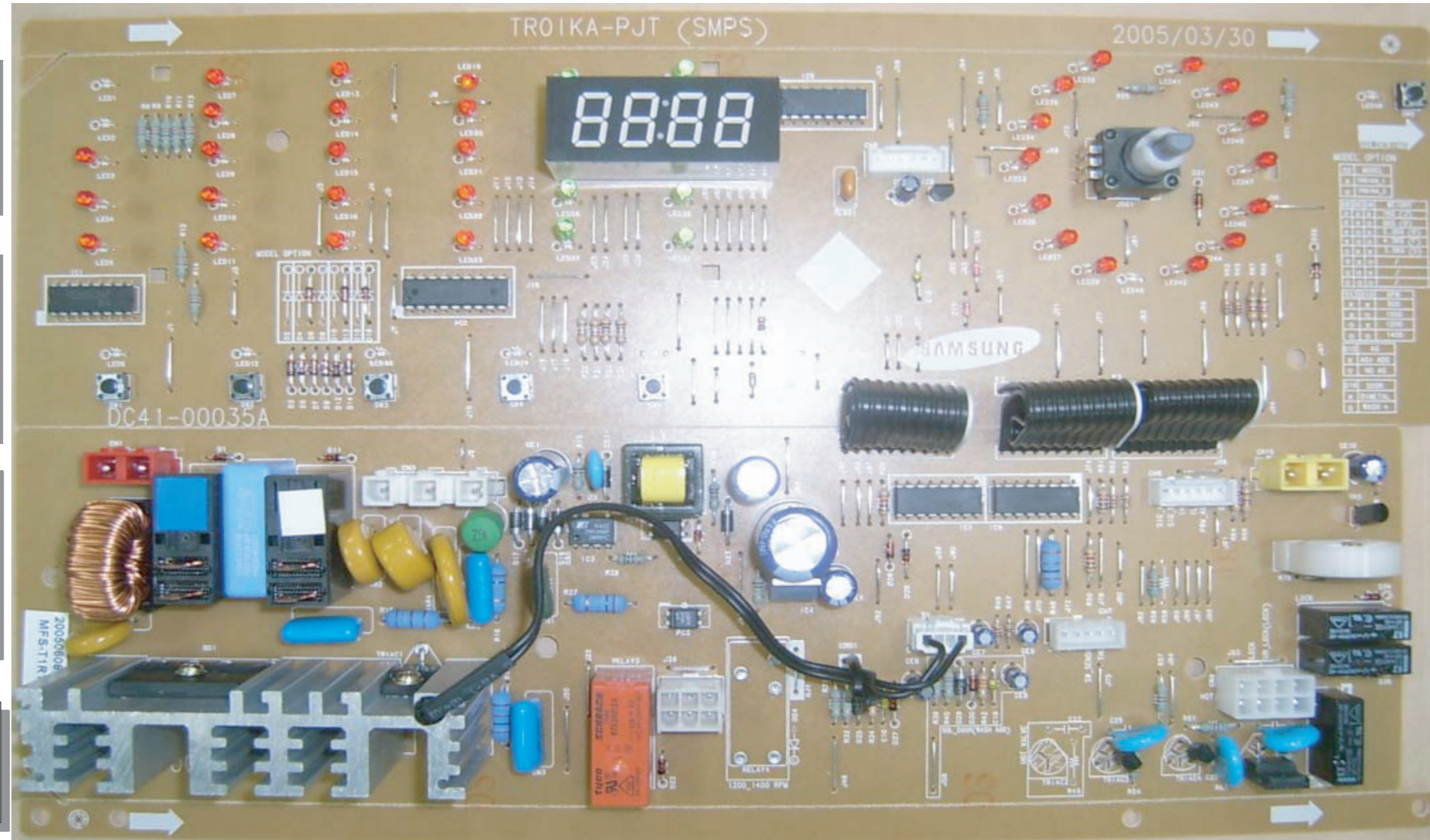


Item	Part Number	Description
1	Display	Displays or indicates operations or functions
2	Jog_Dial	Starts/stops an operation to select a course
3	Power_key	Turns the power on/off
4	Key	Selects and processes each function
5	CN1	Detects if the door is open or closed
6	RELAY1	In case of Power_On/Off, supplies or disconnects AC power
7	RELAY2	Disconnects Power from the Heater

Item	Part Number	Description
8	CN3	AC1과 GND를 연결함
9	RELAY3	Motor의 정/역 방향을 제어함
10	CN4	Motor의 동작 Wire를 연결함
11	RELAY4	고 RPM진행시 On/Off 제어함
12	CN6	Heat Sink의 온도Sensor를 연결함
13	CN7	수위,온도Sensor를 연결함
14	구동부	냉/온/Pre/Drain 동작용 부품

Item	Part Number	Description
15	Door System	Parts for Door Lock/Unlock
16	CN10	Connects Motor Tacho Sensor
17	CN8	Connects the silver nano wire
18	CN9	Connects the driving system wire

11-2 Connector & Relay Terminals Description (MAIN PCB)



**RELAY1**

- A) Connects to AC2
- B) Connects to AC2-1
- COMMON

**RELAY2**

- A) Connects to the HEATER
- B) Connects to the HEATER

**CN1**

- A) Connects to the DOOR LOCK Signal
- B) Connects to the DOOR LOCK Signal

**CN3**

- ② Connects to AC1
- ③ Connects to GROUND

**CN8**

- ① Connects to SIG-A
- ② Connects to SIG-B
- ③ Connects to IH
- ⑤ Connects to PWM
- ⑥ Connects to GROUND

**CN10**

- A) Connects to the TACHO SENSOR
- B) Connects to the TACHO SENSOR

**CN4**

- ① Connects to the MOTOR STATOR
- ③ Connects to the MOTOR STATOR
- ④ Connects to the MOTOR STATOR
- ⑤ Connects to the MOTOR STATOR
- ⑥ Connects to the MOTOR STATOR

**CN6**

- ① Connects to the TEMP SENSOR
- ④ Connects to the TEMP SENSOR

**CN7**

- ① Connects to GORUND
- ② Connects to 5V
- ③ Connects to 5V
- ④ Connects to the WATER SENSOR
- ⑤ Connects to the TEMP SENSOR

**CN9**

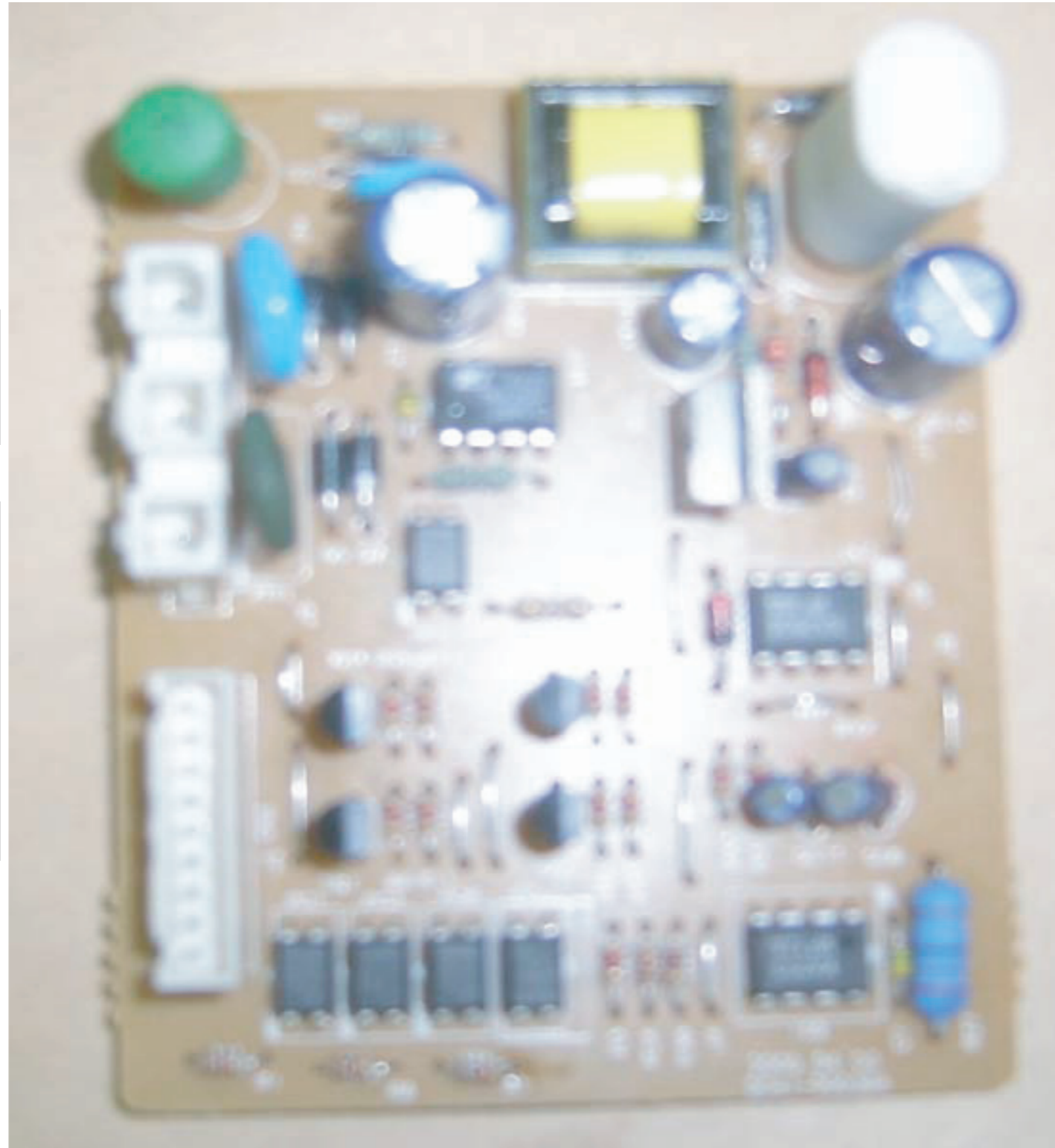
- ① Connects to the DRAIN-MOTOR
- ② Connects to the COLD VALVE
- ③ Connects to the PRE VALVE
- ④ Connects to the HOT VALVE
- ⑥ Connects to the ROLD DOOR S/W

**CN1**

- ①Connects to AC1
- ③Connects to AC2

**CN7**

- ①Connects to GORUND
- ②Connects to IH
- ③Connects to PWM
- ④Connects to SIGNAL-B
- ⑤Connects to SIGNAL-A
- ⑧Connects to AG-B
- ⑨Connects to AG-A



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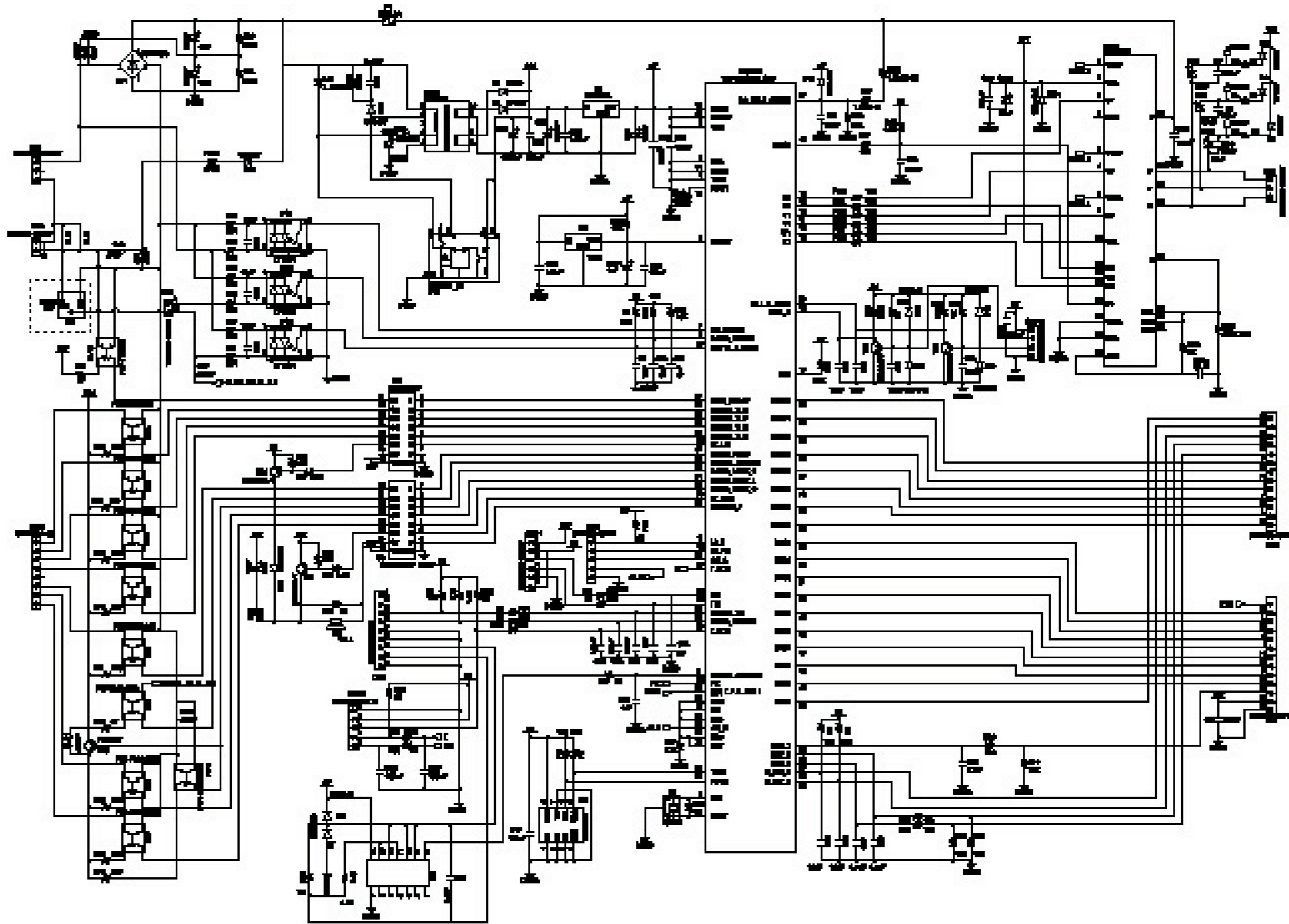
**Memo**

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## 12. SCHEMATIC DIAGRAMS

### 12-1. Main PCB

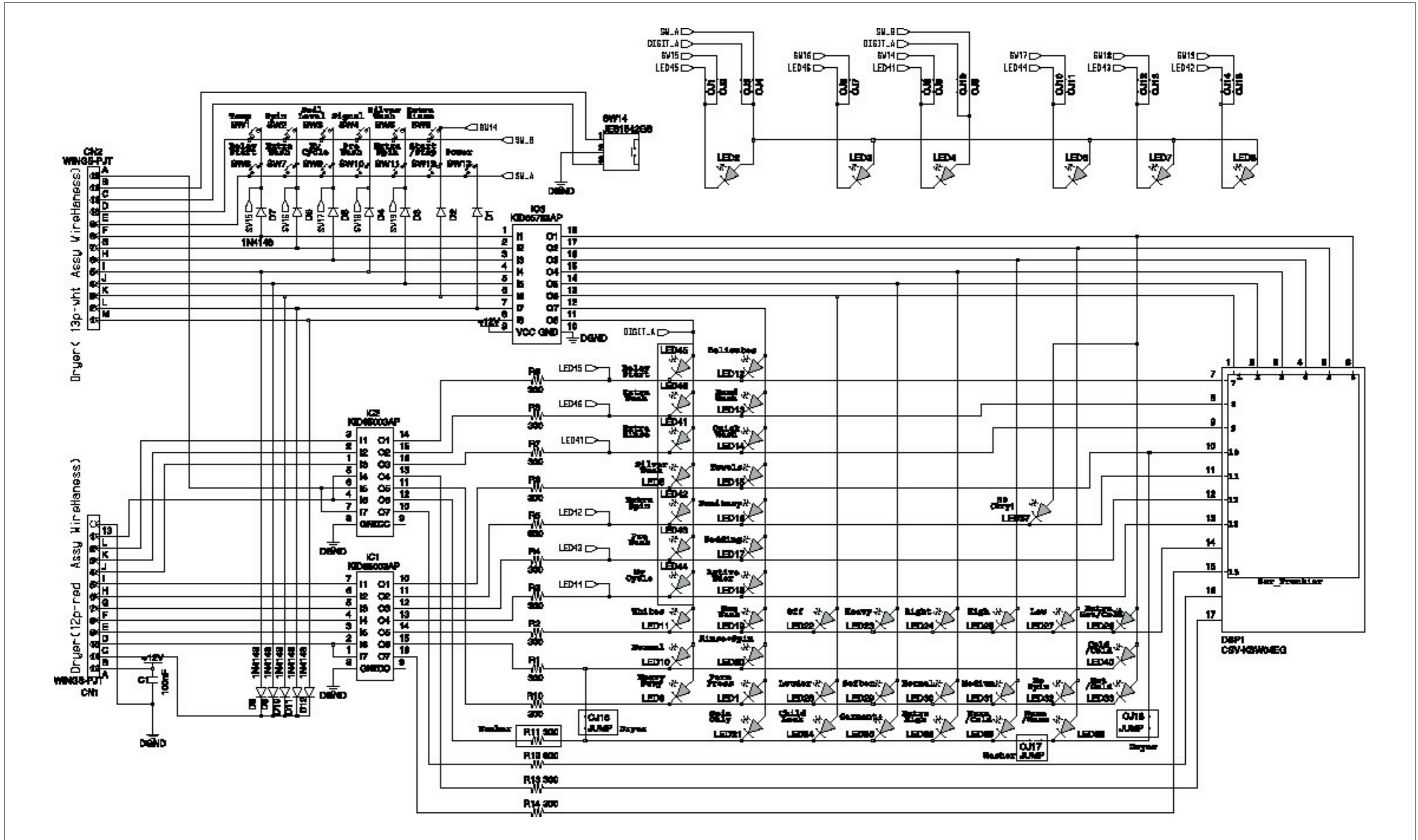
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## 12-2. SUB PCB

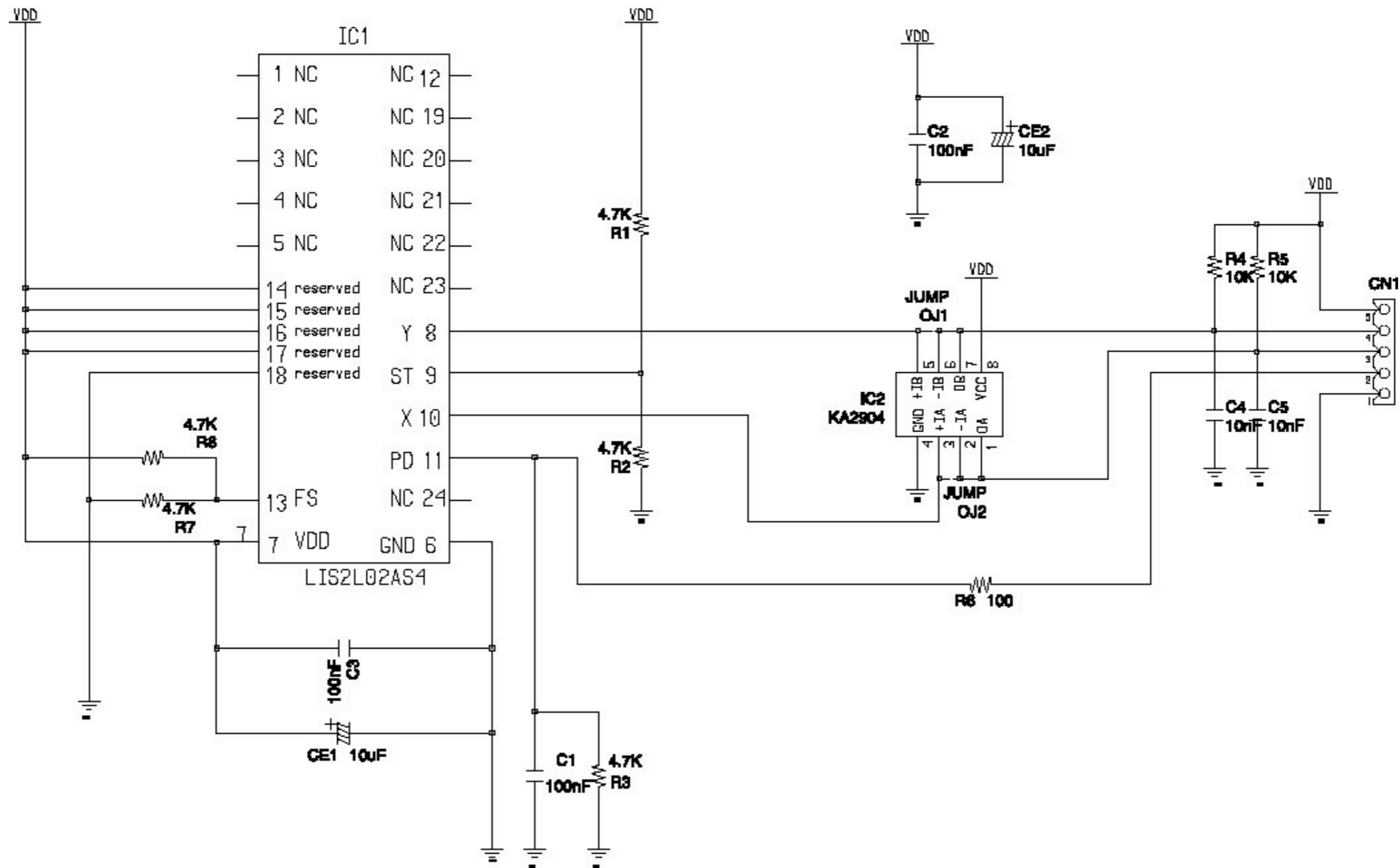
\* This Document can not be used without Samsung's authorization.



## 12-3. MEMS PCB

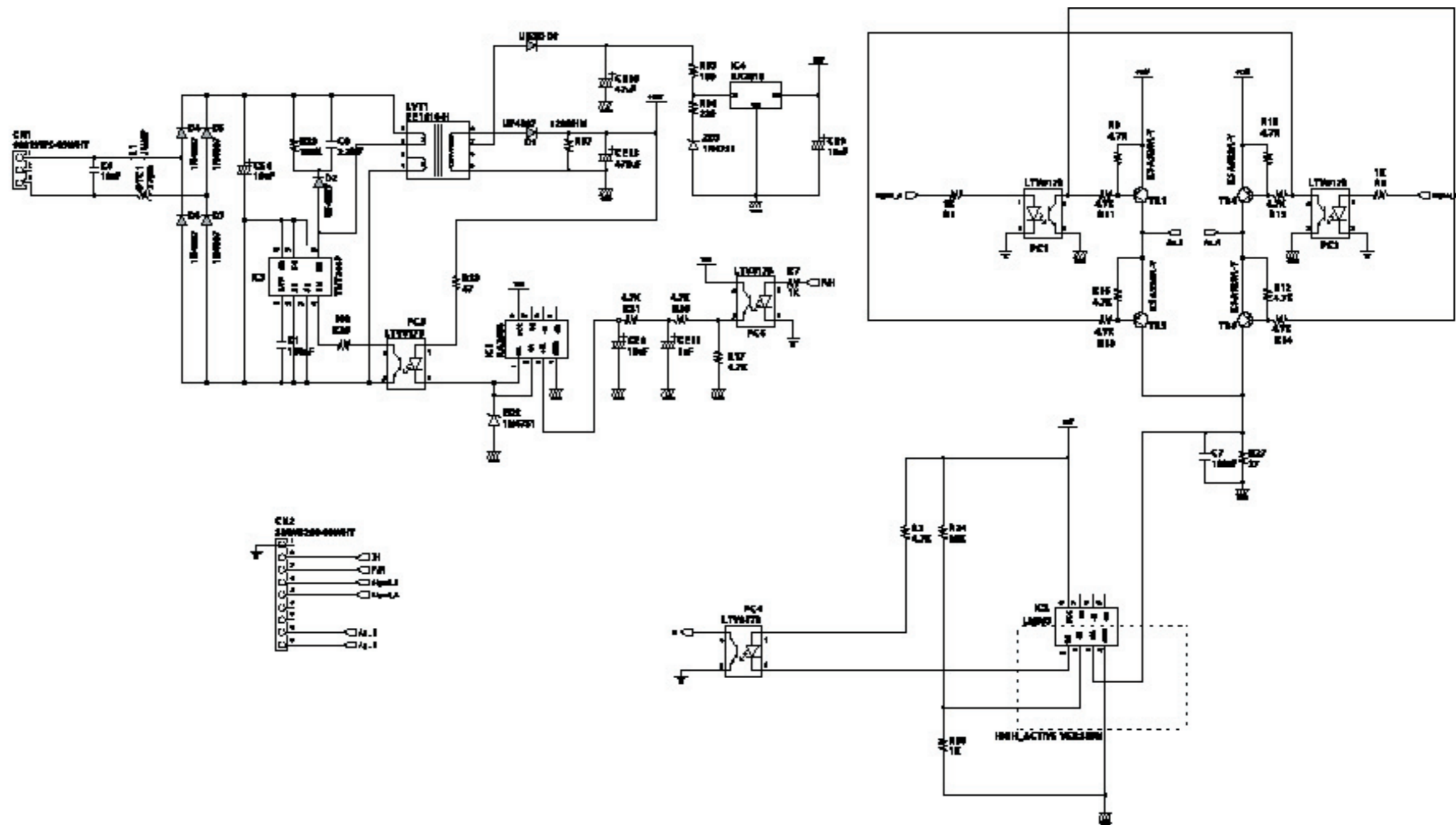
\* This Document can not be used without Samsung's authorization.

No.	Pin	FUNCTION
9	ST	Self Test (0:Normal mode; 1:Self test)
11	PD	Power Down(0:Normal mode; 1:Power-down mode)
13	FS	Full Scale (0:0g ; 1: 0g Full scale)



## 12-4. AG PCB

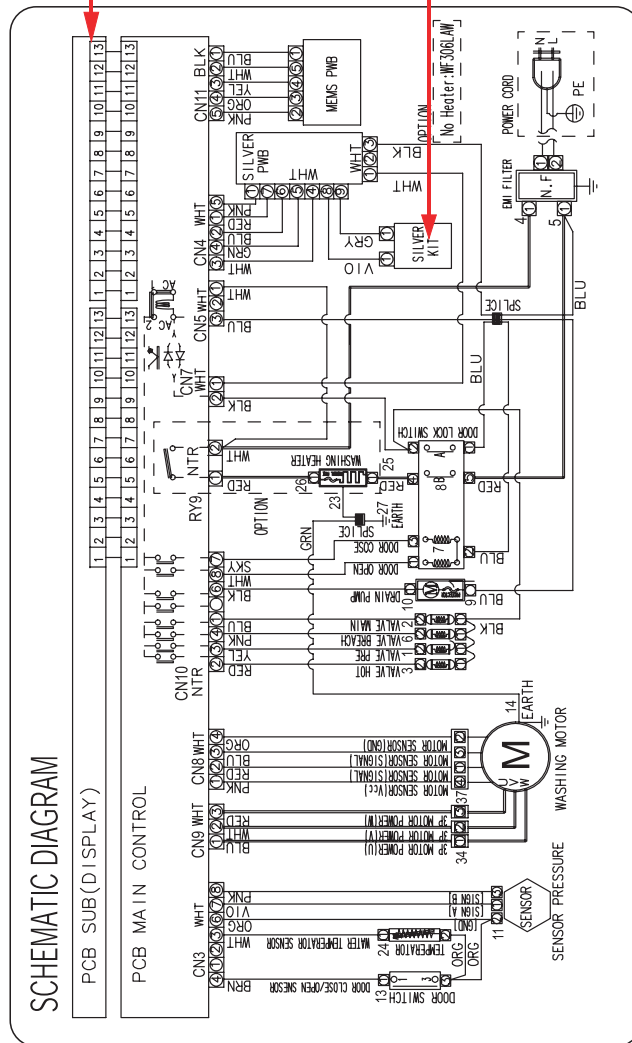
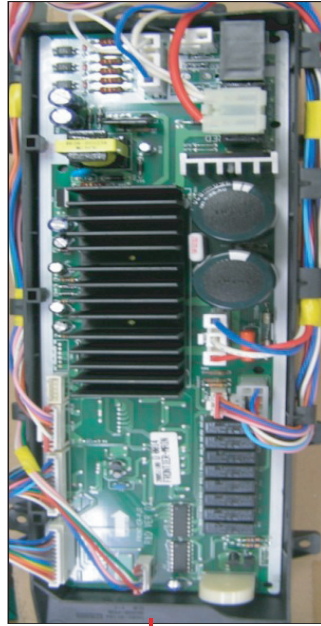
\* This Document can not be used without Samsung's authorization.



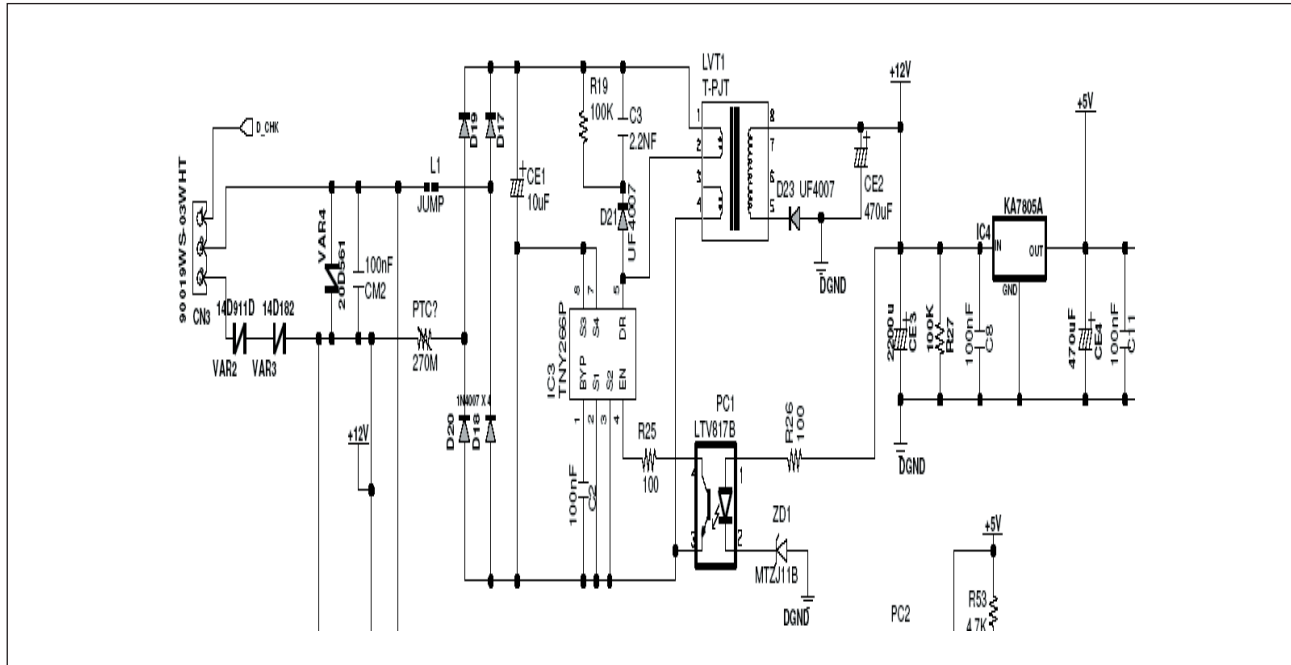
# 2ND AG\_KIT VERSION\_2

# 13. CIRCUIT DESCRIPTIONS

## 13-1. OVERALL SYSTEM



## 13-2. AC Input & Power Circuit



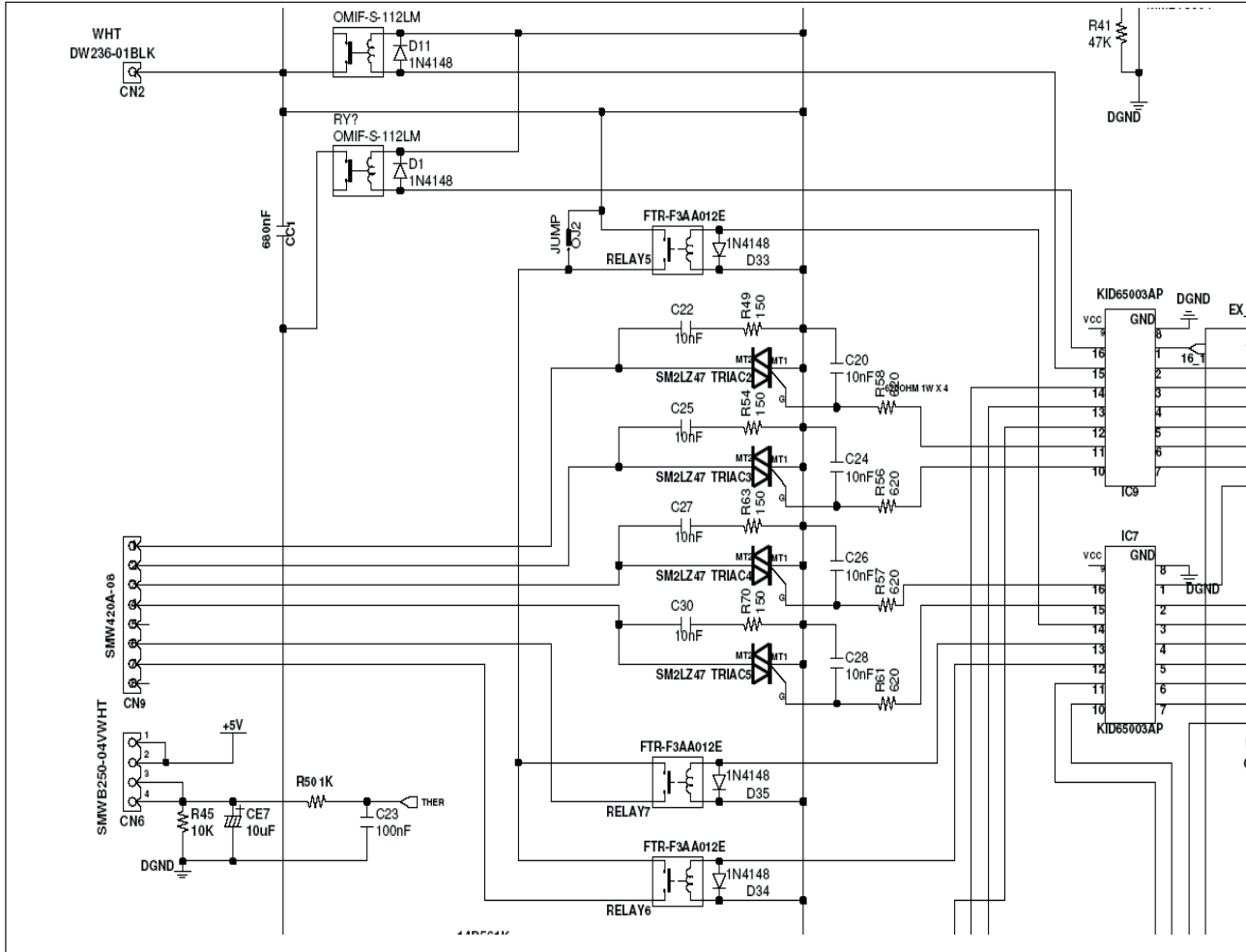
### ► Function

Generates a required DC power of 12V or 5V in case of supplied or disconnected AC power.

### ► Description

- When AC 220V is applied to CN3, D17 D20 transforms it to DC 300V.
- DC 300V is generated for the LVT1 secondary source by IC3 and PC1 turning on/off.
- The secondary 12V depends on the ZD1 value.
- The 12V for the LVT1 secondary source is transformed to DC 5V through IC4

### 13-3. Driving System Circuit



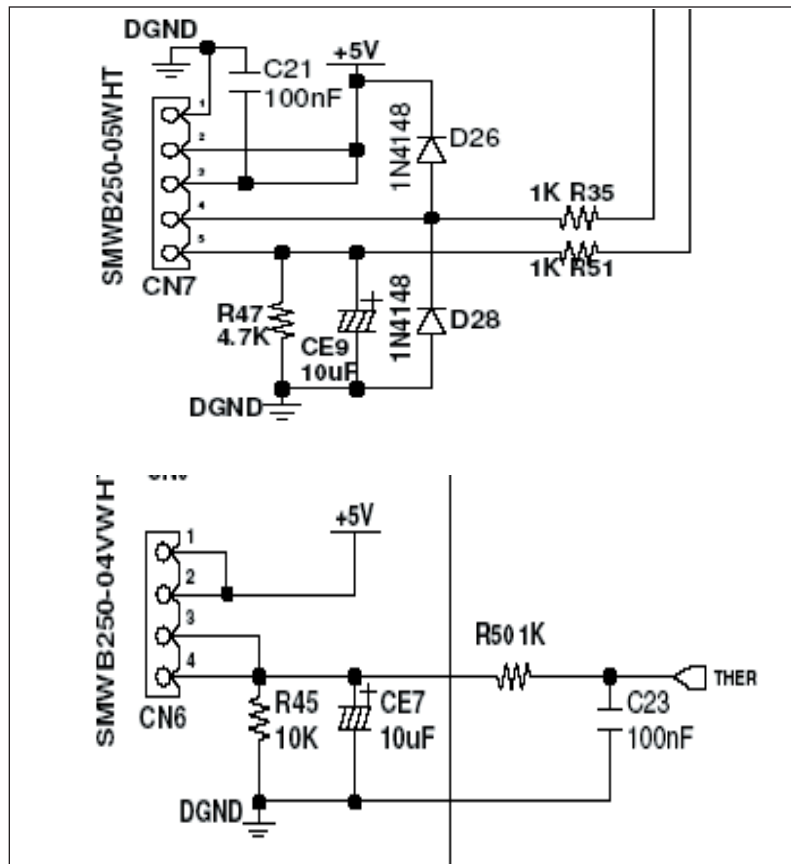
#### ► Function

Controls each driving system (VALVE, DOOR S/W, DRAIN-MOTOR) by turning RELAY or TRIAC on/off.

#### ► Description

- MICOM outputs a high signal of 5V from pin # 1 - 7 of IC7 and IC9.
- Then, pin # 10 to 16 of IC7 and IC9 are electrically grounded (0V).
- When pin # 10 to 16 are grounded, this creates an electric potential difference from the 12V that turns on RELAY 5,6,7 and TRIAC2,3,4,5.
- The operating parts (VALVE, DRAIN-MOTOR, DOOR S/W) connected to CN9 turn on if they are supplied with power.

## 13-4. Sensor Detection Circuit



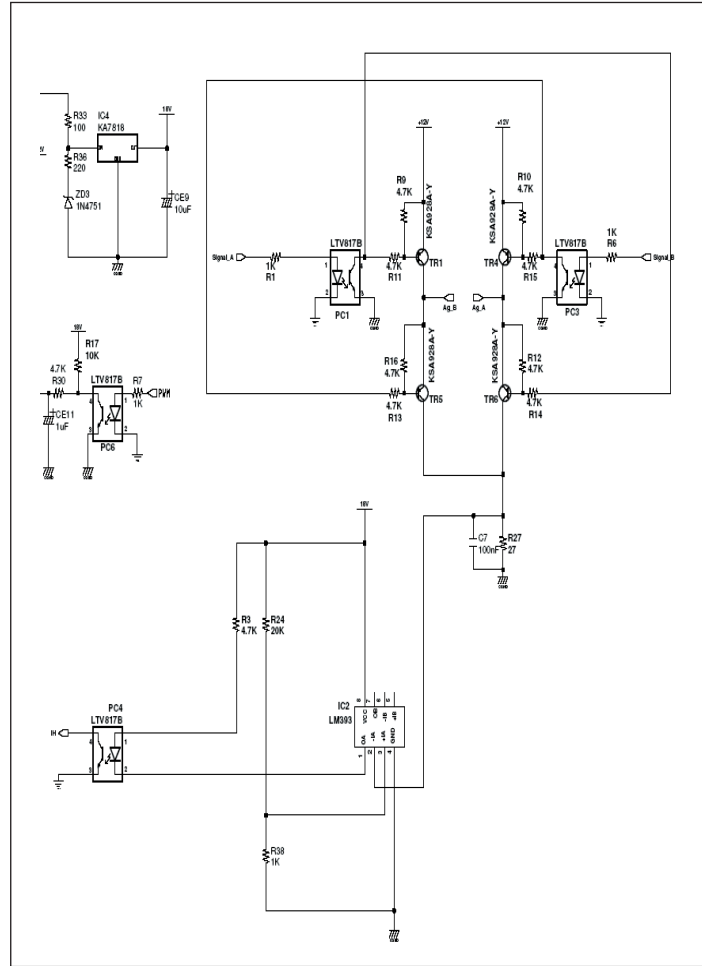
### ► Function

Detects signals from the sensor and controls the current system.

### ► Description

- The water level sensor is connected to pin 4 of CN7.
- The frequency of the level sensor changes according to the water amount in the tub.
- Then, the frequency is input to MICOM pin 48 for detecting the water amount.
- The DHSEH sensor is connected to CN7 pin 5 and CN6 pins 3,4.
- The resistance of the temp. sensor changes according to the ambient temperature. The changed resistance is applied to R50 and R51.
- The voltage applied to R50 and R51 is decided according the temp. MICOM stores the value.
- When voltage is applied to MICOM pins 22 and 23, MICOM compares it to the predefined one before detecting the current temp.

## 13-5. Silver Nano System



### ► Function

Applies the electric current to the silver plate during the water supply and uses the silver water to perform the bacteria-free or sterilization processes.

### ► Description

- Selects the silver nano feature to operate the system.
- Supplies water to the two silver plates AG\_B and AG\_A. Then, SIGNAL\_A and SIGNAL\_B output a high signal of 5V.
- Both SIGNAL\_A and SIGNAL\_B repeat this for 15 seconds outputting a high signal of 5V.
- SIGNAL\_A output turns TR1 and TR6 on to generate a potential difference between the 12V and the grounding for causing the current to flow. SIGNAL\_B output turns TR4 and TR5 on to generate a potential difference between the 12V and the grounding for causing the current to flow.
- The flowing current is transformed to a voltage by the resistance of R27.
- Then, the voltage is applied to IC1 pin 2 and used for detecting and controlling the flowing current.



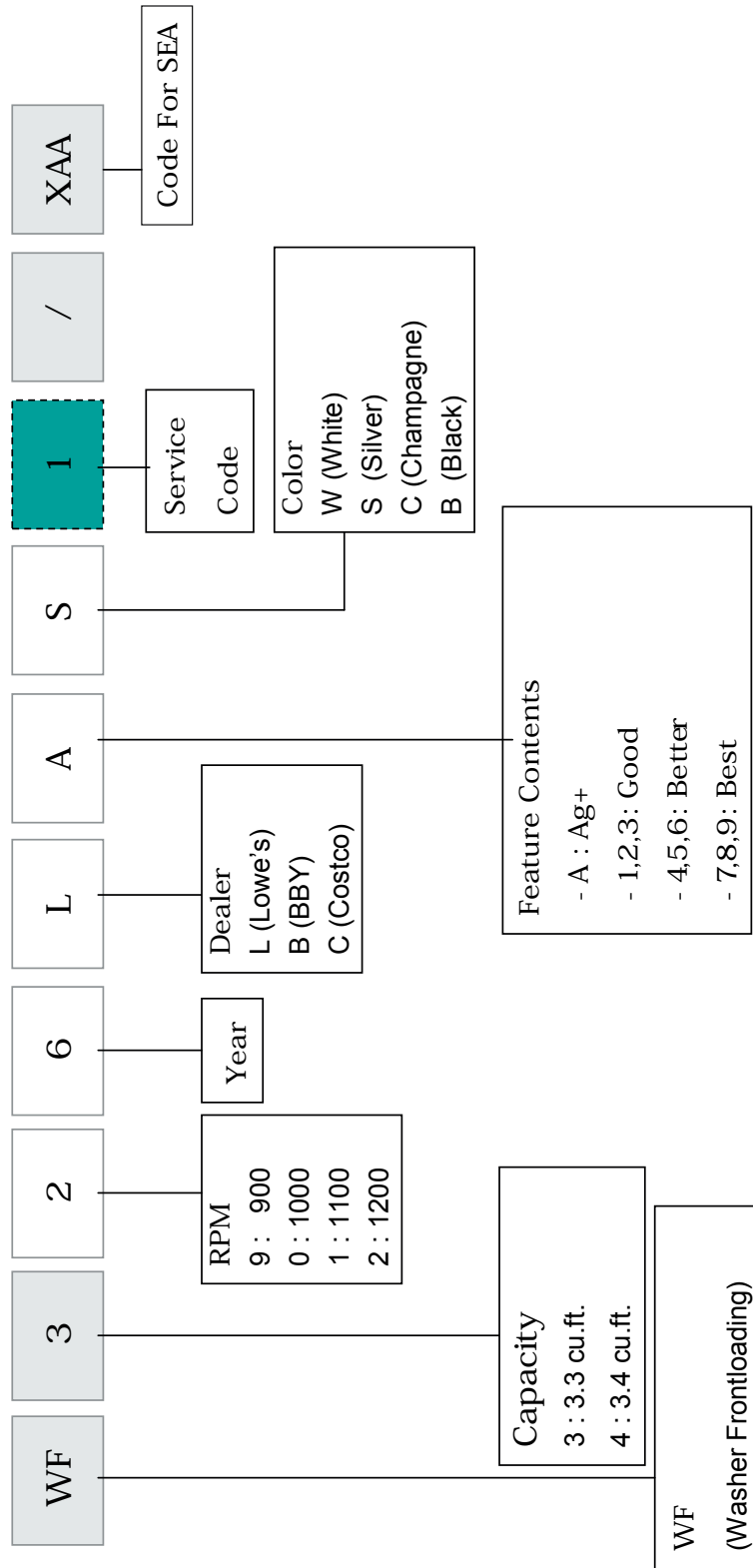
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**Memo**

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# 14. REFERENCE INFORMATION

## 14-1. MODEL NAME



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## 14-2. TERMINOLOGY

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1) ASSY-MAIN PCB (Imbalance Sensor)

→ To prevent the laundry from gathering on one side of the tube causing noise and vibration, the washing machine uses an imbalance detection device that evenly disentangles the laundry before the hydrating cycle starts.

2) DOOR-LOCK S/W

→ Prevents the door from being opened while a cycle is in progress. For safety purposes, it keeps the door locked even in pause mode or after the washing cycle unless the water level frequency is greater than 24.8Khz (anti-overflow level) or the inside-tube temperature is less than 65°C in the hydrating cycle, and 55°C in the washing cycle.

3) SENSOR-PRESSURE (Anti Over-Flow)

→ When the water supplied is more than 2/3 of the tube capacity due to a malfunction of the water supply valve, this device automatically starts water-draining and displays "OVER-FLOW ERROR(E3)" on the LED.

4) THERMISTOR

→ Keeps sensing and controlling the temperature inside the tube to keep it below your settings.

5) ASSY-THERMAL FUSE (Anti Over-Heat)

→ When the washing heater is overheated due to an error in the thermistor or any other malfunction, the assy-thermal fuse (built in the heater) is automatically activated to disconnect the power for your and the product's safety.

6) ASSY-MAIN PCB (Sensitive Laundry Protection)

→ To avoid any damage to sensitive laundry, the tube temperature is detected and "ERROR(E8)" is displayed on the LED for Wool or Lingerie courses when the temperature is over 50°C.

7) THERMOSTAT (Anti Over-Heat)

→ When the heater (drier) overheats from an error in the thermistor or any other malfunction, the thermostat (installed on the drying duct) is automatically activated to disconnect the power for your or product's safety

8) CHILD LOCK

→ Prevents children from playing with the washing machine.

9) **PRE-WASH**



































→ The machine does a preliminary wash of about 10 minutes prior to the main wash. This is particularly effective for cleaning badly stained laundry.

## 14-3. FABRIC CARE CHART

The following symbols provide garment care directions without words.

The care label will include, in order, four symbols: washing, bleaching, drying and ironing, or dry cleaning when necessary.

The use of symbols ensures consistency among garment manufacturers of domestic and imported items. Follow care label directions to maximize garment life and reduce laundering problems.

Wash Cycle		Special Instructions		Warning symbols for laundering	
	Normal		Line Dry/ Hang to Dry		Do Not Wash
	Permanent Press/Wrinkle Resistant/ Wrinkle Control		Drip Dry		Do Not Wring
	Gentle/Delicates		Dry Flat		Do Not Bleach
	Hand Wash	Heat Setting			Do Not Tumble Dry
Water Temperature**			High		No Steam (added to iron)
	Hot		Medium		Do Not Iron
	Warm		Low		
	Cold		Any Heat		
Bleach			No Heat/Air		
	Any Bleach (when needed)	Iron-Dry or Steam Temperatures			Line Dry/ Hang to Dry
	Only Non-Chlorine (color-safe) Bleach (when needed)		High		Drip Dry
Tumble Dry Cycle			Medium		Dry Flat
	Normal		Low		
	Permanent Press/ Wrinkle Resistant/ Wrinkle Control	Dryclean			
	Gentle/ Delicates		Dry clean		
			Do Not Dry clean		

\*\*The dot symbols represent appropriate wash water temperatures for various items. The temperature range for Hot is 105° - 125° F/ 41° - 52°C, for Warm 85° - 105° F/29° - 41° C and for Cold 60° - 85° F/16° - 29° C.

(Wash water temperature must be a minimum of 60° F/16°C for detergent activation and effective cleaning.)

The clothes Washer may not ensure these temperatures because the actual water temperatures entering your Washer are dependent on water heater settings and regional water supply temperatures. For example, cold water entering the home in the northern states during winter may be 40° F/4° C which is too cold for effective cleaning. The water temperature in this situation will need to be adjusted by selecting a warm setting, adding some hot water to the MAX FILL line or using your Washer's heating option, if available.

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## 14-4. ELECTRICAL WARNINGS

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To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind:

- Operate the appliance only from the type of power source indicated on the marking label.  
If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.
- Use only a grounded or polarized outlet. For your safety, this appliance is equipped with a polarized alternating current line plug having one blade wider than the other.  
This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still doesn't fit, contact your electrician to replace your outlet.
- Protect the power cord. Power supply cords should be routed so that they are unlikely to be walked on or pinched by items placed on or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
- Do not overload the wall outlet or extension cords. Overloading can result in fire or electric shock.

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## 14-5. Models

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Dealer	Models	Remark
<b>Lowe's</b>	WF326LAS	2(1200rpm), 6('06), L(Lowe's), A(Ag+), S(Silver)
	WF326LAW	2(1200rpm), 6('06), L(Lowe's), A(Ag+), W(white)
	WF316LAW	1(1100rpm), 6('06), L(Lowe's), A(Ag+), W(white)
	WF306LAW	0(1000rpm), 6('06), L(Lowe's), A(Ag+), W(white)
<b>BBY</b>	WF316BAC	1(1100rpm), 6('06), B(BBY), A(Ag+), C(Champagne)
	WF316BAW	1(1100rpm), 6('06), B(BBY), A(Ag+), W(white)
	WF306BAW	0(1000rpm), 6('06), B(BBY), A(Ag+), W(white)
	WF306BHW	0(1000rpm), 6('06), B(BBY), H(Ag+,Heater), W(white)
<b>Costco</b>	WF316CAW	1(1100rpm), 6('06), C(costco), A(Ag+), W(white)
	WF306C1W	0(1000rpm), 6('06), C(costco), 1(grade), W(white)

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**14-5. Q & A**

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<b>NO.</b>	<b>Question</b>	<b>Answer</b>
1	How long does it take for the door to unlock?	It takes approximately 2-3 seconds for the door to unlock.
2	The cycle is complete and "End" is displayed. How do I set another cycle?	When "End" is displayed, the Power button should be pressed or door should be opened before selecting another cycle. The display will show "End" until washer is turned off. To turn off washer, the Power button should be pressed or the door should be opened
3	What should I do when Information Code ("dc") lights up?	When the Information Code is displayed, press the Start/Pause dial and then restart the cycle. For more information, refer to the Owner's Manual
4	There is a small amount of water left in Detergent Drawer after the load is complete. Is this normal?	It is normal for a small amount of water remaining in Detergent Drawer after it completes washing. Bleach is usually flushed out into the tub at the beginning of the washing. Also, its compartment is washed again during the following rinse cycle, removing any remnants.
5	When I went back to my washer, it was turned off. What happened?	Power button may have been accidentally bumped or pushed. Reset the cycle and start the washer. Make sure the unit is plugged into a live electrical outlet. Check house fuse or circuit breaker.
6	The washer door gets locked after a power failure. How can I open it?	If the power fails while the door is locked, the door will remain locked until the power comes back on. If the power comes back on while the door is still locked, the cycle will resume where it left off. If the door is unlocked, "PF" will display and the washer will pause. Press Power Off and restart the cycle.
7	The washer door does not unlock when there is water in the tub. How can I open it?	The water must be drained from the tub for the door to be opened. Set the rotary dial to Spin Only and press the Start/Pause dial. The door will open 2-3 seconds after the Spin or Drain cycle is completed.

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**Memo**

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***Be Aware, Be Alert  
Always work safely.  
On the Job, On the Road, In the Home  
Every Time, All the Time***

