LG TRAINING CENTER

WM3988H*A

Universe Washing Machine

The Small Print Page

- Safety Notice
- Caution
- ESD Notice
- Regulatory Information
- Disclaimer
- Compliance

Table of Contents

Specifications

ITEM		WM3988H*A
COLOR		W:BLUE WHITE, N:NAVY BLUE
POWER SUPPLY		AC 120 V, 60 Hz
PRODUCT WEIGHT		192 lbs (87kg)
ELECTRIC POWER CONSUMTION	WASHING	280 W
	DRAIN MOTOR	80 W
	WASH HEATER	1000 W
REVOLUTION SPEED	WASH	46 rpm
	SPIN	1320 rpm
CYCLES		9
WASH/RINSE TEMPERATURES		5
SPIN SPEEDS		5
OPTIONS		Prewash, Rinse+Spin, Extra Rinse, Stain Cycle, Water Plus, Drum Light Tub Clean, SPINSENSE™, Delay Wash, Steam
WATER CIRCULATION		Incorporated
OPERATIONAL WATER PRESSURE		14.5~116 psi (100-800 kPa)
CONTROL TYPE		Electronic
WASH CAPACITY [cu.ft]		3.47 (4.0 IEC)
DIMENSIONS		27" (W) X $29\frac{3}{4}$" (D) X $38\frac{11}{16}$" (H), $50\frac{13}{16}$" (D, door open)
DELAY WASH		up to 19 hours
DOOR SWITCH TYPE		PTC + Solenoid
WATER LEVEL		10 steps (by sensor)
LAUNDRY LOAD SENSING		Incorporated
ERROR DIAGNOSIS		Incorporated
AUTO POWER OFF		Incorporated
CHILD LOCK		Incorporated
RLM ENABLE		Incorporated
STEAM		Incorporated

Warranty

LG ELECTRONICS, INC.
LG LIMITED WARRANTY - USA

Your LG Product will be will repaired or replaced, at LG's option, if it proves to be defective in material or workmanship under normal use, during the warranty period ("Warranty Period") set forth below, effective from the date ("Date of Purchase") of original consumer purchase of the product. This warranty is good only to the original purchaser of the product and effective only when used in the United States, including Alaska, Hawaii, and U.S. Territories.

WARRANTY PERIOD:	HOW SERVICE IS HANDLED:
LABOR: See Owner's Manual with product **PARTS (except as listed below):** See Owner's Manual **Electronic Control Board:** See Owner's Manual **Drum Motor:** See Owner's Manual with product Replacement Units and Repair Parts may be new or remanufactured. Replacement Units and Repair Parts are warranted for the remaining portion of the original unit's warranty period.	**In-Home Service:** Please retain dealer's dated bill of sale or delivery ticket as evidence of the Date of Purchase for proof of warranty, and submit a copy of the bill of sale to the service person at the time warranty service is provided. **Please call 1-800-243-0000 and choose the appropriate option to locate your nearest LG Authorized Service Center.** Or visit our Web site at: http://www.lgservice.com.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT ANY IMPLIED WARRANTY IS REQUIRED BY LAW, IT IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD ABOVE. NEITHER THE MANUFACTURER NOR ITS U.S. DISTRIBUTOR SHALL BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY NATURE, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR PROFITS, OR ANY OTHER DAMAGE WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

THIS LIMITED WARRANTY DOES NOT APPLY TO:

- Service trips to your home to deliver, pick up, and/or install the product, instruct, or replace house fuses or correct wiring, or correction of unauthorized repairs.
- Damages or operating problems that result from misuse, abuse, operation outside environmental specifications or contrary to the requirements of precautions in the Operating Guide, accident, vermin, fire, flood, improper installation, acts of God, unauthorized modification or alteration, incorrect electrical current or voltage, or commercial use, or use for other than intended purpose.

The cost of repair or replacement under these excluded circumstances shall be borne by the consumer.

CUSTOMER INTERACTIVE CENTER NUMBERS

To obtain Customer Assistance, Product Information, or Dealer or Authorized Service Center location:	**Call 1-800-243-0000** (24 hours a day, 365 days a year), and select the appropriate option from the menu. **Or visit our Web site at: http://www.lgservice.com.**

TO CONTACT LG ELECTRONICS BY MAIL:

LG Customer Interactive Center
P. O. Box 240007
201 James Record Road
Huntsville, Alabama 35824
ATTN: CIC

Features

Ultra Capacity

Direct Drive

Tilted Drum / Large Door

Steam Washing / SteamFresh™

Roller Jets and Balls

Automatic Load Detection

Features

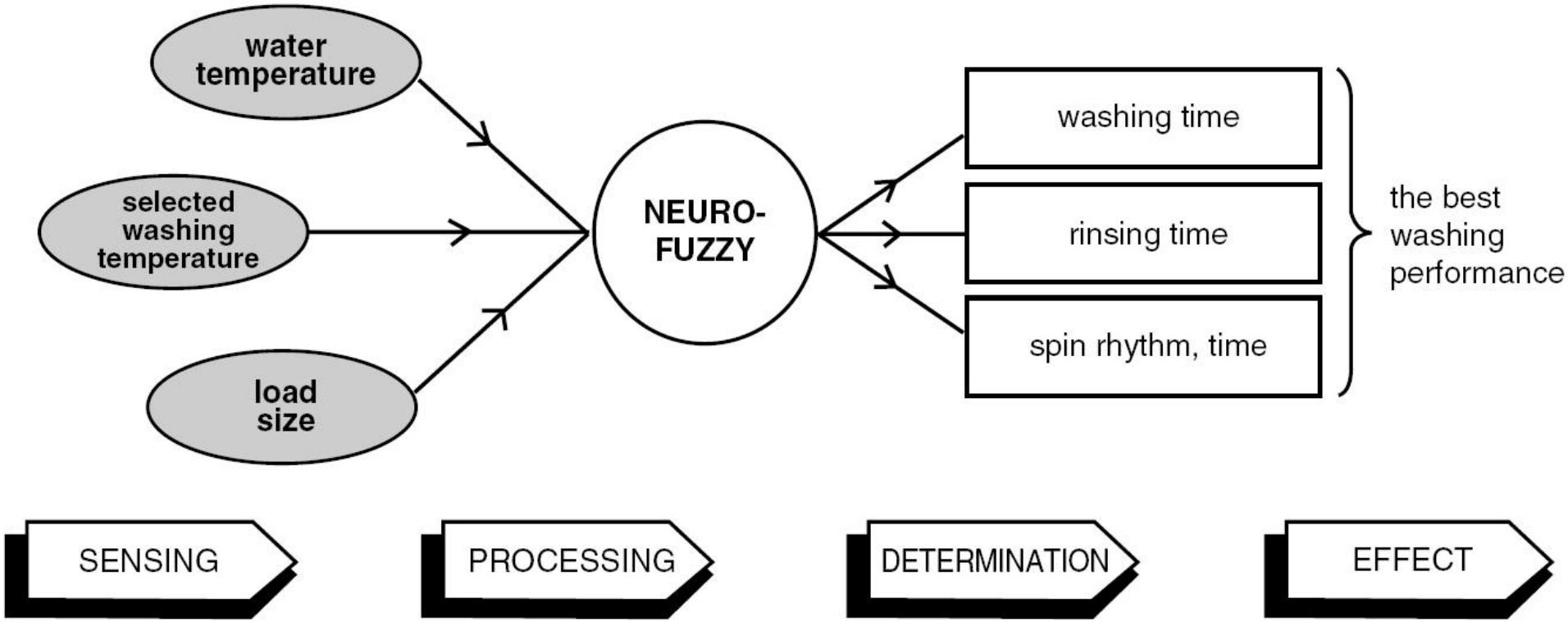
Built-In Heater

Child Lock

Controls

Power Button	Turns the machine on or off.
Cycle / Start Button	Starts or pauses the machine.
Delay Wash Button	Sets the delay to have the washer run later.
Display Window	Shows the estimated remaining cycle time
Option Buttons	Enables various optional cycles when required.

Fuzzy Logic


water temperature
selected washing temperature
load size
NEURO-FUZZY
washing time
rinsing time
spin rhythm, time
the best washing performance
SENSING
PROCESSING
DETERMINATION
EFFECT

Door Lock

The door cannot be opened:

- When the WASHER is operating
- When the power failed or the washer is unplugged
  (until the capacitor discharges and releases the lock)
- When the DOOR LOCK light is on
- When the drum is still turning

Door Lock Lamp

The DOOR LOCK lamp lights:

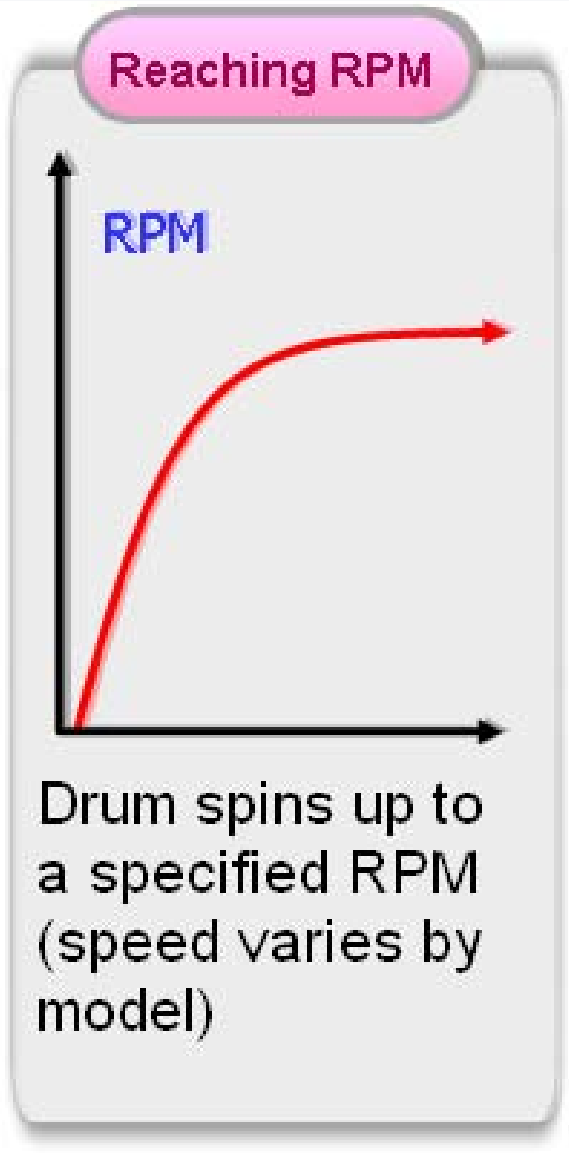
- When the WASHER is operating
- When the water level sensor frequency is lower than 22.9 kHz
- When the temperature inside the tub is over 45° C (113°F)

Load Sensing Function

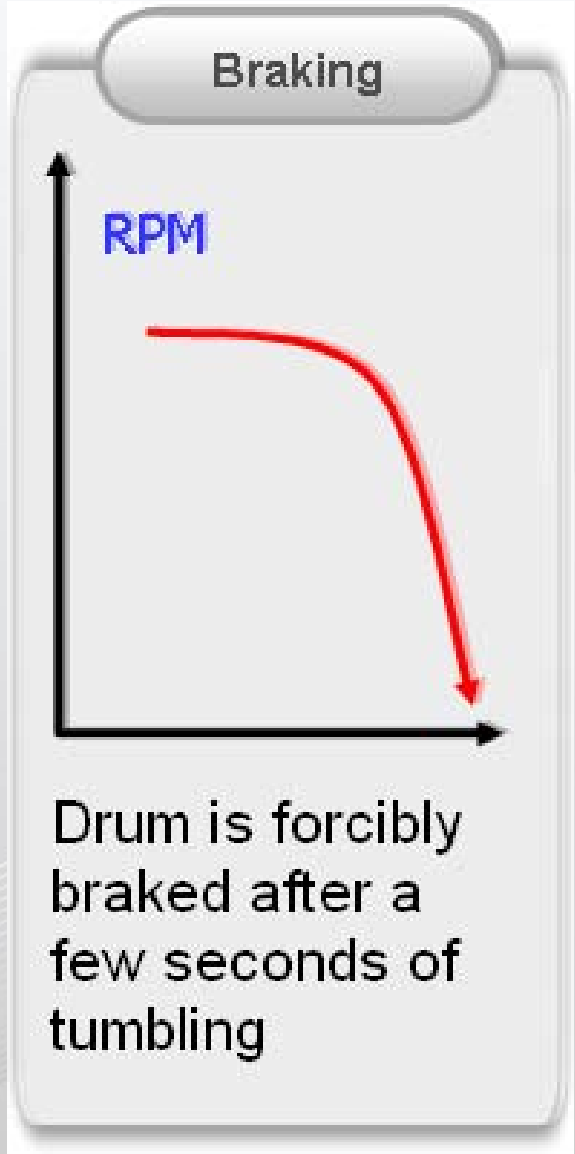
In order to determine the size and weight of the load, the machine begins each cycle by tumbling the load a couple of times.

It spins up to approximately 120 rpm for approximately 6 seconds. (Speed and time may vary by model.)

Load Sensing Function



Load Sensing Function

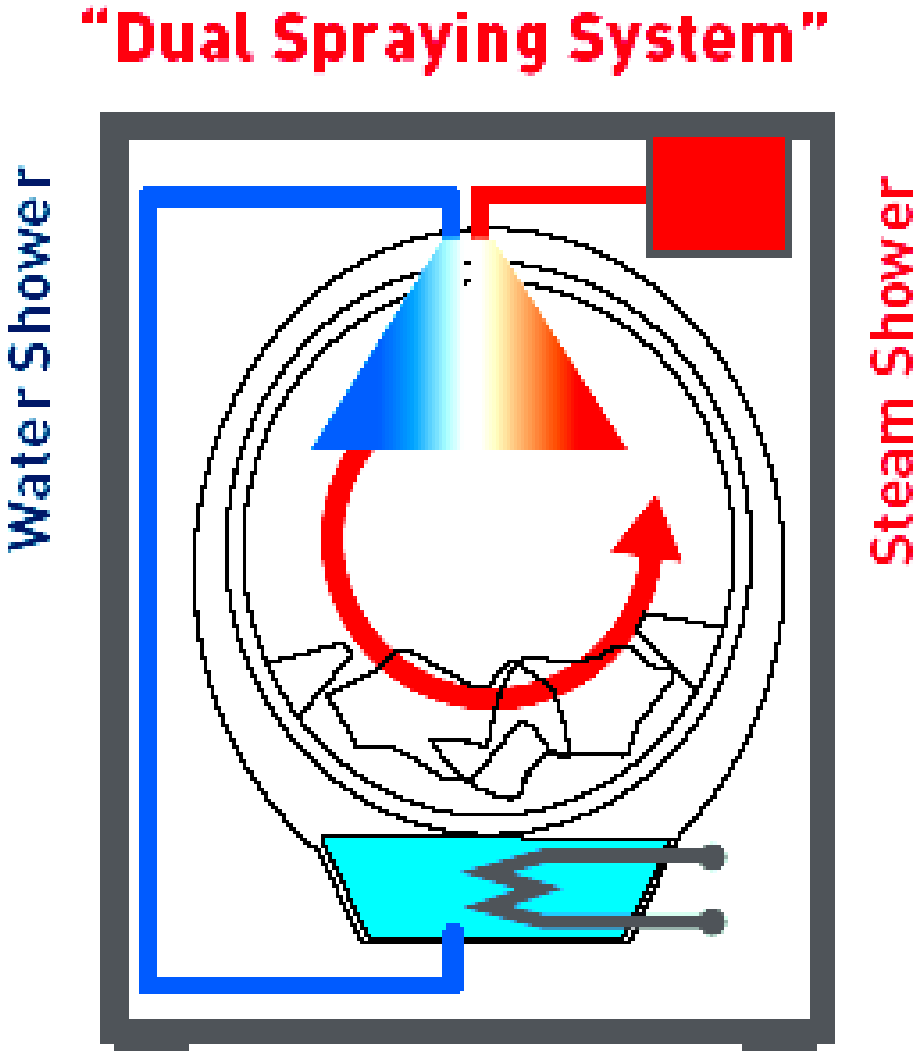


Load Sensing Function

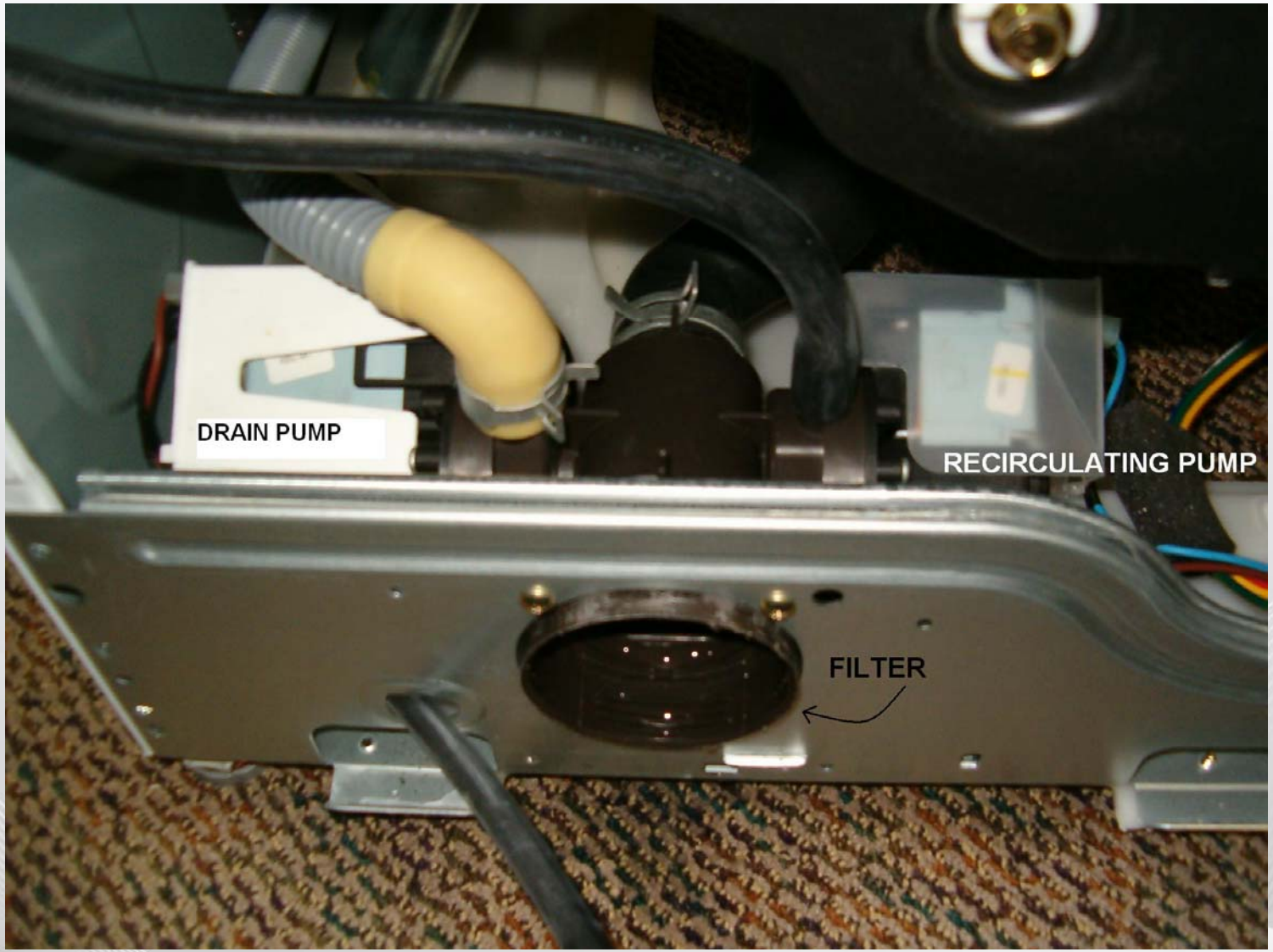
Determining the size and weight of the load allows the controller to estimate the amount of water required to wash and rinse the load.

The fuzzy logic within the program will make numerous decisions during the cycle, adding water, desudsing, and rinsing as determined necessary.

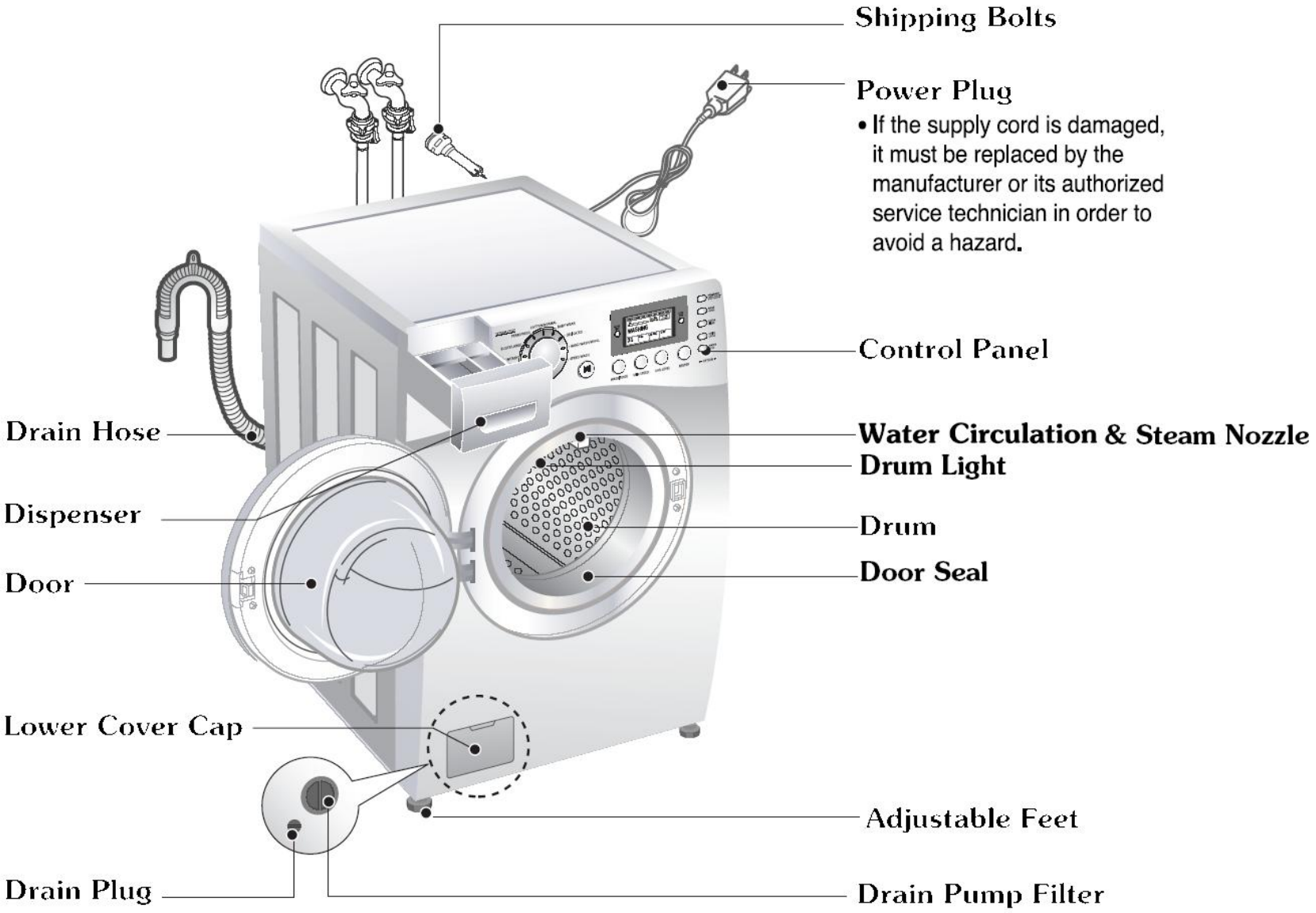
Water Circulation and Steam



Pumps

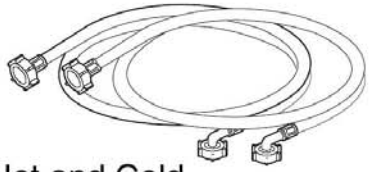


Parts Identification

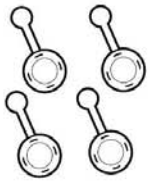


Accessories

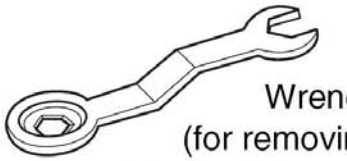
Included Accessories



Hot and Cold
Water Hoses

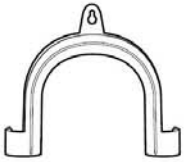


Caps (4)
(for covering
shipping bolt holes)



Wrench
(for removing
shipping bolts and
adjusting leveling feet)

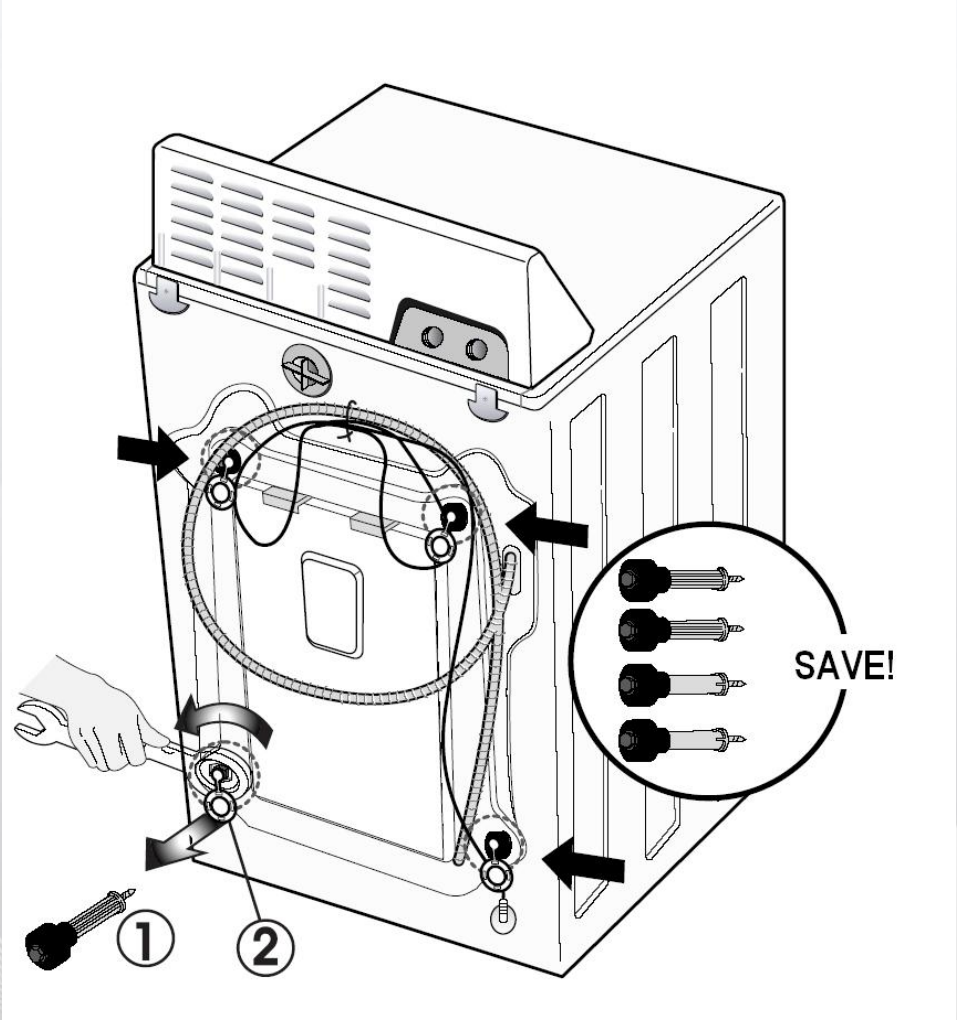
Tie Strap
(for securing
drain hose)



Elbow Bracket
(for securing
drain hose)

Shipping Bolts

The shipping bolts **MUST BE REMOVED** before operating the washer.

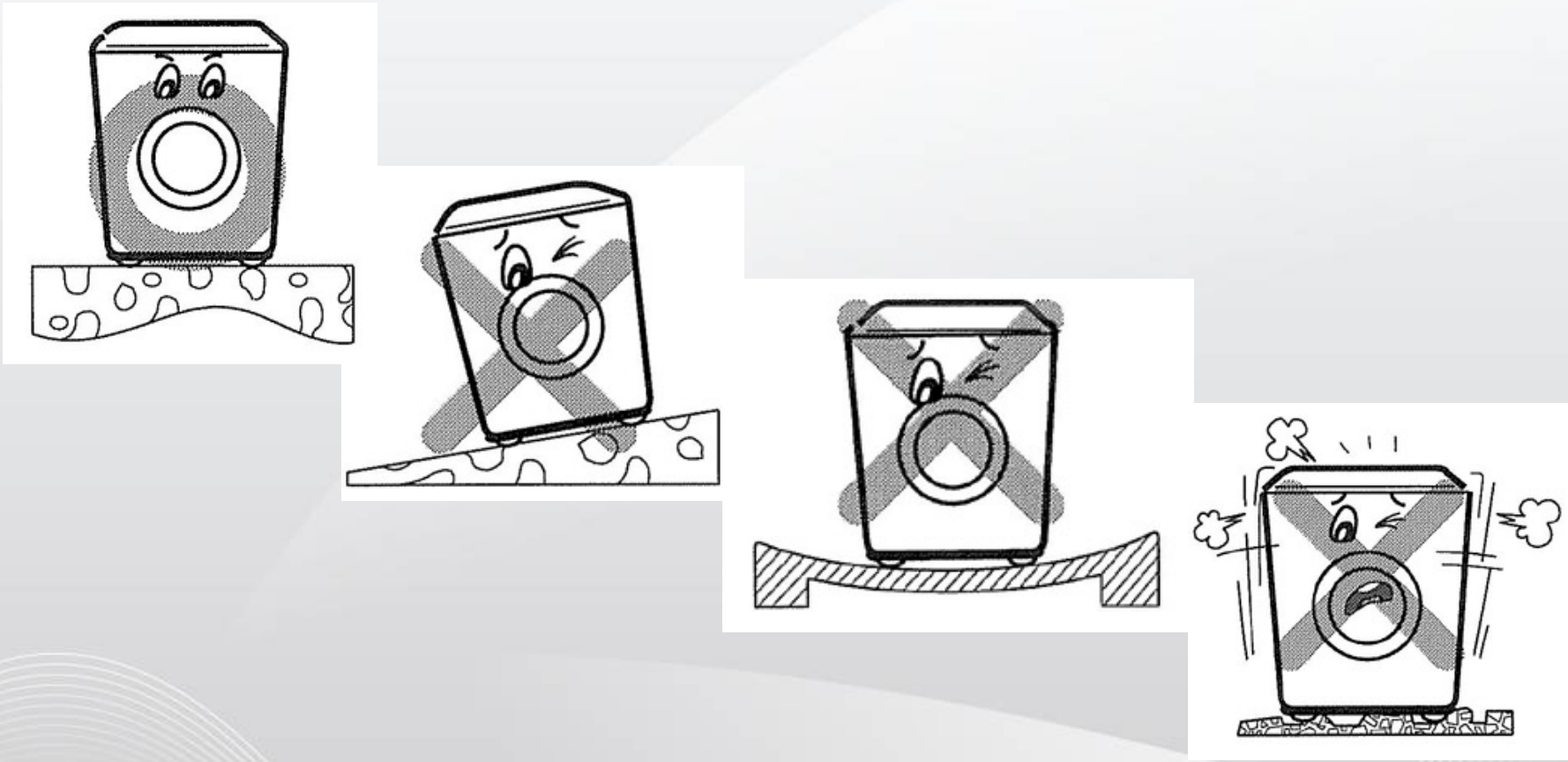


Accessories

Installation

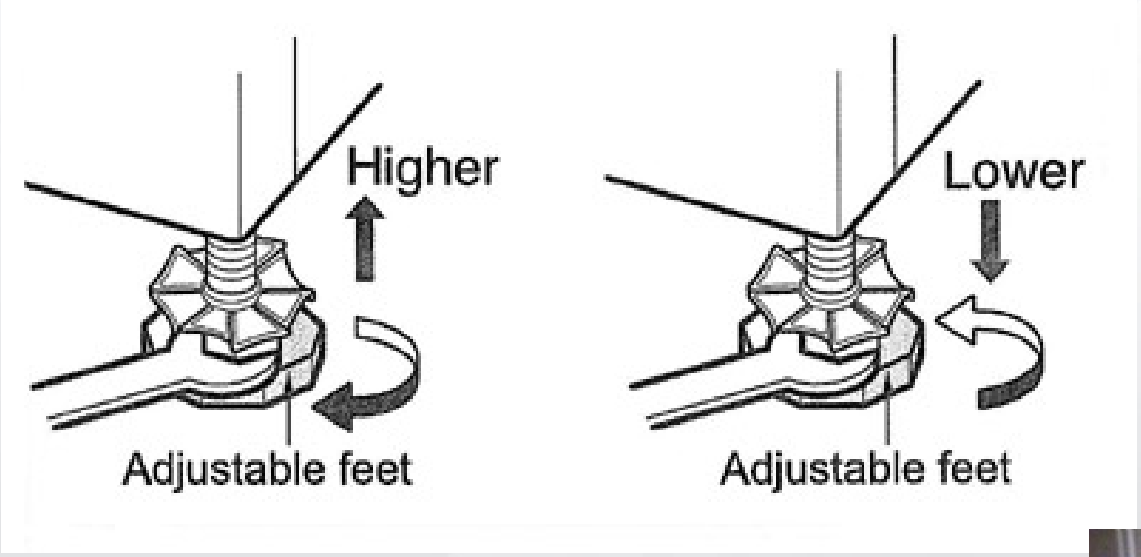
REMOVE THE SHIPPING BOLTS. LEAVE THEM WITH THE CUSTOMER.

Installation

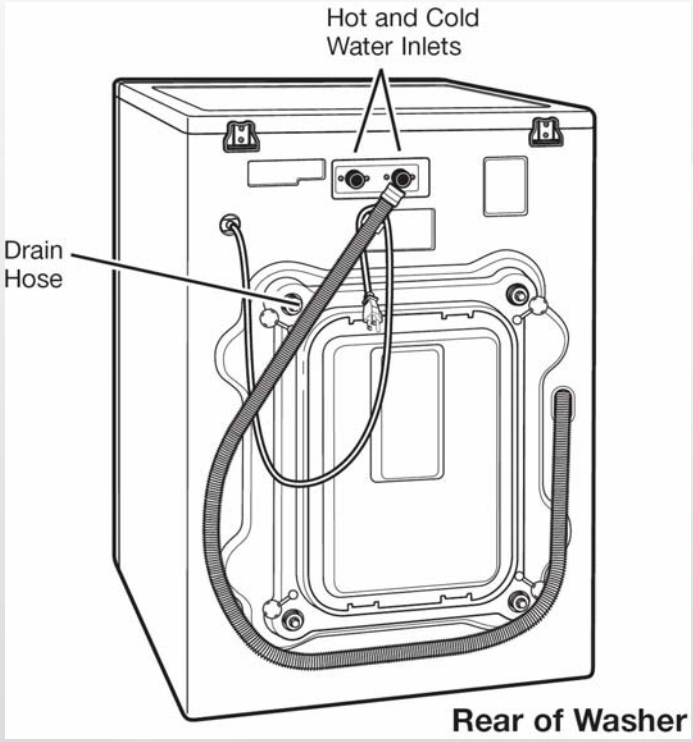


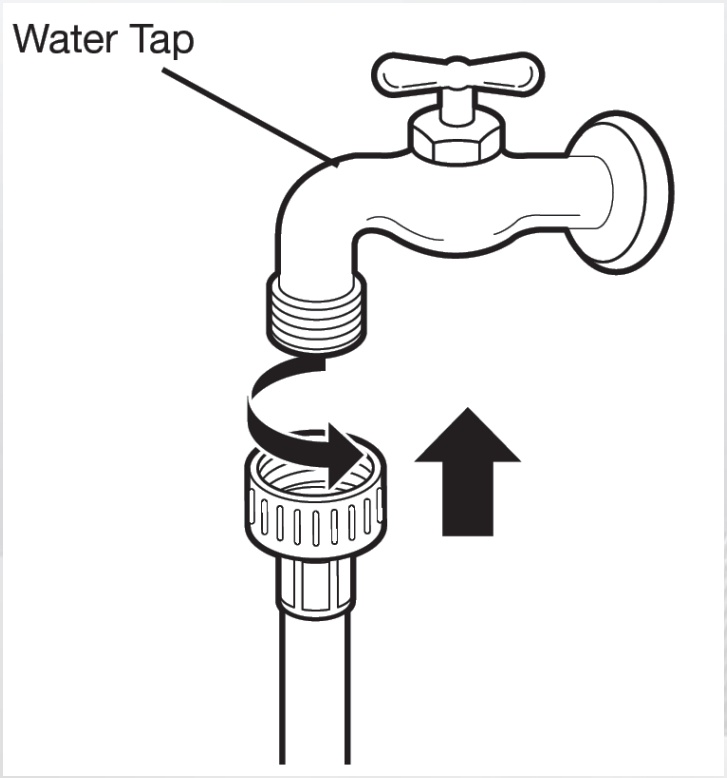
INSTALL THE WASHER ON A FIRM, FLAT SURFACE.

Installation

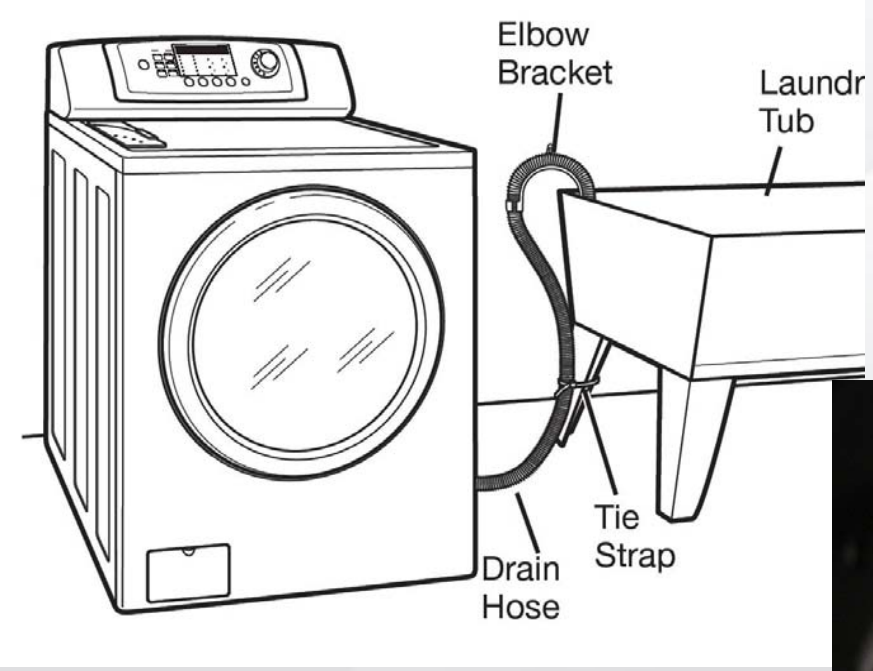


Connections - Water





Connections - Drain

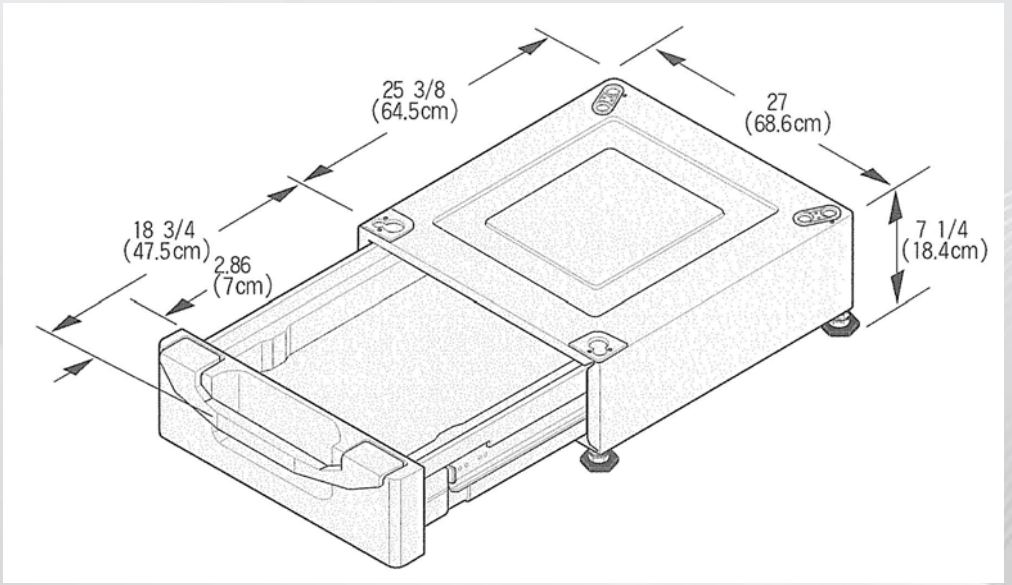


Connections - Electrical

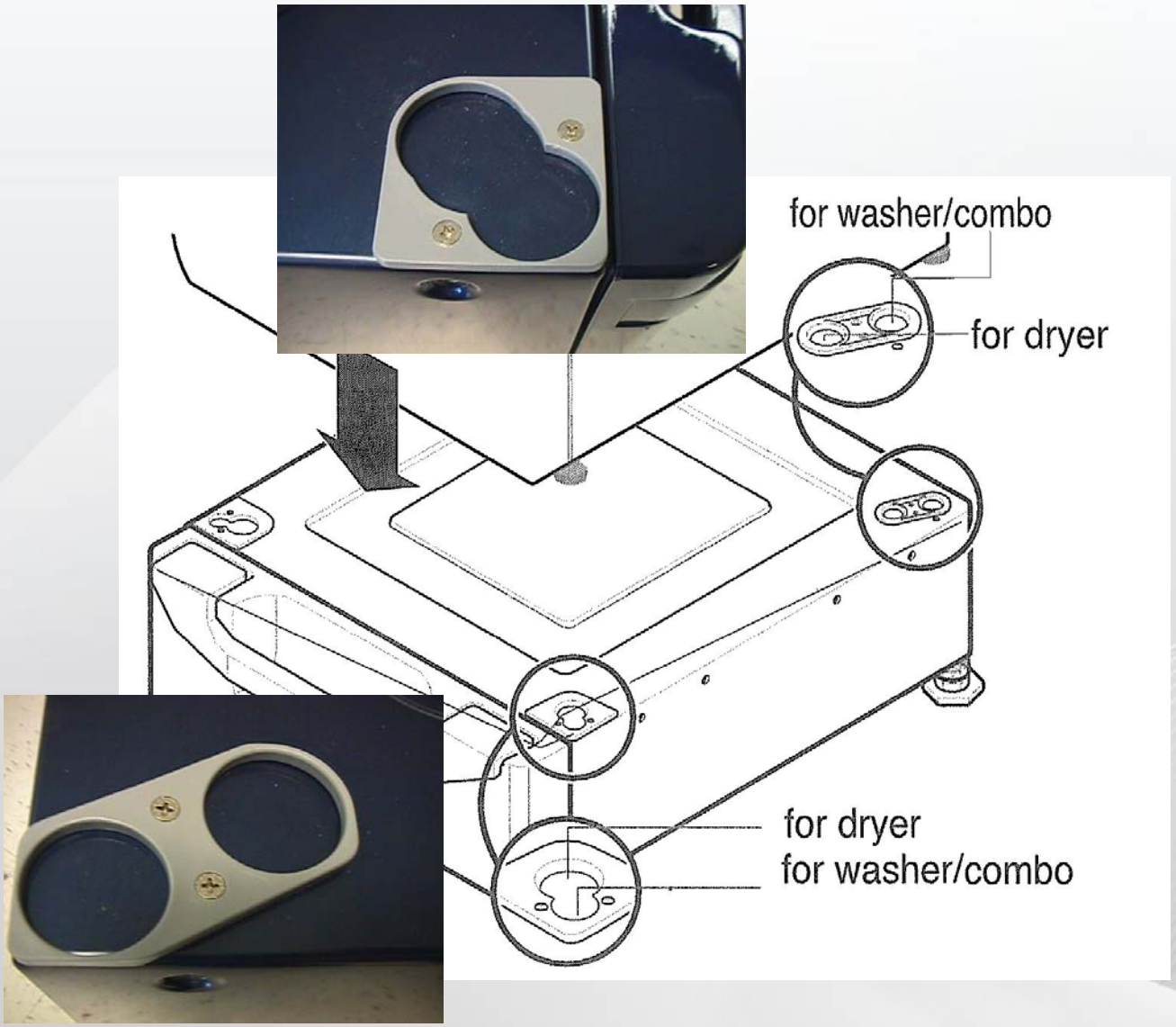
The steam combo requires a 120 VAC, 60 Hz., dedicated, 20-amp circuit.

Pedestal Kit (old style)

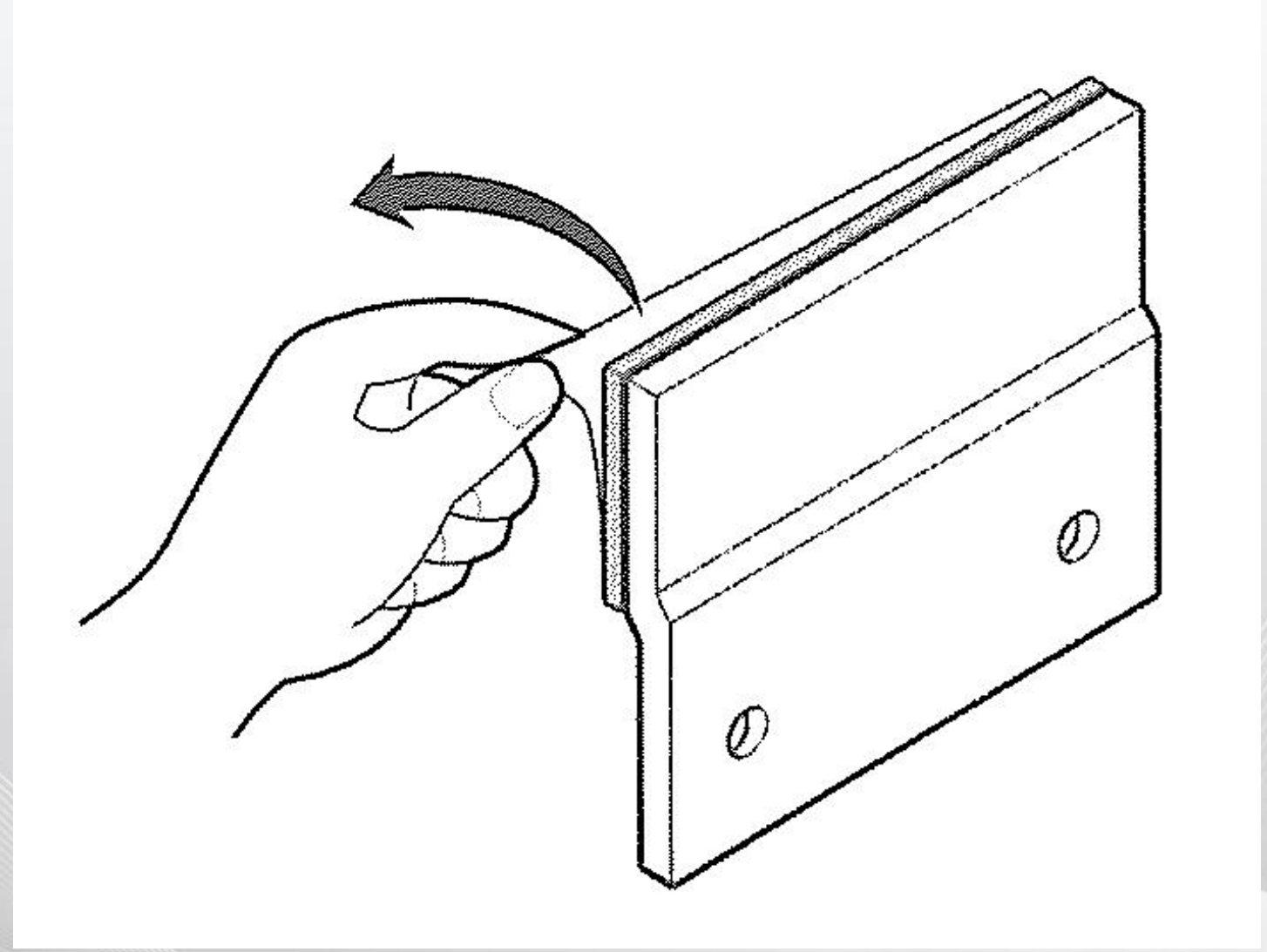
This procedure covers installing and leveling the 7½" and 13" pedestals for 27" washers, dryers, and combos. If the products are stacked, the washer must be below the dryer, and only one pedestal is required.



Pedestal Kit (old style)



Pedestal Kit (old style)



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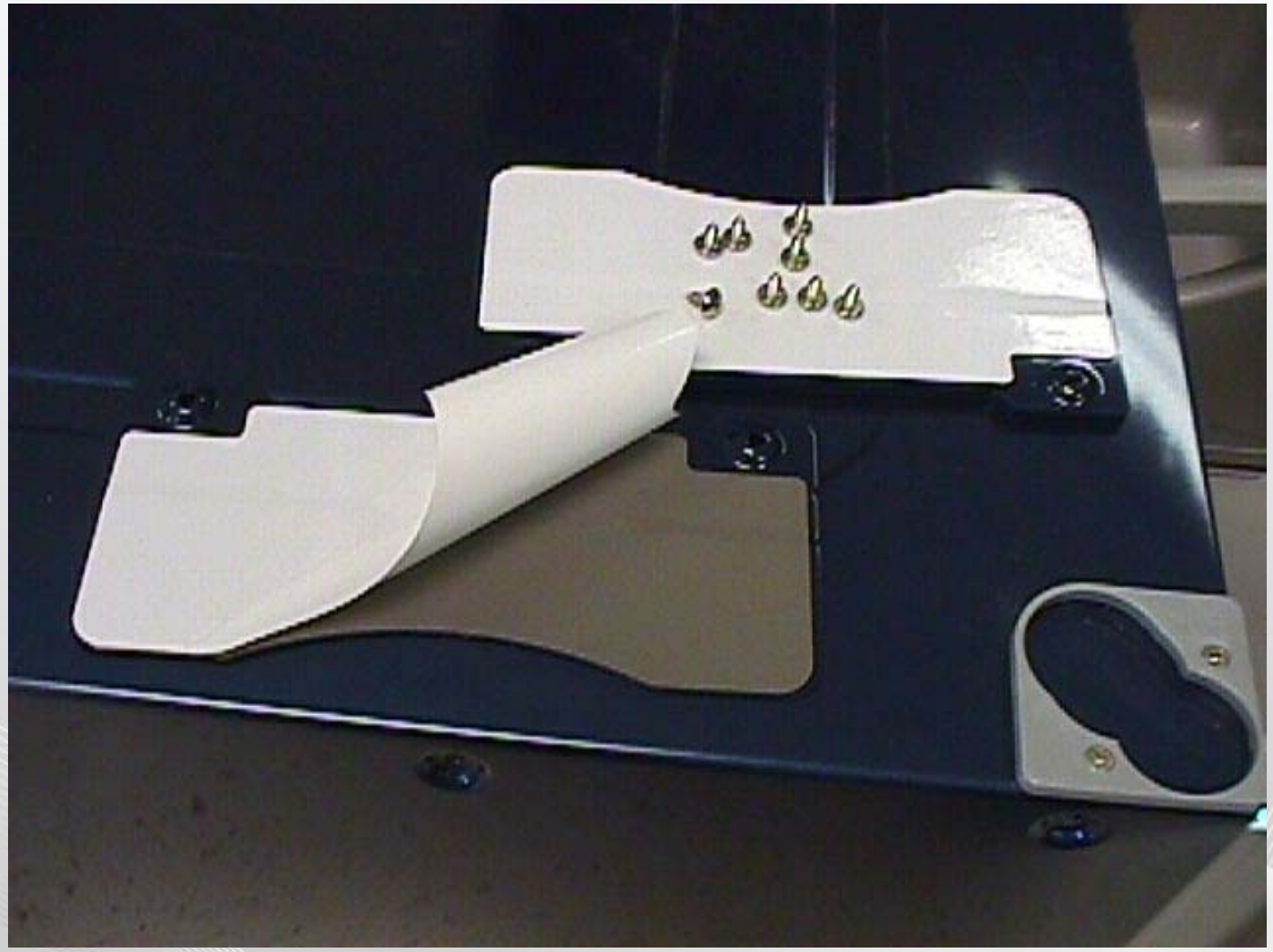

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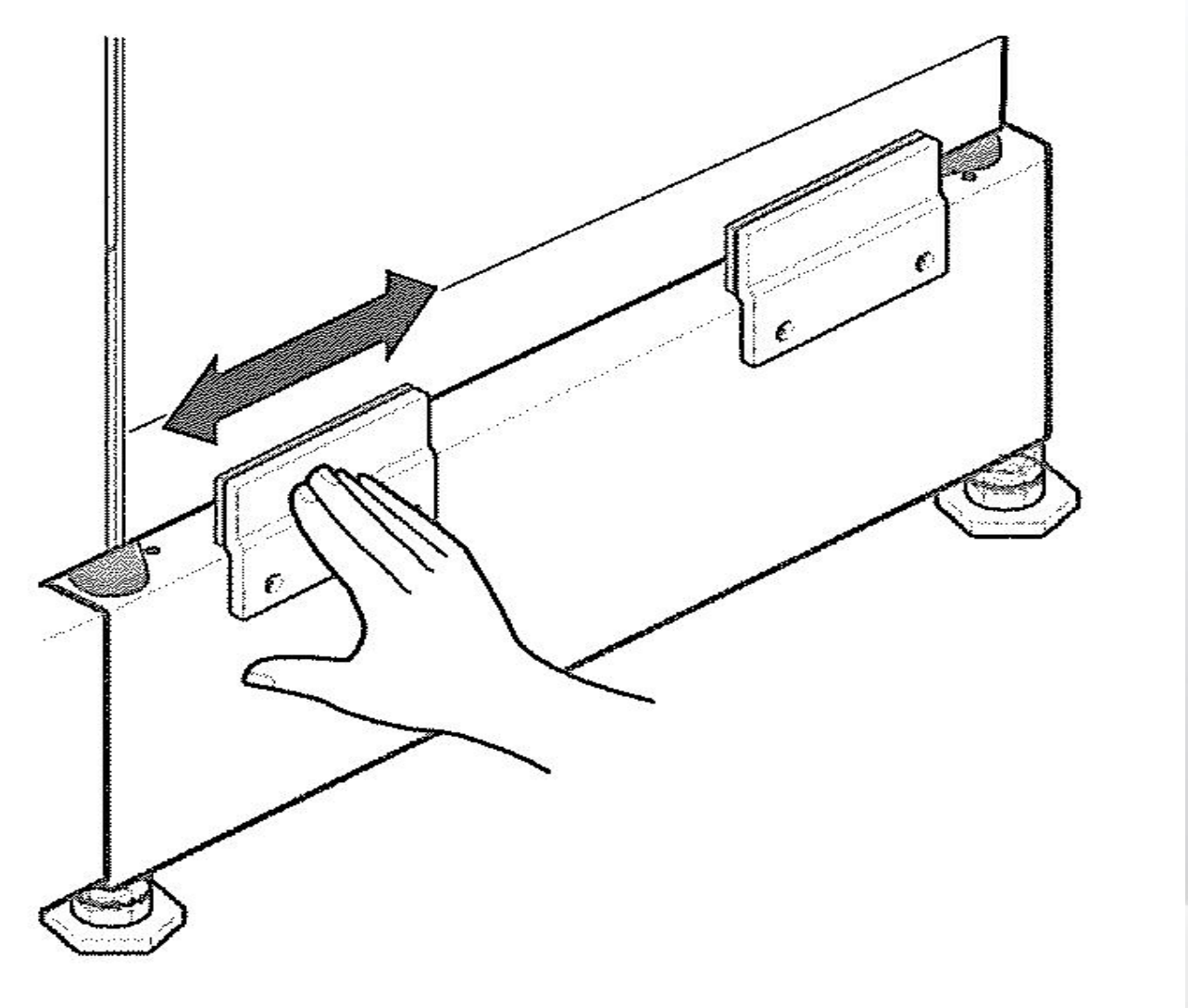
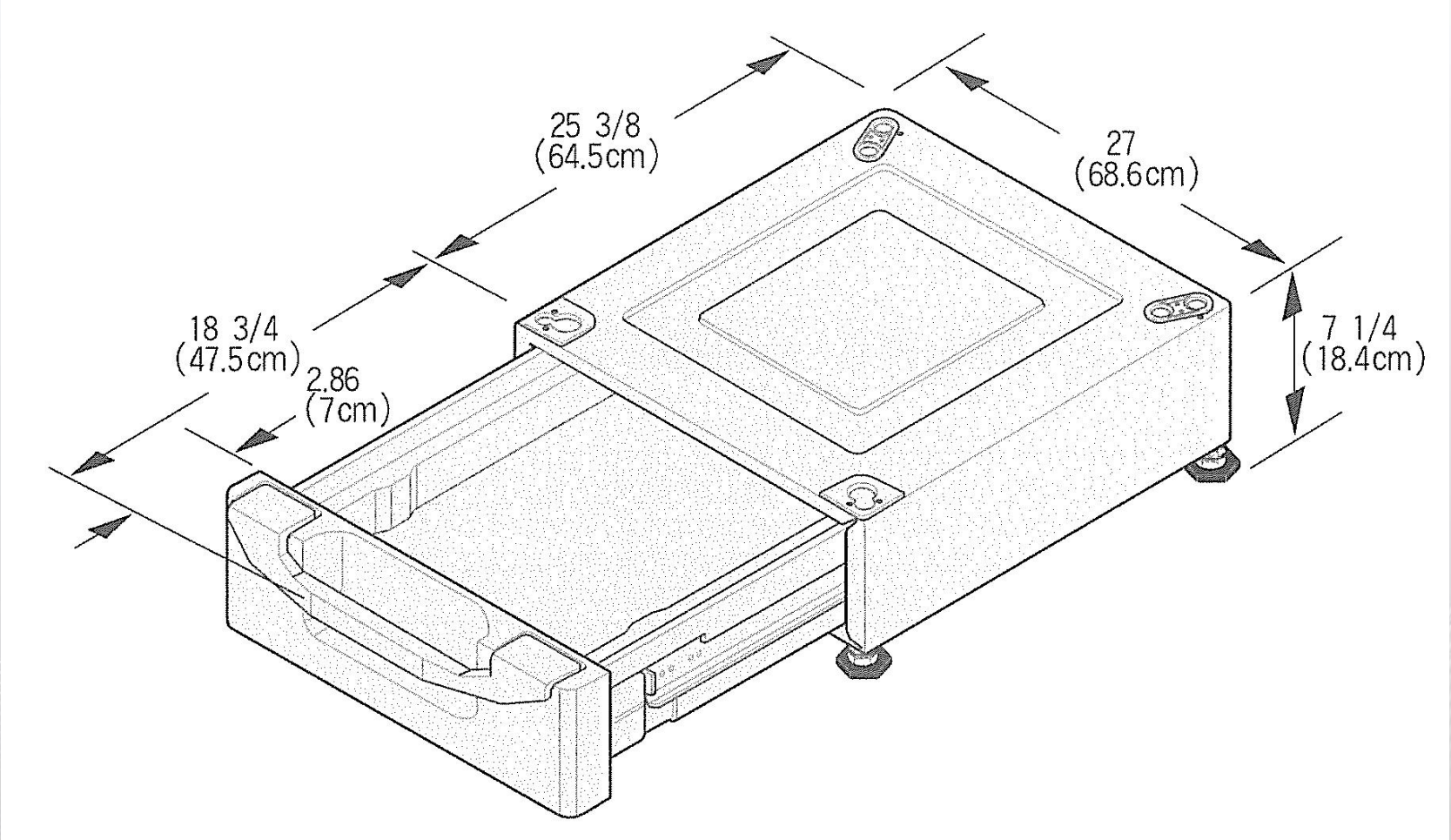
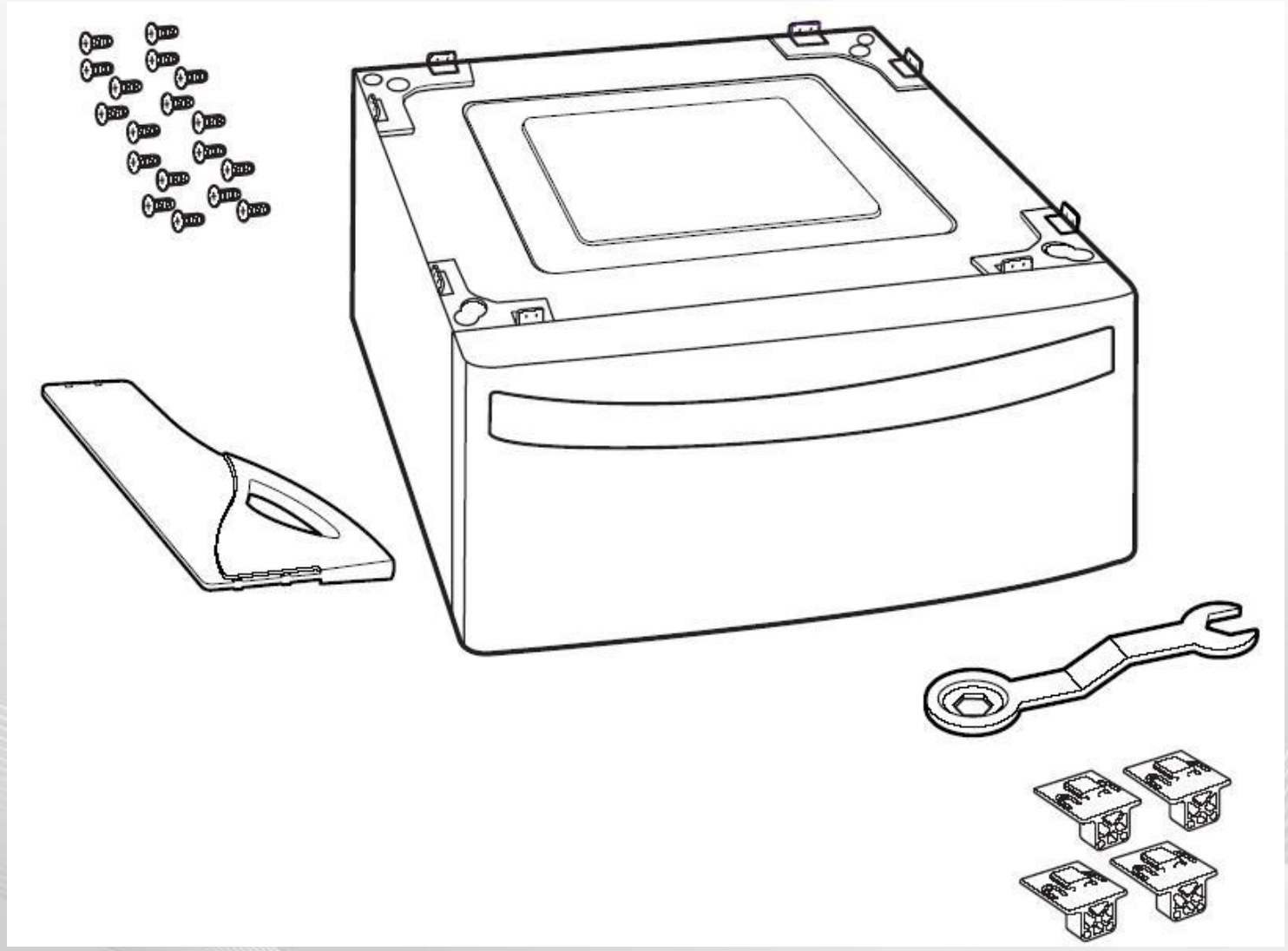


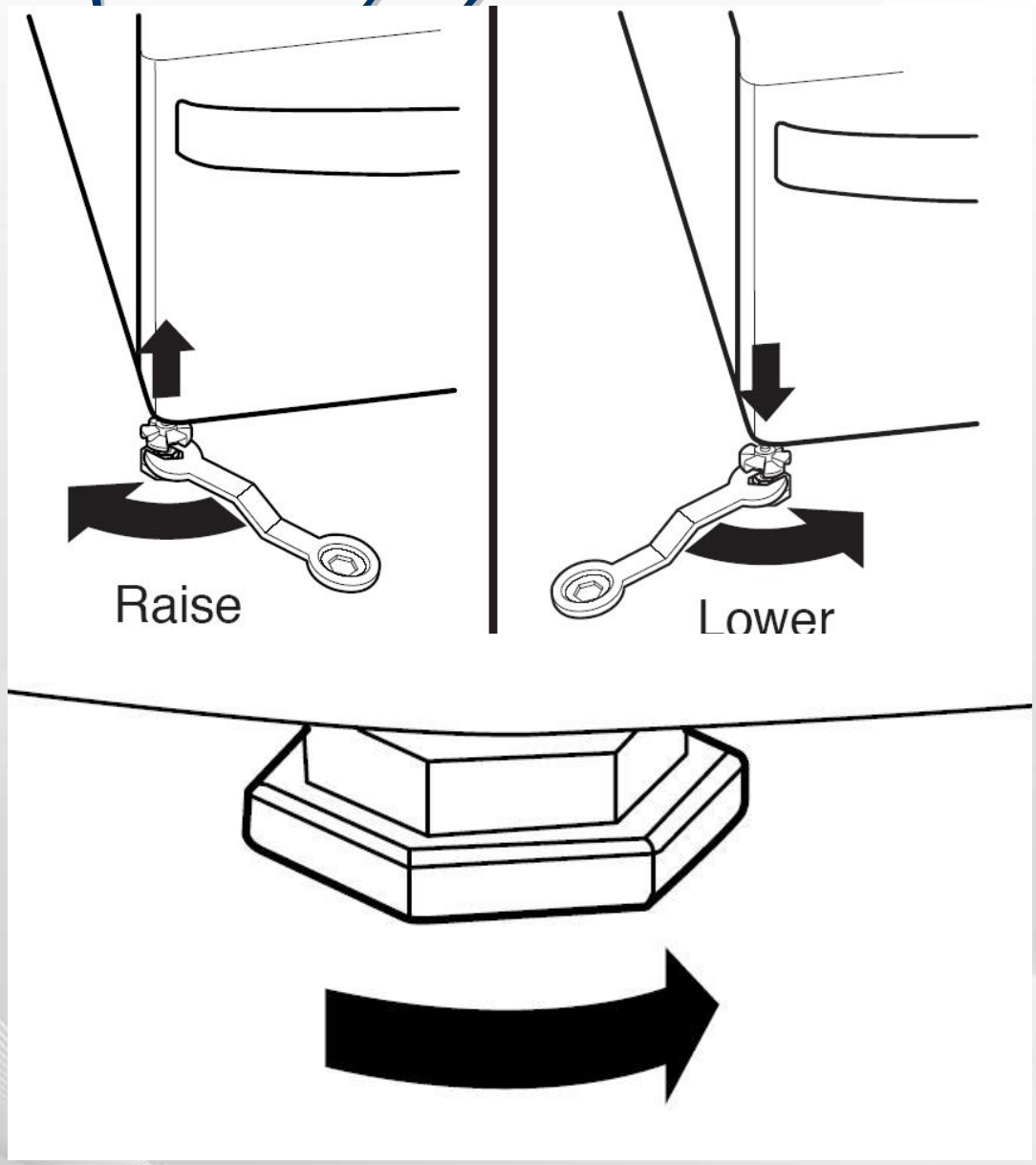
Pedestal Kit (new style)



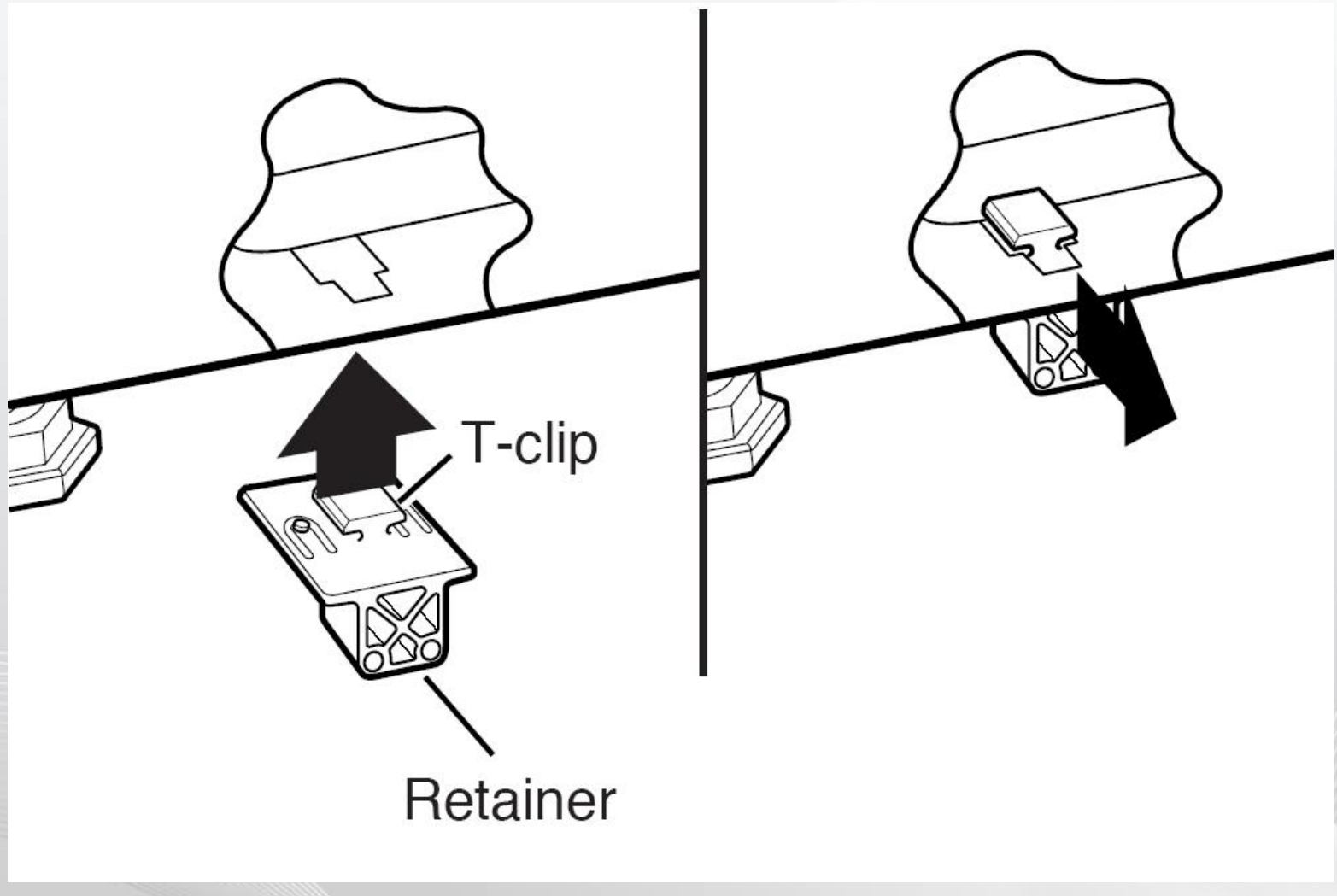
Pedestal Kit (new style)



Pedestal Kit (new style)



Pedestal Kit (new style)



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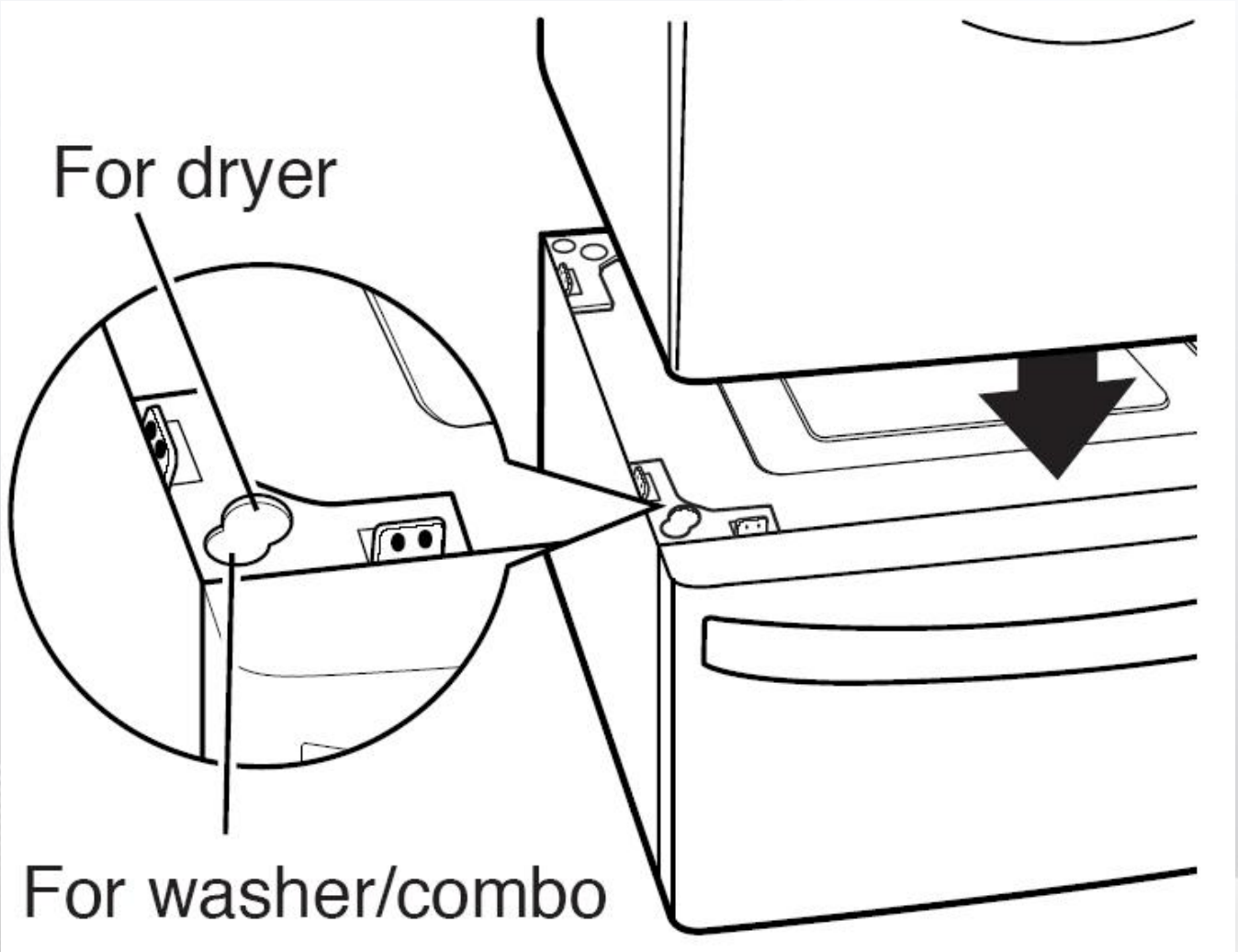

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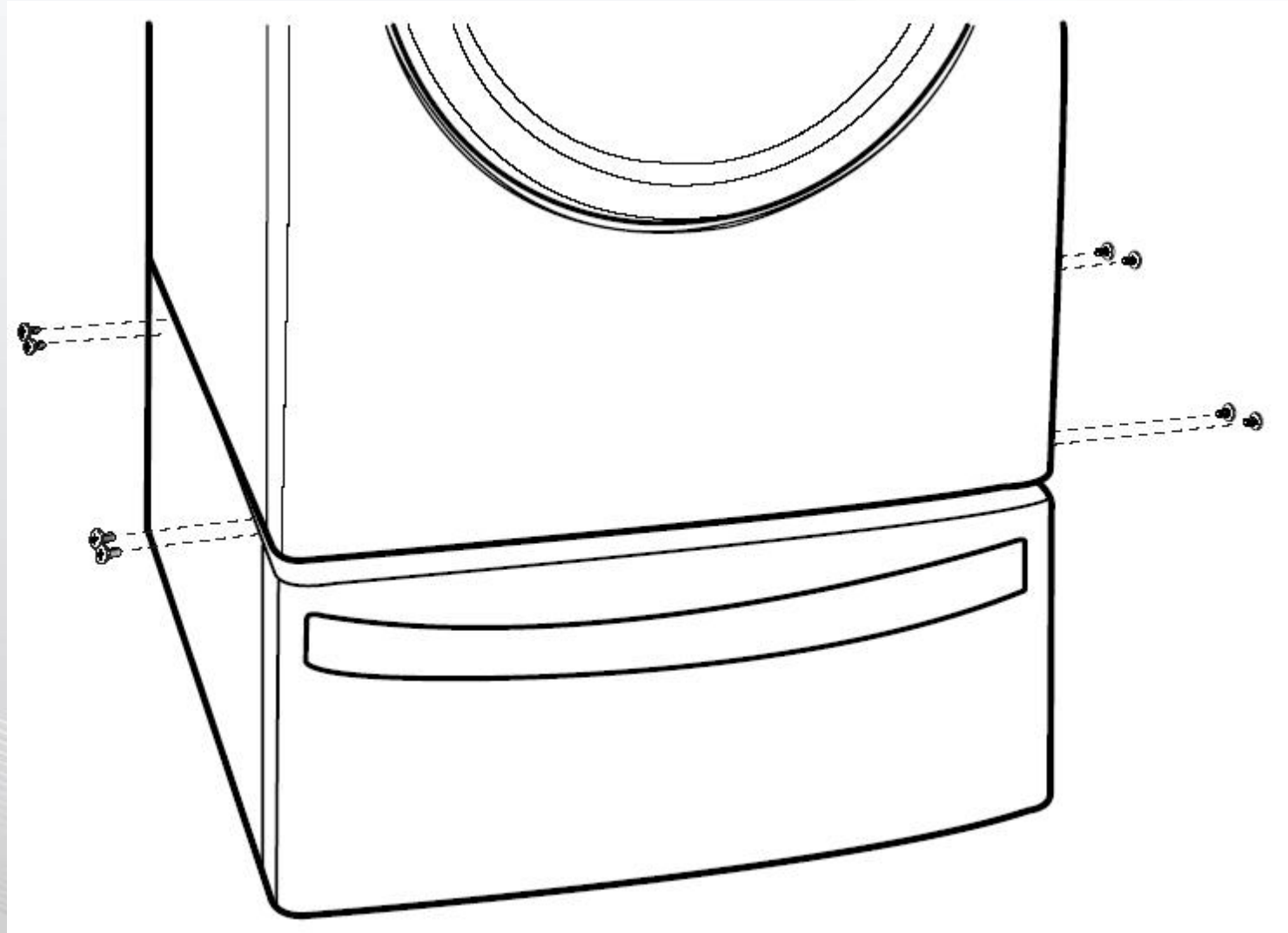

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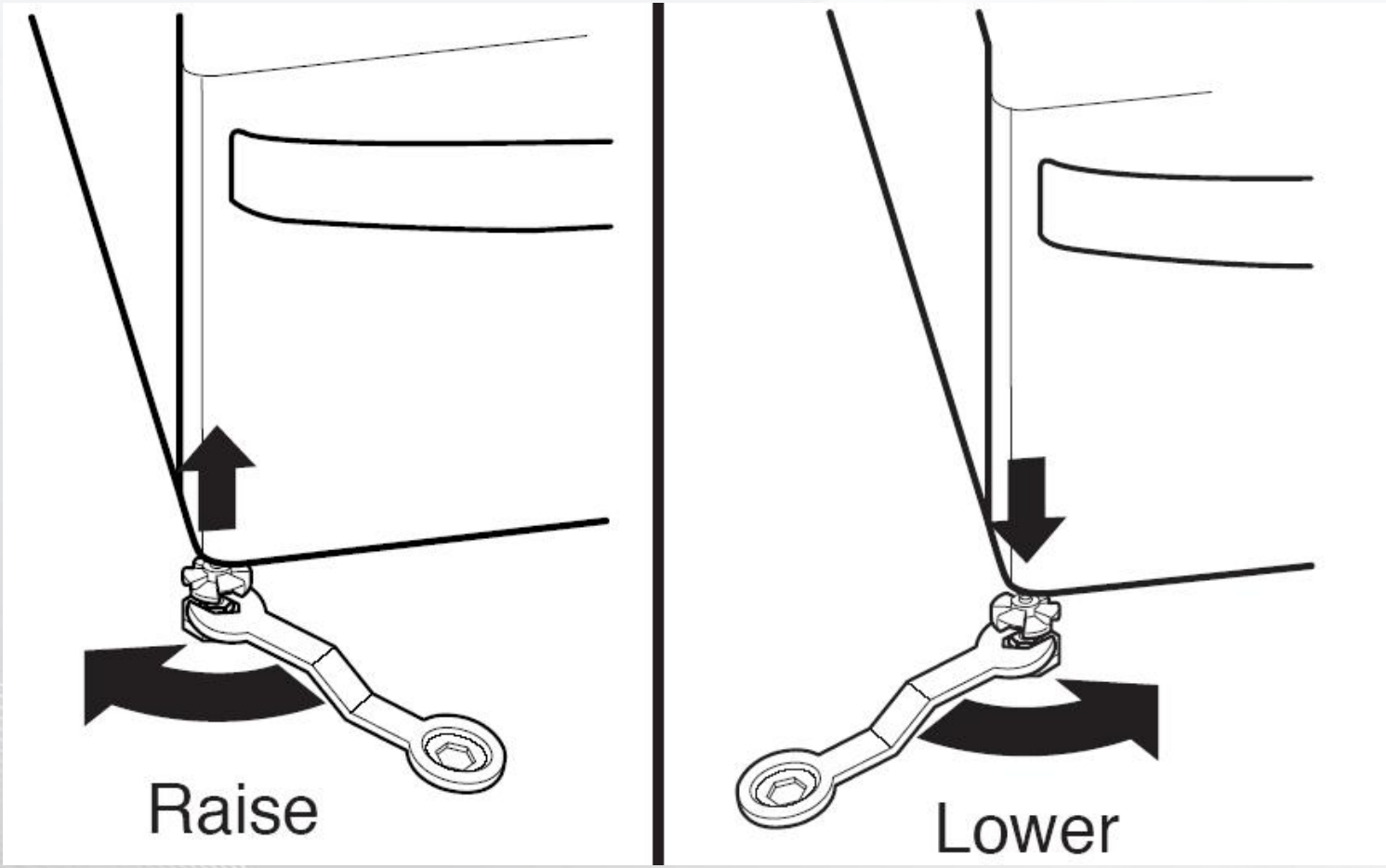


Controls

Power Button

- Use this button to turn the power **On/Off**.

Status Indicator

- It shows elapsed time of the cycle the washer is operating.

Option Button

- **PREWASH**: Use this option for loads that need pretreatment. It adds 16 minutes prewash and a spin cycle.
- **RINSE+SPIN**: Use this option to rinse and then spin.
- **EXTRA RINSE**: This option provides an additional rinse.
- **STAIN CYCLE**: Adds time to the wash and rinse cycles for better stain removal. Automatically provides a rinse.
- **WATER PLUS**: Add extra water to the wash and rinse cycles for superior results.

Cycle Selector Knob

- Rotate the **Cycle selector knob** to select the cycle designed for different types of fabric and soil levels.

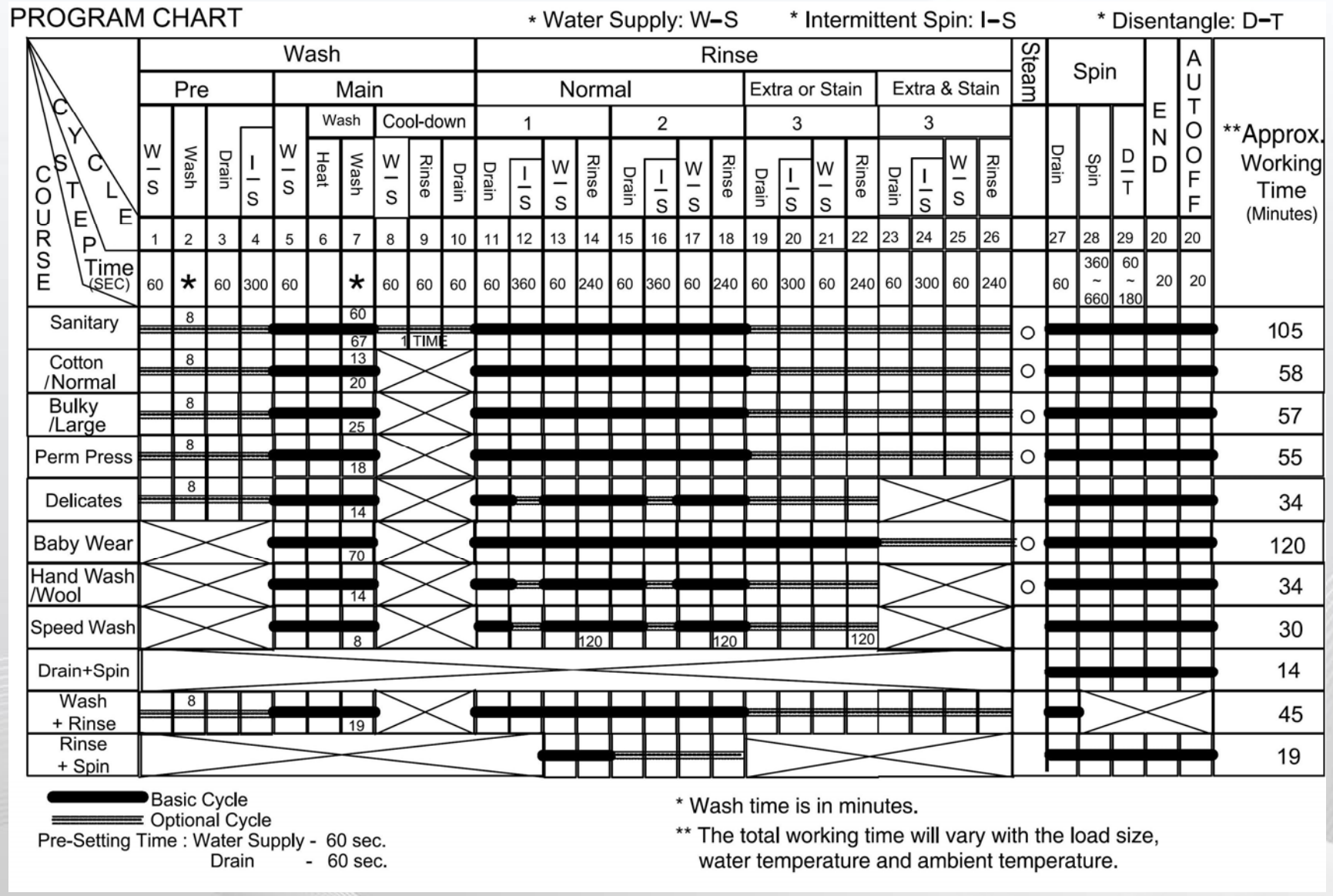
Start/Pause

- Use this button to Start/ Stop the washer.

Wash/Rinse, Spin speed, Soil Level, Dry Beeper Button

- Select a water temperature based on the type of load you are washing.
- To change the spin speed, press the Spin Speed button repeatedly to cycle through available options.
- To change the soil level, press the Soil Level button repeatedly until the desired setting is on.
- Press repeatedly to adjust the volume of the Beeper
- To set the type of or amount of drying time press DRY button repeatedly.

Program Chart



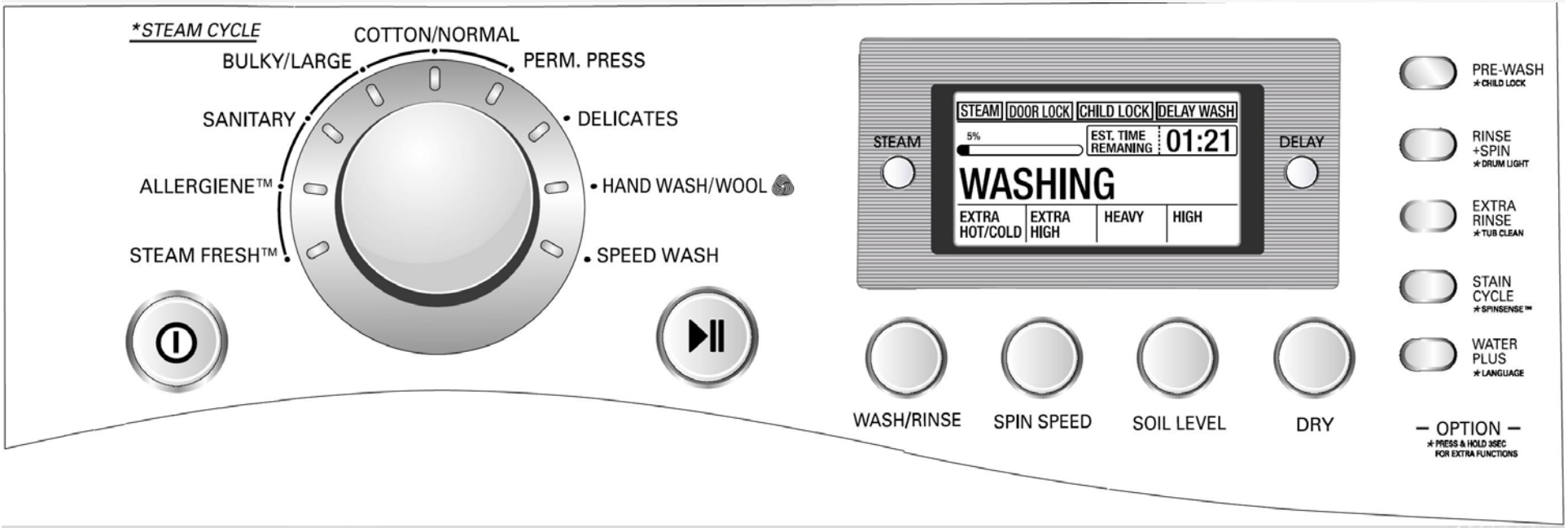
Before Performing Service

- Be careful to avoid electric shock when disconnecting parts for troubleshooting.
- Most terminals in the steam washer have 120 Volts AC or DC on them, sometimes even when the washer is off. The motor operates on 310 Volts DC.
- The steam generator operates at a high temperature. Be careful when servicing it. It can be drained in place by removing the drain cap, but have a hose or a big towel ready to soak up the spillage.

Cycle and Option Chart

Cycle	Fabric Type	Wash/Rinse Temp.	Spin Speed	Soil Level	Pre-Wash	Rinse + Spin	Extra Rinse	Stain Cycle	Steam
Steam Fresh™	Dress shirts, blouses								●
Sanitary	Heavily soiled underwear, work clothes, diapers, etc.	Extra Hot/Cold	High	Normal	●	●	●	●	●
			Extra High No Spin Low Medium	Heavy Light					
Bulky/ Large	Large items such as blankets and comforters	Warm/Cold	Gentle	Normal	●	●	●	●	●
		Warm/Warm Hot/Cold Tap Cold/Cold Cold/Cold	Low Medium No Spin	Heavy Light					
Perm Press	Dress shirts/pants, wrinkle-free clothing, poly/cotton blend clothing, tablecloths	Warm/Cold	Medium	Normal	●	●	●	●	●
		Warm/Warm Hot/Cold Tap Cold/Cold Cold/Cold	High No Spin Gentle Low	Heavy Light					
Cotton/ Normal	Cotton, linen, towels, shirts, sheets, jeans, mixed loads	Warm/Cold	High	Normal	●	●	●	●	●
		Warm/Warm Hot/Cold Tap Cold/Cold Cold/Cold	Extra High No Spin Low Medium	Heavy Light					
Allergiene	Cotton, underwear, pillow covers, bed sheets, baby wear		High						●
			No Spin Low Medium						
Delicates	Dress shirts/blouses, nylons, sheer or lacy garments	Cold/Cold	Low	Normal	●	●	●		
		Warm/Cold Warm/Warm Tap Cold/Cold	Medium No Spin Gentle	Heavy Light					
Hand Wash/ Wool	Items labeled "hand-washable"	Warm/Cold	Low	Normal		●	●		
		Warm/Warm Tap Cold/Cold Cold/Cold	No Spin Gentle	Light					
Speed Wash	Lightly soiled clothing and small loads	Hot/Cold	Extra High	Light		●	●		
		Tap Cold/Cold Cold/Cold Warm/Cold Warm/Warm	No Spin Gentle Low Medium High	Normal Heavy					

Cycle and Option Information



Steam

Steam can be added to every cycle except DELICATES, HAND WASH, WOOL, and SPEED WASH. It is locked out of these cycles to prevent damage to delicate clothing. While the laundry is washing, the steam generator boils water to spray steam through the laundry as it tumbles.

STEAM FRESH™

Steam Fresh™ is not an actual wash cycle. Instead, it is a cycle that tumbles up to five laundry items in a spray of steam to refresh the fabric and release the wrinkles. Water is not dispensed during the STEAMFRESH™ cycle. It is designed to refresh clothes that have been packed away, as in a suitcase or drawer, and make them look freshly laundered and ironed. It is NOT a substitute for dry cleaning and should not be used for any garment that is not designed to be washed in water. To run a STEAMFRESH™ cycle, press POWER and turn the cycle selector knob to STEAMFRESH™. The default setting is for 3 items, but it can be adjusted to freshen from 1 to 5 garments.

ALLERGIENE™

The Allergiene™ cycle is designed to use hotter wash water (140° F or 60° C) than the regular HOT wash (112° F or 50° C) but not as hot as the SANITARY cycle (158° F or 70° C). Its purpose is to remove all allergens, such as dust mites and their eggs and droppings, as well as lint and dead skin cells. This machine is certified allergy and asthma friendly by the Allergy and Asthma Foundation of America as removing 95% of harmful allergens. When the Allergiene™ cycle is operating, the display shows 1:50 at the beginning, the water level defaults to approximately 242 and spin defaults to HIGH. The steam generator operates as does the wash water heater in the bottom of the tub.

Sanitary

The sanitary cycle is used to reduce bacteria and germs, as in baby clothes and sick room linens. The wash water temperature defaults to 158° F (70° C) and cannot be adjusted.

Bulky / Large

The BULKY / LARGE cycle is designed to launder large items like tablecloths and bed covers. It is NOT intended as an opportunity to overload the machine. Just because an item can be forced into the tub is not evidence it can be successfully laundered there. In every case, the laundry must be able to tumble to be cleaned effectively.

In the BULKY / LARGE cycle, the cycle time is preset.

The default selections can be overridden for wash temperature, spin speed, and soil level. If a selection is not permissible with the cycle, the machine will beep and refuse to accept the setting.

Cotton / Normal

The COTTON / NORMAL cycle is the most often used cycle. It defaults to a 0:53 minute cycle time, but this may vary as the fuzzy logic makes numerous adjustments throughout the cycle. It is the only cycle that genuinely senses the load before displaying the approximate wash time. The water level defaults to approximately 239. The default selections can be overridden for wash temperature, spin speed, and soil level.

Delicates

The delicate cycle defaults to a 0:42 minute cycle. The water level defaults to approximately 230. The default selections can be overridden for wash temperature, spin speed, and soil level, but certain options cannot be selected, such as steam, very hot water, and high speed spin. If a selection is not permissible with the cycle, the machine will beep and refuse to accept the setting.

Hand Wash / Wool

This cycle is designed for woolen articles and other garments that are suitable to be washed in water but must be treated very delicately. The HAND WASH / WOOL cycle defaults to a 0:55 minute cycle. Water level defaults to 230. The drum tumbles very gently, making slightly less than one complete revolution per tumble, which is just enough to turn the load over in the water.

Speed Wash

SPEED WASH is the quickest cycle that provides a complete wash and rinse. It defaults to a 0:35 minute cycle. The default selections can be overridden for wash temperature, spin speed, and soil level, very hot water, and high speed spin, but certain options cannot be selected. If a selection is not permissible with the cycle, the machine will beep and refuse to accept the setting. SPEED WASH defaults to a HOT wash, but most people find that overriding it to select WARM gives a better wash and less wrinkling.

Options

When a cycle is selected, options like water temperature, spin speed, are preset for that cycle, but they can be overridden by selecting one of the option buttons on the control panel. For example, selecting a COTTON/NORMAL cycle will automatically default to a WARM wash, COLD rinse, HIGH spin speed, and NORMAL soil level. Any of these settings may be overridden by changing the options at the control panel before the wash cycle is started.

Not every option is available for every cycle. As mentioned above, the DELICATE cycle will lock out selections HOT WASH water, HIGH spin speed, and STEAM in the cycle.

Spin Only

The SPIN ONLY cycle is not shown on the console. To engage SPIN ONLY, Press POWER and then SPIN SPEED. The COTTON / NORMAL LED will light. The machine will default to a 0:13 minute cycle on high speed unless EXTRA HIGH SPIN is selected, which will increase the cycle time to 0:17. The drain pump is energized as required during the spin cycle to exhaust all the water extracted from the load.

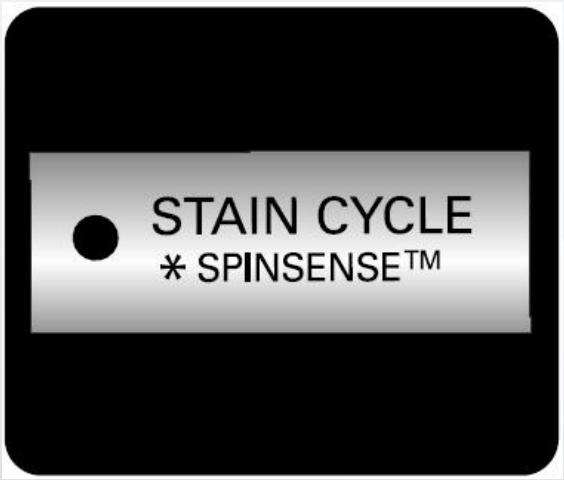
Pre Wash

Pre-wash adds a pre-wash cycle before the main wash cycle. Pre-wash fills the tub and dispenses what was put into the pre-wash detergent compartment. After filling and washing, the pre-wash water is pumped out and the main wash cycle begins.

Stain Cycle

The stain cycle adds time to the wash cycle and increases the temperature of the wash water for increased cleaning performance.

SPINSENSE™



SPINSENSE™ is a setting that reduces the spin speed after sensing an unbalanced load. To engage the SPINSENSE™, press POWER and select a cycle. Press and hold the SPINSENSE™ (Rinse+Spin) button. SPINSENSE™ will remain engaged until it is disengaged by the user. Turning the machine off or losing power will not disable SPINSENSE™.

Child Lock

CHILD LOCK is designed to disable the control pad after the cycle is started. To activate the CHILD LOCK after the cycle has begun, press and hold CHILD LOCK (Delay Start) until **CL** shows on the display. All controls will be disabled until the end of the cycle.

Custom Program

The CUSTOM PROGRAM button allows the customer to set a commonly used program for personal convenience. For example, he may prefer the COTTON/NORMAL cycle but with a HOT WASH instead WARM, EXTRA HIGH SPIN instead of the regular spin, and a LIGHT SOIL level to shorten the cycle time. By programming these selections to the CUSTOM PROGRAM button, the customer can simply press it every time he wants to use this particular cycle. To program the CUSTOM PROGRAM BUTTON, press POWER. select the desired cycle and options (as described above,) and then press and hold the CUSTOM PROGRAM for at least 3 seconds, until it beeps twice. Thereafter, simply press POWER, CUSTOM PROGRAM, and START to use this cycle.

Tub Clean

The TUB CLEAN cycle is designed to use extra hot water and a long wash cycle to remove soap scum and residue from the inside of the tub. Use it once a month to keep the washer clean and to prevent mildew and odor. Do not put laundry into the tub during the TUB CLEAN cycle.

Extra Rinse

The EXTRA RINSE cycle inserts a second rinse cycle, which extends the cycle time accordingly. This cycle is useful for customers who are sensitive to the dyes, perfumes, and other ingredients found in laundry products.

Rinse+Spin

RINSE+SPIN is provided to rinse laundry and spin it before drying it. It is most often used for previously washed laundry that was inadvertently left in the washer instead of being promptly transferred to the dryer or clothesline. Rinse temperatures are limited to COLD or WARM water. Changing the spin speed to EXTRA HIGH increases the cycle time by 0:04 minutes.

Delay Cycle

The DELAY CYCLE button allows the user to put laundry into the machine, add the appropriate additives (HE detergent, softener, and bleach,) set the desired cycle and options, and delaying the start tome for up to 12 hours in 1-hour increments. This option is used to have the laundry ready to come out of the washer at a certain time, like when the customer gets home from work or after school, etc.

Water Plus

Press and hold the WATER PLUS button to activate the language selection option.

Water Plus

The LANGUAGE button allows the user to select the display language from among English, Spanish, and French.

Water Temperature Control

PREWASH CYCLE

Cold water is supplied via the dispenser when the prewash valve opens. If **COLD WASH / COLD RINSE** is selected, the heater is not activated. If another WASH / RINSE temperature is selected, the heater still is not activated during the PREWASH unless the water temperature is lower than 85° F (29° C).

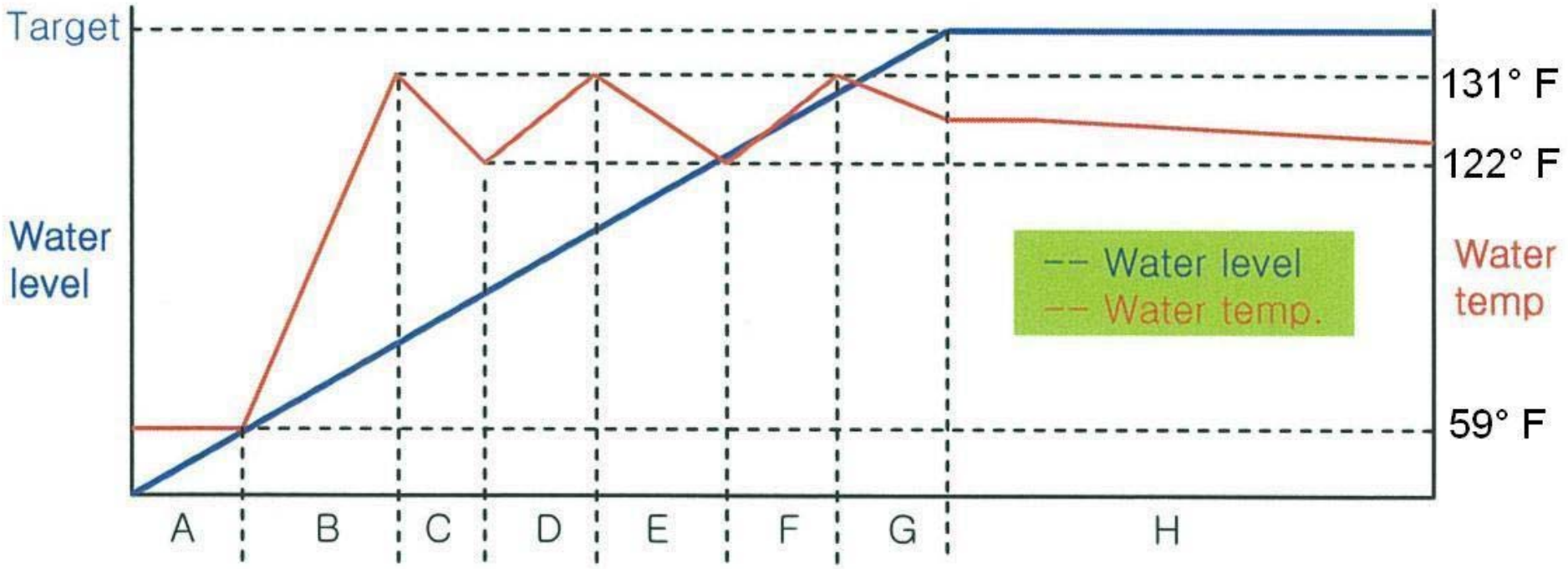
Water Temperature Control

MAIN WASH and RINSE CYCLE

At the beginning of the prewash cycle, COLD water is supplied via the dispenser when the prewash valve opens. Then HOT or COLD water is applied as required to create a wash of the programmed temperature, as shown in the table below.

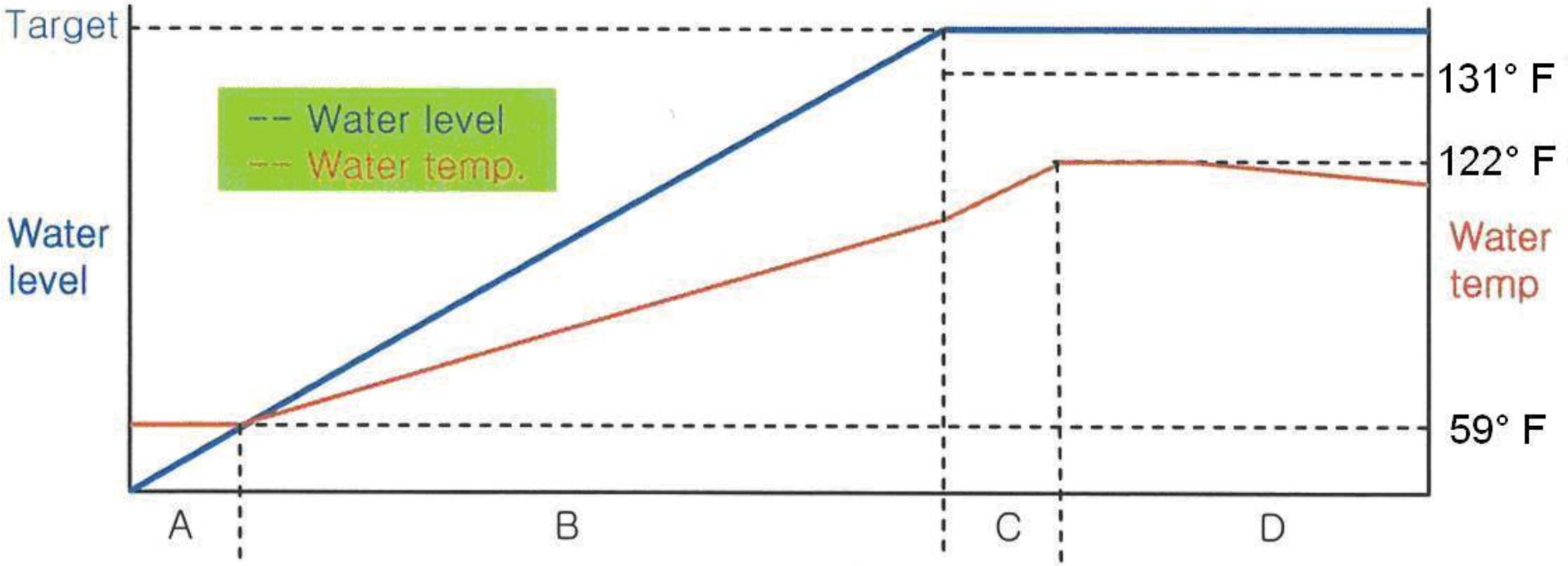
	EXTRA HOT	HOT	WARM	COLD
Set Point	158° F	122°F	104°F	86°F
Range (Wash)	158~167° F	122~131° F	104~**113**° F	50~86° F
Range (Rinse)	68~77° F	68~77° F	68~77° F	Tap

Water Temperature Control



A	Prewash valve opens, cold water is supplied.
B, D, and F	Hot valve opens to raise water temperature to 131° F.
C, E, and G	Cold valve opens to lower water temp to 122° F.
H	No water is supplied because water temp reaches target.

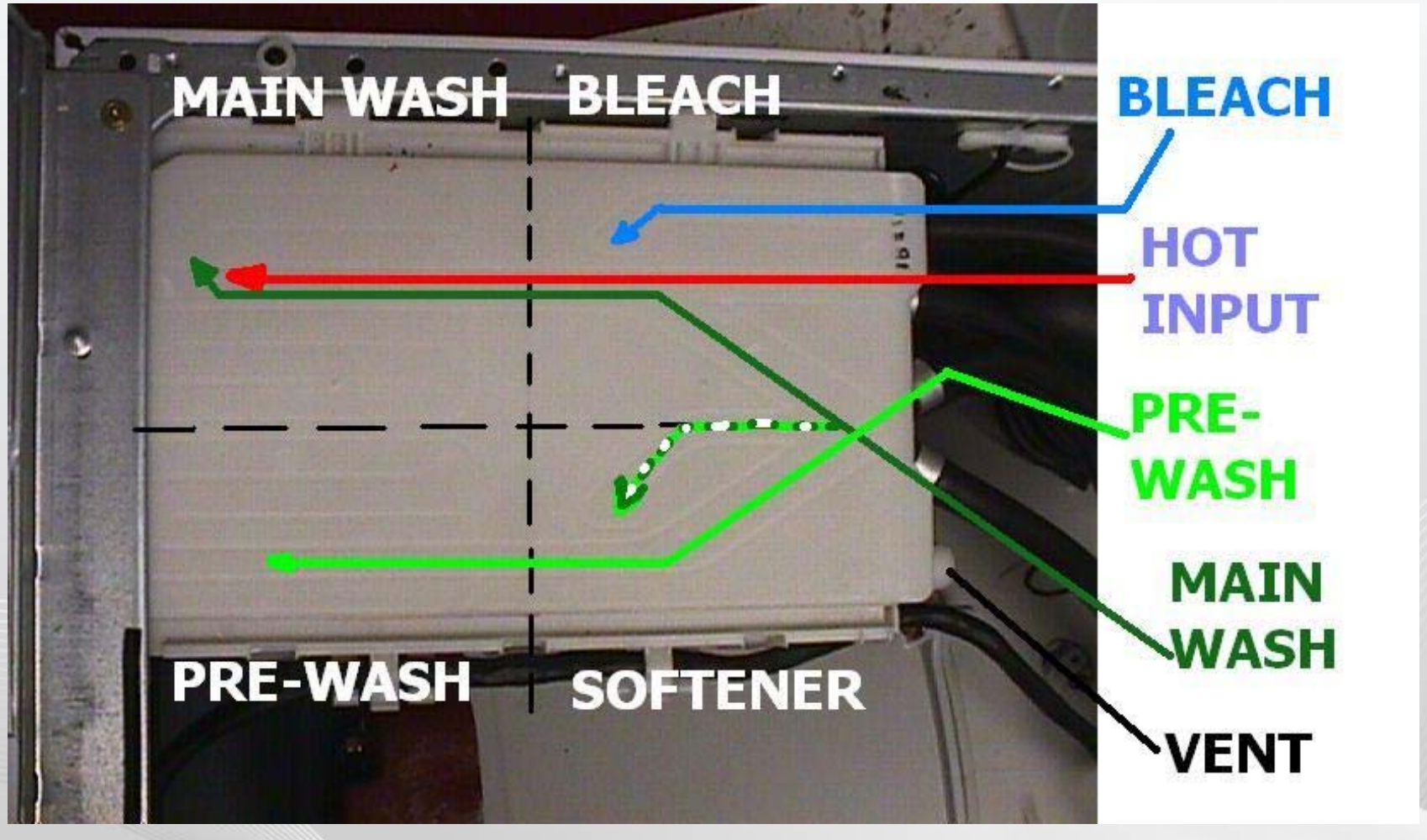
Water Temperature Control



A	Prewash valve opens, cold water is supplied.
B	Hot valve opens to raise the water temperature to 122° F.
C	No cold water is supplied; already reached the target level.
D	Heater turns off when the water reaches target temp of 122° F.

Detergent Dispenser

Dispenser


MAIN WASH
BLEACH
PRE-WASH
SOFTENER
BLEACH
HOT INPUT
PRE-WASH
MAIN WASH
VENT

Siphon Box

The Rule of TWOs

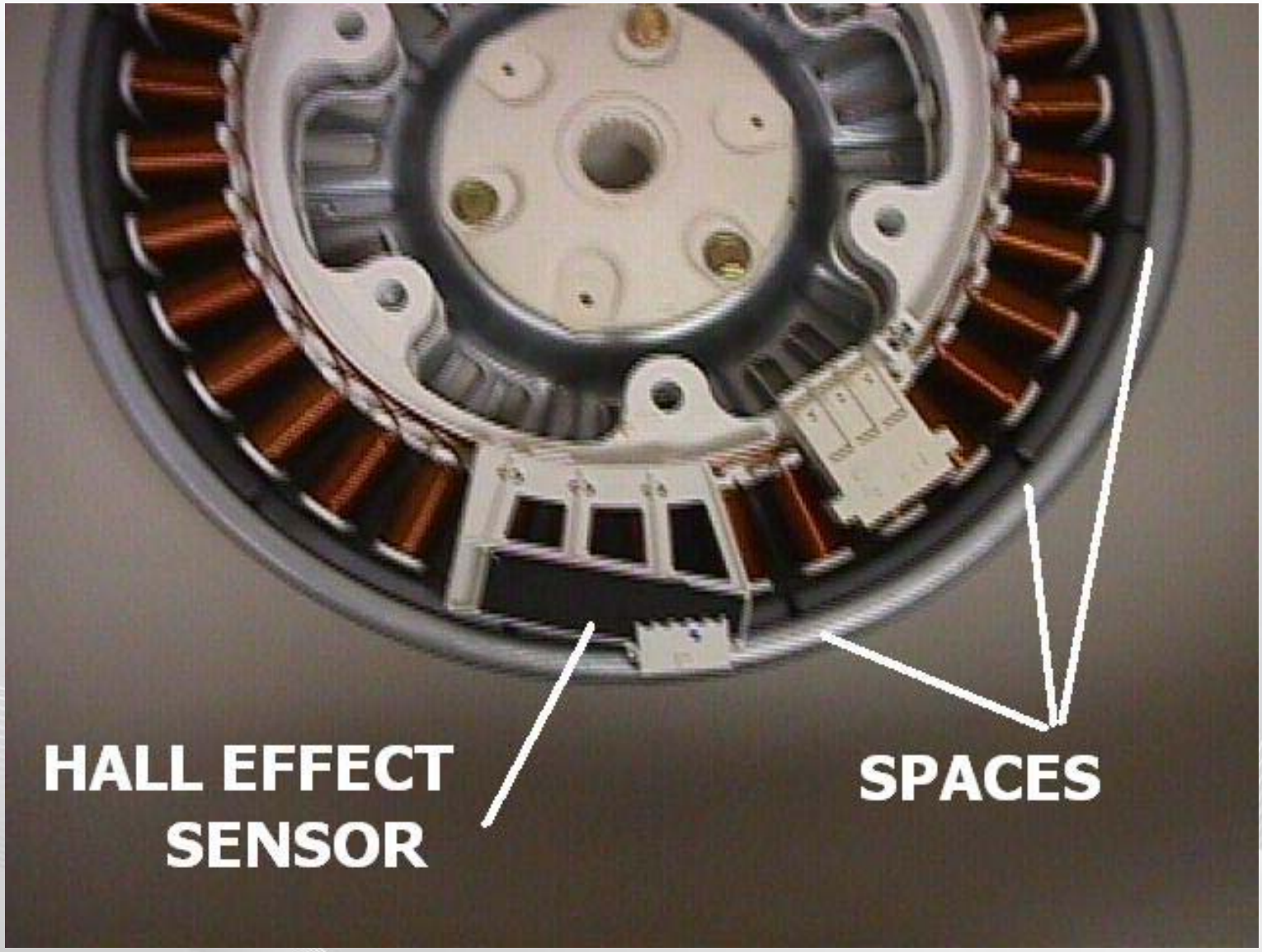
We recommend the **RULE OF TWOS** concerning the usage of laundry products.

Use no more than **TWO TABLESPOONS** of detergent in either the pre-wash or the main wash cycles. Use no more than **TWO TEASPOONS** of softener or bleach. While some **HE** laundry detergents suggest the use of as much as 4 ounces per load, this is entirely too much detergent for the LG machines.

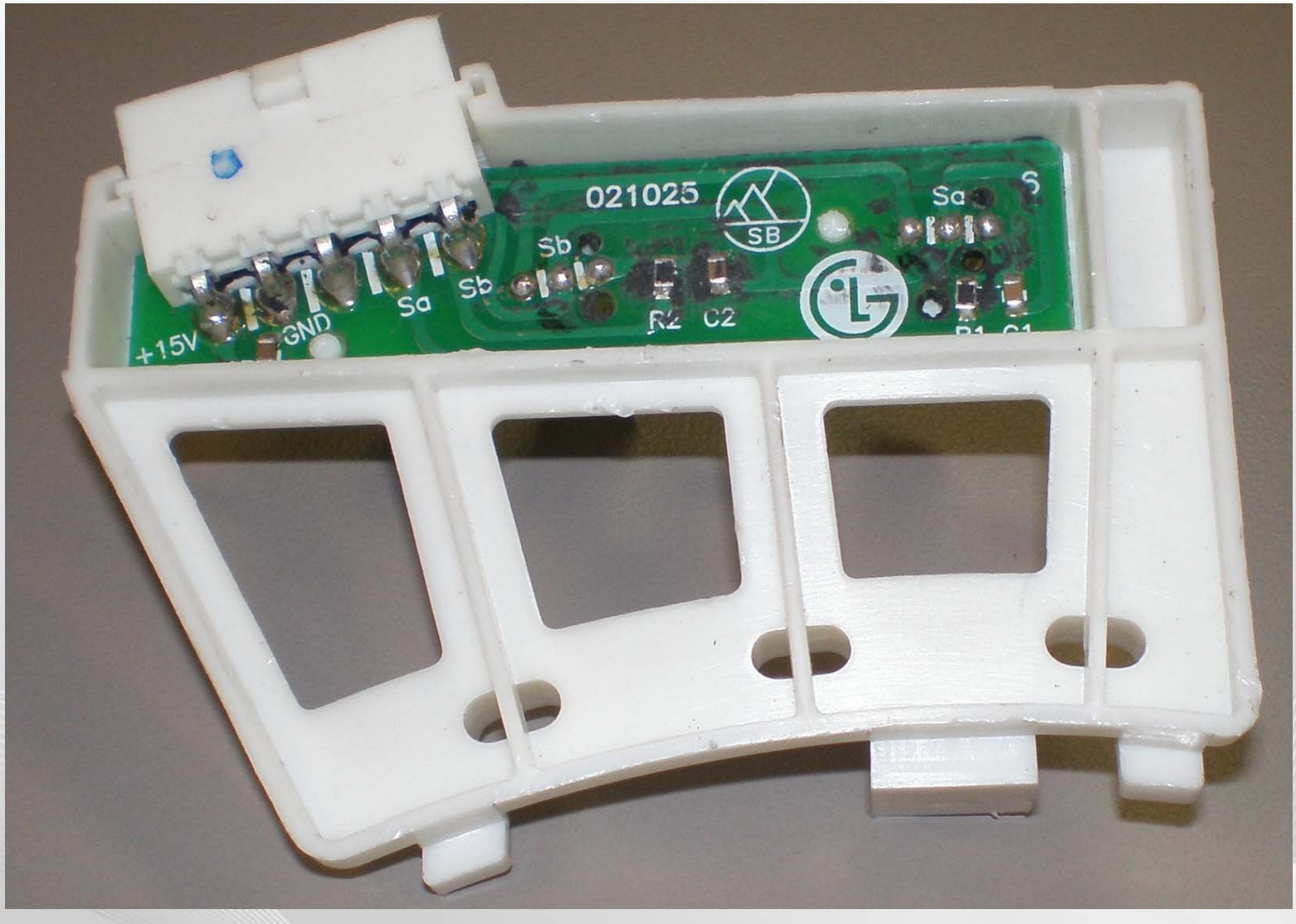
Due to the design of the machine, we do not recommend using it to soak or dye clothing, nor do we recommend the use of various laundry additives such as enzyme pre-soaks, detergent boosters, borax additives, bluing, and others.

Direct Drive Motor

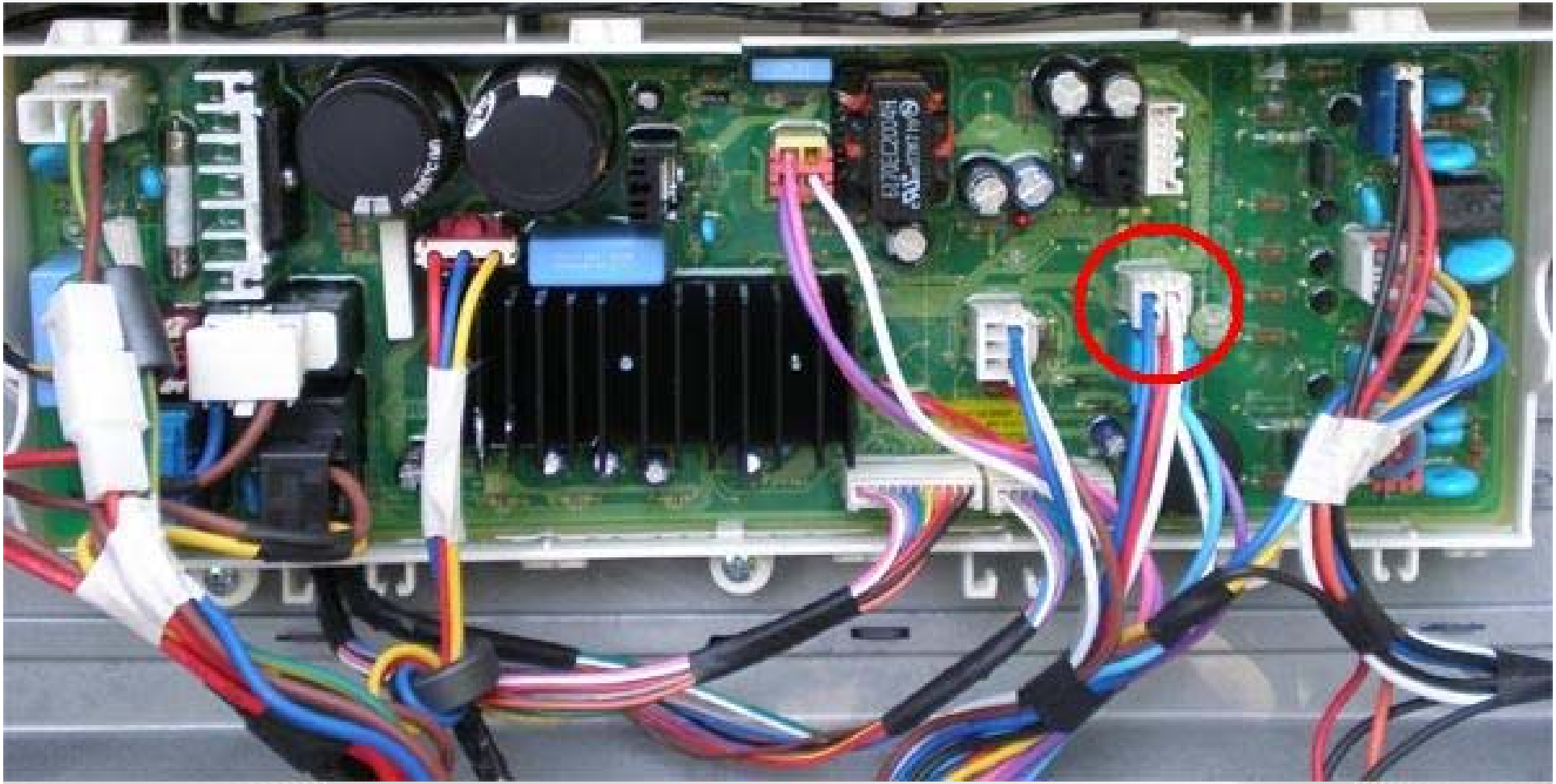
Direct Drive Motor



Direct Drive Motor



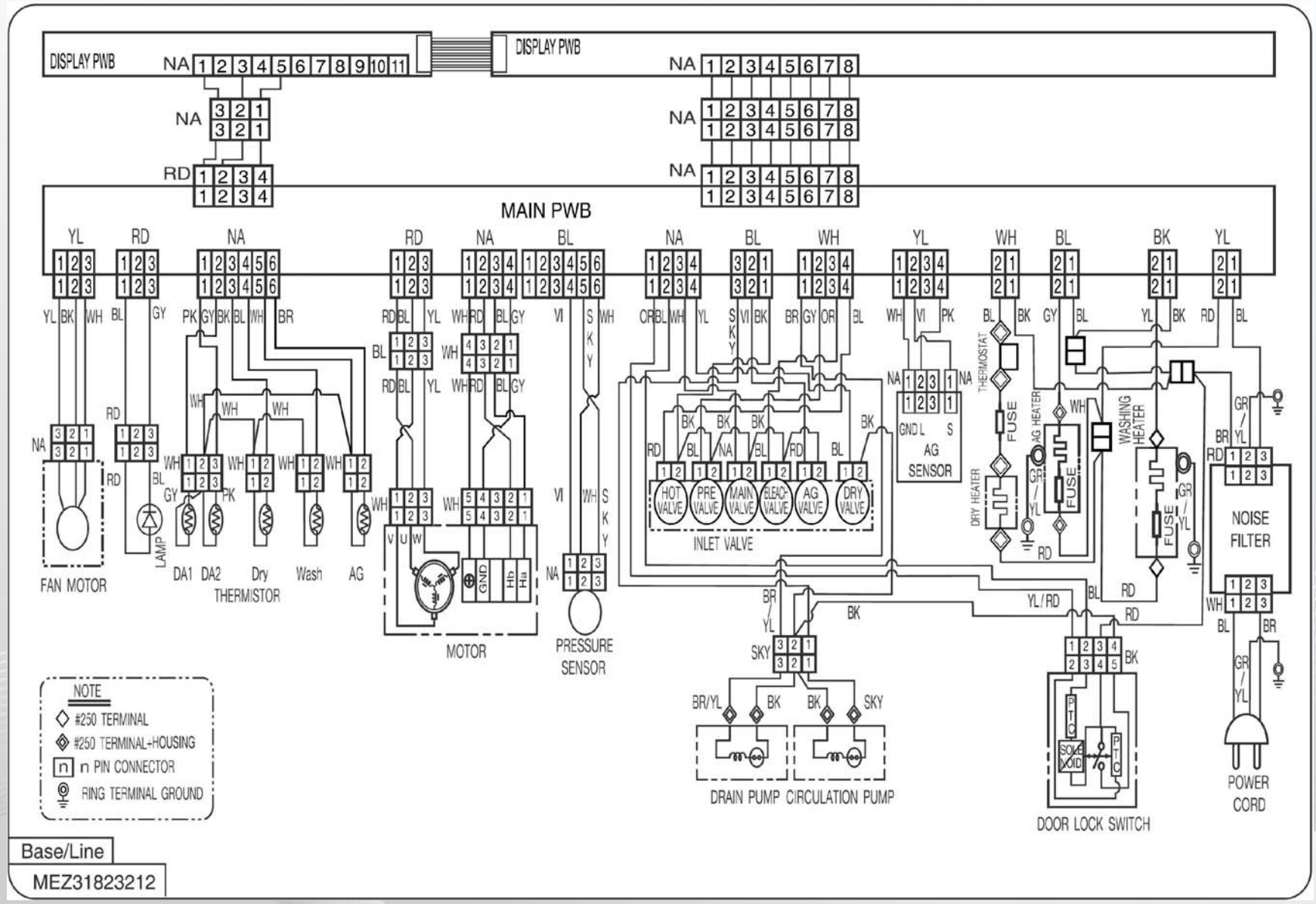
Direct Drive Motor



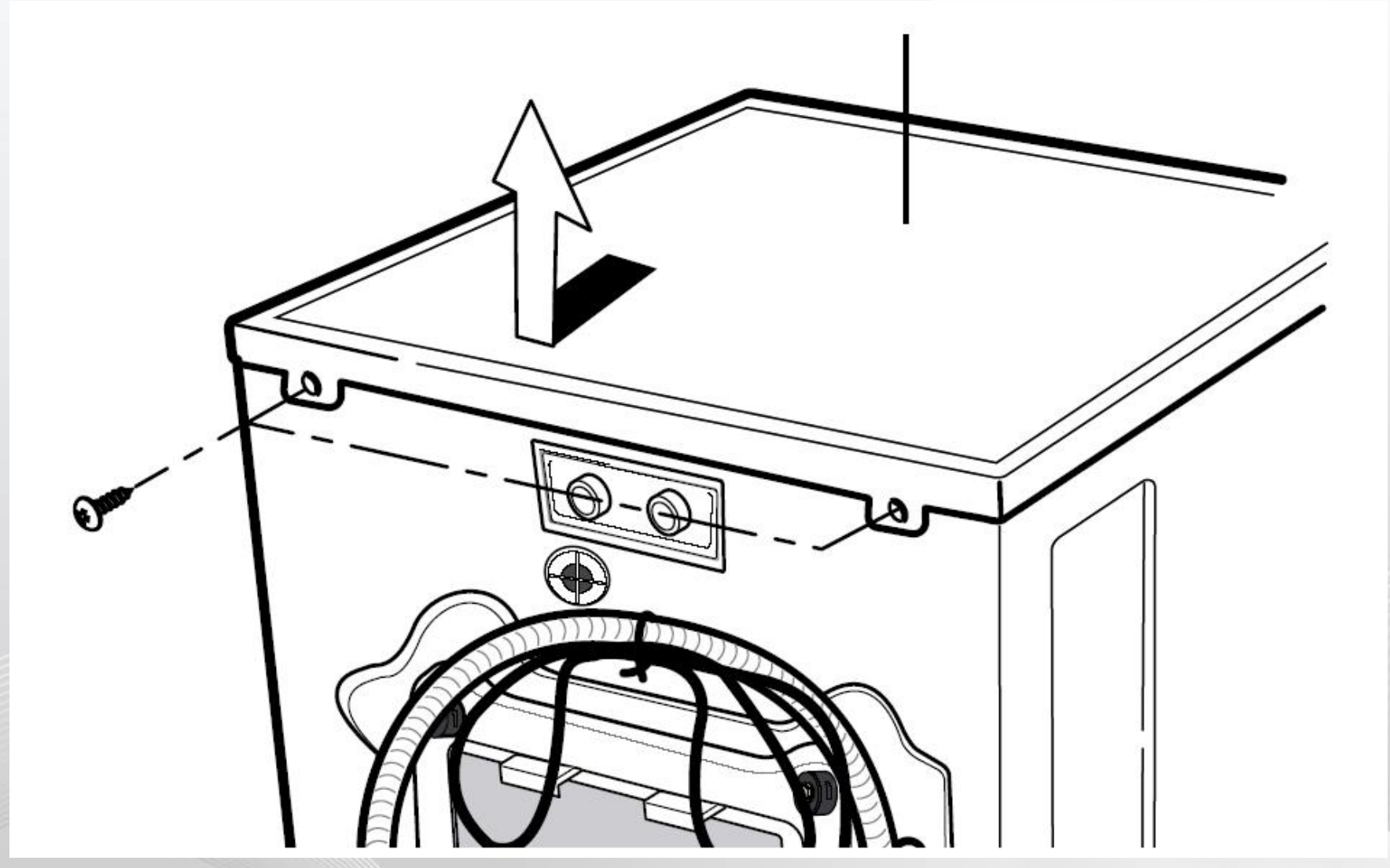
Disassembly and Repair

The following pages will show the instructions for disassembly, repair, replacement of parts, and re-assembly. Many times, electrical components may be tested by connecting the appropriate meter to the leads or connectors on the main PC Board. (Refer to the block wiring diagram, below.) Proper diagnosis will eliminate unnecessary labor and expedite repairs.

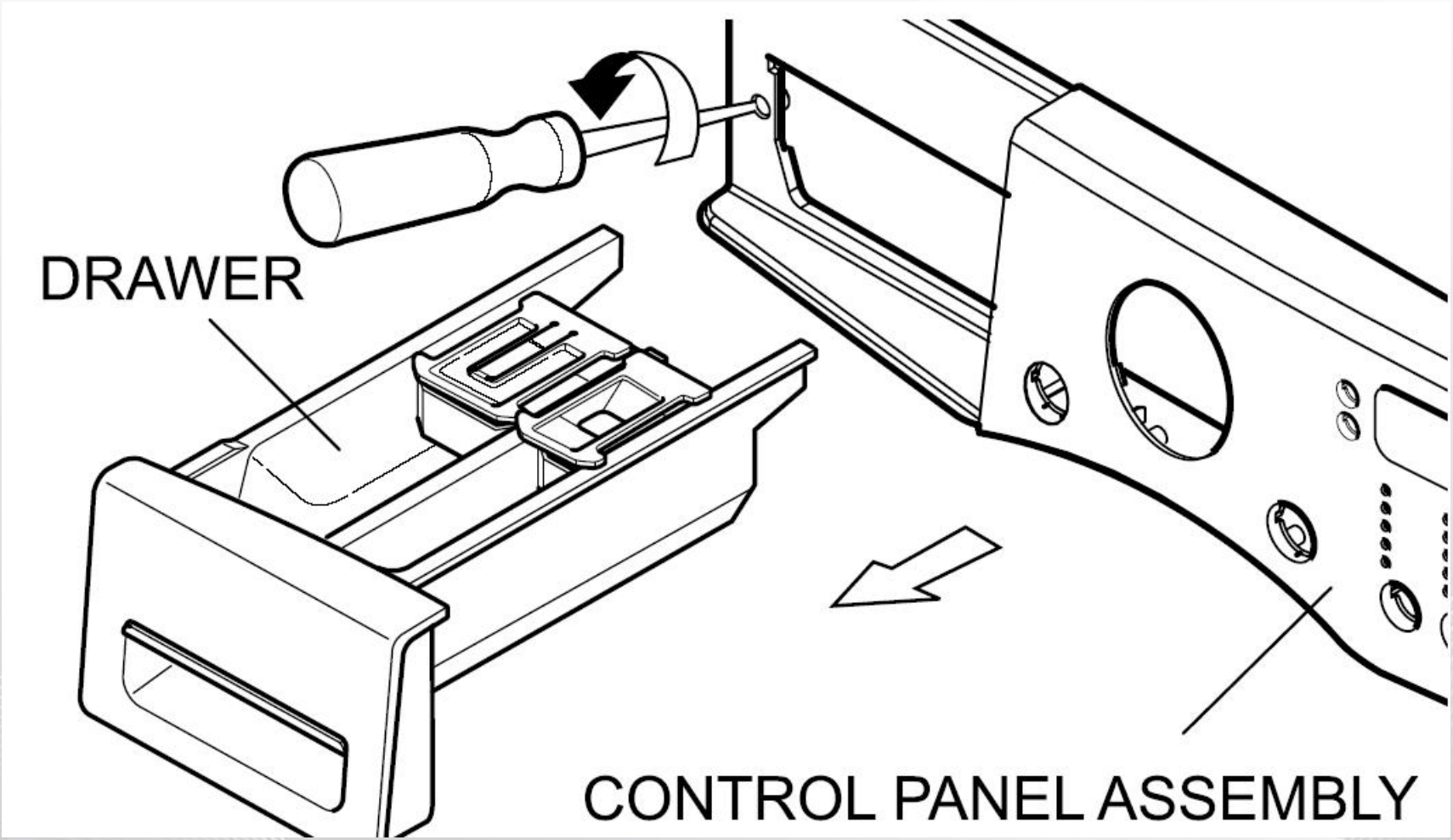
Block Wiring Diagram



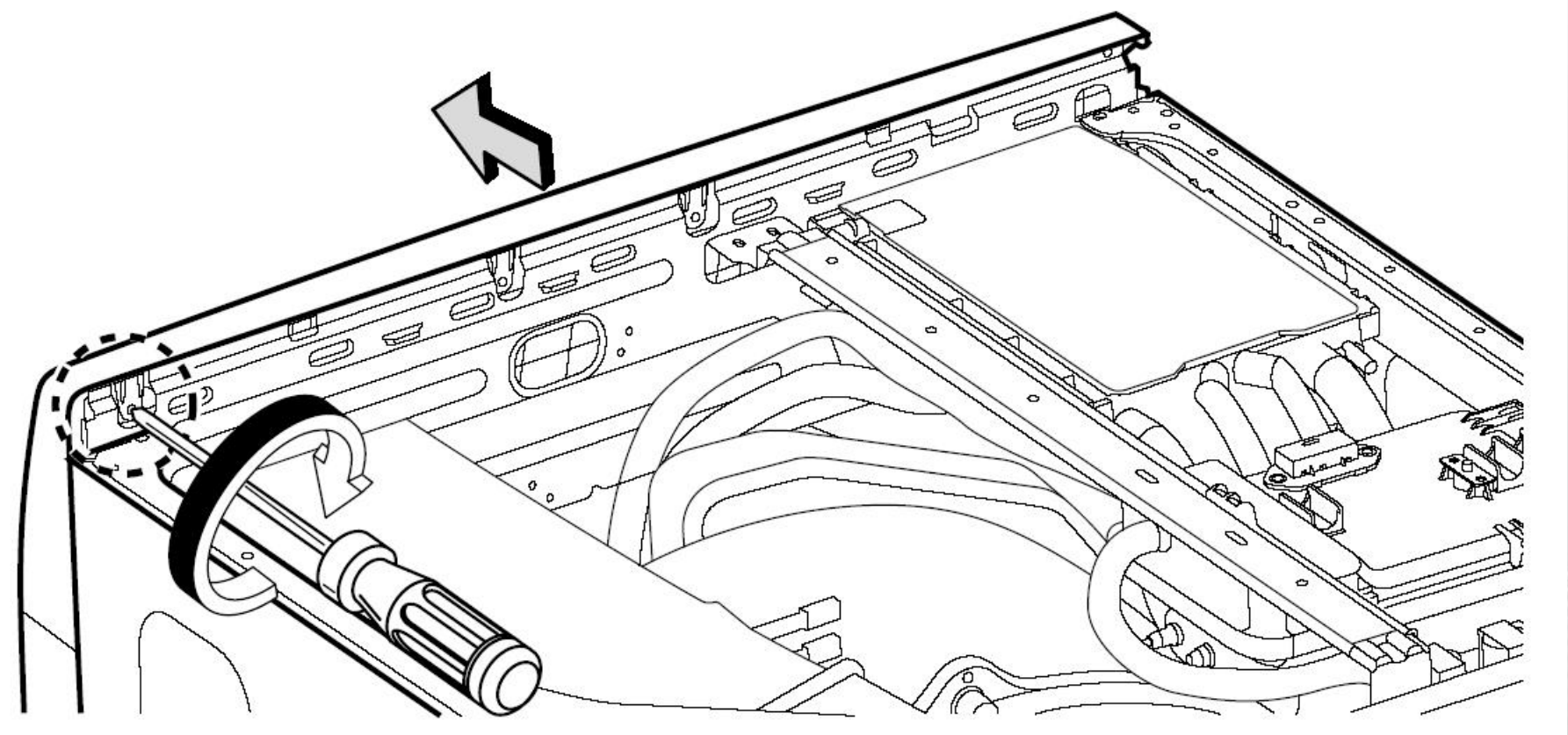
Control Panel



Control Panel

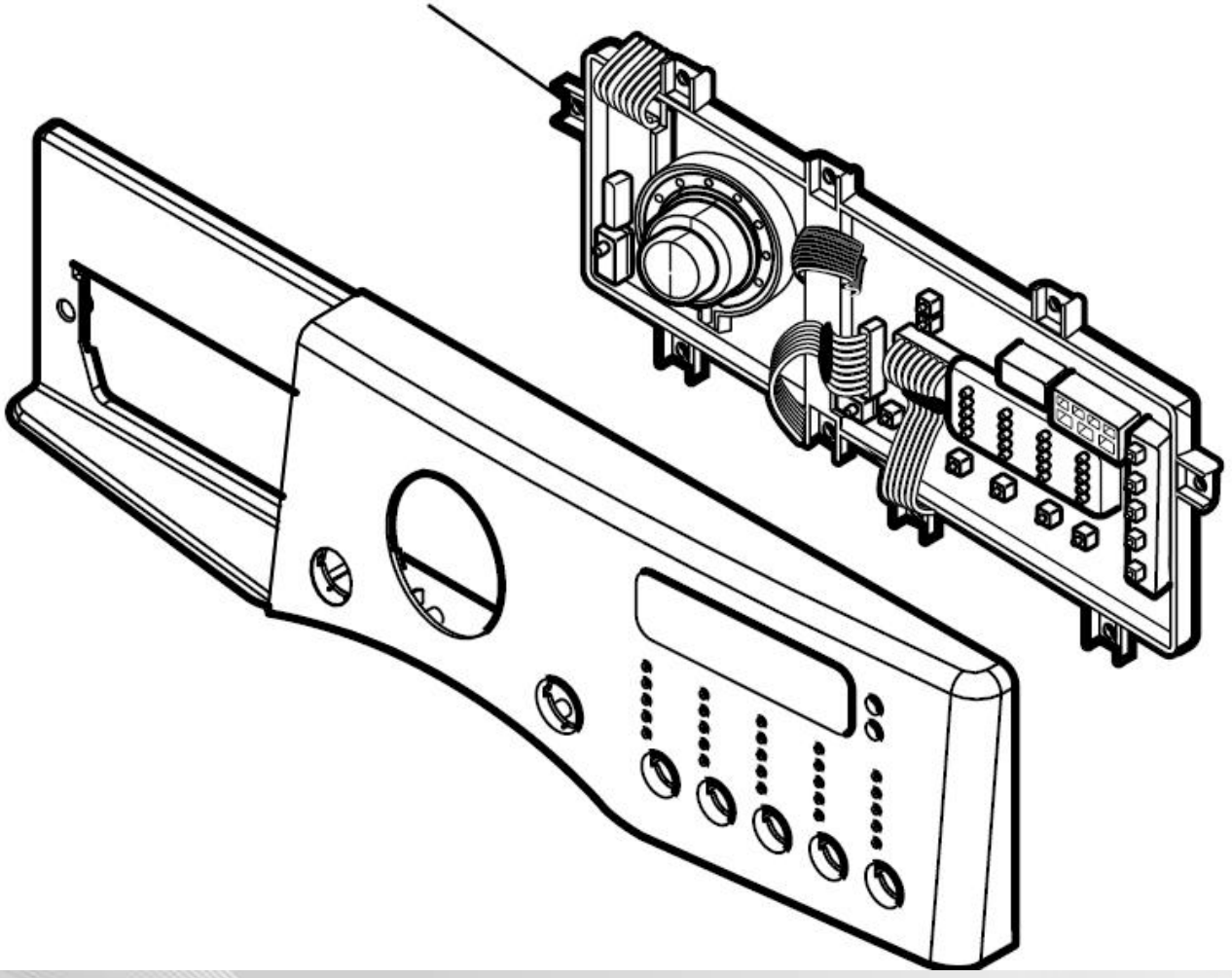


Control Panel

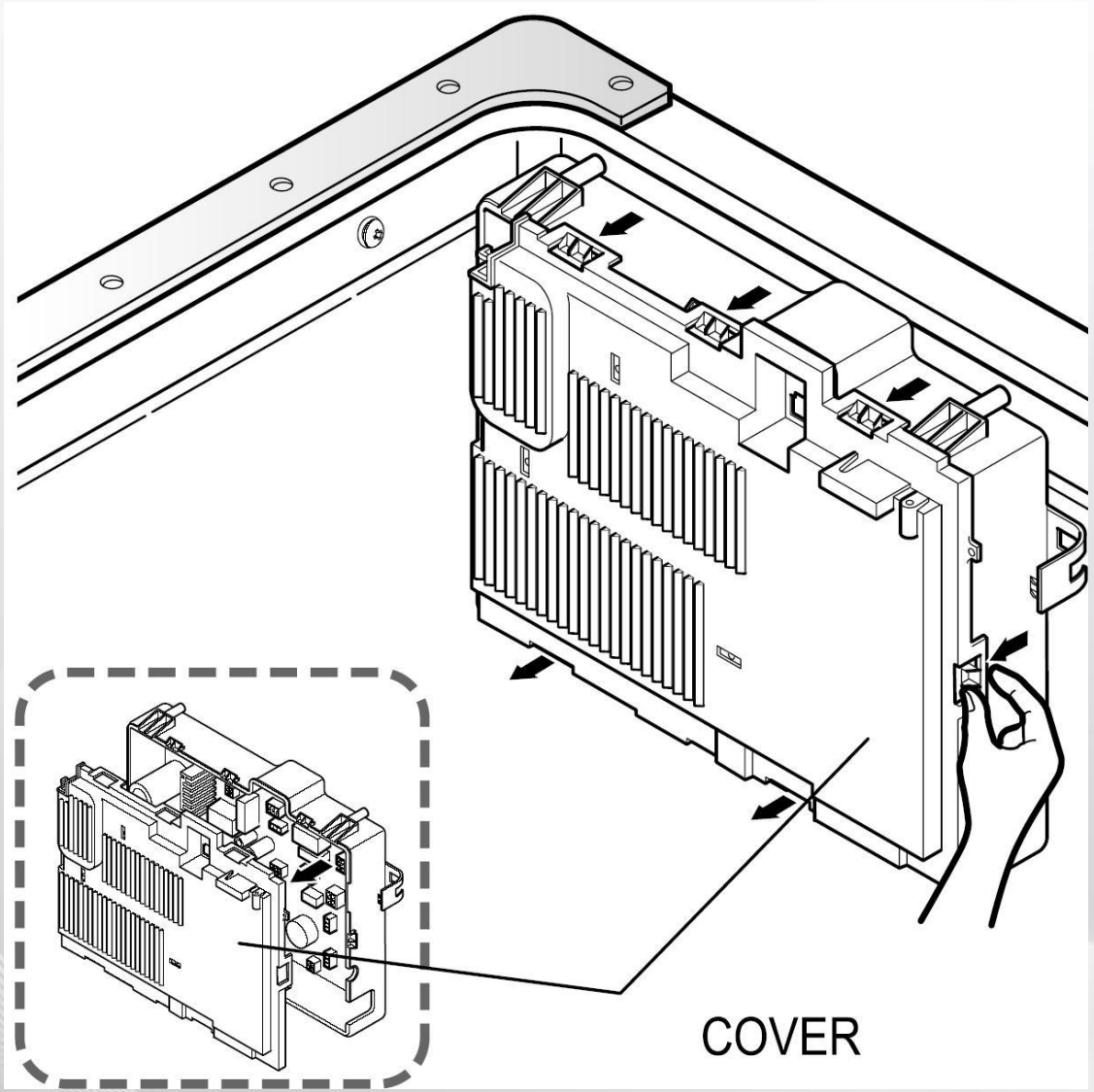


Control Panel

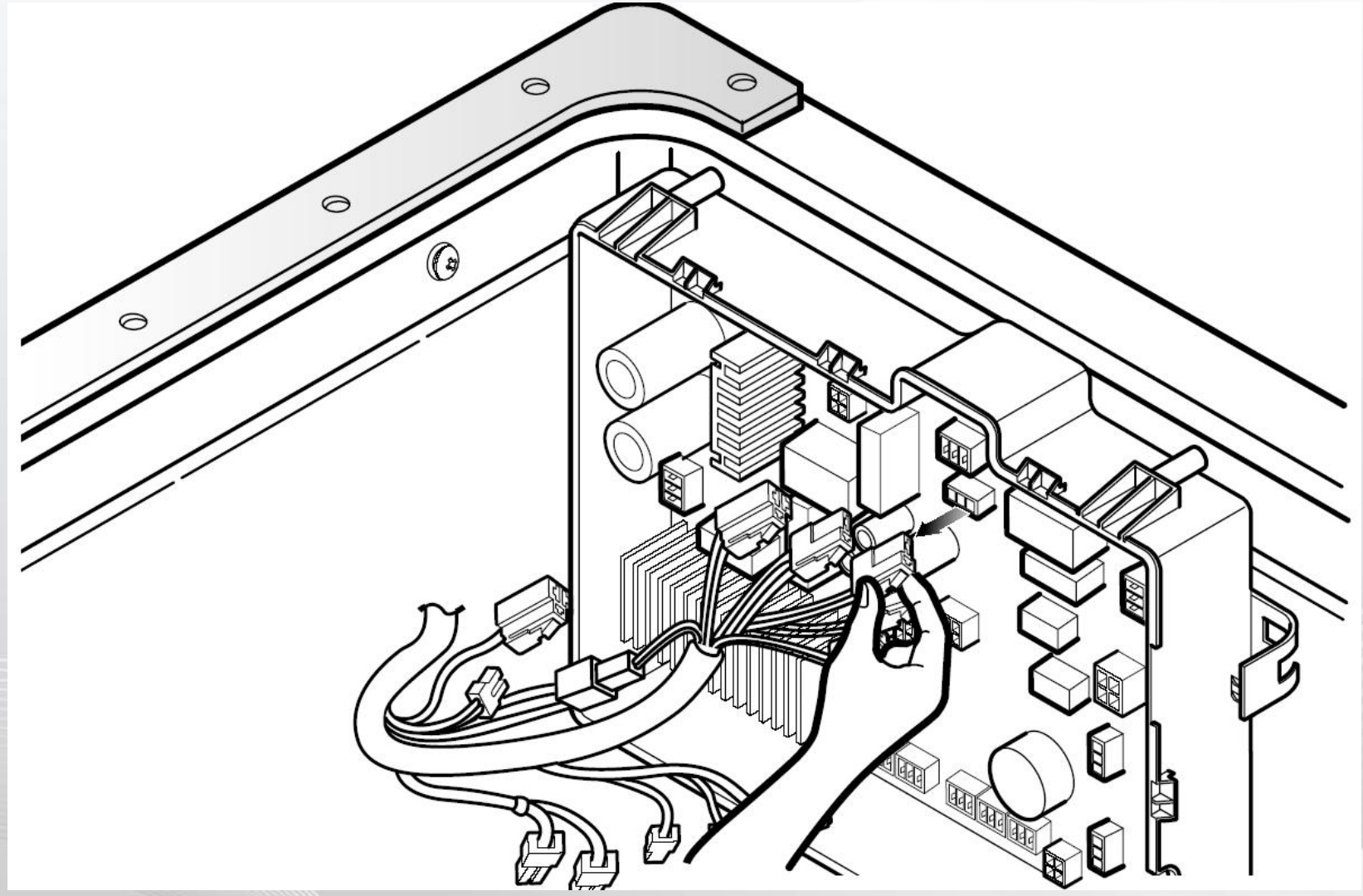
DISPLAY PWB ASSEMBLY



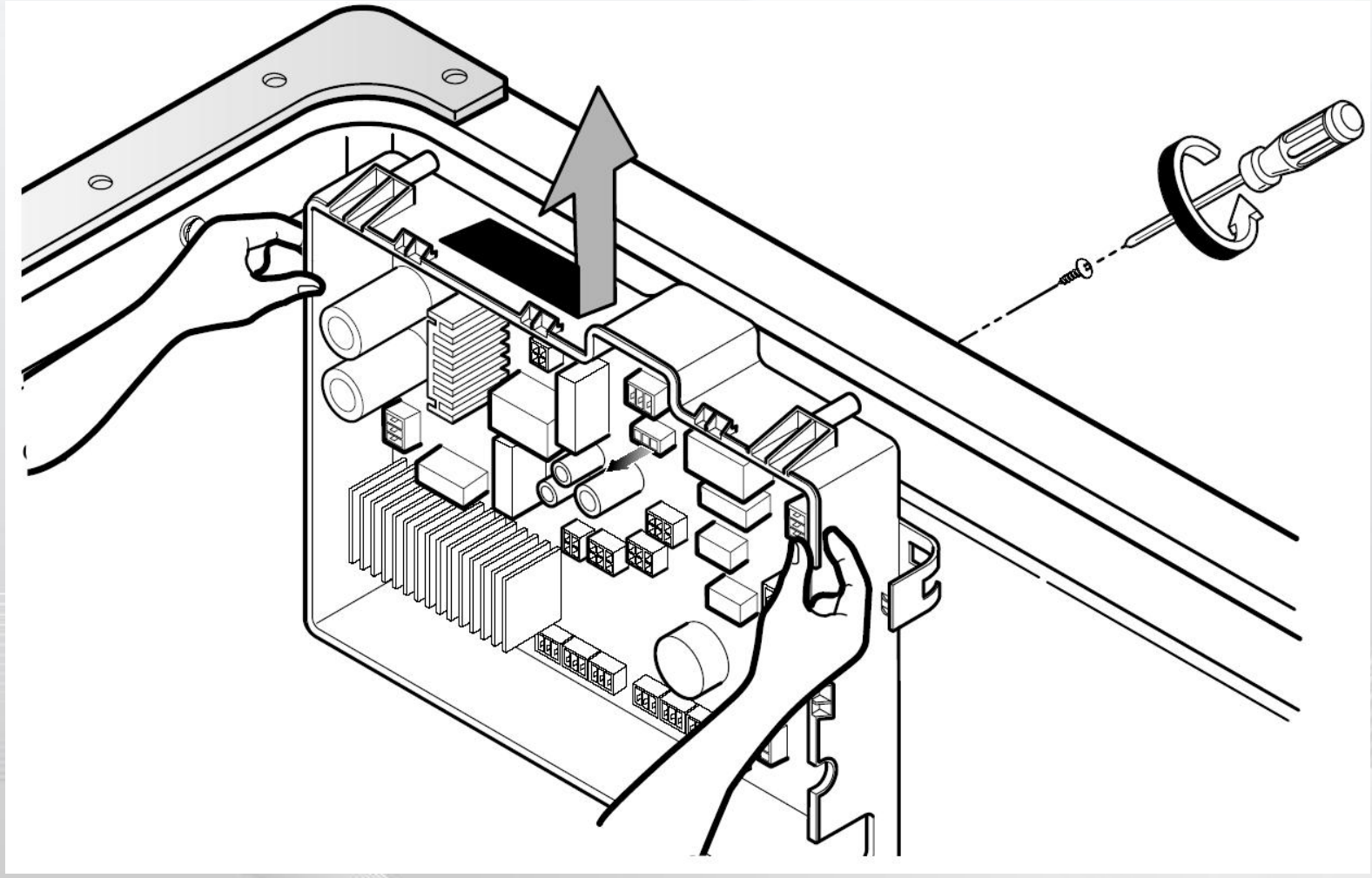
Main Board



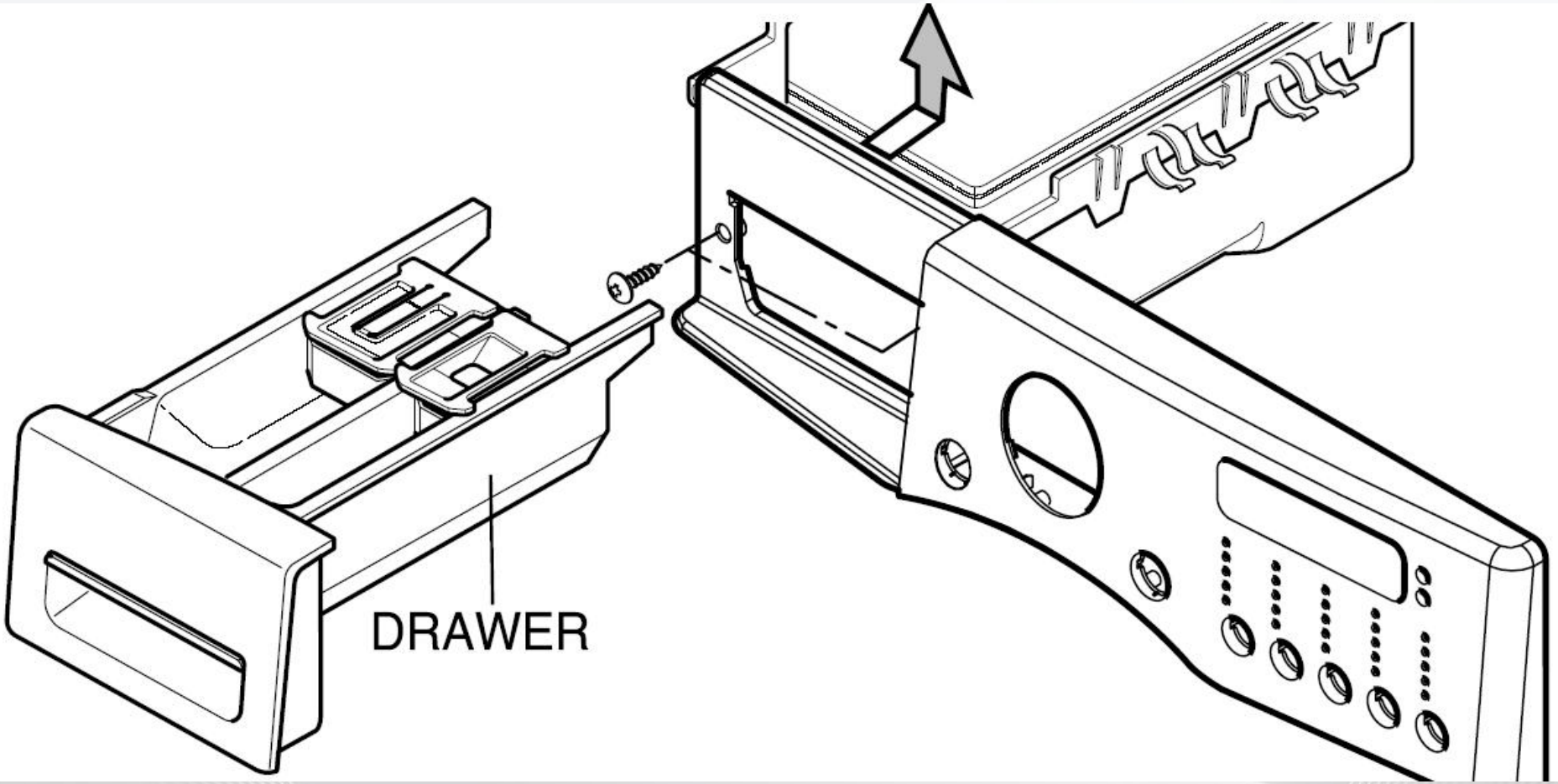
Main Board



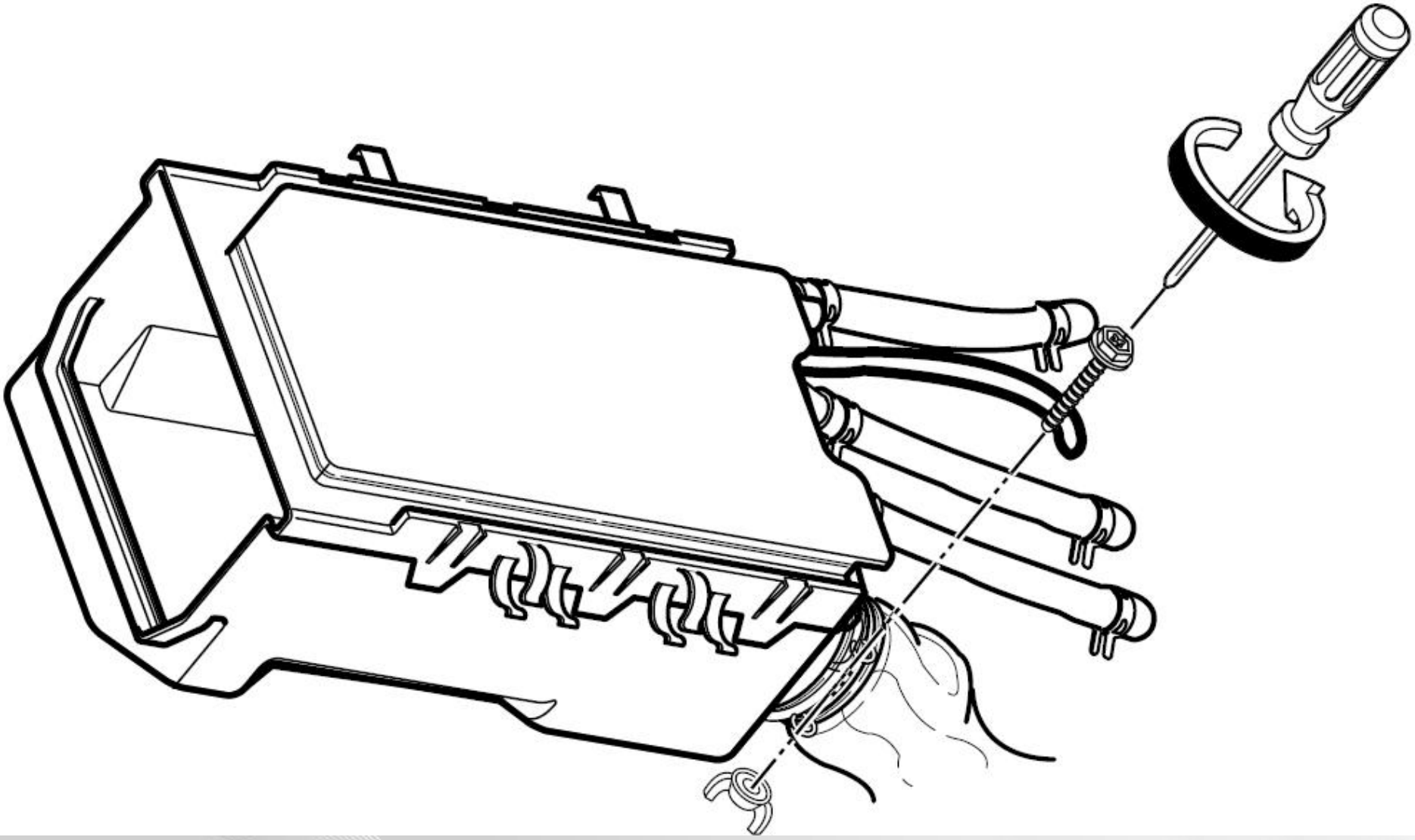
Main Board



Dispenser

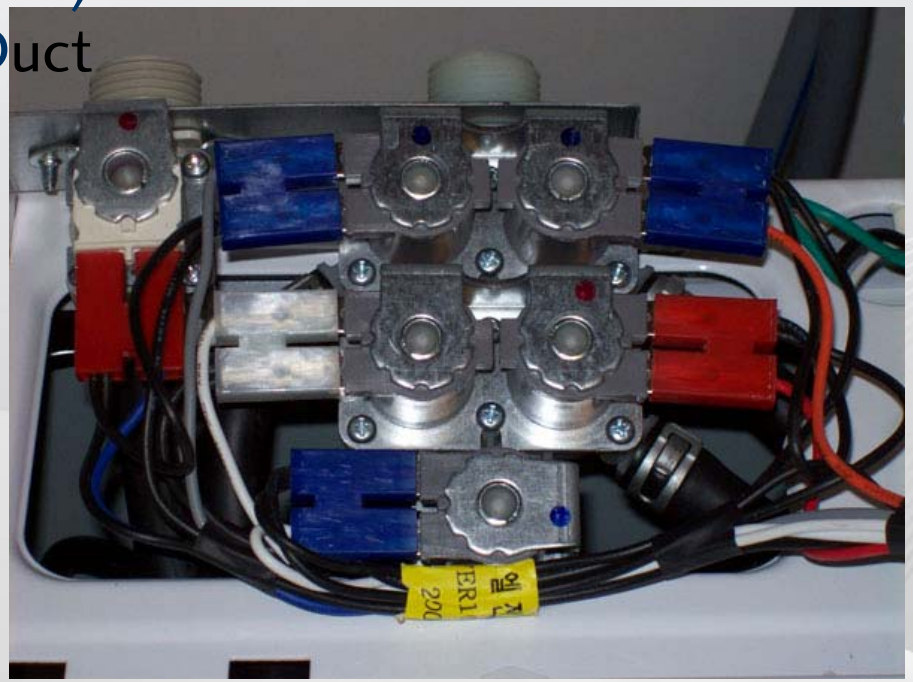


Dispenser

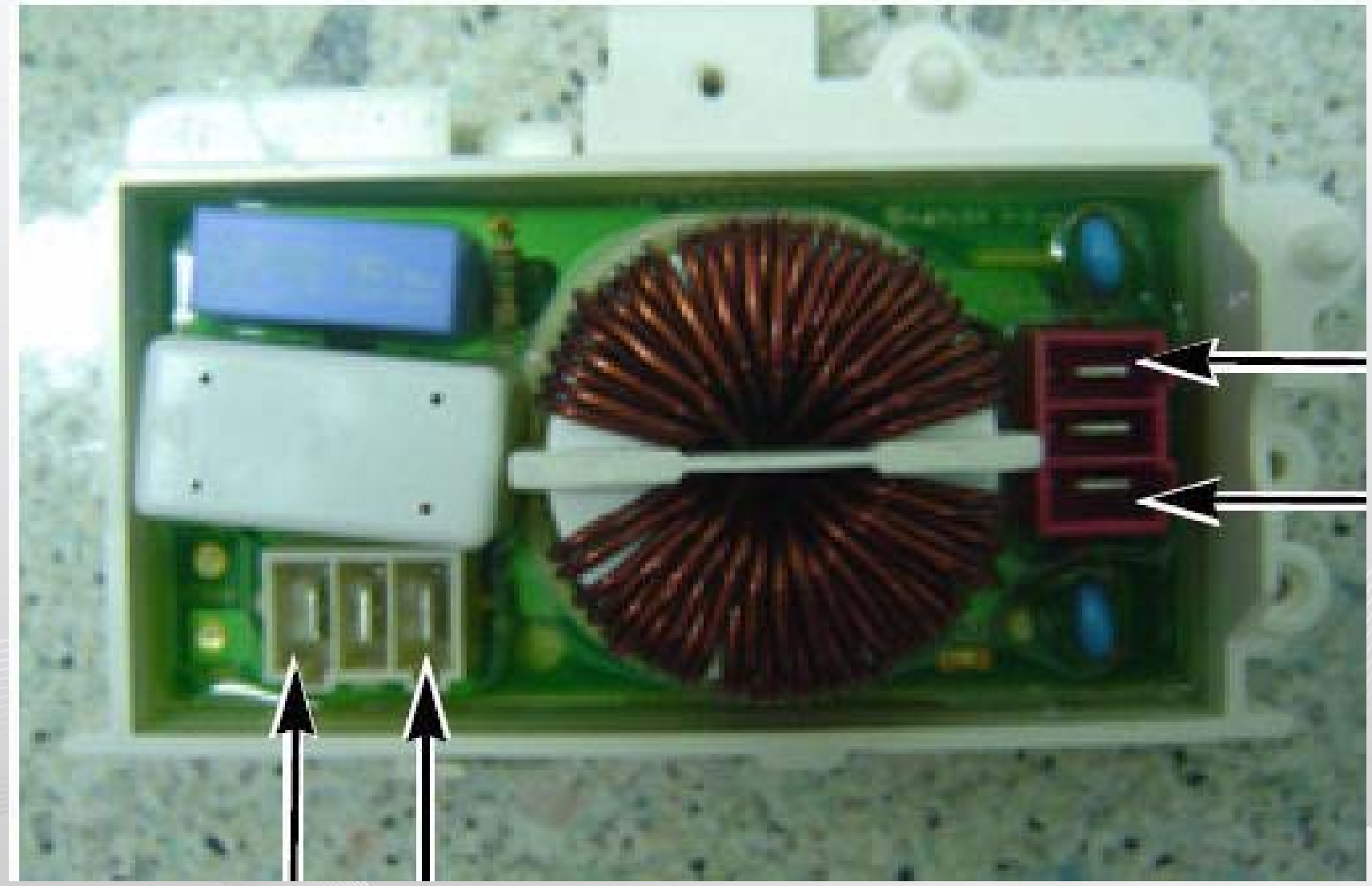


Dispenser

#	CONN	WIRE COLORS	VALVE
1	Blue	(Orange and Black)	Bleach
2	Red	(Violet and Black)	Steam
3	White	(White and Black)	Main (Cold)
4	Blue	(Gray and Black)	Pre Wash
5	Red	(Blue and Black)	Main (Hot)
6	Blue	(Red and Black)	Dryer Duct

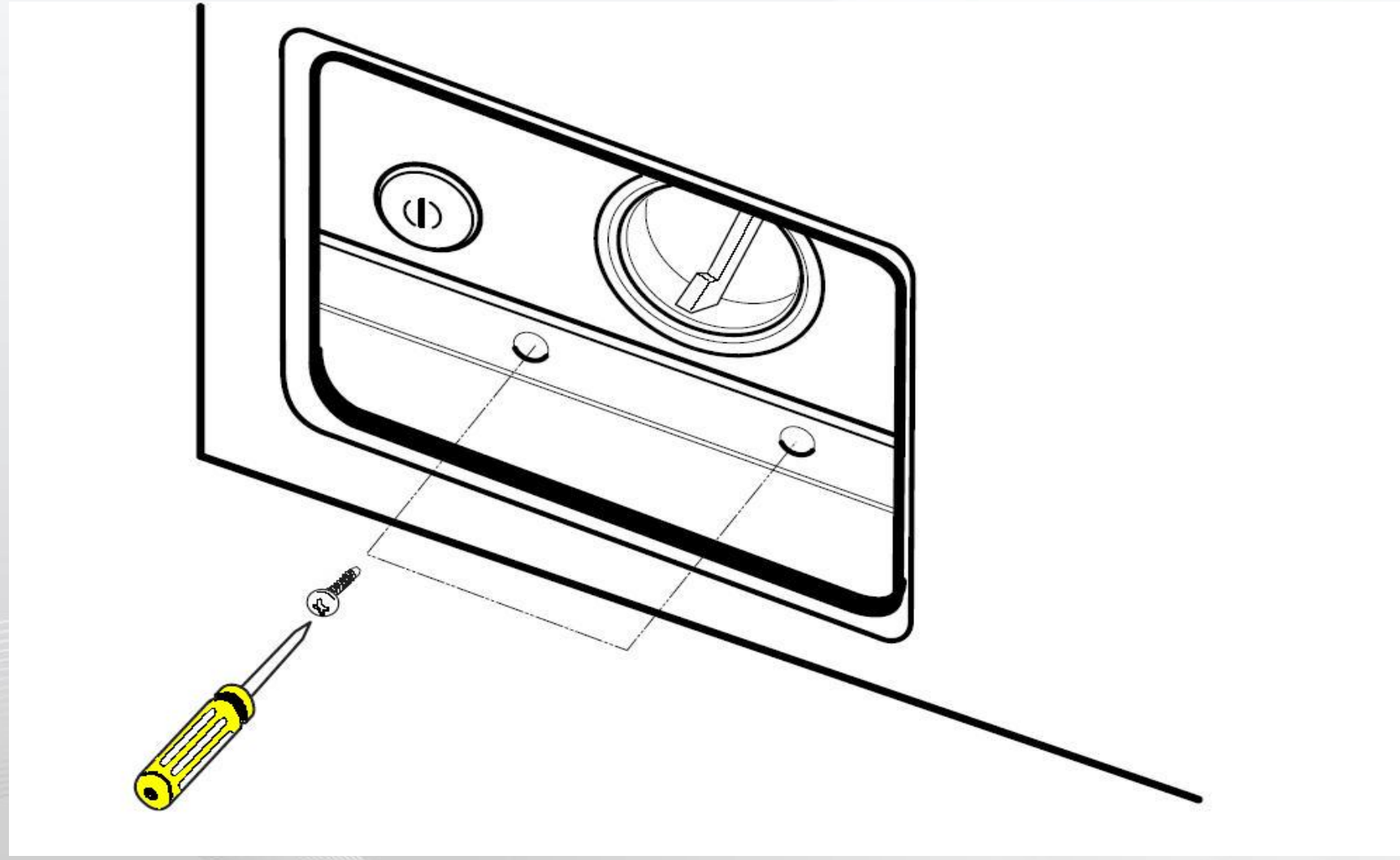


Noise Filter



Front Cover

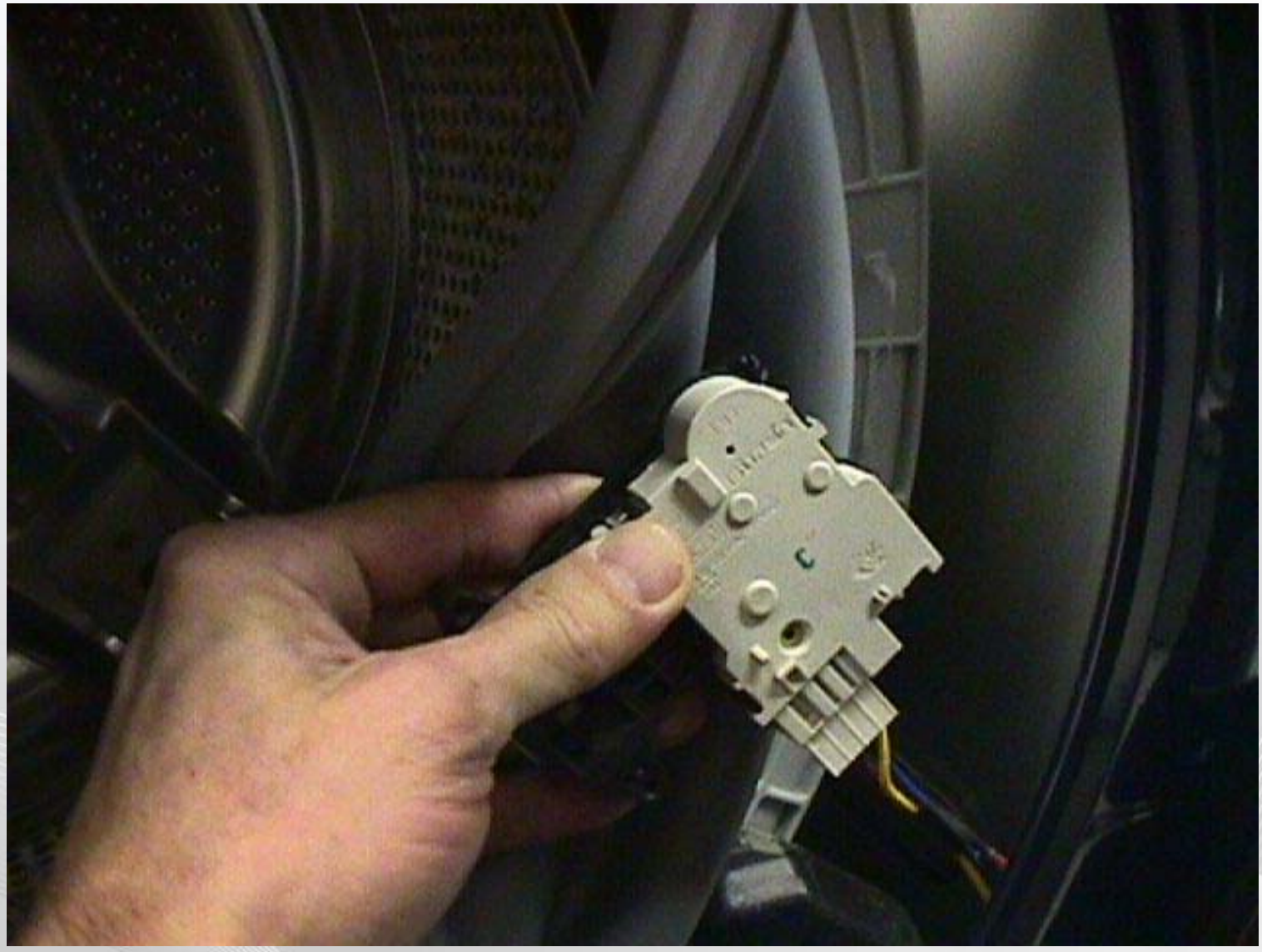
Front Cover



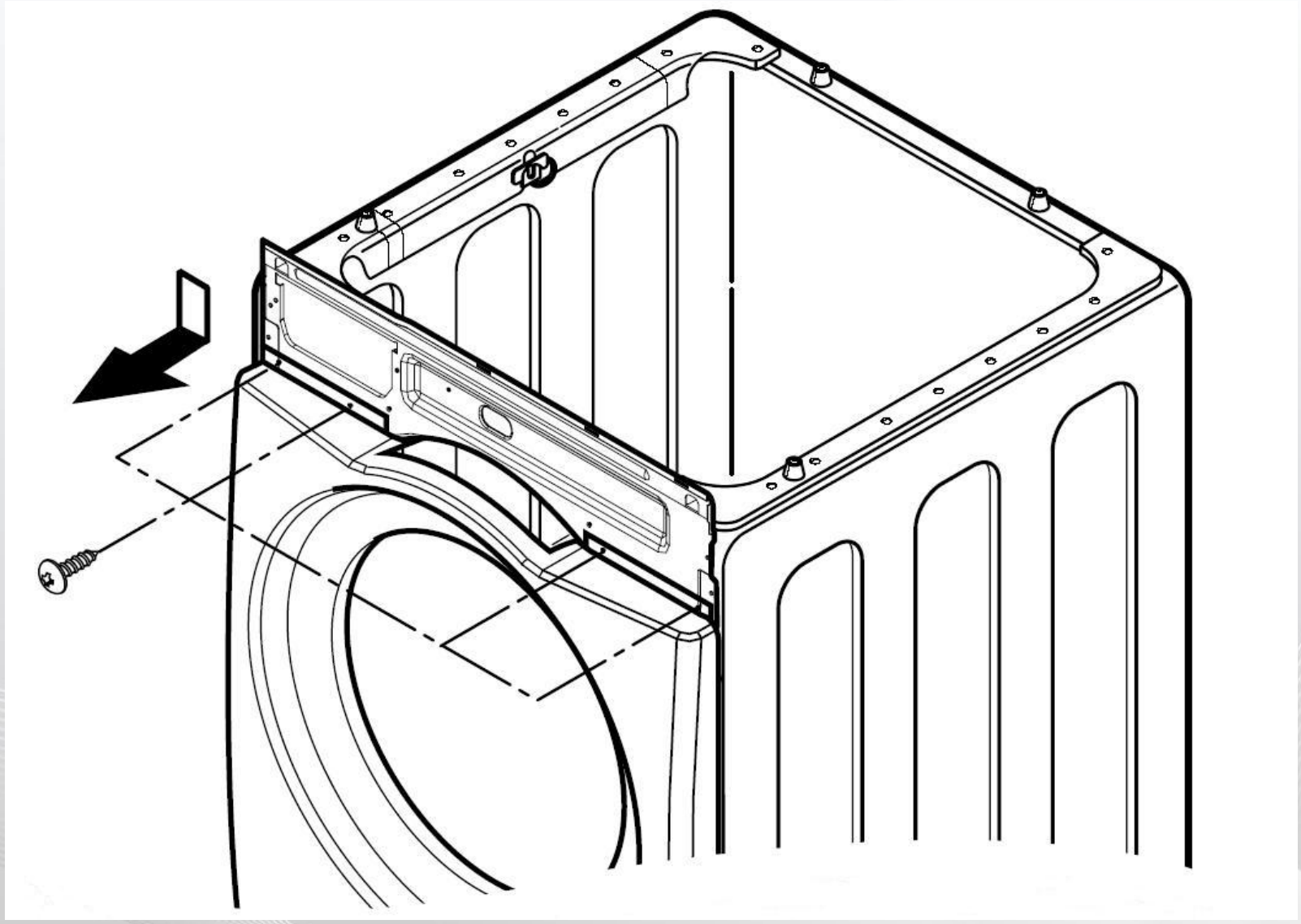
Front Cover


WARNING
AVERTISSEMENT
• Pour réduire le risque de choc électrique, débranchez l'appareil de la puissance électrique avant d'essayer aucun entretien d'usager. Le tournage des contrôles d'arrêt ne fait pas l'appareil débranché de la puissance électrique.
• Branchez la laveuse sur un circuit distinct.
• Les enfants doivent être contrôlés pour éviter qu'ils ne jouent avec la machine à laver.
• Ne lavez pas ou n'essorez pas des vêtements tachés avec des solvants, de l'essence, etc. Car ce sont des produits inflammables et ils pourraient provoquer un incendie ou une explosion.

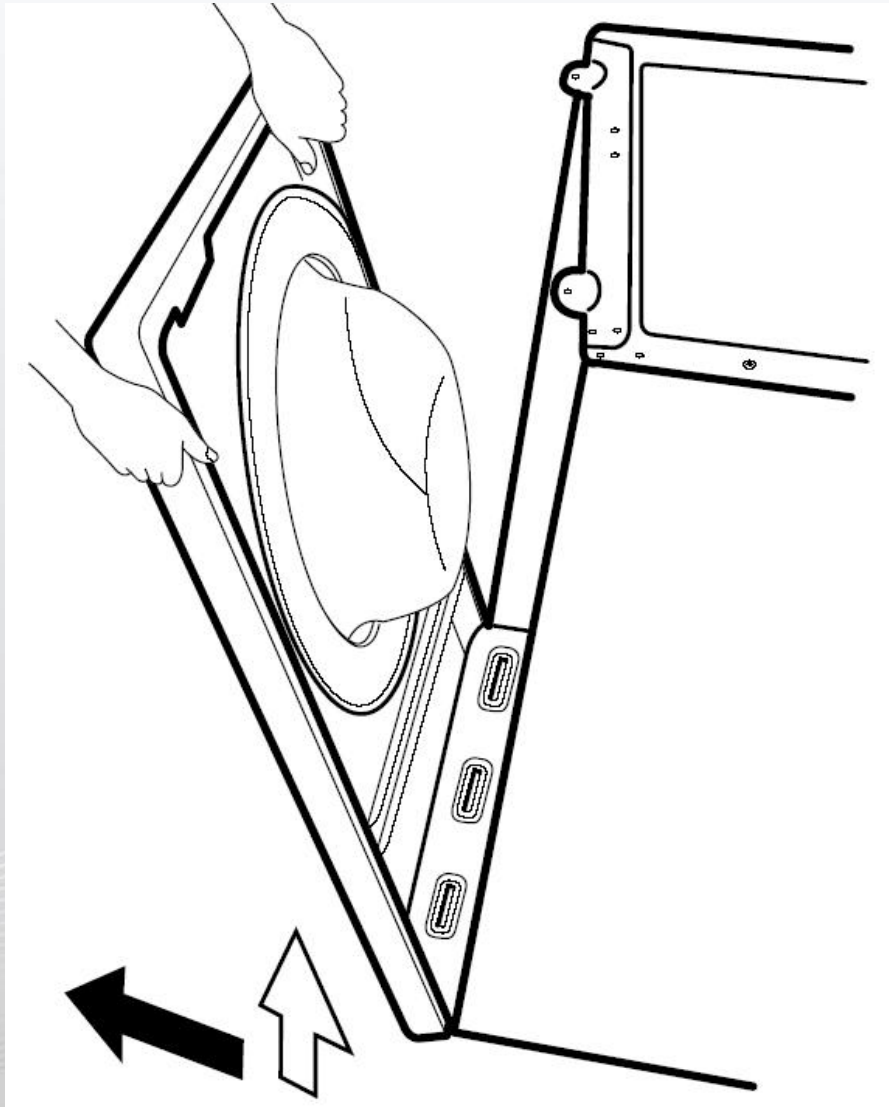
Front Cover



Front Cover

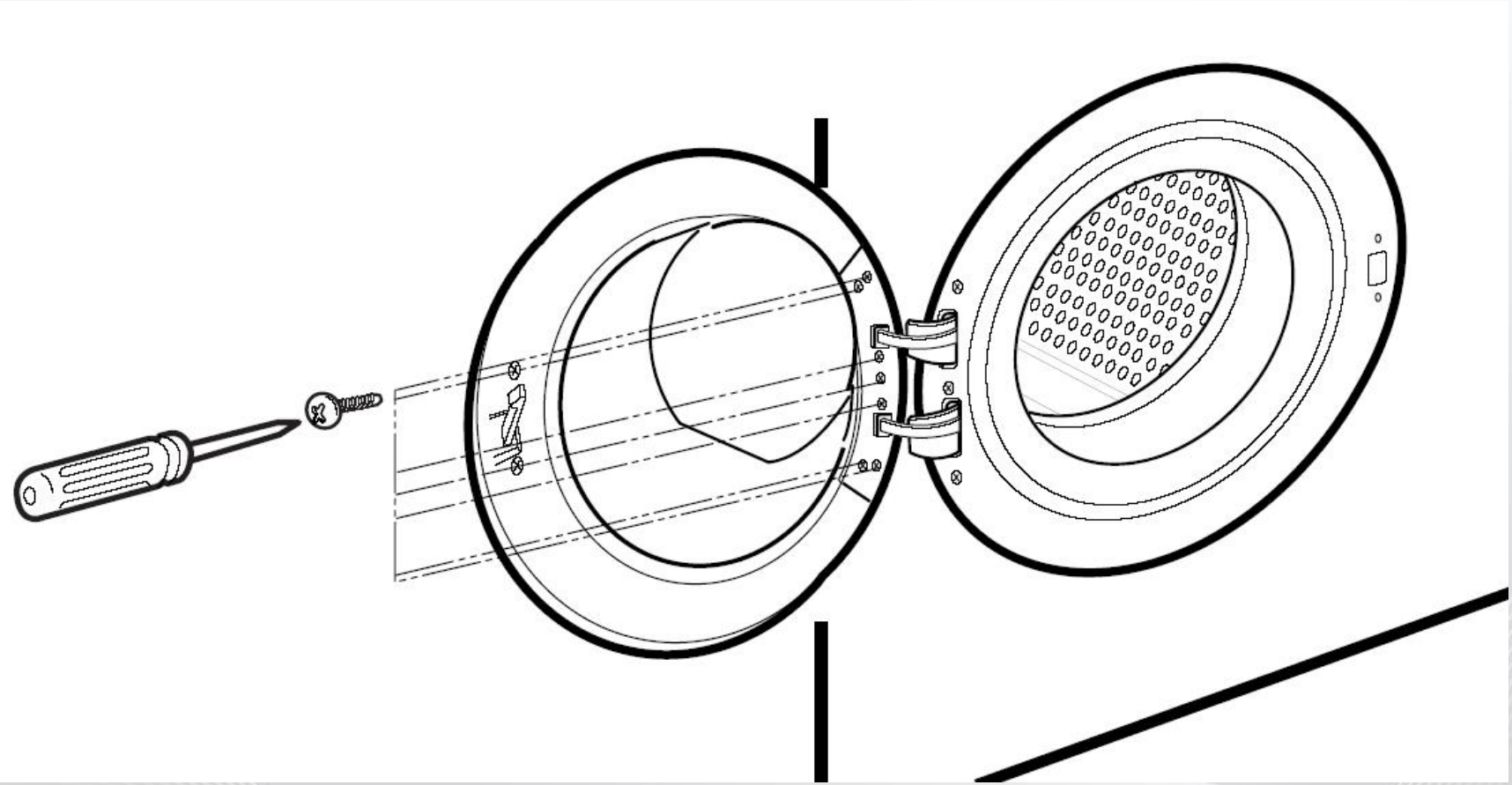


Front Cover

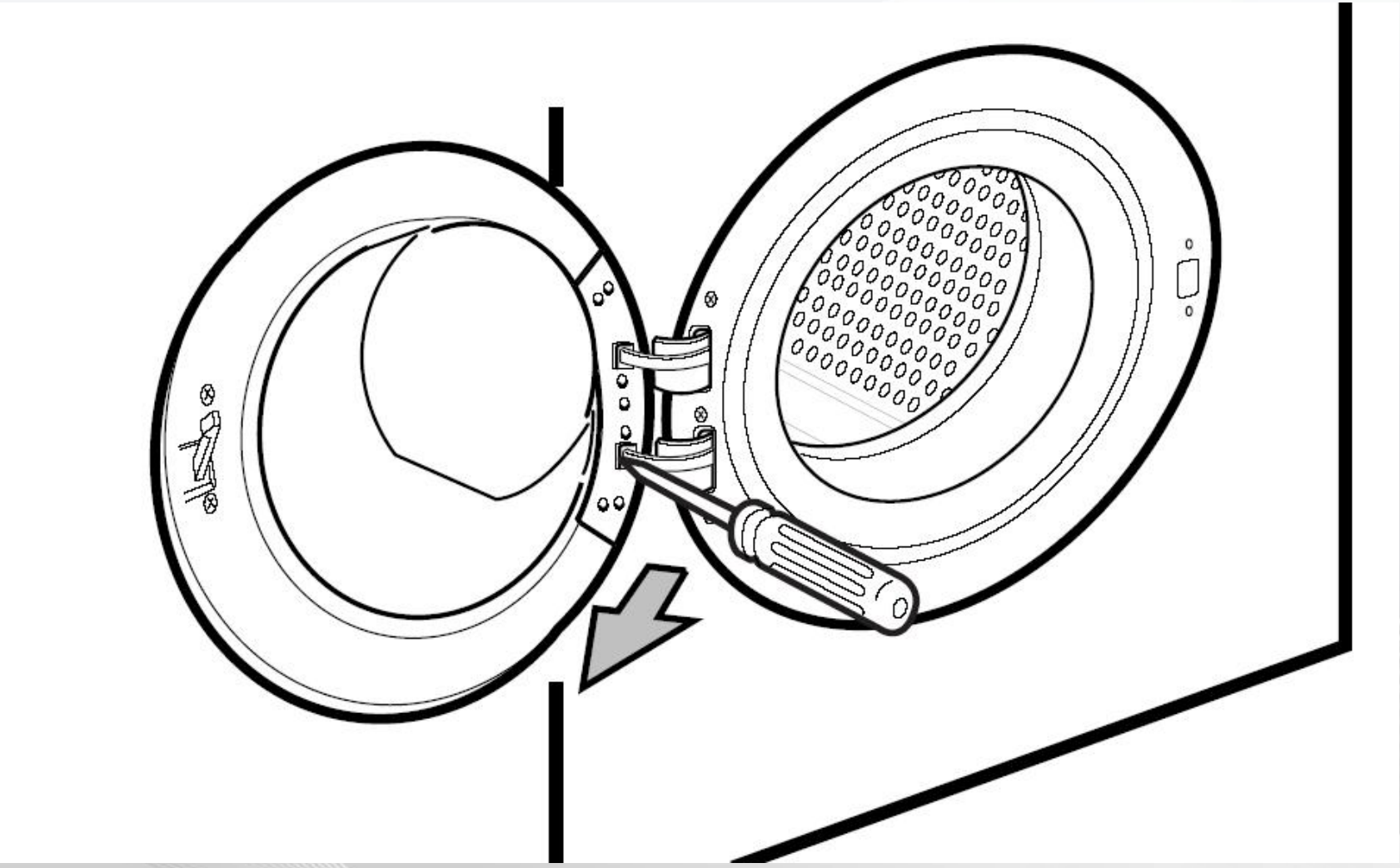


CAUTION!
The door is very heavy because of the large glass window.

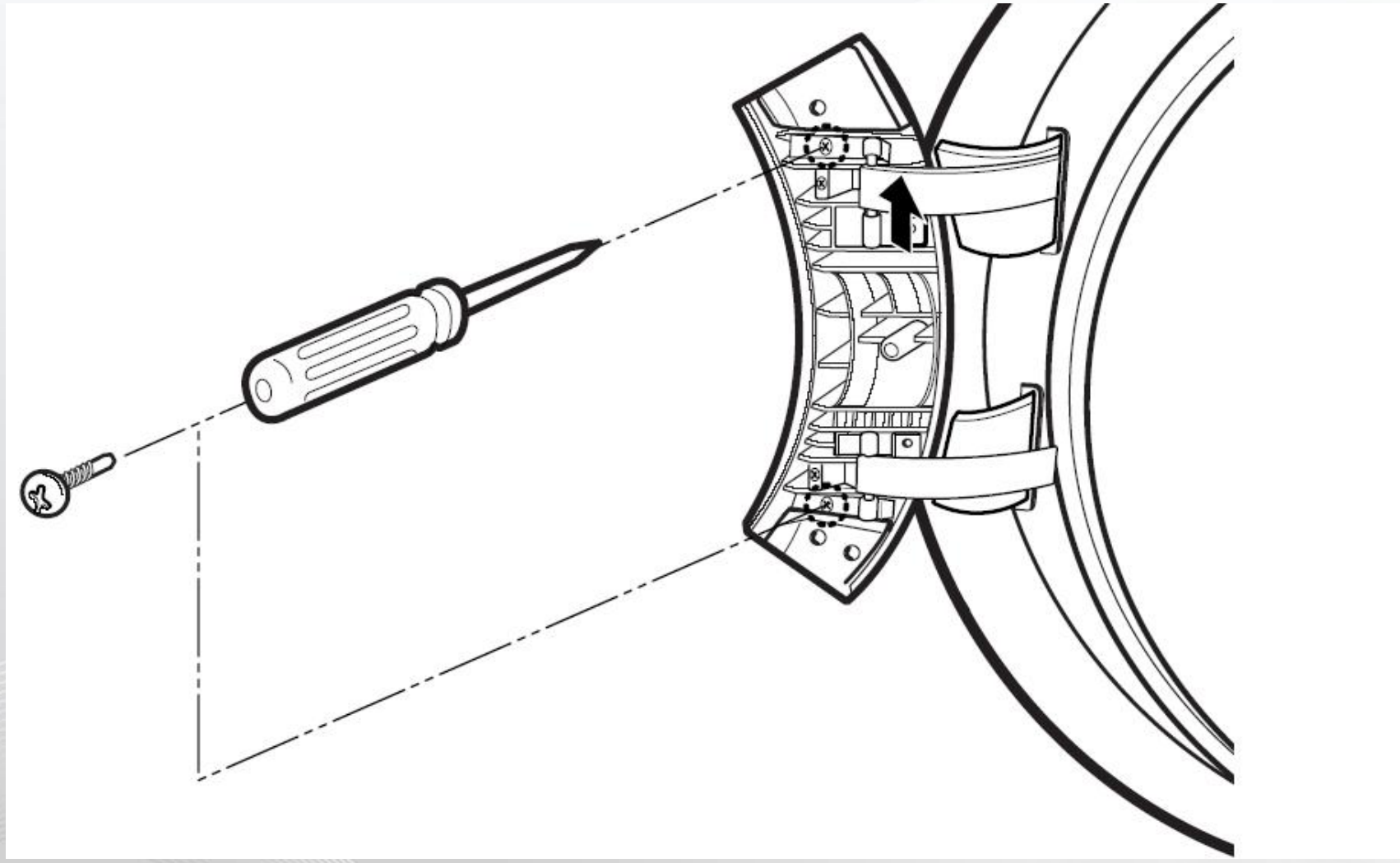
Door and Hinge



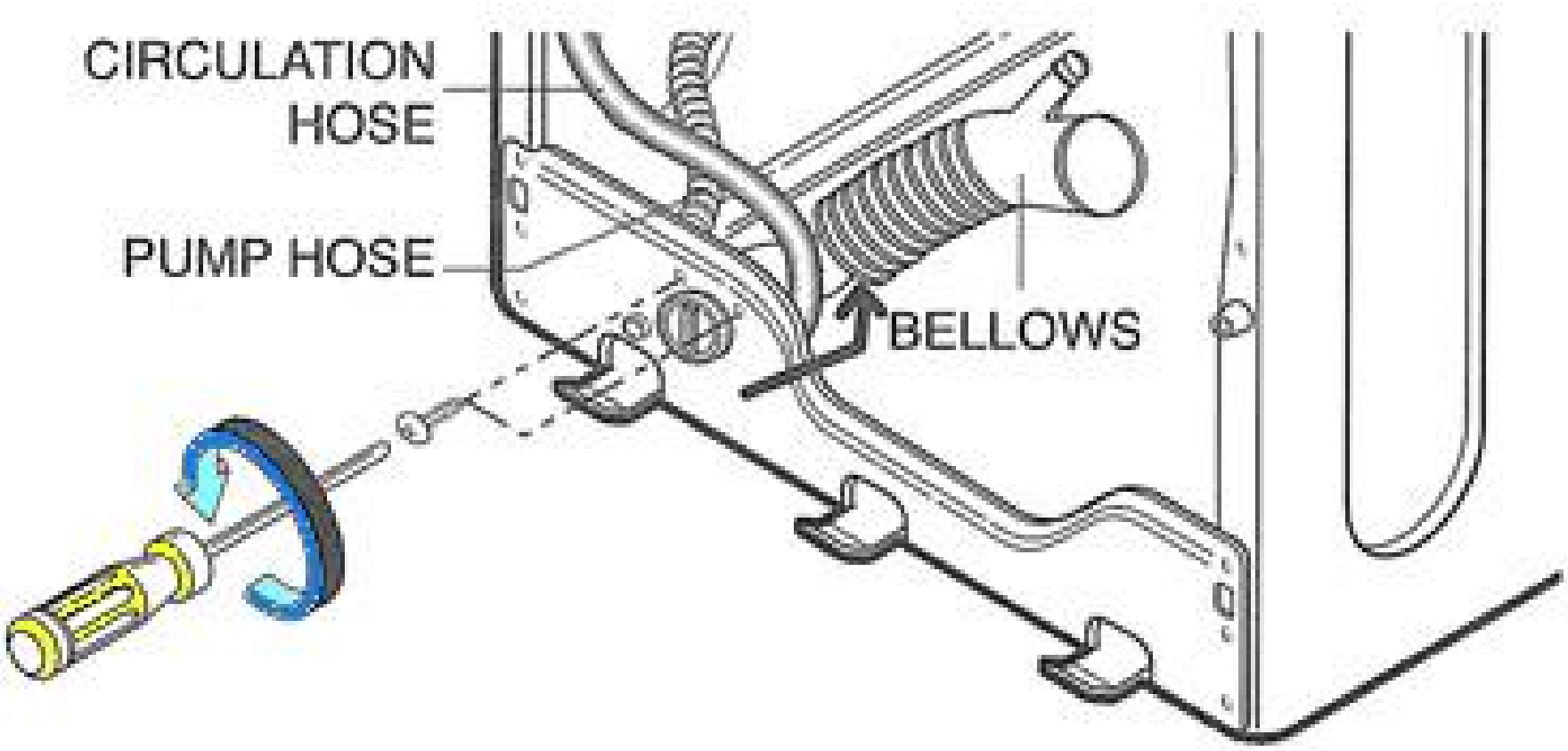
Door and Hinge



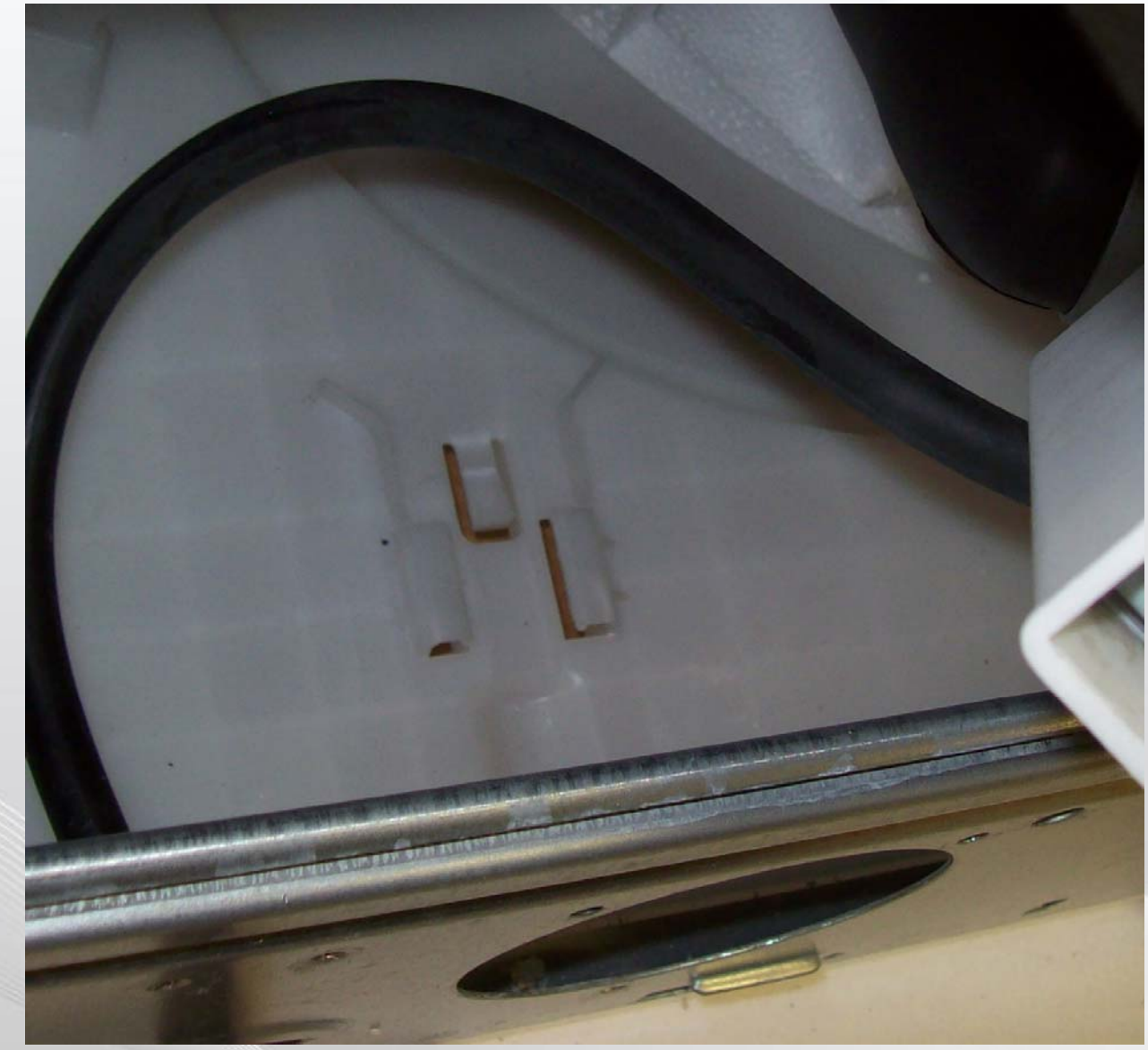
Door and Hinge



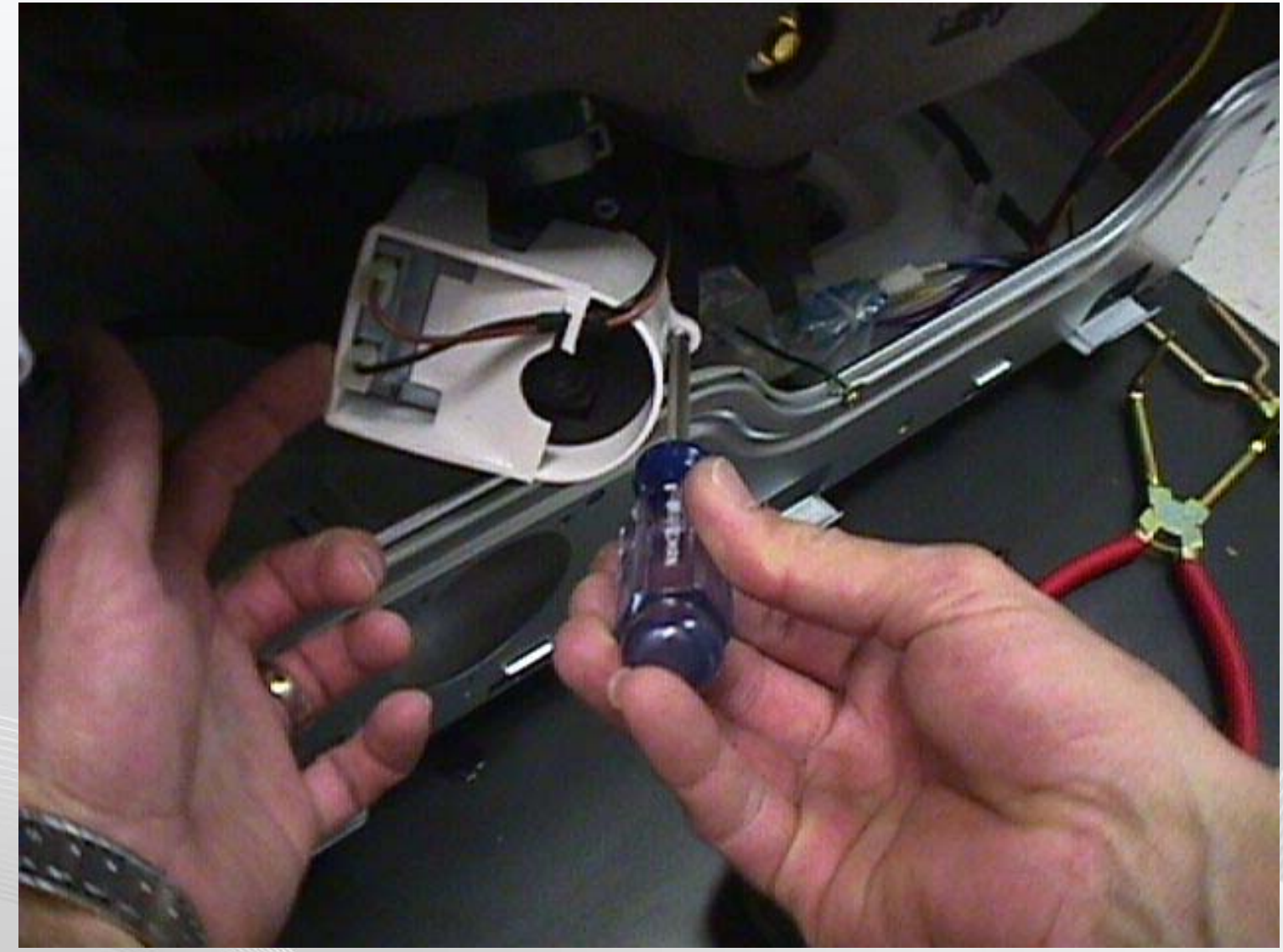
Pumps and Filter Housing



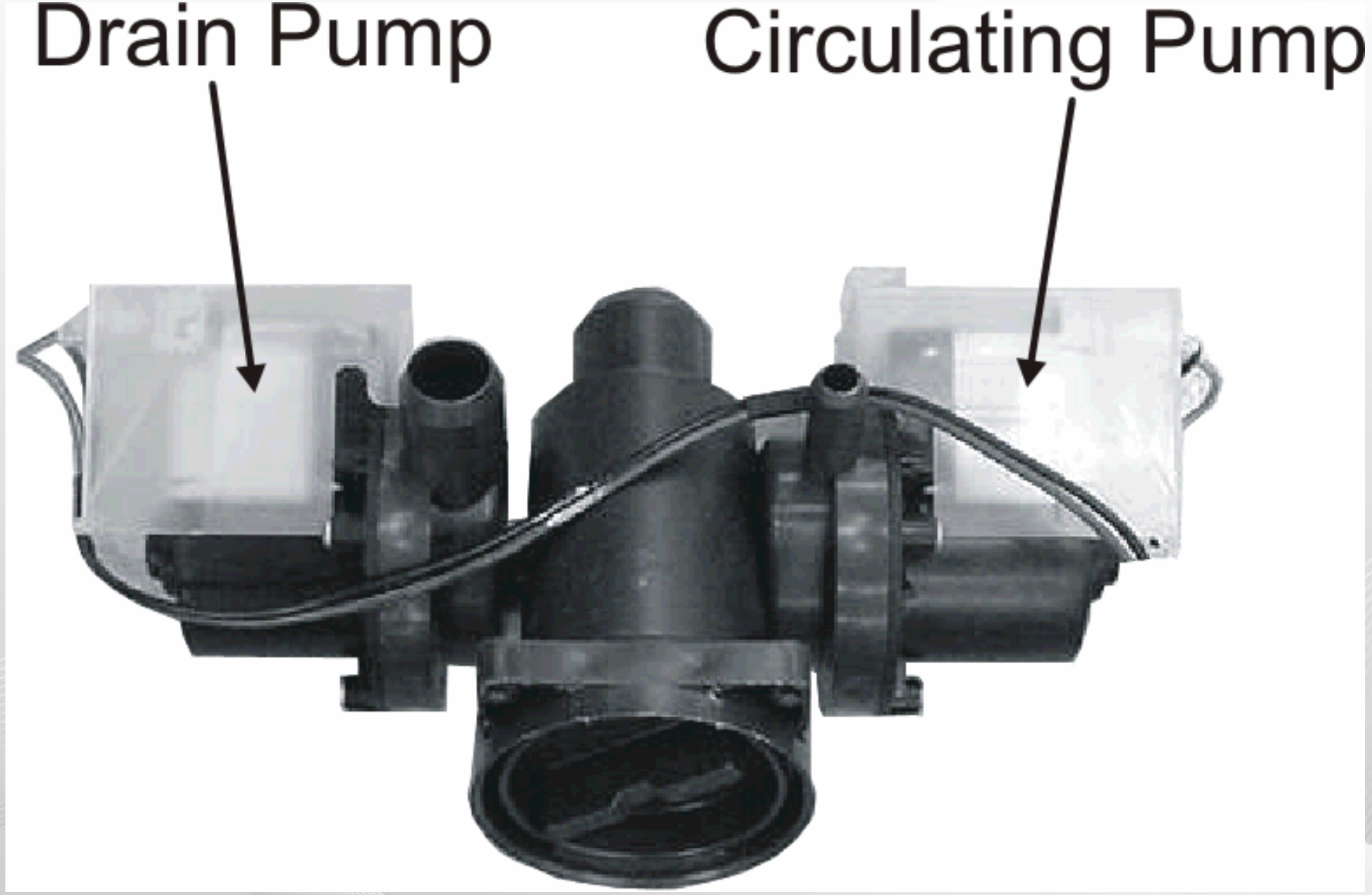
Pumps and Filter Housing



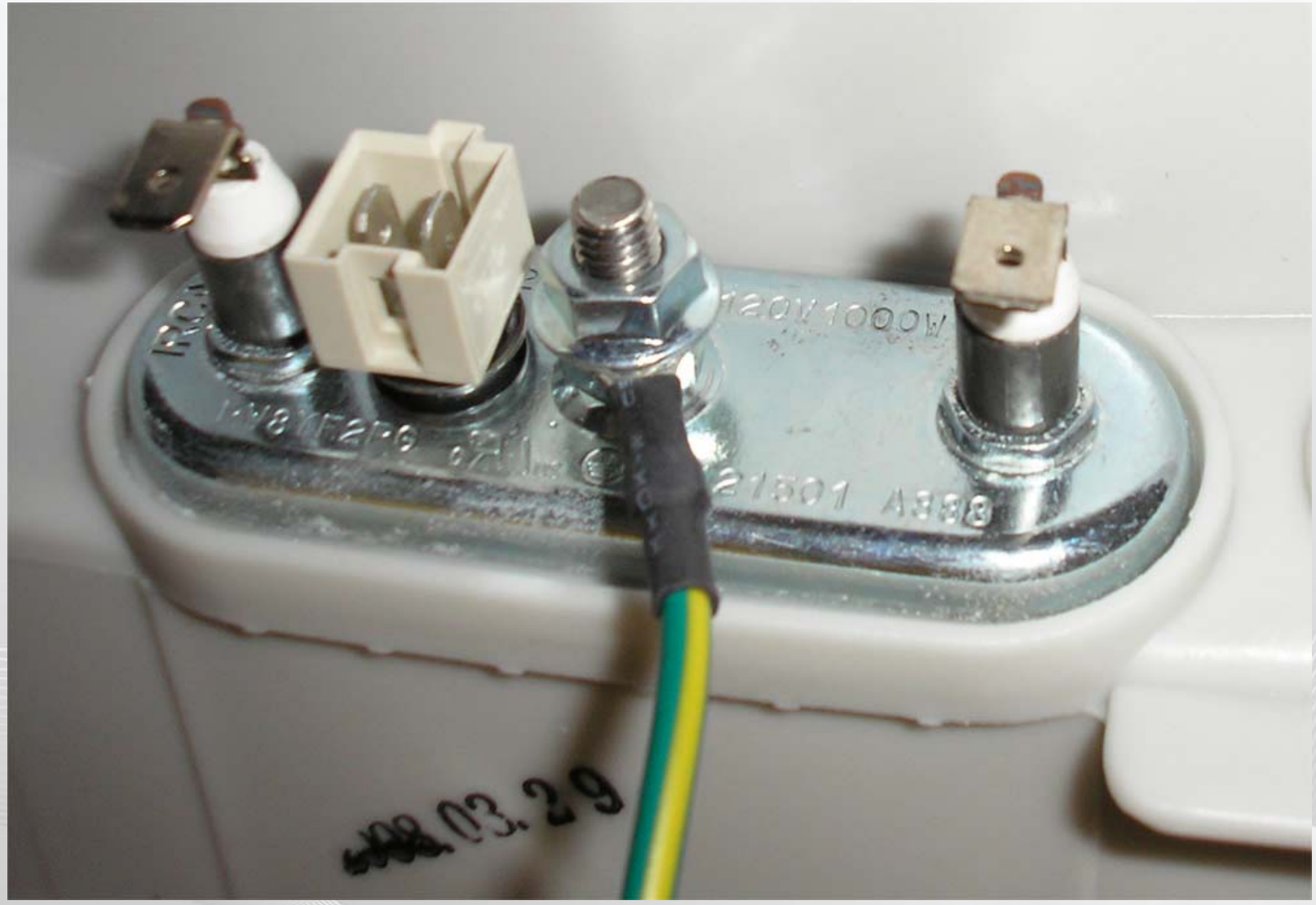
Pumps and Filter Housing



Pumps and Filter Housing

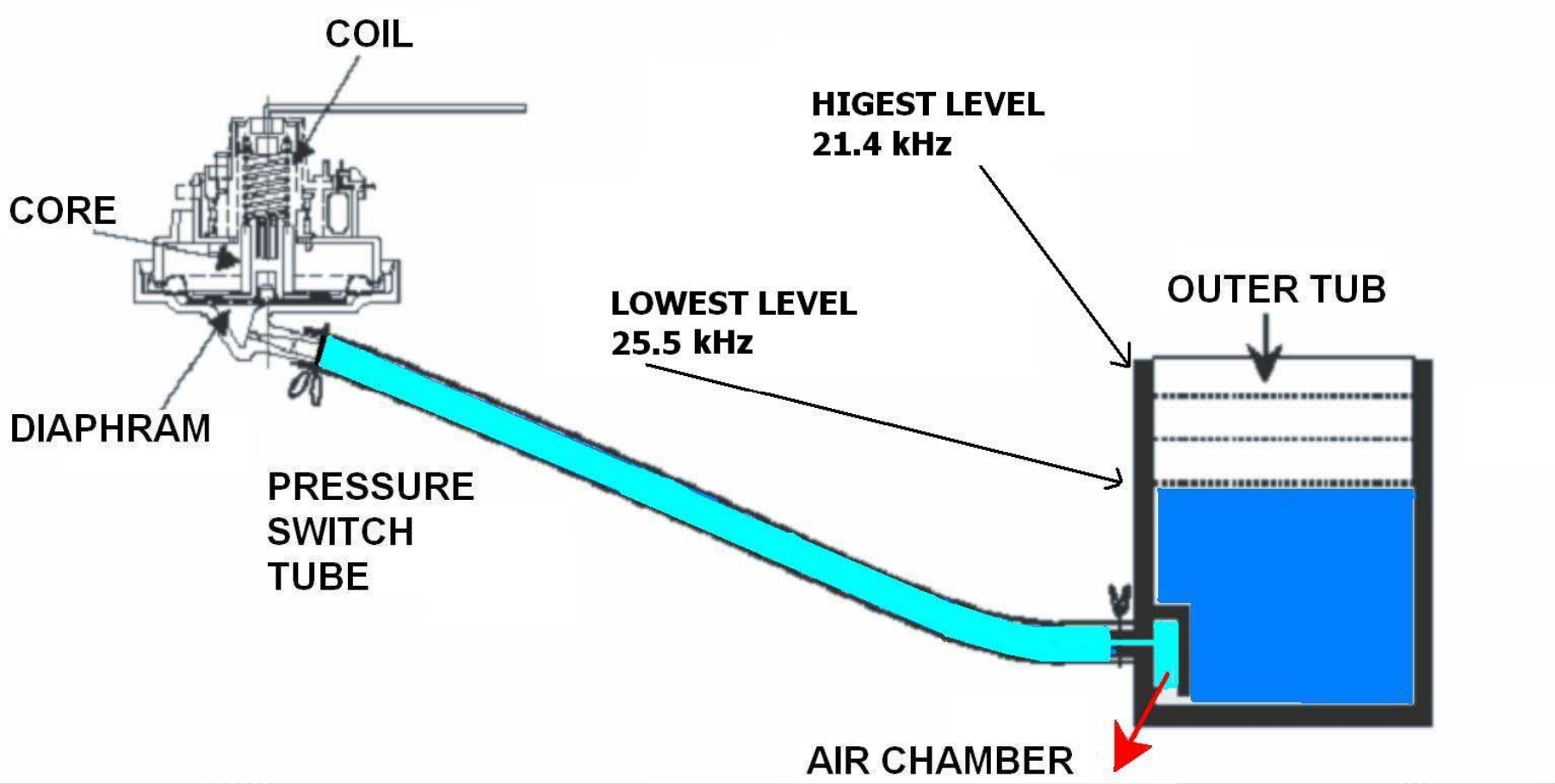


Wash Heater

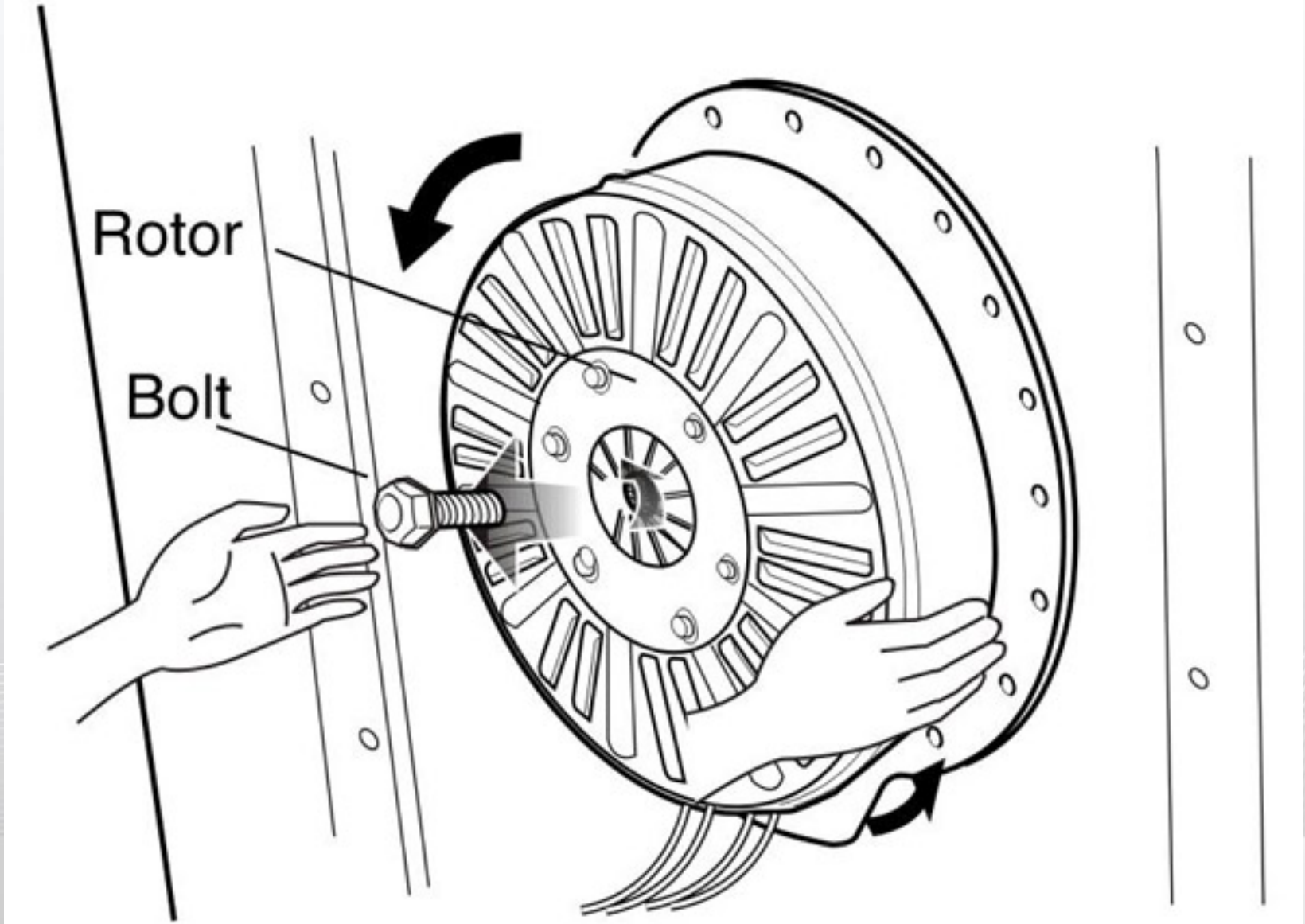


Foreign Object Removal

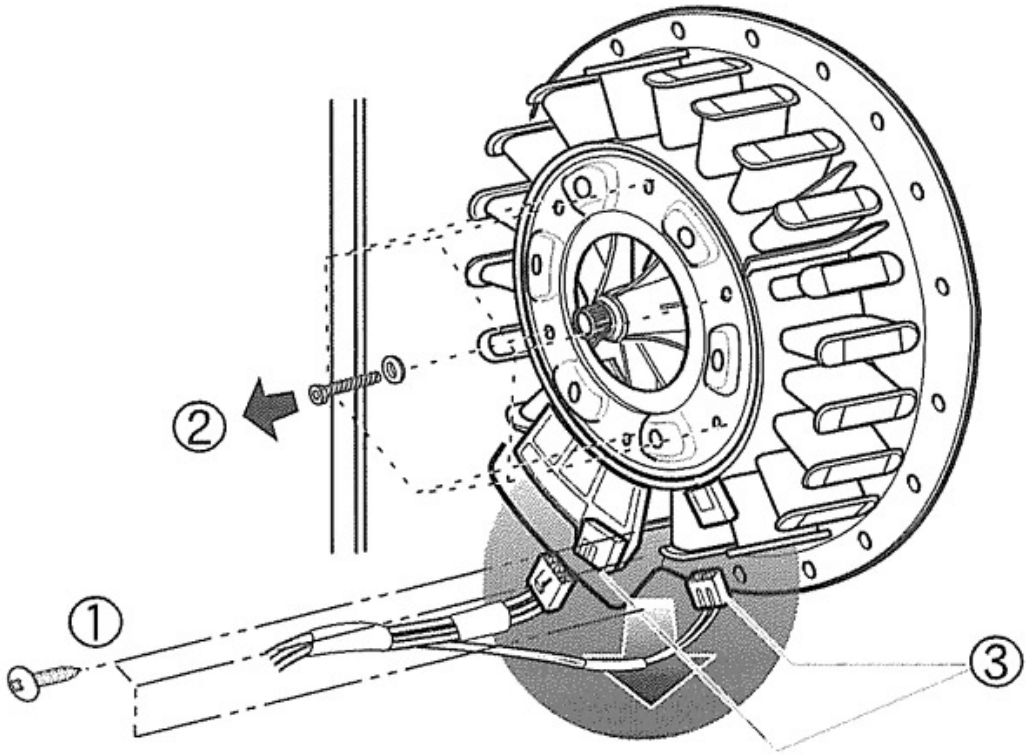
Water Level Switch



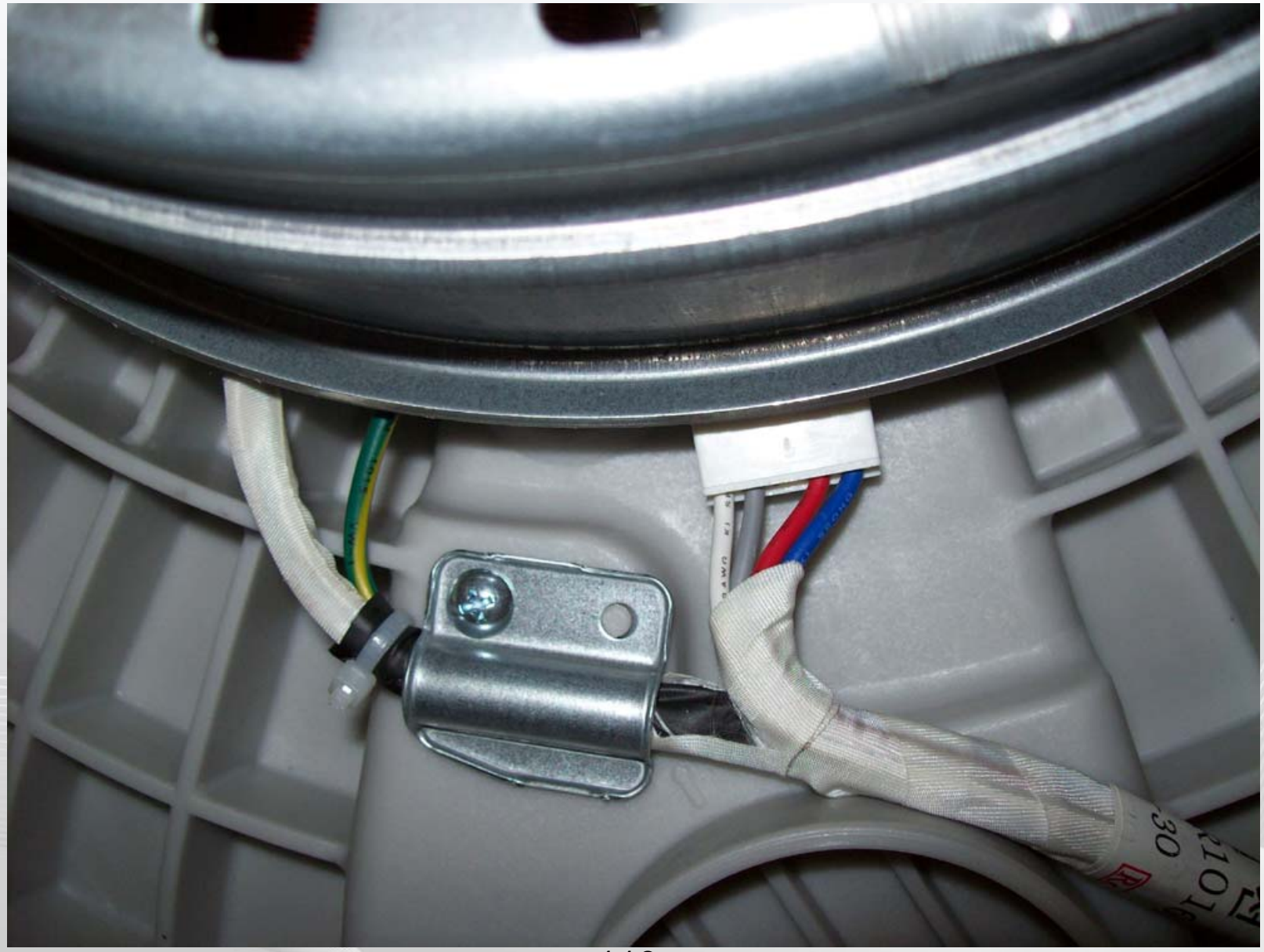
Motor



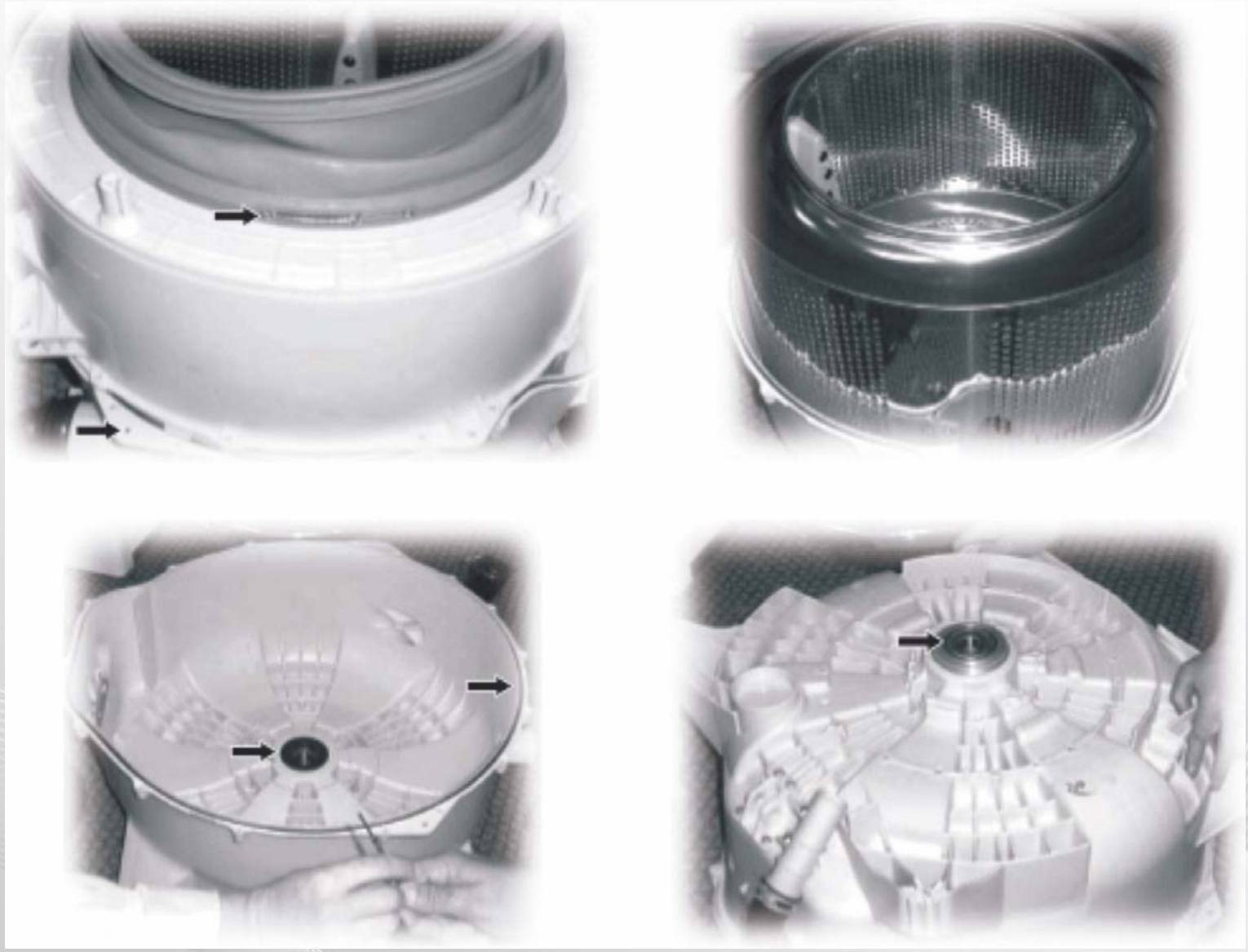
Motor



Motor



Tub and Drum

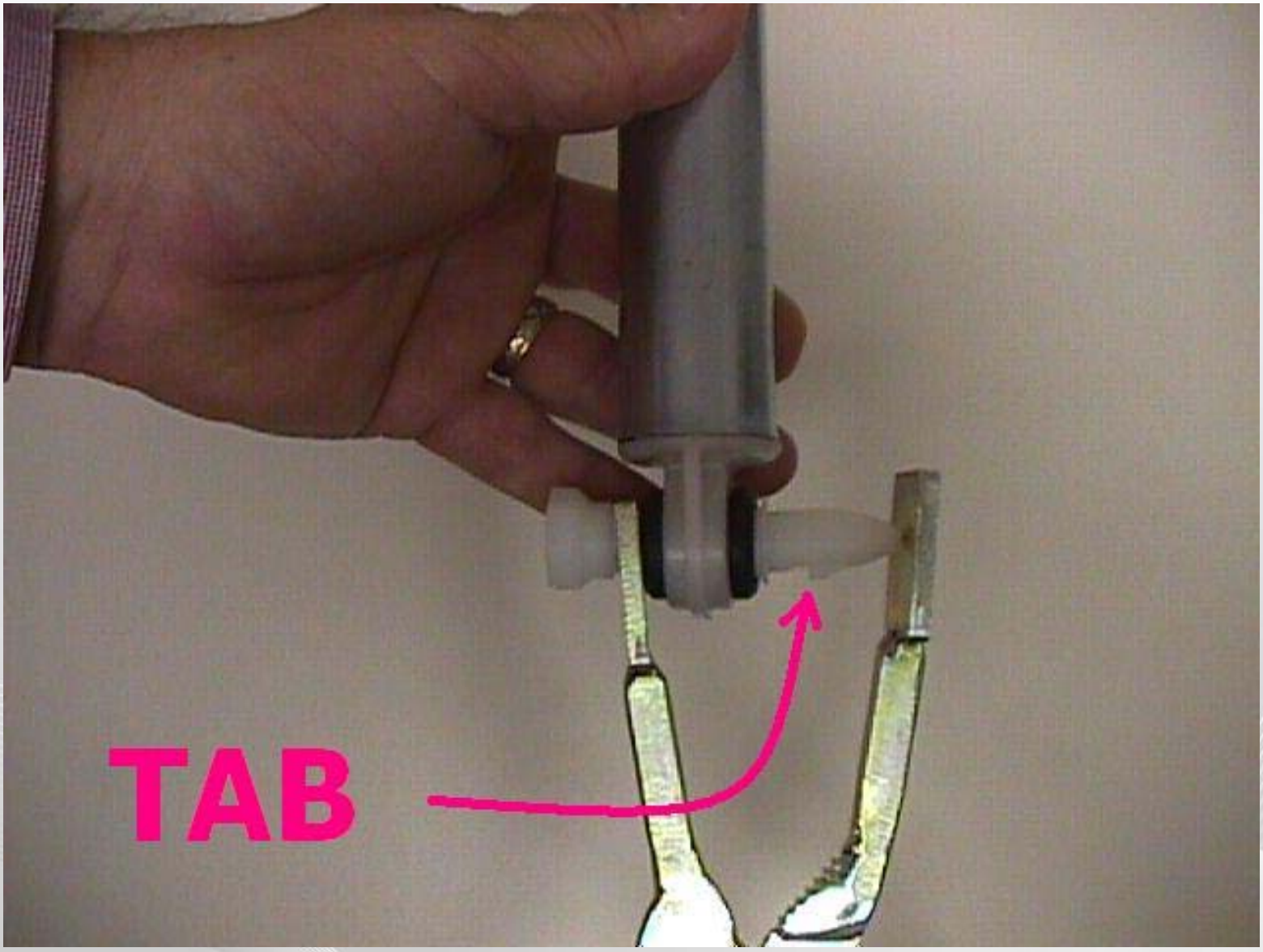


Tub and Drum

Dampers

Dampers

Dampers



Test Mode

The steam washer must be empty and off to enter the test mode.

- Press and hold **SPIN SPEED** and **SOIL LEVEL**.
- Press **POWER**. The buzzer will sound twice.
- Press **START/PAUSE** to cycle through the test modes.
  (See chart, below.)

Test Mode

Number of times Start/Pause pressed	Event	Display
None	All lamps on / door locked	QC TEST MODE
1	Drain pump/Tumble clockwise	rpm[1] (42 ~ 50)
2	Spin – Low speed	rpm[1] (55 ~ 65)[1]
3	Spin – High Speed	rpm[1] (105 ~ 125)[1]
4	Pre-wash valve (Cold)	Water level freq. (25 ~ 65)[2]
5	Main wash valve (Cold)	Water level freq. (25 ~ 65)[2]
6	Main wash valve (Hot)	Water level freq. (25 ~ 65)[2]
7	Steam valve (Cold)	Water level freq. (25 ~ 65)[2]
8	Bleach valve (Cold)	Water level freq. (25 ~ 65)[2]
9	Tumble counterclockwise	rpm[1] (42 ~ 50)[1]
10	Tub heater (1.2 seconds)	Water temperature (tub) °C[3]
11	Circulation pump	Water level freq. (25 ~ 65)[2]
12	Drain pump	Water level freq. (25 ~ 65)[2]
13	Steam generator heater	Water temperature (TSG) °C[3]
14	Water level sensor (steam)	Water level freq. (31 ~ 246)[2]
15	Off	NORMAL OPERATING MODE

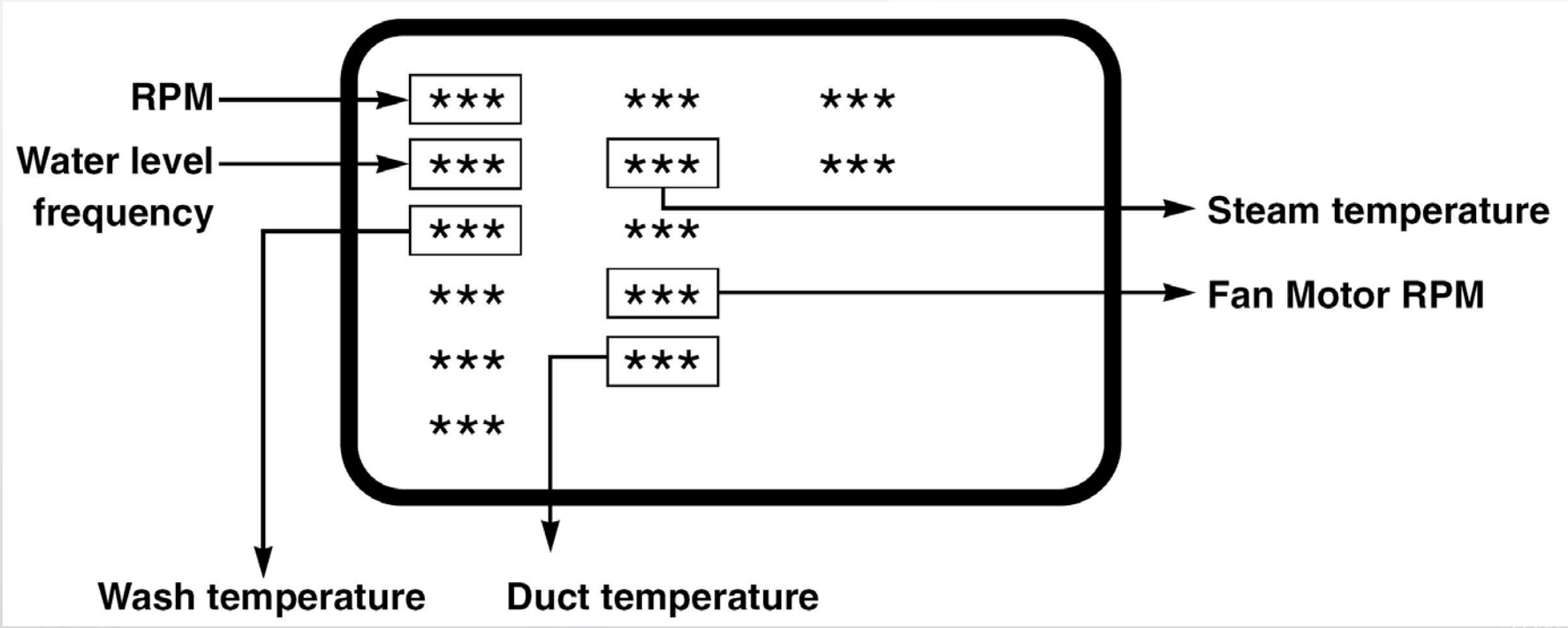
Notes for Test Mode

1. Insert a **zero** at the end of the displayed numbers to determine the actual rpm. 62 indicates 620 rpm; 115 indicates 1,150 rpm.

2. Insert a **2** at the beginning of the displayed number to determine the actual water level frequency. 65 indicates 265 or 26.5 KHz.

3. Temperatures are displayed in degrees Celsius.

Test Mode Display

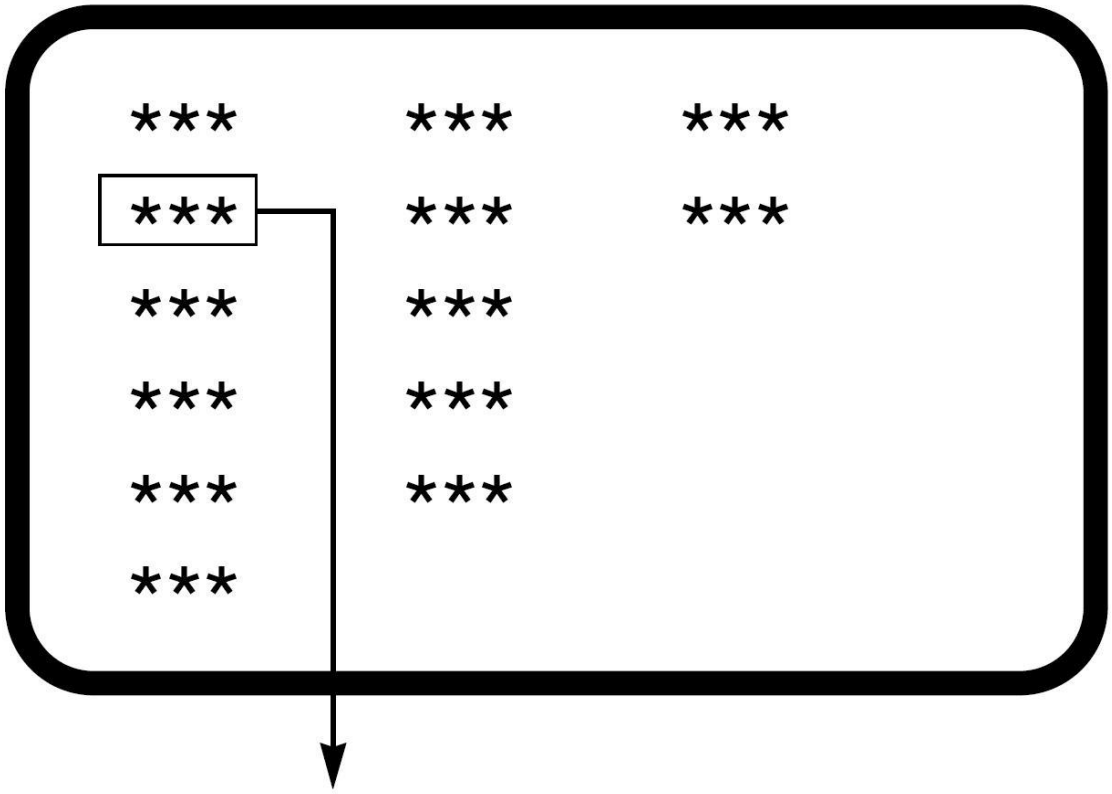


Test Mode Display

The following button combinations allow access to these sensor readings:

PREWASH and CUSTOM	Steam generator temperature in °C
WASH/RINSE and CUSTOM	Tub water temperature in °C
SOIL LEVEL and CUSTOM	Water level (displayed as a frequency)
SPIN SPEED and CUSTOM	Drum rpm speed (see note, previous page)

Test Mode Display



The digits indicate the water level frequency.

For example, if the display indicate 058,
the water level frequency is 20+(58 X 0.1) = 25.8 kHz.

Error Codes

If you press START / PAUSE when an error code is displayed, any error except PE will disappear and the machine will revert to PAUSE status. In the cases of a PE, TE, or DE error code, if the error is not cleared within 20 seconds, the machine will be turned off automatically and the error code will blink on the display. In the case of any other error code, if the error is not cleared within 4 minutes, the machine will be turned off automatically and the error code will blink on the display.
In the event of an FE error code, the machine will be turned off and will not be restarted.

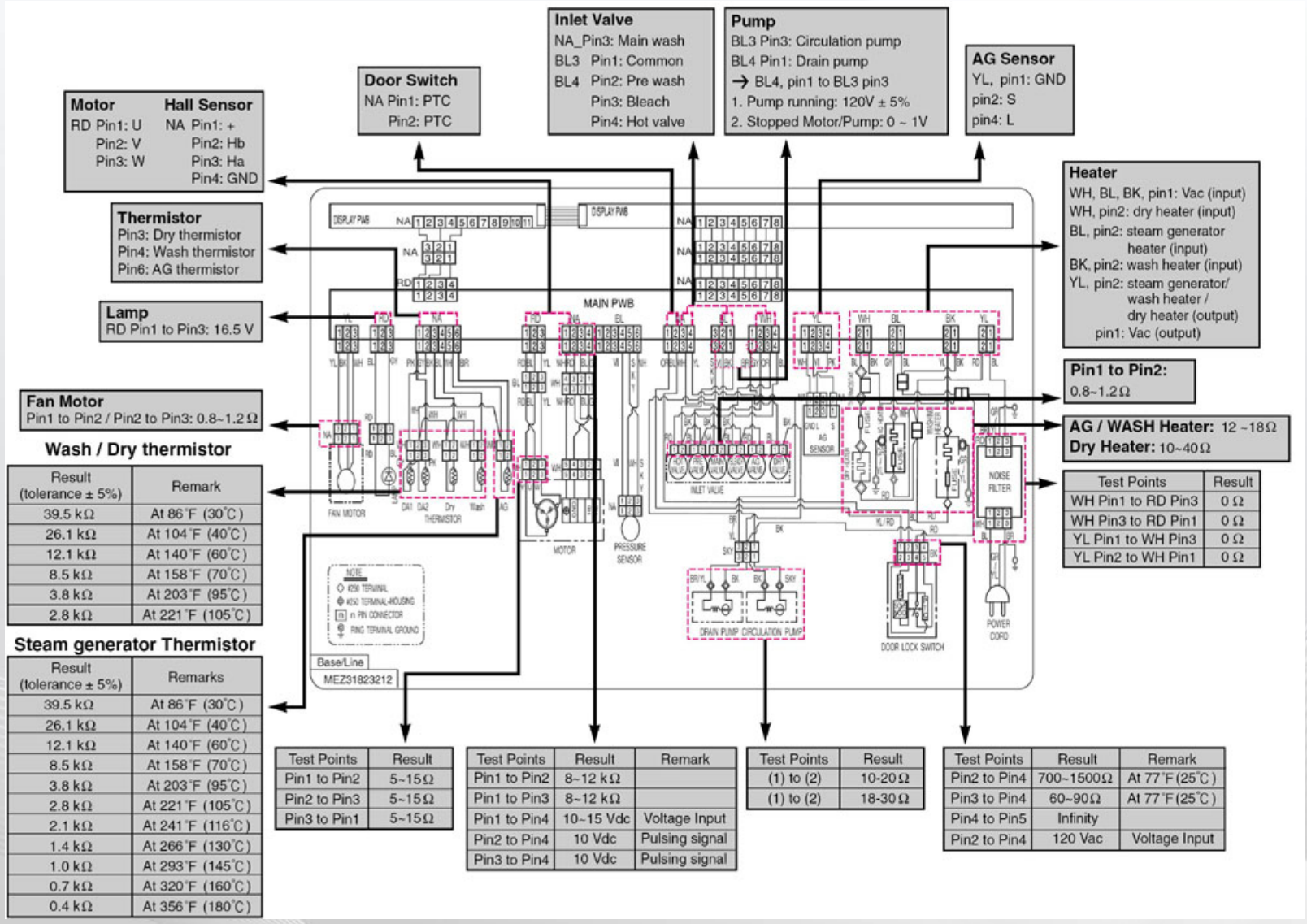
Error Codes

	ERROR	SYMPTOM	CAUSE
1	WATER INLET ERROR		• Correct water level (24.6kHz) is not reached within 8 minutes after water is supplied or it does not reach the preset water level within 25 minutes.
2	UNBALANCE ERROR		• The load is too small. • The appliance is tilted. • Laundry is gathered to one side. • Non distributable things are put into the drum.
3	DRAIN ERROR		• Not fully drained within 10 minutes.
4	OVERFLOW ERROR	FE	• Water is overflowing. (water level frequency is over 21.3kHz). ※ If FE is displayed, the drain pump will operate to drain the water automatically.
5	PRESSURE SENSOR ERROR	PE	• The PRESSURE SENSOR ASSEMBLY is out of order. • When water level frequency maintain condition of below 10 kHz and over 30 kHz.
6	DOOR OPEN ERROR		• Door not all the way closed. • Loose electrical connections at Door switch and PWB Assembly. • The DOOR SWITCH ASSEMBLY is out of order.
7	HEATING ERROR	tE	• The THERMISTOR is out of order.

Error Codes

	ERROR	SYMPTOM	CAUSE
8	LOCKED MOTOR ERROR	LE	• The connector (3-pin, male, white) in the MOTOR HARNESS is not connected to the connector (3-pin, female, white) of STATOR ASSEMBLY. • The electric contact between the connectors (3-pin, male, white) in the MOTOR HARNESS and 4-pin, female, white connector in the MAIN PWB ASSEMBLY is bad or unstable. • The MOTOR HARNESS between the STATOR ASSEMBLY and MAIN PWB ASSEMBLY is cut (open circuited). • The hall sensor is out of order/defective.
9	EEPROM ERROR	EE	• EEPROM is out of order. ※ Displayed only when the START/PAUSE button is first pressed in the Load Test Mode.
10	POWER FAILURE	PF	• After the power supply is stopped while washing machine is working, the power is supplied rapidly.
11	DRY HEATING ERROR	dHE	• The connector (3-pin, male, white) in the FAN MOTOR HARNESS is not connected to the connector(3-pin, female, white) of FAN MOTOR ASSEMBLY. • The electric contact between the connectors (3-pin, male, yellow) in the FAN MOTOR HARNESS and (3-pin, female, yellow) connector in the MAIN PWB ASSEMBLY is bad or unstable. • The MOTOR HARNESS between the FAN MOTOR ASSEMBLY and MAIN PWB ASSEMBLY is cut (open circuited).

Troubleshooting Summary



Wash / Dry thermistor

Result (tolerance ± 5%)	Remark
39.5 kΩ	At 86°F (30°C)
26.1 kΩ	At 104°F (40°C)
12.1 kΩ	At 140°F (60°C)
8.5 kΩ	At 158°F (70°C)
3.8 kΩ	At 203°F (95°C)
2.8 kΩ	At 221°F (105°C)

Steam generator Thermistor

Result (tolerance ± 5%)	Remarks
39.5 kΩ	At 86°F (30°C)
26.1 kΩ	At 104°F (40°C)
12.1 kΩ	At 140°F (60°C)
8.5 kΩ	At 158°F (70°C)
3.8 kΩ	At 203°F (95°C)
2.8 kΩ	At 221°F (105°C)
2.1 kΩ	At 241°F (116°C)
1.4 kΩ	At 266°F (130°C)
1.0 kΩ	At 293°F (145°C)
0.7 kΩ	At 320°F (160°C)
0.4 kΩ	At 356°F (180°C)

Test Points	Result
Pin1 to Pin2	5~15Ω
Pin2 to Pin3	5~15Ω
Pin3 to Pin1	5~15Ω

Test Points	Result	Remark
Pin1 to Pin2	8~12 kΩ	
Pin1 to Pin3	8~12 kΩ	
Pin1 to Pin4	10~15 Vdc	Voltage Input
Pin2 to Pin4	10 Vdc	Pulsing signal
Pin3 to Pin4	10 Vdc	Pulsing signal

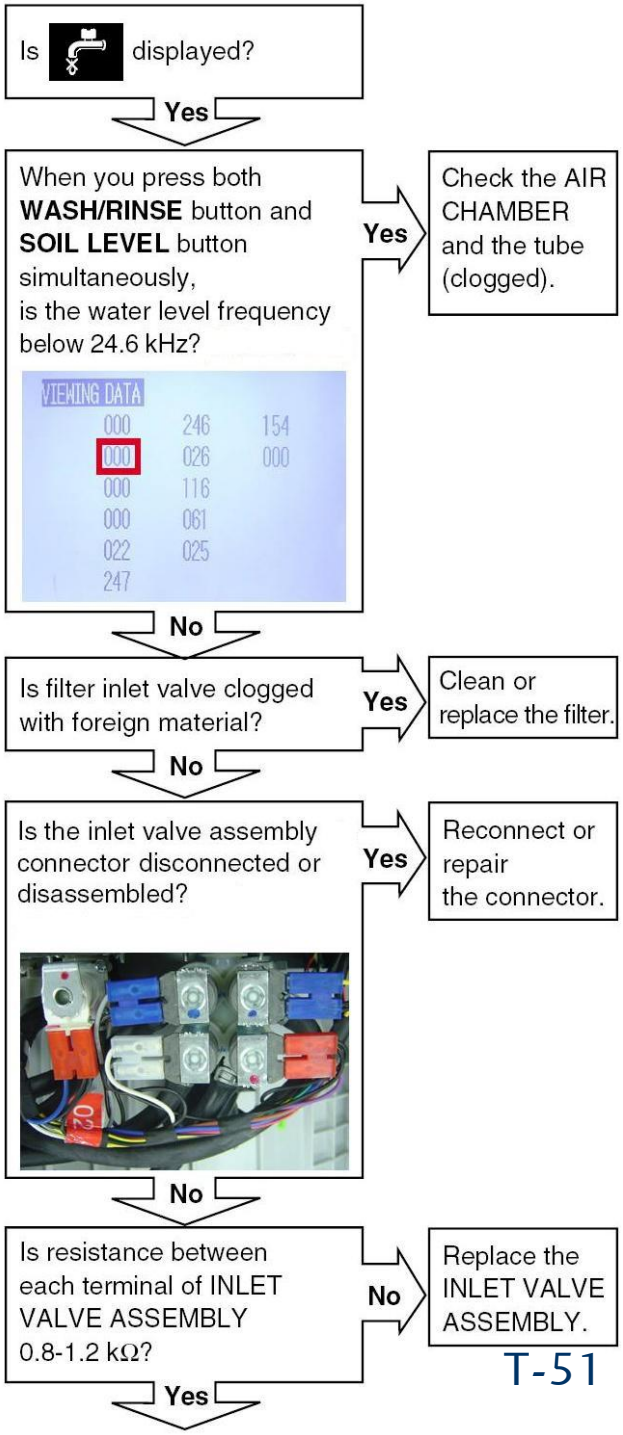
Test Points	Result
(1) to (2)	10-20Ω
(1) to (2)	18-30Ω

Test Points	Result	Remark
Pin2 to Pin4	700~1500Ω	At 77°F(25°C)
Pin3 to Pin4	60~90Ω	At 77°F(25°C)
Pin4 to Pin5	Infinity	
Pin2 to Pin4	120 Vac	Voltage Input

Test Points	Result
WH Pin1 to RD Pin3	0 Ω
WH Pin3 to RD Pin1	0 Ω
YL Pin1 to WH Pin3	0 Ω
YL Pin2 to WH Pin1	0 Ω

Troubleshooting (with Error Codes)

Inlet Valve Error (IE)



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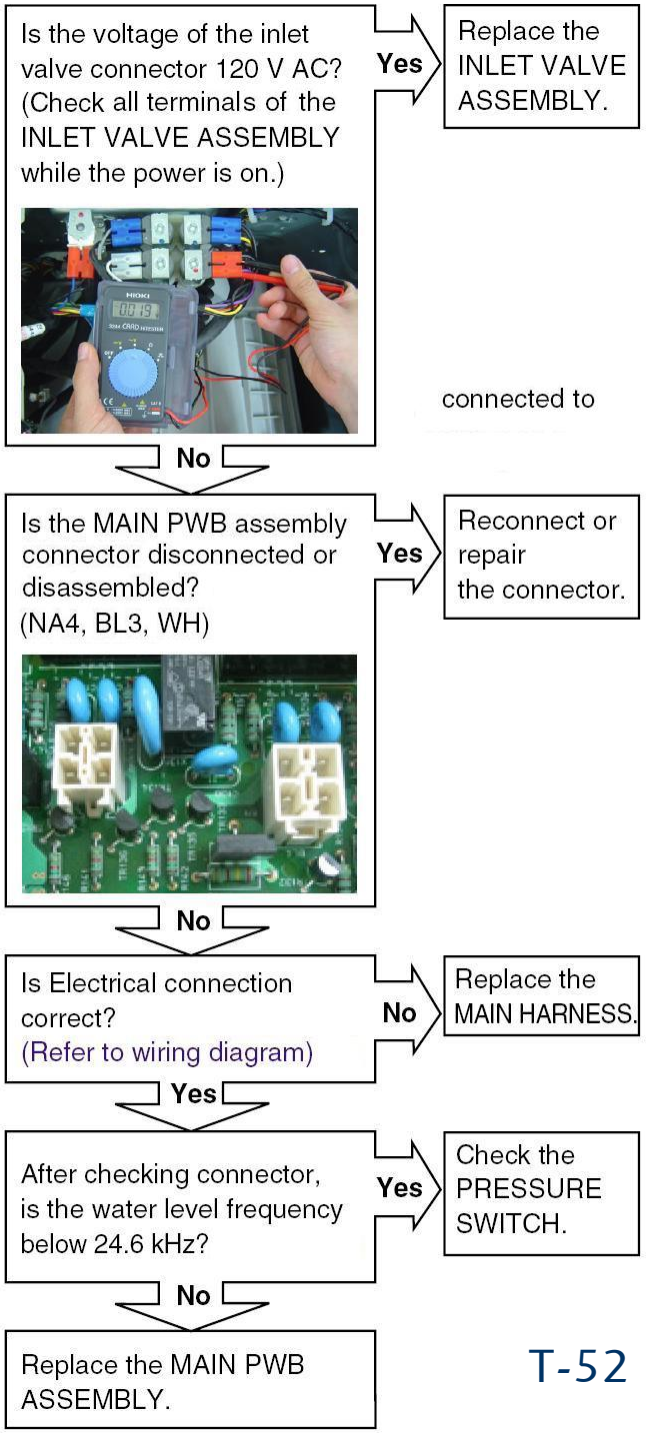
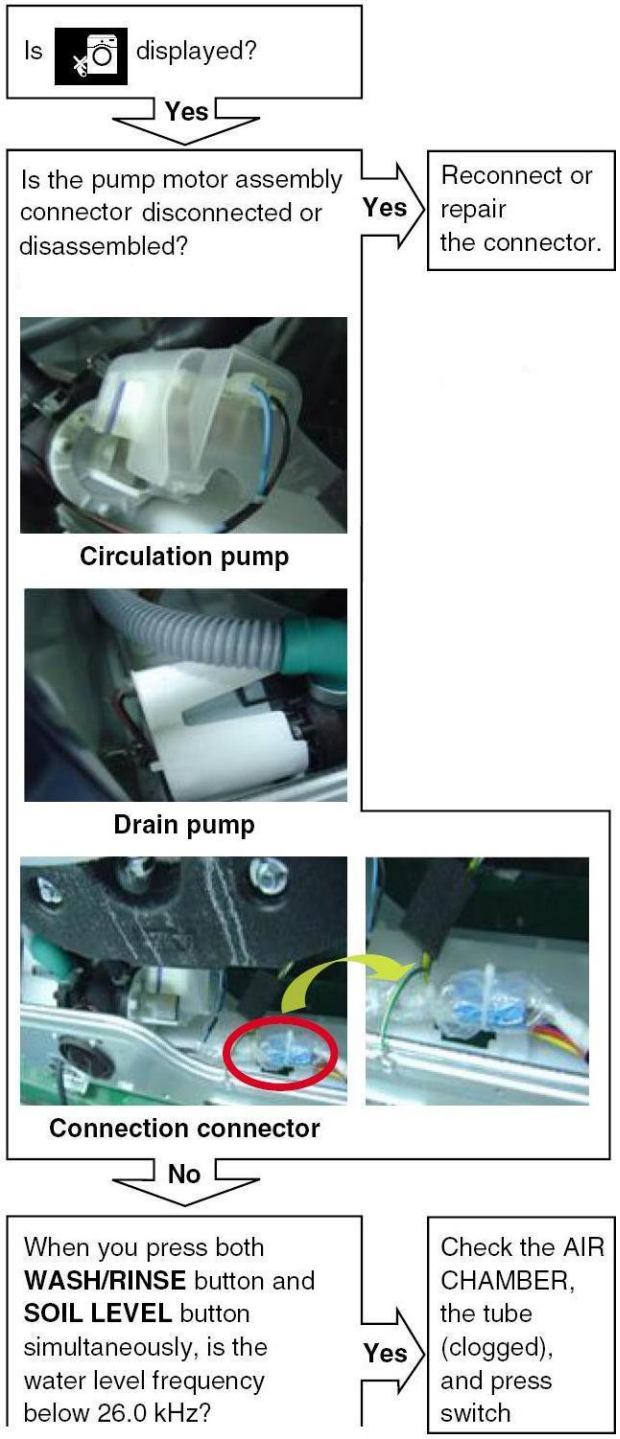
Troubleshooting (with Error Codes)

Inlet Valve Error (IE)



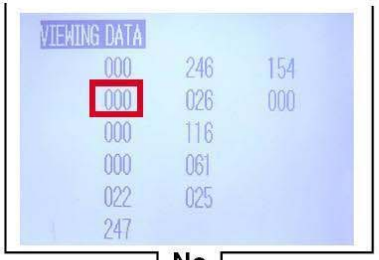
Troubleshooting (with Error Codes)

Drain Error (DE)



Troubleshooting (with Error Codes)

Drain Error (DE)



No

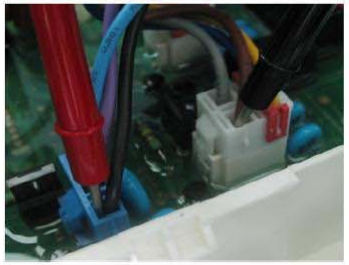
Is the coil of the drain pump too high or low? (resistance of the coil is 10-20Ω)

Yes → Replace the DRAIN PUMP ASSEMBLY.

No

Is the voltage between connectors out of range? (WH pin1~ BL3 pin1)
- After remove Terminal Position Assurance (TPA) of connector, check as follows.

Yes → Replace the MAIN PWB ASSEMBLY.



- Pump running: 120V±5%
- Stopped Motor/Pump: 0~1V Method

1. Press the Power button, while the SPIN SPEED button and SOIL LEVEL button is pressed simultaneously.
2. Press Start/Pause button.
   1 time → Pump slow-speed running
   2 times → Pump mid-speed running
   3 times → Pump high-speed running
   4 times → Stop the Motor/Pump

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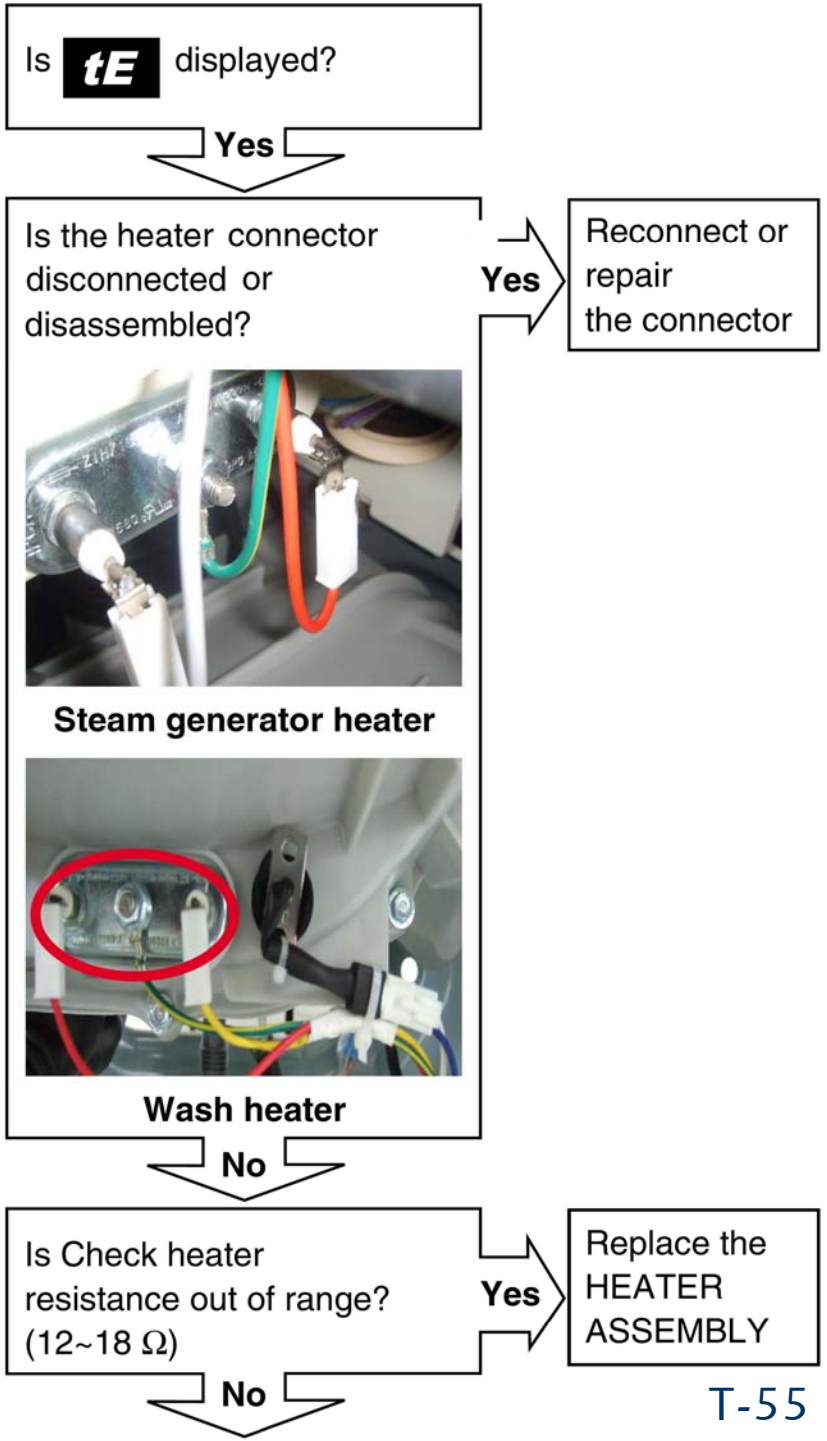
Troubleshooting (with Error Codes)

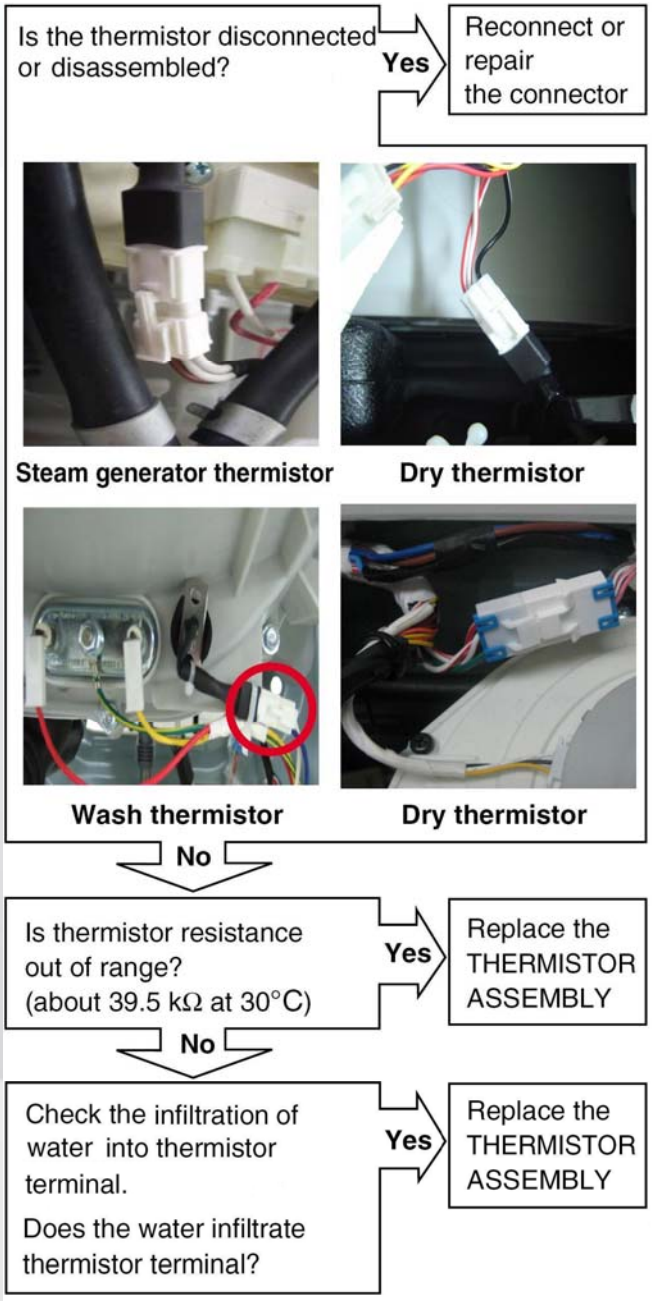
Heating (Thermal) Error (tE)



T-55

Troubleshooting (with Error Codes)

Heating (Thermal) Error (tE)



Troubleshooting (with Error Codes)

Locked Motor Error (LE)

Is **LE** displayed?

Yes

Check the connectors below. Is the connector disconnected or disassembled? (motor hall sensor connector, motor drive connector)
main PWB part assembly (NA1, RD4)

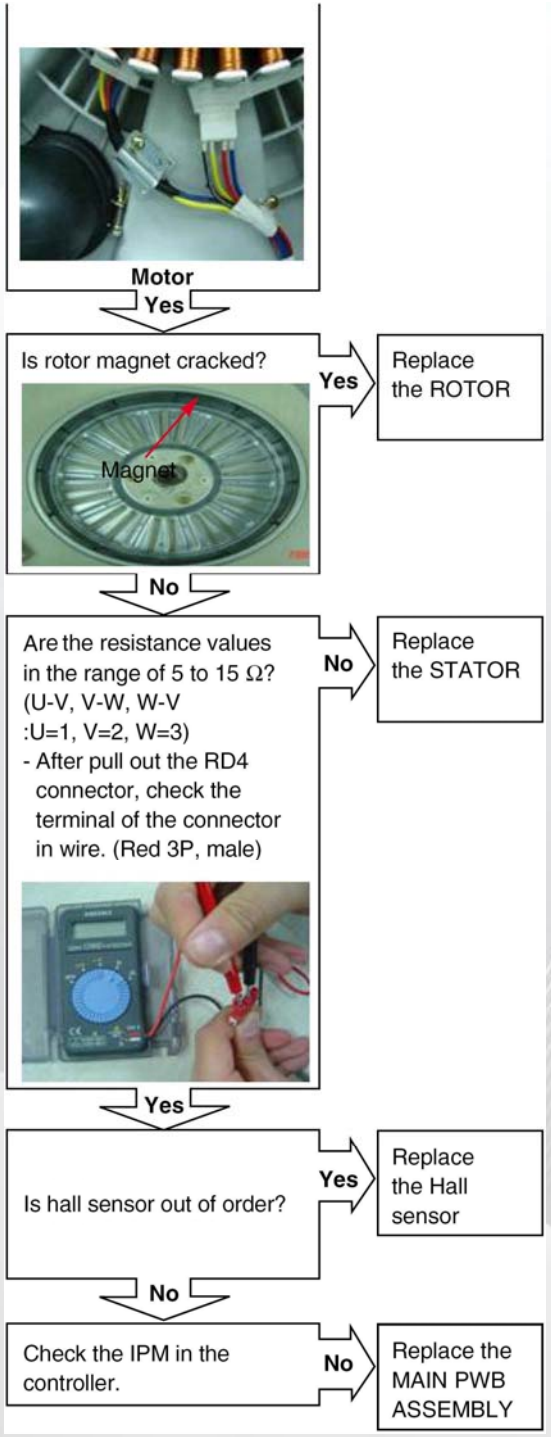
Yes → Reconnect the connector. (connector / wire / motor)

Motor Drive

Hall sensor

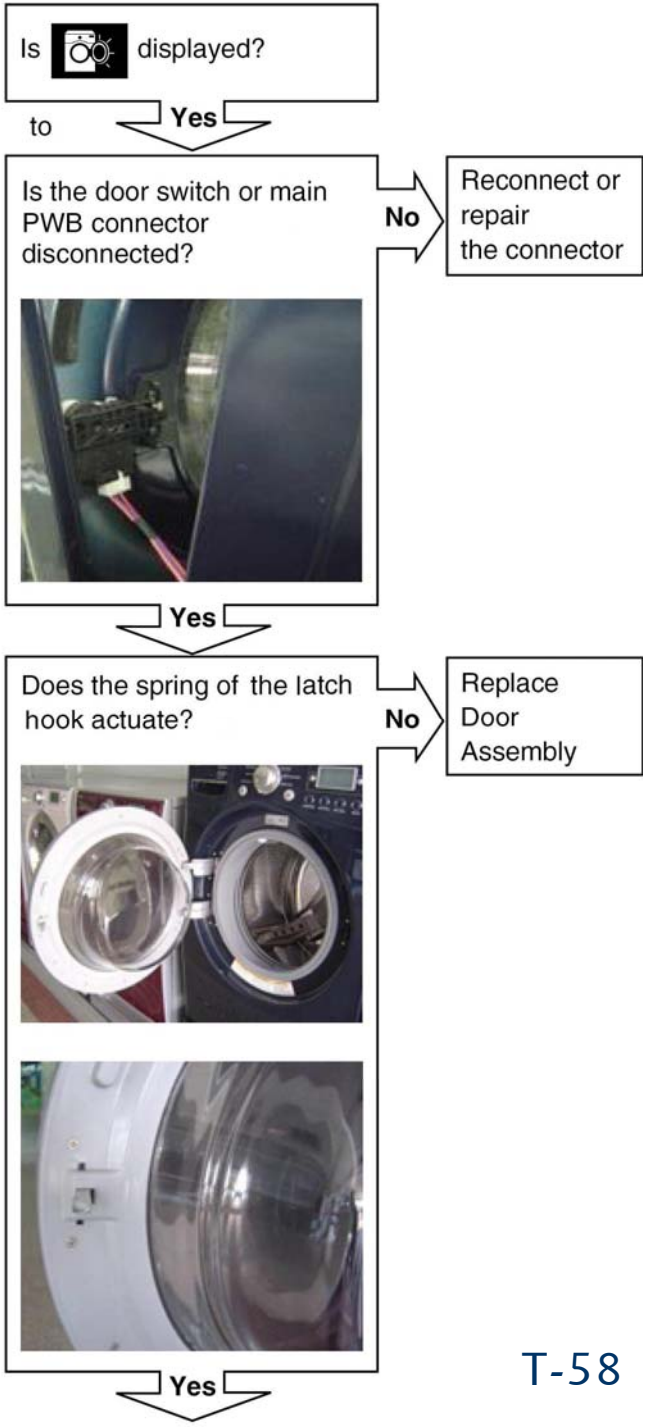
Troubleshooting (with Error Codes)

Locked Motor Error (LE)



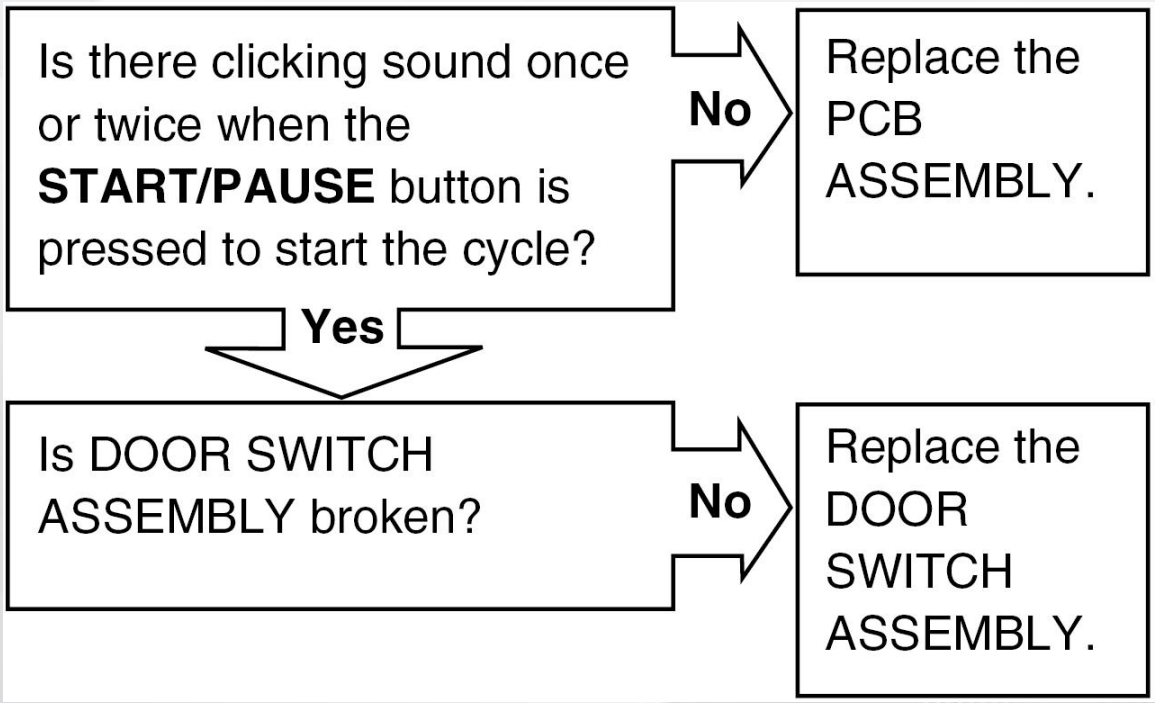
Troubleshooting (with Error Codes)

Door Open Error



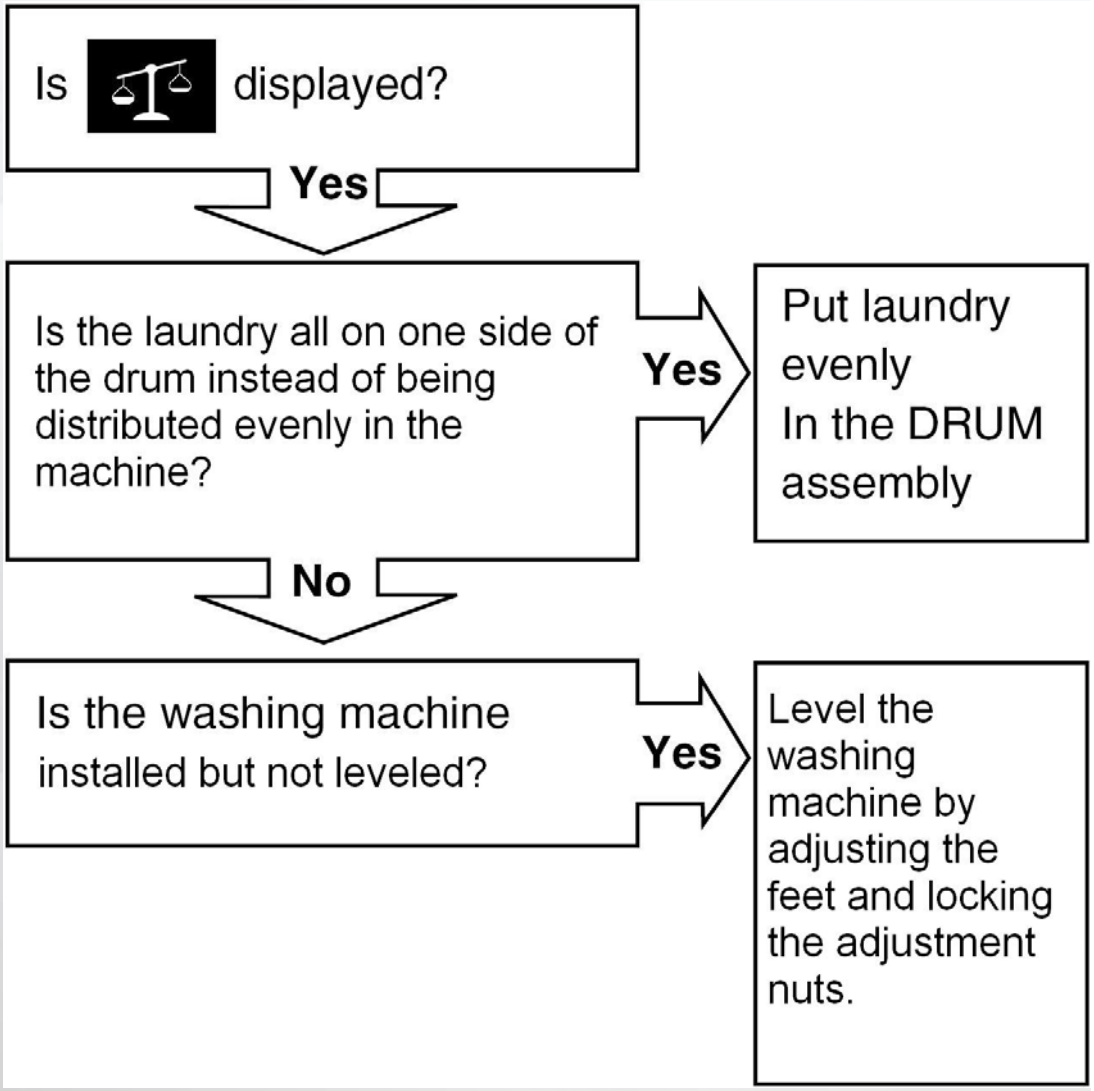
Troubleshooting (with Error Codes)

Door Open Error



Troubleshooting (with Error Codes)

Unbalance Error



Troubleshooting (with Error Codes)

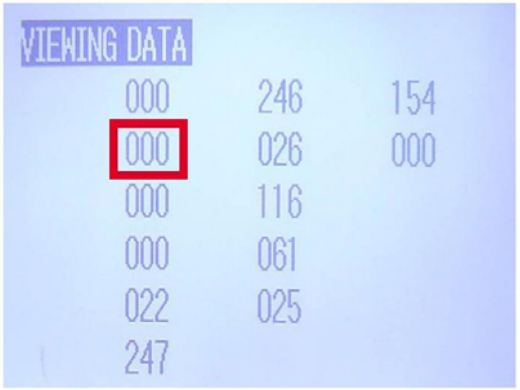
Overflow Error (FE)

Is **FE** displayed?

Yes

When you press both **WASH/RINSE** button and **SOIL LEVEL** button simultaneously, is the water level frequency over 21.3kHz?

No → Check the AIR CHAMBER and the tube (clogged).



Yes

Does the inlet valve work when the power is not applied?

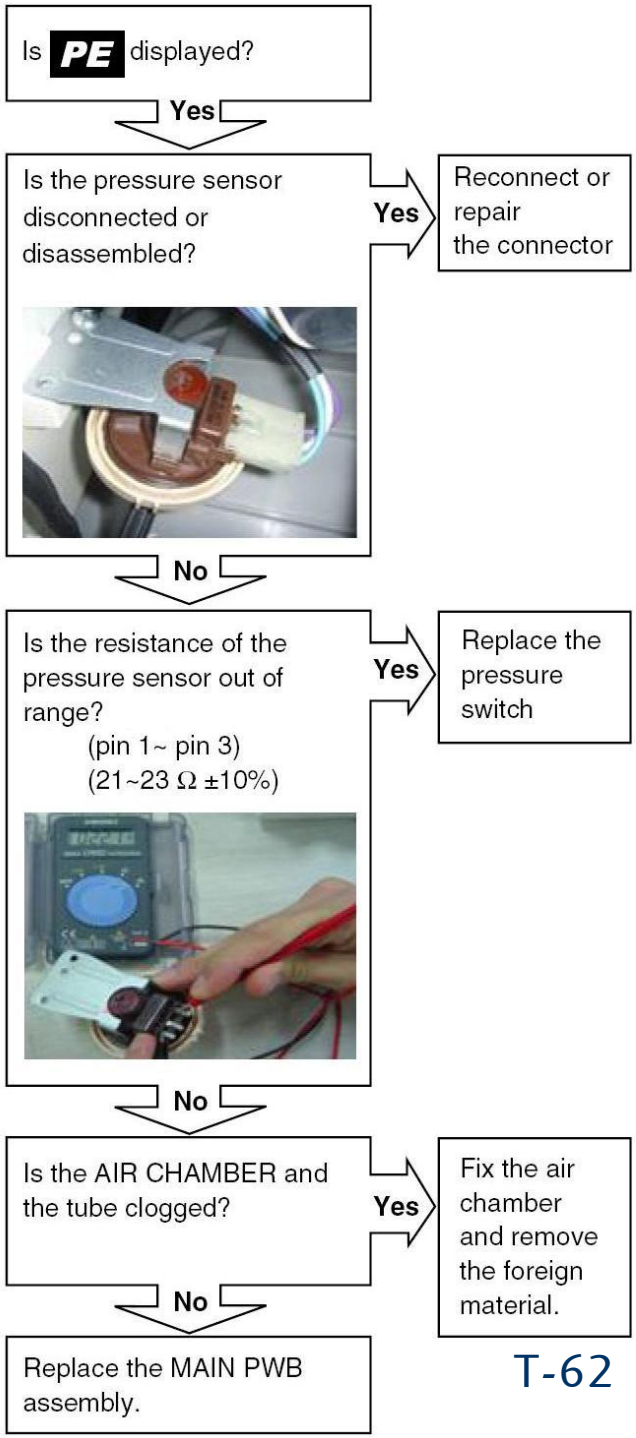
No → If the inlet valve works continuously when the power is applied, Replace the MAIN PWB ASSEMBLY

Yes

Replace the INLET VALVE ASSEMBLY

Troubleshooting (with Error Codes)

Pressure Error (PE)



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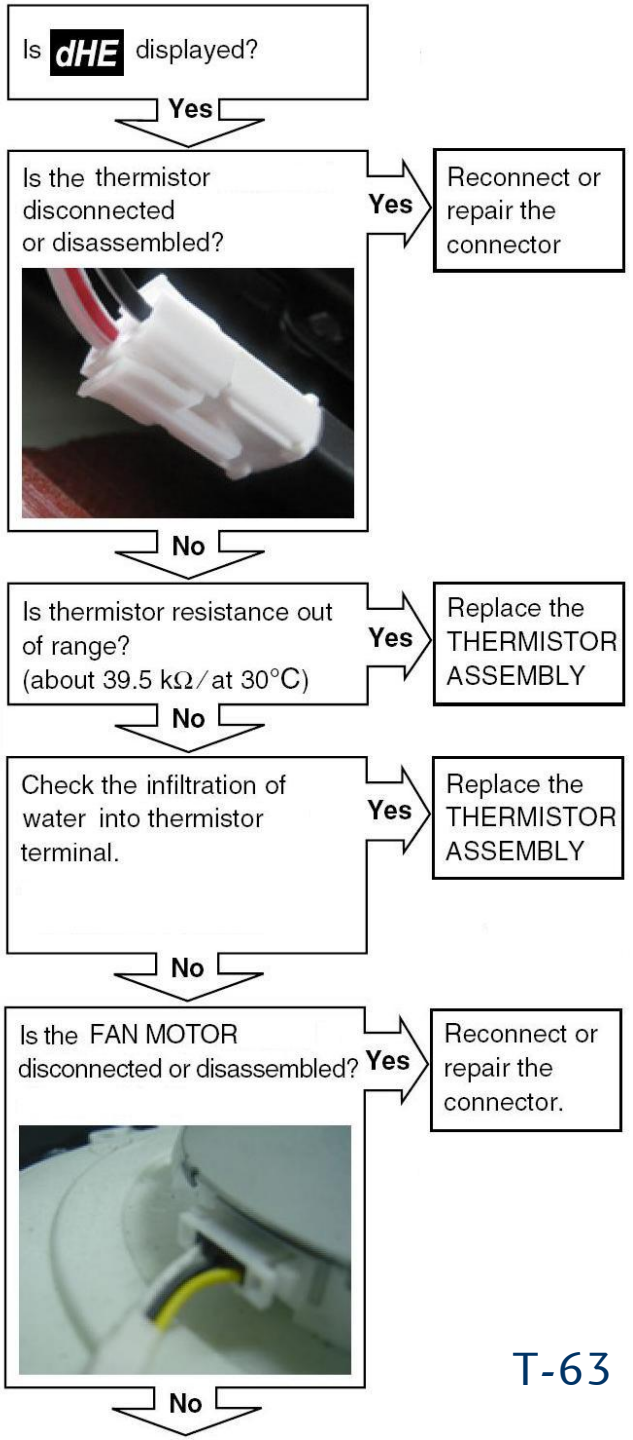
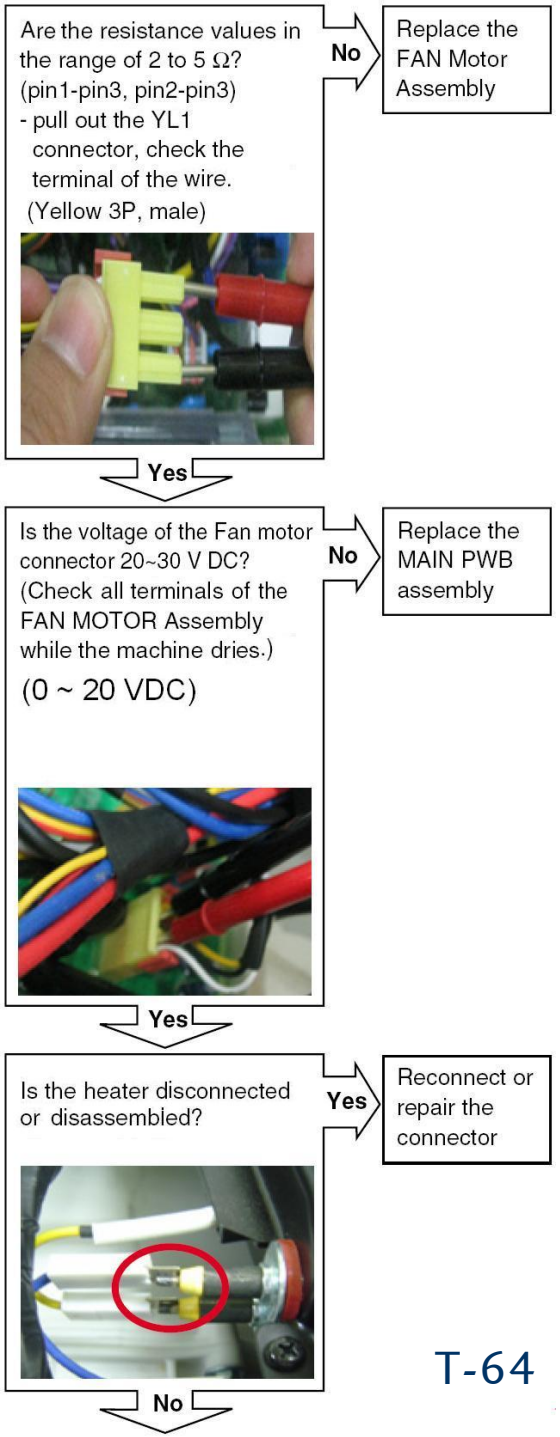
Troubleshooting (with Error Codes)

Dryer Heater Error (dHE)



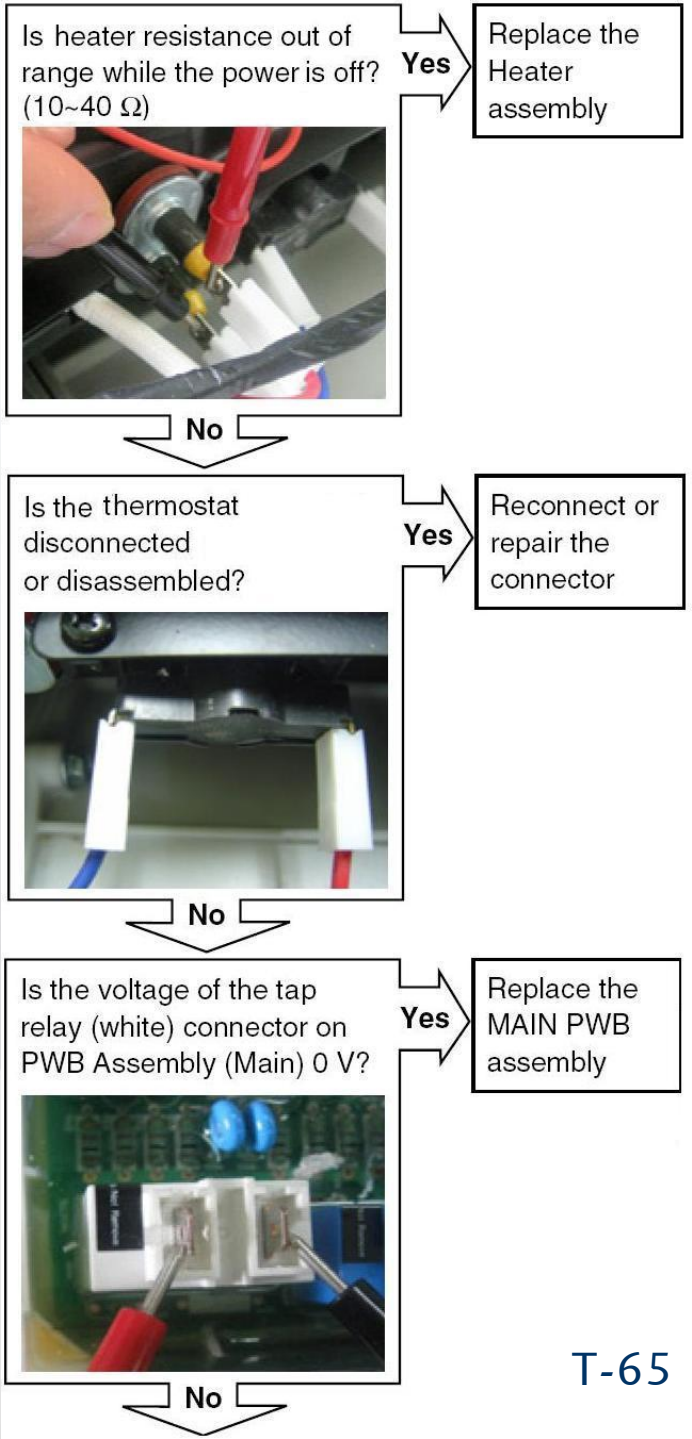
Troubleshooting (with Error Codes)

Dryer Heater Error (dHE)



Troubleshooting (with Error Codes)

Dryer Heater Error (dHE)

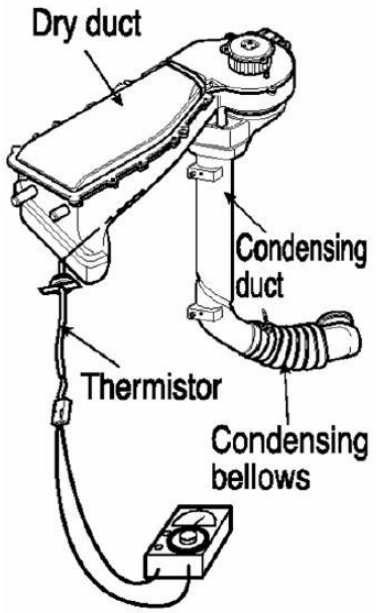


Troubleshooting (with Error Codes)

Dryer Heater Error (dHE)

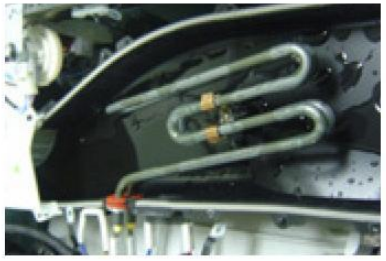
Separate the bellows and drying duct and check for blockage or foreign material.

Yes → Remove the foreign material



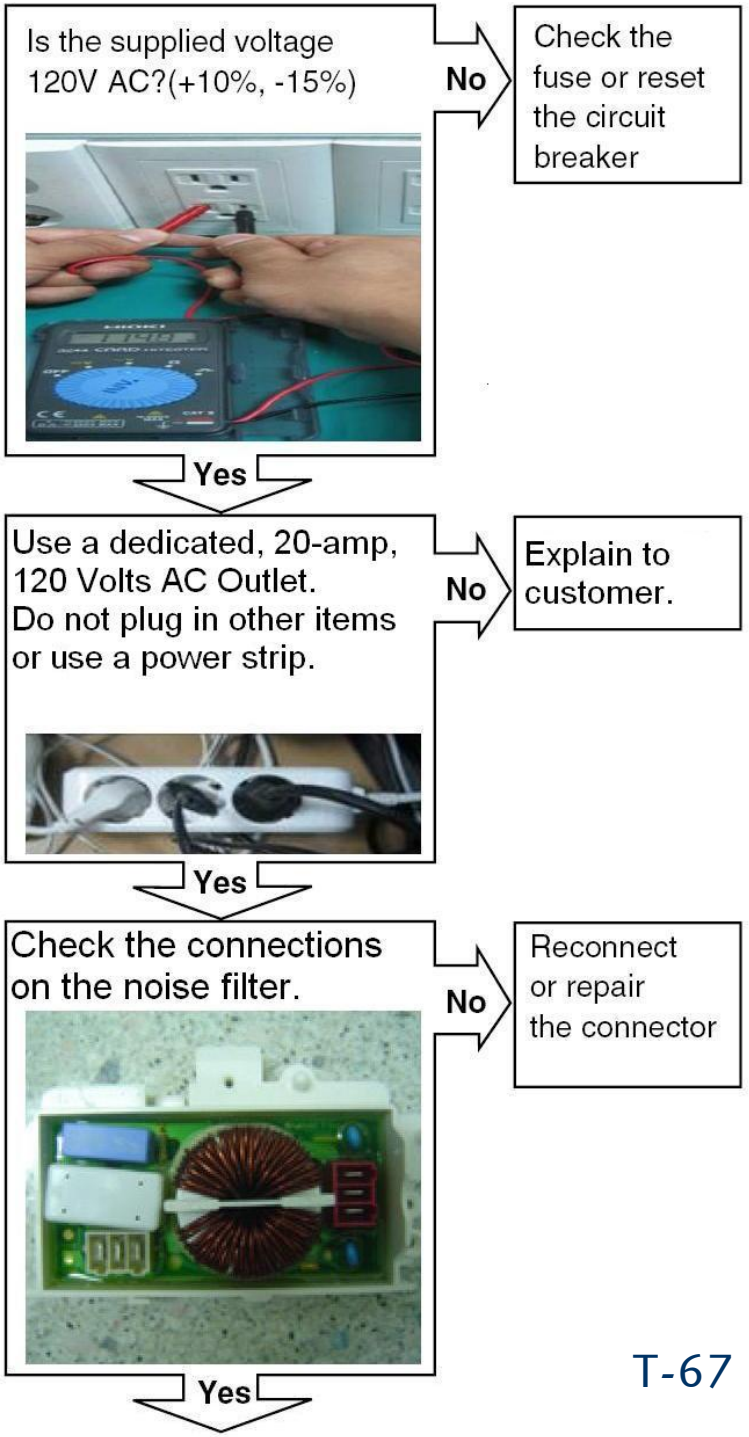
No

Remove the blockage after disassembly. Clean and re-assemble.



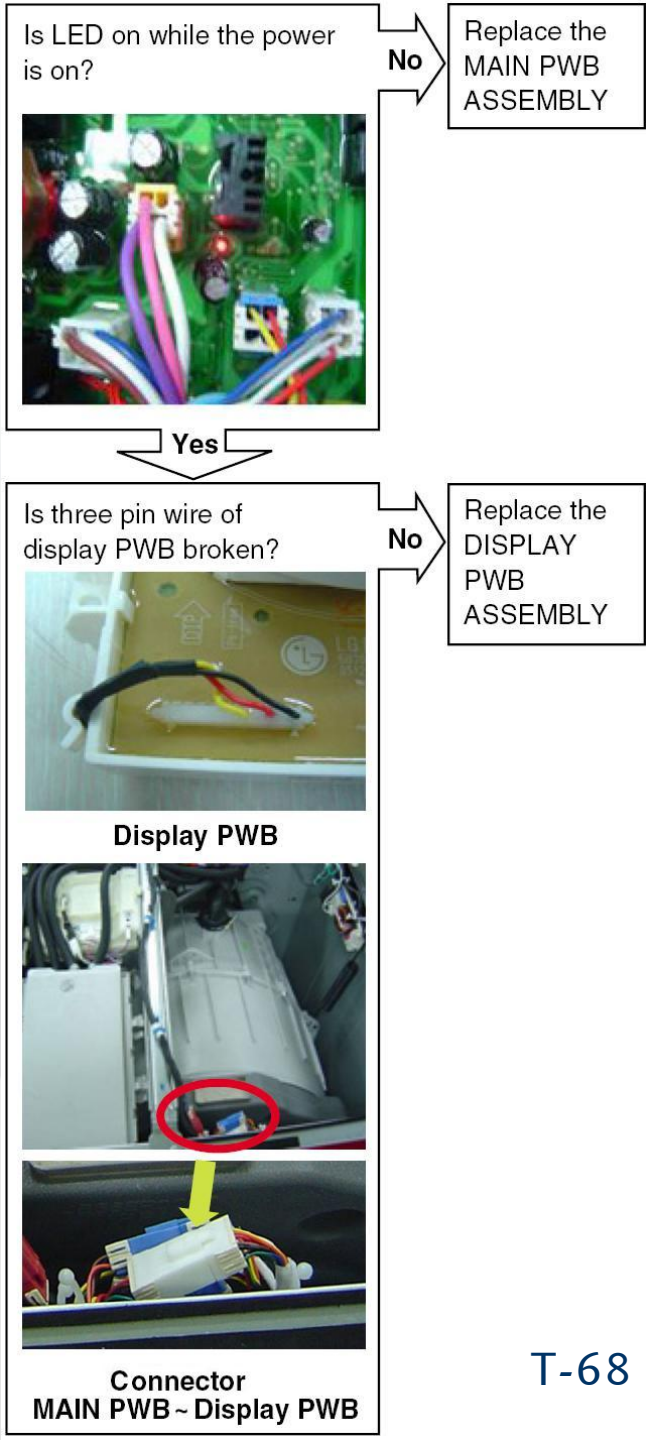
Troubleshooting (with Error Codes)

No Power



Troubleshooting (with Error Codes)

No Power



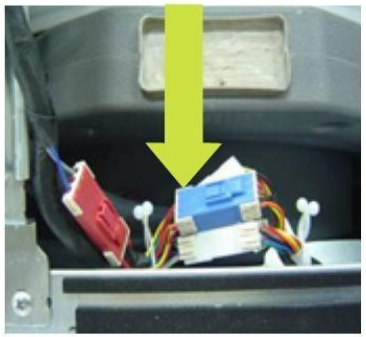
Troubleshooting (with Error Codes)

Buttons Do Not Operate Properly

Is the Main PWB / Display PWB disconnected or disassembled?

Yes

Reconnect or Repair the connector



No

Is the panel button stuck?

Yes

Repair the button

Troubleshooting (with Error Codes)

Buttons Do Not Operate Properly

No

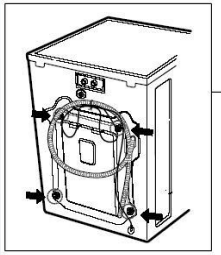
Is the display PCB broken?
Check the buzzer and LEDs by pushing a button to activate them.

Yes

Replace the DISPLAY PWB ASSEMBLY

Troubleshooting (with Error Codes)

Vibration and Noise in the Spin Cycle



Have all the transit bolts and base packing been removed?

NO → Remove the transit bolts and base packing.

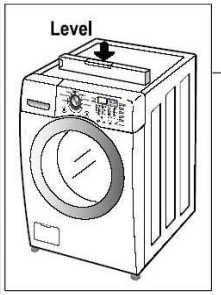
YES

Is the washer installed on a solidly constructed floor?

NO → Move the washer or reinforce the floor.

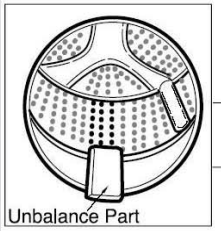
YES

Check if the washer is perfectly level as follows:



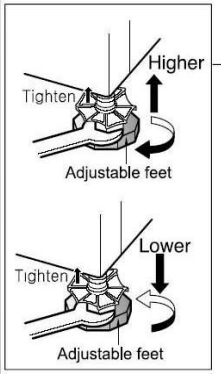
Check the leveling of the washer with a level and check that the washer is stable.

Put a large, knotted bath towel in the drum to make it run off balance. Operate a spin cycle to check for vibration and noise. Adjust the feet as necessary. Verify the machine is stable.



If you do not have the unbalance part, put 4.5 to 6.5 lbs (2 to 3 kg) of clothing. Once loaded, press power, Rinse+Spin,and the start/pause button,in sequence.
When the machine is spinning in high speed, verify that it is stable.

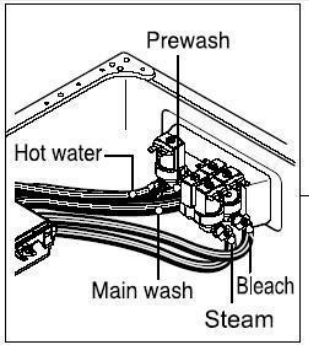
YES

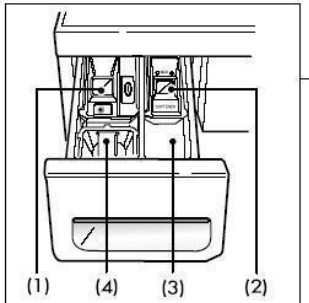


If it is not stable, adjust feet accordingly.
After the washer is level, tighten the lock nuts against of the base of the washer.
All lock nuts must be tightened.

Troubleshooting (with Error Codes)

Laundry Products Do Not Dispense





1) Liquid bleach
2) Liquid softener
3) Prewash
4) Main Wash

Operate TEST MODE to ensure all valves are dispensing water to all compartments as required.
NO → Be sure water is turned on and hoses are connected.

YES

Ensure all wires and hoses are connected properly.
NO → Repair according to manual.

YES

Are detergent, bleach, and softener placed into the correct compartments of the dispenser?
NO → Put the laundry products into the correct compartments.

Pre wash | Main wash

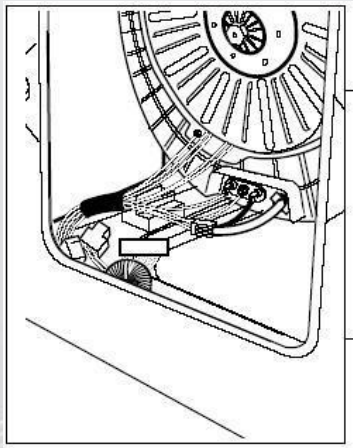
● : Detergent

YES

Is the detergent caked or hardened?
Do the siphon covers require cleaning?
YES → Clean the dispenser.

Troubleshooting (with Error Codes)

Abnormal Sound



Is the motor bolt loose ?

YES → Tighten it with a 17 mm wrench. Do not overtorque it.

NO

Is friction noise coming from the motor?

YES → Turn the drum once to ensure nothing is caught between the drum and tub.

Check the hall sensor as shown in this manual.

Check the stator.

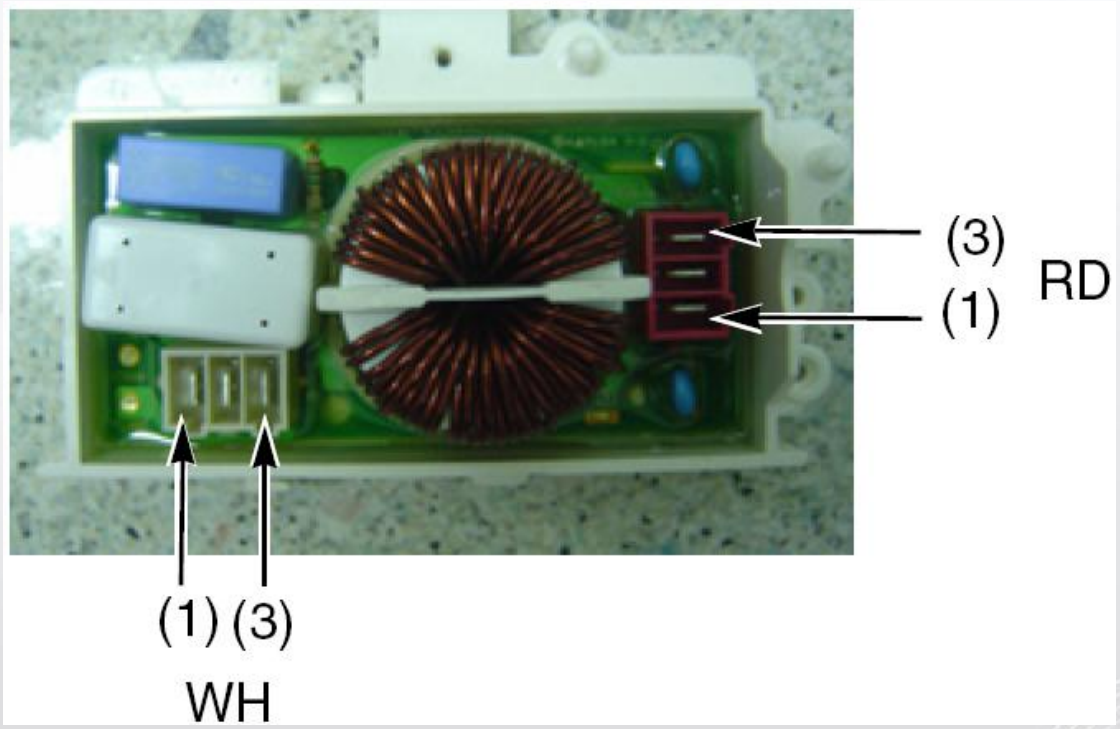
Check the rotor for broken magnets.

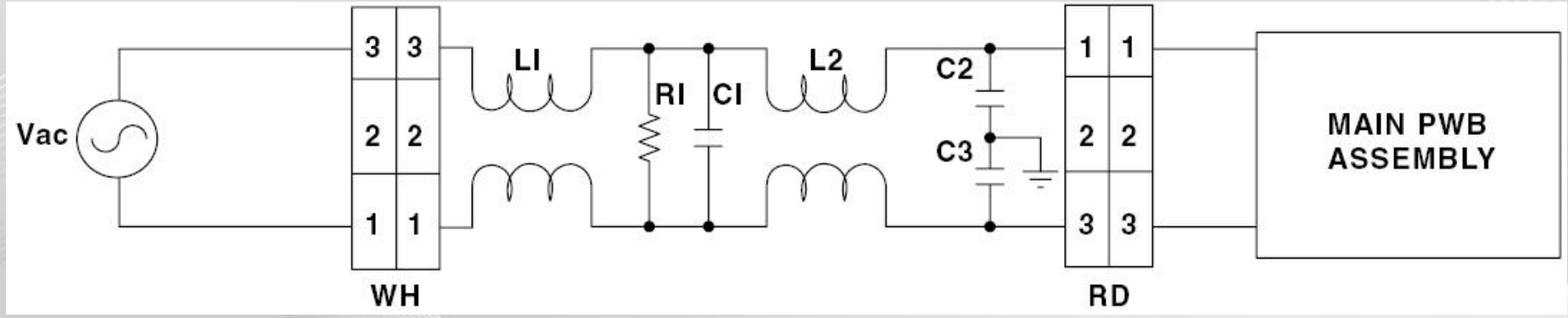
Component Test Procedures

Several components of the machine can be tested before removing or exchanging them. Some test procedures can be completed without major disassembly other than to disconnect the component from its circuit; others may be tested from their connector on the control panel. Often, the only equipment required is a multimeter.

Component Test Procedures

Noise Filter





Component Test Procedures

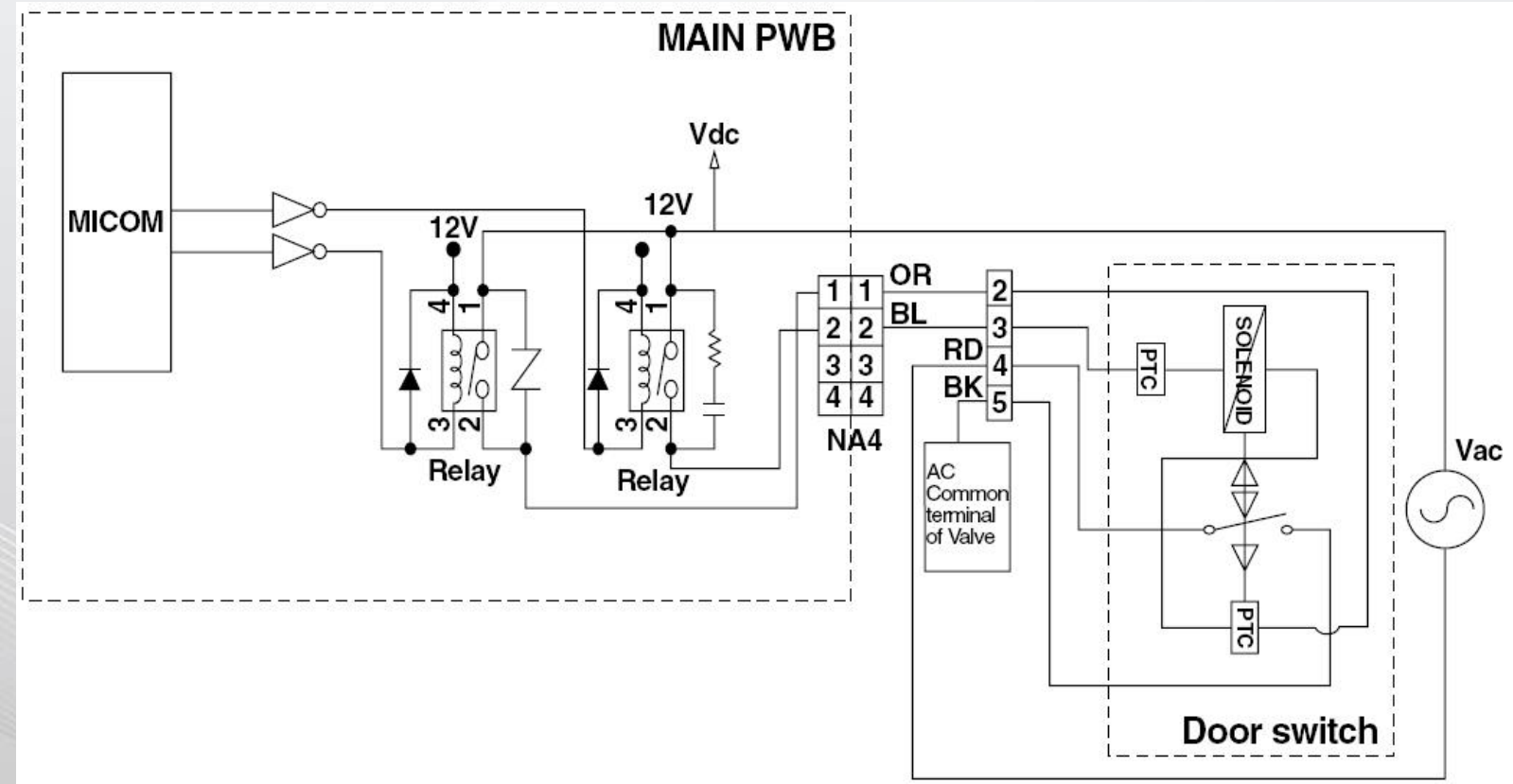
Using an ohmmeter, check from the white connector terminal 1 to the red connector terminal 3. The resistance should be 0Ω.

Then check from the white connector terminal 3 to the red connector terminal 1. The resistance should be 0Ω.

If these tests pass, reconnect the white connector but not the red connector. Plug in the machine in.
Read the voltage across terminals 1 and 3 of the red connector.
It should be approximately 120 V_{AC}, the same as at the outlet.

Component Test Procedures

Door Lock Switch

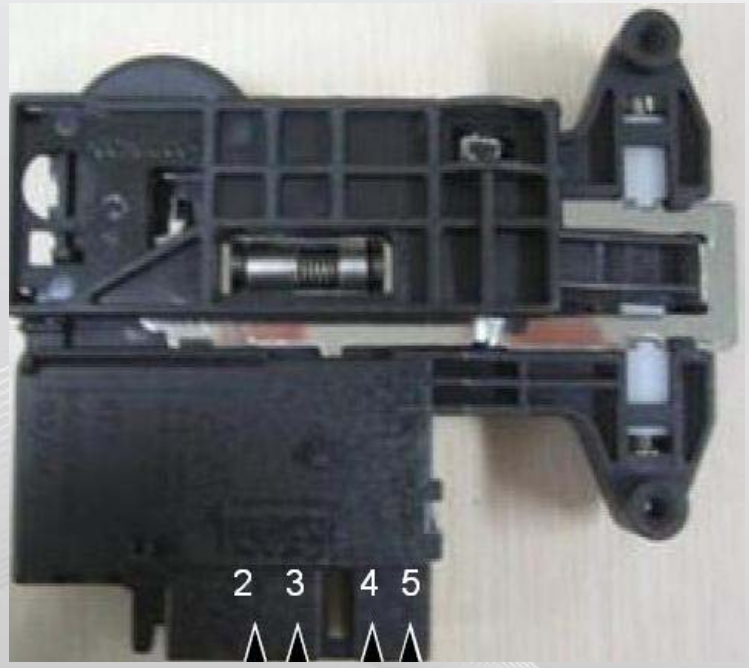


Component Test Procedures

Door Lock / Unlock

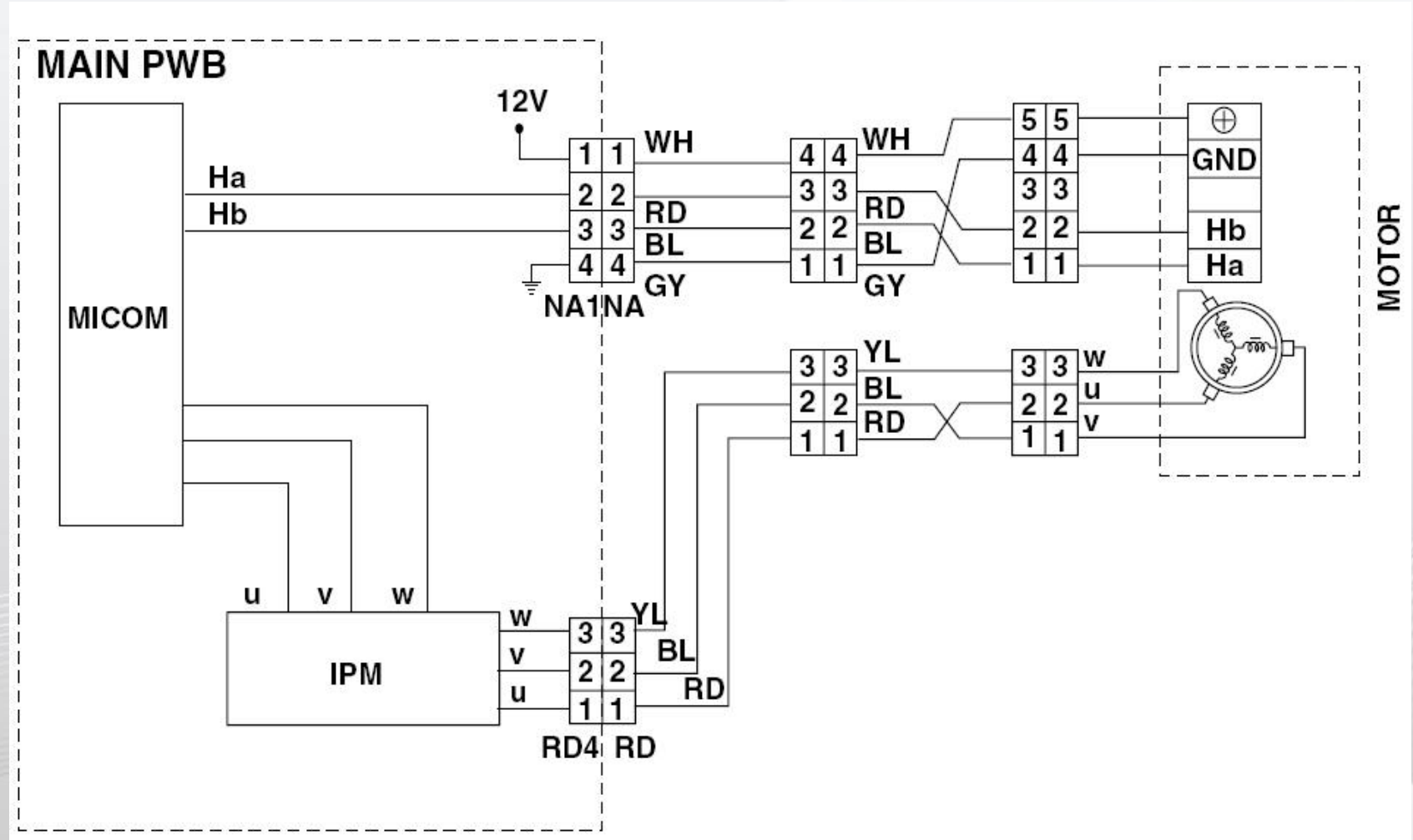
Test results at 77° F (25° C)

2 to 3	700 fl 1,500 Ω
3 to 4	60 fl 90 Ω
4 to 5	∞ (infinity)
2 to 4	120 VAC (input voltage)



Component Test Procedures

Stator

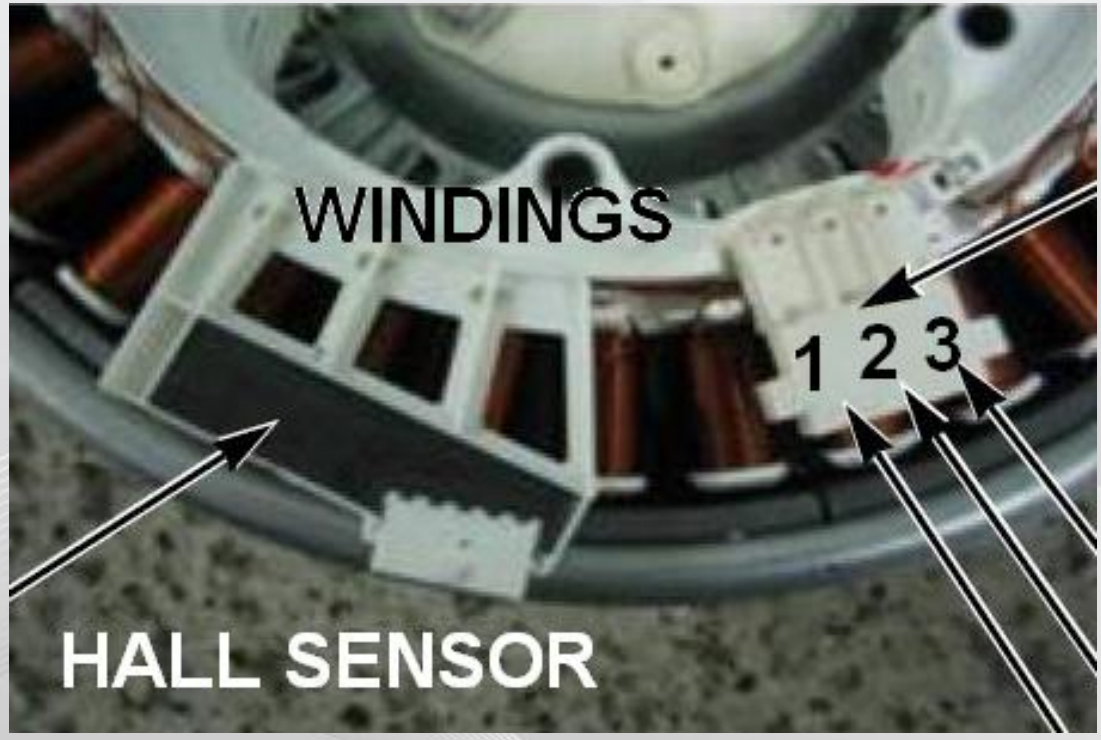


Component Test Procedures

Stator

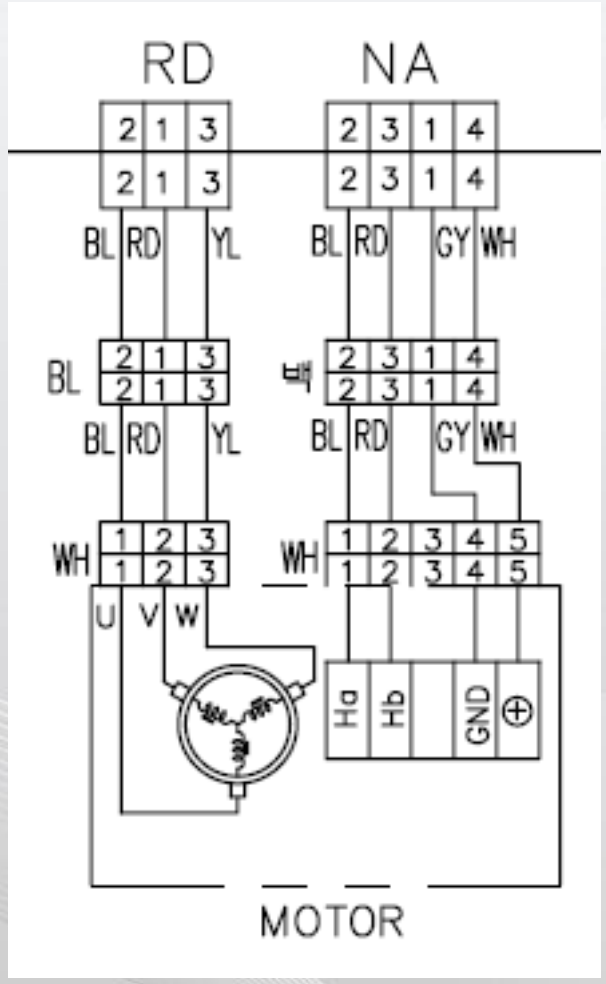
All test points should read the same.

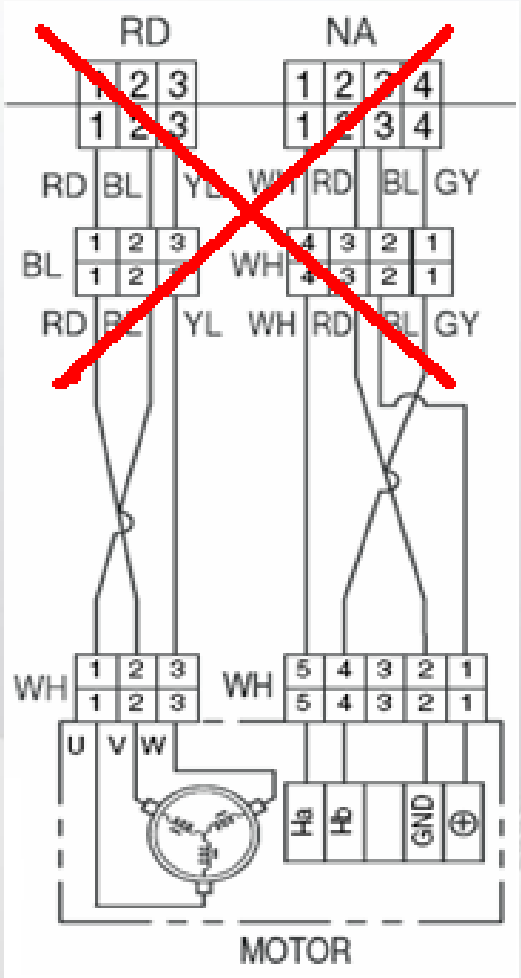
1 to 2	5 ~ 15 Ω
2 to 3	5 ~ 15 Ω
1 to 3	5 ~ 15 Ω



Component Test Procedures

Hall Sensor

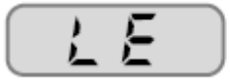




Component Test Procedures

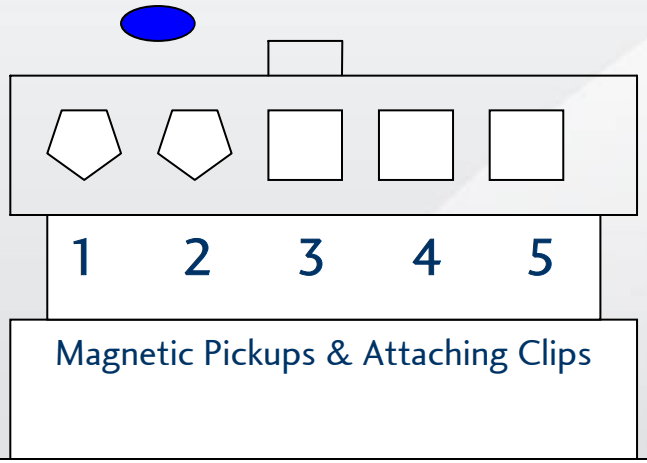
Hall Sensor

Hall Sensor testing methods are now available on the following pages when LE error code troubleshooting says "*hall sensor is out of order or defective.*"

LOCKED MOTOR ERROR		• The connector (3-pin, male, white) in the MOTOR HARNESS is not connected to the connector (3-pin, female, white) of STATOR ASSEMBLY. • The electric contact between the connectors (3-pin, male, white) in the MOTOR HARNESS and 4-pin, female, white connector in the MAIN PWB ASSEMBLY is bad or unstable. • The MOTOR HARNESS between the STATOR ASSEMBLY and MAIN PWB ASSEMBLY is cut (open circuited). • The hall sensor is out of order/defective.

Component Test Procedures

Hall Sensor



1 – BL (Ha)
2 – RD (Hb)
3 – Not Used
4 – GRY (-)
5 – WH (+)

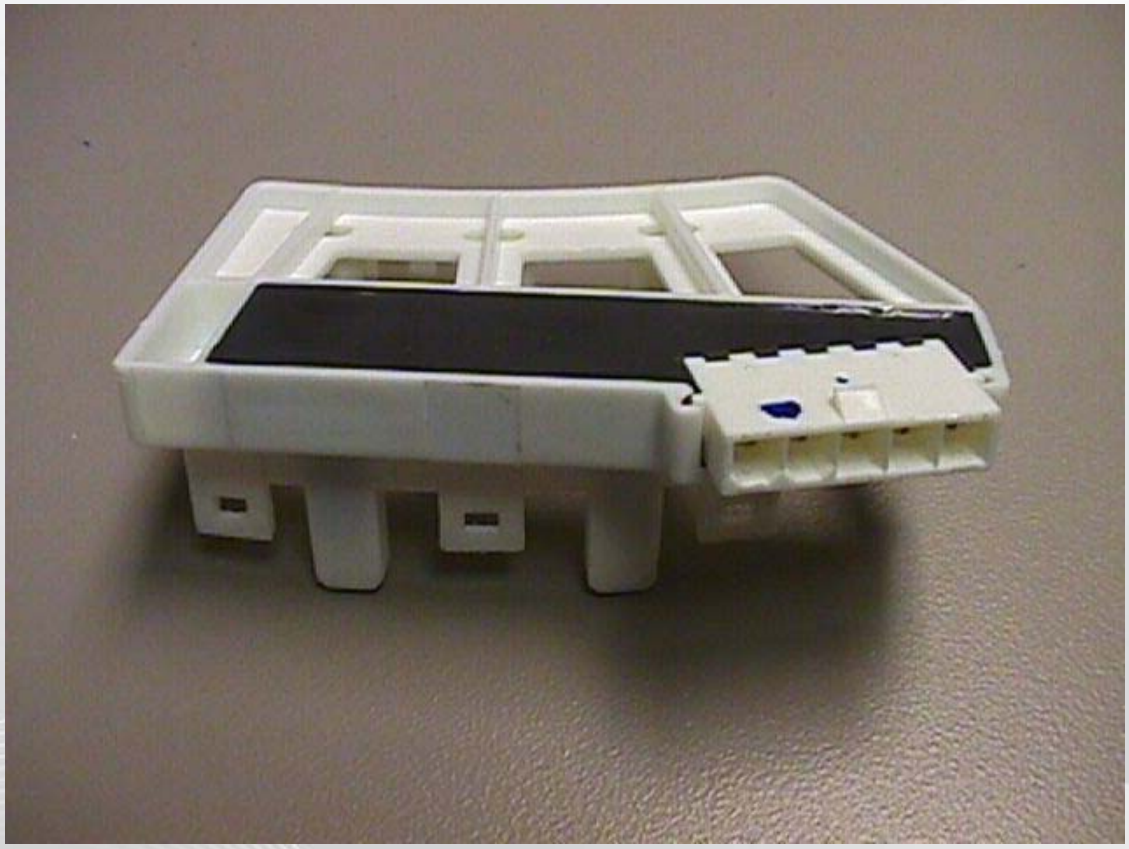
OHM Checking **Voltage Checking**

5 to 1 = 10 K Ω
5 to 4 = 10 to 15 V_{dc} Voltage Input
5 to 2 = 10 K Ω
4 to 1 = pulsing 10 V_{dc} Signal Output
4 to 2 = pulsing 10 V_{dc} Signal Output

Note: Ohm values are approximate; if the ohm check determines either resistor open, the hall sensor has failed and must be replaced!!

Component Test Procedures

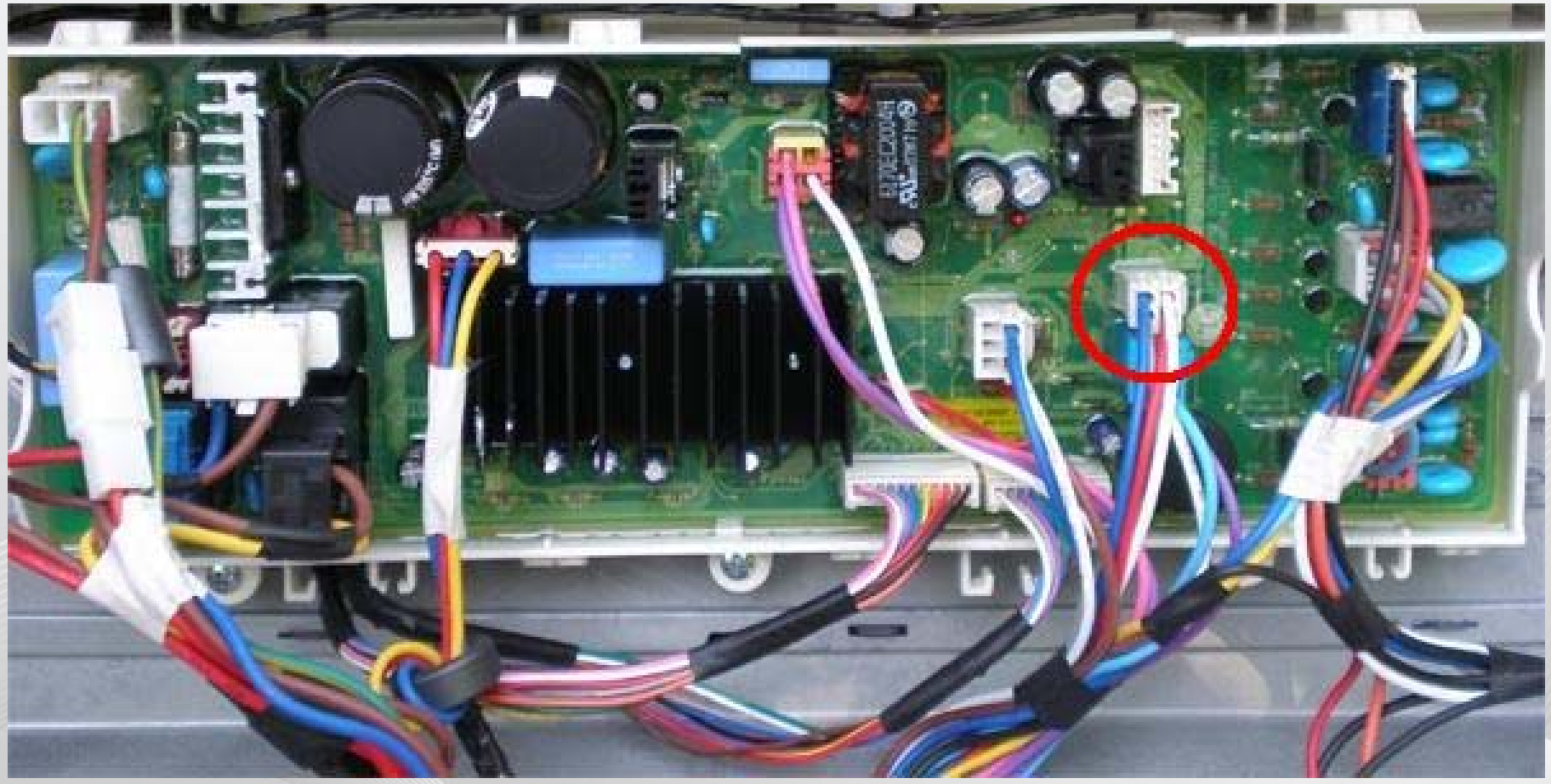
Hall Sensor



Part No. 6501KW2002A

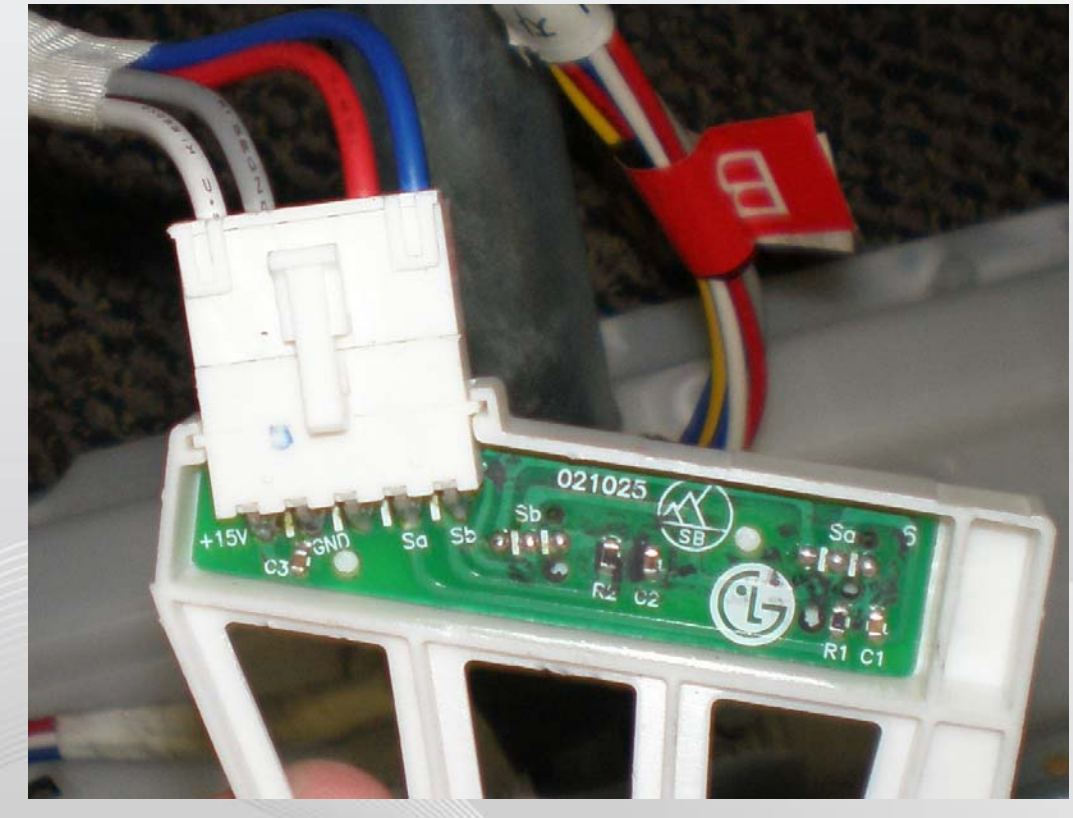
Component Test Procedures

Testing the Hall Sensor from the Control Board



Component Test Procedures

Hall Sensor

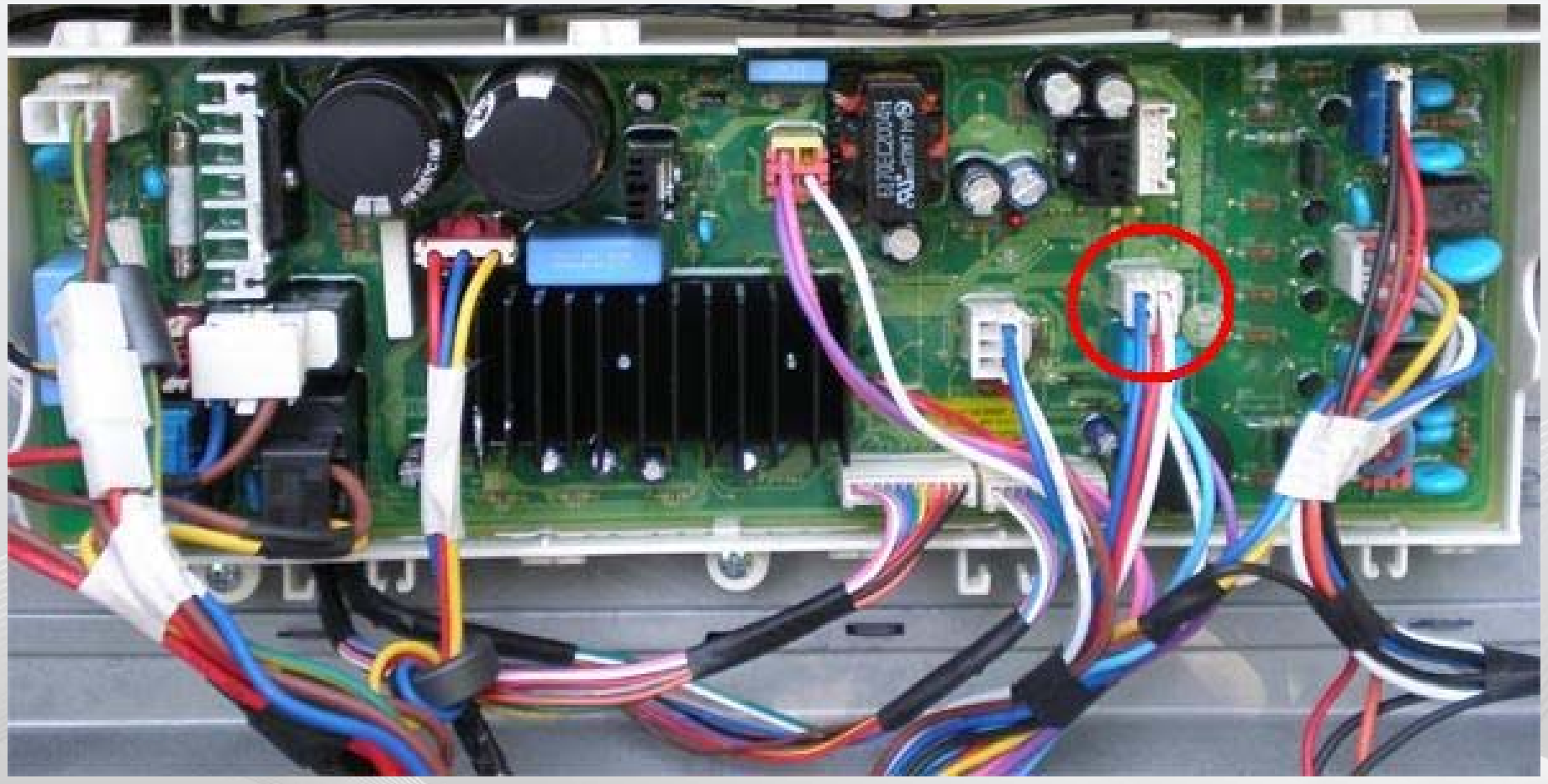


Actual Terminal Wiring

The potting epoxy has been removed to show the PC board and components.

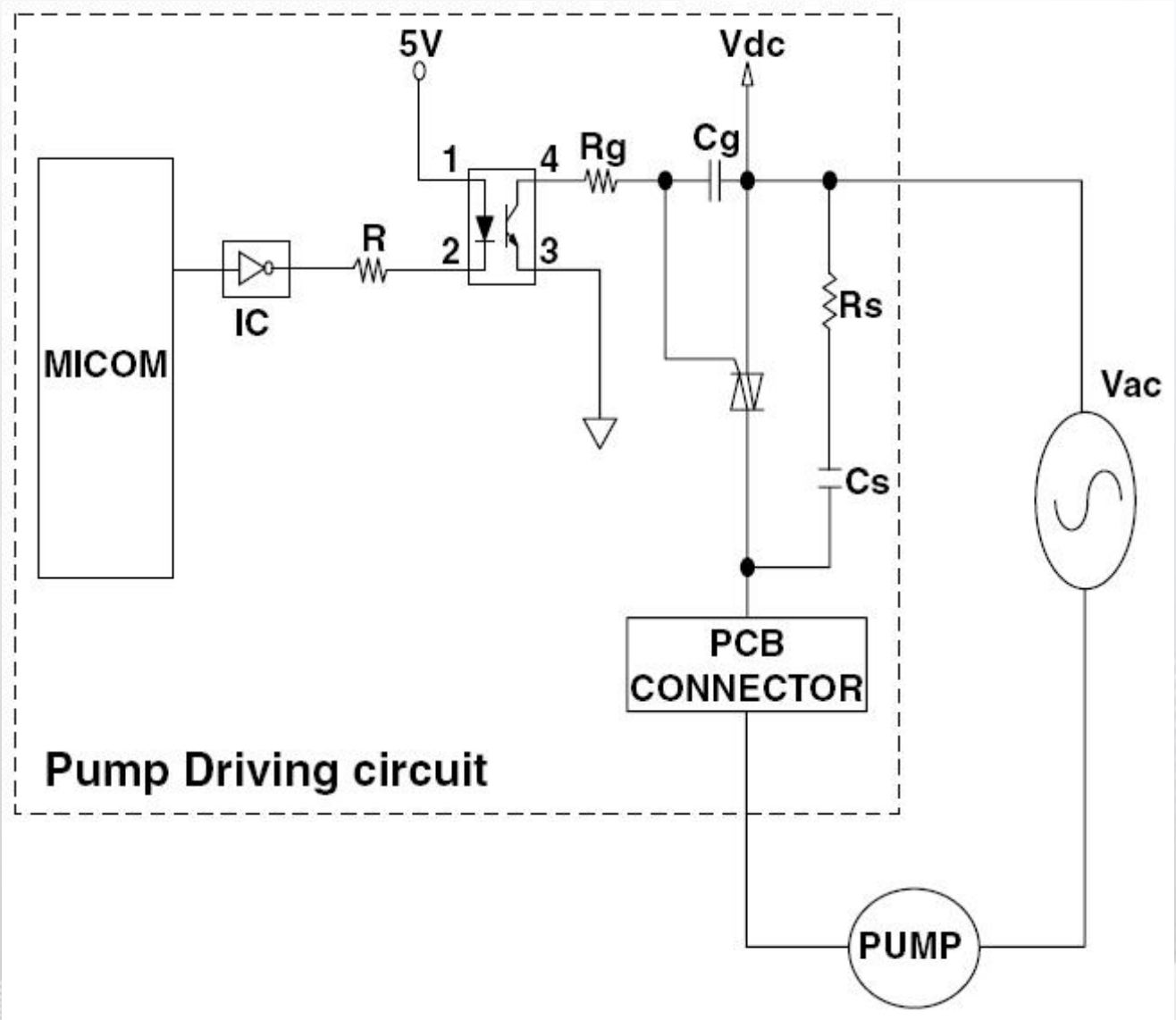
Component Test Procedures

Hall Sensor



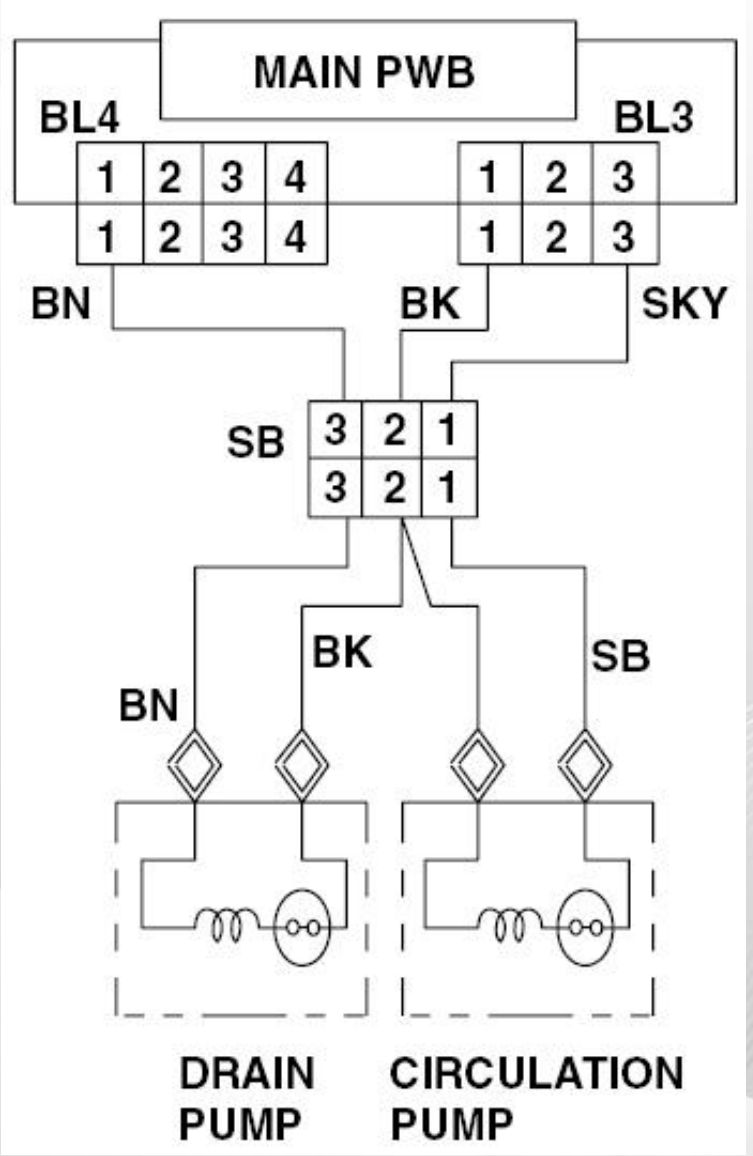
Component Test Procedures

Pump Motors



Component Test Procedures

Pump Motors



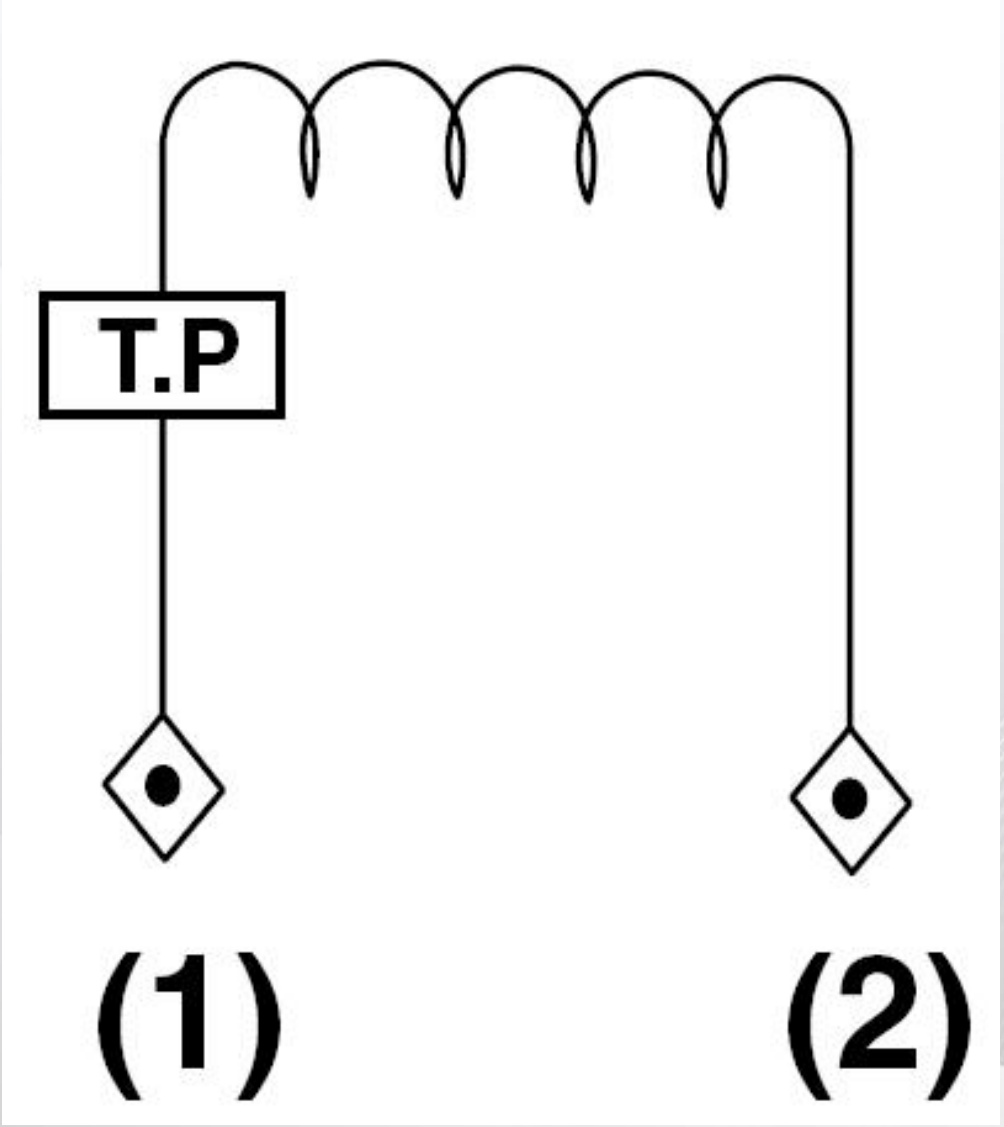
Component Test Procedures

DRAIN PUMP

1 to 2 10 ~ 20 Ω

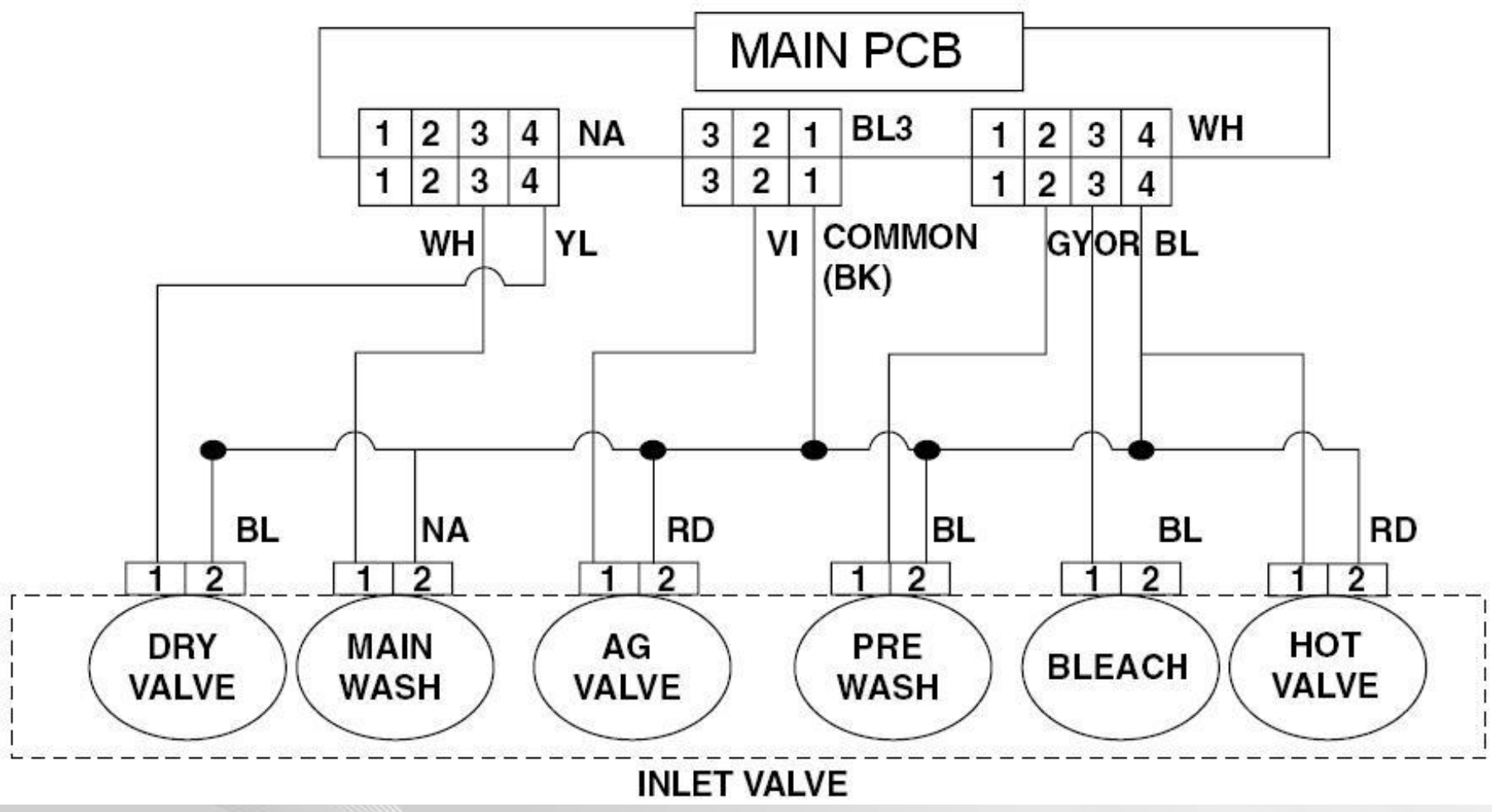
CIRCULATION PUMP

1 to 2 18 ~ 30 Ω



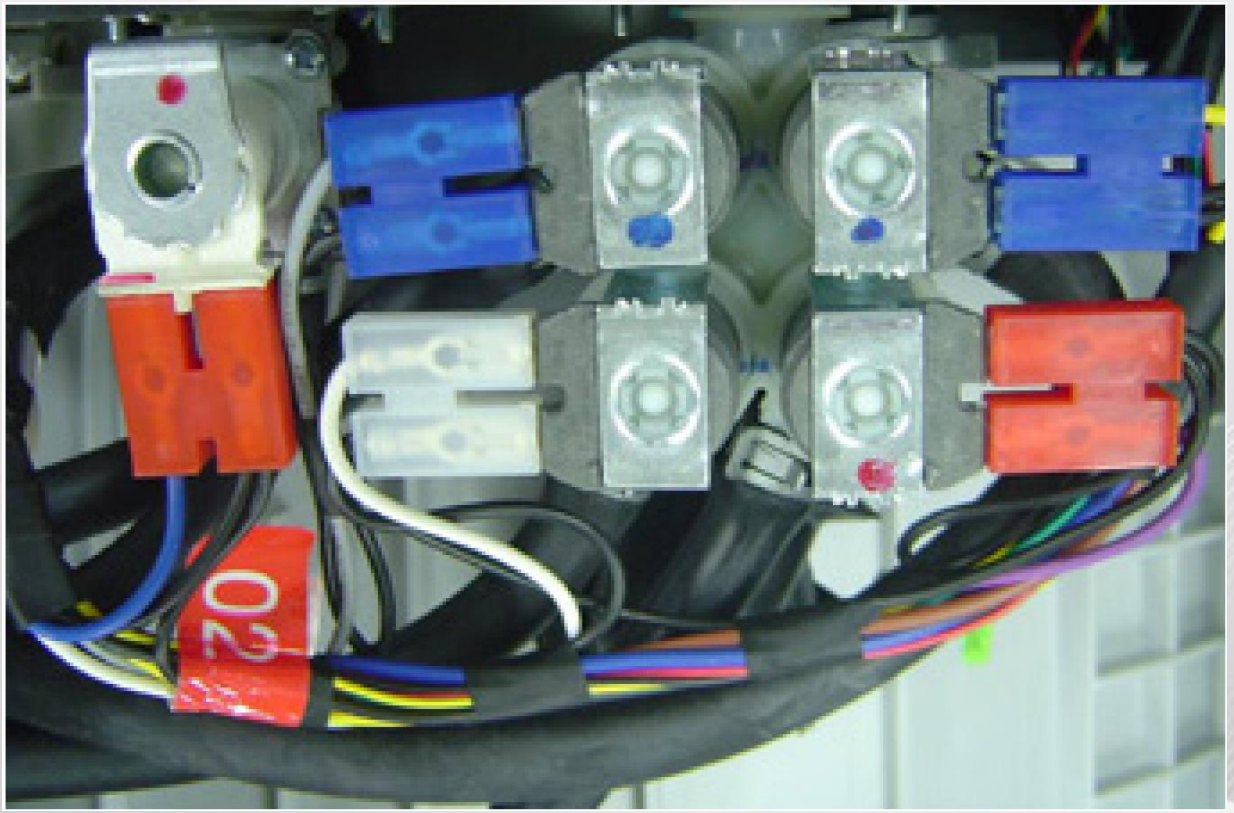
Component Test Procedures

Inlet Valve Assembly



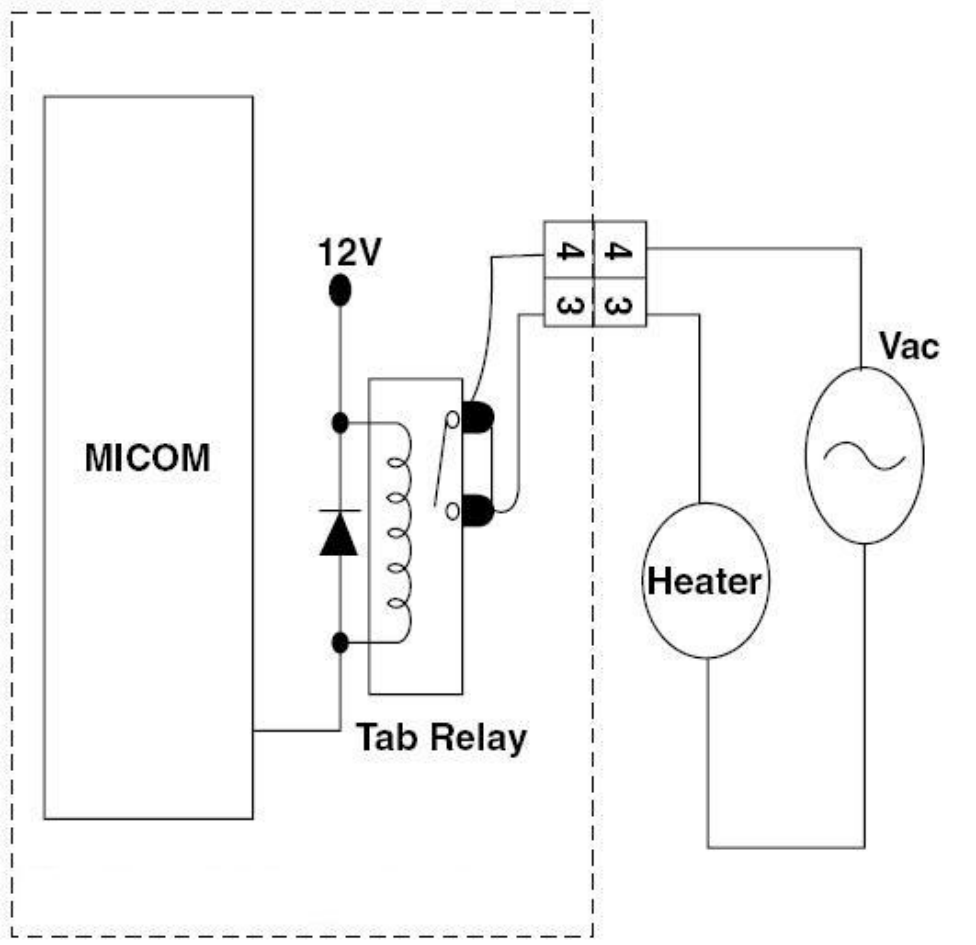
Component Test Procedures

For all solenoids:
With the solenoid connected and energized, the voltage should be 120 VAC.
With the connector removed from the solenoid, the resistance should be 1.0 Ω ± 20%.



Component Test Procedures

Heater Driver Circuit (general)

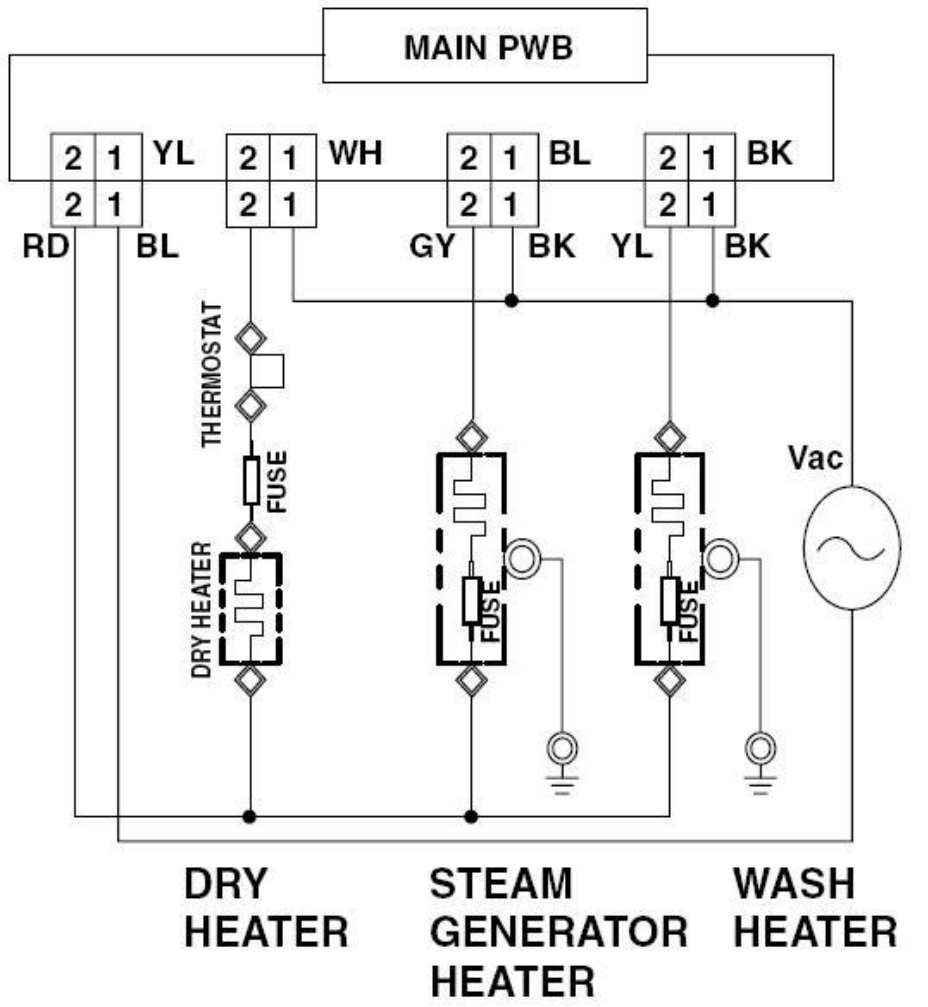


When the heater is energized, use your multimeter to read the voltage. It should be approximately 120 VAC. You can read the voltage either at the heater terminals or at its connector on the main board.

With the heater element disconnected from the circuit, the resistance should be 15Ω ± 20%.

Component Test Procedures

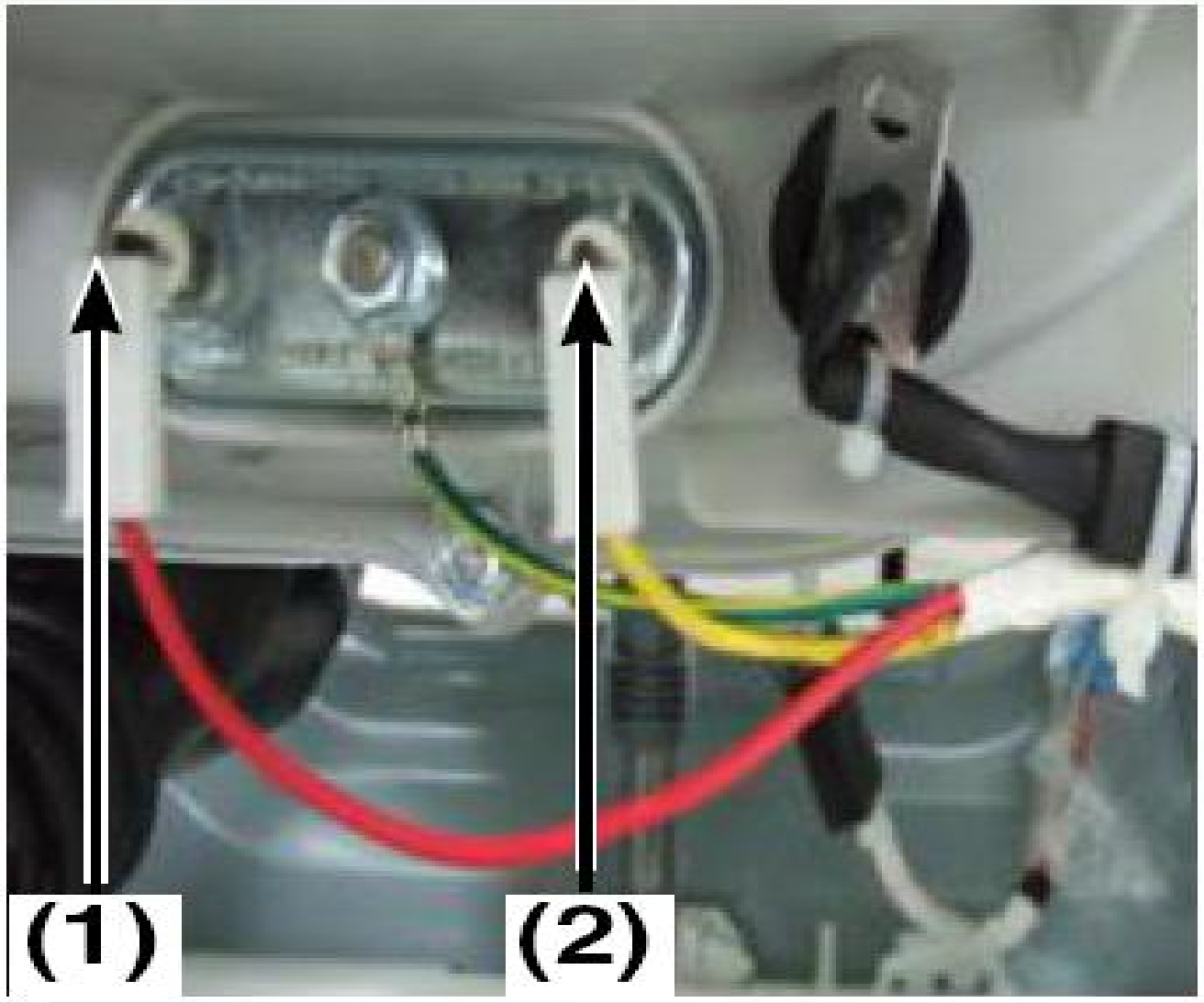
Heater Circuits



When using the connectors for test points, pay particular attention to connector and wire colors and numbers.

Component Test Procedures

Wash Heater



Component Test Procedures

Wash Heater

Component Test Procedures

Wash Heater

Component Test Procedures

Dryer Duct

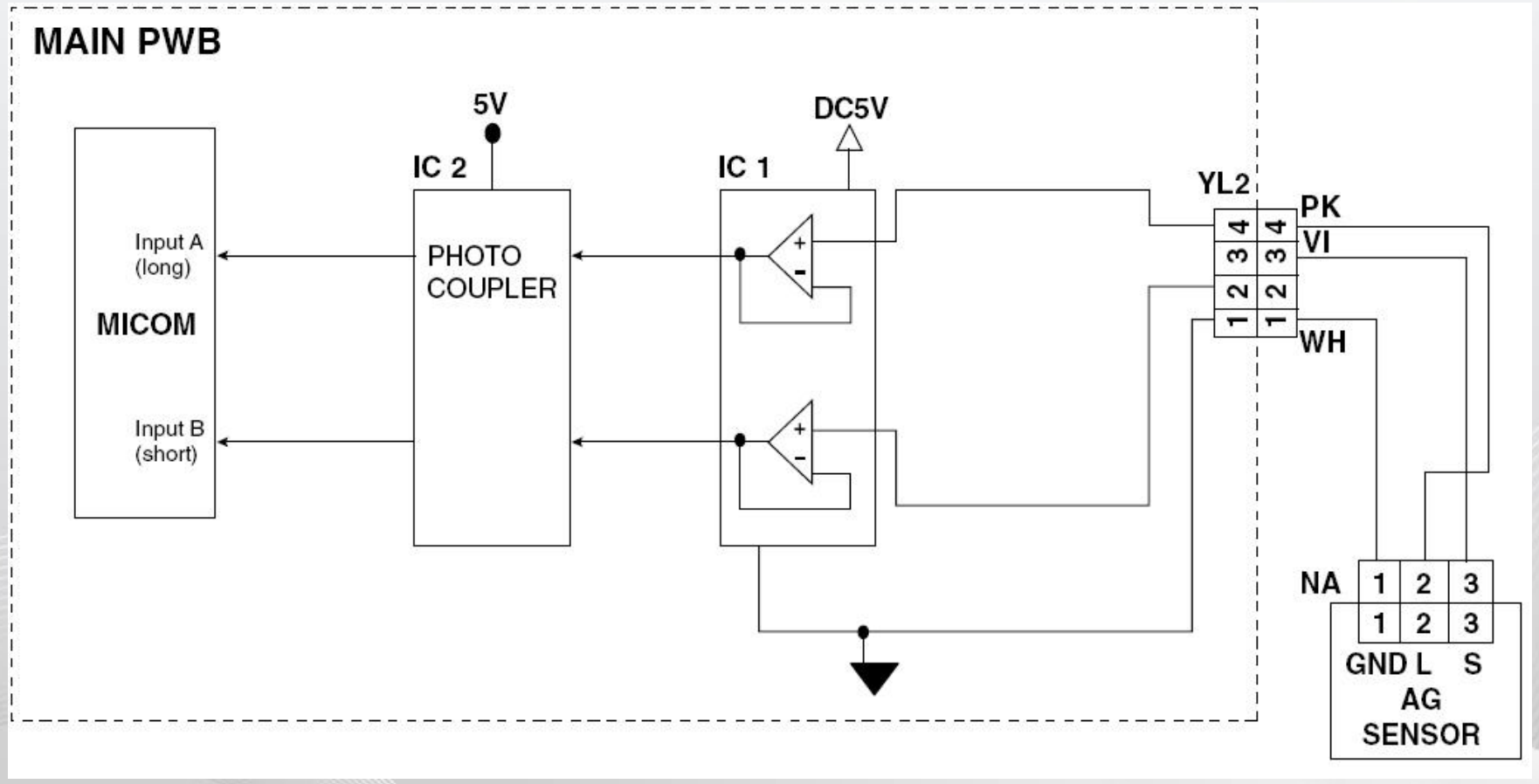
Component Test Procedures

Steam Generator

The TSG (Turbo Steam Generator) is supplied as an assembly only; parts like the sensor, thermistor, or heater cannot be replaced individually. Diagnosis is limited to determining malfunction and replacing the assembly. The steam generator does not have to be removed from the machine to be drained. Be sure to let the water cool to avoid a burn. Have a hose available to slip onto the connector or a large towel to catch the water so it doesn't run down into the machine cabinet. If you remove the steam generator before draining it, be sure to avoid tipping it and spilling the water.

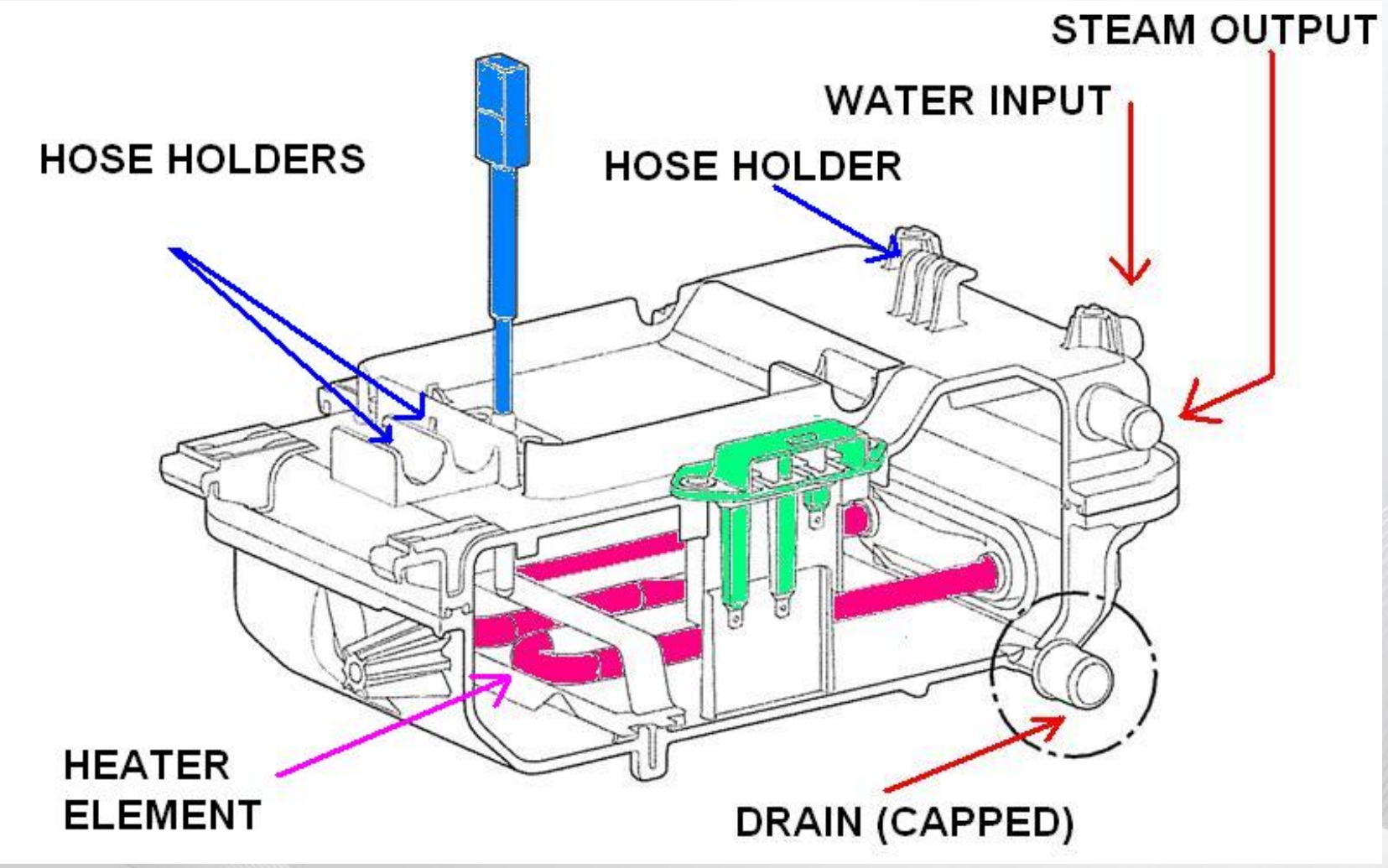
Component Test Procedures

Whatever



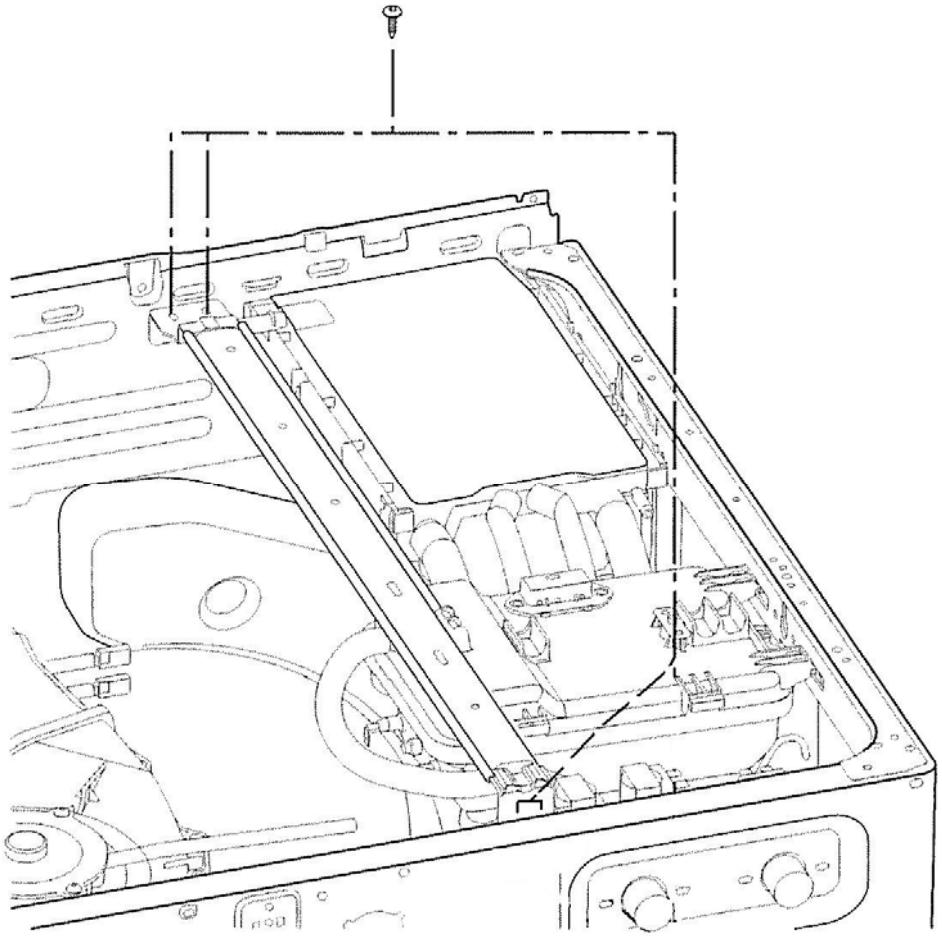
Component Test Procedures

Steam Generator



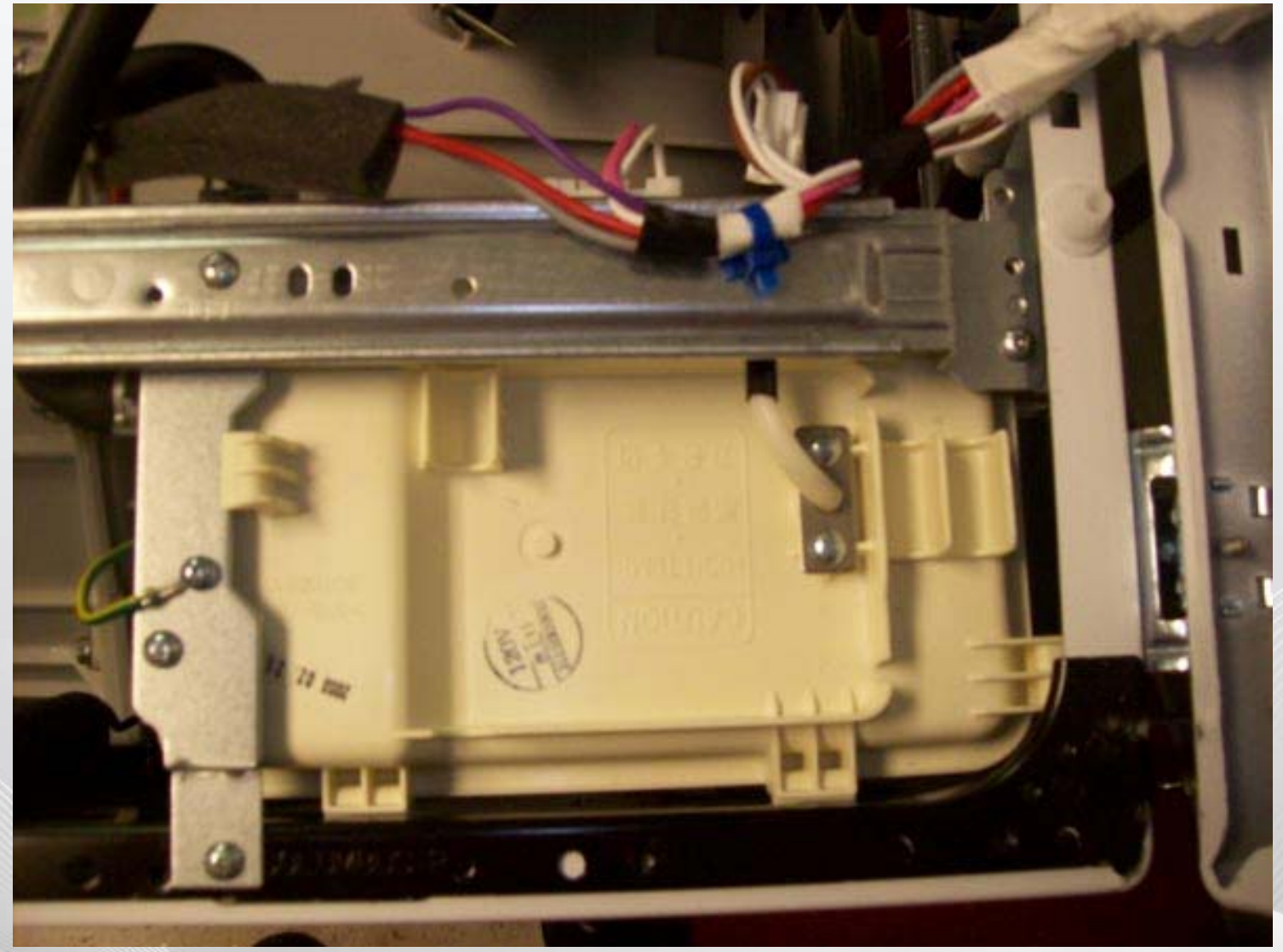
Component Test Procedures

Steam Generator



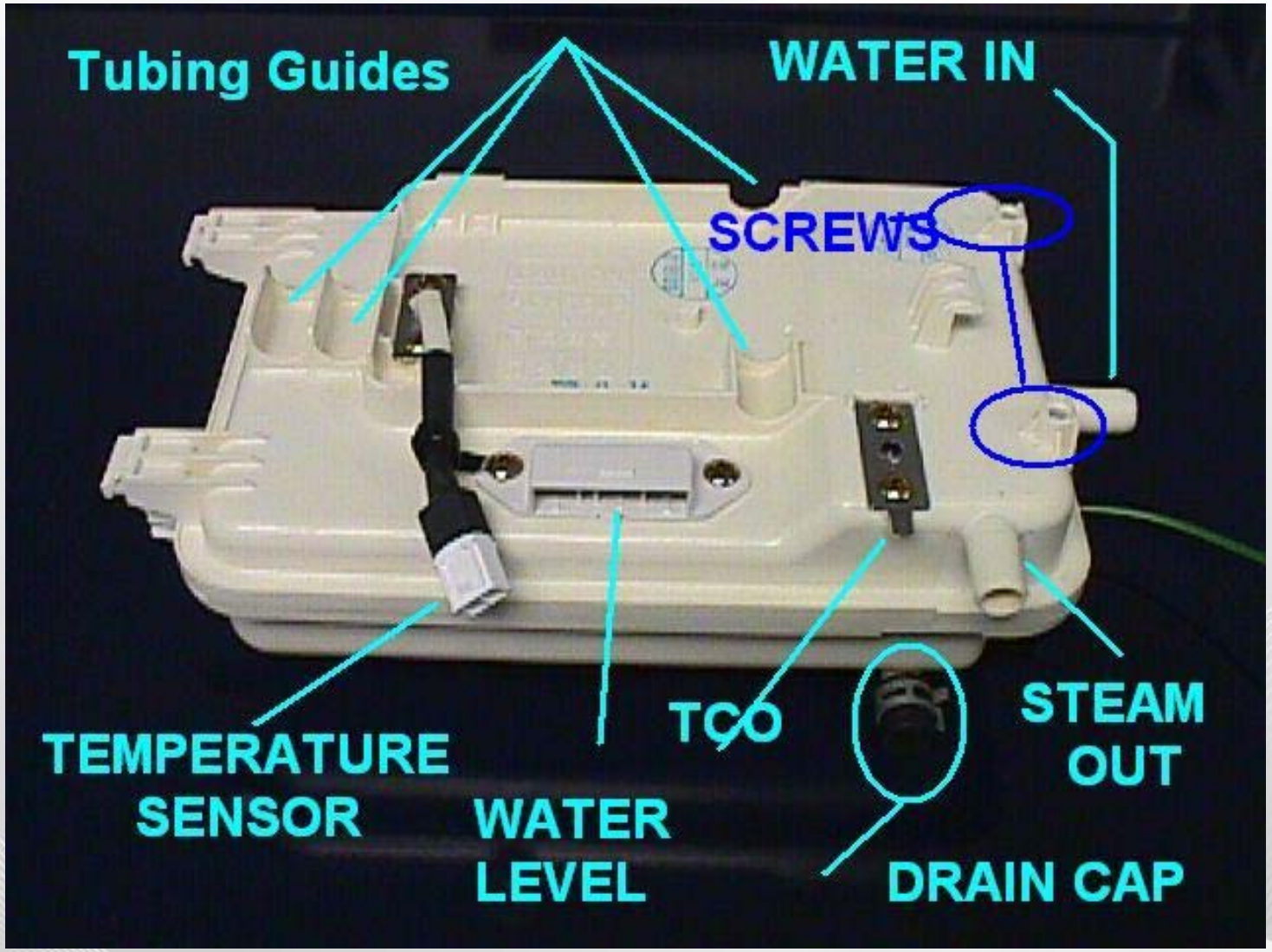
Component Test Procedures

Steam Generator



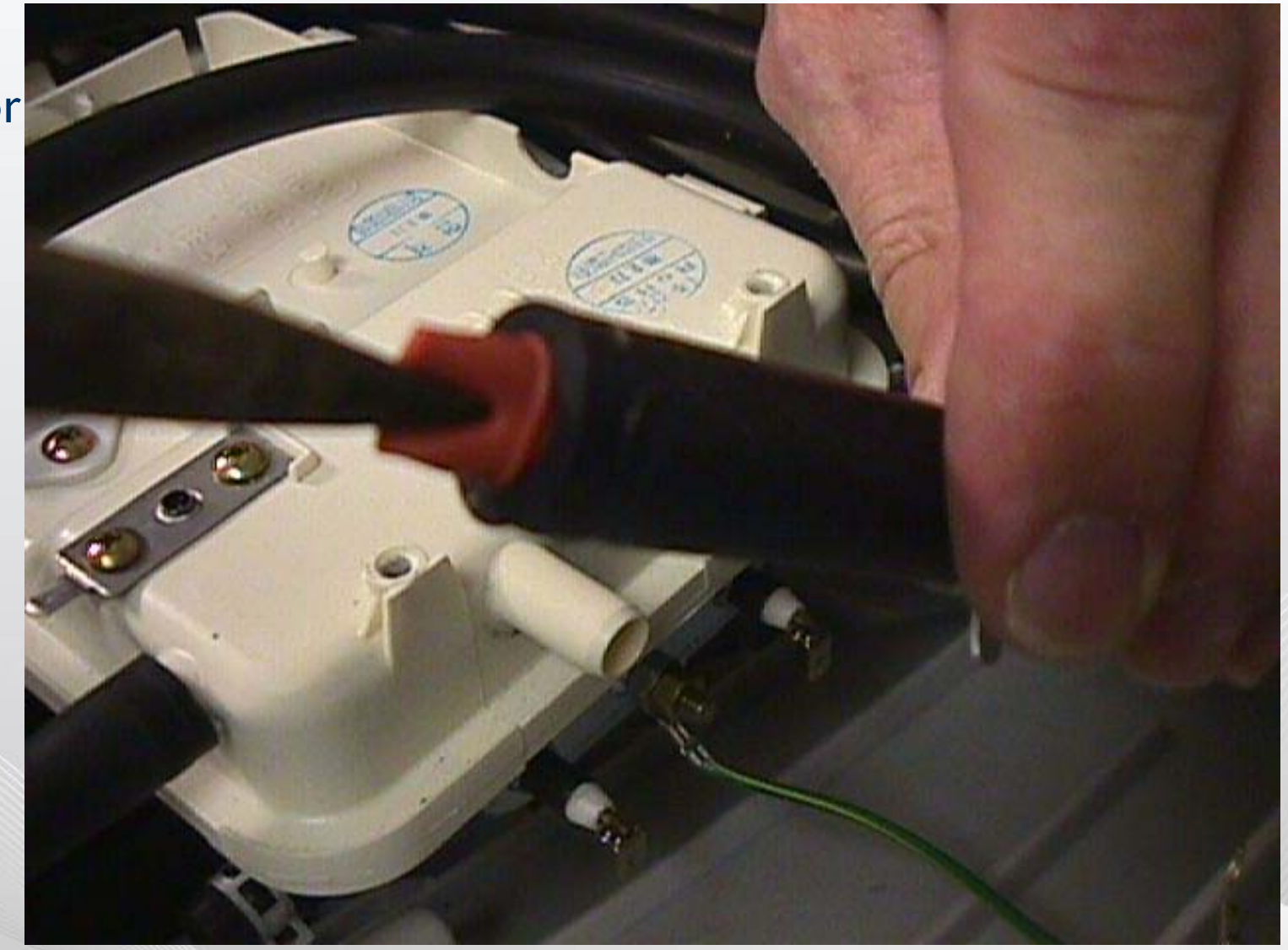
Component Test Procedures

Steam Generator



Component Test Procedures

Steam Generator



Component Test Procedures

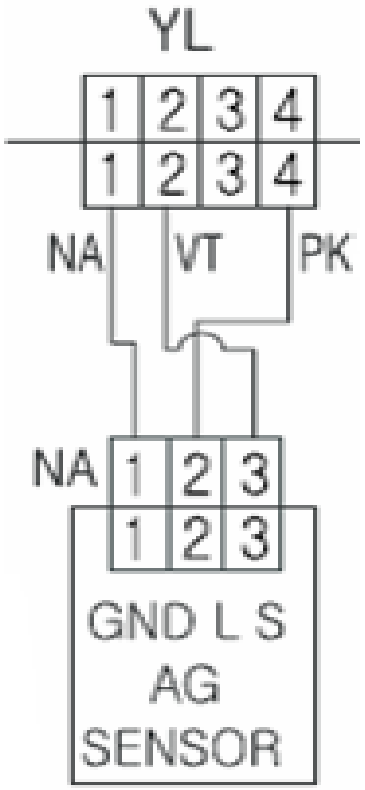
Steam Generator

Component Test Procedures

Steam
Generator

Component Test Procedures

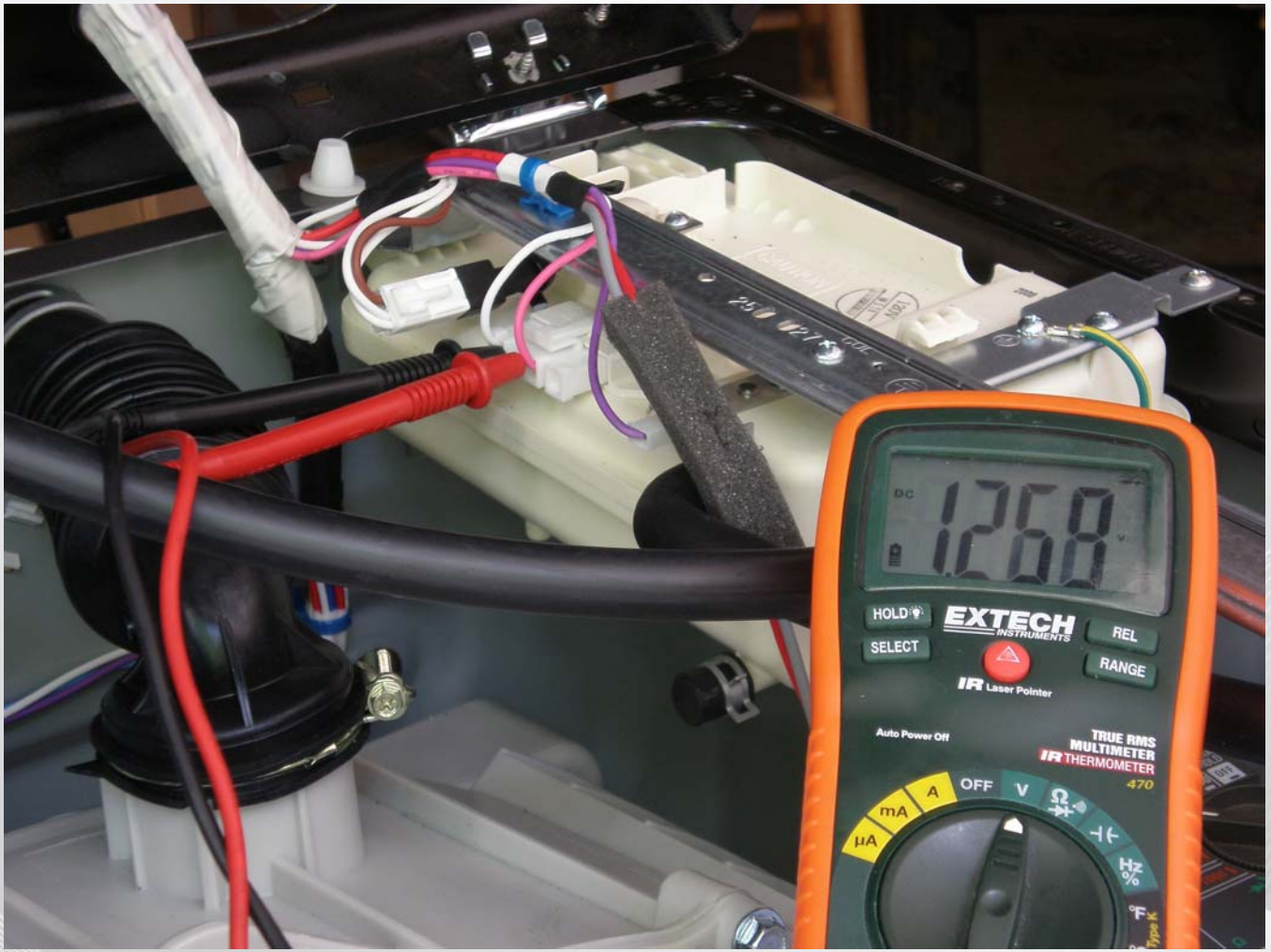
Sensor Wiring Diagram



Steam Generator

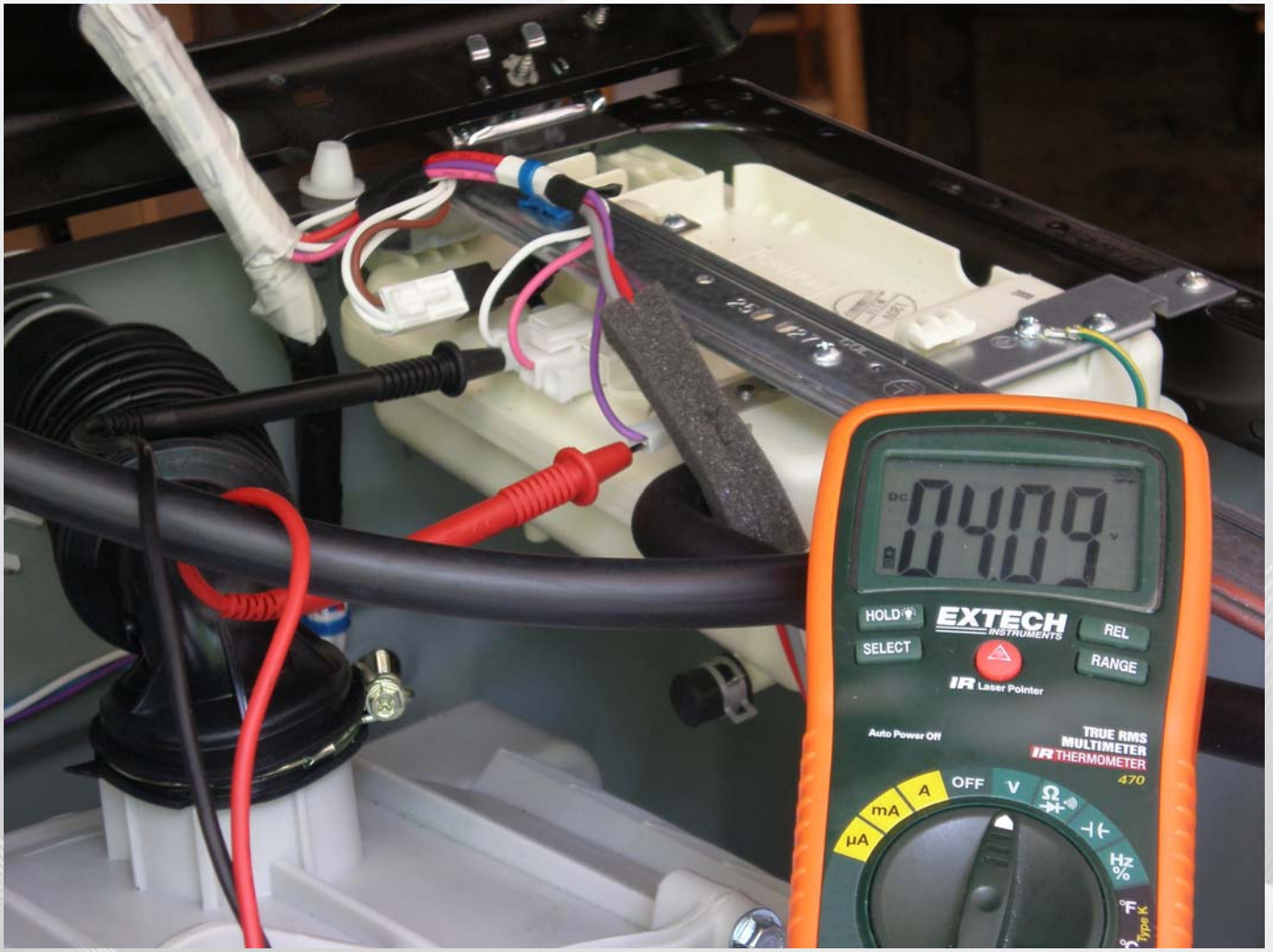
Component Test Procedures

Low Water Sensor Detecting Water



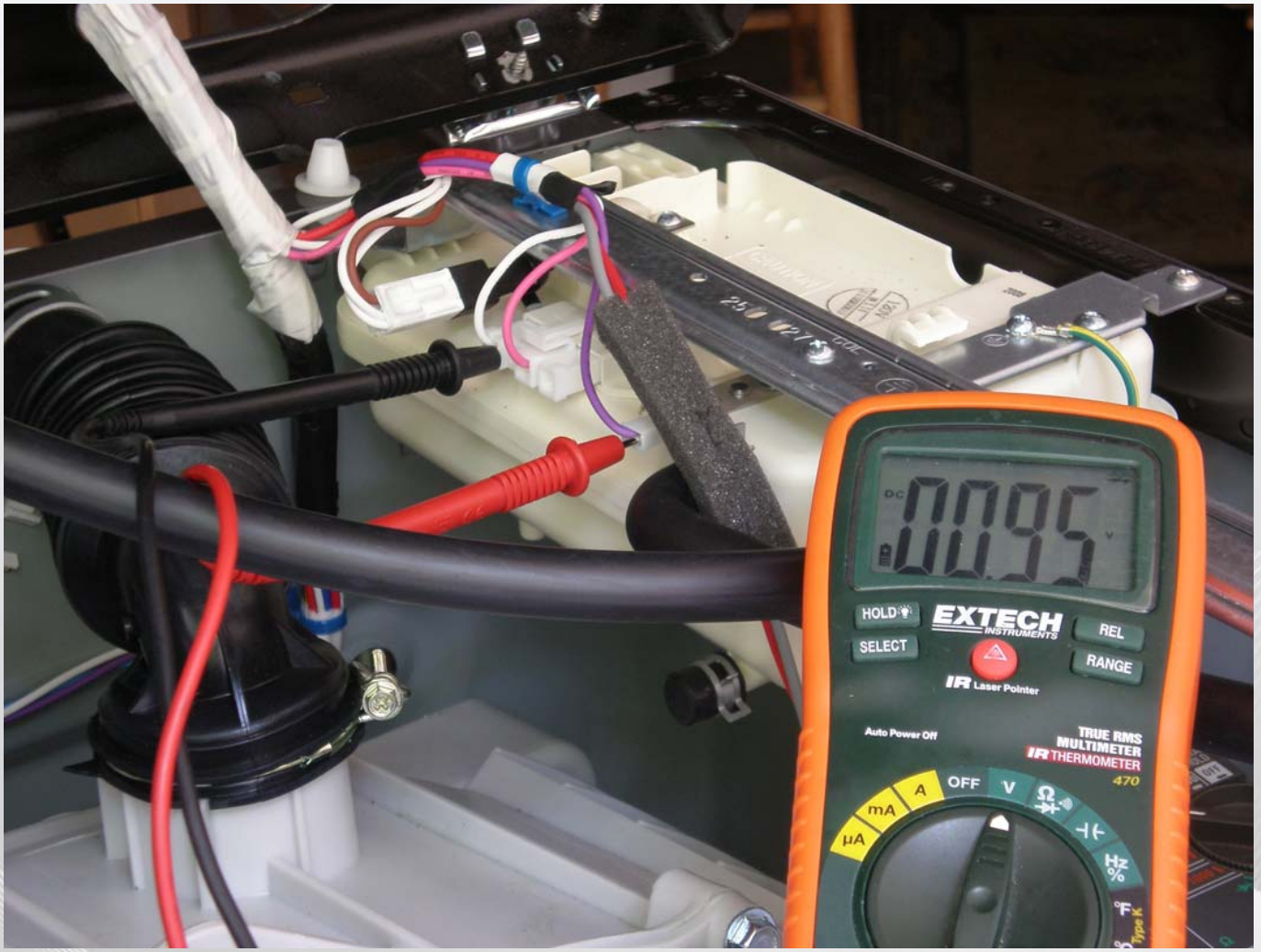
Component Test Procedures

High Water Sensor Detecting Low Water



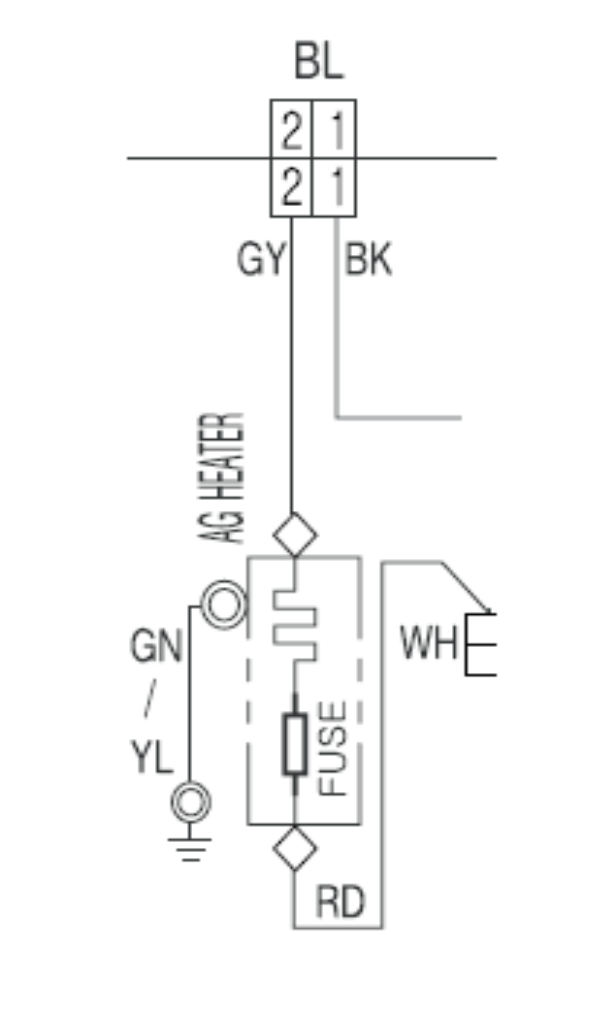
Component Test Procedures

High Water Sensor Detecting Full



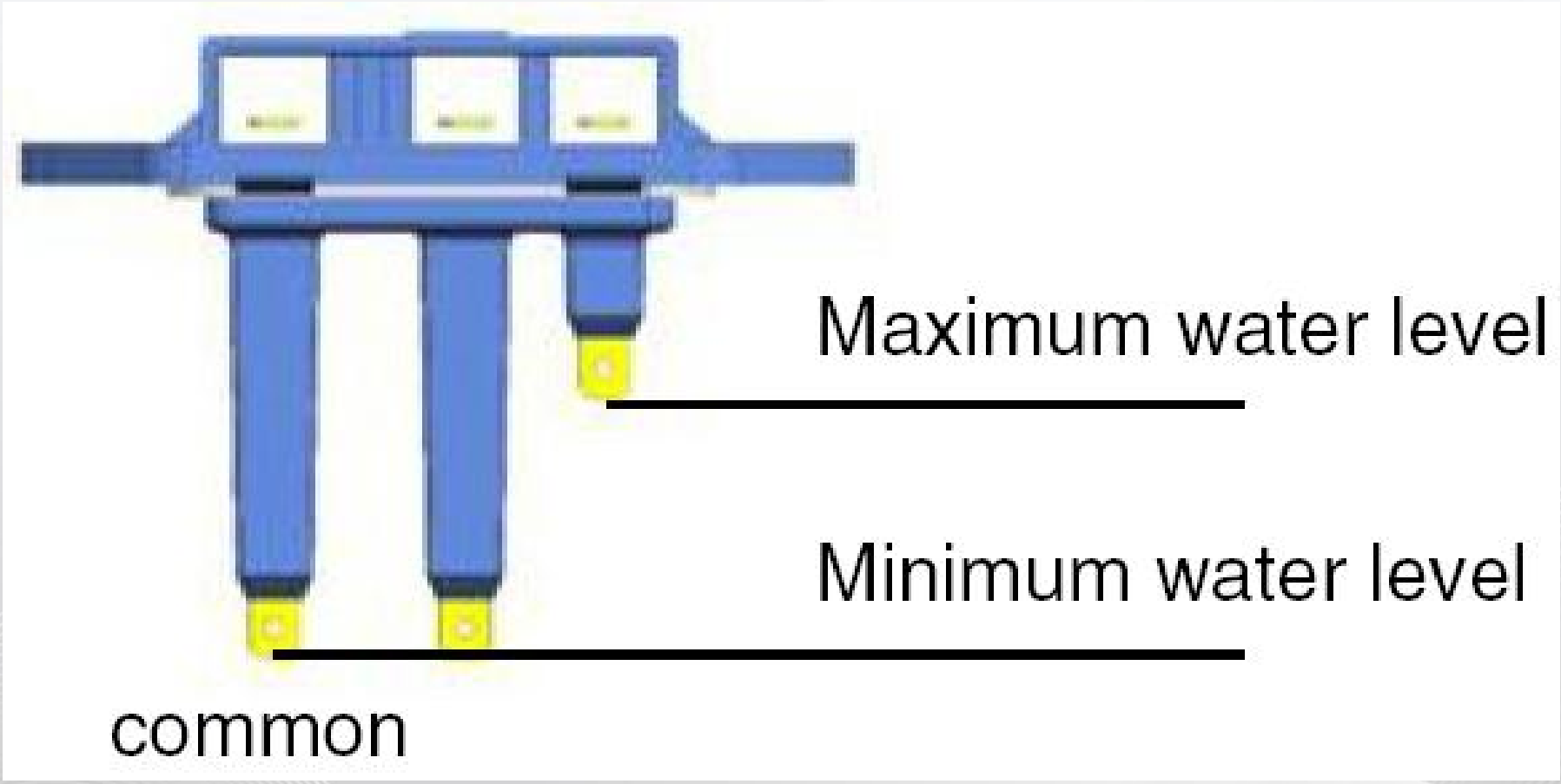
Component Test Procedures

Steam Generator Wiring



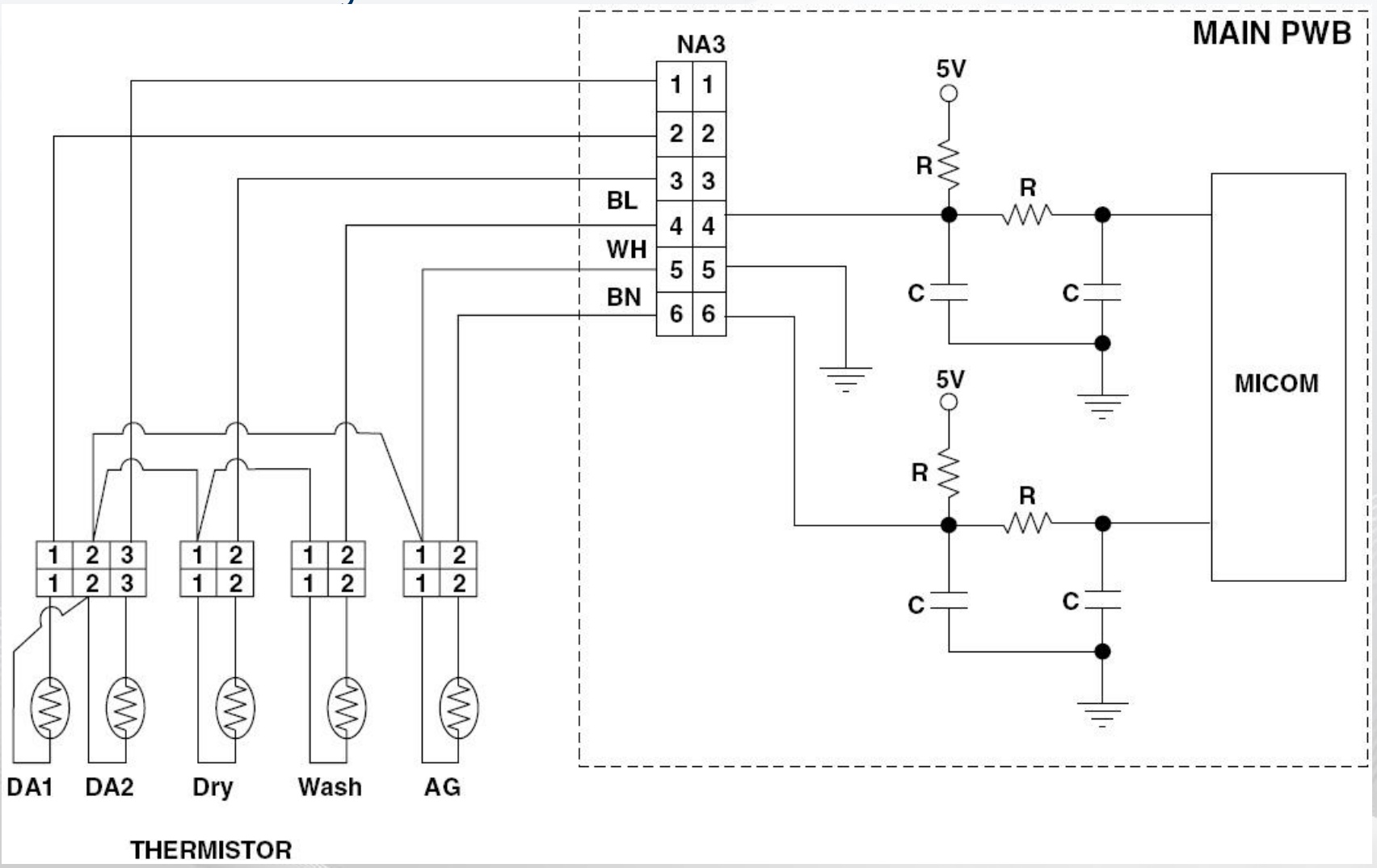
Component Test Procedures

Water Level Sensor



Component Test Procedures

Thermistor Assembly



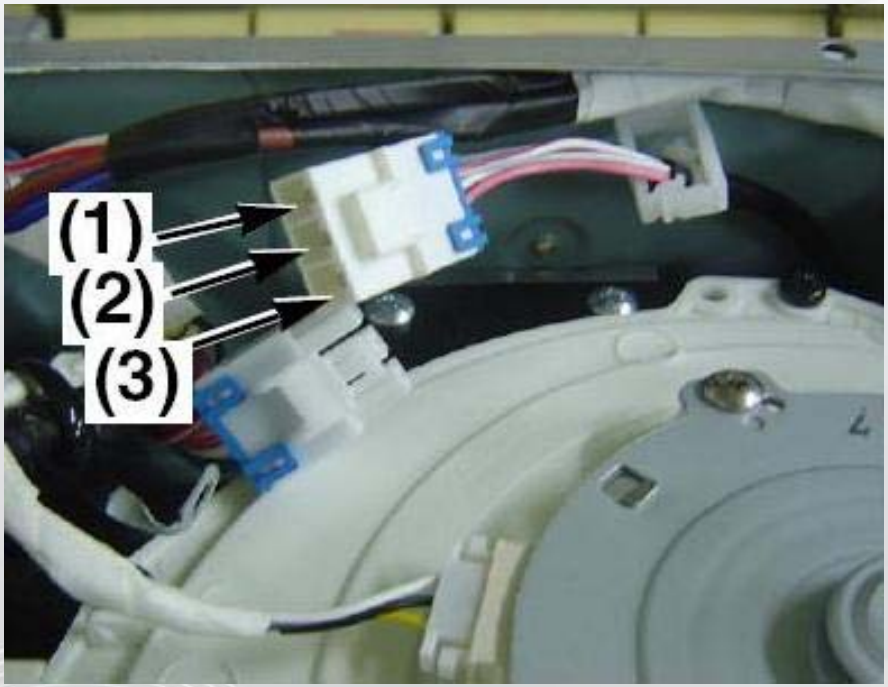
Component Test Procedures

Wash Thermistor

Test resistance across terminals 1 and 2.
39.5 kΩ ± 5% at 86° (30° C)
26.1 kΩ ± 5% at 104° (30° C)
12.1 kΩ ± 5% at 140° (30° C)
8.5 kΩ ± 5% at 158° (30° C)
3.8 kΩ ± 5% at 203° (30° C)
2.8 kΩ ± 5% at 221° (30° C)

Component Test Procedures

Dryer Thermistor

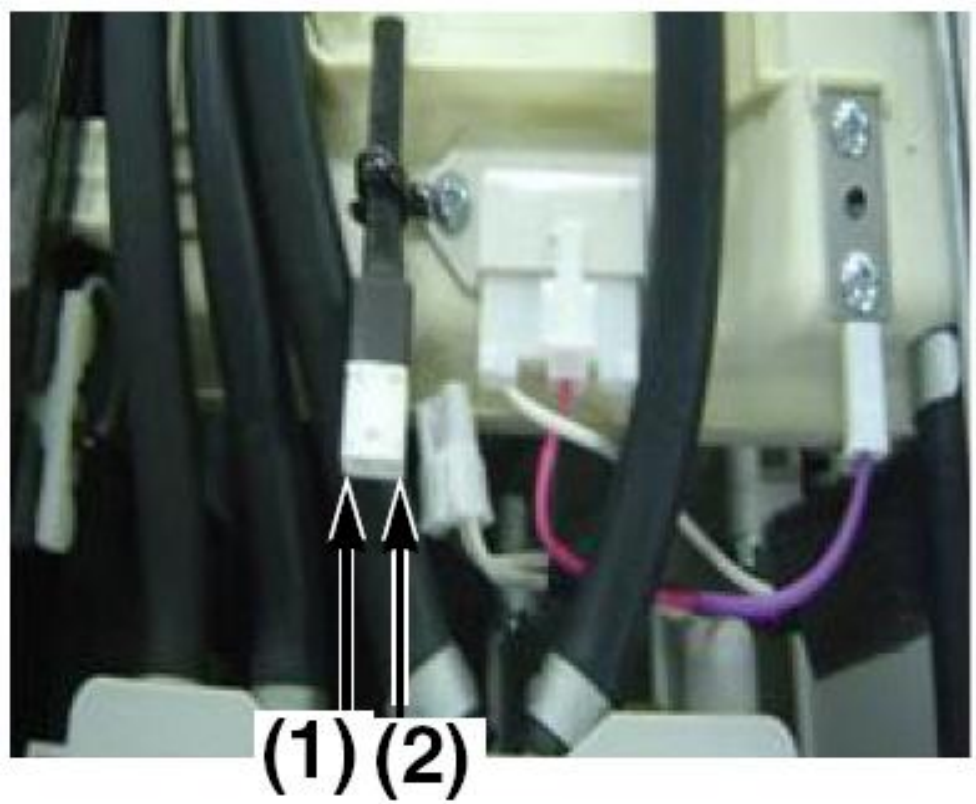


Test resistance (DA1) across terminals 1 and 2.
39.5 kΩ ± 5% at 86° (30° C)
26.1 kΩ ± 5% at 104° (30° C)
12.1 kΩ ± 5% at 140° (30° C)
8.5 kΩ ± 5% at 158° (30° C)
3.8 kΩ ± 5% at 203° (30° C)
2.8 kΩ ± 5% at 221° (30° C)

Test resistance (DA2) across terminals 2 and 3.
39.5 kΩ ± 5% at 86° (30° C)
26.1 kΩ ± 5% at 104° (30° C)
12.1 kΩ ± 5% at 140° (30° C)
8.5 kΩ ± 5% at 158° (30° C)
3.8 kΩ ± 5% at 203° (30° C)
2.8 kΩ ± 5% at 221° (30° C)

Component Test Procedures

Steam Generator
Thermistor

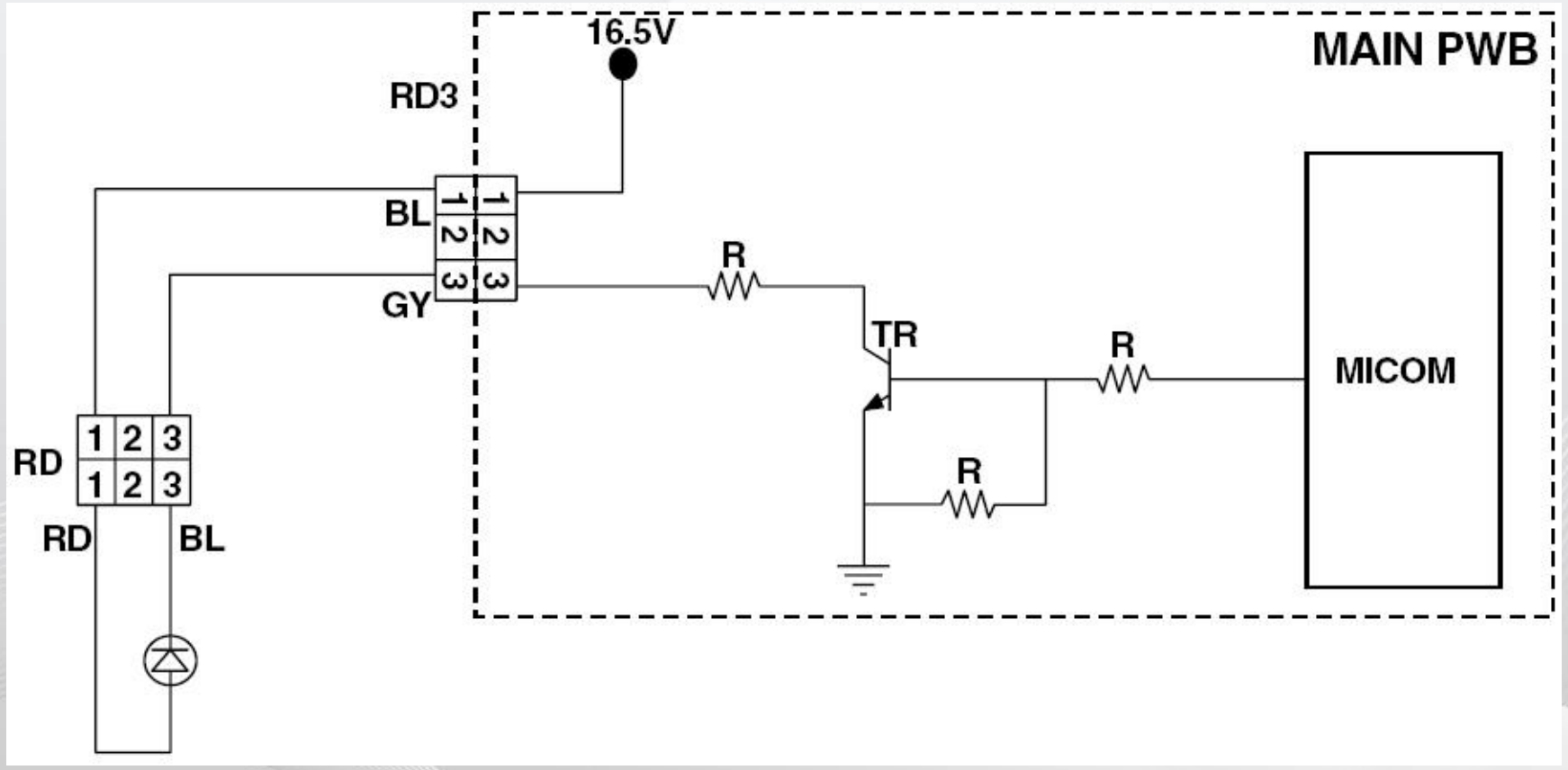


Test resistance across terminals 1 and 2.

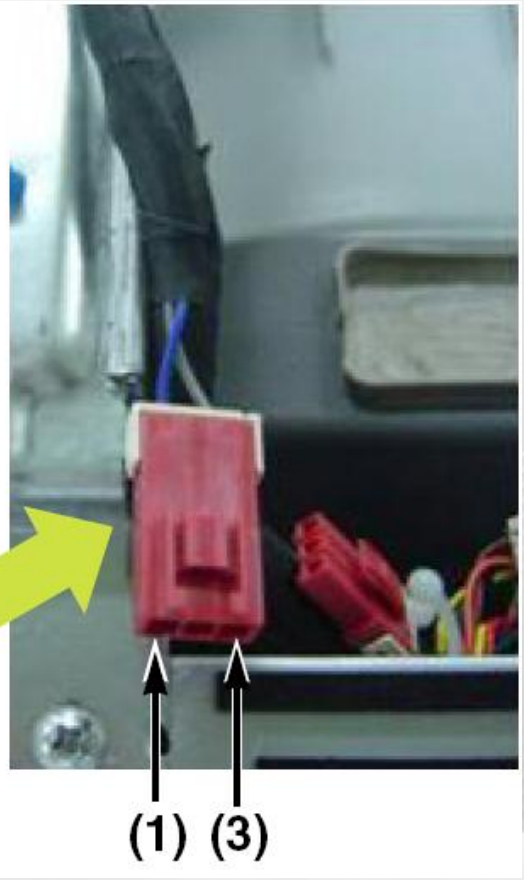
39.5 kΩ ± 5% at 86° (30° C)
26.1 kΩ ± 5% at 104° (40° C)
12.1 kΩ ± 5% at 140° (60° C)
8.5 kΩ ± 5% at 158° (70° C)
3.8 kΩ ± 5% at 203° (95° C)
2.8 kΩ ± 5% at 221° (105° C)
2.1 kΩ ± 5% at 241° (116° C)
1.4 kΩ ± 5% at 266° (130° C)
1.0 kΩ ± 5% at 293° (145° C)
0.7 kΩ ± 5% at 320° (160° C)
0.4 kΩ ± 5% at 356° (180° C)

Component Test Procedures

Drum Lamp



Component Test Procedures

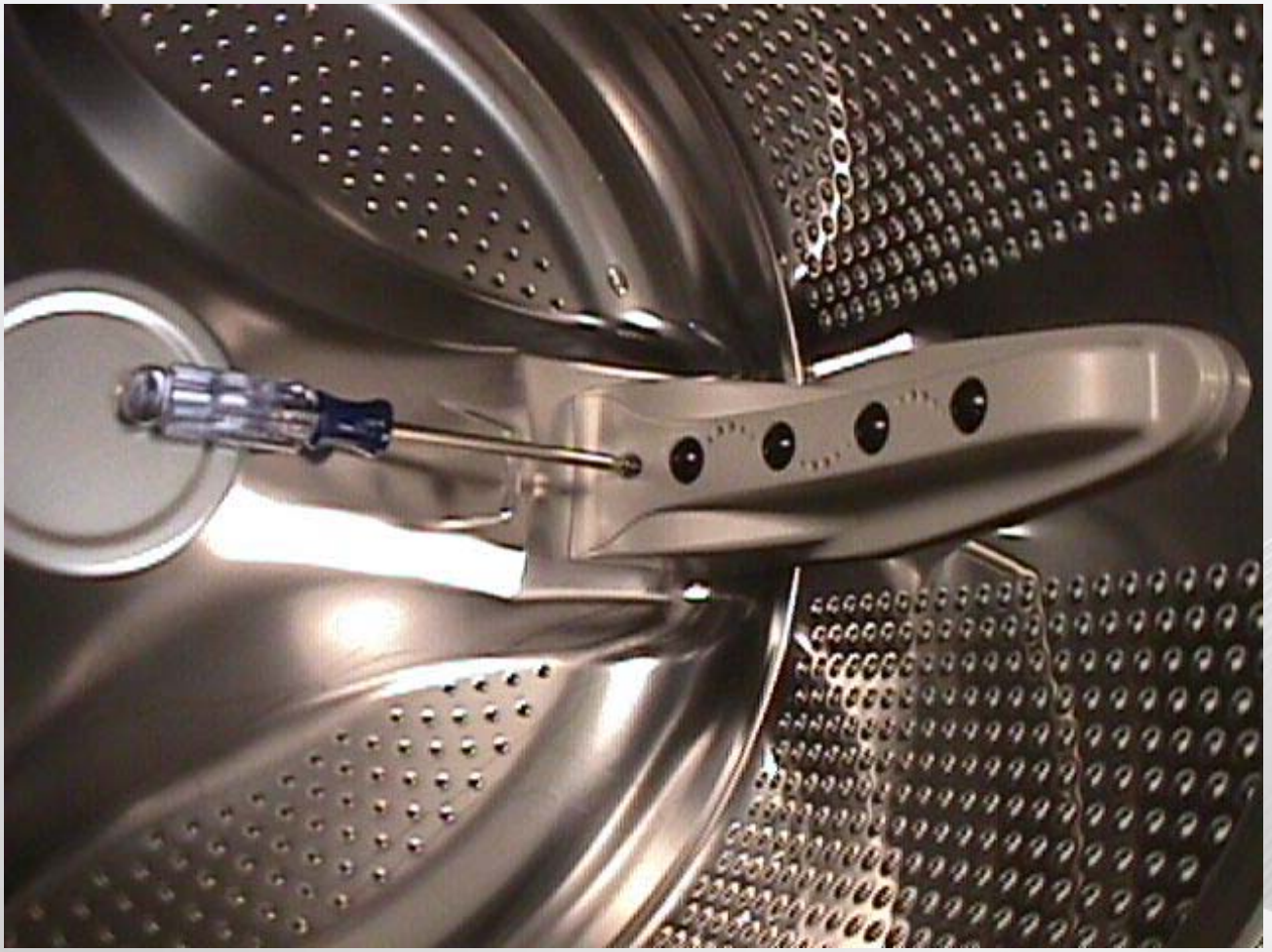


Tips and Tricks

Hoses

Tips and Tricks

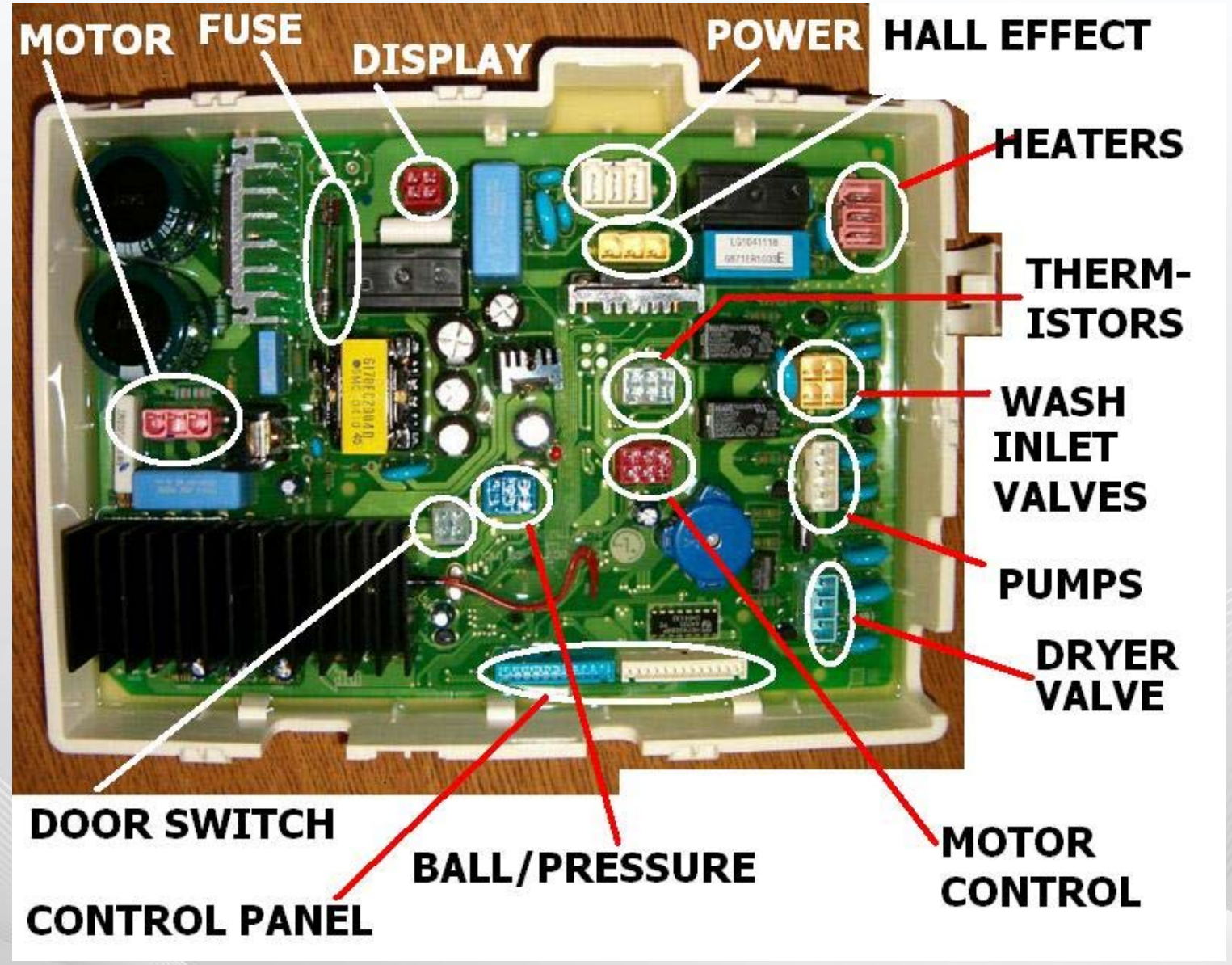
Baffles (Lifters)



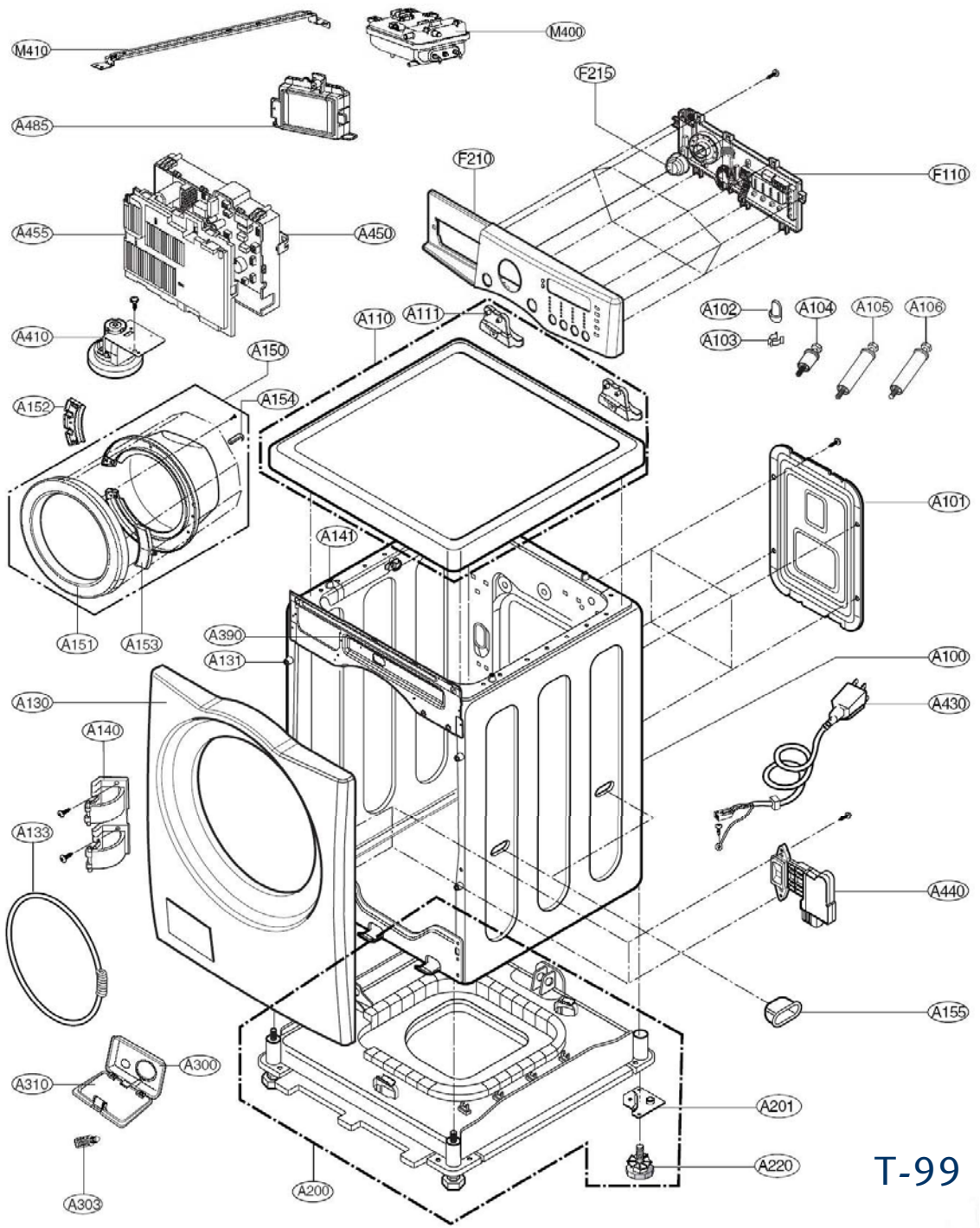
Tips and Tricks

Mushroom Valve

Main Board Labeled



Exploded Views



LG TRAINING CENTER

Parts List

Loc #	Part No	Description
*001	AFN30385117	Manual Assembly, Owners
*002	MAY37166202	Box, Carton
*003	3W20018B	Spanner
*004	MFL30599110	Manual, Service
*009	MEG41552101	Holder
A100	3091ER0004N	Cabinet Assembly
A101	3550ER1028A	Cover, Rear
A102	4830ER3001A	Bushing, drain pipe exit
A103	4930ER3014A	Holder

Special Tools

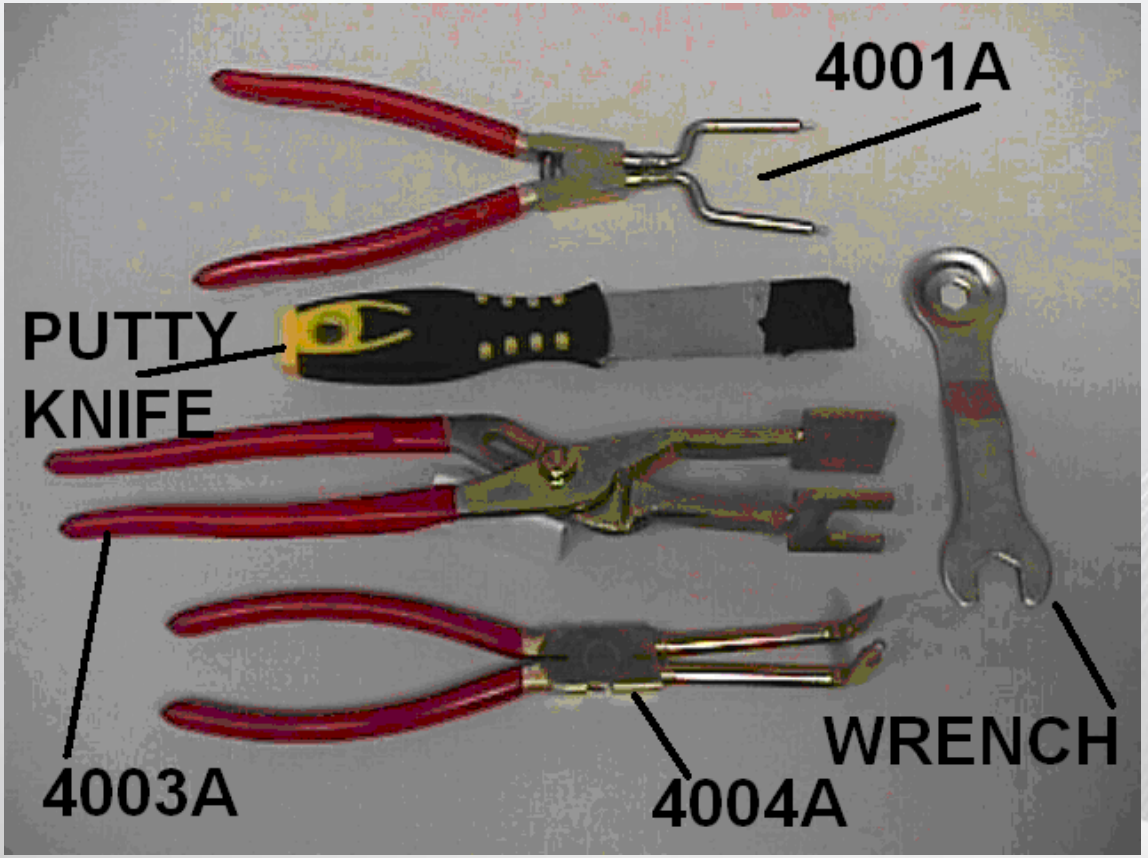
383EER4001A
GASKET PLIER

383EER4003A
DAMPER PLIER

383EER4004A
GASKET PLIER

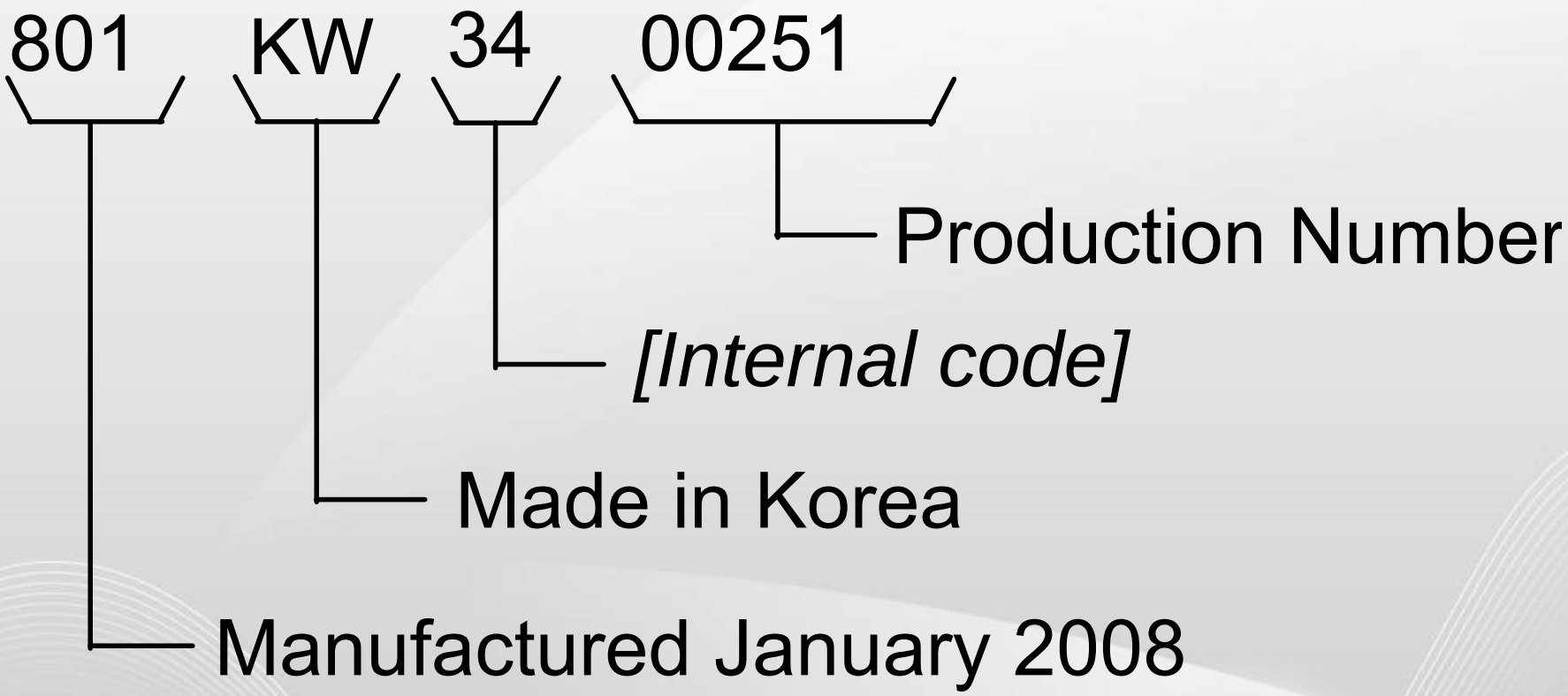
5214FR3018D
DRAIN HOSE EXTENSION

PUTTY KNIFE NOT USED
THIS MODEL



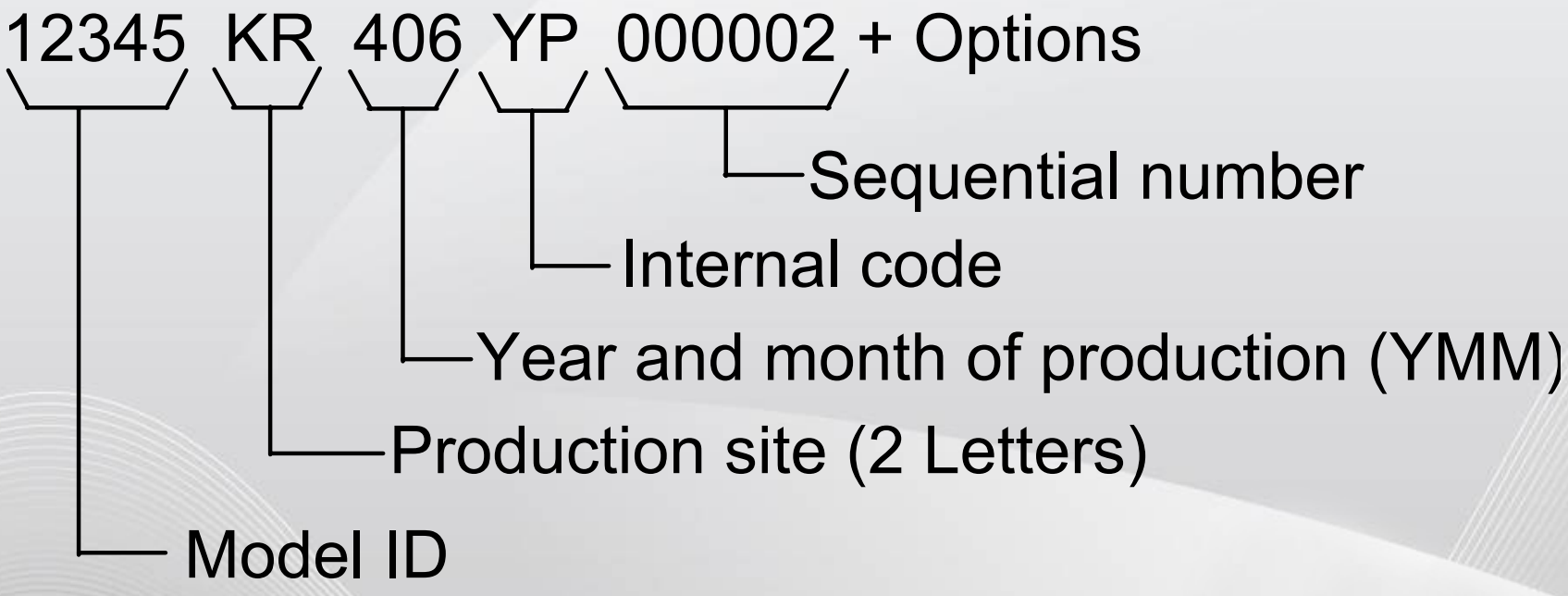
Serial Number (old style)

[Example] 801KW3400251

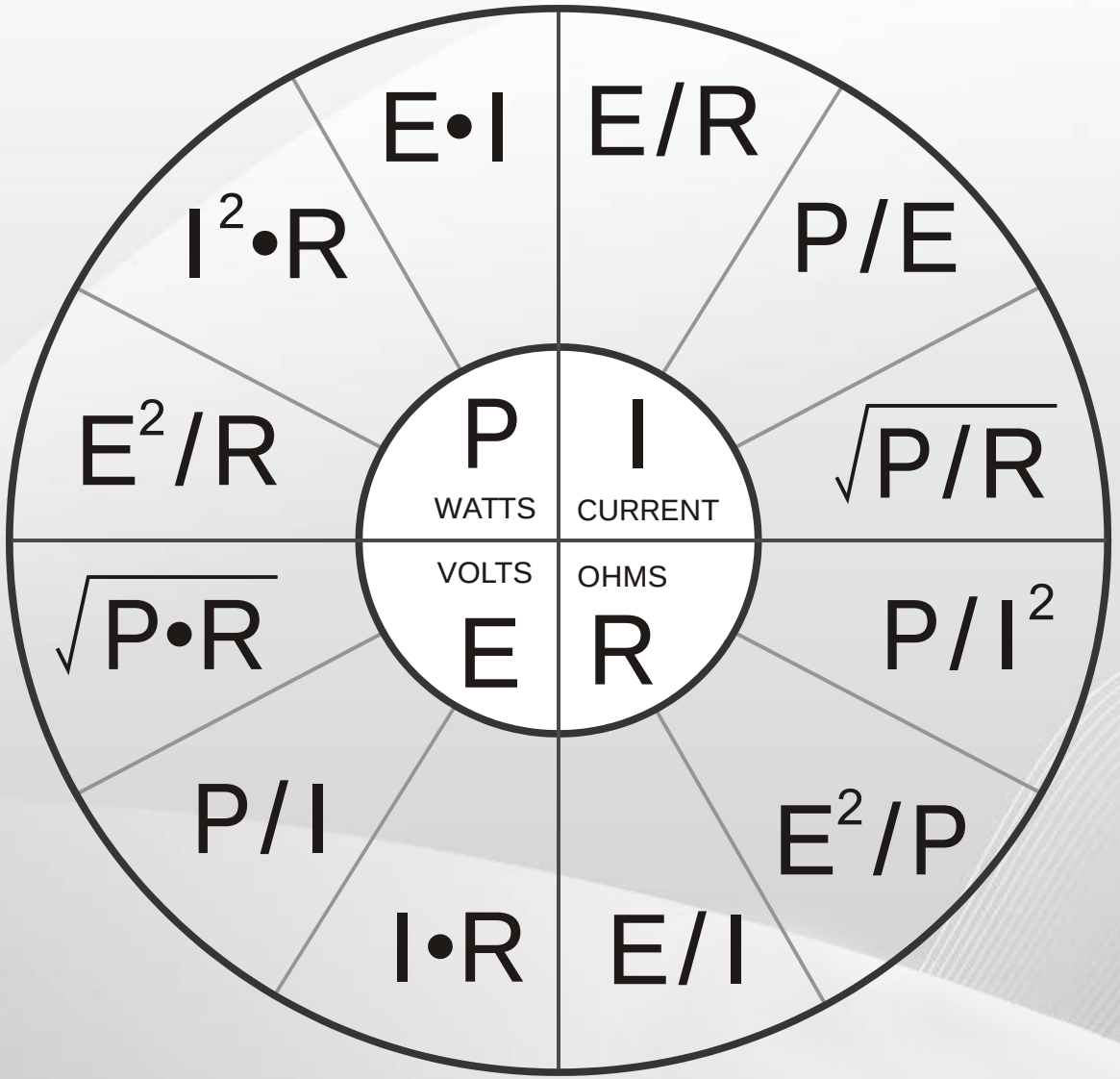


Serial Number (new style)

New Serial Code (ETA Mid 2008)



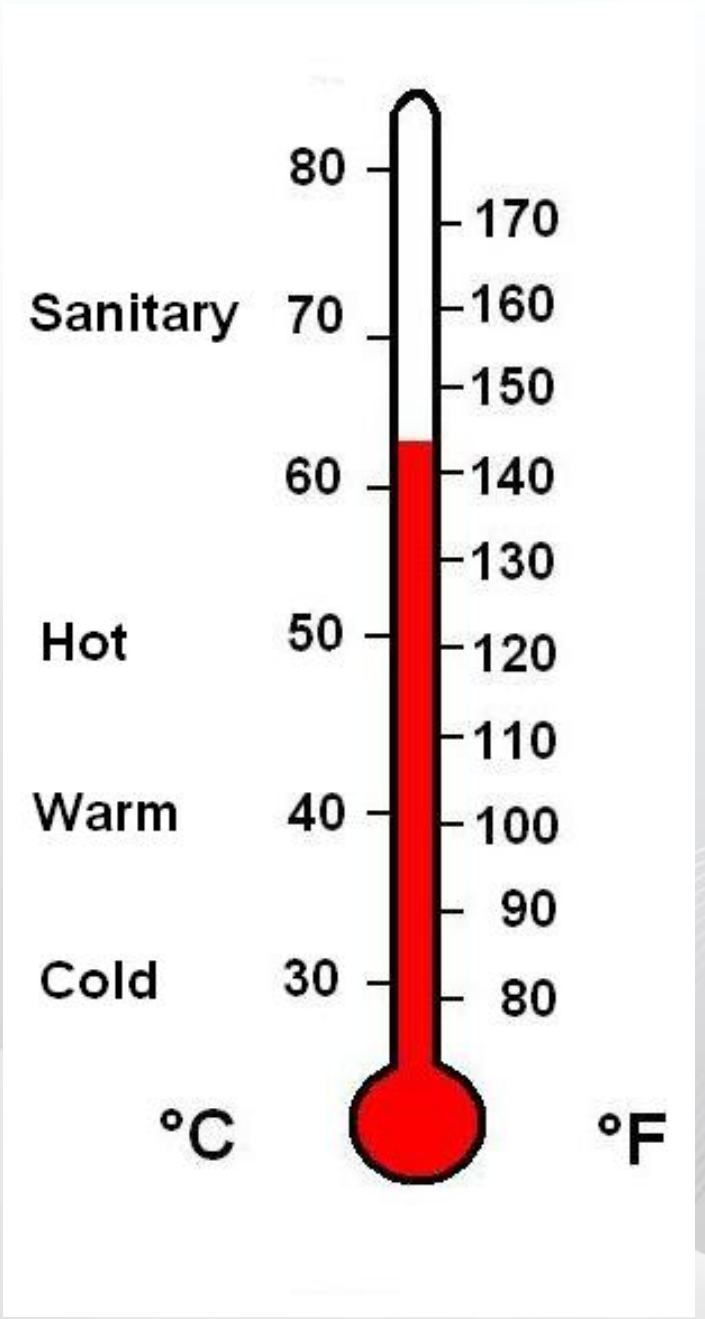
Ohm's Law


E•I
E/R
I²•R
P/E
E²/R
√P/R
P
WATTS
I
CURRENT
VOLTS
E
OHMS
R
√P•R
P/I²
P/I
E²/P
I•R
E/I

Temperature and Conversion

FORMULAE

°F = (9/5) °C + 32
°C = (5/9) x (°F – 32)



Supplementary Information

WASH TEMPERATURES

Sanitary	158° F	(70° C)
Allergiene	140° F	(60° C)
Hot	122° F	(50° C)
Warm	104° F	(40° C)
Cold	86° F	(30° C)
Tap Cold	whatever is in the pipe	

Supplementary Information

SPIN SPEEDS

Extra High	1,150 rpm
High	1,010 rpm
Normal	1,000 rpm
Low	960 rpm
Gentle	400 rpm

Supplementary Information

SOIL LEVEL

Increases or decreases total cycle times (wash and rinse)
Heavy 1:22
Normal 0:52
Low 0:47

The End