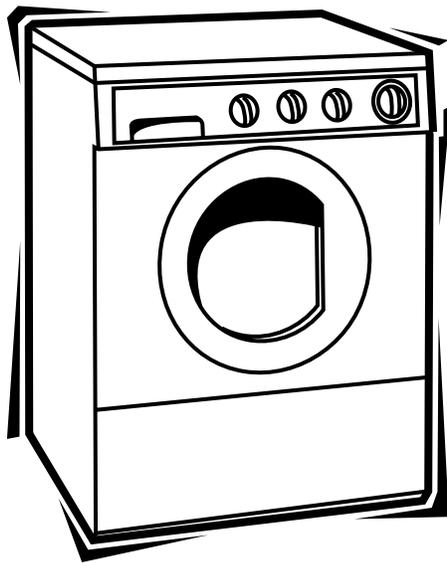




TECHNICAL SERVICE GUIDE

Front-Load Washer



MODEL SERIES:

WSXH208A





IMPORTANT SAFETY NOTICE

The information in this service guide is intended for use by individuals possessing adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

WARNING

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

RECONNECT ALL GROUNDING DEVICES

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

GE Consumer Home Services Training

Technical Service Guide

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Introduction



GE introduced its Horizontal Axis Front-Load Washer in 1998. The manual, Pub #31-9005, provided service information for that product. The 2000 version of the front-load washer has several significant changes that are shown in this manual. This Technical Service Guide is a supplement for that manual, and highlights and illustrates product changes and service methods to successfully service the updated washer. The significant

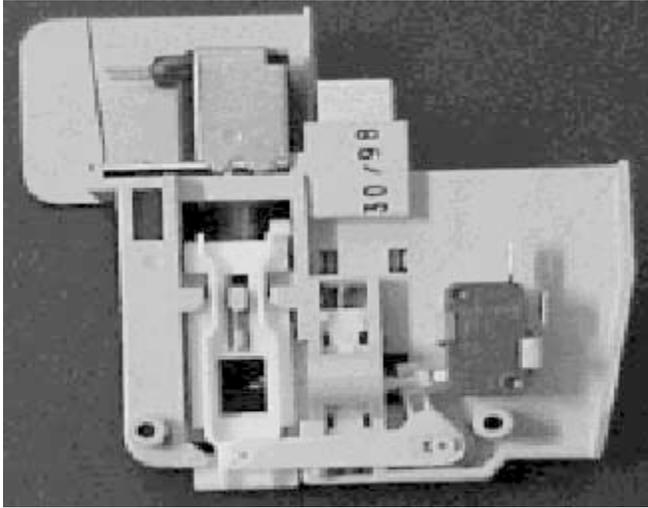
changes are listed below and covered in this supplement. A detailed method for servicing the bellows is also included to assist you.

- **Door lock assembly and strike**
- **Automatic dispenser**
- **Motor Speed Control**
- **Timer**
- **Drive Motor**

Functional Part Changes

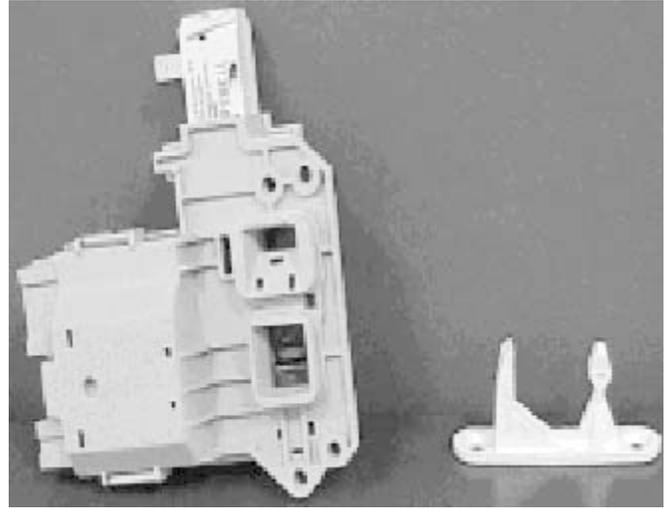
1998 Model

Door Lock Assembly and Strike

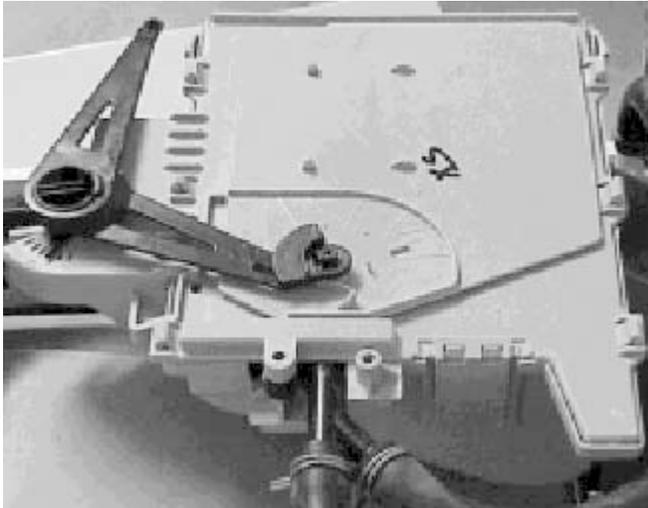


NEW Model

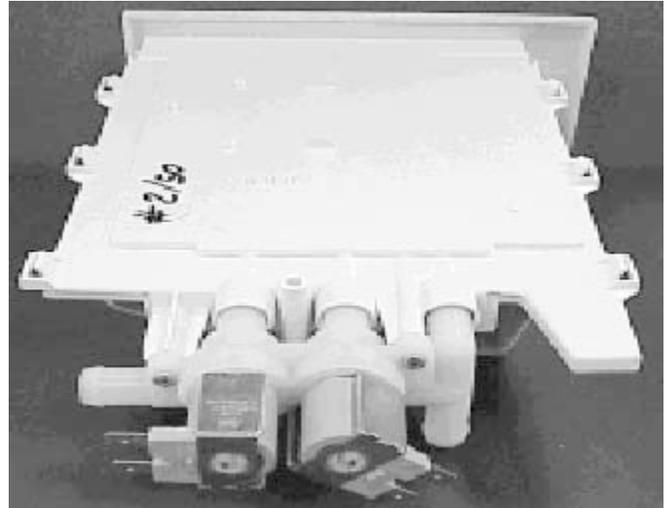
New Door Lock Assembly and Strike



Automatic Dispenser



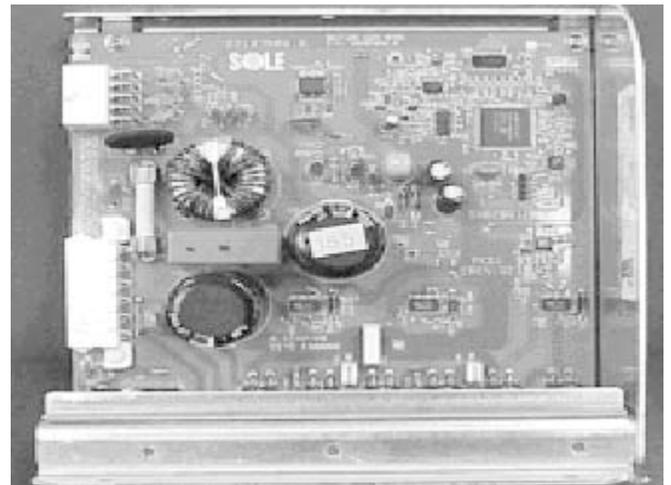
New Automatic Dispenser



Motor Speed Control

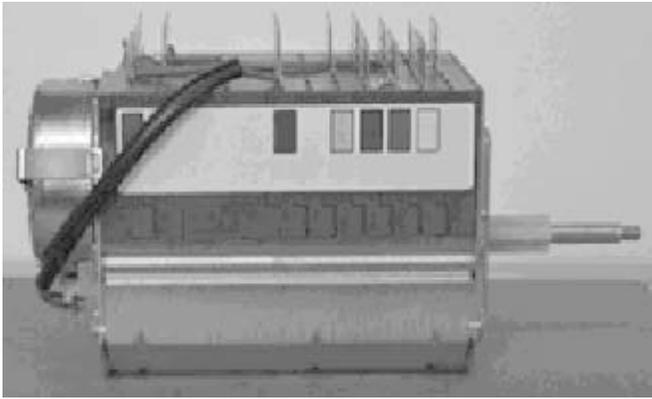


New Motor Speed Control



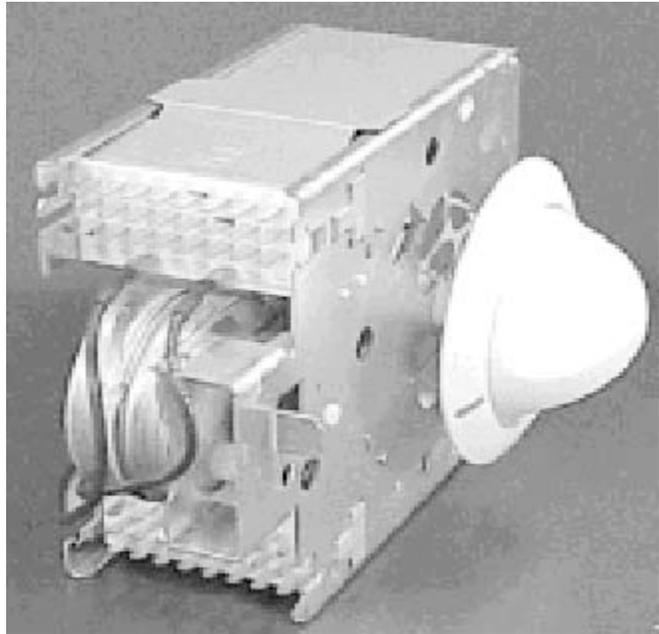
1998 Model

Timer



NEW Model

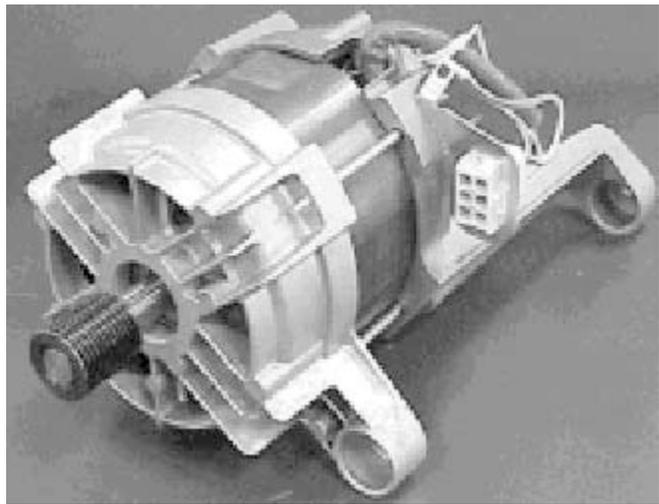
New Timer



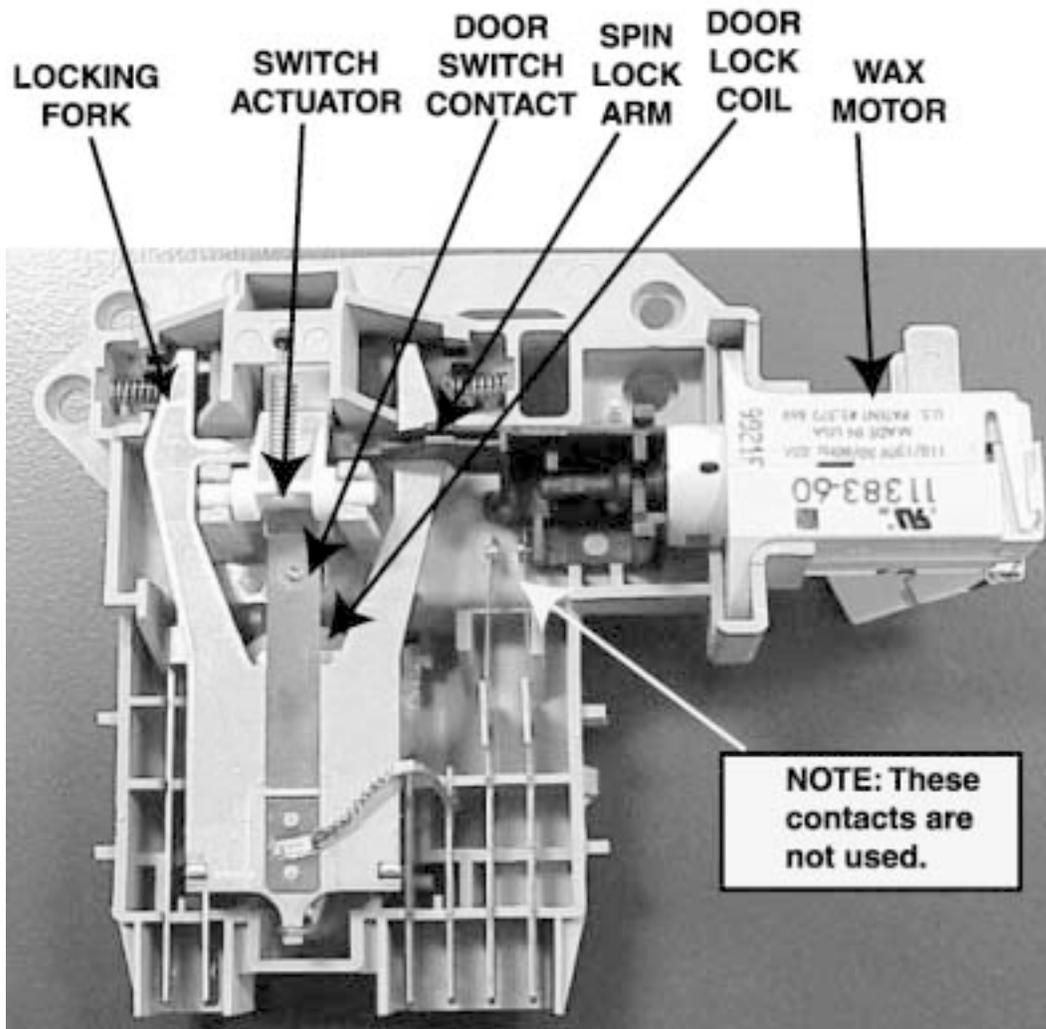
Drive Motor



New Drive Motor



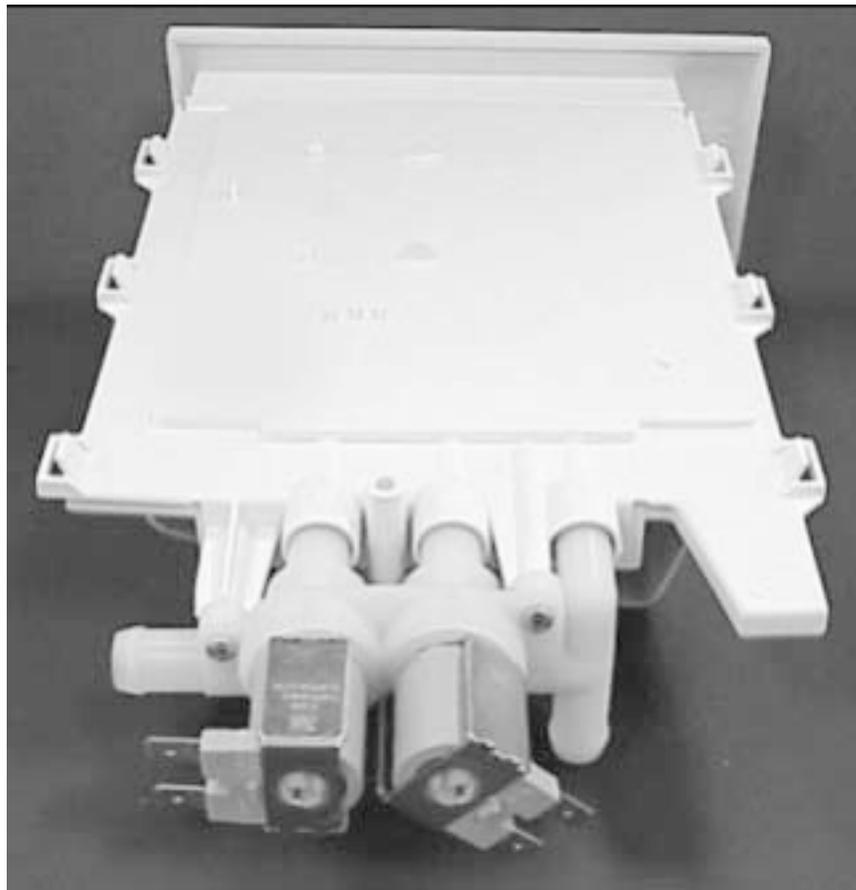
Door Lock Assembly



The new door lock assembly consists of a coil, door switch, switch actuator, locking fork, wax motor, and spin lock arm. When the timer line switch is closed, electrical power is applied to the coil and the door lock switch. The magnetic field of the coil pulls the locking fork down and tries to pull the contacts of the door lock switch closed. If the washer door is open, a tab on the switch actuator prevents the contacts from closing. The locking fork will not allow the door to be closed until the timer line switch is opened. When the washer door is closed, the door strike pivots the switch actuator out of the way. This allows the magnetic field of the coil to close the contacts of the door lock switch and the locking fork locks the door. The

wax motor and spin lock arm are used to prevent the door from being opened while the drum is still spinning. The wax motor is electrically in parallel with the drain pump. Power is applied to the wax motor when the washer is in spin. When power is applied to the wax motor, it expands its piston (40 to 65 seconds), driving the spin lock arm between the locking fork and the switch actuator holding the locking fork down. When power is removed from the wax motor, it takes about 130 seconds for the wax motor to cool down and retract the piston, pulling the spin lock arm back and releasing the locking fork. This allows time for the drum to coast to a stop before the door can be opened.

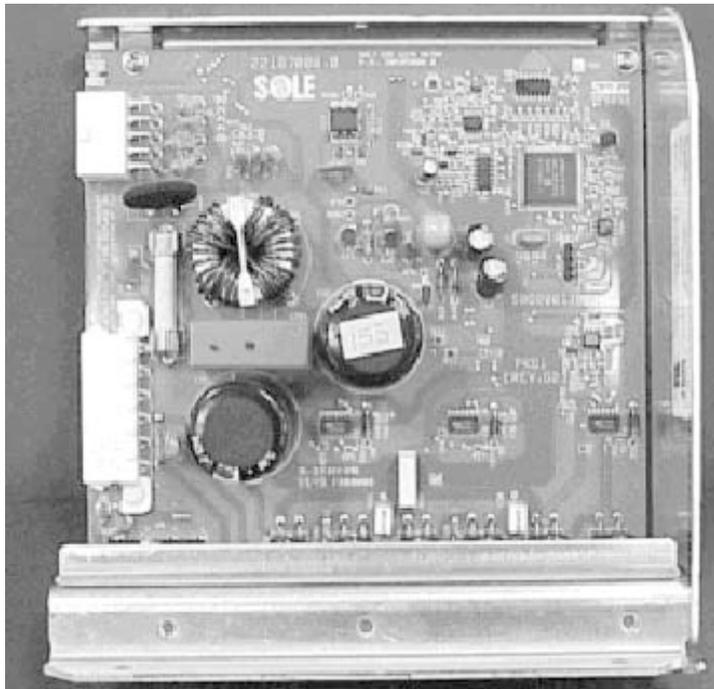
Automatic Dispenser



The Automatic Dispenser has been changed from a mechanical to an electrical operation. When the water valve is activated, all the water entering the washer must pass through the tube at the rear of the dispenser. The tube at the end of the dispenser has four possible outlets. The outlet that allows water to go into the tub and the outlet that allows water to go into the soap section of the dispenser are constantly open. The outlet that allows water into the bleach section of the dispenser and the outlet that allows water into the softener section of the dispenser are controlled by

solenoids. When water enters the washer, water flows through the tube directing water into the tub and through the soap section to the dispenser. When it is time for either the bleach or the softener to be released, the timer will activate the solenoid that controls water to that section. The addition of water to either the bleach or softener cavity starts the flow out of that cavity into the tub. As in the earlier model, the tubes in the inserts and the tubes in the cavities form a siphon that empties the cavity once the flow has started.

Motor Speed Control



The motor speed control now provides all functional control to the washer.

The board controls:

1. **Electrical power** to the timer motor by connecting and disconnecting neutral to the timer motor. Timer contacts 6C to 6T are electrically in parallel with the switch in the speed control board and are used as a backup or to sequence the timer when the knob is turned.

2. The **timing of each function** and the **speed and direction of the drive motor**. In the previous front-load washer, the timer used a slip disc inside the timer to extend the increments (e.g., the 13-minute fill and agitate increment). Contacts of the timer were also used to reverse the polarity on the motor armature of the drive motor to reverse the drive motor. These functions have been removed from the timer and added to the new speed control board. The new speed control board has six terminals marked A, B, C, D, E, and F that receive inputs or codes from the contacts of the timer. Each terminal receives an input of either line to neutral voltage (120 VAC) or zero for each function. For example, if the code received by the speed control board is 120 VAC on terminals A, B,

and D and zero on terminals C, E, and F, this tells the board to allow the washer to fill, tumble at 52 RPM for 107 seconds, then close the contact that connects the neutral side of the timer motor so it advances and gives the next code.

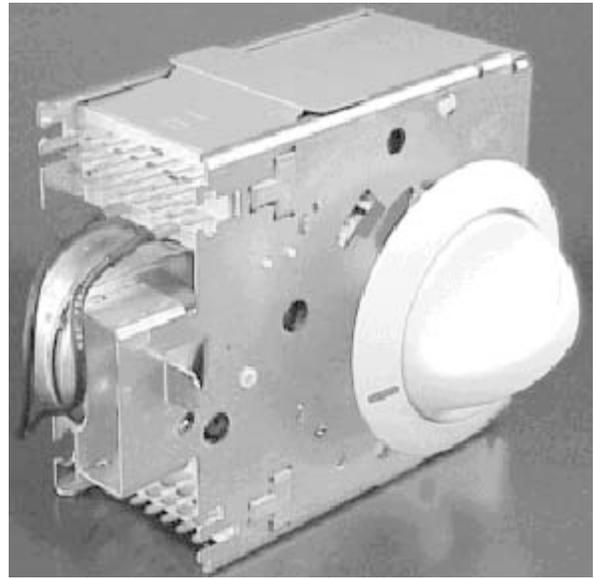
3. The **speed of the drive motor by converting** input line to neutral, single-phase 60-Hz voltage, to varying frequency, three-phase output voltage from 0 to 300 VAC. By varying the amount, frequency, and polarity of the voltage, and comparing the input from the tachogenerator on the drive motor, the control board can operate the drive motor at a preprogrammed speed and direction.

The motor PC board produces three phases from a single phase by rectifying the line voltage to DC voltage. The digital signal processor (DSP) generates the three-phase sine waves by switching ON/OFF the six drivers. The DSP varies the voltage, current, and frequency of the sine waves to vary the speed of the motor.

4. **Determines if the load in the washer is out of balance** by converting the sine wave from the tachogenerator to square waves and comparing the distance between the square waves.

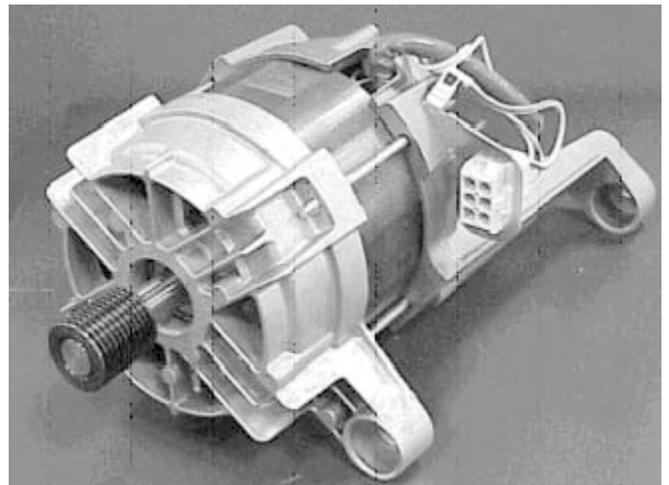
Timer

The timer functions have been reduced to a line switch that turns electrical power ON and OFF to the washer, applying codes to the speed control board. The line switch also applies electrical power to the dispenser valves, the water valve, the drain pump, the wax motor, and the end-of-cycle buzzer at the proper time.



Drive Motor

The new motor is a permanent magnet, three-phase AC motor that varies speeds when the voltage from the speed control board varies in frequency and amount. The motor still has a tachogenerator that inputs the speed of the motor to the speed control board.



Resistance Chart

Drain Pump Motor	15 Ohms +/- 7%
Dispenser Valves Solenoids	1100 Ohms +/- 7%
Drive Motor Windings	
Terminals 1 to 2	2.6 Ohms +/- 7%
Terminals 1 to 3	2.6 Ohms +/- 7%
Terminals 2 to 3	2.6 Ohms +/- 7%
Drive Motor Tachogenerator	184 Ohms +/- 7%
Timer Motor	2425 Ohms +/- 6%
Water Valve Solenoids	880 Ohms +/- 10%
Wax Motor	380 Ohms +/- 10%

Troubleshooting

Attached to the inside of the service panel is the Tech Sheet with a timer flowchart and a wiring schematic, which is invaluable when troubleshooting the washer. The timer flowchart shows which timer contacts are closed at each step. The schematic shows the electrical connection of the components.

Using the example of the **Timer Flowchart Sample** on page 15 and the **Schematic** on page 21, we can review how the two work together. On the timer flowchart at the top of the first column is CAM, and the numbers below it go from 00 to 14. These numbers indicate the timer cams. (When you look at the schematic, each timer contact is numbered; this is the timer cam number.) On the timer flowchart at the top of the fourth column is CONTACT. Below CONTACT are the letters T and B (Top & Bottom) for each cam number.

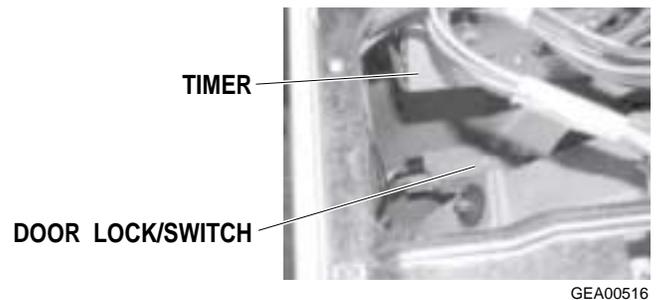
On the schematic, each set of timer contacts is labeled with the cam number and a letter C (Center contact), T, or B. On some schematics, the letter C may be omitted and the contact is labeled by just the cam number (the C is understood to be there).

On the flowchart at the top of the fifth column is CIRCUIT. Below it are different electric circuits controlled by the timer. Above the rest of the columns on the flowchart are the washer functions. The column(s) for each function will either be shaded or blank in line with each circuit. For example, look at the first column below the 8-hour delay function. Looking down the column, we see the block for machine power is shaded, indicating that timer contacts 0C to 0T are closed. The block for code C is shaded, indicating that timer contacts 5C to 5B are closed. The block for pressure switch bypass is shaded, indicating that timer contacts 12C to 12T are closed.

At the bottom of the flowchart is the step time in minutes and the step number. If we look under the 8-hour delay column, we see 479 in the step time block and 1 in the step number block. From the timer flowchart we now know that the 8-hour delay

is the first step in the timer, that timer contacts 0C to 0T, 1C to 1B, 5C to 5B, and 12C to 12B are closed, and the speed board will not advance the timer for 479 minutes.

With the transfer of the timing, the motor speed, and the motor reversing functions from the timer to the speed control board, it is important to understand the coding system to the speed control board. By using different combinations of five inputs, the timer can input hundreds of codes. The speed control board recognizes a code of line-to-neutral voltage (120 VAC), or 0 at each of the five input pins. This code would tell the board to count down for 479 minutes then advance the timer one step.



GEA00516

Two major differences between the previous front-load washer and the 2000 front-load washer are:

1. The door lock and switch assembly can be replaced through the top of the washer. Disconnect the two wire plugs by reaching down from the top, opening the door, and removing the mounting screws and lifting the door lock out through the top.
2. The timer can be replaced through the top by removing the knob and dial, removing the two screws holding the timer to control panel, and lifting the timer out through the top of the washer (see figure above).

Troubleshooting

WATER	Possible Causes	What To Do
Water leaks	Fill hoses or drain hose is improperly connected	<ul style="list-style-type: none"> • Make sure hose connections are tight at washer and faucets and make sure end of drain hose is correctly inserted in and secured to drain facility.
	Household drain may be clogged	<ul style="list-style-type: none"> • Check household plumbing. You may need to call a plumber.
	Constant water pressure to the fill hoses at the water source	<ul style="list-style-type: none"> • Tighten hoses at the faucets and turn the water off after each use. • Check condition of the fill hoses; they may need replacement after 5 years.
	Oversudsing	<ul style="list-style-type: none"> • Use less detergent or low sudsing detergent.
Too many suds	Type of detergent	<ul style="list-style-type: none"> • Switch to a low sudsing detergent and follow instructions on package.
	Very soft water	<ul style="list-style-type: none"> • Try less detergent.
Water won't drain	Drain hose is kinked or improperly connected	<ul style="list-style-type: none"> • Straighten drain hose and make sure washer is not sitting on it. • Top of drain outlet should be less than 8 ft. (2.5 m) above floor.
Water temperature is incorrect	Control is not set properly	<ul style="list-style-type: none"> • Check water temperature control and adjust.
	Water supply is improperly connected	<ul style="list-style-type: none"> • Make sure hoses are connected to correct faucets.
	Water valve screens are stopped up	<ul style="list-style-type: none"> • Turn off the water source and remove the water connection hoses from the upper back of the washer. Use a brush or toothpick to clean the screens in the machine. Reconnect the hoses and turn the water back on.
	House water heater is not set properly	<ul style="list-style-type: none"> • Make sure house water heater is delivering water at 120°F.–140°F. (48°C.–60°C.).
Water does not enter washer or enters slowly	Water supply is turned off	<ul style="list-style-type: none"> • Turn on both hot and cold faucets fully.

Troubleshooting

OPERATION	Possible Causes	What To Do
Washer pauses in cycle	The washer normally pauses between washing steps	
Washer won't operate	Washer is unplugged	• Make sure cord is plugged securely into a working outlet.
	Water supply is turned off	• Turn both hot and cold faucets fully on.
	Controls are not set properly	• Check controls and make sure Cycle knob is pulled out.
	Door is open	• Close door and pull Cycle knob out.
	Dispenser drawer is open	• Close drawer.
	Circuit breaker/fuse is tripped/blown	• Check house circuit breakers/fuses. Replace fuses or reset breaker. Washer should have separate outlet.
	Motor is overheated	• Washer motor will stop if it becomes overheated. It will automatically restart after a cool down period of up to 30 minutes (if washer has not been manually turned off).
Washer won't spin	Washer door open	• Make sure door is closed.
	Dispenser drawer open	• Close drawer.
	Load is too small	• Add one or two similar items to help balance the load.
NOISE	Possible Causes	What To Do
Washer is noisy	Washer is uneven	• Make sure washer is level and rests firmly on the floor.
	Washer load is unbalanced	• Push the Cycle knob in to stop the washer, open the door and redistribute the load evenly. Close the door and restart.
	High pitch jet engine sound	• This is normal during the spin cycle.
	Squealing sound or hot rubber odor	• Washer is overloaded. Stop washer and reduce load.
	Shipping bolts and foam block have not been removed	• See Installation Instructions for directions to remove shipping bolts and foam block.
	Washer is overloaded, causing squealing sound or hot rubber odor	• Stop washer and reduce load size.
	Rattling and clanking caused by foreign objects in tub or pump or metal fasteners hitting tub	• Check drum for foreign objects. Turn items with metal fasteners inside out. Call authorized servicer to inspect pump.
PERFORMANCE	Possible Causes	What To Do
Lint or residue on clothes	Incorrect sorting	• Separate lint producers from lint collectors.
	Washing too long	• Excess wash time may create lint.
	Detergent not dissolving	• Try a liquid detergent.
		• Use warmer water temperature.
	Overloading	• Wash drum may be fully loaded with loosely added items.
Incorrect use of fabric softener	• Check fabric softener package for instructions and follow directions for using dispenser.	

Troubleshooting

(cont.) PERFORMANCE	Possible Causes	What To Do
<i>Clothes too wet</i>	Load is too small	<ul style="list-style-type: none"> • Add one to two similar items.
	Load is out of balance	<ul style="list-style-type: none"> • Redistribute load.
<i>Pilling</i>	Result of normal wear on poly-cotton blends and fuzzy fabrics	<ul style="list-style-type: none"> • While this is not caused by the washer, you can slow the pilling process by washing garments inside out.
<i>Grayed or yellowed clothes</i>	Not enough detergent	<ul style="list-style-type: none"> • Use correct amount of detergent.
	Hard water	<ul style="list-style-type: none"> • Use hottest water safe for fabric. • Use a water conditioner like Calgon brand or install a water softener.
	Water is not hot enough	<ul style="list-style-type: none"> • Make sure water heater is delivering water at 120°F.-140°F. (48°C.-60°C.).
	Detergent is not dissolving	<ul style="list-style-type: none"> • Try a liquid detergent.
	Dye transfer	<ul style="list-style-type: none"> • Sort clothes by color. If fabric label states <i>wash separately</i>, unstable dyes may be indicated.
<i>Colored spots</i>	Incorrect use of fabric softener	<ul style="list-style-type: none"> • Check fabric softener package for instructions and follow directions for using dispenser.
	Dye transfer	<ul style="list-style-type: none"> • Sort whites or lightly colored items from dark colors. • Promptly remove wash load from washer.
<i>Wrinkling</i>	Improper sorting	<ul style="list-style-type: none"> • Avoid mixing heavy items (like work clothes) with light items (like blouses).
	Overloading	<ul style="list-style-type: none"> • Load your washer so clothes have enough room to move freely.
	Incorrect wash cycle	<ul style="list-style-type: none"> • Match Cycle selection to the type of fabric you are washing (especially for easy care loads).
	Repeated washing in water that is too hot	<ul style="list-style-type: none"> • Wash in warm or cold water.
<i>Snags, holes, tears, rips or excessive wear</i>	Pins, snaps, hooks, sharp buttons, belt buckles, zippers, and sharp objects left in pockets	<ul style="list-style-type: none"> • Fasten snaps, hooks, buttons, and zippers. • Remove loose items like pins, objects in pockets and sharp buttons. • Turn knits (which snag easily) inside out.
	Undiluted chlorine bleach	<ul style="list-style-type: none"> • Never add undiluted bleach to wash or allow clothes to come in contact with undiluted bleach.
	Chemicals like hair bleach or dye, permanent wave solution	<ul style="list-style-type: none"> • Rinse items that may have chemicals on them before washing.

Special Troubleshooting and Access Tips

The front panel can be removed to give you access to the motor and motor connectors for resistance readings. This prevents moving the washer from its installations.



With the front panel removed, and the motor connector exposed, you can check the motor windings. They are color coded in the schematic as black, blue, and red.



Black is #1 Winding, Blue is #2 Winding, Red is #3 Winding

Note: Resistance is 2.8 ohms which is within approximate range for winding resistance. Check 1 to 3, 1 to 2, and 2 to 3.



The tachogenerator resistance is also read from the front. The leads are located on the right upper and center of the block.



With volt/ohmmeter probes attached to the right and center leads, the reading should approximate the one in the picture. With a required resistance of 184 ohms, this reading is within the acceptable range. The information is provided in the schematic. Remember to access the tachogenerator leads from the front.

To check for magnetic properties of the magnet on the dispenser door, hold an ordinary metal paper clip to the magnet with the door open (see photo below). If the magnet in the dispenser door will not hold the paper clip, replace the magnet.



The reed switch connector can be accessed, with the top removed. Separate the connector and the reed switch pins. The dispenser door open is NO continuity. The dispenser door closed is continuity.



As a follow-up to “the timer won’t advance after checking timer motor resistance,” rotate the timer until contacts 10 and 11 close intermittently. If they have continuity, the problem is the speed control board, and it should be replaced.

To remove the timer knob, push in and turn counterclockwise. The timer dial is D-shaped and will pull straight out.



Timer motor resistance is approximately 2.4K ohms +/- 7%. (See Resistance Chart or Schematic for resistance values.)

To remove the timer, first remove the knob and the dial indicator. Then, while supporting the timer from the back, remove two screws and pull the timer straight out. You may find wire ties; if so, cut them. Replace and redress the harness when reinstalling the timer.



All other selector knobs are D-shaped and can be removed by pulling straight out.



To remove the temperature switch, remove the top, turn the switch counterclockwise until the locking ears align, and pull straight out.

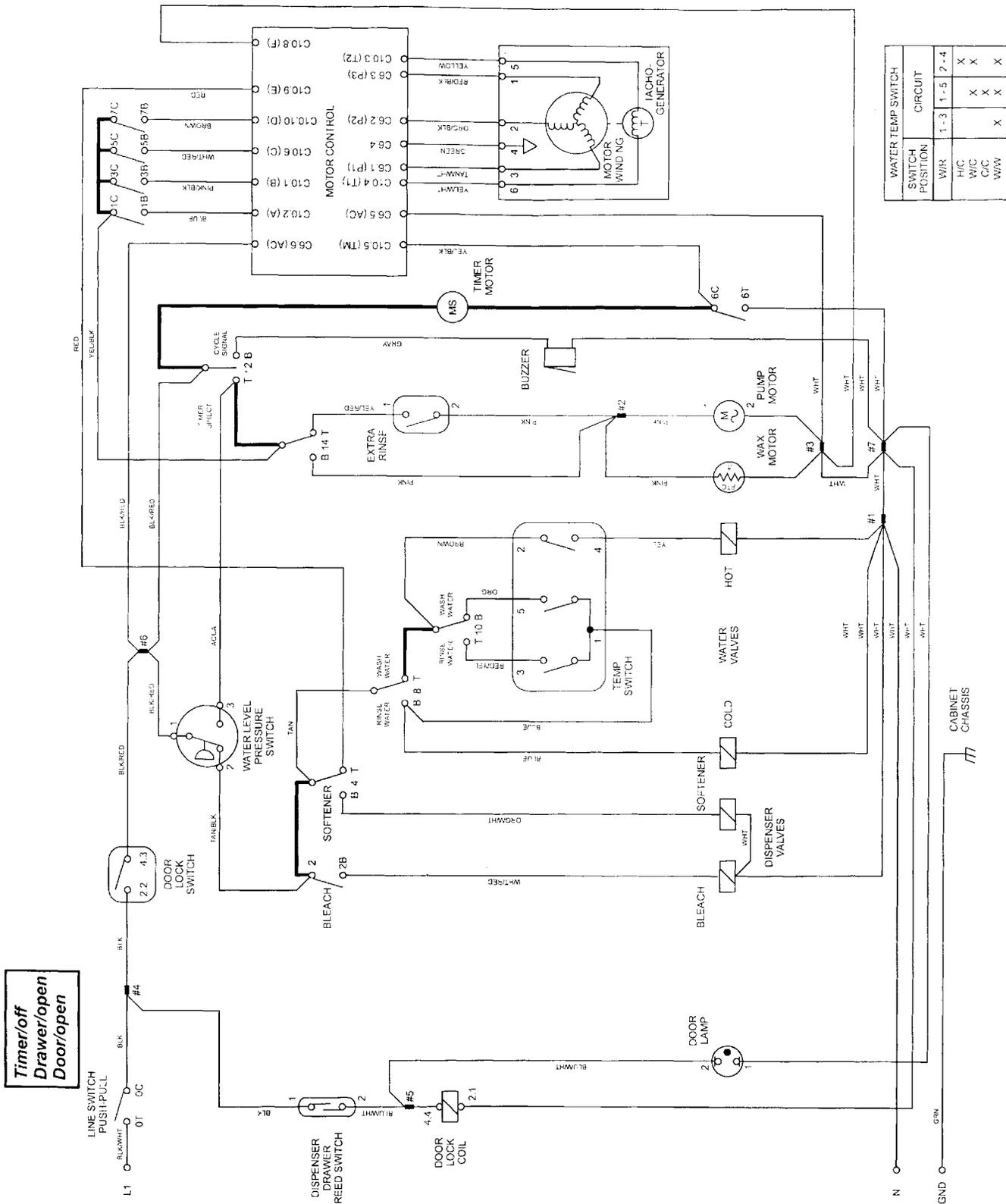
The rinse and speed switches are removed by inserting a small screwdriver to depress tab, then rotating counterclockwise to remove.



Wiring Diagram

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THE APPLIANCE.

Wiring Diagram



WATER TEMP SWITCH			
SWITCH POSITION	CIRCUIT		
WIR	1-3	1-5	7-4
H/C		X	X
W/C		X	X
C/C		X	X
W/W	X		

**Timer/off
Drawer/open
Door/open**

Motor Movement (motor will not run)

1. CHECK FOR POWER:

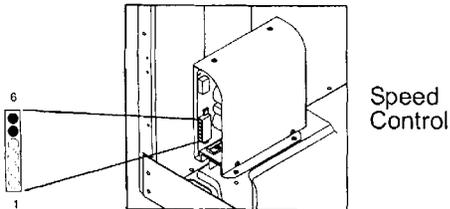
Advance the timer knob to the drain increment. If the drain pump does not run, check household safety circuit. If the drain pump runs go to step 2.

2. CHECK FOR MOTOR MOVEMENT:

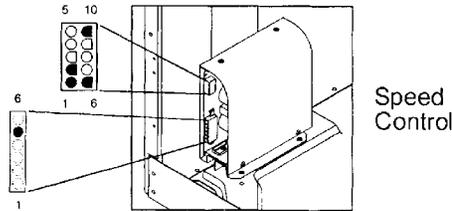
Turn the water off to the washer. Remove electrical power from the washer and remove the back panel. Remove the motor drive belt. Reconnect electrical power and set the timer to the start of the Regular wash cycle and pull the knob out. If motor does not rotate, check for a poor connection in the timer line switch or door lock switch. If good, and motor does not run go to step 3.

3. MEASURE VOLTAGES:

Remove the six pin plug from the speed control unit. Measure the voltage between pins 5 and 6 on the harness. If the meter reads 0 check the connection in the timer line switch or door lock. If the meter reads 120 Vac go to step 4.



4. Set the timer to the Heavy Wash position of the Regular wash cycle. Remove the ten pin plug from the speed control unit. Measure the voltage between pins 1, 2, 6 and 10 of the ten pin plug to pin 5 of the 6 pin plug on the harness. The voltage at pins 2, 6, and 10 should read 120 Vac and 0 Vac at pin 1. If not, check timer contacts 1C to 1B, 5C to 5B, and 7C to 7B for closed contacts, and 3C to 3B for open contacts. If the voltage readings are correct, go to step 5.

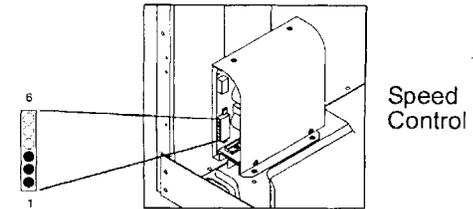


5. MEASURE RESISTANCES:

Check the fuse on the speed control board. If the fuse is open, replace the speed control board. If good, go to step 6.

6. Remove the 6 pin plug from the speed control unit. Measure the resistance between pins 1 and 2, 2 and 3, and 3 and 1 of the speed control unit. If the meter reads other than 3 Meg ohms \pm 10%, replace the speed control board.

7. Remove electrical power from the washer. With an ohmmeter check the resistance between pins 1 and 2, 2 and 3, and 3 and 1 of the six pin plug on the harness. If the meter reads other than 2.6 ohms \pm 7%, replace the motor.

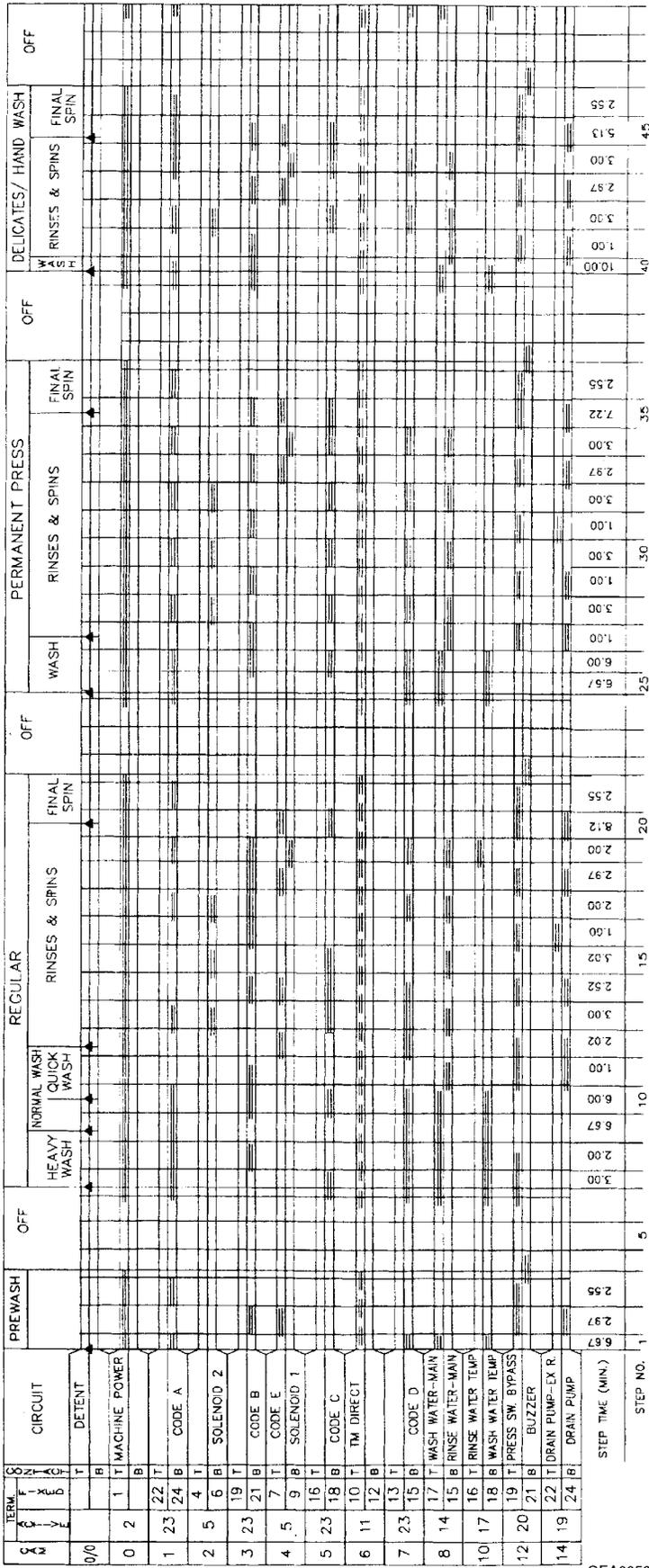


Quick Facts

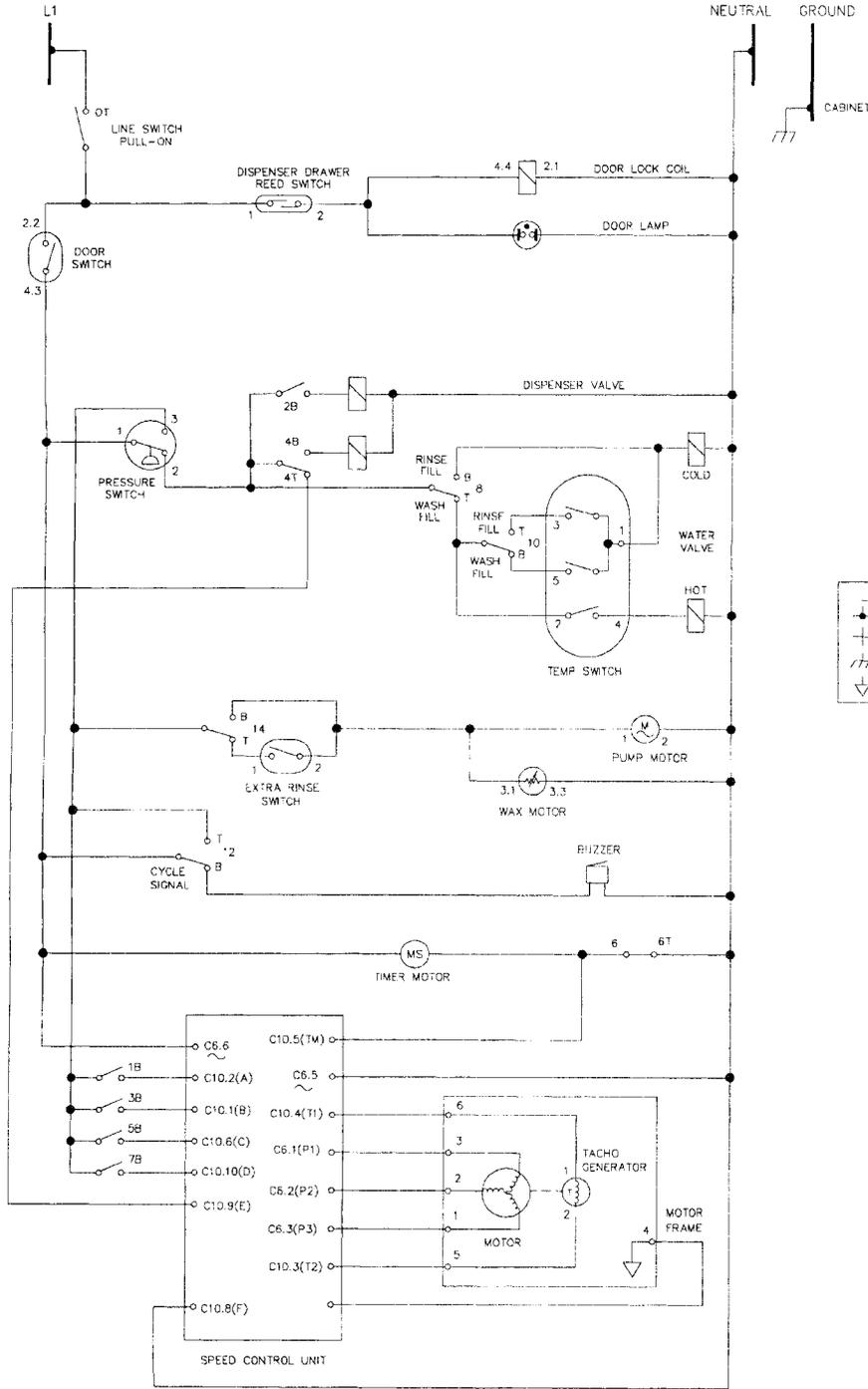
- The timer motor will not run continuously. The speed control unit controls the timer motor and advances the timer when needed.
- In some tumble modes, the tub may not tumble for the first 16 to 20 seconds after start-up.
- Extremely low water pressure may cause tub rotation to stop until WLC satisfied.
- **Note:** Not all pins are used on motor connector.

Timer Flowchart

Timer Flowchart



Schematic

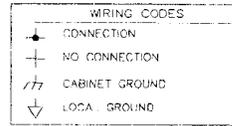


COMPONENT RESISTANCE TABLE	
ELECTRICAL COMPONENT	RESISTANCE Ω @ 77°F (25°C)
WATER VALVE SOLENOIDS	880 ±10%
DOOR LOCK SOLENOID	380 ±10%
TIMER MOTOR	2425 ±6%
PUMP MOTOR	15 ±7%
DISPENSER VALVE SOLENOIDS	1100 ±7%
MOTOR	
M1 TO M2	2.6 ±7%
M2 TO M3	2.6 ±7%
M1 TO M3	2.6 ±7%
M5 TO M6	184 ±7%

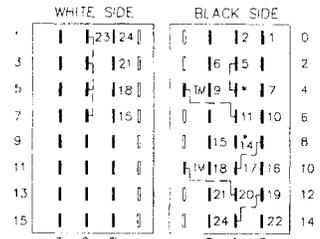


MOTOR PLUG-MALE (FND VIEW)

TEMPERATURE SWITCH			
CIRCUIT	1-3	1-5	2-4
WASH/RINSE			
C/C	X	X	X
W/W	X	X	X
H/C			X



NO LOAD, START POSITION OF PERMANENT PRESS

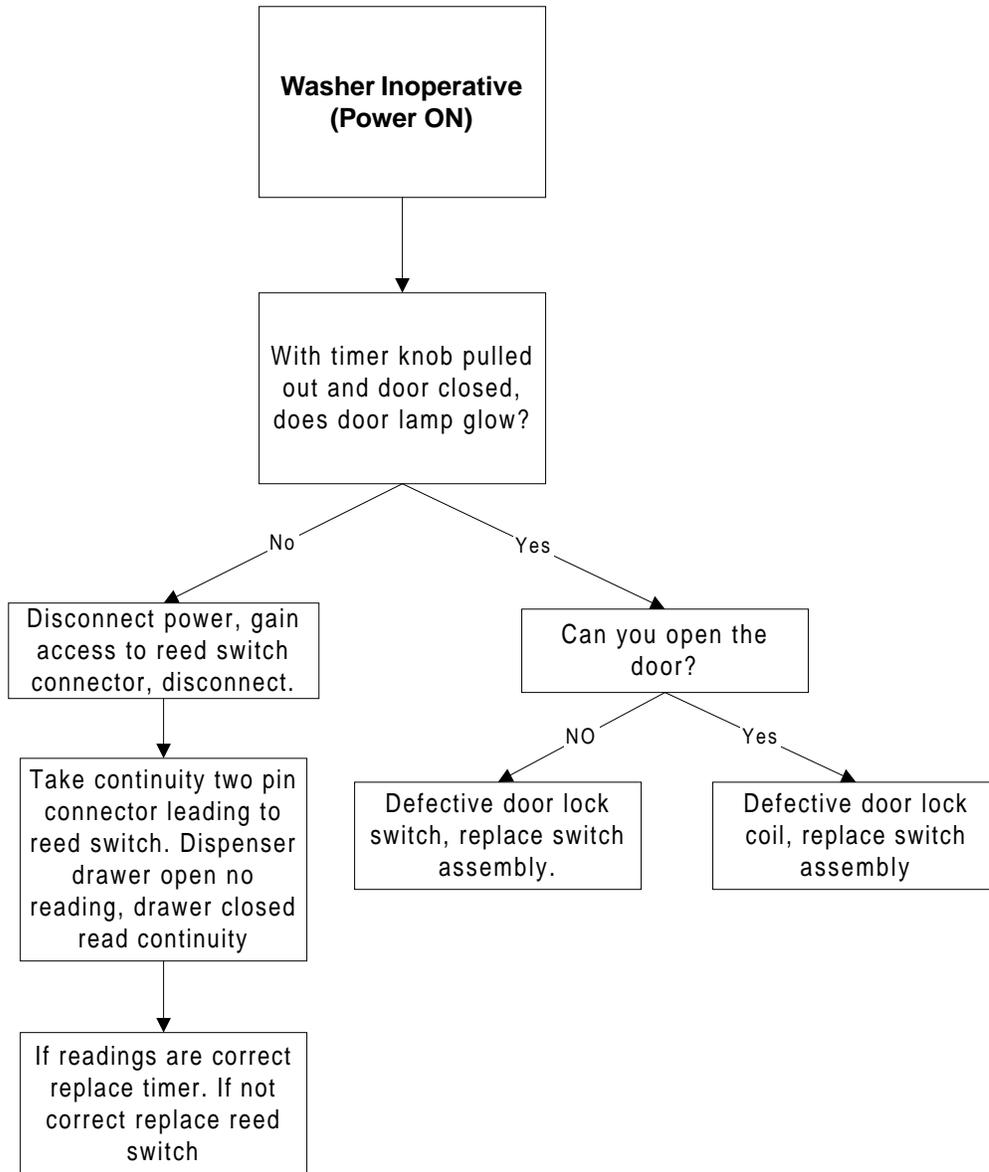


TIMER PLUG-MALE (END VIEW)

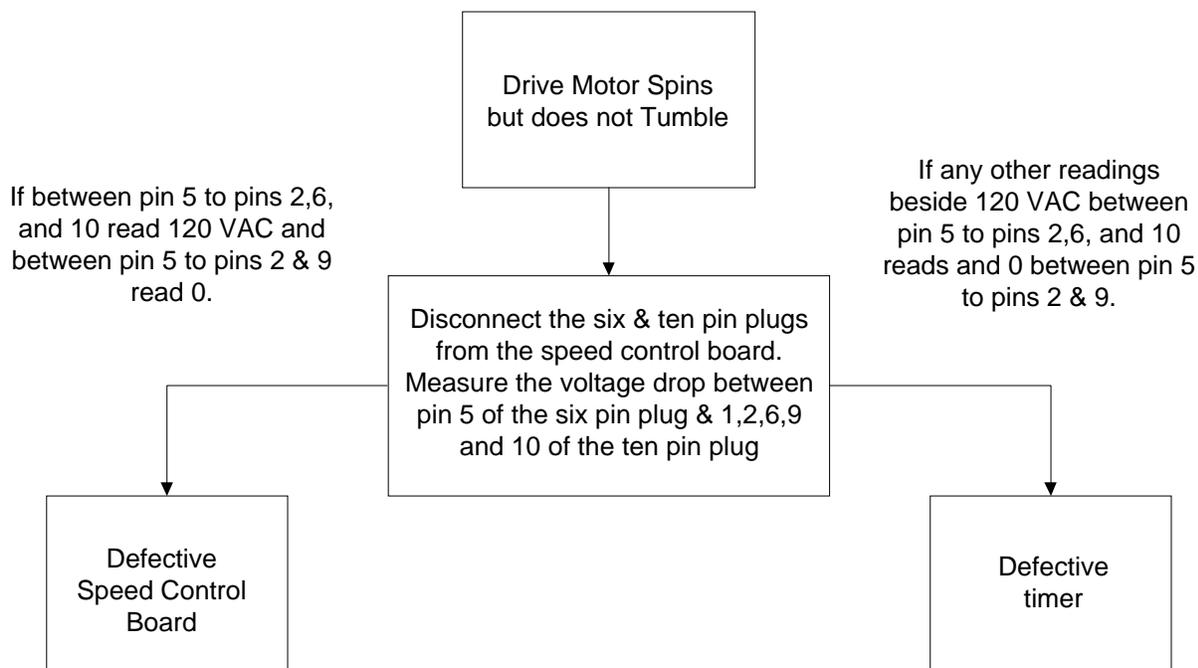
GEA00582

Diagnostics Flowcharts

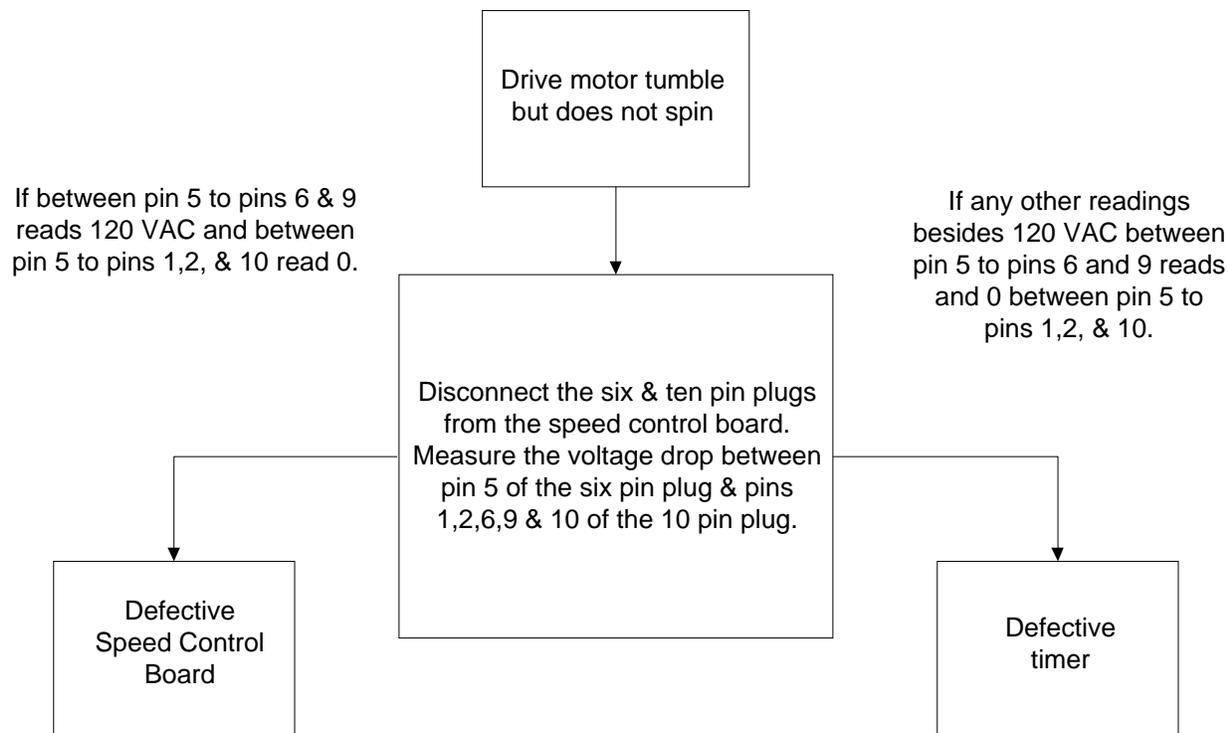
Washer Inoperative



Drive Motor Spins but Does Not Tumble

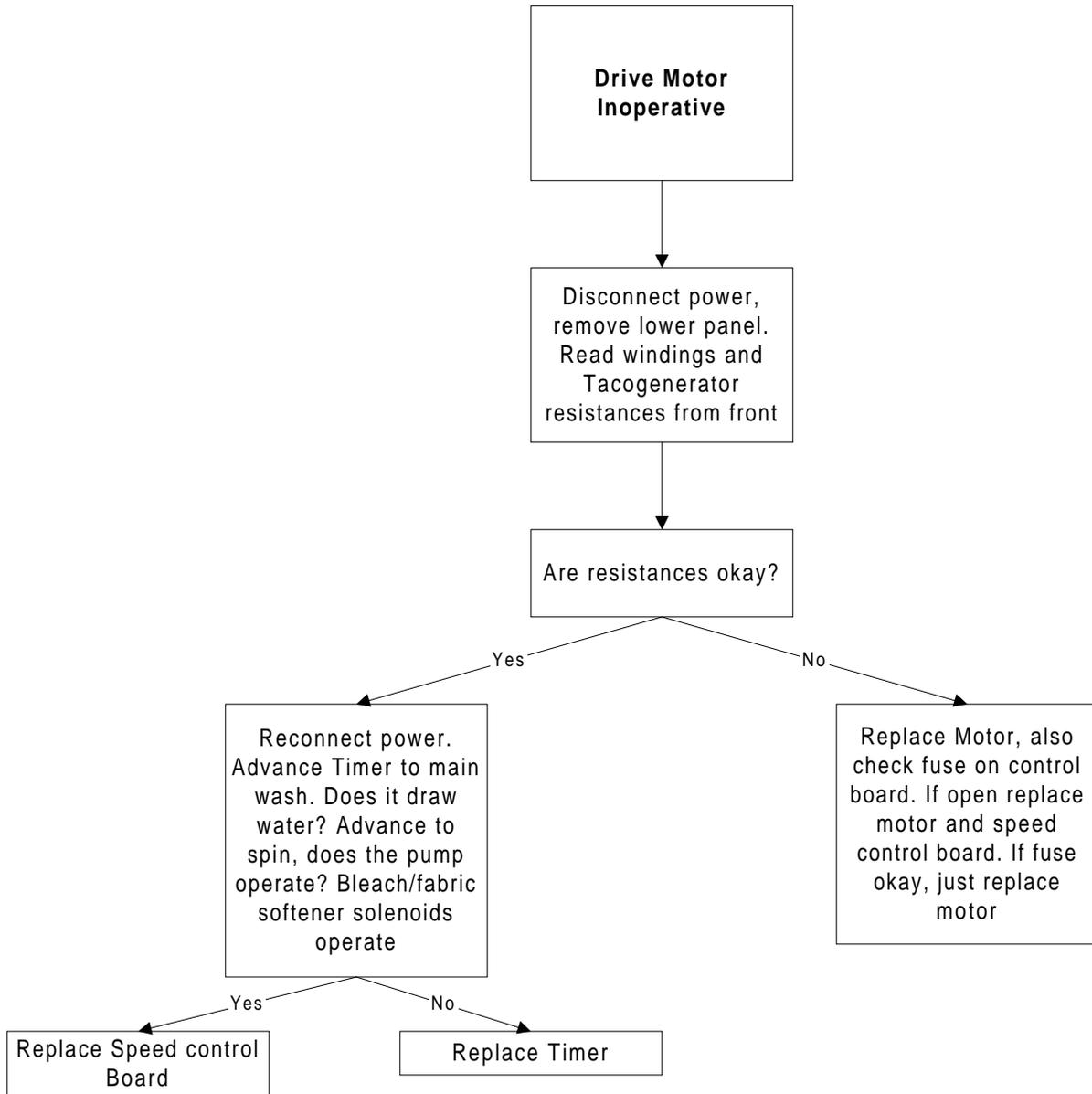


Drive Motor Tumbles but Does Not Spin

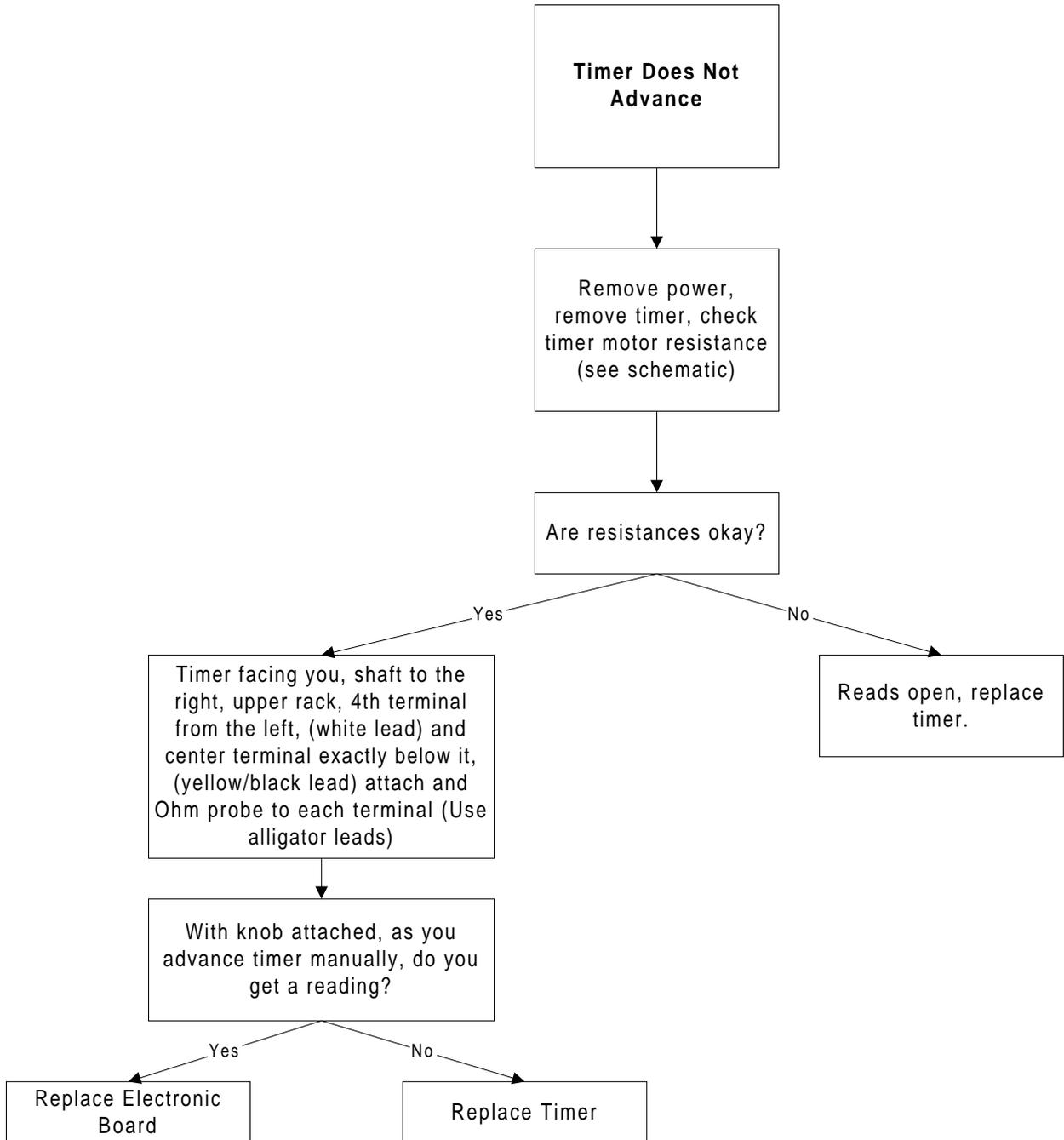


GEA00595

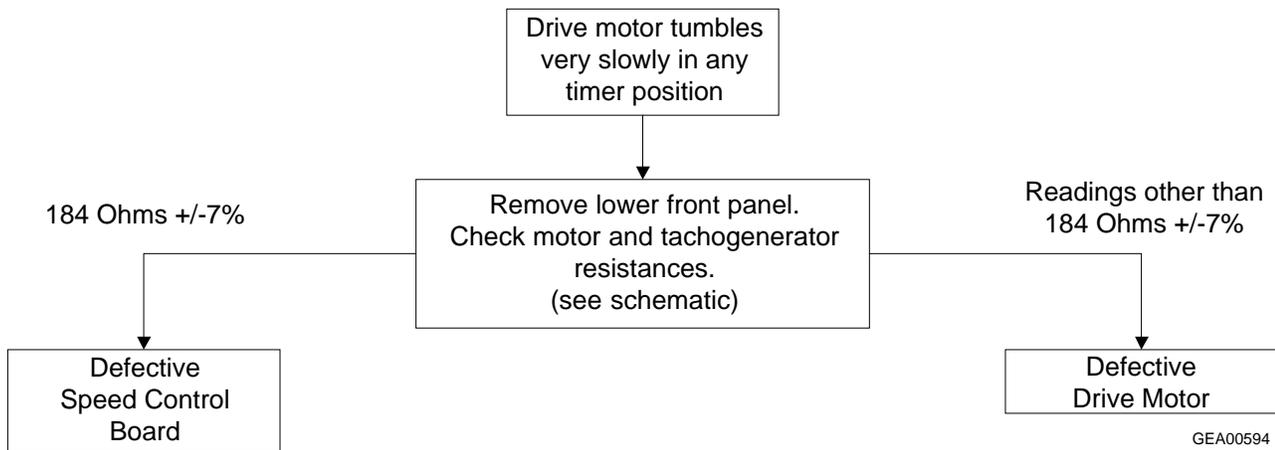
Drive Motor Inoperative



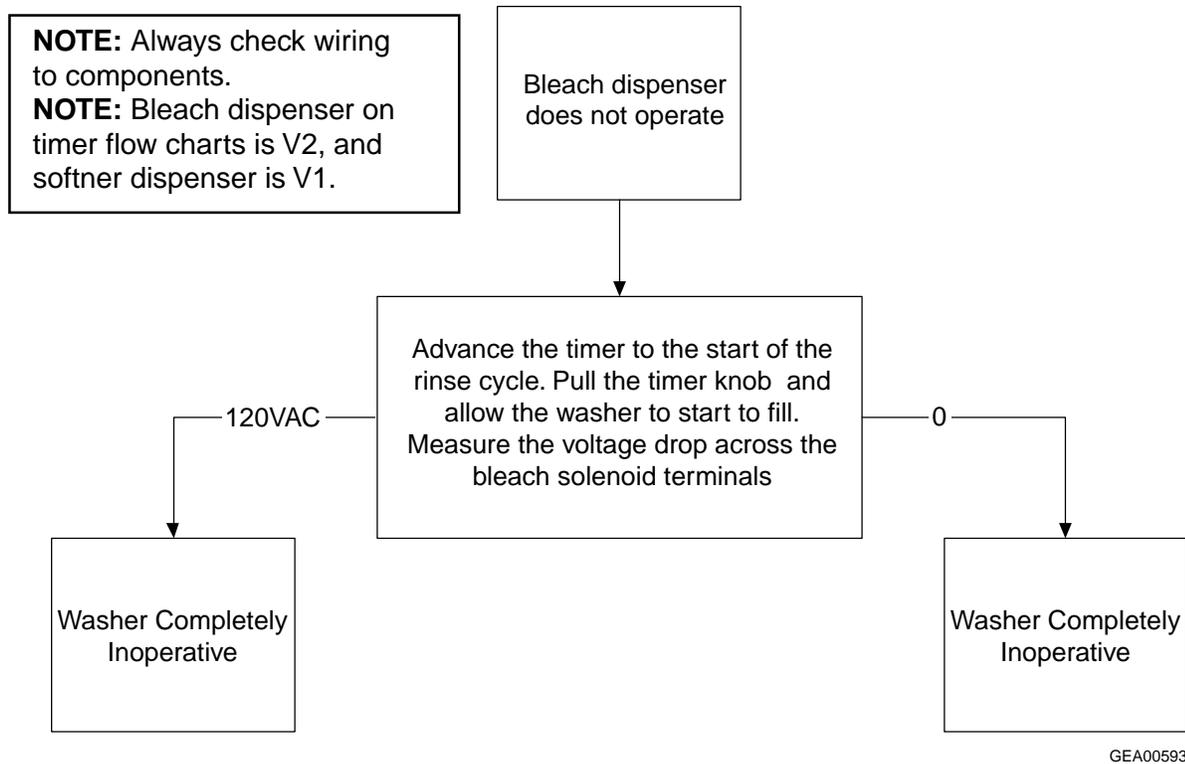
Timer Does Not Advance



Drive Motor Tumbles Slowly



Bleach Dispenser Does Not Operate



Parts Catalog

Part No.	Part Description	Qty.
WH01X10002	PIN	1
WH01X10003	LEG, PAD/NUT	4
WH01X10004	SCREW, PAN HD. 8-18ABX	5
WH01X10005	SPRING	1
WH01X10007	MAGNET	1
WH01X10008	KNOB, TIMER ASSY	1
WH01X10009	KNOB, ROTARY	3
WH01X10010	ARM, PIVOT	1
WH01X10011	CLAMP	2
WH01X10012	HINGE, BUSHING DOOR	1
WH01X10013	PIN, LOCATING	2
WH01X10014	RETAINER, SPRING	1
WH01X10015	HINGE, TOP PANEL	2
WH01X10016	BUSHING, CORD	1
WH01X10017	FILTER, NOISE	1
WH01X10019	WEIGHT, LOWER LEFT	1
WH01X10020	WEIGHT, TOP FRONT	1
WH01X10021	WEIGHT, LOWER RIGHT	1
WH01X10022	SPRING, TUB	2
WH01X10023	WEIGHT, TOP REAR	1
WH01X10024	PIN, LEVEL	1
WH01X10036	CLAMP	2
WH01X10037	BUSHING	1
WH01X10038	SPRING	1
WH01X10039	LATCH, HANDLE	1
WH01X2766	GROMMET, PUMP MNTG	1
WH01X2767	SPACER, PUMP MNTG	1
WH02X10004	SCREW, SW 6032X.19-2A	2
WH02X10005	SCREW, SW 21,8-32X.15	2
WH02X10006	SCREW, TIMER 10-24X.2	1
WH02X10007	SCW #8 PAN HD 10-10B	4
	SUBSTITUTE WH02X1118	4
WH02X10008	WASHER .21X.71X.06	3
WH02X10009	SCREW, LOCK 10-16X.50	1
WH02X10010	SCREW, 10-16X.75	2
WH02X10011	SCREW, HINGE 10-16X.7	1
WH02X10012	SCREW, PANEL 8-18X1.	2
WH02X10013	SCREW, QUAD PH AB8-18	5
WH02X10014	NUT	1
WH02X10015	ROLLER ASSY	1
WH02X10016	WASHER	1
WH02X10017	BOLT 1/4-20X4.5	1
WH02X10018	BOLT 1/4-20X4.05	1

Part No.	Part Description	Qty.
WH02X10019	NUT	1
WH02X10020	WASHER, SPRING	1
WH02X10021	SCREW, 1/4-10X2.165	1
WH02X10022	MOTOR ASSY	1
WH02X10023	SCREW, 10-16X.375	1
WH02X10024	SCREW, MOTOR 12-14X1.	4
WH02X10025	WASHER, 41X1.500X.120	1
WH02X10026	WASHER, LOCK 3/8	1
WH02X10027	SCREW, PULLEY M10X.92	1
WH02X10028	SCREW, BRACKET 10-16X	1
WH02X10029	CLAMP	1
WH02X10030	CLAMP	1
WH02X10031	CLAMP, PUMP	1
WH07X10001	PULLEY, DRUM	1
WH08X10001	SPRING, BOOT	1
WH08X10002	SEAL, SHELL	1
WH08X10003	BELT	1
WH10X10001	LOCK, DOOR ASSY	1
WH10X10002	CATCH, DOOR	1
WH11X10001	CAM, TIMER	1
WH11X10002	LEVER, CAM	1
WH11X10003	DIAL, TIMER	1
WH12X10002	SWITCH, REED	1
WH12X10003	SWITCH, PRESSURE	1
WH12X10004	LIGHT, PILOT	1
WH12X10005	SWITCH, EXTRA RINSE	1
WH12X10006	BUZZER	1
WH12X10007	SWITCH, WATER TEMP.	1
WH12X10008	TIMER	1
WH12X10009	CONTROL, SPEED	1
WH13X0080	VALVE, WATER WH13X80	1
	SUBSTITUTE WH13X0078	1
WH16X0523	SHIELD, PUMP	1
WH16X0524	BRACKET, PUMP MNTG	1
WH16X10001	ROD	1
WH16X10002	BOX, CONTROL	1
WH16X10003	BRACKET, TOP FRONT	1
WH16X10004	BRACKET, TOP REAR	1
WH16X10005	BRACKET	1
WH16X10007	PLATE, WEIGHT	1
WH16X10008	VANE	1
WH16X10009	BRACKET, SHOCK	1
WH16X10010	SCREW, PUMP/BRK./SHI	1

Part No.	Part Description	Qty.
WH17X10001	LEVEL, SHOCK	2
WH19X10001	CORD, SERVICE	1
WH23X10001	PUMP, DRAIN	1
	SUBSTITUTE WH16X0524	1
	SUBSTITUTE WH23X0082	1
WH41X0378	HOSE, DRAIN , 90°	1
WH41X10001	COVER, SOFTENER	1
WH41X10002	COVER, BLEACH	1
WH41X10003	DRAWER, DISPENSER	1
WH41X10006	DIS ASY 1, 2, 3, 4, 5, 35	1
WH41X10007	HOSE, SIPHON/FILL	1
WH41X10008	HOSE, INLET, COLD	1
WH41X10009	HOSE, INLET, HOT	1
WH41X10010	TRAP	1
WH41X10011	CHAMBER, AIR	1
WH41X10012	TUBE, PRESSURE	1
WH41X10013	HOSE, TUB	1
WH41X10023	SHIELD, MOTOR CONNECT	1
WH41X10024	DUCT, FILL	1
WH41X10025	SHIELD, DISPENSER	1
WH41X10026	RING, JUNCTION	1
WH42X10016	HANDLE & TRIM	1
WH43X10001	DISP, ECCENTRIC	1
WH44X10001	PANEL, TOP, WH	1
WH45X10002	RING, WEIGHT	1
WH45X10003	BOOT	1
WH45X10004	REINFORCEMENT	1
WH45X10005	SHELL, FRONT TUB	1
WH45X10006	TUB, SPIN	1
WH45X10007	SHELL, REAR/BEARING	1
WH46X10001	CONTROL PANEL ASSY	1
WH46X10002	DOOR, OUTER	1
WH46X10003	GLASS, DOOR	1
WH46X10004	DOOR, INNER	1
WH46X10005	PANEL, SERVICE, WH	1
WH46X10006	PANEL, BACK	1
WH46X10023	BRACKET, CONTROLS	1
WRO2X9494	SCREW, PANEL TO EVAP	8
31-15265	MANUAL, MINI	1
31-2819	INSTRUCTION, INSTALLA	1
49-9942	MANUAL, USE & CARE	1

Warranty Information



Sales slip or cancelled check is required as proof of original purchase date to obtain service under warranty.

All warranty service is provided by our Factory Service Centers or an authorized Customer Care® technician.

For The Period Of:	GE Will Replace, At No Charge To You:
One Year From the date of the original purchase	Any part of the washer which fails due to a defect in materials or workmanship. During this full one-year warranty , GE will also provide, free of charge , all labor and in-home service to replace the defective part.
Five Years From the date of the original purchase	Replacement parts for the suspension, outer tub, motor, driven pulley or motor controller which prove to be defective in materials or workmanship. During this five-year limited warranty , consumer will be responsible for any labor or in-home service costs.
Twenty Years From the date of the original purchase	The inner wash basket , that breaks due to defective materials or workmanship. During this twenty-year limited warranty , consumer will be responsible for any labor or in-home service costs.

What GE Will Not Cover:

- Service trips to teach how to use the product.
- Improper installation.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage to personal property caused by possible defects with this appliance.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Warrantor: General Electric Company, Louisville, KY 40225

Quiz

1. Drive motor is inoperative, you need to check winding resistance. Where do you go?
 - a) Pull the washer out, remove the back cover, disconnect terminal block, and take resistance reading.
 - b) Remove top cover, trace motor winding to timer, and check resistance values.
 - c) Remove lower front cover and read windings resistance value at the back of the plug, left-side terminals, front view. RED, BLUE, and BLACK leads. From one lead to the other should read 2.6 ohm +/- 7%.
2. The new timer version controls the programming operation of the washer. T or F
3. How does the dispenser drawer operate?
 - a) As the timer advances to the appropriate function, it will mechanically activate a lever to open the proper chamber.
 - b) It is timer-cam operated to distribute the fabric softener and bleach at the selected settings.
 - c) The detergent portion automatically mixes with the initial water draw. Thereafter, fabric softener/bleach solenoids are energized at the appropriate program advance mode.
4. What controls drive motor speeds?
 - a) Electronic board reads tachogenerator and sets up different speeds depending on "code function" (e.g., wash or spin mode).
 - b) Timer energizes the different resistance windings for slow and fast speeds as told to by control board.
 - c) None of the above. Timer totally controls the speeds according to customer's speed selection.
5. When fuse is blown on electronic board:
 - a) If timer is manually advanced, the drain motor and some other components can be energized.
 - b) The entire unit is totally dead.
 - c) Only the timer motor advances.
6. The new wax motor (switch lock circuit) is energized:
 - a) Any time unit is in operation.
 - b) Only during the wash cycle.
 - c) Only during the spin/drain cycle.
7. To replace the drive motor, you must:
 - a) Remove power, remove lower front panel, disconnect motor plug harness, and remove motor mounting screws.
 - b) Remove power, pull unit, remove back cover, remove belt, remove motor plug connector, remove motor mounting screws.
8. Unit is totally dead, door lock light glows, door is closed. You do the following:
 - a) Check the fuse on the electronic board.
 - b) Check the harness to the lock switch. If O.K., replace lock switch assembly.
 - c) Check reed switch for continuity.
 - d) None of the above. Replace timer.
9. Unit is totally dead, door lock light does not glow. Your check points are:
 - a) No input from timer. Replace timer.
 - b) Fuse on electronic board blown. Lock circuit not receiving signal.
 - c) Voltage at outlet. If O.K., remove power and check reed switch circuit.
 - d) Reed switch circuit not connected properly to valve bypass. Check connector at board; if O.K., replace board.
10. Timer not advancing. Your check points are:
 - a) Valve bypass not responding. Check 6- and 10-pin connectors. If O.K., replace board.
 - b) Timer motor windings (first remove power). Check for 6C to 6T continuity reliability. If all O.K., replace PC board. If not, replace timer.
 - c) Bypass switch inoperative, neutral line contaminated. Replace PC board.

