## GE Washers With

## Electromechanical Controls and Mode Shifter Assembly

EWA4600G0<br>GJRR4170H0<br>GJSR4160H0<br>WCSR4170G0<br>WCSR4170G0<br>WHDRR418G0<br>WJRR4170G0<br>WJSR4160G0<br>WLRR4500G0




The nomenclature tag is located under the lid in the right rear corner.

The mini-manual is located inside the control panel.

## Serial Number

The first two characters of the serial number identify the month and year of manufacture.
Example: $\quad$ AL123456S = January, 2006

| A - JAN | 2006 - L |  |
| :---: | :---: | :---: |
| D - FEB | 2005 - H |  |
| F - MAR | 2004-G | The letter designating |
| G - APR | 2003 - F | the year repeats every |
| H-MAY | 2002 - D | 12 years. |
| L-JUN | 2001 - A |  |
| M - JUL | 2000-Z | Example: |
| R-AUG | 1999 - V |  |
| S - SEP | 1998 - T | T-1974 |
| T- OCT | 1997 - S | T-1988 |
| V-NOV | 1996 - R |  |
| Z-DEC | 1995 - M |  |

## Motor and Drive System

The new GE washers incorporate a new motor and drive system. The 120 VAC input powers a three phase induction inverter/motor assembly. The inverter produces approximately 340 VDC , which is pulse width modulated (PWM) to control motor speed. There is no location to check inverter output voltage to the motor. Voltage given is for information only. The motor is bidirectional, constantly reversing it's direction to provide agitation. The motor is connected by a belt to the shaft and mode shifter assembly. By energizing or deenergizing a coil, the mode shifter assembly engages or disengages the shaft and tube. This allows for agitation and spin cycle modes.


## Component Locator Views

Front View


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## Component Locator Views

Control Panel (in service position)


## Control Panel

It is necessary to remove the control panel from the backguard and place it in the service position to access:

- Control timer
- Water level switch
- Water valve
- AC line filter

Caution: To prevent damage to the control panel, place a protective pad on the cover/lid assembly.

## To place the control panel in the service position:

1. Disconnect power.
2. Remove the three $1 / 4$-in. hex-head screws from the rear of the control panel.

3. Rotate the top of the control panel forward approximately 1 inch and slide to the right to unlock the 3 bottom locking tabs.
4. Lift the panel up and off the cover panel and rotate down.


Service Position

## Control Timer

The control timer is mounted on the inside of the control panel. It is held in place with a single $1 / 4$-in. hex-head screw and 2 tab-locks.

## To remove the control timer:

1. Disconnect power.
2. Using a flat blade screwdriver remove the spring clip that attaches the timer knob to the timer shaft.
3. Pull the knob and dial straight out from the timer.

4. Place the control panel in the service position. (See Control Panel.)
5. Remove the wire harness from the control timer
6. Remove the single $1 / 4$-in. hex-head screw.

7. Lift up slightly on the tab where the screw was located and rotate the timer clockwise (as viewed from back) to release it from the 2 tablocks.

Control Timer Removed From Control Panel


## Water Level Switch

- The minimum fill volume is 9 gallons. The water level measures approximately $71 / 2$ inches ( 6 holes) above the bottom of the basket.
- The maximum fill volume is 22 gallons. The water level measures approximately 15 inches above the bottom of the basket (between holes 2 and 3 from the top).


## Minimum Fill Level



To remove the water level switch:

1. Disconnect power.
2. Remove the water level switch knob by gently pulling it outward.
3. Place the control panel in the service position. (See Control Panel.)

Note: The water level switch red and black wire has a locking tab that must be depressed to be disconnected. To remove this wire from the water level switch, depress the clip using a small blade screwdriver and pull the wire off the terminal as shown.


ELECTRICAL TERMINAL RELEASE/LOCKING TAB
4. Disconnect the 3 wires and the pressure hose attached to the water level switch.

5. Press the plastic locking tab, rotate the switch counterclockwise, and pull the switch out of the control panel.


## Temperature Selector and Options Switches

To remove the temperature selector and options switches:

1. Disconnect power.
2. Remove the knob by gently pulling it outward.
3. Place the control panel in the service position. (See Control Panel.)
4. Mark and disconnect the wires attached to the switch.
5. Press the plastic locking tab, rotate the switch counterclockwise, and pull the switch out of the control panel.

Temperature Selector Switch


## Options Switch



## Water Valve

The washer utilizes a 3-coil water valve. This "triple water valve" meters water flow through fixed orifices. The chart below identifies the valves energized at each temperature setting and approximate water temperatures obtained ( $+/-5^{\circ} \mathrm{F}$ ). These temperatures are based on the DOE nominal temperatures of $135^{\circ} \mathrm{F}$ for hot and $60^{\circ} \mathrm{F}$ for cold.


| Setting | Valve(s) Energized | Temperature |
| :---: | :---: | :---: |
| Hot | Hot Valve | $135^{\circ} \mathrm{F}$ |
| Warm | Hot Valve <br> Slow Cold Valve | $90^{\circ} \mathrm{F}$ |
| Cool | Hot Valve <br> Fast Cold Valve <br> Slow Cold Valve | $75^{\circ} \mathrm{F}$ |
| Cold | Fast Cold Valve | $60^{\circ} \mathrm{F}$ |

- The water valve has a flow rate of approximately 2.1 gallons (8 liters) per minute.
- Each solenoid coil has an approximate resistance value of $1.1 \mathrm{~K} \Omega$.
- When energized, there should be approximately 120 VAC at the appropriate coil.

The water valve is accessed by placing the control panel in the service position. It is inserted and retained in a cutout in the rear of the backguard and held in place by 2 hex-head screws. It is only available as a complete assembly.

## To remove the water valve:

1. Disconnect power.
2. Disconnect the wiring from the solenoids.
3. Place the control panel in the service position. (See Control Panel.).
4. Remove the fill hoses from the water valve.

Note: The fill funnel hose is difficult to remove.
5. Remove the fill funnel hose. Squeeze the clamp and slide it back. Carefully break the hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
6. Remove the two $1 / 4$-in. hex-head screws that hold the valve to the cabinet.


## AC Line Filter

The potential exists for the washer to cause electronic devices in the vicinity to experience disruption. In addition, electrical devices in the area could cause erratic behavior in the washer electronic control. To eliminate the likelihood of disruption, the washer is equipped with a conductive noise filter. Should interference with electronic devices or erratic control behavior be reported, suspect a problem with the filter. The ground wire attached to the filter must have a good connection for the filter to operate properly. Check to make certain that the ground wire is connected properly

Note: When untaping and disconnecting the wires from the $A C$ line filter, note wire locations.
 before replacing the filter.

The filter is accessed by placing the control panel in the service position. (See Control Panel.)


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