



SEARS

TECHNICAL FLASH

Department 731A Toronto

T.F. 26 - #27
November 14, 1985

SERVICE INFORMATION

C110 DISHWASHER

MODEL 753900

DEPARTMENT 731A - LARRY SIDES

DELAY WASH TIMER

Model 753900 has an eight hour delay timer that is mounted in the console. See Figure 1. This delay wash timer will delay the start of a selected dishwasher cycle up to eight hours.

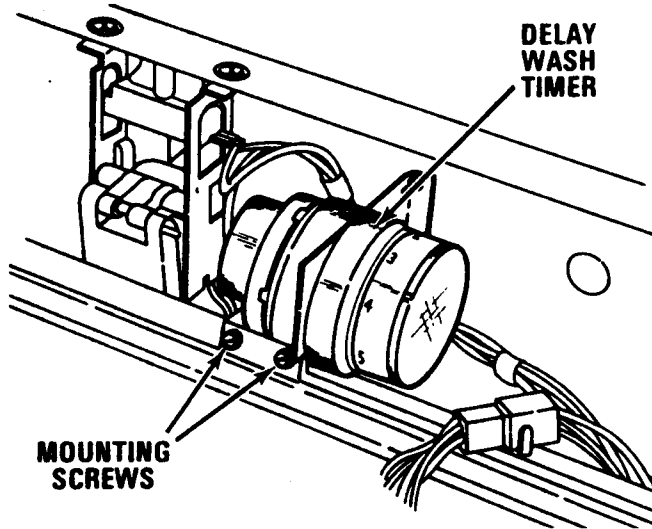


Figure 1

A single-throw double-pole switch in the delay timer controls the start of the dishwasher cycle. See Figure 2 for the location of the delay timer contacts in the wiring diagram. When the DELAY WASH feature is selected, contacts T to W-G are closed. If the DELAY WASH feature is not selected, the T to W-O contacts are closed and the dishwasher will start the selected cycle immediately.

The dishwasher uses a Rapid Advance Timer.

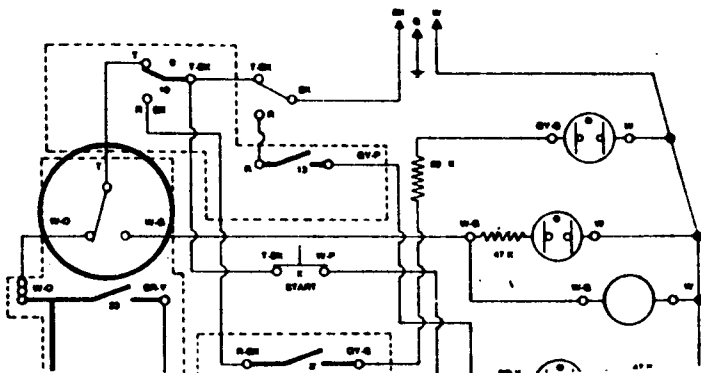


Figure 2

RAPID ADVANCE TIMER

Model 753900 is equipped with a Rapid Advance Timer. This timer does not have a dial or knob. There are actually two timer motors. One is a standard-speed motor that rotates the timer one full revolution in 68 minutes, while the other motor turns rapidly.

The Rapid Advance motor simply serves to advance the timer cams to a predetermined starting position. This starting position is programmed through the pushbutton selector switch and various contacts in the timer itself for any given cycle selection.

This action is similar to a standard timer being manually advanced to a SHORT CYCLE by the user for cycle selection.

The table in figure 3 shows how the timer is advanced through the cycle for any given cycle selection.

Once the timer has advanced to the predetermined starting position, the electrical circuit is broken to the Rapid Advance timer motor by one of the timer switches and one of the selector switches. The Rapid Advance motor stops and the normal timer motor takes over to complete the selected cycle.

The timer is mounted behind the access panel of the dishwasher.

To gain access to the Rapid Advance Timer, the access panel must be removed.

The timer starts all cycles, except the MINI WASH and ECONO cycle, at increment 1 of the timer.

The POTS & PANS and NORMAL WASH cycle go through all cycles for a complete 360 rotation.

The RINSE & HOLD cycle goes through the first wash and rinse cycles only. The RINSE & HOLD cycle finishes in increment 14 of the timer. The Rapid Advance Motor advances the timer to the drain cycle in increment 39. When the drain cycle is completed, the timer advances to the OFF position.

CYCLE SELECTION

POTS & PANS

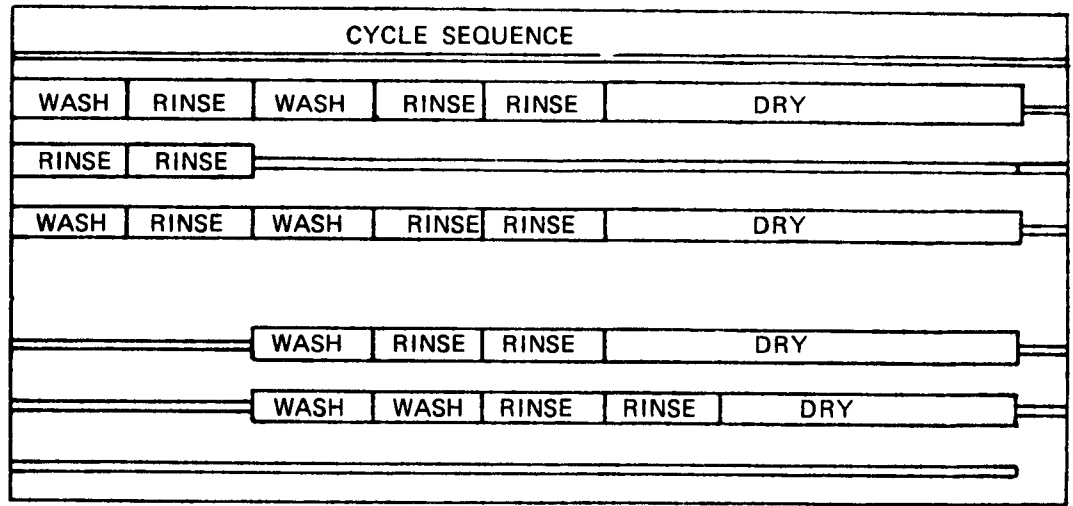
RINSE HOLD

NORMAL

MINI WASH

ECONO WASH

CANCEL/DRAIN



Timer advanced by clock motor

Timer advanced by R.A. motor

Figure 3

REMEMBER: There is no push/pull switch. Also, since there is no timer shaft for a dial and knob, a square hole has been provided in the cam shaft to use for rotating the timer through its cycles manually.

The timer cycles are printed on the timer (Fig.4) and there is a raised step on the cam shaft that is a pointer to indicate where the timer is in the cycle.

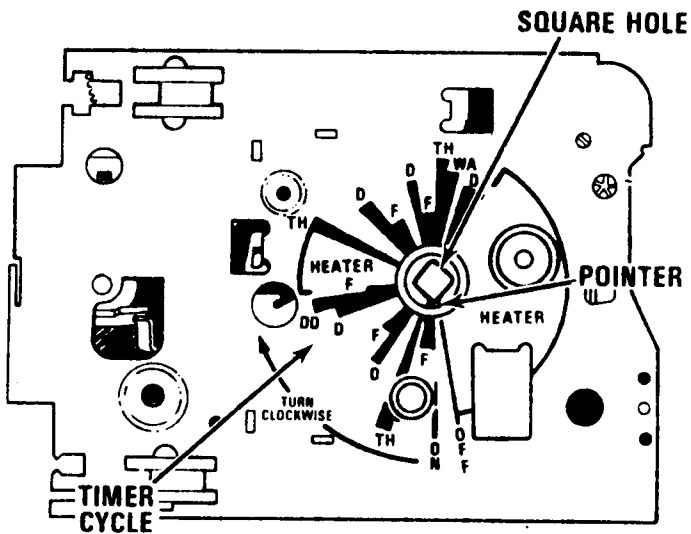


Figure 4

- Legend:
- WA - Wetting Agent Dispenser
 - DD - Detergent Dispenser
 - TH - Thermostatic Hold
 - F - Fill Valve
 - D - Drain

To advance the timer manually, place a screwdriver in the square hole and turn it clockwise to the desired position.

PUSH TO START SWITCH

The momentary Push to Start Switch is used to start the cycle after a pushbutton selection has been made.

A circuit is completed through the door switch contacts BK to T-BK and timer contacts WP to GY-P to the Rapid Advance Timer Motor. (Fig.5)

The timer will automatically advance to the selected cycle.

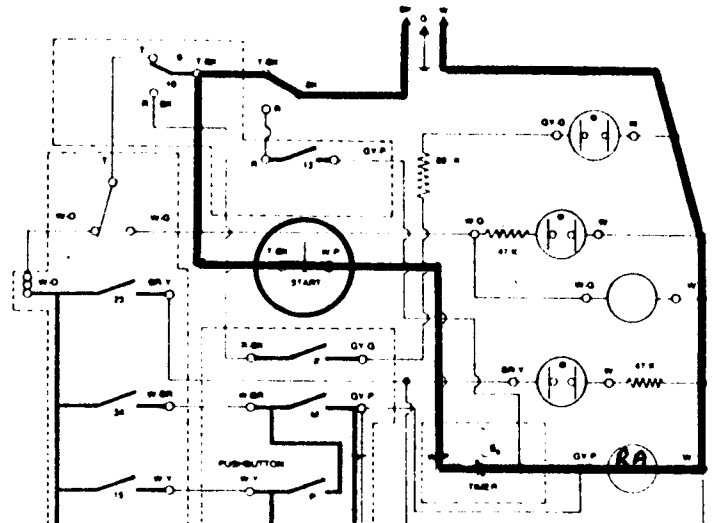


Figure 5

DOOR SWITCH

The door switch is a Single-Throw Double-Pole switch.

With the door closed, contact is made between BK and T-BK providing a current path to the timer and Push to Start Switch. (Fig. 6)

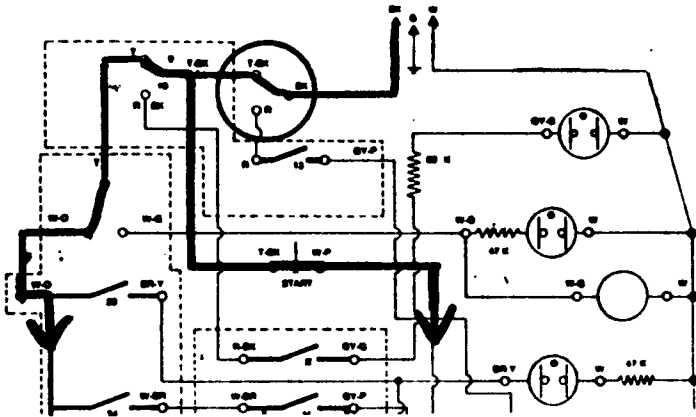


Figure 6

At the end of the cycle (increment 67 on the timer sequence chart) when the door is opened, a circuit is completed through contacts BK to R to the Rapid Advance Motor.

The Rapid Advance Motor advances the timer to increment 68 (OFF). This will turn the Clean Light OFF. (Fig.7)

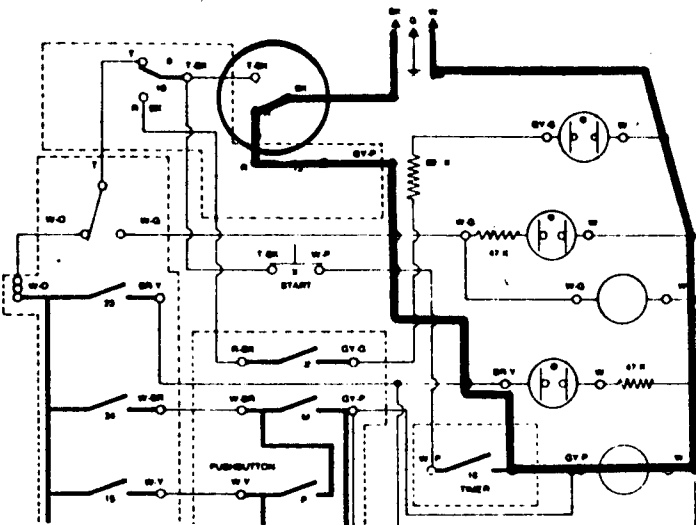


Figure 7

The Clean Light is energized through timer contacts T-BK to R-BK and Pushbutton Switch contacts R-BK to GY-G.

Timer contacts T-BK to R-BK are closed in increment 67 only. (Refer to timer sequence chart).

Note: The Clean Light remains "ON" until the door is opened.

INDICATOR LIGHTS

DELAY LIGHT

The Delay Light is ON when the delay timer option is selected. The light remains on until the dishwasher starts in the selected cycle. The Delay light is energized through delay timer switch contacts T-WG. See Figure 2.

WASH LIGHT

The Wash Light is ON during the wash cycles until the last wash-drain, timer increment 27. The Wash Light is energized through timer switch 32.

RINSE LIGHT

The Rinse Light is ON during the 2 final rinses, timer increments 29 - 40. The Rinse Light is energized through timer switch 23.

DRY LIGHT

The Dry Light is ON during the HEATED dry cycle, but will NOT be on if the Econo Air Dry option is selected. When this selection is made, pushbutton contact B is closed and when timer switch 24 closes in increment 41, it energizes the Rapid Advance Timer Motor to advance the timer to the Clean Light position in increment 65.

CLEAN LIGHT

The Clean Light comes ON in timer increment 65. The light is energized through timer contacts T - R-BK and pushbutton switch contact Z. When referring to the pushbutton selector switch chart you will note that contact Z is closed when the following cycles are selected:

Mini Wash, Econo Wash, Normal Wash and Pots and Pans.

The Clean Light will NOT be on when the Rinse Hold cycle is selected.

The Clean Light remains on until the dishwasher door is opened. With the door open, door switch contacts BK - R are closed. A circuit is completed through timer contacts R - GY-P (reset clean light) to the Rapid Advance motor, which advances the timer to increment 68 (Off Position), opening the circuit to the clean light. See Fig. 7.

HI-TEMP LIGHT

The Hi-Temp Light has a potential circuit through the entire dishwasher cycle. Refer to figure 8. The potential circuit (broken lines) exists from the timer, through the Hi-Temp light and timer motor, to neutral.

However, the timer contact that controls the timer motor is closed through the entire dishwasher cycle (except in increments 4 and 36 which are the thermostatic hold increments on the timer).

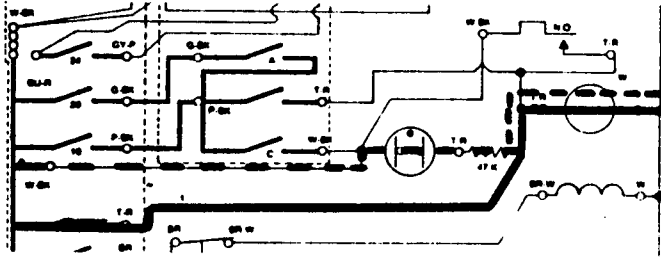


Figure 8

Since current takes the path of least resistance, in this case through the timer motor, there is not enough current across the Hi-Temp light to illuminate it.

When timer contact 22 opens in the thermostatic hold (increments 4 and 36) current will flow through the indicator light. This condition will only occur if the water temperature is lower than 145° F (63° C) and the thermostat is open. See Figure 9. The indicator light will be ON but there is not enough current across the timer motor to make it run.

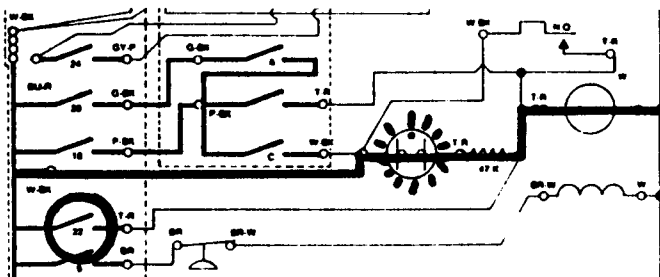


Figure 9

If the water temperature is 145° F (63° C) or higher and the thermostat is closed, a circuit will be completed through the thermostat and the timer motor will be energized, advancing the timer to the next increment, closing timer contact 22 Figure 10.

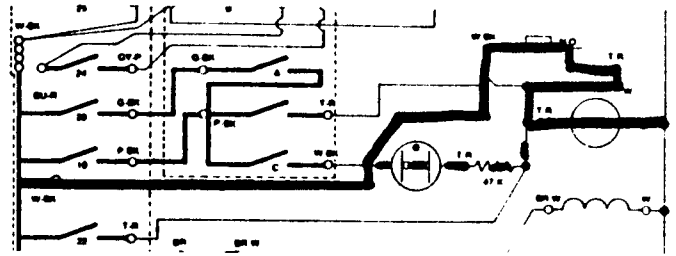


Figure 10

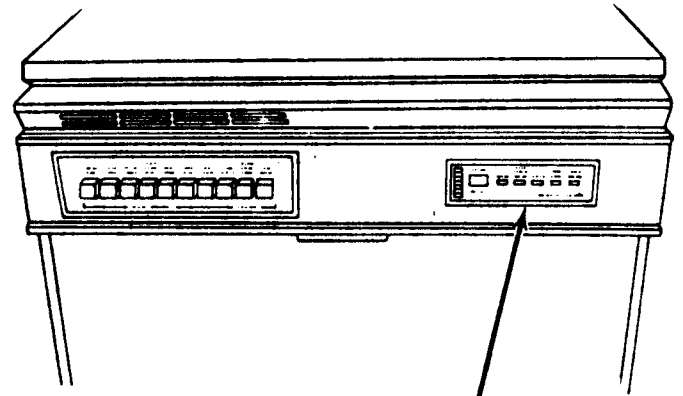
CHECKING

The lights are neon bulbs with an internal resistor, so they cannot be checked for continuity. Put 120 volts AC across the leads at the indicator bulb disconnect plug.

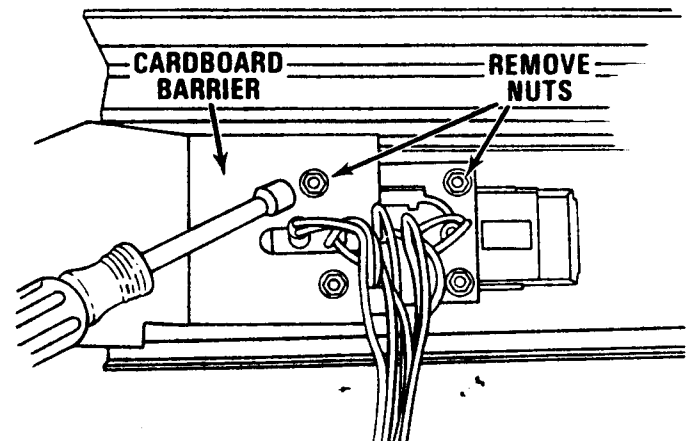
If the bulb does not glow, it is bad and the whole indicator bulb pack must be replaced.

If the bulb does glow, look at the wiring diagram to see which contacts in the pushbutton switch and timer need to be checked to isolate the problem.

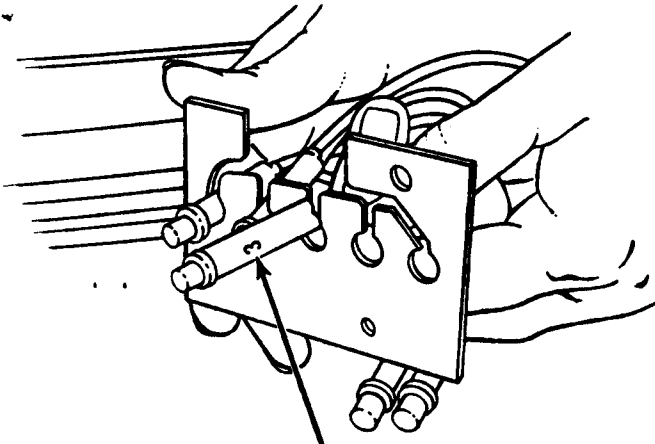
REPLACEMENT



THE BULB PACK STYLE INDICATOR LIGHT IS REMOVED AS SHOWN

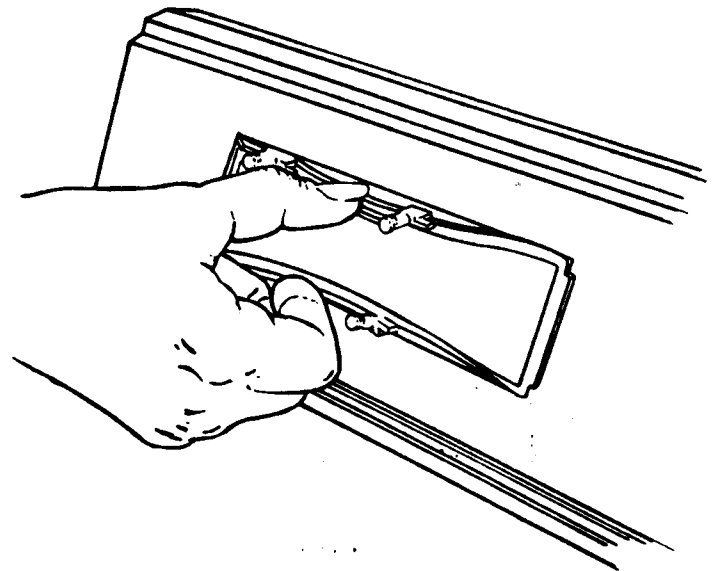


REPLACE THE LIGHTS AS SHOWN



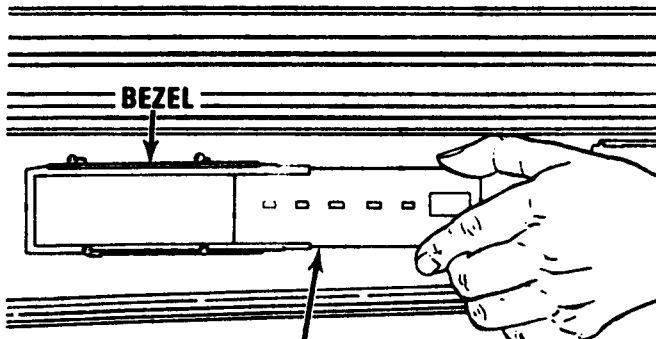
NOTE: THE LIGHTS AND THE BRACKET SLOTS ARE NUMBERED. EACH LIGHT MUST BE PLACED IN THE SLOT WITH THE MATCHING NUMBER.

Pinch the bezel sides together and slide out through the front of console. When installing new bezel, be careful not to crack it.

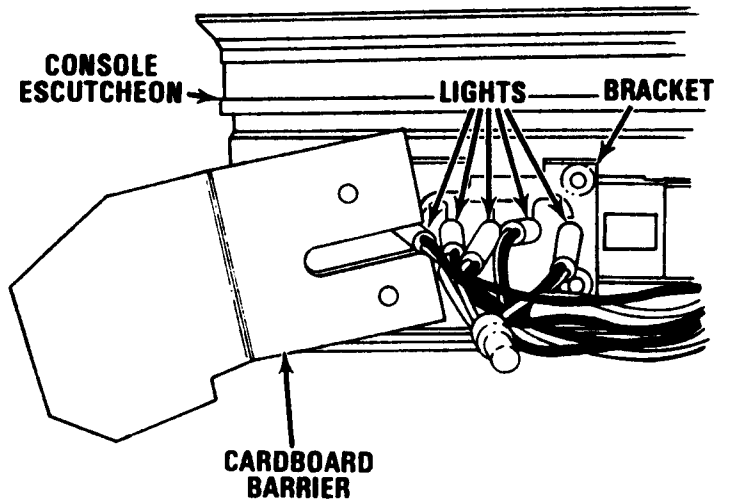


If damaged, the lens and bezel are replaced as shown.

Replace the bracket and light assembly and the cardboard barrier as shown. Reassemble the nuts.



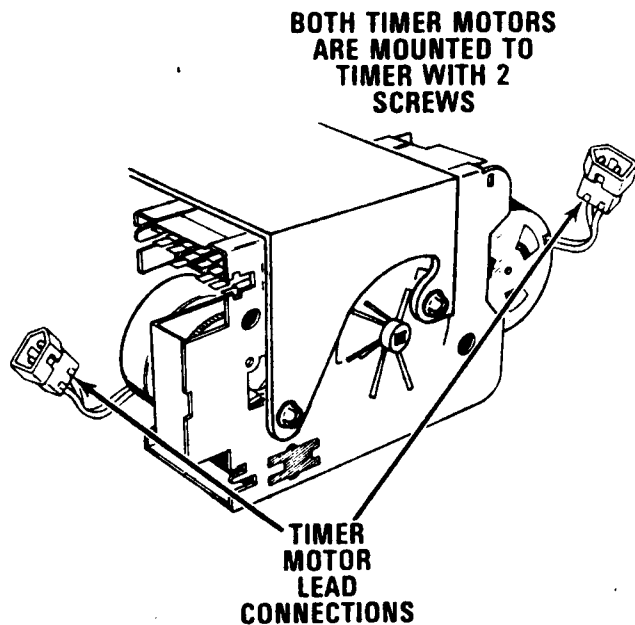
LIFT THE OLD LENS OUT. BE SURE THE PRINTING FACES THE FRONT WHEN INSTALLING NEW LENS



CHECKING PROCEDURE

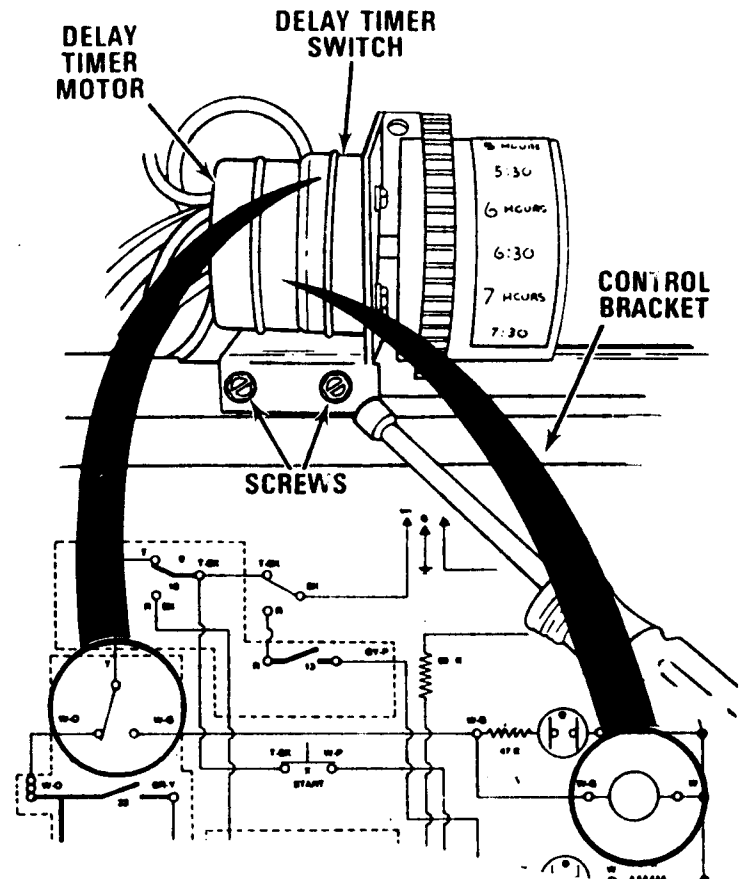
RAPID ADVANCE & DELAY TIMER MOTORS

Disconnect dishwasher from electrical source. If the timer will not advance through the cycles, check the timer motor and/or the rapid advance motor. Separate the motor lead wire connection and check for continuity. If there is infinite resistance (open winding) replace the motor. A normal timer motor will show 1900 - 2900 ohms resistance.



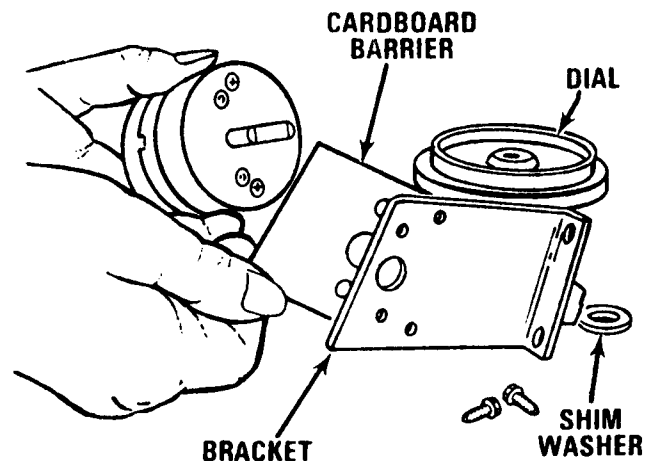
NOTE: If the harness disconnect plug is removed, the disconnect plug locking tabs **MUST** be locked into the timer when reassembled.

The dishwasher will not start if the delay timer does not advance. Check it the same way as the timer motor and rapid advance motor. If it is open, replace it. The delay timer switch should also be checked. The delay timer motor has to be removed to make this check. With time set on the timer, contacts T - WG should be closed. (If not, the dishwasher will start immediately.) With no time on the delay timer, contacts T-WO should show continuity. If the motor is bad, replace it.



When replacing the delay timer motor and/or switch:

1. Face the terminals on the delay timer toward the back.
2. Connect the wires to the proper terminals. The disconnect plugs must be fully engaged.
3. The cardboard barrier **MUST** be in place. The shim washer (goes on the delay timer shaft) is only used to align the dial in the console opening.


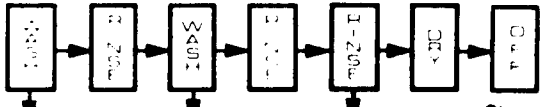

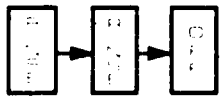

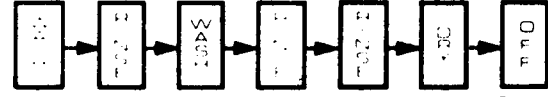

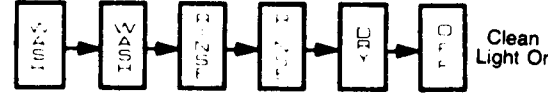

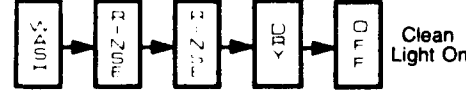



Select Cycle and Option

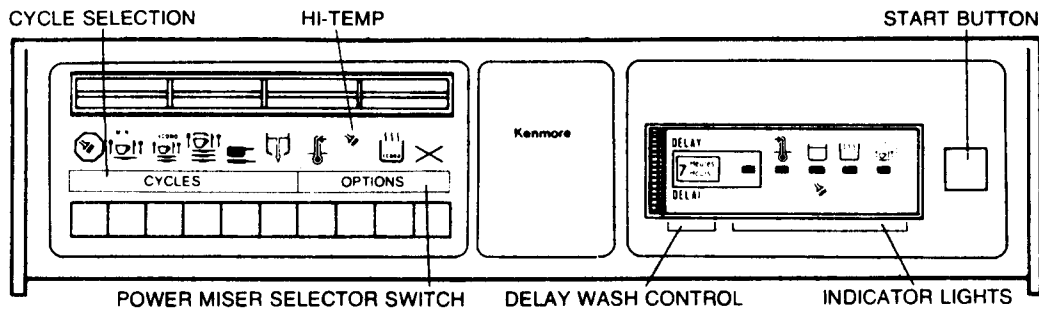
CYCLES: 10 PUSHBUTTON MODEL

Firmly press the correct button for the cycle you wish and push option selection button for desired option or options. Set Delay Wash if desired. Push start button. When the Delay indicator light is on, the dishwasher wash action will delay for the time shown in the window.

READ THIS CHART TO DECIDE WHICH CYCLE YOU SHOULD USE.

CYCLE	USE THIS CYCLE FOR:	WHAT HAPPENS IN THE CYCLE
 <p>POTS & PANS</p>	Extra washing action for heavy or cooked on soils	 <p>TIMER DELAYS IF WATER IS NOT PROPER TEMP. WATER HEATING HI-TEMP LIGHT IS ON</p> <p>In this cycle, the dishwasher will automatically heat the water in the first and second washes, and in the final rinse, if the water is not the proper temperature. Cycle time: Approximately 1-1/2 to 2 hours, depending on the time needed to heat the water.</p>
 <p>RINSE HOLD</p>	Rinse partial loads which will be washed later.	 <p>Cycle time: Approximately 10 minutes.</p>
 <p>NORMAL</p>	A double wash for normally soiled loads.	 <p>Cycle time: Approximately 60 minutes.</p>
 <p>ECONO</p>	For normal, everyday soiled loads. (The ENERGUIDE label data is based on this cycle).	 <p>Cycle time: Approximately 54 minutes.</p>
 <p>MINI WASH MINI</p>	Wash very lightly soiled dishes such as sandwich plates, dessert dishes, etc. NOTE: Before starting dishwasher, run water at sink until it is hot.	 <p>Cycle time: Approximately 55 minutes</p>
 <p>CANCEL AND DRAIN</p>	<p>Cancelling a cycle and selecting a new one</p> <p>or</p> <p>Turning off the dishwasher in the middle of a cycle and draining before selecting a new cycle</p> <p>or</p> <p>Turning off the CLEAN indicator light.</p>	<p>If you have selected a cycle and then change your mind, push the Cancel button. This cancels the cycle. Any water in the dishwasher will drain out of the tub. This takes up to 2 minutes. The "Rinse" light will glow during this time. When the drain is completed, all lights will go off, and a new cycle may be selected.</p> <p>If you have selected a cycle and don't want to complete it, push the Cancel and Drain button. When you restart the dishwasher, select a cycle. The new cycle will start from the beginning. Check the detergent dispenser. It may need to be refilled.</p>

NOTE: When a cycle is cancelled, the timer will rapidly advance to a drain. You will hear "clicks" as the timer moves to the drain position. This is a normal sound. At the end of a complete wash cycle, the CLEAN indicator light will come on. To turn off the CLEAN light, open the dishwasher door



Options



HI-TEMP.
WASHING

When this option is selected, water for the main wash and final rinse is heated to 145° F. (63° C.). As the water is heated, the Water Heat Light glows and washing action continues. The cycle time will be extended until the water reaches this temperature. It takes about one minute to raise water temperature one degree. This option is intended for use when washing heavily soiled dishes. WATER HEAT Option cannot be selected with LIGHT WASH or RINSE HOLD cycles.



HOT
RINSE

When this option is selected, the water for the final rinse will be heated to 145° F. (63° C.). As the water is heated, the Water Heat Light glows and rinsing action continues. The cycle time will be extended until the water reaches this temperature. Use this option to help dry dishes faster and reduce spotting.

HI-TEMP



ECONO
AIR
DRY

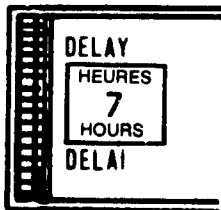
Push Air Dry button. Eliminates heat in the dry cycle. Leave the washed dish load in the latched dishwasher for several hours or overnight. Or, open the door fully for a few seconds to allow steam to escape. Raise the door to a closed position. Allow dishes to dry for several hours. **No-heat drying may result in some spotting of glasses or silver.** Items which do not dry easily (such as plastics) may need towel drying.



CANCEL
OPTION

If you want to change an option, press the Cancel Options button. A new option may be selected.

DELAY WASH



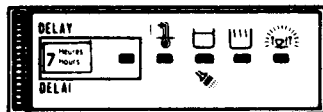
Delay Wash can be used when you want the dishwasher cycle to start 1/2 to 8 hours after the dishwasher is loaded. For example, use Delay Wash to set the dishwasher cycle to run in off-peak hours of electrical use.

To set Delay Wash:

1. Close the door **firmly**.
2. Select the number of hours (from 1/2 to 8 hours) you want the dishwasher to wait before the cycle starts.
3. Turn the Delay Wash Control down until the window shows the number of hours you selected. The control can be moved up or down to change your selection. If you are setting a delay time less than 1 hour, turn the control knob to 1 hour then back to the desired time. The Delay indicator light will glow when the Delay Control is set.
4. Firmly press the button for the desired cycle.
5. Press the desired Options button(s).
6. The Delay indicator light will glow until the dishwasher cycle starts. The Delay Wash window will show the approximate time remaining before the cycle begins. You can add an item to the dishwasher load if the Delay or the Wash indicator lights are on. Close the door firmly.

Indicator Lights

These lights glow during different portions of the cycle to let you know what your dishwasher is doing. The **Delay** light glows when the dishwasher cycle is set to come on at a later time. The **Wash** light glows until the last wash drains. The **Rinse** light glows during the two final rinses. The **Dry** light glows during heated drying, but is off if the **Econo Air Dry** option is selected. The **Clean** light glows when the dishwasher cycle is complete. To turn off the **Clean** light, open the dishwasher door.



The **Hi-Temp** light will glow to let you know that the dishwasher is delaying for water heating. Water heating occurs during the Pots and Pans cycle and when the Hi-Temp Wash is selected. The length of time this light stays on depends upon the temperature of the water entering the dishwasher. The lower the water temperature, the longer the light will stay on and the longer the dishwasher will operate. **Note: The light will not come on if the water is at the correct temperature.**

SYMBOL SYMBOLE	
	HEATER ELEMENT CHAUFFANT
	SETPOINT ADJUSTER REGULATEUR DE SETPOINT
	WET ASENT ADJUSTER BOITE DE PRELUV MOUILLANT
	FIL VALVE SOUPAPE DE REPLENIR
	OVERFILL SWITCH INTERDISSEUR DE TROP-PLEIN
	TEMPERATUR
	CABINET GROUND PRISE DE TERRE DE CABINE
	TIMER MOTOR MOTEUR DE MINUTIERE
	DOOR SWITCH INTERDISSEUR DE PORTE
	15 TEMP LIGHT LAMPE DE TEMP ELEVEE
	WASH LIGHT/WASHER LIGHT LAMPE DE LAVAGE/RECHAGE
	DELAY LIGHT LAMPE DU DELAI
	CLEAN LIGHT LAMPE DE NETTOYAGE
	DRY LIGHT LAMPE DE SECURAGE
	DELAY TIMER MOTOR MOTEUR DE DELAI, DELAI
	R.A. TIMER MOTOR MOTEUR DE MINUTIERE R.A.
	DELAY TIMER DELAJ DE MINUTIERE

