

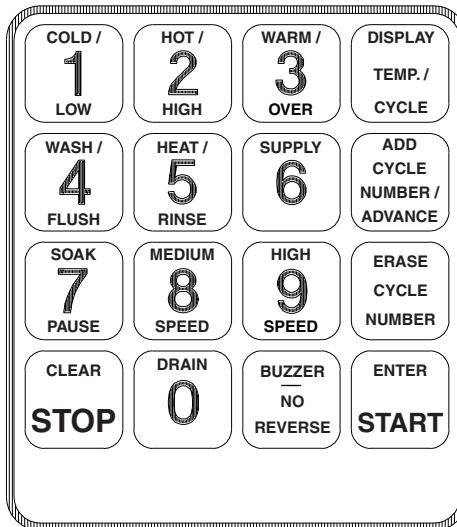
Washer-Extractor

Pocket Hardmount

Instructions for Operating the
WE-4 and WE-5 Microcomputers

UW50P4

Operation



PHM542N

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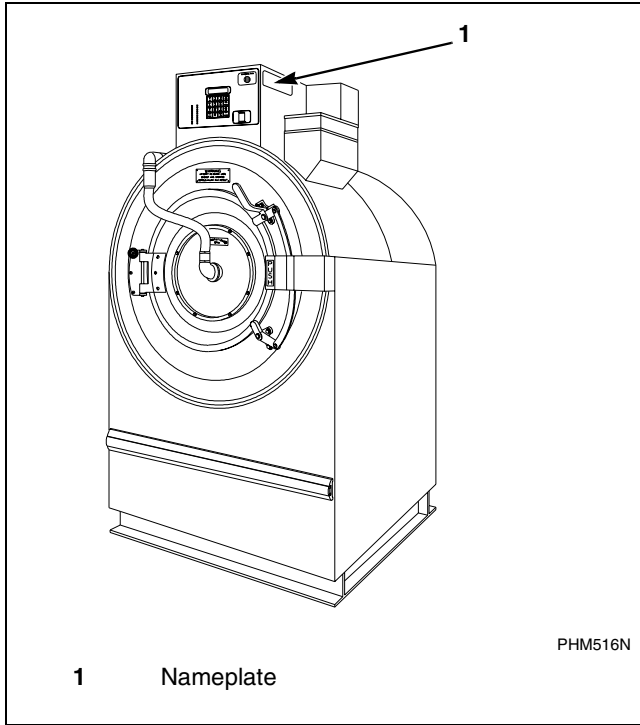
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Introduction

Nameplate Location

The nameplate is located at the top of the machine. Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance.



Replacement Parts

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name and address of the nearest authorized parts distributor.


Customer Service


For technical assistance, call any of the following numbers:


- (850) 718-1025
- (850) 718-1026
- Marianna, Florida U.S.A.
- (920) 748-3121
- Ripon, Wisconsin U.S.A.

Safety Information

Precautionary statements (“DANGER,” “WARNING” and “CAUTION”), followed by specific instructions, are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

	DANGER
DANGER indicates the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the danger is ignored.	

	WARNING
WARNING indicates the presence of a hazard that can cause severe personal injury, death, or substantial property damage if the warning is ignored.	


	CAUTION
CAUTION indicates the presence of a hazard that will or can cause minor personal injury or property damage if the caution is ignored.	

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

IMPORTANT: The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE: The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

Important Safety Instructions

	WARNING
To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:	
W023E	

1. Read all instructions before using the washer.
2. Refer to the *Grounding Instructions* in the installation manual for the proper grounding of the washer.
3. Do not wash textiles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry-cleaning solvents, or other flammable or explosive substances as they give off vapors that could ignite or explode.
4. Do not add gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
5. Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. **HYDROGEN GAS IS EXPLOSIVE.** If the hot water system has not been used for such a period, before using a washing machine or combination washer-dryer, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable; do not smoke or use an open flame during this time.
6. Do not allow children to play on or in the washer. Close supervision of children is necessary when the washer is used near children. This is a safety rule for all appliances.
7. Before the washer is removed from service or discarded, remove the door to the washing compartment.
8. Do not reach into the washer if the wash drum is moving.

Safety Information

9. Do not install or store the washer where it will be exposed to water and/or weather.
10. Do not tamper with the controls.
11. Do not repair or replace any part of the washer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out.
12. To reduce the risk of an electric shock or fire, DO NOT use an extension cord or an adapter to connect the washer to the electrical power source.
13. Use washer only for its intended purpose, washing textiles.
14. ALWAYS disconnect the washer from electrical supply before attempting any service. Disconnect the power cord by grasping the plug, not the cord.
15. Install the washer according to the ***Installation Instructions***. All connections for water, drain, electrical power and grounding must comply with local codes and be made by licensed personnel when required.
16. To reduce the risk of fire, textiles which have traces of any flammable substances such as vegetable oil, cooking oil, machine oil, flammable chemicals, thinner, or anything containing wax or chemicals such as in mops and cleaning cloths, must not be put into the washer. These flammable substances may cause the fabric to catch on fire by itself.
17. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
18. Keep washer in good condition. Bumping or dropping the washer can damage safety features. If this occurs, have washer checked by a qualified service person.
19. Replace worn power cords and/or loose plugs.
20. Be sure water connections have a shut-off valve and that fill hose connections are tight. CLOSE the shut-off valves at the end of each wash day.
21. Loading door MUST BE CLOSED any time the washer is to fill, tumble or spin. DO NOT bypass the loading door switch by permitting the washer to operate with the loading door open.
22. Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
23. Always follow the fabric care instructions supplied by the textile manufacturer.
24. Never operate the washer with any guards and/or panels removed.
25. DO NOT operate the washer with missing or broken parts.
26. DO NOT bypass any safety devices.
27. Failure to install, maintain, and/or operate this washer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.

NOTE: The WARNINGS and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining, or operating the washer.

Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.

Operation

General Information

This manual is designed as a guide to operating and maintaining your washer-extractor. It also serves as an aid to troubleshooting.

Read and be sure you understand this manual and any other literature included with your machine before attempting to start the machine. For warranty purposes, keep this manual, along with any other literature and the wiring diagrams which accompany the machine, in a safe place for ready reference. The first copy is included with your machine. Additional copies are available at a nominal charge.

Theory of Operation

NOTE: When power has been turned off from the machine and then reapplied, the display will read "WAIT" for approximately 30 seconds before the display changes to "NEXT 00".

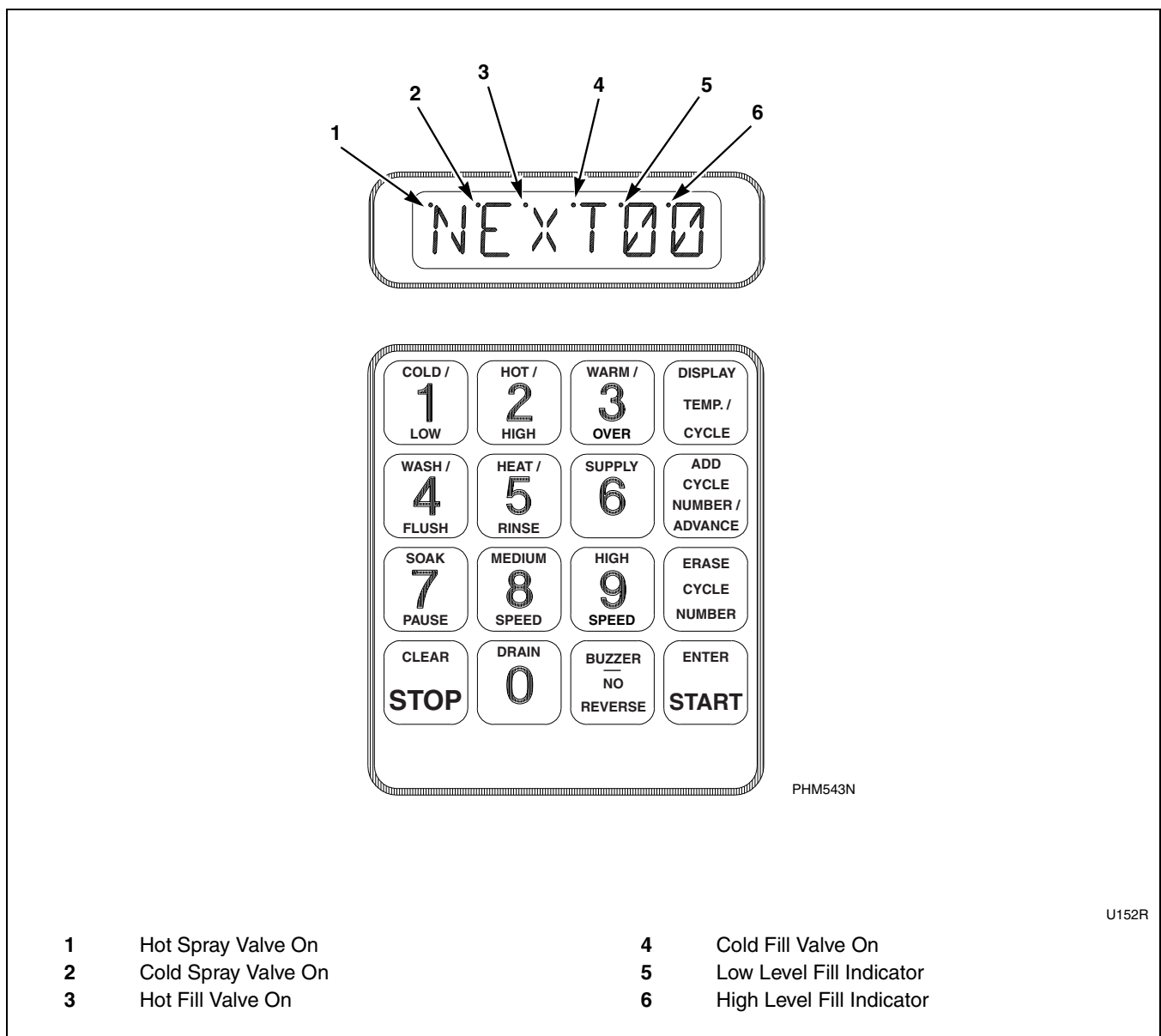


Figure 1

Operation

Start-Up

Turn on the main power source (breaker panel or cut-off switch on the wall). The front panel display should light up and show “WAIT 00” for 30 seconds followed by “NEXT 00” which means Select Cycle. This display will be on at all times that power is on indicating the machine is ready for loading and unloading.

NOTE: Throughout this manual, when display indications are referred to, these indications will pertain to the first four digits of the display reading left to right. The last two digits on the right side of the display will indicate either the last cycle used or the current cycle in process.

Loading

To load the washer, use left hand to press the door unlock button located on the lower right front of the control panel. Use right hand to turn door handle to the right. The door can then be opened.

Load linen until the machine is full. Partial loads are a waste of energy, water and chemicals and cause greater machine wear than full loads. If you do not have enough to fill the basket, wait until you do. Partial loads, if necessary, should only occur at the end of the day. Even then, they can usually be held until the next day when more linen is received.

IMPORTANT: If stringy items such as mop heads are to be washed, laundry nets should be used in order to prevent fouling of seals and drains.

Once loading is complete (you cannot overload the machine as far as harm to the machine is concerned; however, overloading can cause improper mechanical action and an inferior quality wash), close and lock the door making sure that all fabric is inside the basket. The machine should not start or run if the door is not both closed and locked.

Select Cycle

Find the cycle number (cycle numbers must be two-digit numbers) of the desired wash cycle from the cycle code list provided. Press (do not punch) with your finger the numbers desired on the keypad and note that this number is displayed instead of “NEXT”. When keys are pressed on the keypad, a beep will be heard. If an error is made, simply press the CLEAR key and then press the numbers again. As numbers are entered, they move from right to left on the display. Display will show “CY12” if cycle 12 is pressed.

NOTE: In order to Clear or Enter data, the display must be filled – i.e., no blank spaces.

Start Cycle

To start the cycle that has been selected, simply press the START key. If the cycle number selected is not in the computer memory, the display will show “NOGO”. If this happens, select another cycle. Otherwise, the display will now show the first step. (Example: “HL01”.) This number indicates the step number in the cycle as listed in the Selection List. As the cycle proceeds, the display will show the step being run and the cycle number selected.

If the door is not locked, the display will indicate “DOOR”. If this occurs, be sure the door is closed and locked and again press the START key. If the computer starts but the machine does nothing, this indicates the door hinge microswitch cam may need adjusting. The door hinge microswitch interlocks all 120 volt power to the controls with the exception of the computer itself.

As the cycle progresses, the display will show the step in the cycle that is being run as well as the cycle number. In addition, as water is being turned on to fill the machine, one or more of the four indicator lights above the first four digits (left to right) in the display will come on and stay on until the required water level is reached. Indicator lights above the last two digits on the right will indicate the water level(s) reached. When the indicator light in the next to last digit is illuminated, the low water level has been reached. Likewise, when the light in the last digit to the right illuminates, high water level has been reached. The cycle will continue until its completion and, at this time, the display will show “NEXT”.

Test Cycle

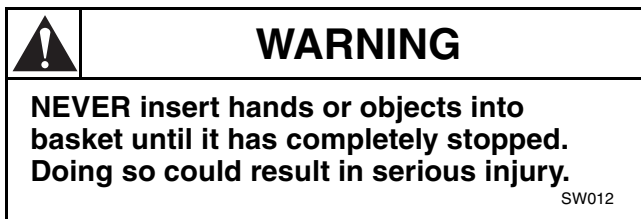
Cycle number 01 is a test cycle to check out all machine functions. The program for the cycle is shown following the copy of the Program Worksheet.

The first step is a cold fill to low level and is designed to give not quite enough time to complete a fill and cause the display to read “FILL”. When the START key is pressed again, it should continue to fill and proceed with the test cycle.

The steps in the test cycle are relatively short with the exception of step 3, step 15, and step 17. These can be shortened by pressing the ADVANCE key to go on to the next step.

End of Cycle

When the cycle is completed, the display will show “NEXT” plus the cycle number just run. To unload the machine, press the door unlock button and again open the door to remove contents and place them in the dryer.



To display temperature, press the DISPLAY TEMP. key. Display will read “---F” as long as the key is pressed and will update display automatically.

It is possible to skip to the next step in the cycle except a drain step. To do so, press the ADVANCE key. Drain procedures must be allowed to complete.

LED Display

When display shows letters and/or numbers with or without the beeper, refer to *Table 1*. The computer control in this machine is continuously on the alert for problems both within the machine and with the total installation. As the computer sees a problem, it immediately flashes a letter or number or both on the display and may activate the beeper as well. *Table 1* shows the various displays and what they mean. The operator should become familiar with these computer displays.


Operation

Display Interpretations			
Display	Meaning	Display	Meaning
DOOR	Door not locked problem	SK	Soak
EMTY	Empty problem	S1	Supply #1 (Soap/Break)
FILL	Fill problem	S2	Supply #2 (Bleach)
SDLY	Spin coast delay	S3	Supply #3 (Softener/Sour)
NEXT	Select cycle or open door or program	S4	Supply #4 (as needed)
NOGO	Cycle not available	S5	Supply #5 (as needed)
STOP	Stop key has been pressed or end of cycle	TH	Controlled Temperature Fill to High Level
01/4	One quarter hour (soak intervals)	TL	Controlled Temperature Fill to Low Level
A1	Buzzer or Auxiliary Output	TO	Controlled Temperature Overflow
CF	Cold flush	NO FILL	Indicates machine cannot add heat due to low level fill not being reached
CH	Cold Fill to High Level	W1	Wash #1 (Regular Reversing)
CL	Cold Fill to Low Level	W2	Wash #2 (Gentle Reversing)
CO	Cold Fill to Overflow	W3	Wash #3 (No Agitation)
CR	Cold Rinse	WF	Warm Flush
CY	Cycle Number	WH	Warm Fill to High Level
DR	Drain	WL	Warm Fill to Low Level
F	Heat select temperature (F--) in degrees F	WO	Warm Fill to Overflow
OH	Auxiliary heat in minutes (no hours)	WR	Warm Rinse
HF	Hot Flush	••••••	Dots indicate water valves turned on
HH	Hot Fill to High Level	•	Left dot – hot spray valve
HL	Hot Fill to Low Level	•	2nd dot from left – cold spray valve
HO	Hot Fill to Overflow	•	3rd dot from left – hot fill valve
HR	Hot Rinse	•	4th dot from left – cold fill valve
HS	High Speed Spin	•	5th dot from left – low level fill reached
HT	Heat (steam or electric)	•	6th dot from left – high level fill reached
M	Minutes (used when programming time)	PAUSE 5	Paused during Cycle (see explanation in this manual)
MS	Medium Speed Spin		

Table 1

NOTE: For further explanation of problem indication displays, consult *Test Procedure* section of this manual.

Test Procedure

	WARNING
<p>Serious shock may occur. Open primary disconnect switch before attempting any repairs.</p>	
W447	

1. The WE-4 and WE-5 Programmable Computer, with its display/fuse board should be easier to maintain than other type controls. The following procedure should help to eliminate problems and determine if components are defective.
2. Test equipment required:
 - a. 20K OHM/Volt AC-DC voltmeter
 - b. Programmable computer diagram, WE-4 page 43, WE-5 page 44.
 - c. Display board diagram, drawing #2091
3. Power Up
 - a. When AC power is turned on, after 30 seconds the computer should read "NEXT".
 - b. Door unlock solenoid should work if Door Unlock button is depressed.
 - c. If these are correct, go to step 5.
4. If computer does not read "NEXT" or does not light:
 - a. Examine display board; the door light (DR) should be on and all others off.
 - b. If not, check 2 AMP fuse on side of module.
 - c. Check for 115 volts AC between AC HOT (ACH) and AC NEUTRAL (ACN) at top center of display board. (Ref. Drawing #2091)
 - d. Be certain that all plugs are correctly installed on the computer board.
 - e. If all above check OK, remove the 6 pin plug (J-1) just above the transformer on the computer board. Carefully check for 115 volt AC between pins 1 and 6; if correct voltage is there, replace computer board.
5. If computer reads "NEXT":
 - a. Test the keypad, first with the keyed mode switch in the Run position. A beep tone should sound as each key is pressed.
 - b. When the DISPLAY TEMP. key is pressed, the computer display should change to show the temperature inside the sump. When key is released, the display should return to previous read-out.
 - c. Turn the keyed mode switch to Program and press "Display/Cycle". Read-out should show "CY--". Then press 0 twice.
 - d. Press the CLEAR/STOP key. Display should return to "NEXT".
 - e. Return Mode switch to the Run position.
6. If keypad does not function as above:
 - a. Check the plug at the bottom center of computer board for proper installation. (P-1)
 - b. If the plug is correct, proceed to "Replacing Keypad" section.
7. Test Cycle
 - a. Cycle 01 is a preprogrammed test cycle. If it has not been erased, it may be used to check all functions of the machine.
 - b. Start this cycle by pressing 0, then 1, then the START key.
 - c. Display should show "CL01" with two dots indicating water valves turned on. (Refer to *Table 1*.)
 - d. On the display/fuse board inside the control module, these lights should be lit: Cold Fill (CF), Cold Spray (CS), Drain (DN), plus Forward (FW) and Reverse (RV) should alternate on and off. (Ref. Drawing No. 2091)
 - e. Printed program will indicate which lights to expect for each step. (Ref. Cycle 01 as shown in this manual)
8. If read-out is OK but no lights are lit on display/fuse board:
 - a. Check 2 AMP fuse and door hinge microswitch.
 - b. Check thermal overload indicator light on side of control module. If lit, thermal overload circuit is open.

NOTE: Keys should be pressed at their centers and only hard enough to activate them. With the computer showing "NEXT", press each of the 15 keys not including the START key and listen for each beep. After pressing all 15 keys (except START), press 0 twice then press the START key. Display should read "NOGO00".

Operation

9. If only one light on display/fuse board not lit:
 - a. Check the fuse on the fuse board associated with that light.
 - b. If fuse is OK, check jumpers between computer and display board, J4 and J5, making sure J4 on display board is connected to J4 plug on computer board, etc.
 - c. If the fuse is blown, check the related valve or relay for shorted condition before replacing the fuse with one of the same size.
 - d. Use similar procedure for any individual function which does not work.
10. "DOOR" Alarm
 - a. Computer has not been told that door is locked.
 - b. Check switch activator tab on extension arm.
 - c. Check door lock switch.
 - d. Check input plug, J3, on computer board.
11. "FILL" Alarm
 - a. Computer has not been told that water level was reached in the allotted time.
 - b. Check for leaks in air system between level switches and water level air chamber.
 - c. Check for obstruction in water level air chamber or tubing.
 - d. Check for obstructions or low pressure in water supply system.
 - e. Check for failed drain solenoid.
12. "EMPTY" Empty Alarm
 - a. Computer has not been told that level reached empty in the allotted time.
 - b. Check for obstructions in air system to level switches.
 - c. Check for slow drain.

NOTE: Sufficient time for filling and draining must be allowed when a program is written into the computer. If a "FILL" or "EMPTY" alarm occurs only in one program, edit that program and re-enter it into the computer making sure enough time has been allowed for fill and/or drain.

13. No Spin, Rest of Program OK:
 - a. When a spin is called for (medium or high speed) the computer looks for an out-of-balance condition and an empty condition.

NOTE: Computer will look for out-of-balance three (3) times. If balance condition is not corrected, computer will advance to next step without completing spin cycle.

- b. Check input plug, J3, on computer.
 - c. Check balance switch inside "A" Frame.
 - d. Check water level and drain line.
14. "NO FILL" Alarm
 - a. The computer has not received a low level fill signal prior to an auxiliary "HEAT" step.
 - b. Check as for "FILL" Alarm as in step 11.
 15. Spins too soon after "SOAK" step:
 - a. Check for leaks in pressure system to water level switches.
 16. Temperature indication inconsistent:
 - a. Temperature probe is short circuited.
 - b. If reading is 53°F and does not change, temperature probe circuit is open.
 - c. Check input plug, J3, on computer.
 - d. Replace temperature probe in sump.
 17. If the above procedures and troubleshooting have failed to determine the problem, call the factory.

Motor Thermal Overload Indicator

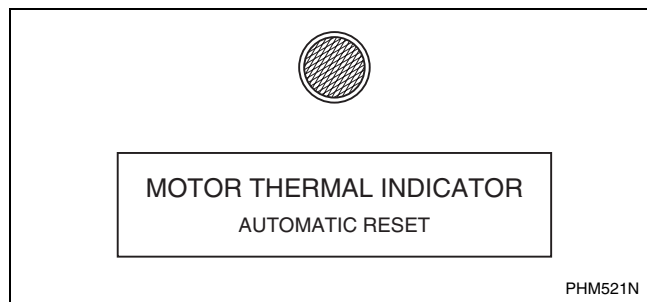


Figure 2

Located on the side of the control module is a small indicator lamp with the above descriptive decal.

When this lamp is lit, it indicates that there is an open thermal overload switch on the motor(s) which shuts off the A.C. power to the computer board thereby preventing damage to the motor(s) caused by overheating and/or an overload condition.

This feature is provided to protect the motor and extend the life of the motor. The thermal overload switch will automatically reset itself after the excessive heat condition has subsided; however, before attempting to restart the machine, always check to find out the reason for the overload (e.g., machine not fully drained before spin, defective motor, continual out of balance condition, low voltage, loss of one phase on three phase motor, failed bearings, air circulation blocked to motor fan). The thermal overload switch should not open under normal operating conditions. Failure to take corrective action when the indicator lamp is lit will ultimately result in damage to the motor(s).

	WARNING
<p>This machine must be installed, adjusted, and serviced by qualified electrical maintenance personnel familiar with the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury and/or equipment damage, and may void the warranty.</p>	
SW004	

If you have difficulty in locating the problem, do not hesitate to call the factory.

