

# Washer-Extractors

## Pocket Hardmount Instructions for Operating and Programming the Mechanical Timer

UW35M2  
UW60M2

Operation/Programming





WASH CYCLES

WHITE	PERM'T PRESS	COLORS	BRIGHT COLORS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WARM HOT COLD	WARM WARM COLD	COLD WARM COLD	COLD - SOAK COLD - WASH COLD - RINSE

ON

WASH

BLEACH

SOFTENER

**OPERATING INSTRUCTIONS**

- PRESS ON/OFF TO ON POSITION.
- TO OPEN DOOR- PRESS DOOR UNLOCK BUTTON AND PULL DOOR HANDLE TO THE RIGHT
- LOAD CLOTHES.
- CLOSE AND LOCK DOOR BY PUSHING DOOR HANDLE TO THE LEFT AS FAR AS IT WILL GO.
- SELECT WASH TEMPERATURE.
- PRESS START SWITCH.

ON



OFF

START



DOOR



PRESS AND HOLD

PN 23067

Para bajar una copia de estas instrucciones en español, visite [www.comlaundry.com](http://www.comlaundry.com).

**Keep These Instructions for Future Reference.**

(If this machine changes ownership, this manual must accompany machine.)





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# Safety Information

## Explanation of Safety Messages

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.

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

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

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

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

	<b>WARNING</b>
<b>To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:</b>	
W023	

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, kerosene, waxes, cooking oils, 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. Never wash machine parts or automotive parts in the machine. This could result in serious damage to the basket.
15. ALWAYS disconnect the washer from electrical supply before attempting any service. Disconnect the power cord by grasping the plug, not the cord.
16. 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.
17. 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, etc., 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.
18. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
19. 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.
20. Replace worn power cords and/or loose plugs.
21. 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.
22. 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.
23. 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).
24. Always follow the fabric care instructions supplied by the textile manufacturer.
25. Never operate the washer with any guards and/or panels removed.
26. DO NOT operate the washer with missing or broken parts.
27. DO NOT bypass any safety devices.
28. 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.

	<b>WARNING</b>
<p><b>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.</b></p>	
SW004	

	<b>CAUTION</b>
<p><b>Ensure that the machine is installed on a level floor of sufficient strength and that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.</b></p>	
SW020	

	<b>CAUTION</b>
<p><b>Be careful around the open door, particularly when loading from a level below the door. Impact with door edges can cause personal injury.</b></p>	
SW025	

	<b>WARNING</b>
<p><b>Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.</b></p>	
SW014	

## Safety Information

### Safety Decals

Safety decals appear at crucial locations on the machine. Failure to maintain legible safety decals could result in injury to the operator or service technician.

To provide personal safety and keep the machine in proper working order, follow all maintenance and safety procedures presented in this manual. If questions regarding safety arise, contact the manufacturer immediately.

Use manufacturer-authorized spare parts to avoid safety hazards.

## Operator Safety

	<b>WARNING</b>
<p><b>NEVER insert hands or objects into basket until it has completely stopped. Doing so could result in serious injury.</b></p>	
SW012	

To ensure the safety of machine operators, the following maintenance checks must be performed daily:

1. Prior to operating the machine, verify that all warning signs are present and legible. Missing or illegible signs must be replaced immediately. Make certain that spares are available.
2. Check door interlock before starting operation of the machine:
  - a. Attempt to start the machine with the door open. The machine should not start with the door open.
  - b. Close the door without locking it and attempt to start the machine. The machine should not start with the door unlocked.
  - c. Close and lock the door and start a cycle. Attempt to open the door while the cycle is in progress. The door should not open.

If the door lock and interlock are not functioning properly, call a service technician.
3. Do not attempt to operate the machine if any of the following conditions are present:
  - a. The door does not remain securely locked during the entire cycle.
  - b. Excessively high water level is evident.
  - c. Machine is not connected to a properly grounded circuit.

Do not bypass any safety devices in the machine.

	<b>WARNING</b>
<p><b>Never operate the machine with a bypassed or disconnected balance system. Operating the machine with severe out-of-balance loads could result in personal injury and serious equipment damage.</b></p>	
SW039	

## Safe Operating Environment

Safe operation requires an appropriate operating environment for both the operator and the machine. If questions regarding safety arise, contact the manufacturer immediately.

### Environmental Conditions

- *Ambient Temperature.* Water in the machine will freeze at temperatures of 32°F (0°C) or below.
- Temperatures above 120°F (50°C) will result in more frequent motor overheating and, in some cases, malfunction or premature damage to solid state devices that are used in some models. Special cooling devices may be necessary.
- Water pressure switches are affected by increases and decreases in temperature. Every 25°F (10°C) change in temperature will have a 1% effect on the water level.
- *Humidity.* Relative humidity above 90% may cause the machine's electronics or motors to malfunction or may trip the ground fault interrupter. Corrosion problems may occur on some metal components in the machine.
- If the relative humidity is below 30%, belts and rubber hoses may eventually develop dry rot. This condition can result in hose leaks, which may cause safety hazards external to the machine in conjunction with adjacent electrical equipment.
- *Ventilation.* The need for make-up air openings for such laundry room accessories as dryers, ironers, water heaters, etc., must be evaluated periodically. Louvers, screens, or other separating devices may reduce the available air opening significantly.
- *Radio Frequency Emissions.* A filter is available for machines in installations where floor space is shared with equipment sensitive to radio frequency emissions.
- *Elevation.* If the machine is to be operated at elevations of over 3280 feet (1000 m) above sea level, pay special attention to water levels and electronic settings (particularly temperature) or desired results may not be achieved.
- *Chemicals.* Keep stainless steel surfaces free of chemical residues.

	<b>DANGER</b>
<p><b>Do not place volatile or flammable fluids in any machine. Do not clean the machine with volatile or flammable fluids such as acetone, lacquer thinners, enamel reducers, carbon tetrachloride, gasoline, benzene, naphtha, etc. Doing so could result in serious personal injury and/or damage to the machine.</b></p>	
<small>SW002</small>	

- *Water Damage.* Do not spray the machine with water. Short circuiting and serious damage may result. Repair immediately all seepage due to worn or damaged gaskets, etc.

### Machine Location

- *Foundation.* The concrete floor must be of sufficient strength and thickness to handle the floor loads generated by the high extract speeds of the machine.
- *Service/Maintenance Space.* Provide sufficient space to allow comfortable performance of service procedures and routine preventive maintenance.

Consult installation instructions for specific details.

	<b>CAUTION</b>
<p><b>Replace all panels that are removed to perform service and maintenance procedures. Do not operate the machine with missing guards or with broken or missing parts. Do not bypass any safety devices.</b></p>	
<small>SW019</small>	

### Input and Output Services

- *Water Pressure.* Best performance will be realized if water is provided at a pressure of 30 – 85 psi (2.0 – 5.7 bar). Although the machine will function properly at lower pressure, increased fill times will occur. Water pressure higher than 100 psi (6.7 bar) may result in damage to machine plumbing. Component failure(s) and personal injury could result.
- *Steam Heat (Optional) Pressure.* Best performance will be realized if steam is provided at a pressure of 30 – 80 psi (2.0 – 5.4 bar). Steam pressure higher than 125 psi (8.5 bar) may result in damage to steam components and may cause personal injury.
- For machines equipped with optional steam heat, install piping in accordance with approved commercial steam practices. Failure to install the supplied steam filter may void the warranty.
- *Drainage System.* Provide drain lines or troughs large enough to accommodate the total number of gallons that could be dumped if all machines on the site drained at the same time from the highest attainable level. If troughs are used, they should be covered to support light foot traffic.
- *Power.* For personal safety and for proper operation, the machine must be grounded in accordance with state and local codes. The ground connection must be to a proven earth ground, not to conduit or water pipes. Do not use fuses in place of the circuit breaker. An easy-access cutoff switch should also be provided.

	<b>WARNING</b>
<p><b>Ensure that a ground wire from a proven earth ground is connected to the ground lug near the input power block on this machine. Without proper grounding, personal injury from electric shock could occur and machine malfunctions may be evident.</b></p>	
<small>SW008</small>	

Always disconnect power and water supplies before a service technician performs any service procedure. Where applicable, steam and/or compressed air supplies should also be disconnected before service is performed.

# Operation

This manual is designed as a guide to operating and programming the UW35 and UW60 rigid-mount washer-extractor equipped with the mechanical timer control.

The manuals, installation instructions, and wiring diagrams which accompany the machine have been included with the machine at no charge. Additional copies are available at a nominal charge.

**NOTE: Read this manual thoroughly before attempting to operate the machine.**

**NOTE: Do not use this manual in conjunction with earlier model UW machines. Do not use technical literature intended for earlier models when operating this machine.**

**NOTE: All information, illustrations, and specifications contained in this manual are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.**

## Customer Service

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

For technical assistance, call (920) 748-3121 Ripon, Wisconsin.

A record of each machine is on file with the manufacturer. Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance.

## Operation

### Machine Familiarization

The machine familiarization guide in *Figure 1* identifies major operational features of the UW washer-extractor.

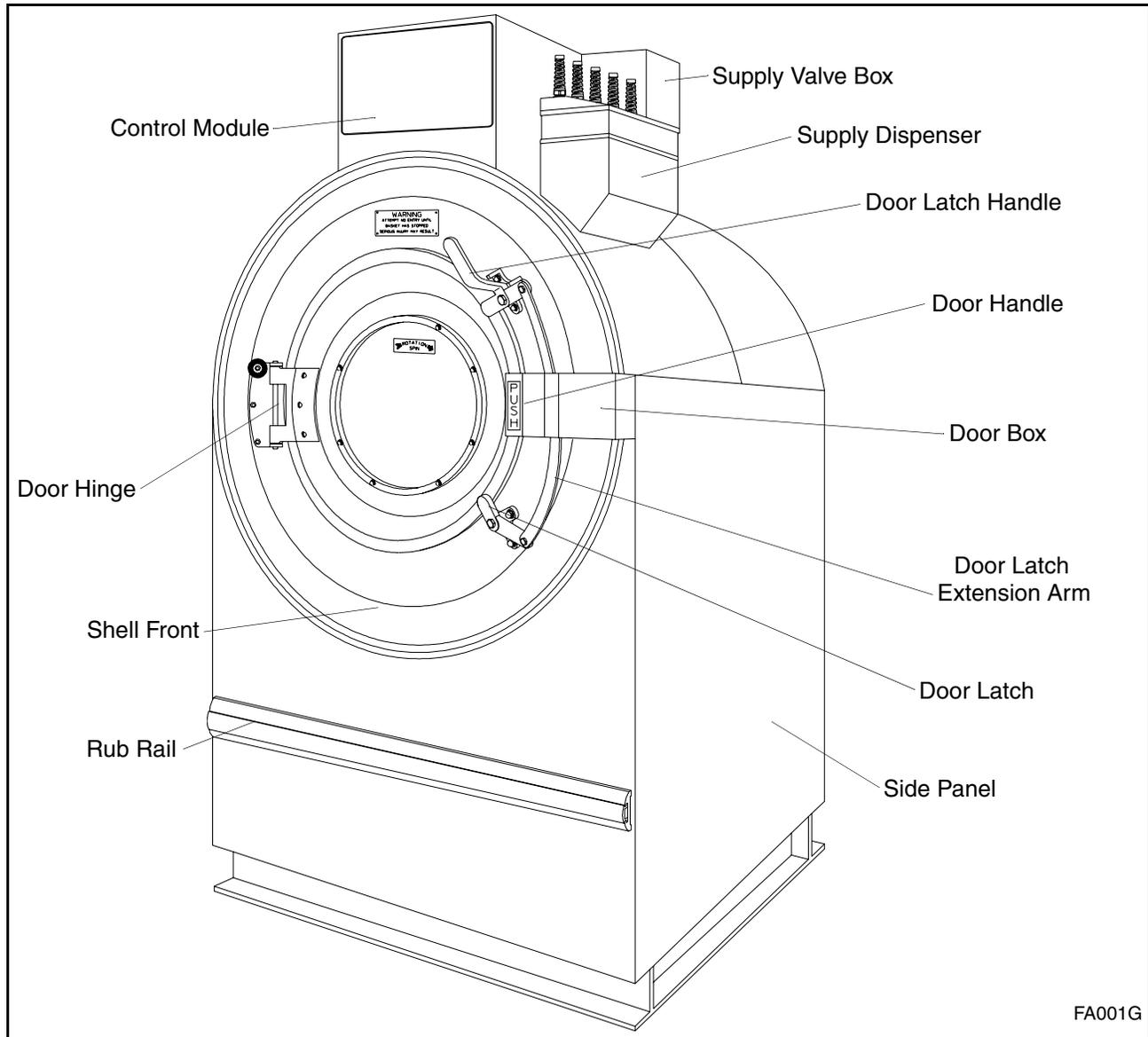


Figure 1

## Theory Of Operation

The design of the machine emphasizes performance reliability and long service life. The cylinder, shell, and main body panels are fabricated of stainless steel.

Electrical controls for the machine are housed in a separate enclosure located on the top of the machine. Removing the screws from the module cover, lifting the cover, and pulling to the rear provides access to the control module. This module contains the mechanical timer, contactors, water-level switch, and other control components.

All models use one 2-speed motor to drive the cylinder via a V-belt drive in both speeds. The cylinder is supported via the shaft by two bearings. The UW35 uses two ball bearings held in place by a single cast-iron housing that is bolted to the A-frame. The UW60 uses two flange-mounted, spherical roller bearings bolted to the A-frame.

The cylinder is constructed with lifters or ribs that lift the laundry from the bath solution when the cylinder rotates at slow speed and then allow the laundry to tumble back into the bath. This mechanical action accomplishes the washing function. The cylinder is perforated, allowing the water to drain from within during the wash and extract steps.

On the UW60, a balance switch is installed between the faces of the A-frame to signal the controls to slow the machine when a severely out-of-balance load occurs during extract.

Water enters the machine through electromechanical water valves controlled by the mechanical timer. The mechanical timer also controls the drain and door lock. In addition, the timer selects the water levels according to the selected cycle. A vacuum breaker is installed in the water-inlet plumbing to prevent backflow of water.

The standard production UW 2-speed model uses a single drain valve. (A dual drain is available as an option.) The drain valve is normally open, which means that it closes only when power is applied, thus allowing the machine to drain in the event of a power failure.

A door-lock system prevents opening of the stainless steel door when a cycle is in progress. It also prevents operation of the machine when the door is open. The doorbox contains the door-lock microswitch, door-closed magnetic switch, and the door-unlock solenoid.

The UW35 shaft seal assembly includes two lip seals integrated into the cast-iron bearing housing. Each seal has two lips which make contact with a polished stainless steel bushing mounted to the shaft.

The UW60 shaft seal assembly includes a brass collar held in place on the cylinder shaft with set screws. The collar has a flange with a ceramic ring which makes contact with a spring-loaded phenolic face seal enclosed in a nylon housing mounted on the rear of the shell. The collar contains two internal O rings which maintain contact with the cylinder shaft.

The polypropylene supply dispenser is mounted on the right side of the washer-extractor, viewed from the front. The dispenser has 5 supply compartments, numbered 1–5, starting from the rear of the machine. The compartments hold plastic supply cups that are used for either liquid or dry supplies. A nozzle flushes supplies from the cups with water at the appropriate time in the cycle.

Liquid supplies can be injected directly into the cups by a customer-supplied external chemical supply system. Five hose strain reliefs on top of the supply dispenser facilitate connection to an external supply system. A terminal strip inside a compartment attached to the left side of the control module, viewed from the rear of the washer-extractor, provides connection points for external supply signals.

**Operation**

**Display Indications**

Figure 2 shows the control panel for mechanical timer-controlled machines.

The red light labeled “ON” on the control panel illuminates when a cycle is started and will stay illuminated until the completion of the cycle.

The amber light labeled “BLEACH” on the control module illuminates at the beginning of the wash step, once water level is reached (and cycle temperature has been reached on auxiliary heat models). This indicates when the machine is flushing supply dispenser compartment 3.

The amber light labeled “WASH” on the control module illuminates during fill, heat, and agitation steps.

The amber light labeled “SOFTENER” on the control module illuminates at the beginning of the third rinse step. This indicates when the machine is flushing supply dispenser compartments 4 and 5.

The cycle indicator dial on the control module displays the current cycle step.

The depressed push button on the cycle selector switch indicates the currently selected cycle.

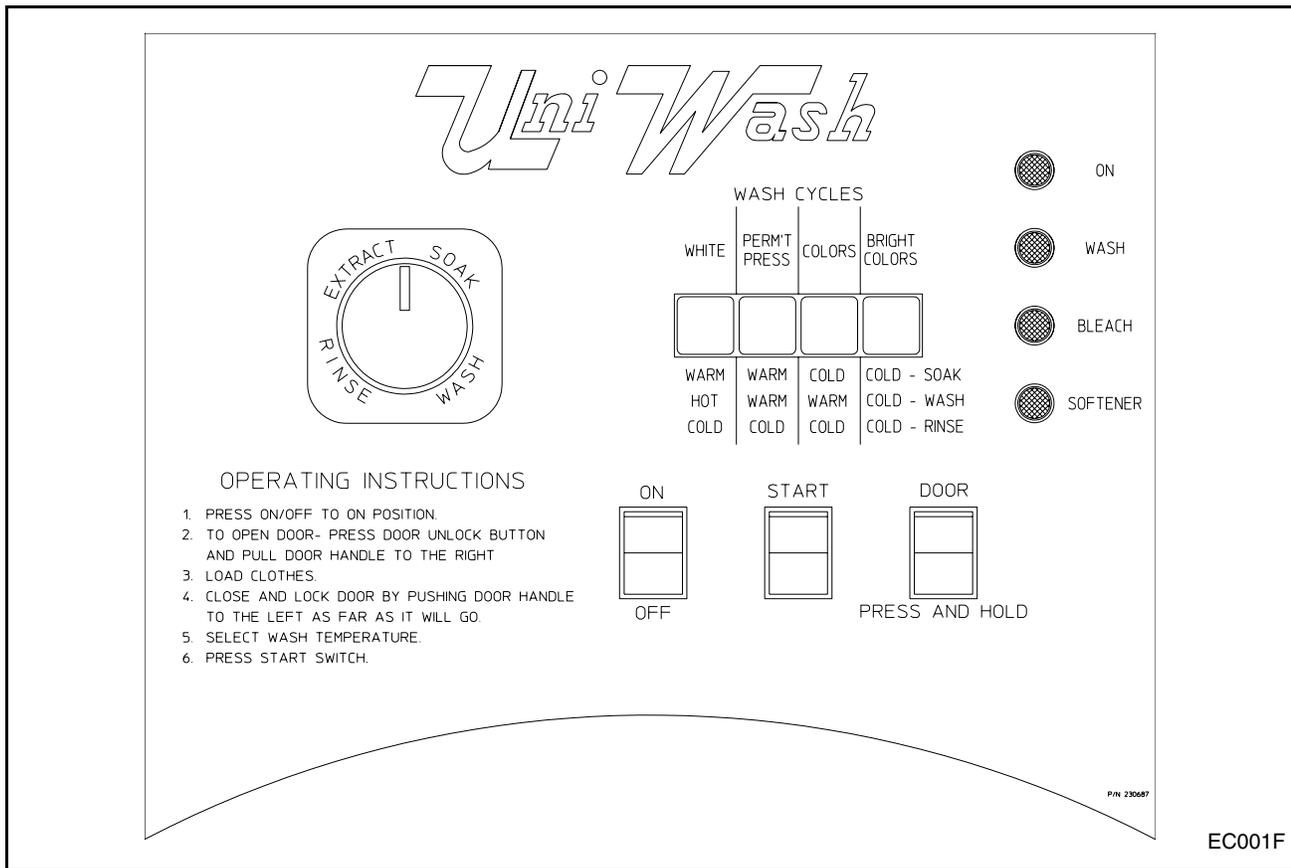


Figure 2

## Start-up

Switch the **ON/OFF** rocker switch on the control module to the **ON** position.

## Opening Door

Use left hand to press and hold the door unlock button located on the lower right front of the control panel. Use right hand to turn door handle clockwise and swing the door left to open. See *Figure 3*.

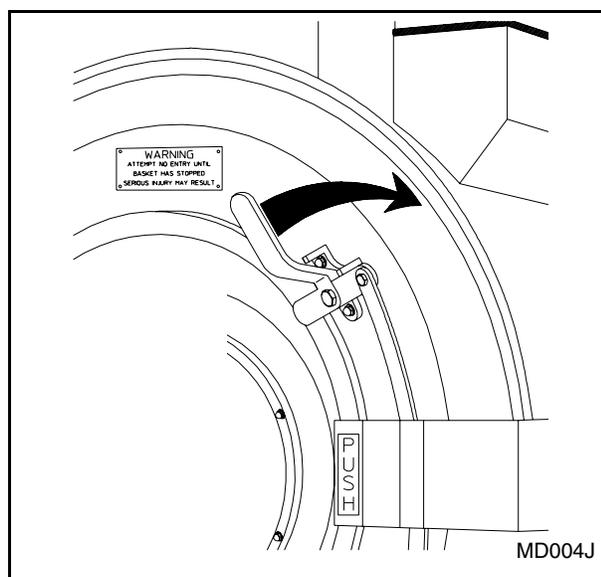


Figure 3

The door will not open if the timer pointer is not in the vertical position at the top of the dial. If the pointer is not vertical, the timer must be rapid-advanced until the timer pointer is in the vertical position. The rapid-advance procedure is as follows:

1. Press and hold the **START** button. The timer will begin rapid-advancing through the cycle.
2. Release the **START** button when the timer stops advancing.
3. Wait one minute.
4. The door unlock button will be enabled, allowing the door to be opened.

## Loading

	<b>CAUTION</b>
<p><b>Be careful around the open door, particularly when loading from a level below the door. Impact with door edges can cause personal injury.</b></p>	
SW025	

Load the machine to full capacity whenever possible, but do not exceed the rated dry-weight capacity of the machine if the fabric to be washed is quite dense, closely woven, and heavily soiled. Overloading can result in an inferior wash. The operator may need to experiment to determine load size based on fabric content, soil content, and level of cleanliness required.

Partial loads are a waste of energy, water, and chemicals, and cause greater machine wear than full loads. Partial loads also increase the possibility of a severe out-of-balance condition.

	<b>WARNING</b>
<p><b>Never operate the machine with a bypassed or disconnected out-of-balance switch. Operating the machine with severe out-of-balance loads could result in personal injury and serious equipment damage.</b></p>	
SW010	

When loading is complete, ensure that all fabric is inside the basket. Then close and lock the door. The machine should not start or run unless the door is both closed and locked.

	<b>CAUTION</b>
<p><b>Check the door safety interlock daily before the machine is placed in operation.</b></p>	
SW024	

**NOTE: When washing items which may disintegrate or fragment, such as mop heads or sponges, use laundry nets to prevent drain blockage.**

## Operation

### Supply Dispenser

Dry supplies are placed in the supply dispenser compartment cups prior to the start of each cycle.

Liquid supplies can be injected directly into the supply dispenser by an external chemical supply system.

**NOTE: Supply dispenser compartment cups should not be removed when an external chemical injection supply system is attached to the washer-extractor.**

The supply system flushes at preset times in the wash cycle. Refer to the following tables for more details.

Supply Dispenser Flush Times	
Compartment	Time
1	Prewash and Wash Fill
2	Wash Fill
3	Wash After Fill
4	Rinse 3 Fill
5	Rinse 3 Fill

Supply Signal Output Times	
Output	Time
1	Prewash and Wash Fill
2	Wash Fill
3	Wash After Fill
4	Rinse 3 Fill
5	Rinse 3 Fill

## Cycle Selection

The push button cycle selector switch on the control module provides a selection of four complete automatic cycles. See the table below for more information.

Press the **START** button to start the selected cycle.

Mechanical Timer Cycles						
Step	Time (Min)*	Water Level	Program Water Temperature			
			White	Permanent Press	Colors	Bright Colors
<b>Prewash</b>	2	High	Warm	Warm	Cold	Cold**
<b>Drain</b>	1					
<b>Auxiliary Heat Wash Step Temperature †</b>			194 °F / 90 °C	140 °F / 60 °C	104 °F / 40 °C	86 °F / 30 °C
<b>Wash</b>	4	Low	Hot	Warm	Warm	Cold
<b>Drain</b>	1					
<b>Extract</b>	0.5					
<b>Rinse 1</b>	1.5	High	Cold	Cold	Cold	Cold
<b>Drain</b>	1					
<b>Extract</b>	0.5					
<b>Rinse 2</b>	1.5	High	Cold	Cold	Cold	Cold
<b>Drain</b>	1					
<b>Extract</b>	0.5					
<b>Rinse 3</b>	1.5	High	Cold	Cold	Cold	Cold
<b>Drain</b>	1					
<b>Extract</b>	4					
<b>Shakeout</b>	0.5					

\*Cycle times are for the factory-preset jumper configuration and do not include fill and heat times. See the Programming section for more information.  
 \*\*Auxiliary heat-equipped models only. Standard models do not have a prewash step in the Bright Colors cycle.  
 †Auxiliary heat-equipped models only.

## Operation

### Cycle Execution

**NOTE: The following description is for the factory-preset program. Prewash times, wash times, final extract times, fill levels, and water temperatures may vary depending on jumper configuration. See the Programming section for more details.**

The program timer advances one step every thirty seconds, except during fills.

#### Prewash

After the **START** button has been pressed, the door unlock button is disabled, the drain valve closes, the red “ON” indicator light illuminates, and the water inlet valve(s) opens to fill the machine with water to high level.

The door unlock button will remain disabled and the red “ON” indicator light will remain illuminated for the duration of the cycle.

The cylinder rotates clockwise at wash speed during each fill.

The amber indicator light labeled “WASH” illuminates during fill, heat, and agitation steps.

External chemical supply signal output 1 energizes and supply dispenser compartment 1 flushes throughout the duration of this fill.

When high water level is reached, the water valve(s) closes and the washing action begins.

Standard washing action is as follows: 12 seconds rotation clockwise at wash speed, a 3-second pause, then 12 seconds rotation counterclockwise at wash speed.

The Bright Colors cycle uses a gentle washing action: 3 seconds rotation clockwise at wash speed, a 12-second pause, then 3 seconds rotation counterclockwise at wash speed.

After two minutes of washing action, the drain valve opens.

#### Wash

After the machine has drained, the drain valve closes and the water inlet valve(s) opens to fill the machine with water to low level.

External chemical supply signal output 2 energizes and supply dispenser compartment 2 flushes throughout the duration of this fill.

External chemical supply signal output 1 energizes and supply dispenser compartment 1 flushes throughout the duration of this fill.

On standard models, the amber indicator light labeled “BLEACH” illuminates after water level is reached and remains illuminated for 1 minute. The machine resumes the washing action once low water level is reached. External chemical supply signal output 3 energizes and supply dispenser compartment 3 flushes once low water level is reached.

On models equipped with auxiliary heat, the timer will stop and the heating system will activate once the water level is reached. The timer will resume once cycle temperature is achieved, illuminating the amber indicator light labeled “BLEACH,” energizing external chemical supply signal output 3, and flushing supply dispenser compartment 3 for 1 minute.

When the wash step is completed, the drain valve opens. After the machine has drained, the machine performs a 30-second intermediate extract.

#### Rinse 1

After the intermediate extract step, the machine closes the drain valve and opens the cold water inlet valve to fill the machine to high level.

Once high level is reached, the washing action resumes for 90 seconds.

The drain then opens. After the machine has drained, the machine performs a 30-second intermediate extract.

#### Rinse 2

Rinse 2 is identical to rinse 1.

### Rinse 3

After the second intermediate extract, the machine closes the drain valve and opens the cold water inlet valve to fill the machine to high level.

The amber indicator light labeled “SOFTENER” illuminates at the beginning of the fill, and remains illuminated for 1 minute.

External chemical supply signal outputs 4 and 5 energize, and supply dispenser compartments 4 and 5 flush for 1 minute during this fill.

Once high level is reached, the washing action resumes for 90 seconds.

The drain then opens. Once the machine has drained, the machine performs a four-minute final extract.

A 30-second shakeout is then executed, completing the cycle.

A 30-second delay is in effect after the “ON” light goes off before the door unlock button is enabled.

	<b>WARNING</b>
<p><b>NEVER insert hands or objects into basket until it has completely stopped. Doing so could result in serious injury.</b></p> <p style="text-align: right;"><small>SW012</small></p>	



# Programming

The wash cycle program in machines equipped with a mechanical timer can be modified to a limited extent. The following changes can be made:

- The prewash time may be set to 2 minutes, 4 minutes, or omitted altogether.
- The wash time may be set to either 4 minutes or 8 minutes. The water level for the wash step may be set to either low or high.
- The water temperature for the rinses may be set to either cold or warm.
- The final spin time may be set to either 2 minutes or 4 minutes.

	<b>WARNING</b>
<p><b>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.</b></p>	
SW004	

	<b>WARNING</b>
<p><b>Dangerous voltages are present in the electrical control box(es) and at the motor terminals. Only qualified personnel familiar with electrical test procedures, test equipment, and safety precautions should attempt adjustments and troubleshooting. Disconnect power from the machine before removing the control box cover, and before attempting any service procedures.</b></p>	
SW005	

## Setting the Jumpers

	<b>WARNING</b>
<p><b>Attempting jumper configurations other than those described in this manual may result in personal injury and/or equipment damage, and may void the warranty.</b></p>	
SW041	

**NOTE: The following procedures must be performed by a qualified electrician familiar with the construction and operation of this type of machinery.**

1. Disconnect power to the machine.
2. Remove the screws securing the control module cover to the control module.
3. Lift the control module cover and slide cover towards the rear of the machine.
4. The mechanical timer is located in the control module. The odd-numbered side of the timer is used to change the duration of individual cycle steps. See *Figure 4*.

Eleven permissible jumper configurations are available for changing the cycle time. See the table below.

19b	19	19a
17b	17	17a
15b	15	15a
13b	13	13a
11b	11	11a
9b	9	9a
7b	7	7a
5b	5	5a
3b	3	3a
1b	1	1a

Figure 4

Mechanical Timer Cycle Time Options							
Jumper Setting	Prewash	Wash	Rinse 1	Rinse 2	Rinse 3	Final Spin	Cycle Time*
None	4	8	1.5	1.5	1.5	4	27.5
1a to 3a	4	4	1.5	1.5	1.5	4	23.5
1a to 3a to 3b	--	4	1.5	1.5	1.5	4	18.5
1a to 3a to 3b to 5b	--	4	1.5	1.5	1.5	2	16.5
1a to 3a to 5a**	2	4	1.5	1.5	1.5	4	21.5
1a to 3a to 5a to 5b	2	4	1.5	1.5	1.5	2	19.5
1a to 3b	--	8	1.5	1.5	1.5	4	22.5
1a to 3b to 5b	--	8	1.5	1.5	1.5	2	20.5
1a to 5a	2	8	1.5	1.5	1.5	4	25.5
1a to 5a to 5b	2	8	1.5	1.5	1.5	2	23.5
1a to 5b	4	8	1.5	1.5	1.5	2	25.5

\*Cycle times do not include fill or heat times.  
 \*\*Factory setting.

Table 1

- If access to the odd-numbered side of the timer is limited, remove the timer bracket mounting screws and rotate the timer.
- Install or remove jumpers to achieve the desired cycle time. *Figure 5* through *Figure 15* illustrate the permissible jumper combinations.

**NOTE: Do not remove the cover from the mechanical timer. Removing this cover will void the warranty.**

**No Jumpers Installed on the Board**

Removing all the jumpers extends the cycle time, making it as long as possible. See *Figure 5*.

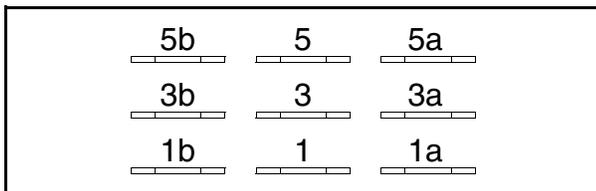


Figure 5

**1a to 3a**

This jumper configuration shortens the wash step from 8 minutes to 4 minutes. See *Figure 6*.

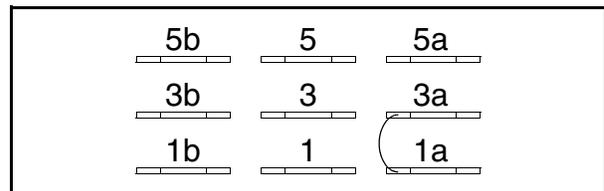


Figure 6

**1a to 3a to 3b**

This configuration eliminates the prewash step and shortens the wash step from 8 minutes to 4 minutes. See *Figure 7*.

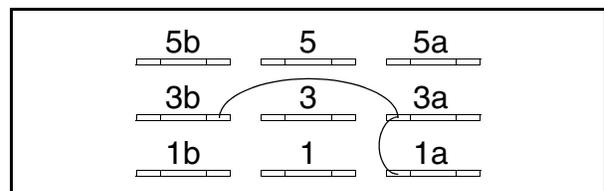


Figure 7

**1a to 3a to 3b to 5b**

This configuration eliminates the prewash step, shortens the wash step from 8 minutes to 4 minutes, and shortens the final spin time from 4 minutes to 2 minutes. See *Figure 8*.

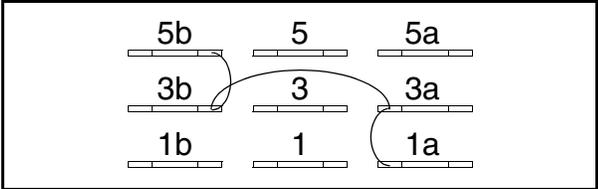


Figure 8

**1a to 3a to 5a**

This is the factory-preset jumper configuration. This configuration shortens the prewash step from 4 minutes to 2 minutes and shortens the wash step from 8 minutes to 4 minutes. See *Figure 9*.

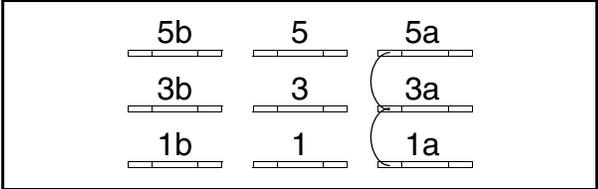


Figure 9

**1a to 3a to 5a to 5b**

This configuration shortens the prewash step from 4 minutes to 2 minutes, shortens the wash step from 8 minutes to 4 minutes, and shortens the final spin time from 4 minutes to 2 minutes. See *Figure 10*.

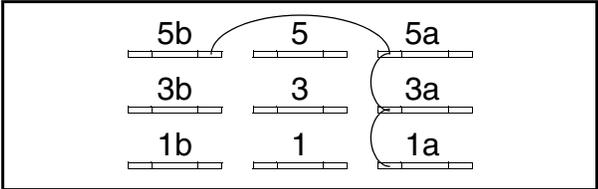


Figure 10

**1a to 3b**

This configuration eliminates the prewash step. See *Figure 11*.

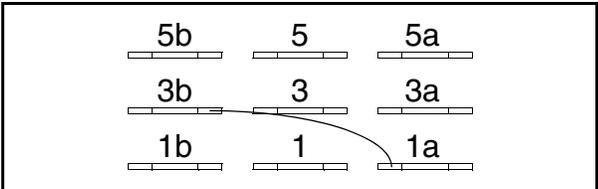


Figure 11

**1a to 3b to 5b**

This configuration eliminates the prewash step and shortens the final spin time from 4 minutes to 2 minutes. See *Figure 12*.

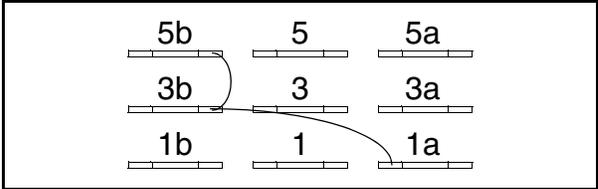


Figure 12

**1a to 5a**

This configuration shortens the prewash step from 4 minutes to 2 minutes. See *Figure 13*.

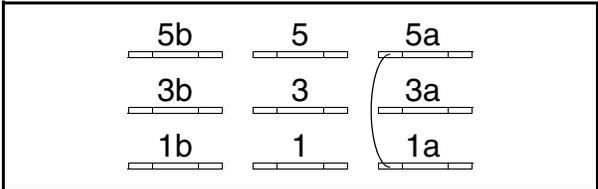


Figure 13

**1a to 5a to 5b**

This configuration shortens the prewash step from 4 minutes to 2 minutes and shortens the final spin time from 4 minutes to 2 minutes. See *Figure 14*.

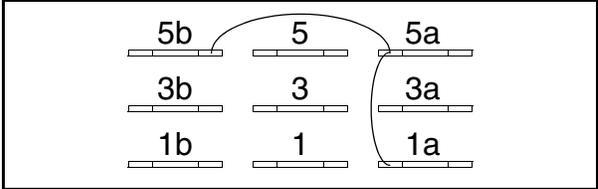


Figure 14

**1a to 5b**

This configuration shortens the final spin time from 4 minutes to 2 minutes. See *Figure 15*.

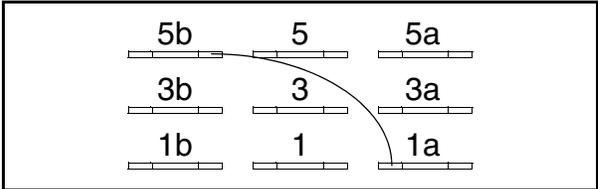


Figure 15

## Programming

- The even-numbered side of the program timer can be configured with jumpers to adjust the rinse temperature or to change the water level for the wash step. Either or both even-side jumper configurations may be used in conjunction with any of the 11 permissible odd-side jumper combinations. See *Figure 13*.

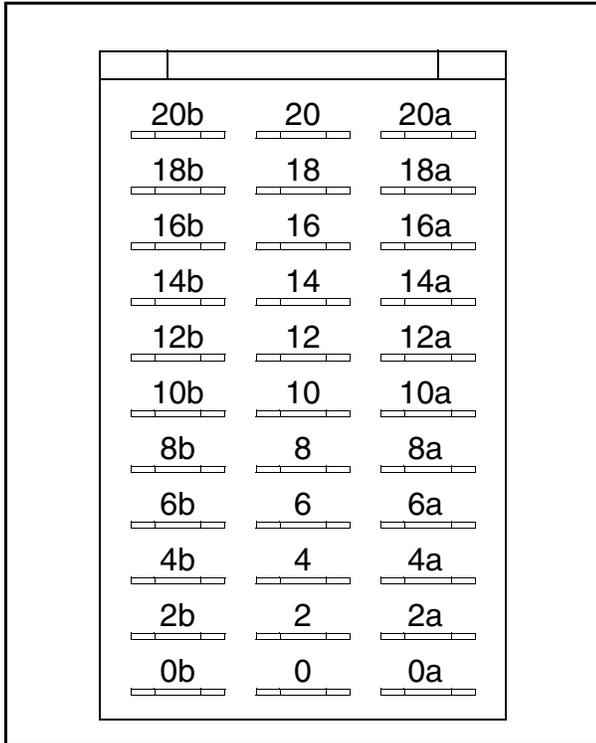


Figure 16

*Figure 17* and *Figure 18* illustrate the different options available.

### 2a to 2b

This jumper configuration changes the fill temperature for the rinses from cold to warm for all cycles. See *Figure 17*.

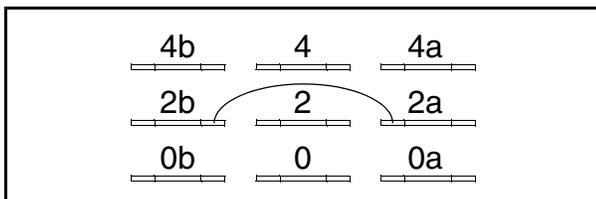


Figure 17

### 10a to 10b

This jumper configuration changes the water level for the wash segment from low to high for all cycles. See *Figure 18*.

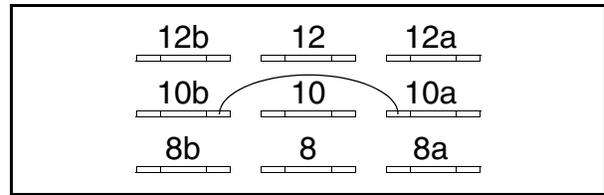


Figure 18

**NOTE: This jumper configuration will cause the timer to advance once low water level is reached. The fill valves will remain open until high water level is reached.**

- Replace the timer bracket screws if they were removed in step 5.
- Replace the control module cover and mounting screws.
- Reconnect power to the machine.