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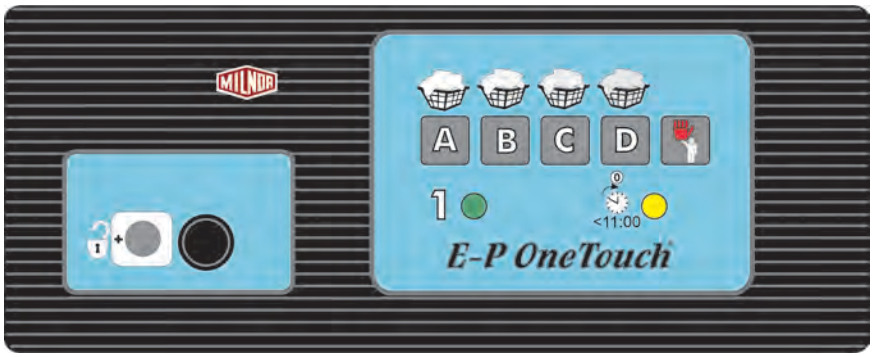
Operator Guide
E-P OneTouch® Controls



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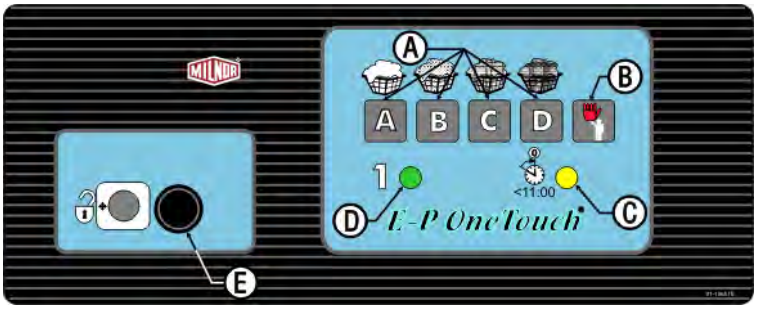
1 Description of Controls

1.1 Controls on E-P OneTouch® Model Washer-extractors

Most of the controls on Milnor® E-P OneTouch washer-extractors are membrane push-buttons. Other controls include a mechanical push-button to unlock the door latch, and two lights to indicate that the machine is running and when the machine is nearing the end of a formula

Figure 1. E-P OneTouch Controls

Control Panel	Legend
	**A . . . Formula Selection** buttons **B . . . Terminate** button **C . . . Last Rinse** light **D . . . In Progress** light **E . . . Door Unlock** button

1.1.1 Control Functions During Normal Operation

Formula Selection Buttons — The E-P OneTouch controller provides four pre-programmed formulas that vary according to machine configuration. Start the desired formula by pressing the corresponding **Formula Selection** button (A, B, C, or D) with the machine loaded and the door closed.

Consult with your chemical supplier for the specific formula to use with each type of goods being processed.

Terminate Button — The **Terminate** button ( ) ends any running formula. When a formula is ended early, you must restart it from the beginning by pressing one of the **Formula Selection** buttons with the door closed.

Last Rinse Light — This light comes on when the last bath step of any formula begins and remains on until the formula ends. If the operator needs to add a chemical during the last bath, such as softener, he should add it as soon as this light comes on. The **Last Rinse** light also alerts the operator that the machine will soon be ready for unloading.

If an error occurs during a formula, this light and the **In Progress** light flash (two seconds on, then two seconds off) for 10 minutes. After 10 minutes, both lights go off. The error can be a malfunction of either the door lock circuit or the inverter. In either case, all machine controls are locked out for 75 seconds to ensure that the cylinder has coasted to a stop. To open the door after an error occurs, press the **Terminate** button ( ) to clear the error condition, then hold the **Door Unlock** button ( ) and turn the door latch handle.

In Progress Light — When power is first applied to the machine, this light flashes for 75 seconds to indicate that the power-up delay timer is counting down. The light goes off when the power-up delay expires.

This light is constantly **on** when a formula starts (the door is closed and a formula selection button is pressed). It remains on until the formula ends normally, is terminated by the operator, or an error occurs.

If the formula ends normally by running to completion, the **In Progress** light goes off when the last step of the formula ends. If the operator terminates a formula, this light flashes (two seconds on, then two seconds off) for 75 seconds as the coast timer counts down. After 75 seconds, hold the **Door Unlock** button ( ) and turn the door latch handle to open the door.

Door Unlock Button — This button activates a solenoid in the door latch which unlocks the door latch handle, allowing the operator to open the door. To lessen the chance of injury caused by opening the door while the basket is turning, the microprocessor controller disables this button when a formula starts.

The **Door Unlock** button is disabled for 75 seconds after a formula ends, whether the formula ended normally, was ended early by the operator, or ended because of an error.

2 Normal Operation

2.1 E-P OneTouch® Operation

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2.1.1 Instructions for Normal Operation

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2.1.1.1 Load the Machine

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1. If the loading door is closed and latched, hold the **Door Unlock** button ( ) to unlock the door while operating the door latch handle with the other hand. If the door does not unlock, verify that the machine is connected to power and that the wall disconnect is functioning properly. The machine must have power available to unlock the door.
2. When the door opens, load the machine according to plant guidelines and Section 2.2 : Determining Load Size, page 5 .
3. Close the door firmly.

2.1.1.2 Start a Formula

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2.1.1.2.1 After a Completed Formula (Normal)

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If the previous formula finished normally, simply press the button that matches the formula you want to run. The selected formula will start immediately if the door is closed. The **Formula Running** light ( ) illuminates and the door locks immediately, and the machine fills with water. Once the door is locked, the operator must end the formula early (Section 2.1.2 : How to End a Formula Early, page 5) or wait for the formula to finish before opening the door.

2.1.1.2.2 After Opening the Door during a Formula

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If you ended the previous formula early by opening the door, you must press the **Terminate** button ( ) before you can start the machine again. The **Terminate** button also clears any internal machine error that might have caused the formula to end early.

2.1.1.3 Unload the Machine

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When the formula ends, the **Formula Running** light ( ) goes out. Hold the **Door Unlock** button ( ) to unlock the door while turning the door latch handle with the other hand.

2.1.2 How to End a Formula Early

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You can end any running formula by pressing the **Terminate** button ( ) on the control panel. A safety delay keeps the door locked for 75 seconds. When the **In Progress** light goes off, hold the **Door Unlock** button ( ) to unlock the door while turning the door latch handle with the other hand.

To resume operation, restart the formula from the beginning by pressing the desired **formula button**.

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2.2 Determining Load Size

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You will not do damage to the machine with a large load if you follow these rules:

1. The goods are made of common cotton or synthetic materials.
2. The load can balance in the cylinder before the extract step.
3. The extract speed has not been increased above the designed maximum.
4. You do not program so many extract steps that you do damage to the motor.

For common goods, the size of the machine sets the quantity you can put in the machine.

These items determine the maximum load weight of soiled goods:

- the volume of the machine's cylinder, and
- the material and weight of the goods.

Do not try to load the machine to its maximum weight capacity with bulky fabrics.

Use the size of the machine, the type of the goods, the amount of soil, and the wash quality when you load the machine.

3 Troubleshooting

3.1 Troubleshooting Errors

Vibration Switch Tripped — If the machine vibrates excessively during extract, the vibration switch (SMWVB in the electrical schematics) closes to ground an input (MTA3-10) to the microprocessor. When the machine is in an extract step and this input is grounded, the controller immediately ends the extract step and starts the subsequent coast step. The formula then continues normally.

NOTE: The input which indicates that the vibration switch is tripped is shared with the high water level pressure switch. Software determines whether to turn off the water valve (s) or to signal the inverter to stop the motor depending on the operation running when the input is grounded

Door Open

DANGER:

Entangle and Sever Hazards — Cylinder door interlock—Operating the machine with a malfunctioning door interlock can permit opening the door when the cylinder is turning and/or starting the cycle with the door open, exposing the turning cylinder.

- If the basket continues to turn when the door is open, stop using the machine immediately and contact an authorized maintenance person.

When the machine operates normally, relay-contacts 5 and 8 in relay CRDL close and make the input on MTA3-5 to the microprocessor. If the door opens, the input stops. When the input stops, the microprocessor stops the machine. For safety, the machine ignores all controls for 75 seconds after the error.

If the door opens while the machine is operating, the **In Progress** light and the **Last Rinse** light flash. Both lights flash **on** for two seconds, then turn **off** for two seconds, repeating for 10 minutes. After 10 minutes, the lights remain off.

To start the machine again:

1. press the **Terminate** button ( ) to recover from this error,
2. **ensure that the door is securely closed,**
3. then start the formula again.

High Level Still Made — The machine will not increase the speed from drain speed to extract speed if the high-level input (MTA3-8) is grounded. This input grounds when the high-level switch is closed. If the controller sees the high-level input when extract speed starts, the machine will ignore the extract step and decrease the speed without power.

Look for a blocked pressure hose to the level switch or a broken level switch.

Door/Inverter Fault — This error indicates one of three conditions:

- the operator selected a formula before closing the door,
- the door opened while the machine was operating, or
- the inverter sensed a fault during operation.

Door/Inverter Fault Before a Formula Starts — You must close the door before selecting a formula. If the door is open when you press one of the **Formula Selection** buttons, the controller recognizes an error condition.

1. The controller prevents further operation for a safety delay period of 100 seconds.
2. If you close the door, the **In Progress** light and the **Last Rinse** light flash simultaneously.
3. After the safety delay period, the lights continue flashing until the you press the **Terminate** button ( ) to clear the error.
4. The lights stop blinking after 10 minutes unless you clear the error. The error is cleared only when you press the **Terminate** button.

Door/Inverter Fault During Operation — When operating normally, the inverter closes an internal contact wired in series with CRDL pins 5 and 8. If the door is closed and the inverter is functioning, the input on MTA3-5 is grounded, as described in Door Open. If the inverter senses a fault, its internal contacts open and the input on MTA3-5 is lost. This same input is also lost if the door opens during operation. Refer to the inverter documentation for specific troubleshooting procedures.

As happens when the door opens during a formula, the microprocessor signals the error by flashing both the **In Progress** light and the **Last Rinse** light simultaneously. Both lights flash **on** for two seconds, then **off** for two seconds, repeating for 10 minutes. After 10 minutes, both lights remain off.

For safety, all machine controls are disabled for 100 seconds after the error occurs. To open the door after this error:

1. You must first wait 100 seconds until the controls are enabled.
2. When the controls are enabled, press the **Terminate** button ( ) to clear the error.
3. Finally, hold the **Door Unlock** button ( ) and unlatch the door.

If the error happens again after you close the door, contact an authorized maintenance person.

After correcting any error with the inverter itself, start the formula again.