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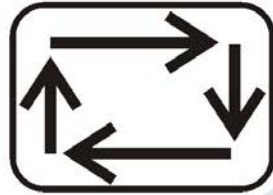
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48040M7K

68036 & 72046 M5K

MilTouch™



MKWHUO02U1/23284A

1. English

Operator Guide - MilTouch-EX™ Washer-extractor with
Integrated Door Chute

MKWHUO02EN/2023284

English

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Operator Guide

MilTouch-EX™

Washer-extractor with Integrated Door Chute



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1 Preface

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1.1 About This Operator Guide and This MilTouch™ Washer-extractor

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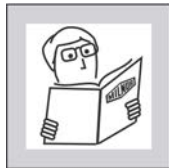
This operator guide applies to the following machine model(s):

- 48040M7K
- 68036M5K
- 72046M5K

This operator guide explains routine operation. It is for the operator and for supervisory personnel responsible for operator training. The machine must be fully commissioned and ready before you attempt to operate it. A separate controller reference manual is available from Milnor for use by technicians involved in the commissioning, programming, and servicing of the machine.



WARNING: Careless use — can cause death or serious injury and property damage.



- ▶ Read the machine manuals before you install, operate, service, or clean the machine.
- ▶ Do not attempt to service the machine or reach into normally-guarded areas unless you are a qualified service technician.

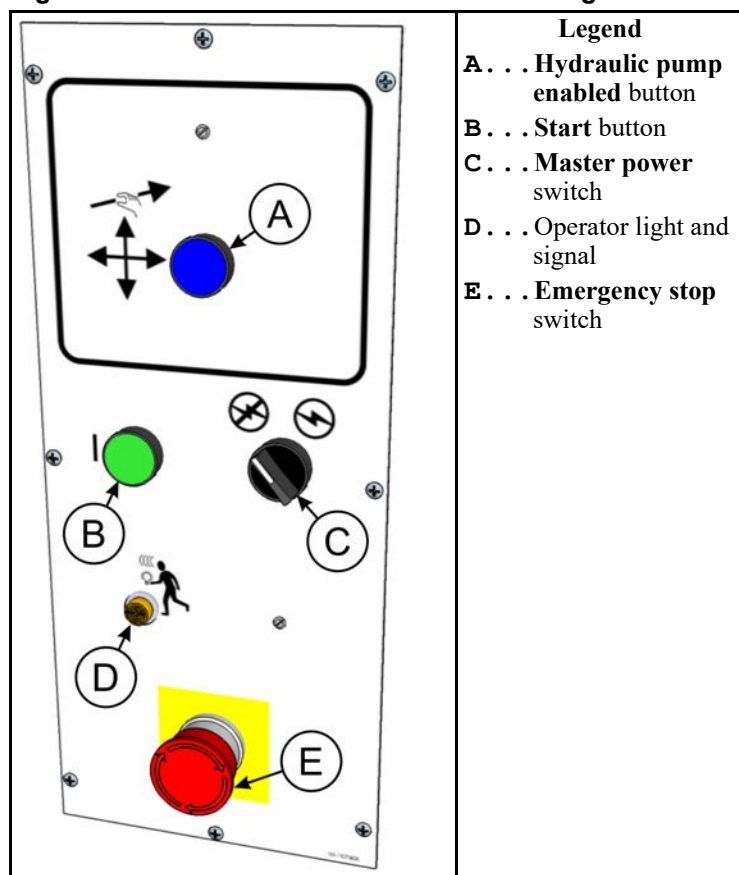
This MilTouch™ industrial washer-extractor has one or more physical switches and buttons (electromechanical controls), as well as a touch-sensitive display screen with virtual controls. Use the electromechanical controls to apply power, unlock the door, stop the machine immediately (if necessary), and load and unload the machine. Use the touch-actuated controls on the MilTouch™ display screen to select, run, and monitor formulas.

2 Controls


2.1 Physical Controls


The following figure shows how the control panel appears on your machine.



Figure 1. MilTouch™ Control Panel with Integrated Door Chute Control




Hydraulic pump enabled button — This button, when held, will operate the selected (illuminated) function on the **Manual Override** display (see [Figure 27: Manual Override Display, page 31](#)).

Start button () — This button enables the 3-wire circuit.

Master power switch () — This switch energizes and removes power from the control system.

-  Remove power from the control system.
-  Energize the control system.

Operator light and signal () — The operator signal sounds and the operator light illuminates when it is time for the operator to intervene. It can be necessary for the operator to intervene to reposition the machine, add a chemical, correct an error, or cancel the formula.

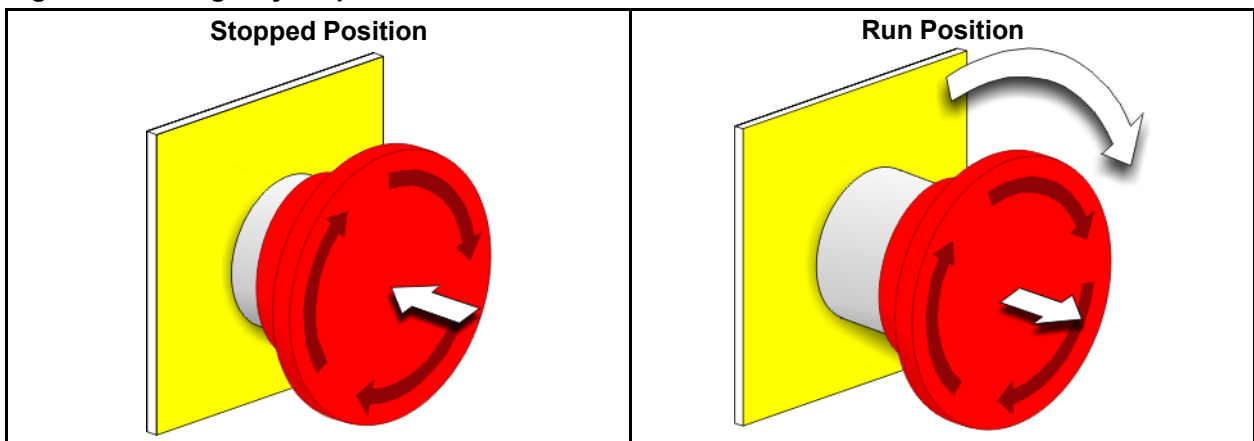
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2.2 Emergency Stop Switch (locking push button)

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One or more **emergency stop** switches (pictured below) may be provided on the device. When pressed, any **emergency stop** switch removes power from the machine controls, stops the machine, and locks in the depressed (switch actuated, machine stopped) position. When safe to do so, turn the button clockwise to unlock the switch. To resume operation, perform the device’s normal startup procedure.

Figure 2. Emergency Stop Switch



 **NOTICE:** Press the **emergency stop** switch immediately in an emergency situation.

Display or Action



Explanation

This symbol represents the **emergency stop** switch in Milnor® documents other than electrical wiring diagrams.

2.3 How to Use the MilTouch™ Controller

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The Milnor® MilTouch™ washer-extractor controller uses a touch-sensitive display screen to operate the machine. All the functions and information you need to process goods appear on this screen.



CAUTION: Excessive pressure — can damage the display screen.



- ▶ Do not push hard on the glass.
- ▶ Use only a finger to touch the glass. Do not touch the screen with a tool.

Turn the **master switch** on (⏻) to apply power to the control system. The **Home** display appears on the touchscreen.

2.3.1 The Home Display

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The display pictured in the following figure, subsequently referred to as the **Home** display, is used to access all the other displays. Buttons labelled with an asterisk (*) are not used during routine operation. For additional information on those buttons and the displays they access, see the separate controller reference manual.

From the **Home** display, you can activate automatic mode or manual mode.

- Automatic mode is the normal mode of operation.
- Manual mode can be used to troubleshoot error conditions and reposition the machine. See [Section 4.3 : Manual Mode, page 30](#).

Figure 3. The Home Display

Legend

- A.** Activate automatic mode
- F#.** The wash formula numbers
- Fn.** The wash formula names
- M.** Activate manual mode
- Mi.** Run a formula from the Mildata® computer, currently unavailable on WTB machines
- P.** Turn machine power OFF
- S.** Run a formula
- Sc.** Scroll between pages
- Se.** Search for a formula
- *C.** Access the **Configuration** display
- *D.** Access the **Diagnostics** displays
- *Dc.** Display the Pellerin Milnor Corporation contact information
- *Dt.** Access the **Data Transfer** display
- *L.** Access the **Data Log** displays
- *V.** The version data
- *Vd.** View the version details for your controller software
- *W.** Access the **Wash Formula Maintenance** display

3 Normal Operation

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3.1 Safety and Best Practice When Loading and Unloading

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If you are responsible to load and unload the machine:

- Put safety first.
- Use correct load sizes.

3.1.1 Loading and Unloading Safety

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Loading and unloading activities have associated risks that are addressed by safety placards on the machine. Before you use your Milnor® washer-extractor for the first time, read the safety placards. If there is anything you do not understand, get clarification from your supervisor or laundry management.

There can also be other risks associated with the type of laundry facility and the allied (non-Milnor®) equipment you use, such as laundry carts, sling systems, chemicals and chemical systems. Milnor® advises you to obtain and read the safety literature provided for your facility and for all equipment you use.

Examples of possible risks related to the type of laundry facility or to allied equipment are:

- goods handling:
 - sharp objects such as scalpels and syringes left in OR gowns
 - biological contamination in patient gowns and diapers
 - just processed goods that are hot to the touch
 - poisonous or flammable chemicals in the soiled goods
- laundry carts of the wrong size that cause unnecessary effort in loading or unloading
- laundering chemicals:
 - leaks in supply lines
 - skin or eye irritation from contact with spilled chemicals or chemical containers

3.1.2 Load Size Best Practice

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For your machine, there is a correct load size for each type of goods you process.

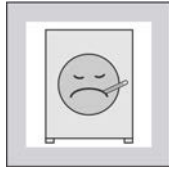
load size the dry weight (in pounds or kilograms) of a load of goods. Specific goods types can require specific load sizes and these can vary significantly.

capacity the load size rating for a washer-extractor, as stated in the specifications shown on the product brochure. This rating does not reflect factors such as goods type and soil content.

You will get the best performance from your machine if you use the correct load sizes. Under-loading can make it difficult for the machine to distribute (balance) the goods before extraction. This can cause excessive recycles (when the machine repeatedly tries to distribute the goods). Occasional small loads may be necessary, but keep these to a minimum. Over-loading can put increased stress on machine components and reduce wash quality.



CAUTION: **Incorrect load sizes** — can cause premature machine wear, excessive recycles (which extends formula time), and poor wash quality.



- ▶ Use a chart of goods types and load sizes from your supervisor or laundry management.
- ▶ Minimize the number of small loads.
- ▶ Use a scale to determine when a load is the correct size.
- ▶ On a divided-cylinder machine, put approximately the same weight of goods in each pocket.

When your machine was purchased, your Milnor® dealer worked with your laundry personnel to determine the optimum machine for your needs. This took into account factors such as the types of goods to be washed and the expected soil content of the goods, which can cause the correct load size to vary greatly among goods types. For example, the more bulky the goods, the smaller the permissible load size. The correct load sizes will be what was previously determined when the machine was purchased. If you do not already have a chart of the goods types to be processed and their correct load sizes, request one from your supervisor or laundry management.

3.1.2.1 Weighing Goods

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Build loads of the correct size for the best performance from your machine. The most accurate method to build loads of the correct size is to weigh each load as you assemble it.

In an automated laundry system, loads are typically built at a sort deck and weighed by a laundry scale or overhead loading conveyor. If your laundry uses a bag system, ensure you fill each bag with the recommended weight of goods.

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3.2 Apply control power.

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Set the **master power** switch (⊗ / ⊕) to ⊕. Control power must be on to use the electromechanical controls and the touchscreen controller.

3.3 Automatic Mode

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In automatic mode, the controller uses inputs from the Miltrac™ system or allied (binary) data inputs to load and unload the machine without operator intervention. Automatic mode is the normal mode of operation for MilTouch-EX™ WTB washer-extractors.



NOTE: The “Load Allowed” input (3MTA4-6) and “Discharge Allowed” input (3MTA4-5) must be grounded to use automatic mode.

Each time you start the machine (for morning startup, after a power loss, after a safety circuit error, etc.) the controller prompts the operator to put the machine in automatic or manual mode, as shown in the following figure.

Figure 4. Automatic/Manual Selection



To activate automatic mode:

- From the **Home** display, touch **Automatic Mode** from the selection list shown in [Figure 4, page 10](#), or
- From the **Manual Override** display ([Figure 27: Manual Override Display, page 31](#)), touch

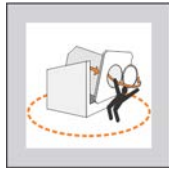


3.3.1 Automatic Mode Startup Sequence

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WARNING: **Machine tilting** — can strike or startle bystanders.





- ▶ Make sure bystanders are safely away from the machine before you initiate the automatic mode startup sequence.

Each time the operator activates automatic mode, the machine moves to the home/recovery position (the home position may vary depending on the setup of your laundry):

1. The bifold doors close fully.
2. The machine tilts rearward until it passes the wash position, or reaches the load position.
3. The machine tilts forward to the wash position.
4. The top chute locks retract.
5. The controller lowers the load chute to the “full down” and locked position.
6. The **Recovery** display (shown in the following figure) appears. The controller prompts, "Is there a load in the machine?"

Figure 5. The Recovery Display



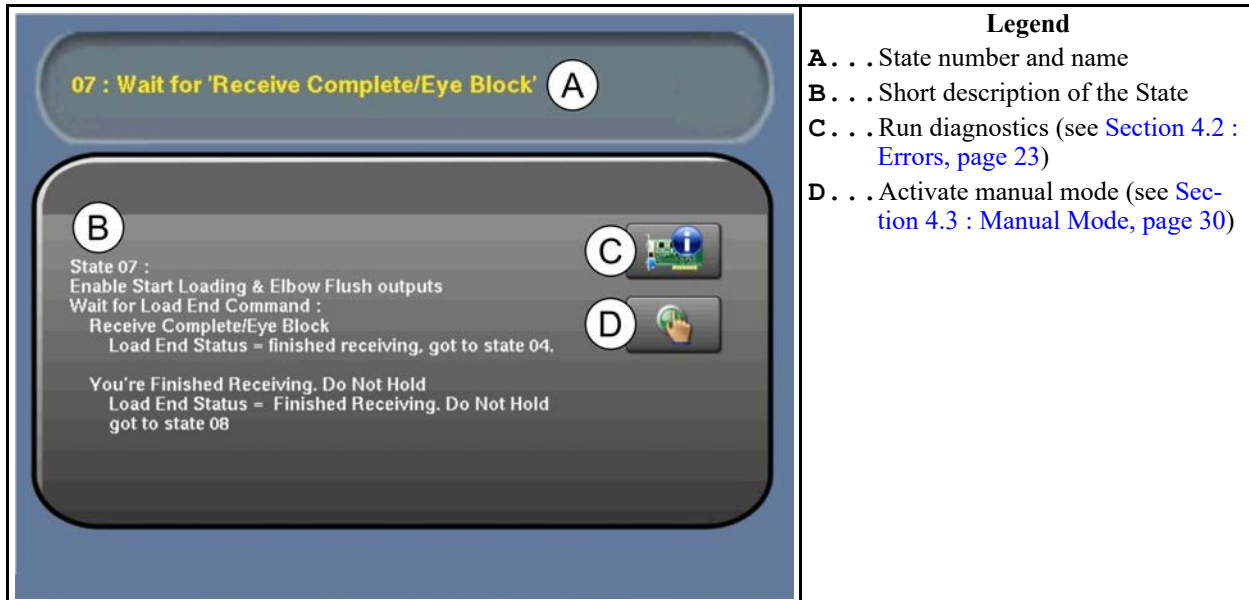
- Touch the yes/no button so that it displays  **NO** if there are no goods in the machine (such as when you are activating automatic mode for morning startup). Continue to Step 3.
- Touch the yes/no button so that it displays  **YES** if there are goods in the machine (such as after a power loss or after an error occurs). See [Section 4.4.3 : To Return the Machine to Automatic Operation, page 34](#).

7. If you selected  **NO**, touch  to start automatic operation.

3.4 Automated Loading

As the machine enters the load position and receives goods, the controller advances through **Loading State** windows, which indicate the machine's progress. An example **Loading State** window is shown in the following figure.

Figure 6. Example Loading State



The machine performs the following sequence of actions during automated loading:

1. The washer-extractor tilts rearward to the load position.
2. The bifold doors open.
3. The controller waits to receive the Miltrac™ or allied “Start Loading” command.
4. The loading device discharges a load of goods to the washer-extractor.
5. The load chute flushes goods down the chute with water.
6. The controller waits to receive the Miltrac™ “Loading Complete” command, or the allied “Load Terminate” input.
7. The bifold doors close.
8. The washer-extractor tilts forward to the wash position.
9. The controller starts the wash formula from the machine's batch data (see [Section 4.4.3.1 : Batch Data, page 35](#)).

The **Run** display appears.

3.5 Monitor the wash formula.

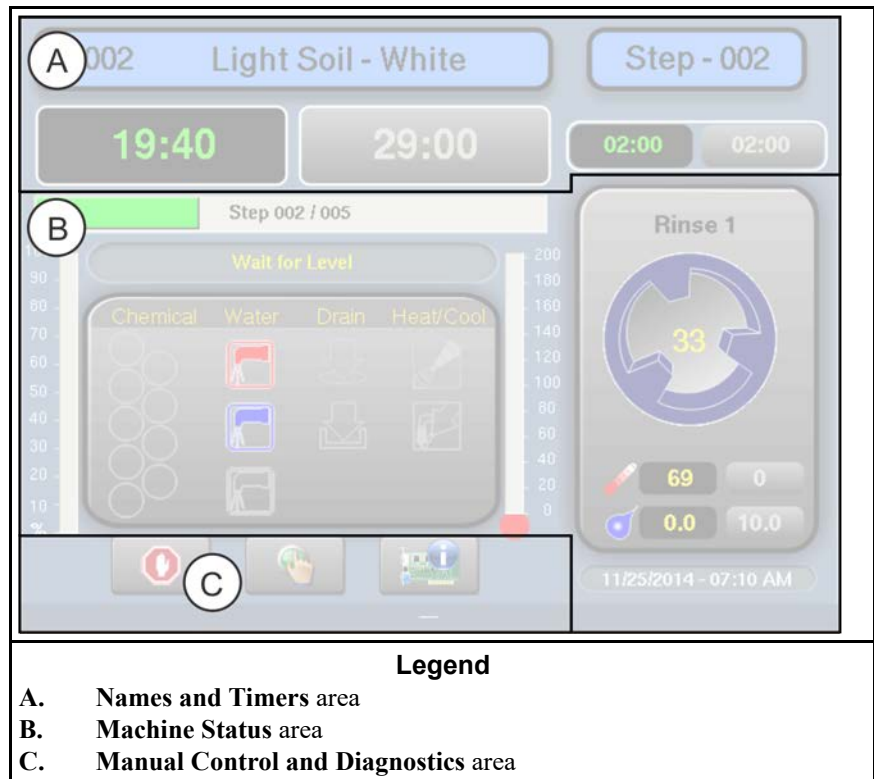
3.5.1 The Run Display

The **Run** display appears when you run a formula.

From the **Run** display, you can monitor the wash formula progress and the machine status. You can also change the water temperature and level, the formula time, the drain type, and the basket speed for the formula in progress.

Three types of information are given on the **Run** display. These types are grouped into three areas of the display, as shown in [Figure 7, page 13](#).

Figure 7. The Three Information Areas of the Run Display



3.5.1.1 The Names and Timers Area (A)

This area displays the running formula's name and number, the current step number, the total time in the formula, and the time remaining in the formula and the current step.

Figure 8. The Names and the Timers Area

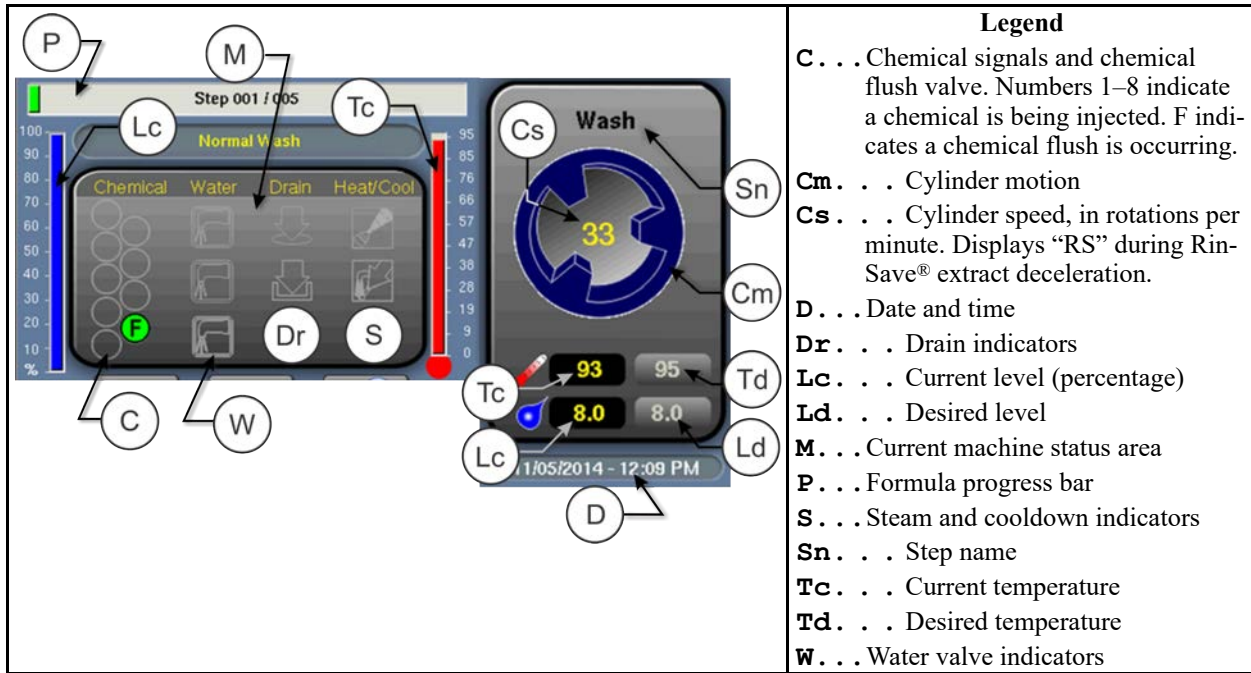


3.5.1.2 The Machine Status Area (B)

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This area displays the current and desired water level and temperature for the step in progress, the current cylinder motion, and the current state of each valve.

Figure 9. The Machine Status Area



3.5.1.2.1 How to Monitor Automatic Liquid-Chemical Injections

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If your machine controls a pumped chemical system, the controller automatically injects chemicals from the pump system while the formula runs.

You can monitor automatic liquid-chemical injections in the **Machine Status** area. As the controller injects a chemical into the machine, the chemical’s valve number illuminates, as shown in [Figure 10, page 14](#), until the programmed injection time expires.

Figure 10. Chemicals from Valves 1 and 2 Injecting

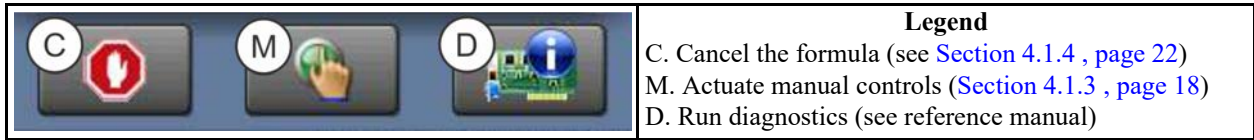


3.5.1.3 Manual Control and Diagnostics Area (C)

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Use these buttons as explained in the following figure.

Figure 11. Standard Controls



3.5.2 Respond to the end of the cycle.

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The operator signal will sound when the cycle ends.

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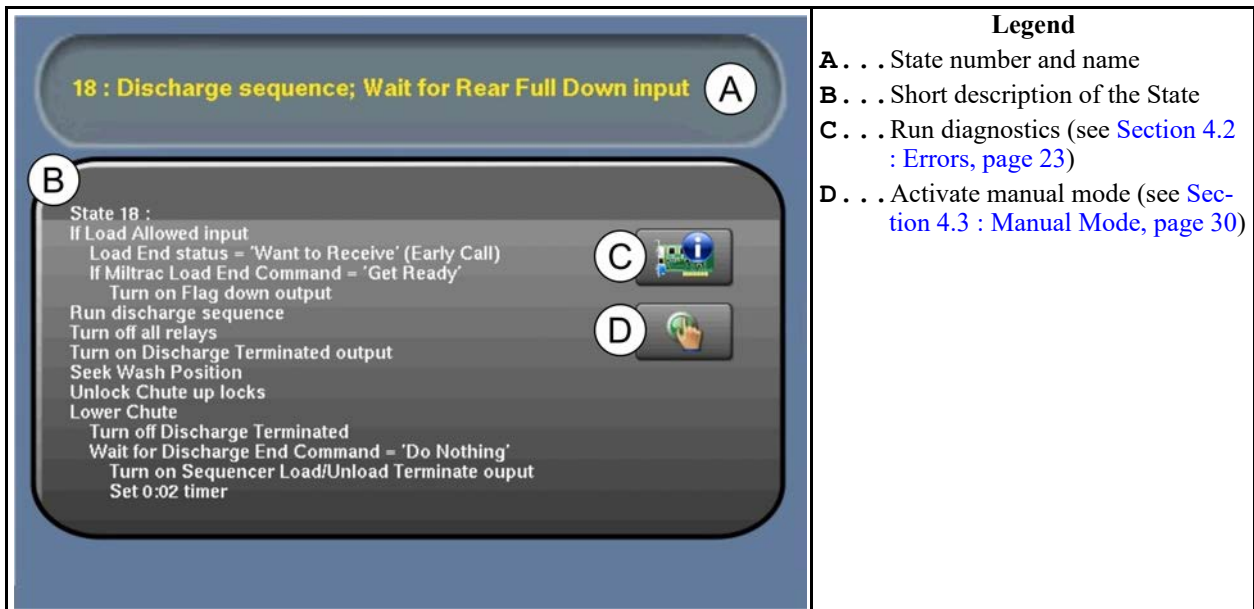
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3.6 Automated Discharge

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As the machine enters the discharge position and discharges goods, the controller advances through **Discharge State** windows, which indicate the machine’s progress. An example **Discharge State** window is shown in the following figure.

Figure 12. Example Discharging State



The machine performs the following sequence of actions during automated discharge:

1. The controller waits to receive the “Discharge Allowed” signal.
2. The controller waits to receive the Miltrac™ or allied “Start Discharging” command.
3. The chute seal deflates.
4. The bottom chute locks retract. If the bottom chute locks jam:
 - a. The hydraulic motor drives the elbow into the machine.
 - b. The machine tries again to retract the chute locks.

5. The controller raises the chute to the “full up” and locked position.
6. The washer-extractor tilts forward to the discharge (“rear full up”) position.
7. The controller runs the configured discharge sequence.
8. The controller waits to lose the Miltrac™ or allied “Start Discharging” command.
9. The washer-extractor tilts rearward to the wash position, continues to tilt rearward, then tilts forward to the wash position again.
10. The chute up locks retract.
11. The controller lowers the chute to the “full down” and locked position.
12. The washer-extractor waits to receive the next Miltrac™ or allied “Start Loading” command.

4 Troubleshooting

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4.1 Operator Intervention

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During normal operation, the controller uses inputs to automatically load the machine, process goods, and unload the machine without operator intervention.

However, it can be necessary for the operator to intervene to:

- add a chemical
- correct an error
- make a manual change to a wash formula, or cancel the formula

In most cases, the operator signal will sound when it is time for the operator to intervene.

4.1.1 Chemical Supplies Intervention

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The operator should receive instruction from the chemical supplier for the type of chemical system provided. This can be:

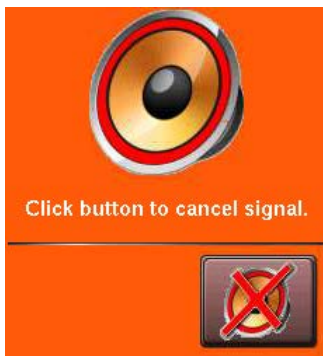
Pumped chemical system a system that injects liquid chemicals into the machine when called for by the formula. The only intervention normally required is to ensure that the chemical containers that supply the chemicals to the system remain at a safe level.

Optional 5-compartment supply injector a system in which the operator places a measured amount of chemical in each compartment before the start of each wash cycle. Each compartment is dedicated to a type of chemical (detergent, bleach, sour, softener, etc.). When the formula calls for a given chemical, the compartment for that chemical is injected with water to flush the chemical into the machine.


Although not common, it can be necessary to manually add a chemical that is not provided by the pumped chemical system, or to reload a supply injector compartment with a different chemical while a formula is in progress. In this case, the formula can be programmed to turn on the operator signal when operator intervention is required.

When the machine desires a chemical injection, the step timer pauses, the operator signal sounds, and a dialog box (shown in [Figure 13, page 18](#)) appears on the controller.

Figure 13. Chemical Injection Dialog Box



Add the chemical according to the chemical suppliers instruc-

tions, then touch  to cancel the operator signal and resume the formula.

4.1.2 Error Intervention

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The operator signal sounds if an error occurs. See [Section 4.2 : Errors, page 23](#) for a list of possible error conditions. Contact a service technician or check the separate controller reference manual if you cannot correct the error.

4.1.3 Formula Intervention

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Formula intervention allows you to manually alter a wash formula in production (while it runs). You can adjust the:


- step timer
- water valves
- drain and reuse valves
- steam and cooldown controls
- cylinder speed
- bath temperature and level

The changes you make while in formula intervention mode do not alter the programming of the formula (the step decisions). Formulas proceed normally in formula intervention mode aside from the changes you make.


Chemical suppliers and service technicians can use formula intervention to test formulas and confirm proper operation of the machine components. For example, a service technician may want to turn the steam valve on to confirm proper operation.

Operators might also use formula intervention if it is necessary to make a temporary, or one-time change to a wash formula. For example, the operator may want to stop the timer to slowly add a chemical through the soap chute.

Touch  on the **Run** display to start formula intervention. Controls in the **Names and Timers** area and the **Machine Status** area of the **Run** display become active so that you can change the formula in progress. Green boxes on the display identify the formula control areas, or the settings that can be changed, as shown in [Figure 14, page 19](#).

 **NOTE:** A password may be required to use formula intervention.


In formula intervention mode, touch a box to display the pop-up controls for that setting. The pop-up controls available correspond with your machine's equipment and your configuration decisions.

 **NOTICE:** The MilTouch™ controller prevents the activation of certain controls when their activation would be inappropriate. For example, the controls for the water valves are not available when the bath water is at its maximum level.

Modify Step Timer — Touch the box identified by item St on [Figure 14, page 19](#).

Figure 15. Pop-up Controls for Step Timer



 Add 1 minute to the remaining step time.


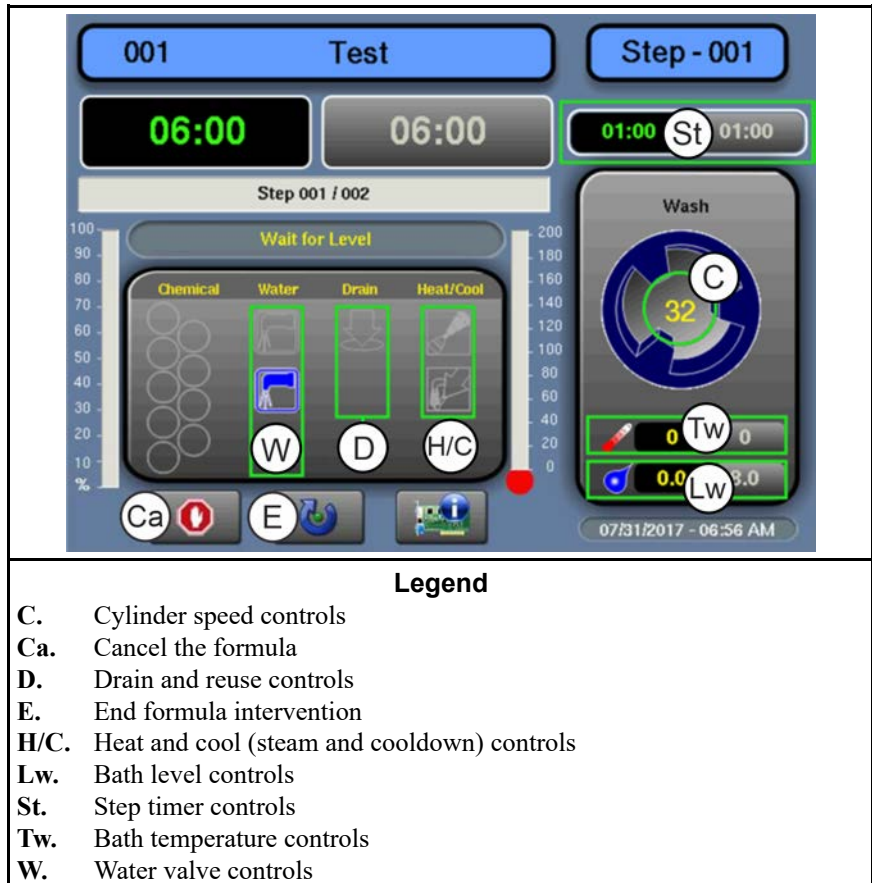
 Subtract 1 minute from the remaining step time. If there is less than 1 minute remaining on the step timer, the timer is reduced to 00:00 and the controller moves on to the next phase in the current step, or the next step if there are no more phases.

Figure 14. Formula Control Areas



Legend

- C. Cylinder speed controls
- Ca. Cancel the formula
- D. Drain and reuse controls
- E. End formula intervention
- H/C. Heat and cool (steam and cooldown) controls
- Lw. Bath level controls
- St. Step timer controls
- Tw. Bath temperature controls
- W. Water valve controls



Pause the current step timer. The formula will remain on the current step, which prevents formula resumption, until this button is touched again.



NOTE: Outputs that the controller actuates during a step remain actuated even when the step timer is paused (unless the actuation of the output is inappropriate). For example,

if the cylinder is turning when you touch , the cylinder will continue to turn even while the step timer is paused.



Close the window.

Modify Water Valves — Touch the box labeled “Water” on the display.

Figure 16. Pop-up Controls for Water Valves



Open the hot water inlet valve. If the hot water inlet valve is open, touch to close it.



Open the cold water inlet valve. If the cold water inlet valve is open, touch to close it.



Open the 3rd water inlet valve. If the 3rd water inlet valve is open, touch to close it.



Close the window.

Modify Drain Valves — Touch the box labelled “Drain” on the display.

Figure 17. Pop-up Controls for Drain Valves



Open the drain valve to the sewer. If the drain valve to the sewer is open, touch to close it.



Open a secondary drain valve to a reuse tank. If the secondary drain valve is open, touch to close it.



Close the window.

Modify Steam and Cooldown — Touch the box labelled “Heat/Cool” on the display.

Figure 18. Pop-up Controls for Steam and Cooldown Valves



Inject steam to raise or maintain the bath temperature. If the steam inlet valve is open, touch to close it.



Inject cool water to gradually lower the bath temperature (perform a cooldown). If the cooldown inlet valve is open, touch to close it.



Close the window.

Modify Cylinder Speed — Touch the box identified by item C on [Figure 14, page 19](#).

Figure 19. Pop-up Controls for Cylinder Speed



Increase the rotation speed of the cylinder by 1 RPM.



Decrease the rotation speed of the cylinder by 1 RPM.



Close the window.

Modify Water Temperature — Touch the box identified by item Tw on [Figure 14, page 19](#).

Figure 20. Pop-up Controls for Water Temperature



Increase the desired bath temperature by 1 degree (Celsius or Fahrenheit).



Decrease the desired bath water temperature by 1 degree (Celsius or Fahrenheit).





Close the window.


Modify Water Level — Touch the box identified by item Lw on [Figure 14, page 19](#).


Figure 21. Pop-up Controls for Water Level



 Increase the desired bath water level by 1 unit (centimeters or inches).

 Decrease the desired bath water level by 1 unit (centimeters or inches).

 Close the window.

When you are finished making changes to the wash formula, touch  to end formula intervention.

4.1.4 To Cancel a Formula

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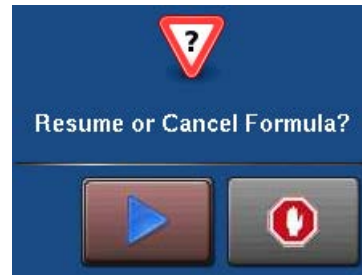
1. Touch  on the **Run** display to cancel a formula.
2. A dialog box appears ([Figure 22, page 22](#)) that prompts you to confirm your decision. On the dialog box, touch  to cancel the formula.
3. The controller disables all outputs, drains the bath water through the normally-open drain valve (usually the drain valve to the sewer), unlocks the door to the washer-extractor, and returns to the **Home** display.

Figure 22. Resume or Cancel the Formula



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4.2 Errors

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If your machine encounters an error, an error code dialog box (Figure 23, page 23) appears on the controller.

There are two types of errors your machine can encounter:

- Formula Errors
- Loading and Discharging Errors

See the next section for a list of all the error codes and the possible causes/solutions.

Figure 23. Sample Error Code Dialog Box



4.2.1 Error Messages for MilTouch-EX™ Controller with Automated Loading and Discharge

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The following are error messages the controller can issue, possible causes, and solutions. Operation stops and cannot be resumed until the cause of the error is corrected. This can require a maintenance or chemical technician.

Formula Errors — These errors can occur when the machine runs a formula.

Too Long to Fill — The water in the machine did not reach the specified level within the configured **Fill Error Time**. The controller closes all water valves and turns off all chemical injections. The **Fill Error** timer resets after you correct the error.

Fill Time Configured too Short: Do a check of the configured fill time in your machine's configuration decisions. It may be necessary to increase the fill time.

Low Water Pressure: Do a check of the water pressure and volume to the machine.

Water Valve Malfunctioned: Use the electrical schematic manual to do a check of the water valves and the circuits that control the valves.

Too Long to Drain — The water in the machine did not drop to the specified level within the allotted drain time. The controller issues an error but the drain remains open. If a slow drain caused the error, the error clears and the formula resumes when the transducer senses that the water level has dropped to the desired level.

Drain Blocked: The drain pipe from the machine to the sewer may be blocked. Check the drain pipe and remove any obstruction.

Transducer Tube Blocked: The tube from the shell to the pressure transducer (Figure 24, page 24) may be blocked. Check the tube and remove lint or other obstructions.

Drain Valve Malfunctioned: The drain valve or drain valve solenoid may have malfunctioned. Electrical troubleshooting is required (see Figure 25, page 24).

Figure 24. Transducer Tube

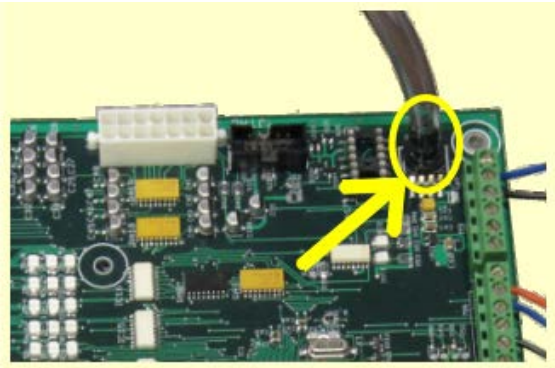
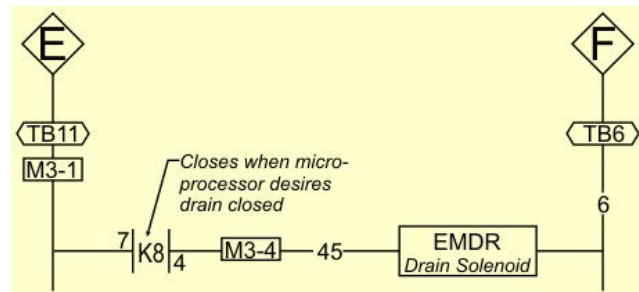


Figure 25. Schematic of Typical Drain Circuit



3-Wire Circuit Disabled — The controller cannot confirm that all 3-wire safeties are satisfied. The controller stops the wash program and turns off all outputs.

Too Long to Steam — The temperature in the machine did not reach the specified temperature within the configured **Steam Error** time. The controller issues an error but the steam valve remains open. If the temperature probe senses that the machine has reached its target temperature, the error clears and the formula resumes.

Low Steam Pressure: Do a check of the steam pressure from the boiler to the machine.

Steam Time Configured too Short: Do a check of the configured steam time in your machine's configuration decisions. This value represents the time required to apply steam to cold water at high level to achieve the hottest temperature used.

Steam Valve Malfunctioned: Use formula intervention to turn the steam valve on to confirm proper operation.

Too Long to Cool — The temperature in the machine did not drop to the specified temperature within the configured **Cooldown Error** time. The controller issues an error but continues to perform the cooldown. If the temperature probe senses that the machine has dropped to its target temperature, the error clears and the formula resumes.

Cooldown Time Configured too Short: Do a check of the configured cooldown time in your machine's configuration decisions. It may be necessary to increase the cooldown error time.

Low Water Pressure: Do a check of the cold water pressure and volume to the machine.

Cooldown Valve Malfunctioned: Do a check of the cooldown valve for proper operation.

Temperature Circuit Malfunctioned: Do a check of the temperature probe and the analog-to-digital board for proper operation.

Check Temperature Probe — The temperature probe detected a temperature below 32° F (0° C) or above 230°F (110°C). The controller turns off all outputs, cancels the wash formula, and returns to the **Home** display.

The Probe is Disconnected: Electrical troubleshooting is required. Check for an open circuit.

The Probe Malfunctioned: If the probe connections are found good, disconnect the probe and measure the resistance between the leads. The resistance between the leads should be between 2K and 35K Ohms. The resistance between either lead and the ground should be infinite.

Level Still Made — The water level in the cylinder is at or above the configured low water level at the start of the formula, before the first bath step. The controller issues an error but the drain remains open. If a slow drain caused the error, the error clears when the transducer senses that the water level in the cylinder is less than the configured low water level.

Drain Blocked: Do a check that the drain valve and drain outlet are clear of debris.

Transducer Tube Blocked: The tube from the shell to the pressure transducer may be blocked. Check the tube and remove lint or other obstructions.

Drain Valve Malfunctioned: The drain valve or drain valve solenoid may have malfunctioned. Electrical troubleshooting is required.

Serial Communication Failure — A peripheral board in the control box has lost communication with the processor board. The controller stops cylinder rotation and waits for serial communication to resume. This error dialog box closes when serial communication resumes.

Board Failure: A peripheral board in the control box cannot communicate with the processor board. Electrical troubleshooting is required.

Failed Speed Sensor — The controller cannot verify that the cylinder is turning. If the speed sensor fails at extract speed, the machine cancels the extract sequence and coasts for the default coast time. The default coast time must expire before the door will unlock.

Speed Sensor Failure: The cylinder speed sensor has stopped working. Electrical troubleshooting is required.

Inverter Tripped — The inverter that controls the motor had an error. The controller turns off all outputs, cancels the wash formula, and returns to the **Home** display.

Inverter error: The machine controller cannot tell about the specific error. See the inverter manual for details. The inverter manual was shipped in an electric box on your machine or with the packet of documentation inside the machine cylinder.

External Fault Error — This message is triggered by a device external to the MilTouch™ machine. This error usually originates with the chemical supply system.

Brake Pressure Fault — If the air pressure in the brake system is less than the required pressure 8 seconds after the beginning of the step, the controller stops the wash program and turns off all the outputs. The 8-second timer resets after you correct the error.

Low Air Pressure: The air pressure inside the brake release cylinder is too low. This can be caused by a leaking air cylinder piston cup, leaking/pinched air lines, leaking quick-release air valves, or a faulty pressure switch or pilot air valve.

Bearing Pressure Fault — If the main bearing pressure is less than the required pressure 8 seconds after the beginning of the step, the controller stops the wash program and turns off all the outputs. The 8-second timer resets after you correct the error.

Injecting less than 5 PSI (34.5 kPa): The machine is injecting less than 5 PSI (34.5 kPa) behind the excluder seal to protect the bearings. Do a check of the air supply and the sensor circuit.

Brake Pads Worn — The brake pads used to slow the cylinder after an extract are worn. Replace the pads.

Too Many Recycles — Due to an unbalanced load, the machine has performed the maximum of three extract cycles. The current extract step will be completed at a speed lower than programmed.

Check Balance System/Excursion Switch — The balance system or the excursion switch tripped.

Loading and Discharging Errors — These errors can occur during automated loading and discharge. When these errors occur, it may be necessary to use manual mode to reposition the machine.

Loading Aborted — This error occurs when the loading device or another external device sends a signal to the MilTouch™ machine to abort the loading process.

Discharge Aborted — This error occurs when the discharge device or another external device sends a signal to the MilTouch™ machine to abort the discharging process.

Invalid Formula — The operator programmed the MilTouch™ machine to use a wash formula that does not exist in the Mildata® computer.

Load Eye Blocked — This error indicates that the load chute photoeye is blocked, which suggests there is a jam in the load chute.

Up Lock Not Made — The controller cannot confirm that the chute is in the up and locked position.

Invalid Work Order — The operator entered a work order that does not exist in the Mildata® computer.

Invalid Goods Code — The operator entered a goods code that does not exist in the Mildata® computer.

Invalid Customer Code — The operator entered a customer code that does not exist in the Mildata® computer.

Invalid Employee Code — The operator entered an employee code that does not exist in the Mildata® computer.

Can't Find Data — This error appears only on machines connected to a Mildata® computer. The MilTouch™ machine requested a wash formula that was not found on the Mildata® computer.

Chute Door Not Closed — This error appears only on machines equipped with a separate load chute and door. The machine controller cannot confirm that the load chute door is completely closed.

Bifold Door Not Closed — The machine controller cannot confirm that the bifold door is completely closed (the “Bifold Door Closed” input did not actuate when the machine expected it).

Bifold Door Not Open — The machine controller cannot confirm that the bifold door is fully open for loading (the “Bifold Door Full Open” input did not actuate when the controller expected it).

Can't Find Load Position — The "Load Position" input was not actuated within the required time limit.

Can't Find Wash Position — The “Wash Position” input was not actuated within the required time limit. This error also occurs when the machine attempts to tilt to the discharge position (instead of the wash position) before an extract.

Can't Find Unload Position — The "Rear Full Up" input was not actuated within the required time limit.

Chute Locked Up — Indicates the automatic loading chute is locked in the up position.


Chute Locked Down — Indicates the automatic loading chute is locked in the down position.

Load Eye Not Blocked — Goods did not block the load chute photoeye when the machine controller expected a load.

Door Opened — Indicates the chute is not completely against the machine and sealed.

4.2.2 Error Correction

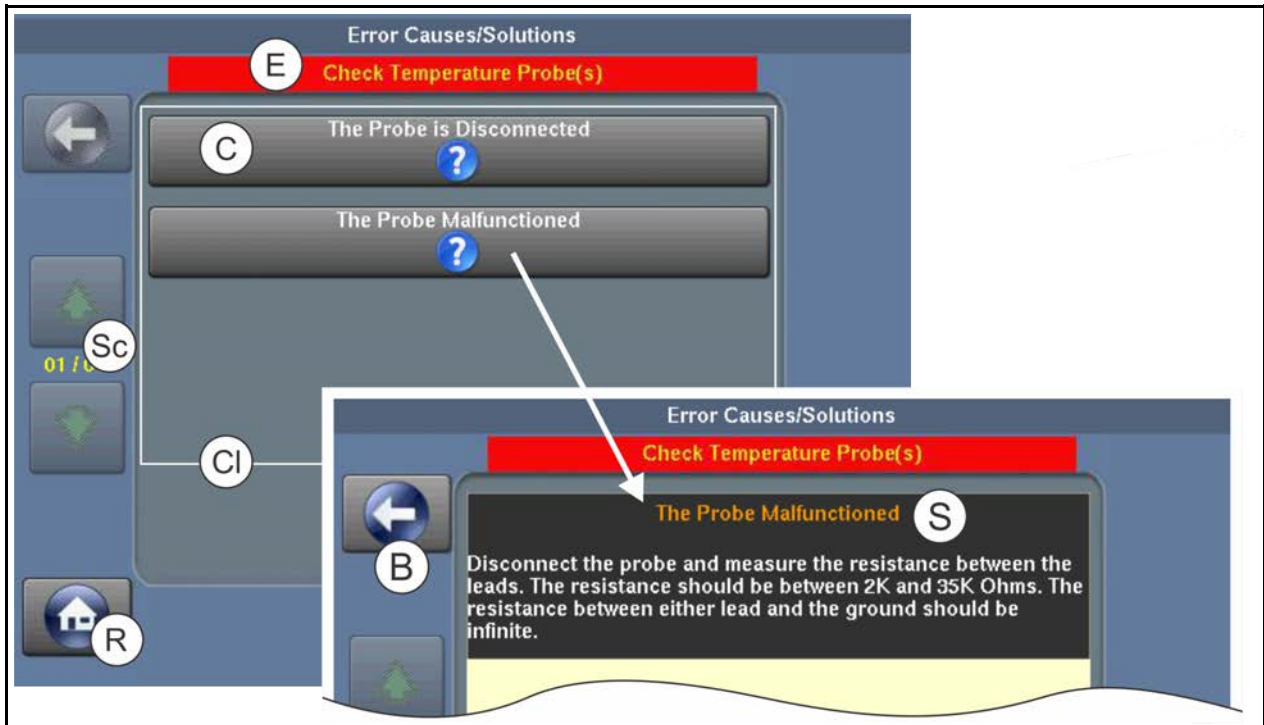
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Touch  (in the error code dialog box, [Figure 23: Sample Error Code Dialog Box, page 23](#)) to view the **Error Causes/Solutions** display (shown in the following figure).

The **Error Causes/Solutions** display gives a list of possible causes for the error. Touch one of the error causes in the list for an explanation of how to correct it.

Some errors do not have additional details on how to solve them.

Figure 26. Error Causes/Solutions Display

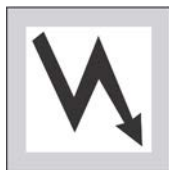


Legend

- B . . . Return to the list of possible error causes
- Cl . . . A list of possible error causes
- C . . . Touch to view the solution for this cause
- E . . . The error description
- R . . . Return to the **Run** display
- S . . . A possible solution to the error
- Sc . . . Scroll pages if there is more than one page.





WARNING: High voltage and/or moving parts — are present inside the machine when troubleshooting.



- ▶ Qualified technicians only
- ▶ Use care to avoid contact with live or moving parts
- ▶ Keep bystanders away.

If your machine encountered an error while it was running a formula:

1. Follow the instructions on the **Error Causes/Solutions** display for how to correct the error.
2. Touch  to return to the **Run** display.
3. In the error code dialog box, touch  to silence the operator signal, close the error code dialog box, and resume the wash formula at the current step. Some error code dialog boxes close automatically when you resolve the error.

If your machine encountered an error while it was receiving or discharging a load:

1. Activate manual mode.
2. Use the functions on the **Manual Override** display to reposition the machine, if necessary.
3. On the **Manual Override** display, use the Load or Discharge function (the fault recovery sequences) to return the machine to automatic operation.

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4.3 Manual Mode

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Manual mode is used to troubleshoot error conditions or reposition the machine after a fault occurs. In manual mode, the operator controls the washer-extractor with the outputs on the **Manual Override** display.

The **Manual Override** display, shown in the following figure, appears when you activate manual mode.

To activate manual mode:




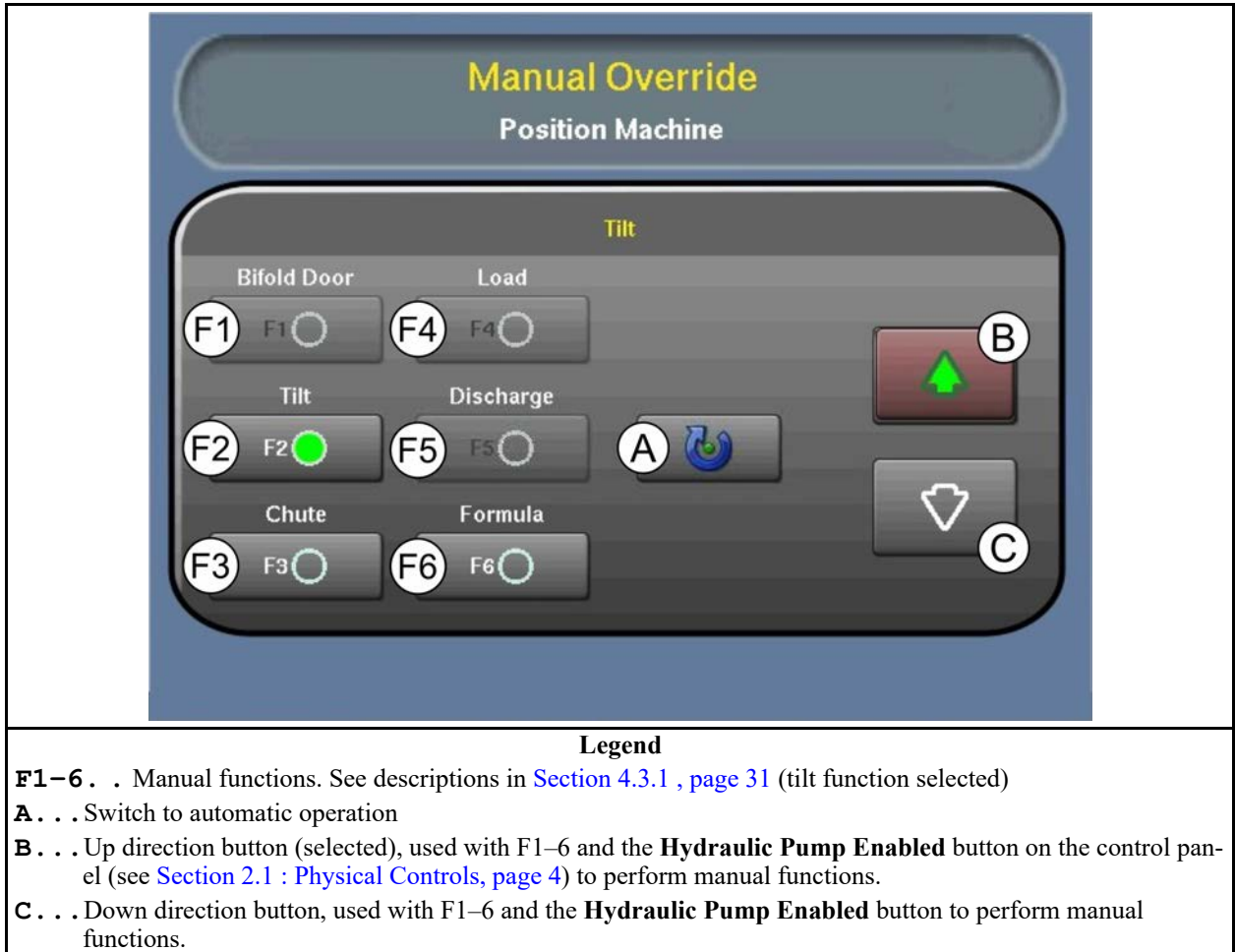
- From the **Home** display, touch , or touch **Manual Mode** from the selection list shown in [Figure 4: Automatic/Manual Selection, page 10](#) .
- From the Automatic **Loading/Discharging State** windows (see [Figure 6: Example Loading State, page 12](#)), touch  .
- From the error code dialog box (if your machine has encountered an error), touch  .

Figure 27. Manual Override Display

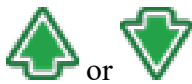




4.3.1 Manual Functions

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To use a function:

1. Touch a function button (F1–6) to select it. The light on the button illuminates to indicate it is actuated, as illustrated by F2 in the previous figure. The **Hydraulic Pump Enabled** button on the controller, when held, will operate the selected function.



2. Touch  or , depending on the action you want to perform. The button illuminates to indicate it is actuated. The actions vary by function.
3. Press or hold the **Hydraulic Pump Enabled** button, as indicated for each function. The selected function occurs (Ex. The bifold door opens).



NOTE: The MilTouch™ controller prevents the activation of a manual control when its activation would be inappropriate.

Bifold Door (F1) — This function opens or closes the bifold door. The chute must be down. Hold the **Hydraulic Pump Enabled** button to operate the door.



Opens the bifold door. The door is fully open when the “Bifold Door Full Open” input is actuated.



Closes the bifold door. The door is fully closed when the “Bifold Door Closed” input is actuated.

Tilt (F2) — This function tilts the rear up or down. Hold the **Hydraulic Pump Enabled** button to tilt the machine.



Raises the machine rear. The “Rear Full Up” input actuates when the rear is fully raised (when the machine is in the discharge position).



Lowers the machine rear. The “Load Position” input actuates when the rear is fully down (when the machine is in the load position).

Chute (F3) — This function moves the loading chute up or down. The bifold door must be closed. Hold the **Hydraulic Pump Enabled** button to move the chute.



Raises the load chute. The “Chute Up Left Lock” and “Chute Up Right Lock” inputs actuate when the chute is fully raised and locked into the up position.



Lowers the load chute. The “Chute Down Left Lock” and “Chute Down Right Lock” inputs actuate when the chute is fully lowered and locked into the down position.

Load (F4) — This function allows the machine to recover from faults that occur during loading. The machine must be in the load position: rear down, bifold door open, and chute down. Push the **Hydraulic Pump Enabled** button to start/stop the sequence.



Starts the loading recovery sequence, described in [Section 4.4.1 : The Loading Recovery Sequence, page 33](#).



Stops the loading recovery sequence.

Discharge (F5) — This function allows the machine to recover from faults that occur during discharge. The machine must be in the discharge position: rear up, bifold door closed, chute up and locked. Push the **Hydraulic Pump Enabled** button to start/stop the sequence.



Starts the discharging recovery sequence, described in [Section 4.4.2 : The Discharging Recovery Sequence, page 34](#).



Stops the discharging recovery sequence.

Formula (F6) — Touch the **Formula** button to exit the **Manual Override** window and return to the **Home** display. The bifold door must be closed, and the chute must be down.

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4.4 Fault Recovery

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If the machine lost power or an error occurred while the machine was receiving a load, running a formula, or discharging a load, follow these instructions to return the machine to automatic operation after you resolve the error.

4.4.1 The Loading Recovery Sequence

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If the machine lost power or an error occurred while the machine was receiving goods, follow these steps.

1. On the **Manual Override** display, touch **Load (F4)**.



NOTE: The machine must be in the load position (rear down, bifold door open, and chute down) to use this function.



2. Touch . The loading sequence will start when you push the **Hydraulic Pump Enabled** button.
3. Push the **Hydraulic Pump Enabled** button to start the loading sequence.
 - a. The cold water valve opens.
 - b. The cylinder turns at drain speed.
 - c. The water valve closes when the water level reaches the level entered in the **Wet-Down** configuration decision.
4. Load the machine.
5. When the machine is fully loaded, touch . The loading sequence will end when you push the **Hydraulic Pump Enabled** button.
6. Push the **Hydraulic Pump Enabled** button to end the loading sequence.
 - a. The water valves close.
 - b. Cylinder rotation stops after the time entered in the **End Time** configuration decision expires.
 - c. The sewer remains closed.
7. Use the **Bifold Door** function (F1) to close the bifold door.
8. Continue to [Section 4.4.3](#), page 34.

4.4.2 The Discharging Recovery Sequence


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If the machine lost power or an error occurred while the machine was discharging goods, follow these steps.

1. On the **Manual Override** display, touch **Discharge** (F5).




NOTE: The machine must be in the discharge position (rear up, bifold door closed, and chute up and locked) to use this function.

2. Touch . The discharging sequence will start when you push the **Hydraulic Pump Enabled** button.
3. Push the **Hydraulic Pump Enabled** button to start the discharging sequence.

The cylinder turns in both directions and stops between rotations, as configured in the **Clockwise Discharge**, **Counter-clockwise Discharge**, and **Dwell Discharge** WTB configuration decisions.

4. Unload the machine.

5. When the machine has fully discharged its load, touch . The discharging sequence will end when you push the **Hydraulic Pump Enabled** button.
6. Push the **Hydraulic Pump Enabled** button to end the discharging sequence.

Cylinder rotation stops after the time entered in the **End Time** WTB configuration decision expires.

7. Continue to [Section 4.4.3](#), page 34.

4.4.3 To Return the Machine to Automatic Operation

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After you have resolved the error and fully loaded the machine, or fully discharged the load, follow these steps to return the machine to automatic operation.



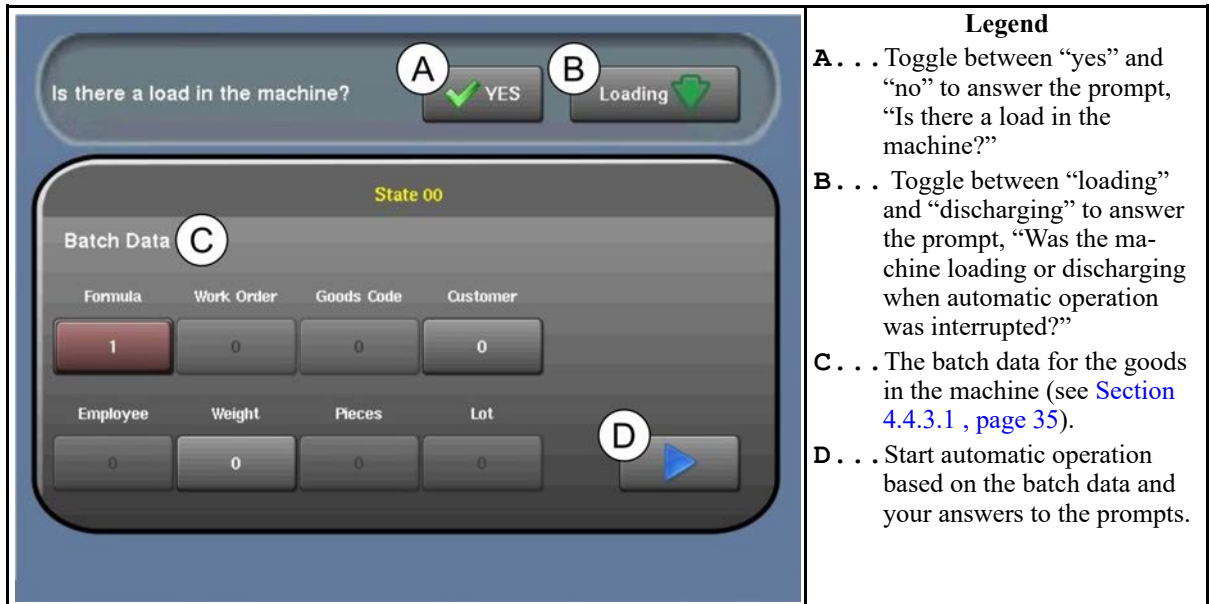

1. From the **Manual Override** display, touch  to activate automatic mode.
The machine moves to the default position.
2. The **Recovery** display (shown in the following figure) appears. The controller prompts, "Is there a load in the machine?" Touch the yes/no button (item A in the following figure) so that it displays  **YES**.

Figure 28. The Recovery Display



3. Enter the batch data for the goods in the machine. See [Section 4.4.3.1](#), page 35.
4. Choose whether the machine was loading or discharging when automatic operation was interrupted.
 - Touch the loading/discharging button (item B in the figure) so that it displays **Loading** if an error occurred or the machine lost power while it was receiving goods.
 - Touch the loading/discharging button (item B in the figure) so that it displays **Discharging** if an error occurred or the machine lost power while it was discharging goods.
5. Touch  to start automatic operation.

4.4.3.1 Batch Data

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As goods are transferred between devices in a laundry (loading device, washer-extractor, discharge device, press, etc.), each device passes batch data and post-wash codes for those goods to the other devices. Batch data and post-wash codes are passed either through the Miltrac™ controller system or through allied data inputs and are used for two purposes:

- instructing the washer-extractor and other equipment (such as drying equipment) how to process the goods
- accounting and record-keeping

In automatic operation, the washer-extractor processes goods using the batch data it receives from the loading device. If the washer-extractor lost power or an error occurred while it was processing goods, the operator must re-enter the batch data into the **Recovery** display.

The machine also reports production data to the MILDATA® computer as well as error info.

Formula identifies the wash formula used in the tunnel. Goods Code can be used instead.

- Work Order** identifies the wash formula and other batch data bundled together in a pre-set code. No other batch data is necessary if this code is used.
- Goods Code** identifies the wash formula based on the goods-type in the tunnel. Formula can be used instead.
- Customer** identifies the customer (commercial laundry) or department (institutional laundry) the batch belongs to.
- Employee** identifies the employee who processed the batch. This information can be used to generate a report of which batches or how many batches each employee processed.
- Weight** the dry, soiled weight of a batch, as measured by a weighing device, such as a weighing type load conveyor.
- Pieces** the number of pieces in the batch.
- Lot** identifies an individual batch with a unique number assigned by the user.

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4.5 How to Contact Milnor®

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Your authorized Milnor® dealer can assist you with your Milnor® machine and knows about the local conditions that may be pertinent to the installation, use, or maintenance of the machine. Contact your dealer first. For assistance from the Milnor® factory, refer to [Table 1, page 36](#) for contact information.

Table 1. Pellerin Milnor® Corporation Contact Information

Purpose	Department	Telephone	FAX	E-mail/Web site
Order or ask about replacement parts	Parts	504-712-7775 or 800-299-1500	504-469-9777	parts@milnor.com
Get advice on installing, servicing, or using	Customer Service/ Technical Support	504-712-7780	504-469-9777	service@milnor.com www.milnor.com (Customer Service)
Learn about, request, or enroll in Milnor® service seminars	Training	504-712-7716	504-469-9777	training@milnor.com
Determine warranty eligibility or claim status	Warranty Administration	504-712-7735	504-469-9777	service@milnor.com (Attention: Warranty)
Ask about, comment on, or report an error in equipment manuals	Technical Publications	504-712-7636	504-469-1849	techpub@milnor.com
European contacts	Milnor® International	+ 32 2 720 5822	—	milnor@milnor.be
Ask about the shipping weight of your machine before it arrives at your facility	Logistics Department	504-712-7686	504-471-0273	—

Pellerin Milnor Corporation
Post Office Box 400
Kenner, LA 70063-0400

Telephone: 504-467-9591
<http://www.milnor.com>