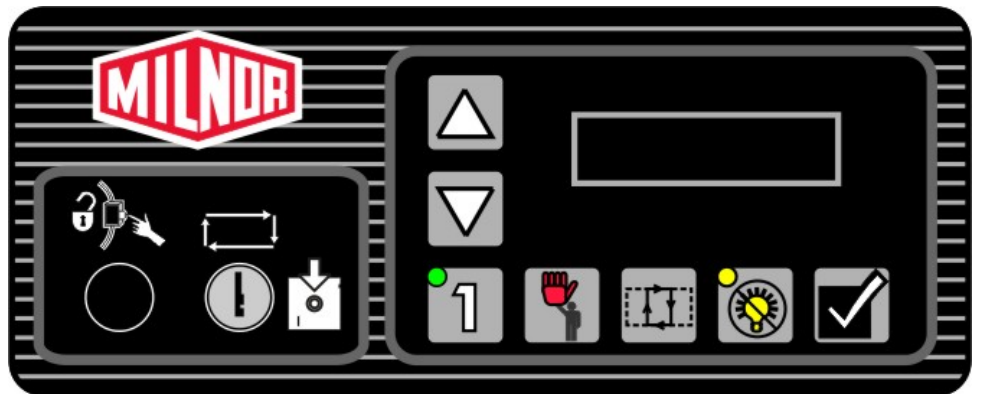
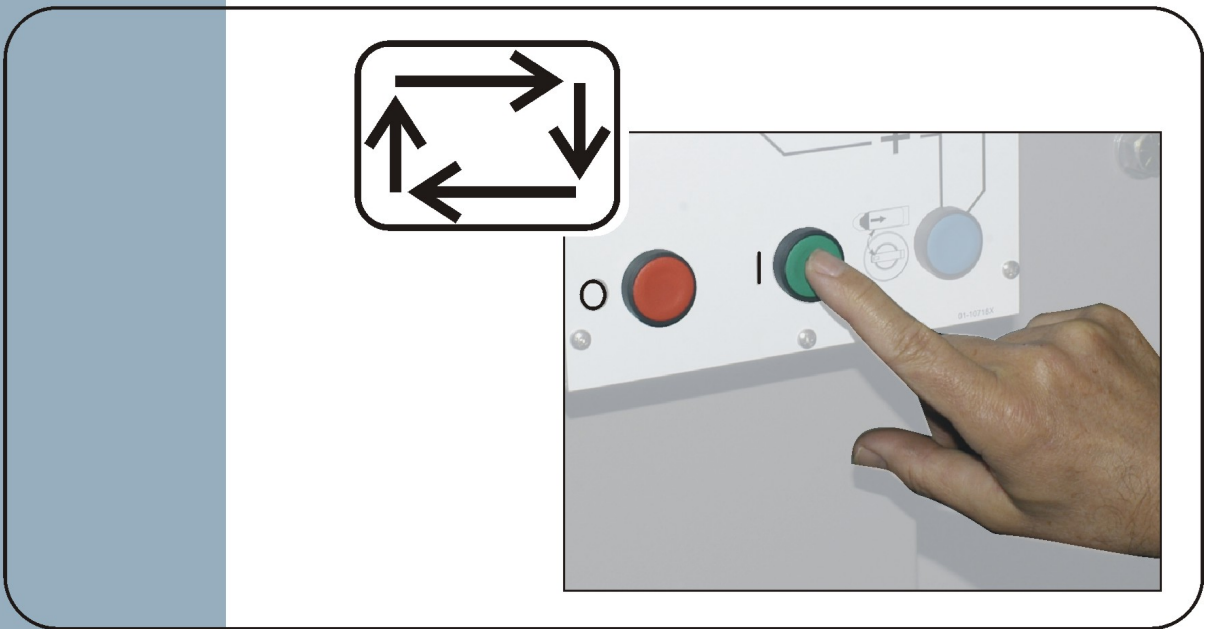


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- Publishing System: TPAS2
- Access date: 08/10/2015
- Document ECNs: Latest



# E-P Plus®, E-P Express®





## MQCJVO01U2/15332A

|            |  |                     |
|------------|--|---------------------|
| <b>1</b>   | <b>English</b>   |                     |
| 3          | Operator Guide—Washer-extractor Models with E-P Plus® and E-P Express® Controls                  | MQCJVO01EN/20090831 |
| <b>15</b>  | <b>Português</b>   |                     |
| 17         | Guia do operador—Modelos de extração de limpeza com controles E-P Plus® e E-P Express®           | MQCJVO01PT/20090831 |
| <b>37</b>  | <b>Türk</b>  |                     |
| 39         | Kullanıcı rehberi—E-P Plus® ve E-P Express® kontrollü yıkama-sıkma makinesi modelleri            | MQCJVO01TR/20090831 |
| <b>59</b>  | <b>Ελληνική</b>  |                     |
| 61         | Οδηγός χειριστή—Μοντέλα πλυντοστυπτηρίου με χειριστήρια E-P Plus® και E-P Express®               | MQCJVO01EL/20090831 |
| <b>83</b>  | <b>РУССКИЙ</b>   |                     |
| 85         | Руководство оператора—Органы управления стирально-сушильных машин моделей E-P Plus® E-P Express® | MQCJVO01RU/20090831 |
| <b>105</b> | <b>Dansk</b>   |                     |
| 107        | Brugervejledning—vaskecentrifuge modeller med E-P Plus® and E-P Express® knapper                 | MQCJVO01DA/20090831 |



English

1



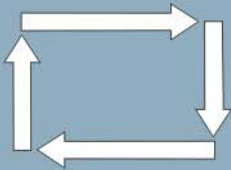


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## Operator Guide—

# Washer-extractor Models with E-P Plus® and E-P Express® Controls



**Read the  
separate  
safety  
manual  
before  
installing,  
operating,  
or servicing**

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

**Applicable Milnor® products by model number:**

|          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|
| 30015T5X | 30015V7J | 30022H8J | 30022T5X | 30022V6J | 30022VRJ | 30022X8J |
| 36021V5J | 36021V7J | 36026V5J | 36026V7J | 36026X8J | 42026V6J | 42026X7J |
| 42030V6J | 42032X7J | 48040F7B | 48040F7J | MWR12J5  | MWR12X5  | MWR16J5  |
| MWR16X5  | MWR18J4  | MWR18J6  | MWR18X4  |          |          |          |



# Table of Contents

| Sections  | Figures, Tables, and Supplements        |
|---|---|
| <b>Chapter 1. Description of Controls</b>   |   |
| <b>1.1. Operator Controls on E-P Plus® and E-P Express® Models</b><br>(Document BICJHF01) | Figure 1: Typical Control Panel         |
| <b>Chapter 2. Normal Operation</b>  |   |
| <b>2.1. Normal Machine Operation</b> (Document BICJVO03)                                  |   |
| 2.1.1. Start Here for Safety  |   |
| 2.1.2. Check Switch Settings  | Supplement 1: The Power-up Safety Delay |
| 2.1.3. Load the Machine   |   |
| 2.1.4. Select and Start a Formula   |   |
| 2.1.5. Monitor Operation  |   |
| 2.1.6. How to Terminate a Running Formula   |   |
| 2.1.7. How to Restart after Losing Power  |   |
| 2.1.8. Unload the Machine   |   |
| <b>Chapter 3. Correcting Errors</b>   |   |
| <b>3.1. Error Messages During Normal Operation</b> (Document BICJHT04)                    |   |

# Chapter 1

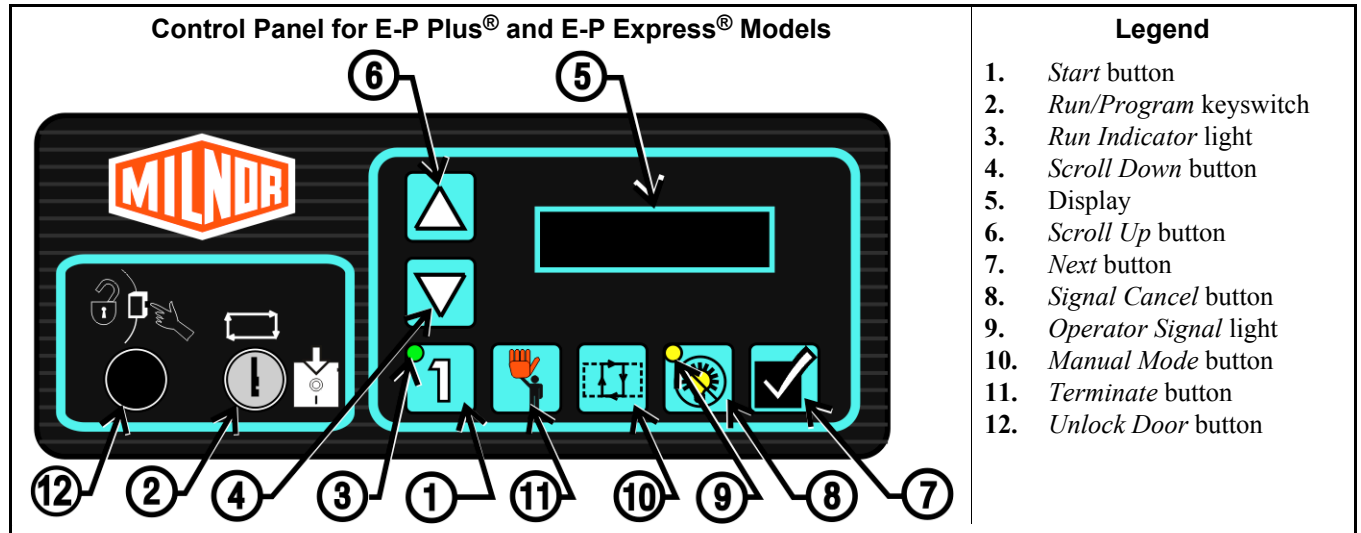
## Description of Controls

BICJHF01 (Published) Book specs- Dates: 20090831 / 20090831 / 20091105 Lang: ENG01 Applic: CJV CJH CJF CJX

### **1.1. Operator Controls on E-P Plus® and E-P Express® Models**

This document describes the user controls during normal machine operation. For additional information on other controls shown in [Figure 1](#), see the reference manual.

Figure 1: Typical Control Panel



- Legend**
1. Start button
  2. Run/Program keyswitch
  3. Run Indicator light
  4. Scroll Down button
  5. Display
  6. Scroll Up button
  7. Next button
  8. Signal Cancel button
  9. Operator Signal light
  10. Manual Mode button
  11. Terminate button
  12. Unlock Door button

**Display or Action**

**Explanation**

- ① When the display says *Run Formula*, press this button to start the formula.
- ☐ / ☑ During normal operation, the *Run/Program* keyswitch must be set to ☐. This is the automatic position.
- ▲ / ▼ Use the *Scroll Up* and *Scroll Down* buttons to select the desired formula.
- ☑ The *Next* button is not used during normal operation.
- 🔊 The *Signal Cancel* button silences the operator signal that sounds when a formula completes normally. Also, if an operator signal is programmed with a chemical injection, add the chemical and press this button to resume operation.
- 🔧 The *Manual* button is not used during normal operation.
- 🛑 The *Terminate* button cancels all remaining steps in the current formula and starts the shutdown procedure for the machine. The formula can not be resumed.
- 🔓 The *Unlock Door* button allows you to open the door if all other safety conditions are met.

— End of BICJHF01 —

# Chapter 2

## Normal Operation

BICJVO03 (Published) Book specs- Dates: 20090831 / 20090831 / 20091105 Lang: ENG01 Applic: CJV CJH CJF CJX

### 2.1. Normal Machine Operation

#### 2.1.1. Start Here for Safety

This document is designed to remind the person operating this washer-extractor what is required to operate this machine. Do not attempt to operate this machine before a trained operator has explained the details to you.



**DANGER [1]: Multiple Hazards**—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.






**CAUTION [2]: Electrocutation and Electrical Burn Hazards**—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Do not unlock or open electric box doors.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.
- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.

#### 2.1.2. Check Switch Settings

**Display or Action**

**Explanation**

- |   |   |
|---|---|
|  | Check that the <i>run/program</i> keyswitch is at  . |
|  | Check that any <i>emergency stop</i> switches are in the <i>out</i> position.   |
|  | Check that the master switch, if provided, is at  .  |

**Supplement 1**

**The Power-up Safety Delay**

Some Milnor® washer extractors do not use a speed sensing device to verify that the basket has stopped rotating. Therefore, when power is first applied to the machine, at least 80 seconds must elapse before any further operations can be attempted. This provides sufficient time for the basket to coast to a complete stop if power was lost while the machine was in a high speed extract and restored before the basket stopped.

### 2.1.3. Load the Machine

Load the machine to the rated capacity and securely close the loading door.

### 2.1.4. Select and Start a Formula

#### Display or Action

```
RUN FORMULA
00 OK TO POWER OFF
```

#### Explanation

This is the *Run Formula* display. From this display, you can disconnect power from the machine without risking damage to electronic parts, or you can select a formula to run.

▲ / ▼

indexes forward/backward through the 30 formulas.

```
RUN FORMULA
07 FORMULA NUMBER 07
```

Example display: *Formula 07* selected for running

1

starts the machine with the selected formula.

```
RUN FORMULA
DOES NOT EXIST
```

indicates that the formula selected for running has not been programmed. This display appears for three seconds.

### 2.1.5. Monitor Operation

**Display or Action**

```
23:04 F02S01 02:37
TEMP A168/D170 LEV 1
```

```
23:04 STEP 01 02:37
TEMP A168/D170 SPD 0
```

```
23:04 F02S01 02:37
```

```
TEMP A168/D170 LEV 1
```

```
SPD 0 LEV 2
```

**Explanation**

These two displays alternate during normal operation on some E-P Plus® models. E-P Express® models display other data about the step, but not bath temperature data.

STEP01 is the current step.

EXTRACT indicates that the machine is extracting the goods.

TIMEHALT indicates that the timer is stopped for a chemical injection. The chemical supply equipment must be properly installed for this feature to work.

Temperature in this E-P Plus® machine is measured in degrees Fahrenheit or Celsius, according to machine configuration.

A168 indicates that the current achieved temperature is 168 degrees. Temperature is displayed only if machine is equipped with and configured for temperature control.

D170 indicates that the desired temperature for this step is 170 degrees. Temperature is displayed only if the machine is equipped with and configured for temperature control.

LEV 2 indicates that the bath level achieved is Level 2.

SPD 0 indicates the bath speed for this step.

WAIT FOR LEVEL 2 H indicates that Level 2 is programmed for this step, but is not yet achieved. The H indicates that the hot water valve is open; C indicates cold water, and 3 indicates extra water.

CHEM 03 is displayed when Chemical 03 is being injected. The number for each chemical (up to five may be connected) is displayed as the chemical is injected.

FINAL EXTRACT indicates that the step in progress is the final step of the wash formula.

### 2.1.6. How to Terminate a Running Formula

**Display or Action**



**Explanation**

Cancels the current formula and returns the machine to the *Run Formula* display (see [Section 2.1.4 “Select and Start a Formula”](#)).

### 2.1.7. How to Restart after Losing Power

The control remembers the formula and step it was executing if power fails or if the wall disconnect is turned off while the machine is operating in automatic mode.

#### Display or Action

```
PRESS START TO RUN
STEP xx - FORMULA yy
```

#### Explanation

On most machine models, this display appears when power is restored. The formula and step which were in progress when power was interrupted are shown.

**1**

Resumes the formula at the displayed formula and step. If the outage occurred in a bath step, level and temperature (if commanded) must again be satisfied, even if these were already satisfied before power was lost. Any commanded chemicals will be injected again.

If the outage occurred during the drain part of a bath step, the bath step will be repeated, then followed by the next commanded step.

If the outage occurred during an extract step, the previous bath will be repeated before the extract step begins.

### 2.1.8. Unload the Machine



**DANGER 3: Entangle and Sever Hazards**—Contact with goods being processed can cause the goods to wrap around your body or limbs and dismember you. The goods are normally isolated by the locked cylinder door.

- Do not touch goods inside or hanging partially outside the turning cylinder.

When the formula ends or is terminated, the cylinder coasts for 25 seconds if the last step was a bath step. If the last step was an extract, the coast time may be as much as 180 seconds. Do not attempt to open the door early.

#### Display or Action

```
UNLOCKING THE DOOR
PLEASE WAIT
```

#### Explanation

display during the last 15 seconds of coast, or during the entire coast time if the formula was manually terminated.

```
WAITING TO UNLOAD
```

At the end of the coast time, the operator alarm sounds.

**2**

Silences the operator alarm. The door unlocks so you can unload the machine.

— End of BICJVO03 —

# Chapter 3

## Correcting Errors



### 3.1. Error Messages During Normal Operation

If an error message appears on the bottom line of the display while the machine is running, the timer shown on the top line will stop counting. When the error is corrected, the timer resumes counting down. To troubleshoot most errors, suspend the formula in progress and turn power off. Do not terminate the formula if it is to be resumed after the error is corrected. See the reference manual for more information.

#### Display or Action

LEVELS STILL MADE

#### Explanation

The microprocessor is still receiving information that a level is made just before or during an extract step, or immediately before the fill for a bath step. This error is self-clearing when level is lost.

TOO LONG TO FILL

Time to fill to level exceeded 10 minutes. Check the water valves, strainers, supply lines, and water pressure. The machine will continue to fill until level is reached, at which time the error will automatically clear and normal operation will resume.

TOO LONG TO STEAM

**E-P Plus models only.** The configured maximum time to steam up to the desired temperature has been exceeded. Check the steam valve, strainer, main steam header and pressure, etc. Steaming will continue until temperature is achieved, when the error will automatically clear and normal operation will resume.

TOO LONG TO COOL

**E-P Plus models only.** The configured maximum time to cool down to the desired temperature has been exceeded. Check the cooldown valve and strainer if equipped, cold water pressure, and position of vernier valve on cooldown inlet. Cooldown will continue until the desired temperature is achieved, when the error will automatically clear.

TOO LONG TO DRAIN

The machine did not drain properly in the allotted drain time. This self-correcting error will clear when the water level in the basket is low enough to begin the next operation.

CHECK PROBE

**E-P Plus models only.** This error message indicates that the resistance of the temperature probe is outside the specified range. Test the probe by disconnecting the probe leads from the processor board and checking the resistance with an accurate digital ohmmeter. Resistance between the two leads must be between 2K and 35K Ohms. Resistance between each lead and ground must be infinite.

EXTERNAL FAULT

On most machines, this error indicates that the programmed chemical injection failed, usually because the chemical supply system is empty. When chemicals are added and can be injected, this error clears automatically, allowing operation to resume.

On 48040F7J/F7B models, this error indicates that the bearing air pressure is below the minimum required to help protect the bearing from water contamination.

**Display or Action**

BRAKE PRESS. FAULT

**Explanation**

This error appears only on machine models equipped with a cylinder brake. The message indicates that the brake is engaged when it should be disengaged. This is usually because the machine is not receiving sufficient air pressure to open the normally-closed brake. Check the plant compressed air supply.

THREE WIRE DISABLED

The three-wire relay de-energized. This relay provides control circuit power to the machine. Once energized by momentarily depressing the *Start* button (**1**), it is held energized by its own normally open contacts, along with motor overloads, door interlocks, etc. Should any of these contacts open even momentarily, the machine stops and this display appears. This error can only be cleared by depressing the *Start* button (**1**), and only then if the error has been cleared.

INVERTER FAULT

This error message appears if the microprocessor does not receive an input from the inverter within 14 seconds of the beginning of the formula. After 14 seconds without an inverter input, the timer stops, the basket is stationary, and the drain valve opens. To recover, press the *Next* key (**2**).

VIBRATION SW TRIPPED  
RECOVERY SEQUENCE

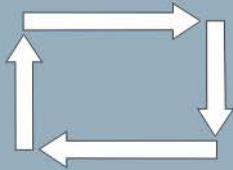
When the vibration switch closes, the timer stops. After 45 to 85 seconds (120 seconds on 42032F7J models), the basket reverses at wash speed as the cylinder fills with water. When low level is achieved, the cylinder reverses for one additional minute at wash speed, then accelerates to extract speed.

— End of BICJHT04 —

Português

2





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- Language Code: POR01, Purpose: publication, Format: 2colA

## Guia do operador [Operator Guide]—

### Modelos de extração de limpeza com controles E-P Plus<sup>®</sup> e E-P Express<sup>®</sup> [Washer-extractor Models with E-P Plus<sup>®</sup> and E-P Express<sup>®</sup> Controls]

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Leia o manual de segurança

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

**Pode ser aplicado Milnor® produtos por número do modelo: [Applicable Milnor® products by model number:]**

|          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|
| 30015T5X | 30015V7J | 30022H8J | 30022T5X | 30022V6J | 30022VRJ | 30022X8J |
| 36021V5J | 36021V7J | 36026V5J | 36026V7J | 36026X8J | 42026V6J | 42026X7J |
| 42030V6J | 42032X7J | 48040F7B | 48040F7J | MWR12J5  | MWR12X5  | MWR16J5  |
| MWR16X5  | MWR18J4  | MWR18J6  | MWR18X4  |          |          |          |

# Índice [English table of contents follows]

| Seções  | Imagens, tabelas e suplementos                       |
|---|--|
| <b>Capítulo 1. Descrição dos controles</b>  |  |
| <b>1.1. Controles do operador nos modelos E-P Plus® e E-P Express®</b> (Documento BICJHF01) | Imagem 1: Painel de controle típico                  |
| <b>Capítulo 2. Funcionamento normal</b>   |  |
| <b>2.1. Funcionamento normal da máquina</b> (Documento BICJVO03)                            |  |
| 2.1.1. Iniciar aqui por segurança   |  |
| 2.1.2. Verifique as definições do alternador  | Suplemento 1: O atraso de segurança de inicialização |
| 2.1.3. Carregue a máquina   |  |
| 2.1.4. Selecionar a iniciar uma fórmula   |  |
| 2.1.5. Monitorar o funcionamento  |  |
| 2.1.6. Como encerrar uma fórmula em execução  |  |
| 2.1.7. Como reiniciar após perder energia   |  |
| 2.1.8. Descarregue a máquina  |  |
| <b>Capítulo 3. Correção de erros</b>  |  |
| <b>3.1. Mensagens de erro durante o funcionamento normal</b> (Documento BICJHT04)           |  |

# Table of Contents

| Sections  | Figures, Tables, and Supplements        |
|---|---|
| <b>Chapter 1. Description of Controls</b>   |   |
| <b>1.1. Operator Controls on E-P Plus® and E-P Express® Models</b><br>(Document BICJHF01) | Figure 1: Typical Control Panel         |
| <b>Chapter 2. Normal Operation</b>  |   |
| <b>2.1. Normal Machine Operation</b> (Document BICJVO03)                                  |   |
| 2.1.1. Start Here for Safety  |   |
| 2.1.2. Check Switch Settings  | Supplement 1: The Power-up Safety Delay |
| 2.1.3. Load the Machine   |   |
| 2.1.4. Select and Start a Formula   |   |
| 2.1.5. Monitor Operation  |   |
| 2.1.6. How to Terminate a Running Formula   |   |
| 2.1.7. How to Restart after Losing Power  |   |
| 2.1.8. Unload the Machine   |   |
| <b>Chapter 3. Correcting Errors</b>   |   |
| <b>3.1. Error Messages During Normal Operation</b> (Document BICJHT04)                    |   |



# Capítulo 1

## Descrição dos controles

# Chapter 1

## Description of Controls

BICJHF01 (Published) Book specs- Dates: 20090831 / 20090831 / 20140206 Lang: POR01 Applic: CJV CJH CJF CJX

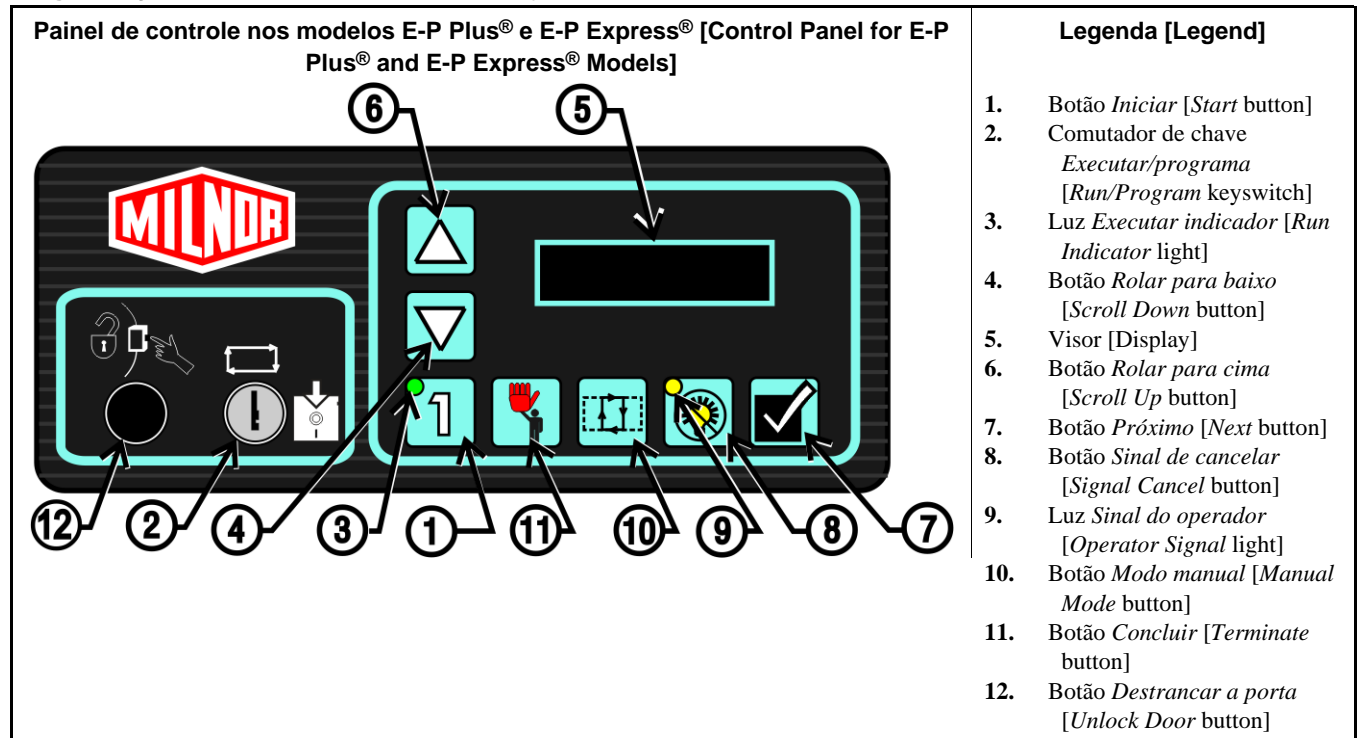
### 1.1. Controles do operador nos modelos E-P Plus<sup>®</sup> e E-P Express<sup>®</sup>

Este documento descreve os controles do usuário durante o funcionamento normal da máquina. Para obter informações adicionais sobre outros controles mostrados em [Imagem 1](#), consulte o manual de referência.

### Operator Controls on E-P Plus<sup>®</sup> and E-P Express<sup>®</sup> Models

This document describes the user controls during normal machine operation. For additional information on other controls shown in [Figure 1](#), see the reference manual.

Imagem [Figure] 1: Painel de controle típico [Typical Control Panel]



**Visualização ou ação**  
[Display or Action]

**Explicação**

**Explanation**

- |              |   |   |
|--------------|---|---|
| <p>1</p>     | <p>Quando o visor disser <i>Executar a fórmula</i>, pressione este botão para iniciar a fórmula.</p>  | <p>When the display says <i>Run Formula</i>, press this button to start the formula.</p>  |
| <p>☐ / ☑</p> | <p>Durante o funcionamento normal, o comutador de chaves <i>Executar/programa</i> deverá estar definido como ☐. Esta é a posição automática.</p>  | <p>During normal operation, the <i>Run/Program</i> keyswitch must be set to ☐. This is the automatic position.</p>  |
| <p>▲ / ▼</p> | <p>Utilize os botões <i>Rolar para cima</i> e <i>Rolar para baixo</i> para selecionar a fórmula desejada.</p>   | <p>Use the <i>Scroll Up</i> and <i>Scroll Down</i> buttons to select the desired formula.</p>   |
| <p>☑</p>     | <p>O botão <i>Próximo</i> não é utilizado durante o funcionamento normal.</p>   | <p>The <i>Next</i> button is not used during normal operation.</p>  |
| <p>🔊</p>     | <p>O botão <i>Sinal de cancelar</i> silencia o sinal do operador emitido quando a fórmula é completada normalmente. Além disso, se o sinal do operador for programado com uma injeção química, adicione o produto químico e pressione o botão para reiniciar o funcionamento.</p> | <p>The <i>Signal Cancel</i> button silences the operator signal that sounds when a formula completes normally. Also, if an operator signal is programmed with a chemical injection, add the chemical and press this button to resume operation.</p> |

**Visualização ou ação**  
[Display or Action]

**Explicação**

**Explanation**



O botão *Manual* não é utilizado durante o funcionamento normal.

The *Manual* button is not used during normal operation.



O botão *Concluir* cancela todas as etapas restantes da fórmula atual e inicia o desligamento da máquina. Não foi possível reiniciar a fórmula.

The *Terminate* button cancels all remaining steps in the current formula and starts the shutdown procedure for the machine. The formula can not be resumed.



O botão *Destrancar a porta* permite abrir a porta se todas as outras condições de segurança tiverem sido atendidas.

The *Unlock Door* button allows you to open the door if all other safety conditions are met.

— Final de BICJHF01 —

— End of BICJHF01 —

## Capítulo 2

# Funcionamento normal

## Chapter 2

# Normal Operation

BICJVO03 (Published) Book specs- Dates: 20090831 / 20090831 / 20140206 Lang: POR01 Applic: CJV CJH CJF CJX

### 2.1. Funcionamento normal da máquina

### Normal Machine Operation

#### 2.1.1. Iniciar aqui por segurança

Este documento foi desenvolvido para lembrar ao operador do extrator de lavagem o que é necessário para operar esta máquina. Não tente operar esta máquina antes de um operador treinado explicar os detalhes a você.

#### Start Here for Safety

This document is designed to remind the person operating this washer-extractor what is required to operate this machine. Do not attempt to operate this machine before a trained operator has explained the details to you.



**PERIGO [1]: Riscos diversos**—Ações descuidadas do operador poderão matar ou ferir pessoal, danificar ou destruir a máquina, danificar propriedade e/ou anular a garantia.

**DANGER [1]: Multiple Hazards**—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.



**CUIDADO [2]: Riscos de eletrocução e queimaduras elétricas**—O contato com energia elétrica pode ferir seriamente ou matar. A energia elétrica estará presente no interior do gabinete a menos que o disjuntor principal da máquina esteja desligado.








**CAUTION [2]: Electrocutation and Electrical Burn Hazards**—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Não destrave ou abra portas de quadros de energia.
- Saiba a localização do disjuntor principal da máquina e use-o em caso de emergência para cortar toda a energia elétrica da máquina.
- Não realize manutenção na máquina a menos que seja qualificado e autorizado. Você deve compreender claramente os riscos e como os evitar.

- Do not unlock or open electric box doors.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.
- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.

### 2.1.2. Verifique as definições do alternador

### Check Switch Settings

| Visualização ou ação<br>[Display or Action]                                       | Explicação  | Explanation   |
|---|---|---|
|  | Verifique se o <i>executar/programa</i> comutador de chave está em  . | Check that the <i>run/program</i> keyswitch is at  . |
|  | Verifique se há alternadores <i>para de emergência</i> na posição <i>fora</i> .   | Check that any <i>emergency stop</i> switches are in the <i>out</i> position.   |
|  | Verifique se o alternador mestre, se houver, está em  .                | Check that the master switch, if provided, is at  .  |

#### Suplemento 1

##### O atraso de segurança de inicialização

Alguns Milnor® extratores de limpeza não utilizam um dispositivo de percepção da velocidade para verificar se a cesta parou de girar. Portanto, quando a energia começa a ser aplicada na máquina, ao menos 80 segundos deverão transcorrer antes que sejam tentadas quaisquer operações. Isto fornece tempo suficiente para a cesta desacelerar até parar completamente se o fornecimento de energia for interrompido quando a máquina estiver em extração de alta velocidade e retomado antes de a cesta parar.

#### Supplement 1

##### The Power-up Safety Delay

Some Milnor® washer extractors do not use a speed sensing device to verify that the basket has stopped rotating. Therefore, when power is first applied to the machine, at least 80 seconds must elapse before any further operations can be attempted. This provides sufficient time for the basket to coast to a complete stop if power was lost while the machine was in a high speed extract and restored before the basket stopped.

### 2.1.3. Carregue a máquina

Carregue a máquina até a capacidade avaliada e feche a porta da carga com segurança.

### Load the Machine

Load the machine to the rated capacity and securely close the loading door.

## 2.1.4. Selecionar a iniciar uma fórmula      Select and Start a Formula

**Visualização ou ação**  
[Display or Action]

```
EXECUTAR A FÓRMULA
00 OK PARA
DESLIGAMENTO
```

```
RUN FORMULA
00 OK TO POWER OFF
```



```
EXECUTAR A FÓRMULA
07 FÓRMULA NÚMERO 07
```

```
RUN FORMULA
07 FORMULA NUMBER 07
```



```
EXECUTAR A FÓRMULA
NÃO EXISTE
```

```
RUN FORMULA
DOES NOT EXIST
```

**Explicação**

Isto é para o visor *Executar a fórmula*. Neste visor é possível desconectar o cabo de energia da máquina sem colocar em risco as peças eletrônicas. Também é possível selecionar uma fórmula para ser executada.

indica para frente/para trás em todas as 30 fórmulas.

Visualização de exemplo: *Fórmula 07* selecionado para executar

inicia a máquina com a fórmula selecionada.

indica que a fórmula selecionada para execução não foi programada. Esta visualização será exibida por três segundos.

**Explanation**

This is the *Run Formula* display. From this display, you can disconnect power from the machine without risking damage to electronic parts, or you can select a formula to run.

indexes forward/backward through the 30 formulas.

Example display: *Formula 07* selected for running

starts the machine with the selected formula.

indicates that the formula selected for running has not been programmed. This display appears for three seconds.

### 2.1.5. Monitorar o funcionamento

### Monitor Operation

**Visualização ou ação**  
[Display or Action]

**Explicação**

**Explanation**

```
23:04 F02S01 02:37
TEMP A168/D170 NÍV 1
```

```
23:04 F02S01 02:37
TEMP A168/D170 LEV 1
```

```
23:04 STEP 01 02:37
TEMP A168/D170 VEL 0
```

```
23:04 STEP 01 02:37
TEMP A168/D170 SPD 0
```

```
23:04 F02S01 02:37
```

```
23:04 F02S01 02:37
```

```
TEMP A168/D170 NÍV 1
```

```
TEMP A168/D170 LEV 1
```

Estas duas visualizações se alternam durante o funcionamento normal em alguns modelos E-P Plus®. Os modelos E-P Express® exibem outros dados sobre a etapa, mas não os dados de temperatura do banho.

STEP01 é a etapa atual.

EXTRACT indica que a máquina está extraindo os bens.

TIMEHALT indica que o marcador de tempo foi interrompido por uma injeção química. O equipamento de fornecimento de químicos deveria ser instalado adequadamente para que este recurso funcione.

A temperatura nesta máquina E-P Plus® é medida em graus Fahrenheit ou Celsius, de acordo com a configuração da máquina.

A168 indica que a temperatura atual alcançada é de 168 graus. A temperatura será exibida apenas se a máquina possuir um controle de temperatura e estiver configurada de acordo.

These two displays alternate during normal operation on some E-P Plus® models. E-P Express® models display other data about the step, but not bath temperature data.

STEP01 is the current step.

EXTRACT indicates that the machine is extracting the goods.

TIMEHALT indicates that the timer is stopped for a chemical injection. The chemical supply equipment must be properly installed for this feature to work.

Temperature in this E-P Plus® machine is measured in degrees Fahrenheit or Celsius, according to machine configuration.

A168 indicates that the current achieved temperature is 168 degrees. Temperature is displayed only if machine is equipped with and configured for temperature control.

**Visualização ou ação**  
[Display or Action]

|       |       |
|-------|-------|
| VEL 0 | NÍV 2 |
|-------|-------|

|       |       |
|-------|-------|
| SPD 0 | LEV 2 |
|-------|-------|

**Explicação**

D170 indica que a temperatura desejada para esta etapa é de 170 graus. A temperatura será exibida apenas se a máquina possuir um controle de temperatura e estiver configurada de acordo.

LEV 2 indica que o nível de banho alcançado é o 2 (Nível 2).

SPD 0 indica a velocidade de banho nesta etapa.

WAIT FOR LEVEL 2 H indica que o Nível 2 é o programado para esta etapa, mas ainda não foi alcançado. O H indica que a válvula de água quente está aberta; C indica água fria, e 3 indica água extra.

CHEM 03 será exibido quando o Químico 03 for injetado. O número de cada químico (até cinco poderão ser conectados) será exibido quando o material for injetado.

FINAL EXTRACT indica que a etapa em curso é a última da fórmula de limpeza.

**Explanation**

D170 indicates that the desired temperature for this step is 170 degrees. Temperature is displayed only if the machine is equipped with and configured for temperature control.

LEV 2 indicates that the bath level achieved is Level 2.

SPD 0 indicates the bath speed for this step.

WAIT FOR LEVEL 2 H indicates that Level 2 is programmed for this step, but is not yet achieved. The H indicates that the hot water valve is open; C indicates cold water, and 3 indicates extra water.

CHEM 03 is displayed when Chemical 03 is being injected. The number for each chemical (up to five may be connected) is displayed as the chemical is injected.

FINAL EXTRACT indicates that the step in progress is the final step of the wash formula.

**2.1.6. Como encerrar uma fórmula em execução**

**How to Terminate a Running Formula**

**Visualização ou ação**  
[Display or Action]



**Explicação**

Cancela a fórmula atual e faz a máquina retornar à exibição *Executar a fórmula* (ver Seção 2.1.4 “Selecionar a iniciar uma fórmula”).

**Explanation**

Cancels the current formula and returns the machine to the *Run Formula* display (see Section 2.1.4 “Select and Start a Formula”).



### 2.1.7. Como reiniciar após perder energia

O controle lembrará a fórmula e a etapa que estava sendo executada quando houver queda de energia ou quando o disjuntor de parede for desligado enquanto a máquina estiver no modo de funcionamento automático.

#### Visualização ou ação [Display or Action]

```

PRESSIONE INCIAR
PARA EXECUTAR
ETAPA xx - FÓRMULA
yy

PRESS START TO RUN
STEP xx - FORMULA yy
    
```

#### Explicação

Na maioria dos modelos de máquina esta visualização será exibida quando a energia for recuperada. A fórmula e a etapa que estavam em andamento quando o fornecimento de energia foi interrompido serão exibidas.

#### Explanation

On most machine models, this display appears when power is restored. The formula and step which were in progress when power was interrupted are shown.



A fórmula será reiniciada a partir do ponto exibido na tela. Se a falha de energia ocorrer durante uma etapa de banho, o nível e a temperatura (se controlados) deverão ser alcançados novamente, ainda que estivessem no nível desejado antes da queda de energia. Todos os comandos químicos deverão ser injetados novamente.

Resumes the formula at the displayed formula and step. If the outage occurred in a bath step, level and temperature (if commanded) must again be satisfied, even if these were already satisfied before power was lost. Any commanded chemicals will be injected again.

Se a falha elétrica ocorrer durante o estágio de drenagem de uma etapa de banho, a etapa de banho será repetida, e depois seguida para a próxima etapa de comando.

If the outage occurred during the drain part of a bath step, the bath step will be repeated, then followed by the next commanded step.

Se a falha elétrica ocorrer durante uma etapa de extração, o banho anterior será repetido antes que a etapa de extração se inicie.

If the outage occurred during an extract step, the previous bath will be repeated before the extract step begins.

### 2.1.8. Descarregue a máquina



**PERIGO [3]: Riscos de se prender e de amputação**—O contato com bens em processamento poderá fazer com que eles se enroscuem no seu corpo ou membros, desmembrando você. Os bens são, normalmente, isolados pela porta fechada do cilindro.

- Não toque os bens dentro ou pendurados parcialmente fora do cilindro girando.

Quando a fórmula terminar ou for encerrada, o cilindro desacelerará por 25 segundos se a última

### Unload the Machine

**DANGER [3]: Entangle and Sever Hazards**—Contact with goods being processed can cause the goods to wrap around your body or limbs and dismember you. The goods are normally isolated by the locked cylinder door.

- Do not touch goods inside or hanging partially outside the turning cylinder.

When the formula ends or is terminated, the cylinder coasts for 25 seconds if the last step

etapa for a de banho. Caso a última etapa tenha sido de extração, o tempo de desaceleração poderá se estender a 180 segundos. Não tente abrir a porta logo.

was a bath step. If the last step was an extract, the coast time may be as much as 180 seconds. Do not attempt to open the door early.

**Visualização ou ação**  
[Display or Action]

DESTRANCAMENTO DA  
PORTA  
AGUARDE

UNLOCKING THE DOOR  
PLEASE WAIT

AGUARDANDO O  
DESCARREGAMENTO  


WAITING TO UNLOAD  


**Explicação**

exibido durante os últimos 15 segundos de desaceleração, ou durante todo o tempo de desaceleração se a fórmula tiver sido encerrada manualmente.

Ao final do tempo de desaceleração, o operador soará o alarme.



Silencia o alarme do operador. A porta será destrancada para que a máquina possa ser carregada.

**Explanation**

display during the last 15 seconds of coast, or during the entire coast time if the formula was manually terminated.

At the end of the coast time, the operator alarm sounds.

Silences the operator alarm. The door unlocks so you can unload the machine.

— Final de BICJVO03 —

— End of BICJVO03 —

## Capítulo 3

# Correção de erros

## Chapter 3

# Correcting Errors

BICJHT04 (Published) Book specs- Dates: 20090831 / 20090831 / 20140206 Lang: POR01 Applic: CJV CJH CJF CJX

### 3.1. Mensagens de erro durante o funcionamento normal

Caso seja exibida uma mensagem de erro na linha inferior do visor enquanto a máquina estiver em funcionamento, o marcador de tempo na linha superior interromperá a contagem. Quando o erro for corrigido, o marcador de tempo retomará a contagem. Para solucionar a maior parte dos problemas, suspenda a fórmula em funcionamento e interrompa o fornecimento de energia. Não conclua a fórmula se está estiver para ser reiniciada depois que o erro for corrigido. Consulte o manual de referência para obter mais informações.

### Error Messages During Normal Operation

If an error message appears on the bottom line of the display while the machine is running, the timer shown on the top line will stop counting. When the error is corrected, the timer resumes counting down. To troubleshoot most errors, suspend the formula in progress and turn power off. Do not terminate the formula if it is to be resumed after the error is corrected. See the reference manual for more information.

**Visualização ou ação**  
[Display or Action]

NÍVEIS AINDA FEITOS  
LEVELS STILL MADE

MUITO LENTO PARA  
PREENCHER  
TOO LONG TO FILL

MUITO LENTO PARA  
EVAPORAR  
TOO LONG TO STEAM

MUITO LENTO PARA  
RESFRIAR  
TOO LONG TO COOL

**Explicação**

O microprocessador ainda está recebendo informações de que há níveis sendo feitos logo antes ou durante a etapa de extração, ou imediatamente após o preenchimento para a etapa de banho. O erro se eliminará se o nível for perdido.

O tempo de preenchimento do nível excedeu 10 minutos. Verifique as válvulas de água, os filtros, as linhas de fornecimento e a pressão da água. A máquina continuará a preencher até alcançar o nível. Quando isso acontecer, o erro será automaticamente excluído e o funcionamento normal será reiniciado.

**Apenas modelos E-P.**O tempo máximo configurado para evaporar até a temperatura desejada foi excedido. Verifique a válvula de vapor, o filtro, principal tubo de vaporização e pressão, etc. A evaporação continuará até que seja atingida a temperatura, quando o erro será automaticamente excluído e o funcionamento normal será reiniciado.

**Apenas modelos E-P.**O tempo máximo configurado para resfriar até a temperatura desejada foi excedido. Verifique a válvula e o filtro de resfriamento, a pressão da água fria e a posição da válvula Vernier na entrada de resfriamento. O resfriamento continuará até que seja atingida a temperatura desejada, quando o erro automaticamente será excluído.

**Explanation**

The microprocessor is still receiving information that a level is made just before or during an extract step, or immediately before the fill for a bath step. This error is self-clearing when level is lost.

Time to fill to level exceeded 10 minutes. Check the water valves, strainers, supply lines, and water pressure. The machine will continue to fill until level is reached, at which time the error will automatically clear and normal operation will resume.

**E-P Plus models only.**The configured maximum time to steam up to the desired temperature has been exceeded. Check the steam valve, strainer, main steam header and pressure, etc. Steaming will continue until temperature is achieved, when the error will automatically clear and normal operation will resume.

**E-P Plus models only.**The configured maximum time to cool down to the desired temperature has been exceeded. Check the cooldown valve and strainer if equipped, cold water pressure, and position of vernier valve on cooldown inlet. Cooldown will continue until the desired temperature is achieved, when the error will automatically clear.

**Visualização ou ação**  
[Display or Action]

MUITO LENTO PARA  
DRENAR

TOO LONG TO DRAIN

VERIFICAR A SONDA

CHECK PROBE

FALHA EXTERNA

EXTERNAL FAULT

**Explicação**

A máquina não realizou a drenagem da forma adequada no tempo de drenagem estabelecido. Este erro que se corrige automaticamente será excluído quando o nível de água no cesto estiver baixo o suficiente para iniciar a próxima operação.

**Apenas modelos E-P.** Esta mensagem de erro indica que a resistência da sonda de temperatura está fora do intervalo especificado. Teste a sonda desconectando as pontas da placa do processador e verificando a resistência com um ohmômetro digital preciso. A resistência entre as duas pontas deverá estar entre 2K e 35K Ohms. A resistência entre a ponta e o chão deverá ser infinita.

Na maioria das máquinas, este erro indica que houve falha na injeção química programada, geralmente porque o sistema de fornecimento químico está vazio. Quando os produtos químicos são adicionados e podem ser injetados, este erro é automaticamente excluído, permitindo que o funcionamento seja reiniciado.

Nos modelos 48040F7J/F7B este erro indicará que a pressão de ar no mancal está abaixo da mínima exigida para ajudar a proteger o mancal contra contaminação por água.

**Explanation**

The machine did not drain properly in the allotted drain time. This self-correcting error will clear when the water level in the basket is low enough to begin the next operation.

**E-P Plus models only.** This error message indicates that the resistance of the temperature probe is outside the specified range. Test the probe by disconnecting the probe leads from the processor board and checking the resistance with an accurate digital ohmmeter. Resistance between the two leads must be between 2K and 35K Ohms. Resistance between each lead and ground must be infinite.

On most machines, this error indicates that the programmed chemical injection failed, usually because the chemical supply system is empty. When chemicals are added and can be injected, this error clears automatically, allowing operation to resume.

On 48040F7J/F7B models, this error indicates that the bearing air pressure is below the minimum required to help protect the bearing from water contamination.

**Visualização ou ação**  
[Display or Action]

PRENSA DE CHAPA.  
FALHA

BRAKE PRESS. FAULT

TRÊS CABOS  
DEBILITADOS

THREE WIRE DISABLED

FALHA DO INVERSOR

INVERTER FAULT

**Explicação**

Este erro aparecerá apenas nos modelos de máquinas equipados com um freio de cilindro. Esta mensagem indicará que o freio está engatado, quando deveria estar desengatado. Isto geralmente ocorre porque a máquina não está recebendo pressão de ar suficiente para abrir o freio, que normalmente está fechado. Verifique o fornecimento de ar comprimido da planta.

O relé de três cabos está desenergizado. Este relé fornece energia de circuito de controle à máquina. Uma vez energizado ao momentaneamente pressionar o *Iniciar* botão (1), permanecerá energizado por seus próprios contatos, junto com as sobrecargas do motor, as trancas da porta, etc. Caso um desses contatos seja aberto momentaneamente, a máquina cessará e será exibida esta mensagem. Este erro só poderá ser excluído ao pressionar o *Iniciar* botão (1). Apenas assim o erro será excluído.

Esta mensagem de erro será exibida se o microprocessador não receber uma entrada do inversor até 14 segundos após o início da fórmula. Depois de 14 segundos sem uma entrada do inversor, o marcador de tempo cessará, a cesta ficará imóvel e a válvula de drenagem se abrirá. Para recobrar, pressione a *Próximo* tecla (2).

**Explanation**

This error appears only on machine models equipped with a cylinder brake. The message indicates that the brake is engaged when it should be disengaged. This is usually because the machine is not receiving sufficient air pressure to open the normally-closed brake. Check the plant compressed air supply.

The three-wire relay de-energized. This relay provides control circuit power to the machine. Once energized by momentarily depressing the *Start* button (1), it is held energized by its own normally open contacts, along with motor overloads, door interlocks, etc. Should any of these contacts open even momentarily, the machine stops and this display appears. This error can only be cleared by depressing the *Start* button (1), and only then if the error has been cleared.

This error message appears if the microprocessor does not receive an input from the inverter within 14 seconds of the beginning of the formula. After 14 seconds without an inverter input, the timer stops, the basket is stationary, and the drain valve opens. To recover, press the *Next* key (2).

**Visualização ou ação**  
[Display or Action]

|  |
|--|
| A VIBRAÇÃO DE SW FOI<br>ATIVADA<br>SEQUÊNCIA DE<br>RECUPERAÇÃO |
|--|

|   |
|---|
| VIBRATION SW TRIPPED<br>RECOVERY SEQUENCE |
|---|

**Explicação**

Quando o alternador de vibração se fechar, o marcador de tempo cessará. Depois de 45 a 85 segundos (120 segundos nos modelos 42032F7J), a cesta reverterá para a velocidade de limpeza à medida que o cilindro se encher de água. Ao atingir o nível baixo, o cilindro reverterá para um minuto adicional em velocidade de limpeza e depois acelerará para a velocidade de extração.

**Explanation**

When the vibration switch closes, the timer stops. After 45 to 85 seconds (120 seconds on 42032F7J models), the basket reverses at wash speed as the cylinder fills with water. When low level is achieved, the cylinder reverses for one additional minute at wash speed, then accelerates to extract speed.

— Final de BICJHT04 —

— End of BICJHT04 —

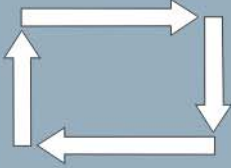




Türk

3





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## Kullanıcı rehberi [Operator Guide]—

# E-P Plus® ve E-P Express® kontrollü yıkama-sıkma makinesi modelleri [Washer-extractor Models with E-P Plus® and E-P Express® Controls]

**DİKKAT:** Bu el kitabında bulunan bilgiler, Pellerin Milnor Corporation tarafından yalnızca **İngilizce olarak sağlanmıştır**. Milnor kaliteli bir çeviri sunmaya çalışmıştır, fakat İngilizce olmayan sürümde bulunan bilgilerin doğruluğu, eksiksizliği veya yeterliliği hakkında hiçbir iddiada bulunmaz, söz veya garanti vermez.

Ayrıca, İngilizce olmayan sürümde bulunan bilgiler tamamen bir üçüncü parti tarafından sağlandığı için, Milnor bu bilgileri doğrulamak amacıyla bir girişimde bulunmamıştır. Bundan dolayı, Milnor içerik veya biçimdeki hatalarla ilgili yükümlülüğü açıkça reddeder ve İngilizce olmayan sürümde bulunan bilgilere güvenilmesiyle veya bu bilgilerin kullanılmasının sonuçlarıyla ilgili hiçbir sorumluluk almaz.

**Milnor veya araçları ya da çalışanları, bu el kitabının İngilizce olmayan sürümünün kullanılması veya kullanılmaması ya da bu el kitabına güvenilmesi sonucu herhangi bir şekilde ortaya çıkabilecek veya çevirideki yanlışlıklardan, eksikliklerden ya da hatalardan kaynaklanan doğrudan, dolaylı, ceza gerektirici veya sonuç olarak ortaya çıkan zararlardan hiçbir şekilde sorumlu tutulamaz.**

**Güvenlik kitabını oku**

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

**Uygulanabilir Milnor® Model numarasına göre ürünler: [Applicable Milnor® products by model number:]**

|          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|
| 30015T5X | 30015V7J | 30022H8J | 30022T5X | 30022V6J | 30022VRJ | 30022X8J |
| 36021V5J | 36021V7J | 36026V5J | 36026V7J | 36026X8J | 42026V6J | 42026X7J |
| 42030V6J | 42032X7J | 48040F7B | 48040F7J | MWR12J5  | MWR12X5  | MWR16J5  |
| MWR16X5  | MWR18J4  | MWR18J6  | MWR18X4  |          |          |          |

# İçindekiler Tablosu [English table of contents follows]

| Bölümler   | Rakamlar, Tablolar, ve Ekler             |
|--|--|
| <b>Bölüm 1. Kontrollerin Tanımı</b>  |  |
| <b>1.1. E-P Plus® ve E-P Express® Modellerinde Operatör Kontrolleri</b> (Doküman BICJHF01) | Rakam 1: Tipik kontrol paneli            |
| <b>Bölüm 2. Normal Operasyon</b>   |  |
| <b>2.1. Makinenin Normal Çalıştırılması</b> (Doküman BICJVO03)                             |  |
| 2.1.1. Güvenlik için buradan başlayın  |  |
| 2.1.2. Switch set değerlerini kontrol edin.  | Ek 1: Güç devrede iken Emniyet gecikmesi |
| 2.1.3. Makineyi Yükle  |  |
| 2.1.4. Programı Seçme ve Baslatma  |  |
| 2.1.5. İşlemin İzlenmesi ve anlamları  |  |
| 2.1.6. Çalışan bir program nasıl durdurulur  |  |
| 2.1.7. Enerji kesildiğinde yeniden başlatma  |  |
| 2.1.8. Makinenin boşaltılması  |  |
| <b>Bölüm 3. Hataları Düzeltme</b>  |  |
| <b>3.1. Normal operasyonda hata mesajı</b> (Doküman BICJHT04)                              |  |

# Table of Contents

| Sections  | Figures, Tables, and Supplements        |
|---|---|
| <b>Chapter 1. Description of Controls</b>   |   |
| <b>1.1. Operator Controls on E-P Plus® and E-P Express® Models</b><br>(Document BICJHF01) | Figure 1: Typical Control Panel         |
| <b>Chapter 2. Normal Operation</b>  |   |
| <b>2.1. Normal Machine Operation</b> (Document BICJVO03)                                  |   |
| 2.1.1. Start Here for Safety  |   |
| 2.1.2. Check Switch Settings  | Supplement 1: The Power-up Safety Delay |
| 2.1.3. Load the Machine   |   |
| 2.1.4. Select and Start a Formula   |   |
| 2.1.5. Monitor Operation  |   |
| 2.1.6. How to Terminate a Running Formula   |   |
| 2.1.7. How to Restart after Losing Power  |   |
| 2.1.8. Unload the Machine   |   |
| <b>Chapter 3. Correcting Errors</b>   |   |
| <b>3.1. Error Messages During Normal Operation</b> (Document BICJHT04)                    |   |

# Bölüm 1

## Kontrollerin Tanımı

# Chapter 1

## Description of Controls

BICJHF01 (Published) Book specs- Dates: 20090831 / 20090831 / 20100519 Lang: TUR01 Applic: CJV CJH CJF CJX

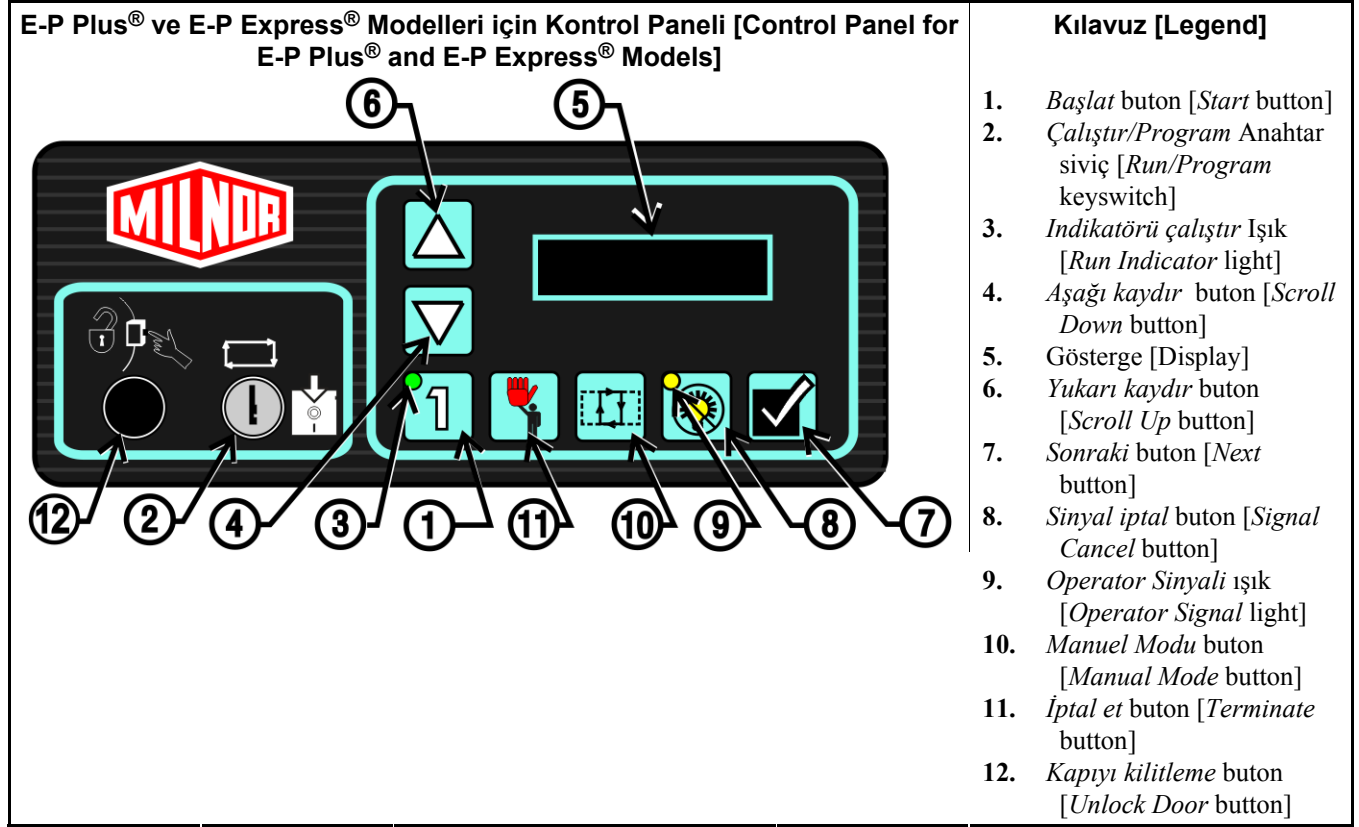
### 1.1. E-P Plus® ve E-P Express® Modellerinde Operatör Kontrolleri

Bu doküman kullanıcının normal makine operasyonunda kontrol ünitelerinin kullanımını tarif eder. Diğer bilgiler için [Rakam 1](#), referans manuele bakınız.

### Operator Controls on E-P Plus® and E-P Express® Models

This document describes the user controls during normal machine operation. For additional information on other controls shown in [Figure 1](#), see the reference manual.

Rakam [Figure] 1: Tipik kontrol paneli [Typical Control Panel]



Göster veya uygula  
[Display or Action]

Açıklama

Explanation

1

Gösterge *Formulayı çalıştır* söylediğinde bu butona bas ve formulayı başlat.

When the display says *Run Formula*, press this button to start the formula.

☐ / ☒

Normal operasyonda, *Çalıştır/Program* bu ana siviç B mutlaka bu pozisyonda olmalıdır.

During normal operation, the *Run/Program* keyswitch must be set to ☐. This is the automatic position.

▲ / ▼

*Yukarı kaydır* bunu kullan ve *Aşağı kaydır* butonları istediğin formulayı seçmek için kullan.

Use the *Scroll Up* and *Scroll Down* buttons to select the desired formula.

☑

*Sonraki* bu buton normal operasyonda kullanılmaz.

The *Next* button is not used during normal operation.

☒

*Sinyal iptali* Bu buton program bittiğinde bitiş sinyalini susturur. Eğer bu operator sinyali kimyasal enjeksiyon için de ayarlanmışsa, kimyasalı ilave edin ve bu butona basın program devam etsin.

The *Signal Cancel* button silences the operator signal that sounds when a formula completes normally. Also, if an operator signal is programmed with a chemical injection, add the chemical and press this button to resume operation.



**Göster veya uygula**  
[Display or Action]**Açıklama****Explanation**

*Manuel* Bu buton normal operasyonda kullanılmaz.

The *Manual* button is not used during normal operation.



*İptal et.* Bu buton yıkama programının tüm kalan aşamalarını iptal eder ve makineyi kapatma prosedürünü başlatır.

The *Terminate* button cancels all remaining steps in the current formula and starts the shutdown procedure for the machine. The formula can not be resumed.



*Kapıyı kilitleme* Bu buton diğer tüm emniyet koşulları yerine getirilmişse kapıyı açmanıza izin verir.

The *Unlock Door* button allows you to open the door if all other safety conditions are met.

— Sonu BICJHF01 —

— End of BICJHF01 —

## Bölüm 2

# Normal Operasyon

## Chapter 2

# Normal Operation

BICJVO03 (Published) Book specs- Dates: 20090831 / 20090831 / 20100519 Lang: TUR01 Applic: CJV CJH CJF CJX

### 2.1. Makinenin Normal Çalıştırılması Normal Machine Operation

#### 2.1.1. Güvenlik için buradan başlayın

Bu doküman, ile makineyi çalıştıracak personelin gerek duyacağı bilgileri içerir. Size detaylı olarak anlatılmadan makineyi kullanmaya girişmeyin.



**TEHLİKE [1]: Çoklu Tehlike**—Yetkisiz ve dikkatsiz kullanıcıların makineye müdahaleleri, kişisel kazalara, ölümlere sebep olabilir ve ayrıca makineye kalıcı hasar verebilir, bu durum garanti şartlarını geçersiz kılar.



**DİKKAT [2]: Elektrik çarpması ve kısa devre yangın Tehlikesi**—Elektrik ile temas etmeyin. Ölüm veya ciddi kalıcı sakatlıklara sebep olabilir. Makinenin ana şalteri açık iken elektrik panosuna müdahale etmeyin. Panoda çalışma yapmadan önce mutlaka ana şalteri kapatınız.

- Elektrik panosu kapaklarını açmayın yada kapatmayın.
- Makinenin ana şalterinin nerede olduğunu öğreniniz ve acil müdahalelerde nereden kapatacağınızı biliniz.
- Bilgisiz ve yetkisiz durumda müdahale etmeyiniz. Tehlikelerin açıkça farkında olmalısınız ve nasıl yok edileceğini bilmelisiniz.

#### Start Here for Safety

This document is designed to remind the person operating this washer-extractor what is required to operate this machine. Do not attempt to operate this machine before a trained operator has explained the details to you.







**DANGER [1]: Multiple Hazards**—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

**CAUTION [2]: Electrocutation and Electrical Burn Hazards**—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Do not unlock or open electric box doors.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.
- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.

## 2.1.2. Switch set değerlerini kontrol edin.

## Check Switch Settings

| Göster veya uygula<br>[Display or Action]   | Açıklama  | Explanation   |
|---|---|---|
|  | Anahtarlı <i>çalıştır/program</i> switchinin <b>B</b> konumunda olduğunu kontrol edin.                                      | Check that the <i>run/program</i> keyswitch is at  . |
|  | Bütün <i>acil durum durdurma</i> acil stop switchlerinin açık <i>çıkış</i> pozisyonunda olduğunu kontrol edin.              | Check that any <i>emergency stop</i> switches are in the <i>out</i> position.   |
|  | Ana şalterin  pozisyonunda olmasını sağla. | Check that the master switch, if provided, is at  .  |

### Ek 1

#### Güç devrede iken Emniyet gecikmesi

Bazı Milnor® yıkama sıkma makinelerinde, tamburun dönmesinin durduğunu doğrulayan bir hız sensörü bulunmaz. Bundan dolayı makineye ilk defa enerji verildiğinde herhangi bir işlem olmaksızın makinenin devrelerine 80 saniye boyunca enerji gelmez. Bu sayede makine yüksek devir sıkmada iken enerji kesilmesi ve tambur daha durmadan enerjinin geri gelmesi halinde tamburun tamamen durması için yeterli zaman sağlar.

### Supplement 1

#### The Power-up Safety Delay

Some Milnor® washer extractors do not use a speed sensing device to verify that the basket has stopped rotating. Therefore, when power is first applied to the machine, at least 80 seconds must elapse before any further operations can be attempted. This provides sufficient time for the basket to coast to a complete stop if power was lost while the machine was in a high speed extract and restored before the basket stopped.




## 2.1.3. Makineyi Yükle

Makineyi belirtilen kapasite yükle, kapağın emniyetli kapandığından emin ol.

## Load the Machine

Load the machine to the rated capacity and securely close the loading door.

## 2.1.4. Programı Seçme ve Baslatma Select and Start a Formula

| Göster veya uygula<br>[Display or Action]   | Açıklama   | Explanation  |
|---|--|--|
| <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">                     RUN FORMULA<br/>00 OK TO POWER OFF                 </div> <div style="border: 1px solid black; padding: 2px;">                     RUN FORMULA<br/>00 OK TO POWER OFF                 </div>     | Bu <i>Run Formula</i> ekran görüntüsüdür. Bu ekranda iken, makinenin enerjisini elektronik parçalara zarar vermeden kesebilirsiniz veya herhangi bir programı çalıştırabilirsiniz. | This is the <i>Run Formula</i> display. From this display, you can disconnect power from the machine without risking damage to electronic parts, or you can select a formula to run. |
|  /    | Yukarı/Aşağı tuşları ile 30 Formula/program listelenebilir.  | indexes forward/backward through the 30 formulas.  |
| <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">                     RUN FORMULA<br/>07 FORMULA NUMBER 07                 </div> <div style="border: 1px solid black; padding: 2px;">                     RUN FORMULA<br/>07 FORMULA NUMBER 07                 </div> | Örnek Ekran: <i>Formül 07</i> çalıştırmak için seçilen.  | Example display: <i>Formula 07</i> selected for running  |
|    | Seçilmiş olan Formula/program ile makineyi çalıştırır.   | starts the machine with the selected formula.  |
| <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">                     RUN FORMULA<br/>GEÇERSİZ PROGRAM                 </div> <div style="border: 1px solid black; padding: 2px;">                     RUN FORMULA<br/>DOES NOT EXIST                 </div>           | Seçilmiş olan Formula/programın mevcut olmadığını ifade eder. Bu ekran 3 saniye boyunca görünür.   | indicates that the formula selected for running has not been programmed. This display appears for three seconds.   |

## 2.1.5. İşlemin İzlenmesi ve anlamları Monitor Operation

| Göster veya uygula<br>[Display or Action]           | Açıklama   | Explanation  |
|---|--|--|
| <pre>23:04 F02S01 02:37 TEMP A168/D170 LEV 1</pre>  | Bazı E-P Plus® modellerinde bu iki ekran normal işlemde değişir. E-P Express® modelleri adım hakkındaki diğer verileri gösterir ancak yıkama ısı verilerini göstermez. | These two displays alternate during normal operation on some E-P Plus® models. E-P Express® models display other data about the step, but not bath temperature data.   |
| <pre>23:04 F02S01 02:37 TEMP A168/D170 LEV 1</pre>  |  |  |
| <pre>23:04 STEP 01 02:37 TEMP A168/D170 SPD 0</pre> |  |  |
| <pre>23:04 STEP 01 02:37 TEMP A168/D170 SPD 0</pre> |  |  |
| <pre>23:04 F02S01 02:37</pre>                       | STEP01 geçerli işlemi ifade eder.  | STEP01 is the current step.  |
| <pre>23:04 F02S01 02:37</pre>                       |  |  |
|   | EXTRACT makinenin sıkma işleminde olduğunu gösterir.   | EXTRACT indicates that the machine is extracting the goods.  |
|   | TIMEHALT Kimyasal dozajlama için sürenin durduğunu ifade eder. Bu özelliğin çalışabilmesi için kimyasal dozaj sistemlerinin uygun monte edilmiş olması gerekir.        | TIMEHALT indicates that the timer is stopped for a chemical injection. The chemical supply equipment must be properly installed for this feature to work.              |
| <pre>TEMP A168/D170 LEV 1</pre>                     | Bu E-P Plus® makinesinde, makine konfigürasyonuna göre sıcaklık Fahrenheit veya Santigrat olarak ölçülür.  | Temperature in this E-P Plus® machine is measured in degrees Fahrenheit or Celsius, according to machine configuration.  |
| <pre>TEMP A168/D170 LEV 1</pre>                     |  |  |
|   | A168 makinedeki sıcaklığın 168 ( fahrenheit)dereceye ulaştığını gösterir. Sıcaklık sadece sıcaklık kontrol ünitesi bulunan makinelerde okunabilir.                     | A168 indicates that the current achieved temperature is 168 degrees. Temperature is displayed only if machine is equipped with and configured for temperature control. |

**Göster veya uygula**  
[Display or Action]

**Açıklama**

**Explanation**

|       |       |
|-------|-------|
| SPD 0 | LEV 2 |
| SPD 0 | LEV 2 |

D170 istenen sıcaklığın 170 derece ( fahrenheit) olduğunu gösterir. Sıcaklık sadece sıcaklık kontrol ünitesi bulunan makinelerde okunabilir.

D170 indicates that the desired temperature for this step is 170 degrees. Temperature is displayed only if the machine is equipped with and configured for temperature control.

LEV 2 yıkama su seviyesinin 2. seviyeye ulaştığını gösterir.

LEV 2 indicates that the bath level achieved is Level 2.

SPD 0 O işlemdeki yıkama hızını gösterir.

SPD 0 indicates the bath speed for this step.

WAIT FOR LEVEL 2 H O işlem için seviyenin Level 2 olarak programlandığını, ancak henüz ulaşmadığını gösterir. H sıcak su valfinin, C soğuk su valfinin, 3 ise ilave su valfinin açık olduğunu gösterir.

WAIT FOR LEVEL 2 H indicates that Level 2 is programmed for this step, but is not yet achieved. The H indicates that the hot water valve is open; C indicates cold water, and 3 indicates extra water.

CHEM 03 üçüncü gözden kimyasal aldığını gösterir. En fazla 5 adete kadar bağlanan kimyasal gözlerden, hangisi devrede ise o görülür.

CHEM 03 is displayed when Chemical 03 is being injected. The number for each chemical (up to five may be connected) is displayed as the chemical is injected.

FINAL EXTRACT yıkama işleminin son sıkma aşamasında olduğunu ifade eder.

FINAL EXTRACT indicates that the step in progress is the final step of the wash formula.

## 2.1.6. Çalışan bir program nasıl durdurulur

## How to Terminate a Running Formula

**Göster veya uygula**  
[Display or Action]

**Açıklama**

**Explanation**



Mevcut programı iptal etmek ekranı *Çalıştırma Formülü* konumuna getirir. (bakınız Bölüm 2.1.4 “Programı Seçme ve Baslatma”).

Cancels the current formula and returns the machine to the *Run Formula* display (see Section 2.1.4 “Select and Start a Formula”).

### 2.1.7. Enerji kesildiğinde yeniden başlatma

Makine otomatik konumda çalışırken enerji kesildiğinde, kaldığı yerdeki aşamayı hafızasında tutar ve enerji tekrar geldiğinde oradan devam eder.

**Göster veya uygula**  
[Display or Action]

```
PRESS START TO RUN
STEP xx - FORMULA yy
```

```
PRESS START TO RUN
STEP xx - FORMULA yy
```

**Açıklama**

Bazı makinelerde enerji gidip yeniden geldiğinde bu ekran görülür. Ekran, enerji kesildiğinde programın hangi aşamada kaldığını gösterir.

1

Ekrandaki program kaldığı aşamadan devam eder. Enerji kesilmeden önce tamamlanmış olsa dahi su seviyesi ve sıcaklık kontrol işlemleri yeniden devreye girer. Bu aşamada gerekli olan kimyasal yeniden enjekte edilir.

Herhangi bir drenaj (boşaltma) aşamasında enerji kesilmiş ise tekrar geldiğinde program işlemi tekrarlar ve bir sonraki aşamadan devam eder.

Sıkma aşamasında enerji kesilmesi halinde bir önceki aşama tekrarlanır ve kaldığı yerden devam eder.

**Explanation**

On most machine models, this display appears when power is restored. The formula and step which were in progress when power was interrupted are shown.

Resumes the formula at the displayed formula and step. If the outage occurred in a bath step, level and temperature (if commanded) must again be satisfied, even if these were already satisfied before power was lost. Any commanded chemicals will be injected again.

If the outage occurred during the drain part of a bath step, the bath step will be repeated, then followed by the next commanded step.

If the outage occurred during an extract step, the previous bath will be repeated before the extract step begins.

### 2.1.8. Makinenin boşaltılması



**TEHLİKE 3: Dolanma ve Yırtılma**

**Tehlikeleri**—Makinenin içerisinde bulunan çamaşırların boşaltılması esnasında çamaşırların vücudunuza dolanmasına dikkate ediniz.

Boşaltma işlemi dikkatlice ve acele etmeden yapınız.

- Çamaşırların boşaltılmasında kısmı olarak çıkartıp ucunu herhangi bir yere asmayın, takmayın.

Program bittiğinde veya herhangi bir yıkama aşamasında kesildiğinde tambur 25 sn. dönmeye devam eder. Eğer bu işlem bir sıkma aşamasında

### Unload the Machine

**DANGER 3: Entangle and Sever**

**Hazards**—Contact with goods being processed can cause the goods to wrap around your body or limbs and dismember you. The goods are normally isolated by the locked cylinder door.

- Do not touch goods inside or hanging partially outside the turning cylinder.

When the formula ends or is terminated, the cylinder coasts for 25 seconds if the last step was a bath step. If the last step was an

## Bölüm 2. Normal Operasyon

olur ise tambur 180 saniye dönmeye devam eder. Bu aşamada kapıyı açmak için zorlamayın.

extract, the coast time may be as much as 180 seconds. Do not attempt to open the door early.

### Göster veya uygula [Display or Action]

KAPININ AÇILMASI  
İÇİN  
LÜTFEN BEKLEYİN

UNLOCKING THE DOOR  
PLEASE WAIT

BOŞALTMA İÇİN  
BEKLİYOR

WAITING TO UNLOAD

### Açıklama

Program bittiğinde veya herhangi bir yıkama aşamasında kesildikten sonra ekranda 15 sn. boyunca görülür.

Programın sonunda operatörü uyarmak için alarm sesi duyulur.



Alarmı durdurmak kapı kilidini açar, böylece makineyi boşaltabilirsiniz.

### Explanation

display during the last 15 seconds of coast, or during the entire coast time if the formula was manually terminated.

At the end of the coast time, the operator alarm sounds.

Silences the operator alarm. The door unlocks so you can unload the machine.

— Sonu BICJVO03 —

— End of BICJVO03 —



## Bölüm 3

# Hataları Düzeltme

## Chapter 3

# Correcting Errors

BICJHT04 (Published) Book specs- Dates: 20090831 / 20090831 / 20100519 Lang: TUR01 Applic: CJV CJH CJF CJX

### 3.1. Normal operasyonda hata mesajı

Makine çalışırken eğer hata mesajı göstergenin en alt satırında belirmişse, göstergenin üst sırasındaki timer saymayı durduracaktır. Hata düzeltildiğinde , timer kaldığı yerden geri sayıma devam eder. Hataların önemli bir kısmı, programı bekletmeye alarak, makine elektriği kapatılır. Hata düzeltildiğinde devam edilecekse programı/formulayı iptal etmeyin. Detaylı bilgi için referans manuele bakınız.

### Error Messages During Normal Operation

If an error message appears on the bottom line of the display while the machine is running, the timer shown on the top line will stop counting. When the error is corrected, the timer resumes counting down. To troubleshoot most errors, suspend the formula in progress and turn power off. Do not terminate the formula if it is to be resumed after the error is corrected. See the reference manual for more information.

**Göster veya uygula**  
[Display or Action]

LEVELS STILL MADE

LEVELS STILL MADE

SU ALIMI ÇOK UZUN

TOO LONG TO FILL

BUHAR ISITMA ÇOK UZUN

TOO LONG TO STEAM

SOĞUTMA SÜRESİ ÇOK UZUN

TOO LONG TO COOL

**Açıklama**

Mikroprosesör sıkma aşaması hemen öncesi veya sıkma aşamasında olduğuna ilişkin hala bilgi alıyorsa, veya yıkama aşamasından hemen önceki dolum aşamasında. Bu hata, aşama kaybolduğunda kendi kendini temizlemez.

Su dolum aşaması 10 dakikadır. Su basıncını, su borularını, çek valfleri gibi aksamaları kontrol ediniz. Seviyeye gelinceye kadar makine su almaya devam edecek, dolum gerçekleştiğinde zamana bağlı kalmaksızın bu hata ortadan kalkacak ve program kaldığı yerden devam edecektir.

**Sadece E-P Plus modelleri.**İstenen sıcaklığa ulaşabilmek için konfigüre edilen maksimum süre aşılmıştır. Buhar valflerini, buhar kazanını, ana buhar kolektörünü ve basıncını, vb. kontrol edin. İstenen sıcaklığa ulaşmaya kadar buhar üretimi devam eder; hata otomatik olarak ortadan kalktığında işlem kaldığı yerden devam eder.

**Sadece E-P Plus modelleri.**İstenen sıcaklığa soğutmak üzere yapılandırılan maksimum süre aşılmıştır. Varsa, Soğutma valfini ve filtre elemanını, soğuk su basıncını ve soğutma girişindeki vernier valfin pozisyonunu kontrol edin. Soğutma, sıcaklık istenen seviyeye ulaşana kadar devam edecek ve hata otomatik olarak ortadan kalkacaktır.

**Explanation**

The microprocessor is still receiving information that a level is made just before or during an extract step, or immediately before the fill for a bath step. This error is self-clearing when level is lost.

Time to fill to level exceeded 10 minutes. Check the water valves, strainers, supply lines, and water pressure. The machine will continue to fill until level is reached, at which time the error will automatically clear and normal operation will resume.

**E-P Plus models only.**The configured maximum time to steam up to the desired temperature has been exceeded. Check the steam valve, strainer, main steam header and pressure, etc. Steaming will continue until temperature is achieved, when the error will automatically clear and normal operation will resume.

**E-P Plus models only.**The configured maximum time to cool down to the desired temperature has been exceeded. Check the cooldown valve and strainer if equipped, cold water pressure, and position of vernier valve on cooldown inlet. Cooldown will continue until the desired temperature is achieved, when the error will automatically clear.

| Göster veya uygula<br>[Display or Action]          | Açıklama   | Explanation   |
|--|--|---|
| DRENAJ SÜRESİ ÇOK<br>UZUN<br><br>TOO LONG TO DRAIN | Drenaj tanımlanan sürede yeterli olmamaktadır. Ne zamanki tamburdaki su seviyesi yeterli seviyeye düşerse hata ortadan kalkacak ve program kaldığı yerden devam edecektir.   | The machine did not drain properly in the allotted drain time. This self-correcting error will clear when the water level in the basket is low enough to begin the next operation.  |
| PROBU KONTROL ET<br><br>CHECK PROBE                | <b>Sadece E-P Plus modelleri.</b> Bu hata mesajı, sıcaklık probu rezistansının tanımlanan aralığın dışında olduğunu gösterir. Prob uçlarını işlemci kartından çıkarıp kontrol edin, doğru bir dijital ohmmetre ile rezistansı kontrol edin. İki uç arasındaki rezistans 2K ile 35K ohm arasında olmalıdır. Her bir uç ile topraklama arasındaki rezistans sonsuz olmalıdır.  | <b>E-P Plus models only.</b> This error message indicates that the resistance of the temperature probe is outside the specified range. Test the probe by disconnecting the probe leads from the processor board and checking the resistance with an accurate digital ohmmeter. Resistance between the two leads must be between 2K and 35K Ohms. Resistance between each lead and ground must be infinite.                    |
| DIŞ HATALAR<br><br>EXTERNAL FAULT                  | Çoğu makinede, bu hata programlanan kimyasal enjeksiyonunun yapılamadığını ifade eder. Bu da genellikle kimyasal kaynağının boş olmasından kaynaklanır. Kimyasal doldurulduğunda enjeksiyon gerçekleşecek, hata otomatik olarak ortadan kalkacak ve program kaldığı yerden devam edecektir.<br><br>On 48040F7J/F7B bu model makinelerde, milyatağı hava basıncının düşük ve yetersiz olduğunu ve su mil yatağının kirlemesine karşı koyamadığını ifade eder. | On most machines, this error indicates that the programmed chemical injection failed, usually because the chemical supply system is empty. When chemicals are added and can be injected, this error clears automatically, allowing operation to resume.<br><br>On 48040F7J/F7B models, this error indicates that the bearing air pressure is below the minimum required to help protect the bearing from water contamination. |

| Göster veya uygula<br>[Display or Action]  | Açıklama   | Explanation   |
|--|--|---|
| FREN BASILI . HATA<br>BRAKE PRESS . FAULT  | Bu hata sadece silindir freni olan makinelerde ortaya çıkabilir. Bu mesaj frenin istenmeyen şekilde takıldığını ifade eder. Makine yeterli hava basıncı alamadığından kapalı freni açamamaktadır. Tesisin kompresör hava basıncını kontrol ediniz.   | This error appears only on machine models equipped with a cylinder brake. The message indicates that the brake is engaged when it should be disengaged. This is usually because the machine is not receiving sufficient air pressure to open the normally-closed brake. Check the plant compressed air supply.  |
| THREE WIRE DISABLED<br>THREE WIRE DISABLED | Üç telli rölenin gücü kesilmiştir. Bu röle, kontrol devresinin elektriğini makineye iletmektedir. <i>Başlat</i> düğmesine ( ) kısaca basılarak güç verildiğinde, motordaki aşırı yüklemeler, otomatik kapı kilitleri, vb. ile birlikte olağan açık kontaklarından güç alır. Bu kontaklardan herhangi biri kısa süre için bile olsa açılırsa, makine durur ve bu ekran görünür. Bu hata sadece <i>Başlat</i> düğmesine ( ) basılarak giderilebilir; bu durumda hatanın giderilmiş olması gerekmektedir. | The three-wire relay de-energized. This relay provides control circuit power to the machine. Once energized by momentarily depressing the <i>Start</i> button ( ), it is held energized by its own normally open contacts, along with motor overloads, door interlocks, etc. Should any of these contacts open even momentarily, the machine stops and this display appears. This error can only be cleared by depressing the <i>Start</i> button ( ), and only then if the error has been cleared. |
| İNVERTÖR HATASI<br>INVERTER FAULT          | Bu hata mikroprosesörde, formulanın başlatılması ile birlikte invertörden 14 saniye içinde iletişim olmamışsa belirir. 14 saniyede invertörden bilgi akışı olmamışsa, timer duracak, tambur sabit olarak beklemede olacak ve drenaj valfleri açılacaktır. Yenilemek için, <i>Sonraki</i> bu anahtara basınız (y).  | This error message appears if the microprocessor does not receive an input from the inverter within 14 seconds of the beginning of the formula. After 14 seconds without an inverter input, the timer stops, the basket is stationary, and the drain valve opens. To recover, press the <i>Next</i> key ( ).  |

**Göster veya uygula**  
[Display or Action]

TİTREŞİM SW DURDURMA  
YENİLEME DÜZENİ

VIBRATION SW TRIPPED  
RECOVERY SEQUENCE

**Açıklama**

Titreşim siviçi kapandığında , timer durur. 45 ile 85 saniye sonra, tambur su doldururken, basket ters dönüş yapar. Düşük su seviyesine ulaşıldığında, silindir yıkama hızında bir dakika daha ters dönüşünü sürdürür. Sonra sıkma hızına geçer.

**Explanation**

When the vibration switch closes, the timer stops. After 45 to 85 seconds (120 seconds on 42032F7J models), the basket reverses at wash speed as the cylinder fills with water. When low level is achieved, the cylinder reverses for one additional minute at wash speed, then accelerates to extract speed.

— Sonu BICJHT04 —

— End of BICJHT04 —

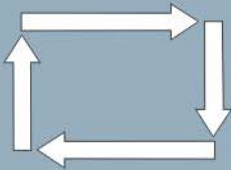


Ελληνική

4







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## Οδηγός χειριστή [Operator Guide]—

### Μοντέλα πλυντοστυπτηρίου με χειριστήρια E-P Plus<sup>®</sup> και E-P Express<sup>®</sup> [Washer-extractor Models with E-P Plus<sup>®</sup> and E-P Express<sup>®</sup> Controls]

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|          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|
| 30015T5X | 30015V7J | 30022H8J | 30022T5X | 30022V6J | 30022VRJ | 30022X8J |
| 36021V5J | 36021V7J | 36026V5J | 36026V7J | 36026X8J | 42026V6J | 42026X7J |
| 42030V6J | 42032X7J | 48040F7B | 48040F7J | MWR12J5  | MWR12X5  | MWR16J5  |
| MWR16X5  | MWR18J4  | MWR18J6  | MWR18X4  |          |          |          |

## Πίνακας περιεχομένων [English table of contents follows]

| Ενότητες  | Σχήματα, πίνακες και παραρτήματα                                 |
|---|--|
| <b>Κεφάλαιο 1. Περιγραφή χειριστηρίων</b>   |  |
| <b>1.1. Χειριστήρια λειτουργίας στα μοντέλα E-P Plus® και E-P Express®</b> (Εγγραφο BICJHF01) | Σχήμα 1: Τυπικός πίνακας ελέγχου                                 |
| <b>Κεφάλαιο 2. Κανονική λειτουργία</b>  |  |
| <b>2.1. Κανονική λειτουργία μηχανήματος</b> (Εγγραφο BICJVO03)                                |  |
| 2.1.1. Οδηγίες ασφαλείας  | Παράρτημα 1: Προστατευτική λειτουργία καθυστέρησης ενεργοποίησης |
| 2.1.2. Έλεγχος των ρυθμίσεων διακοπών   |  |
| 2.1.3. Φόρτωση του μηχανήματος  |  |
| 2.1.4. Επιλογή και εκκίνηση προγράμματος  |  |
| 2.1.5. Παρακολούθηση λειτουργίας  |  |
| 2.1.6. Τερματισμός του προγράμματος που εκτελείται  |  |
| 2.1.7. Επανεκκίνηση μετά από διακοπή ηλεκτρικής παροχής                                       |  |
| 2.1.8. Εκφόρτωση του μηχανήματος  |  |
| <b>Κεφάλαιο 3. Αποκατάσταση σφαλμάτων</b>   |  |
| <b>3.1. Μηνύματα σφάλματος κατά τη διάρκεια της κανονικής λειτουργίας</b> (Εγγραφο BICJHT04)  |  |

# Table of Contents

| Sections  | Figures, Tables, and Supplements        |
|---|---|
| <b>Chapter 1. Description of Controls</b>   |   |
| <b>1.1. Operator Controls on E-P Plus® and E-P Express® Models</b><br>(Document BICJHF01) | Figure 1: Typical Control Panel         |
| <b>Chapter 2. Normal Operation</b>  |   |
| <b>2.1. Normal Machine Operation</b> (Document BICJVO03)                                  |   |
| 2.1.1. Start Here for Safety  |   |
| 2.1.2. Check Switch Settings  | Supplement 1: The Power-up Safety Delay |
| 2.1.3. Load the Machine   |   |
| 2.1.4. Select and Start a Formula   |   |
| 2.1.5. Monitor Operation  |   |
| 2.1.6. How to Terminate a Running Formula   |   |
| 2.1.7. How to Restart after Losing Power  |   |
| 2.1.8. Unload the Machine   |   |
| <b>Chapter 3. Correcting Errors</b>   |   |
| <b>3.1. Error Messages During Normal Operation</b> (Document BICJHT04)                    |   |

# Κεφάλαιο 1

## Περιγραφή χειριστηρίων

# Chapter 1

## Description of Controls

BICJHF01 (Published) Book specs- Dates: 20090831 / 20090831 / 20100607 Lang: GRE01 Applic: CJV CJH CJF CJX

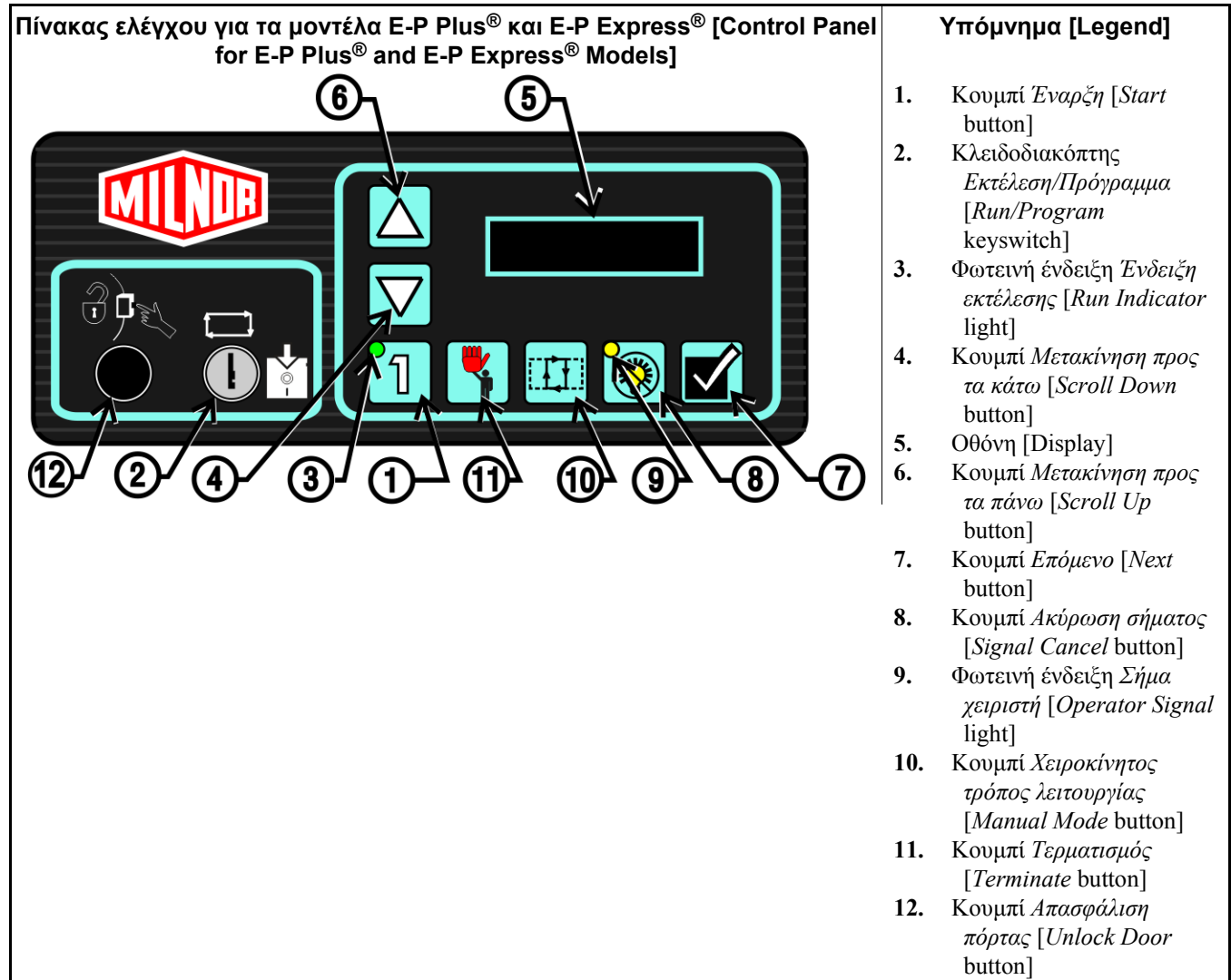
### 1.1. Χειριστήρια λειτουργίας στα μοντέλα E-P Plus® και E-P Express®

Στο παρόν έγγραφο περιγράφονται τα χειριστήρια λειτουργίας κατά την κανονική λειτουργία του μηχανήματος. Για περισσότερες πληροφορίες σχετικά με άλλα χειριστήρια που εμφανίζονται στο [Σχήμα 1](#), ανατρέξτε στο εγχειρίδιο αναφοράς.

### Operator Controls on E-P Plus® and E-P Express® Models

This document describes the user controls during normal machine operation. For additional information on other controls shown in [Figure 1](#), see the reference manual.

Σχήμα [Figure] 1: Τυπικός πίνακας ελέγχου [Typical Control Panel]



**Οθόνη ή ενέργεια**  
[Display or Action]

**Επεξήγηση**


**Explanation**

① Όταν στην οθόνη εμφανίζεται η ένδειξη *Εκτέλεση προγράμματος*, πατήστε το κουμπί για έναρξη του προγράμματος.







When the display says *Run Formula*, press this button to start the formula.



Κατά τη διάρκεια της κανονικής λειτουργίας, ο κλειδοδιακόπτης *Εκτέλεση/Πρόγραμμα* θα πρέπει να βρίσκεται στη θέση Β. Πρόκειται για τη θέση αυτόματης λειτουργίας.

During normal operation, the *Run/Program* keyswitch must be set to . This is the automatic position.

**Οθόνη ή ενέργεια**  
[Display or Action]

|   | <b>Επεξήγηση</b>   | <b>Explanation</b>   |
|---|--|--|
|    | Για την επιλογή του επιθυμητού προγράμματος, χρησιμοποιήστε τα κουμπιά <i>Μετακίνηση προς τα πάνω</i> και <i>Μετακίνηση προς τα κάτω</i> .   | Use the <i>Scroll Up</i> and <i>Scroll Down</i> buttons to select the desired formula.   |
|    | Το κουμπί <i>Επόμενο</i> δεν χρησιμοποιείται κατά τη διάρκεια της κανονικής λειτουργίας.   | The <i>Next</i> button is not used during normal operation.  |
|    | Με το κουμπί <i>Ακύρωση σήματος</i> απενεργοποιείται το σήμα χειριστή που ηχεί κατά την επιτυχή ολοκλήρωση ενός προγράμματος. Επίσης, εάν έχετε προγραμματίσει ένα σήμα χειριστή για μια έγχυση χημικών ουσιών, προσθέστε τη χημική ουσία και πατήστε το κουμπί αυτό για να συνεχιστεί η λειτουργία του μηχανήματος. | The <i>Signal Cancel</i> button silences the operator signal that sounds when a formula completes normally. Also, if an operator signal is programmed with a chemical injection, add the chemical and press this button to resume operation. |
|   | Το κουμπί <i>Χειροκίνητος τρόπος λειτουργίας</i> δεν χρησιμοποιείται κατά τη διάρκεια της κανονικής λειτουργίας.   | The <i>Manual</i> button is not used during normal operation.  |
|  | Με το κουμπί <i>Τερματισμός</i> ακυρώνονται όλα τα υπόλοιπα βήματα στο τρέχον πρόγραμμα και ξεκινά η διαδικασία τερματισμού λειτουργίας του μηχανήματος. Δεν είναι δυνατή η συνέχιση του προγράμματος.   | The <i>Terminate</i> button cancels all remaining steps in the current formula and starts the shutdown procedure for the machine. The formula can not be resumed.  |
|  | Με το κουμπί <i>Απασφάλιση πόρτας</i> μπορείτε να ανοίξετε την πόρτα, εάν πληρούνται όλες οι υπόλοιπες συνθήκες ασφαλείας.   | The <i>Unlock Door</i> button allows you to open the door if all other safety conditions are met.  |

## Κεφάλαιο 2

# Κανονική Λειτουργία

## Chapter 2

# Normal Operation

BICJVO03 (Published) Book specs- Dates: 20090831 / 20090831 / 20100607 Lang: GRE01 Applic: CJV CJH CJF CJX

### 2.1. Κανονική λειτουργία μηχανήματος

### Normal Machine Operation

#### 2.1.1. Οδηγίες ασφαλείας

Το παρόν έγγραφο προορίζεται για την υπενθύμιση των απαιτήσεων χειρισμού στο χειριστή του πλυντοστυπτηρίου. Μην επιχειρήσετε να χρησιμοποιήσετε το μηχάνημα, εάν κάποιος εκπαιδευμένος χειριστής δεν σας έχει εξηγήσει προηγουμένως τις σχετικές λεπτομέρειες.

#### Start Here for Safety

This document is designed to remind the person operating this washer-extractor what is required to operate this machine. Do not attempt to operate this machine before a trained operator has explained the details to you.



**ΚΙΝΔΥΝΟΣ [1]: Πολλαπλοί κίνδυνοι**—Σε περίπτωση αμέλειας του χειριστή, υπάρχει κίνδυνος θανάτου ή τραυματισμού του προσωπικού, φθοράς ή καταστροφής του μηχανήματος, φθοράς περιουσίας και/ή ακύρωσης της εγγύησης.

**DANGER [1]: Multiple Hazards**—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.



**ΠΡΟΣΟΧΗ [2]: Κίνδυνοι ηλεκτροπληξίας και εγκαυμάτων από ηλεκτρικό ρεύμα**—Η επαφή με το ηλεκτρικό ρεύμα μπορεί να προκαλέσει θάνατο ή σοβαρό τραυματισμό. Στον ηλεκτρικό πίνακα υπάρχει ηλεκτρικό ρεύμα, εκτός εάν η κύρια διάταξη διακοπής τροφοδοσίας του μηχανήματος έχει απενεργοποιηθεί.

**CAUTION [2]: Electrocution and Electrical Burn Hazards**—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Μην απασφαλίσετε και μην ανοίγετε τις θύρες του ηλεκτρικού πίνακα.
- Εντοπίστε τη θέση της κύριας διάταξης διακοπής τροφοδοσίας του μηχανήματος και χρησιμοποιήστε την σε περίπτωση έκτακτης ανάγκης για να διακόψετε την τροφοδοσία ηλεκτρικού ρεύματος στο μηχάνημα.

- Do not unlock or open electric box doors.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.
- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and








- Μη χρησιμοποιείτε το μηχάνημα εάν δεν έχετε κατάλληλη κατάρτιση και δεν είστε εξουσιοδοτημένοι για τη χρήση της. Πρέπει να γνωρίζετε με σαφήνεια τους κινδύνους και τον τρόπο αποφυγής τους.

how to avoid them.

### 2.1.2. Έλεγχος των ρυθμίσεων διακοπών

### Check Switch Settings

Οθόνη ή ενέργεια  
[Display or Action]

| Επεξήγηση  | Explanation   |
|--|---|
|  Ελέγξτε εάν ο κλειδοδιακόπτης εκτέλεση/πρόγραμμα βρίσκεται στη θέση B.                                   | Check that the <i>run/program</i> keyswitch is at  . |
|  Ελέγξτε εάν οι κλειδοδιακόπτες διακοπή λειτουργίας έκτακτης ανάγκης βρίσκονται στη θέση απενεργοποίησης. | Check that any <i>emergency stop</i> switches are in the <i>out</i> position.   |
|  Ελέγξτε εάν ο κύριος διακόπτης, εάν διατίθεται, βρίσκεται στη θέση M.                                    | Check that the master switch, if provided, is at  .  |

#### Παράρτημα 1

##### Προστατευτική λειτουργία καθυστέρησης ενεργοποίησης

Ορισμένα πλυντοστυπτήρια Milnor® δεν διαθέτουν διάταξη ανίχνευσης ταχύτητας, ώστε να επαληθεύεται η διακοπή της περιστροφής του καλαθιού. Για το λόγο αυτό, μετά την αρχική ενεργοποίηση του μηχανήματος, πρέπει να παρέλθουν τουλάχιστον 80 δευτερόλεπτα πριν εκτελέσετε περαιτέρω ενέργειες. Ο χρόνος αυτός είναι αρκετός για την πλήρη ακινητοποίηση του καλαθιού, σε περίπτωση διακοπής της ηλεκτρικής παροχής, ενώ το μηχάνημα λειτουργούσε σε υψηλή ταχύτητα στύψιματος και αποκατάστασης πριν από την ακινητοποίηση του καλαθιού.

#### Supplement 1

##### The Power-up Safety Delay

Some Milnor® washer extractors do not use a speed sensing device to verify that the basket has stopped rotating. Therefore, when power is first applied to the machine, at least 80 seconds must elapse before any further operations can be attempted. This provides sufficient time for the basket to coast to a complete stop if power was lost while the machine was in a high speed extract and restored before the basket stopped.

### 2.1.3. Φόρτωση του μηχανήματος

Φορτώστε το μηχάνημα μέχρι το σημείο ονομαστικής χωρητικότητας και κλείστε καλά την πόρτα φόρτωσης.

### Load the Machine

Load the machine to the rated capacity and securely close the loading door.

### 2.1.4. Επιλογή και εκκίνηση προγράμματος

### Select and Start a Formula

**Οθόνη ή ενέργεια**  
[Display or Action]

**Επεξήγηση**

**Explanation**

RUN FORMULA  
00 OK TO POWER OFF

Αυτή είναι η οθόνη *Εκτέλεση προγράμματος*. Στην οθόνη αυτή, μπορείτε να διακόψετε την ηλεκτρική παροχή στο μηχάνημα χωρίς κίνδυνο βλάβης ηλεκτρικών εξαρτημάτων ή μπορείτε να επιλέξετε το πρόγραμμα που θα εκτελεστεί.

This is the *Run Formula* display. From this display, you can disconnect power from the machine without risking damage to electronic parts, or you can select a formula to run.

RUN FORMULA  
00 OK TO POWER OFF



μετάβαση μπροστά/πίσω στα 30 προγράμματα.

indexes forward/backward through the 30 formulas.

RUN FORMULA  
07 FORMULA NUMBER 07

Παράδειγμα οθόνης: Έχει επιλεγεί το *Πρόγραμμα 07* για εκτέλεση

Example display: *Formula 07* selected for running

RUN FORMULA  
07 FORMULA NUMBER 07



έναρξη λειτουργίας του μηχανήματος με το επιλεγμένο πρόγραμμα.

starts the machine with the selected formula.

RUN FORMULA  
DOES NOT EXIST

υποδεικνύει ότι το πρόγραμμα που έχει επιλεγεί για εκτέλεση δεν έχει προγραμματιστεί. Η οθόνη αυτή εμφανίζεται για τρία δευτερόλεπτα.

indicates that the formula selected for running has not been programmed. This display appears for three seconds.

RUN FORMULA  
DOES NOT EXIST

## 2.1.5. Παρακολούθηση λειτουργίας Monitor Operation

**Οθόνη ή ενέργεια**  
[Display or Action]

```
23:04 F02S01 02:37
TEMP A168/D170 LEV 1
```

```
23:04 F02S01 02:37
TEMP A168/D170 LEV 1
```

```
23:04 STEP 01 02:37
TEMP A168/D170 SPD 0
```

```
23:04 STEP 01 02:37
TEMP A168/D170 SPD 0
```

```
23:04 F02S01 02:37
```

```
23:04 F02S01 02:37
```

```
TEMP A168/D170 LEV 1
```

```
TEMP A168/D170 LEV 1
```

**Επεξήγηση**

Οι δύο αυτές οθόνες εναλλάσσονται σε ορισμένα μοντέλα E-P Plus® κατά τη διάρκεια της κανονικής λειτουργίας. Για το βήμα στα μοντέλα E-P Express® εμφανίζονται άλλα στοιχεία, αλλά όχι τα στοιχεία θερμοκρασίας νερού πλύσης.

Με την ένδειξη STEP01 υποδεικνύεται το τρέχον βήμα.

Με την ένδειξη EXTRACT υποδεικνύεται ότι στο μηχάνημα εκτελείται στύψιμο των προϊόντων.

Με την ένδειξη TIMEHALT υποδεικνύεται ότι η λειτουργία του χρονοδιακόπτη έχει διακοπεί, ώστε να εκτελεστεί έγχυση χημικών ουσιών. Ο εξοπλισμός παροχής χημικών ουσιών πρέπει να είναι σωστά εγκατεστημένος για την εκτέλεση της λειτουργίας αυτής.

Η μέτρηση της θερμοκρασίας σε αυτό το μηχάνημα E-P Plus® πραγματοποιείται σε βαθμούς Φαρενάιτ ή Κελσίου, ανάλογα με τη διεύθυνση του μηχανήματος.

**Explanation**

These two displays alternate during normal operation on some E-P Plus® models. E-P Express® models display other data about the step, but not bath temperature data.

STEP01 is the current step.

EXTRACT indicates that the machine is extracting the goods.

TIMEHALT indicates that the timer is stopped for a chemical injection. The chemical supply equipment must be properly installed for this feature to work.

Temperature in this E-P Plus® machine is measured in degrees Fahrenheit or Celsius, according to machine configuration.

**Οθόνη ή ενέργεια**  
[Display or Action]

**Επεξήγηση**

**Explanation**

Με την ένδειξη A168 υποδεικνύεται ότι τη συγκεκριμένη στιγμή έχει επιτευχθεί θερμοκρασία 168 βαθμών. Η θερμοκρασία εμφανίζεται μόνο εάν το μηχάνημα διαθέτει λειτουργία ελέγχου θερμοκρασίας και έχει διευθετηθεί κατάλληλα.

A168 indicates that the current achieved temperature is 168 degrees. Temperature is displayed only if machine is equipped with and configured for temperature control.

Με την ένδειξη D170 υποδεικνύεται ότι η επιθυμητή θερμοκρασία για το συγκεκριμένο βήμα είναι 170 βαθμοί. Η θερμοκρασία εμφανίζεται μόνο εάν το μηχάνημα διαθέτει λειτουργία ελέγχου θερμοκρασίας και έχει διευθετηθεί κατάλληλα.

D170 indicates that the desired temperature for this step is 170 degrees. Temperature is displayed only if the machine is equipped with and configured for temperature control.

Με την ένδειξη LEV 2 υποδεικνύεται ότι έχει επιτευχθεί η Στάθμη 2 για την πλύση.

LEV 2 indicates that the bath level achieved is Level 2.

|       |       |
|-------|-------|
| SPD 0 | LEV 2 |
|-------|-------|

Με την ένδειξη SDP 0 υποδεικνύεται η ταχύτητα πλύσης για το συγκεκριμένο βήμα.

SPD 0 indicates the bath speed for this step.

|       |       |
|-------|-------|
| SPD 0 | LEV 2 |
|-------|-------|

Με την ένδειξη WAIT FOR LEVEL 2 H υποδεικνύεται ότι για το συγκεκριμένο βήμα έχει προγραμματιστεί η Στάθμη 2, αλλά δεν έχει επιτευχθεί ακόμη. Με την ένδειξη H υποδεικνύεται ότι είναι ανοικτή η βαλβίδα ζεστού νερού, με την ένδειξη C υποδεικνύεται ότι είναι ανοικτή η βαλβίδα κρύου νερού και με την ένδειξη 3 υποδεικνύεται η παροχή επιπλέον νερού.

WAIT FOR LEVEL 2 H indicates that Level 2 is programmed for this step, but is not yet achieved. The H indicates that the hot water valve is open; C indicates cold water, and 3 indicates extra water.

Οθόνη ή ενέργεια  
[Display or Action]

Επεξήγηση

Explanation

Η ένδειξη CHEM 03 εμφανίζεται όταν εκτελείται έγχυση της Χημικής ουσίας 03. Ο αριθμός για κάθε χημική ουσία (υπάρχει δυνατότητα σύνδεσης μέχρι 5 ουσιών) εμφανίζεται κατά την έγχυση των χημικών ουσιών.

CHEM 03 is displayed when Chemical 03 is being injected. The number for each chemical (up to five may be connected) is displayed as the chemical is injected.

Με την ένδειξη FINAL EXTRACT υποδεικνύεται ότι το βήμα που βρίσκεται σε εξέλιξη είναι το τελικό βήμα του προγράμματος πλύσης.

FINAL EXTRACT indicates that the step in progress is the final step of the wash formula.

### 2.1.6. Τερματισμός του προγράμματος που εκτελείται

### How to Terminate a Running Formula

Οθόνη ή ενέργεια  
[Display or Action]

Επεξήγηση

Explanation



Ακύρωση του προγράμματος που εκτελείται και επαναφορά του μηχανήματος στην οθόνη *Εκτέλεση προγράμματος* ((βλ. Ενότητα 2.1.4 “Επιλογή και εκκίνηση προγράμματος”).

Cancels the current formula and returns the machine to the *Run Formula* display (see Section 2.1.4 “Select and Start a Formula”).

### 2.1.7. Επανεκκίνηση μετά από διακοπή ηλεκτρικής παροχής

### How to Restart after Losing Power

Σε περίπτωση διακοπής της ηλεκτρικής παροχής ή απενεργοποίησης της επιτοίχιας διάταξης διακοπής τροφοδοσίας ενώ το μηχάνημα βρίσκεται σε αυτόματο τρόπο λειτουργίας, το πρόγραμμα και το βήμα που βρίσκονται σε εξέλιξη αποθηκεύονται στη μονάδα ελέγχου.

The control remembers the formula and step it was executing if power fails or if the wall disconnect is turned off while the machine is operating in automatic mode.

**Οθόνη ή ενέργεια**  
[Display or Action]

PRESS START TO RUN  
STEP xx - FORMULA yy

PRESS START TO RUN  
STEP xx - FORMULA yy

**Επεξήγηση**

Στα περισσότερα μοντέλα του μηχανήματος, η οθόνη αυτή εμφανίζεται κατά την αποκατάσταση της ηλεκτρικής παροχής. Εμφανίζονται το πρόγραμμα και το βήμα που βρισκόταν σε εξέλιξη κατά τη διακοπή της ηλεκτρικής παροχής.

- 1 Επαναφορά στο πρόγραμμα και το βήμα που εμφανίζεται. Εάν η διακοπή ηλεκτρικής παροχής συνέβη κατά τη διάρκεια ενός βήματος πλύσης, πρέπει να επιτευχθούν ξανά οι ρυθμίσεις στάθμης και θερμοκρασίας (σε περίπτωση που έχει επιλεγεί), ακόμη και σε περίπτωση που είχαν ήδη επιτευχθεί πριν από τη διακοπή της ηλεκτρικής παροχής. Θα πραγματοποιηθεί ξανά έγχυση των χημικών ουσιών που έχουν επιλεγεί.

Σε περίπτωση που η διακοπή ηλεκτρικής παροχής συνέβη κατά τη φάση αποστράγγισης ενός βήματος πλύσης, το βήμα πλύσης θα επαναληφθεί και στη συνέχεια θα ακολουθήσει το επόμενο βήμα που έχει επιλεγεί.

Σε περίπτωση που η διακοπή ηλεκτρικής παροχής συνέβη κατά τη διάρκεια ενός βήματος στυψίματος, θα επαναληφθεί το προηγούμενο βήμα πλύσης πριν από την έναρξη του βήματος στυψίματος.

**Explanation**

On most machine models, this display appears when power is restored. The formula and step which were in progress when power was interrupted are shown.

Resumes the formula at the displayed formula and step. If the outage occurred in a bath step, level and temperature (if commanded) must again be satisfied, even if these were already satisfied before power was lost. Any commanded chemicals will be injected again.

If the outage occurred during the drain part of a bath step, the bath step will be repeated, then followed by the next commanded step.

If the outage occurred during an extract step, the previous bath will be repeated before the extract step begins.

**2.1.8. Εκφόρτωση του μηχανήματος**



**ΚΙΝΔΥΝΟΣ 3:** Κίνδυνοι εμπλοκής και ακρωτηριασμού—Σε περίπτωση που έρθετε σε επαφή με τα προϊόντα κατά τη διάρκεια της επεξεργασίας, ενδέχεται να τυλιχθούν γύρω από το σώμα ή τα άκρα σας και προκληθεί ακρωτηριασμός. Τα προϊόντα συνήθως απομονώνονται με την ασφαλισμένη πόρτα του κυλίνδρου.

**Unload the Machine**

**DANGER 3: Entangle and Sever Hazards**—Contact with goods being processed can cause the goods to wrap around your body or limbs and dismember you. The goods are normally isolated by the locked cylinder door.

- Do not touch goods inside or hanging

- Μην αγγίζετε τα προϊόντα που βρίσκονται στο εσωτερικό ή κρέμονται εν μέρει από τον κύλινδρο ενώ περιστρέφεται.

Σε περίπτωση ολοκλήρωσης ή τερματισμού του προγράμματος, ο κύλινδρος ακινητοποιείται σταδιακά σε 25 δευτερόλεπτα, εάν το τελευταίο βήμα ήταν βήμα πλύσης. Εάν το τελευταίο βήμα ήταν βήμα στύψιματος, ο χρόνος σταδιακής ακινητοποίησης μπορεί να φτάσει έως 180 δευτερόλεπτα. Μην επιχειρείτε να ανοίξετε την πόρτα νωρίτερα.

partially outside the turning cylinder.

When the formula ends or is terminated, the cylinder coasts for 25 seconds if the last step was a bath step. If the last step was an extract, the coast time may be as much as 180 seconds. Do not attempt to open the door early.

#### Οθόνη ή ενέργεια [Display or Action]

UNLOCKING THE DOOR  
PLEASE WAIT

UNLOCKING THE DOOR  
PLEASE WAIT

WAITING TO UNLOAD

WAITING TO UNLOAD



#### Επεξήγηση

οθόνη που εμφανίζεται κατά τα τελευταία 15 δευτερόλεπτα της σταδιακής ακινητοποίησης ή σε ολόκληρη τη διάρκεια του χρόνου σταδιακής ακινητοποίησης εάν πραγματοποιήθηκε χειροκίνητος τερματισμός του προγράμματος.

Μετά την πάροδο του χρόνου σταδιακής ακινητοποίησης, ηχεί ο συναγερμός χειριστή.

Απενεργοποίηση του συναγερμού χειριστή. Η πόρτα απασφαλίζει, ώστε να είναι δυνατή η εκφόρτωση του μηχανήματος.

#### Explanation

display during the last 15 seconds of coast, or during the entire coast time if the formula was manually terminated.

At the end of the coast time, the operator alarm sounds.

Silences the operator alarm. The door unlocks so you can unload the machine.

## Κεφάλαιο 3

# Αποκατάσταση σφαλμάτων

## Chapter 3

# Correcting Errors

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### 3.1. Μηνύματα σφάλματος κατά τη διάρκεια της κανονικής λειτουργίας

Εάν εμφανιστεί μήνυμα σφάλματος στην κάτω γραμμή της οθόνης ενώ το μηχάνημα βρίσκεται σε λειτουργία, διακόπτεται η λειτουργία του χρονοδιακόπτη που εμφανίζεται στην πάνω γραμμή. Μόλις αποκατασταθεί το σφάλμα, συνεχίζεται η λειτουργία του χρονοδιακόπτη. Για την αντιμετώπιση των περισσότερων σφαλμάτων, θα πρέπει να διακόψετε την εκτέλεση του προγράμματος και να απενεργοποιήσετε την ηλεκτρική παροχή. Μη διακόψετε τη λειτουργία του προγράμματος εάν πρόκειται να συνεχιστεί η εκτέλεσή του μετά την αποκατάσταση του σφάλματος. Για περισσότερες πληροφορίες, ανατρέξτε στο εγχειρίδιο αναφοράς.

### Error Messages During Normal Operation

If an error message appears on the bottom line of the display while the machine is running, the timer shown on the top line will stop counting. When the error is corrected, the timer resumes counting down. To troubleshoot most errors, suspend the formula in progress and turn power off. Do not terminate the formula if it is to be resumed after the error is corrected. See the reference manual for more information.



**Οθόνη ή ενέργεια**  
[Display or Action]

LEVELS STILL MADE

LEVELS STILL MADE

**Επεξήγηση**

Ο μικροεπεξεργαστής εξακολουθεί να λαμβάνει την πληροφορία ότι πραγματοποιείται πλήρωση σε συγκεκριμένη στάθμη πριν ή κατά τη διάρκεια της λειτουργίας στυψίματος ή αμέσως πριν από την πλήρωση για μια λειτουργία πλύσης. Αυτό το μήνυμα σφάλματος εξαφανίζεται αυτόματα μετά τη μείωση της στάθμης.

**Explanation**

The microprocessor is still receiving information that a level is made just before or during an extract step, or immediately before the fill for a bath step. This error is self-clearing when level is lost.

TOO LONG TO FILL

TOO LONG TO FILL

Ο χρόνος πλήρωσης μέχρι τη συγκεκριμένη στάθμη έχει υπερβεί τα 10 λεπτά. Ελέγξτε τις βαλβίδες νερού, τα φίλτρα, τις γραμμές παροχής και την πίεση του νερού. Η λειτουργία πλήρωσης συνεχίζεται στο μηχάνημα μέχρι να επιτευχθεί η συγκεκριμένη στάθμη και στη συνέχεια εξαφανίζεται αυτόματα το μήνυμα σφάλματος και συνεχίζεται η κανονική λειτουργία.

Time to fill to level exceeded 10 minutes. Check the water valves, strainers, supply lines, and water pressure. The machine will continue to fill until level is reached, at which time the error will automatically clear and normal operation will resume.

TOO LONG TO STEAM

TOO LONG TO STEAM

**Ισχύει μόνο για τα μοντέλα E-P Plus.** Η διαδικασία ατμοποίησης για την επίτευξη της επιθυμητής θερμοκρασίας έχει υπερβεί το μέγιστο χρόνο που έχει διευθετηθεί. Ελέγξτε τη βαλβίδα ατμού, το φίλτρο, τον κύριο αγωγό ατμού, την πίεση του ατμού κ.λπ. Η διαδικασία ατμοποίησης συνεχίζεται μέχρι την επίτευξη της επιθυμητής θερμοκρασίας και στη συνέχεια εξαφανίζεται αυτόματα το μήνυμα σφάλματος και συνεχίζεται η κανονική λειτουργία.

**E-P Plus models only.** The configured maximum time to steam up to the desired temperature has been exceeded. Check the steam valve, strainer, main steam header and pressure, etc. Steaming will continue until temperature is achieved, when the error will automatically clear and normal operation will resume.

**Οθόνη ή ενέργεια**  
[Display or Action]

TOO LONG TO COOL

TOO LONG TO COOL

**Επεξήγηση**

**Ισχύει μόνο για τα μοντέλα E-P Plus.** Η διαδικασία ψύξης για την επίτευξη της επιθυμητής θερμοκρασίας έχει υπερβεί το μέγιστο χρόνο που διευθετήθηκε. Ελέγξτε τη βαλβίδα ψύξης και το φίλτρο, εάν υπάρχει, την πίεση του κρύου νερού και τη θέση της βαλβίδας βερνιέρου στην είσοδο ψύξης. Η διαδικασία ψύξης συνεχίζεται μέχρι την επίτευξη της επιθυμητής θερμοκρασίας και στη συνέχεια εξαφανίζεται αυτόματα το μήνυμα σφάλματος.

**Explanation**

**E-P Plus models only.** The configured maximum time to cool down to the desired temperature has been exceeded. Check the cooldown valve and strainer if equipped, cold water pressure, and position of vernier valve on cooldown inlet. Cooldown will continue until the desired temperature is achieved, when the error will automatically clear.

TOO LONG TO DRAIN

TOO LONG TO DRAIN

Η αποστράγγιση του μηχανήματος δεν πραγματοποιήθηκε σωστά στον επιλεγμένο χρόνο αποστράγγισης. Αυτό το μήνυμα σφάλματος εξαφανίζεται αυτόματα όταν η στάθμη νερού στο καλάθι είναι αρκετά χαμηλή, ώστε να είναι δυνατή η έναρξη της επόμενης λειτουργίας.

The machine did not drain properly in the allotted drain time. This self-correcting error will clear when the water level in the basket is low enough to begin the next operation.

CHECK PROBE

CHECK PROBE

**Ισχύει μόνο για τα μοντέλα E-P Plus.** Με αυτό το μήνυμα σφάλματος υποδεικνύεται ότι η αντίσταση του αισθητήρα θερμοκρασίας δεν βρίσκεται εντός των καθορισμένων ορίων. Ελέγξτε την αντίσταση του αισθητήρα με ένα ακριβές ψηφιακό ωμόμετρο, αφού αποσυνδέσετε τους ακροδέκτες του αισθητήρα από την κάρτα του επεξεργαστή. Η αντίσταση μεταξύ των δύο ακροδεκτών πρέπει να είναι μεταξύ 2K και 35K Ohm. Η αντίσταση μεταξύ κάθε ακροδέκτη και του εδάφους πρέπει να είναι άπειρη.

**E-P Plus models only.** This error message indicates that the resistance of the temperature probe is outside the specified range. Test the probe by disconnecting the probe leads from the processor board and checking the resistance with an accurate digital ohmmeter. Resistance between the two leads must be between 2K and 35K Ohms. Resistance between each lead and ground must be infinite.

**Οθόνη ή ενέργεια**  
[Display or Action]

EXTERNAL FAULT

EXTERNAL FAULT

**Επεξήγηση**

Στα περισσότερα μηχανήματα, με αυτό το μήνυμα σφάλματος υποδεικνύεται η αποτυχία της προγραμματισμένης έγχυσης χημικής ουσίας, συνήθως διότι το σύστημα παροχής χημικών ουσιών είναι κενό. Όταν προστίθενται χημικές ουσίες και μπορεί να πραγματοποιηθεί έγχυση, αυτό το μήνυμα σφάλματος εξαφανίζεται αυτόματα και είναι δυνατή η συνέχιση της λειτουργίας.

**Explanation**

On most machines, this error indicates that the programmed chemical injection failed, usually because the chemical supply system is empty. When chemicals are added and can be injected, this error clears automatically, allowing operation to resume.

Στα μοντέλα 48040F7J/F7B, με αυτό το μήνυμα σφάλματος υποδεικνύεται ότι η πίεση αέρα στα έδρανα βρίσκεται κάτω από το ελάχιστο απαιτούμενο όριο για την προστασία εδράνου από τη ρύπανση με νερό.







On 48040F7J/F7B models, this error indicates that the bearing air pressure is below the minimum required to help protect the bearing from water contamination.

BRAKE PRESS. FAULT

BRAKE PRESS. FAULT

Αυτό το μήνυμα σφάλματος εμφανίζεται μόνο στα μοντέλα του μηχανήματος που διαθέτουν φρένο κυλίνδρου. Με το μήνυμα αυτό υποδεικνύεται ότι το φρένο έχει ενεργοποιηθεί, ενώ θα έπρεπε να είναι απενεργοποιημένο. Συνήθως, η ενεργοποίηση του φρένου πραγματοποιείται όταν το μηχάνημα δεν δέχεται επαρκή πίεση αέρα, ώστε να ανοίξει το υπό φυσιολογικές συνθήκες κλειστό φρένο. Ελέγξτε την παροχή πεπιεσμένου αέρα στο εργοστάσιο.

This error appears only on machine models equipped with a cylinder brake. The message indicates that the brake is engaged when it should be disengaged. This is usually because the machine is not receiving sufficient air pressure to open the normally-closed brake. Check the plant compressed air supply.

| Οθόνη ή ενέργεια<br>[Display or Action]   | Επεξήγηση   | Explanation  |
|---|---|--|
| <div style="border: 1px solid black; padding: 2px; text-align: center;">THREE WIRE DISABLED</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">THREE WIRE DISABLED</div> | <p>Το ρελέ τριών καλωδίων δεν φέρει ρεύμα. Το ρελέ τροφοδοτεί το μηχάνημα με ισχύ κυκλώματος ελέγχου. Εάν ενεργοποιηθεί πατώντας στιγμιαία το κουμπί <i>Έναρξη</i> () , παραμένει ενεργοποιημένο από τις επαφές τις οποίες διαθέτει και οι οποίες διαφορετικά είναι ανοικτές, καθώς και από τις διατάξεις προστασίας του κινητήρα από υπερφόρτωση, το κλείστρο πόρτας κ.λπ. Αν οποιαδήποτε από τις επαφές αυτές ανοίξει ακόμη και στιγμιαία, η λειτουργία του μηχανήματος διακόπτεται και εμφανίζεται η συγκεκριμένη οθόνη. Το συγκεκριμένο σφάλμα μπορεί να διαγραφεί μόνο με πάτημα του κουμπιού <i>Έναρξη</i> () , και μόνο εφόσον το σφάλμα έχει αποκατασταθεί.</p> | <p>The three-wire relay de-energized. This relay provides control circuit power to the machine. Once energized by momentarily depressing the <i>Start</i> button () , it is held energized by its own normally open contacts, along with motor overloads, door interlocks, etc. Should any of these contacts open even momentarily, the machine stops and this display appears. This error can only be cleared by depressing the <i>Start</i> button () , and only then if the error has been cleared.</p> |
| <div style="border: 1px solid black; padding: 2px; text-align: center;">INVERTER FAULT</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">INVERTER FAULT</div>           | <p>Αυτό το μήνυμα σφάλματος εμφανίζεται όταν ο μικροεπεξεργαστής δεν έχει δεχτεί δεδομένα από τον εναλλάκτη για 14 δευτερόλεπτα από την εκκίνηση του προγράμματος. Μετά από 14 δευτερόλεπτα χωρίς δεδομένα από τον εναλλάκτη, η λειτουργία του χρονοδιακόπτη διακόπτεται, το καλάθι ακινητοποιείται και η βαλβίδα αποστράγγισης ανοίγει. Για επαναφορά, πατήστε το πλήκτρο <i>Επόμενο</i> () .</p>   | <p>This error message appears if the microprocessor does not receive an input from the inverter within 14 seconds of the beginning of the formula. After 14 seconds without an inverter input, the timer stops, the basket is stationary, and the drain valve opens. To recover, press the <i>Next</i> key () .</p>   |

**Οθόνη ή ενέργεια**  
[Display or Action]

|   |
|---|
| VIBRATION SW TRIPPED<br>RECOVERY SEQUENCE |
| VIBRATION SW TRIPPED<br>RECOVERY SEQUENCE |

**Επεξήγηση**

Μόλις απενεργοποιηθεί ο διακόπτης δόνησης, διακόπτεται η λειτουργία του χρονοδιακόπτη. Μετά από 45 έως 85 δευτερόλεπτα, το καλάθι επανέρχεται στην ταχύτητα πλύσης, ενώ ο κύλινδρος γεμίζει με νερό. Μόλις η πλήρωση φτάσει στη χαμηλή στάθμη, ο κύλινδρος περιστρέφεται για ένα επιπλέον λεπτό σε ταχύτητα πλύσης και στη συνέχεια, επιταχύνει σε ταχύτητα στυψίματος.

**Explanation**

When the vibration switch closes, the timer stops. After 45 to 85 seconds (120 seconds on 42032F7J models), the basket reverses at wash speed as the cylinder fills with water. When low level is achieved, the cylinder reverses for one additional minute at wash speed, then accelerates to extract speed.

— Τέλος BICJHT04 —

— End of BICJHT04 —

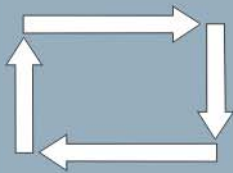


РУССКИЙ

5







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## Руководство оператора [Operator Guide]—

### Органы управления стирально-сушильных машин моделей E-P Plus<sup>®</sup> E-P Express<sup>®</sup> [Washer-extractor Models with E-P Plus<sup>®</sup> and E-P Express<sup>®</sup> Controls]

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Прочтите руководство по безопасности

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

**Применимо Milnor® к товарам по номеру модели: [Applicable Milnor® products by model number:]**

|          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|
| 30015T5X | 30015V7J | 30022H8J | 30022T5X | 30022V6J | 30022VRJ | 30022X8J |
| 36021V5J | 36021V7J | 36026V5J | 36026V7J | 36026X8J | 42026V6J | 42026X7J |
| 42030V6J | 42032X7J | 48040F7B | 48040F7J | MWR12J5  | MWR12X5  | MWR16J5  |
| MWR16X5  | MWR18J4  | MWR18J6  | MWR18X4  |          |          |          |

## Содержание [English table of contents follows]

| Раздел  | Картинки, Таблицы, и Дополнения                              |
|---|--|
| <b>Глава 1. Описание управления</b>   |  |
| <b>1.1. Органы управления моделей E-P Plus® и E-P Express®</b><br>(Документ VICJHF01) | Картинка 1: Традиционная панель управления                   |
| <b>Глава 2. Нормальная работа</b>   |  |
| <b>2.1. Нормальная работа машины</b> (Документ VICJVO03)                              |  |
| 2.1.1. Начните отсюда для безопасности  |  |
| 2.1.2. Проверьте настройки выключателя.   | Дополнение 1: Задержка безопасности включения электропитания |
| 2.1.3. Загрузите машину   |  |
| 2.1.4. Выберите и запустите программу   |  |
| 2.1.5. Мониторинг работы  |  |
| 2.1.6. Как отменить выполнение работающей программы.                                  |  |
| 2.1.7. Как перезапустить машину после потери питания.                                 |  |
| 2.1.8. Разгрузите машину  |  |
| <b>Глава 3. Корректирование ошибок</b>  |  |
| <b>3.1. Сообщение об ошибке во время нормальной работы</b><br>(Документ VICJHT04)     |  |

# Table of Contents

| Sections  | Figures, Tables, and Supplements        |
|---|---|
| <b>Chapter 1. Description of Controls</b>   |   |
| <b>1.1. Operator Controls on E-P Plus® and E-P Express® Models</b><br>(Document BICJHF01) | Figure 1: Typical Control Panel         |
| <b>Chapter 2. Normal Operation</b>  |   |
| <b>2.1. Normal Machine Operation</b> (Document BICJVO03)                                  |   |
| 2.1.1. Start Here for Safety  |   |
| 2.1.2. Check Switch Settings  | Supplement 1: The Power-up Safety Delay |
| 2.1.3. Load the Machine   |   |
| 2.1.4. Select and Start a Formula   |   |
| 2.1.5. Monitor Operation  |   |
| 2.1.6. How to Terminate a Running Formula   |   |
| 2.1.7. How to Restart after Losing Power  |   |
| 2.1.8. Unload the Machine   |   |
| <b>Chapter 3. Correcting Errors</b>   |   |
| <b>3.1. Error Messages During Normal Operation</b> (Document BICJHT04)                    |   |

# Глава 1

## Описание управления

# Chapter 1

## Description of Controls

BICJHF01 (Published) Book specs- Dates: 20090831 / 20090831 / 20100607 Lang: RUS01 Applic: CJV CJH CJF CJX

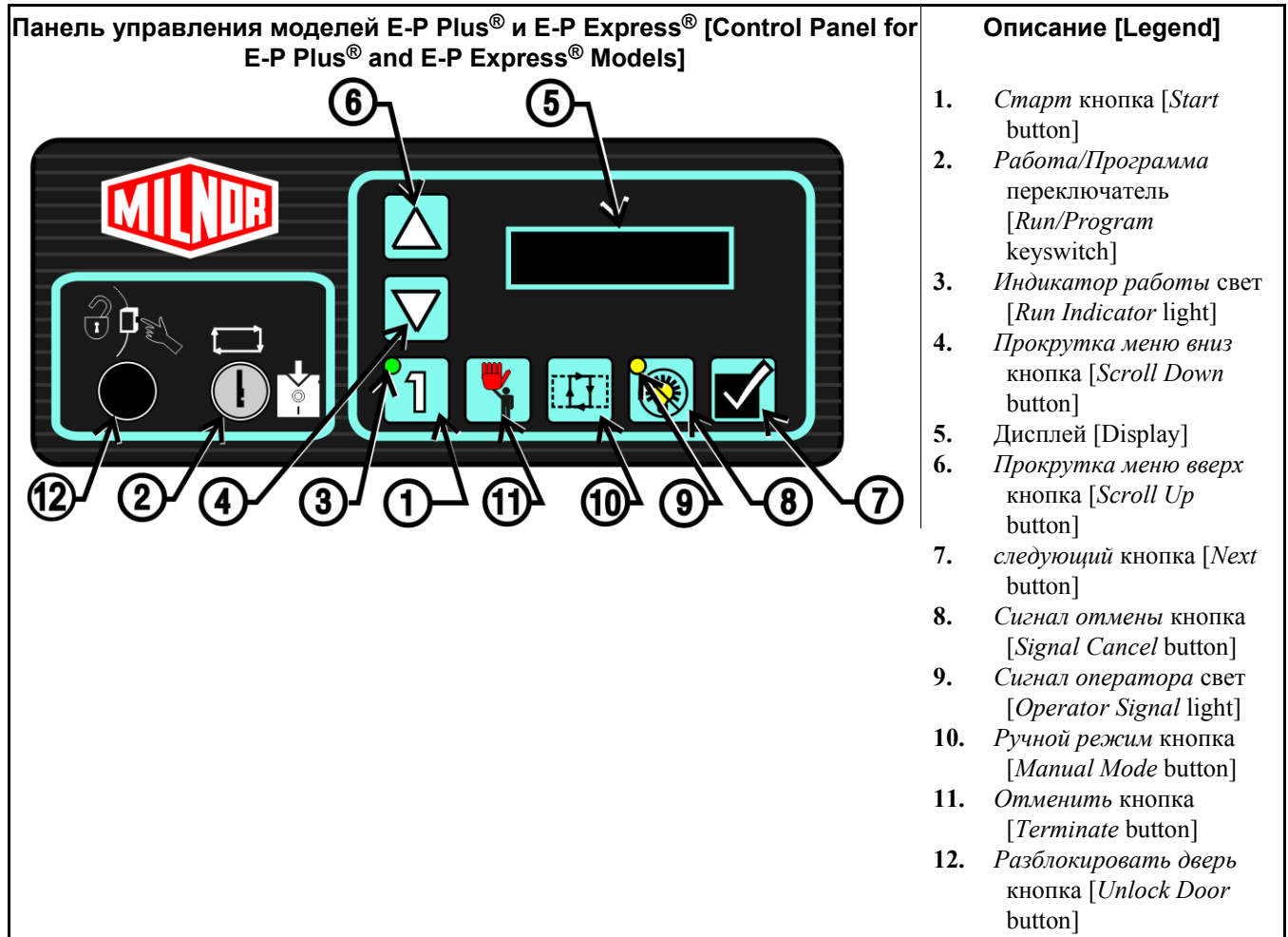
### 1.1. Органы управления моделей E-P Plus® и E-P Express®

Это руководство описывает управление машиной оператором во время нормальной работы. Для дополнительной информации по другим версиям указанным в [Картинка 1](#), читайте соответствующее руководство.

### Operator Controls on E-P Plus® and E-P Express® Models

This document describes the user controls during normal machine operation. For additional information on other controls shown in [Figure 1](#), see the reference manual.

Картинка [Figure] 1: Традиционная панель управления [Typical Control Panel]



Отображение или действие  
[Display or Action]

Объяснения

Explanation

1

Когда на дисплее горит *Работа программы*, нажмите эту кнопку для запуска программы.

When the display says *Run Formula*, press this button to start the formula.

☐ / ☑

Во время нормальной работы, переключатель *Работа/Программа* должен быть установлен в положение ☐. Это автоматическое положение.

During normal operation, the *Run/Program* keyswitch must be set to ☐. This is the automatic position.

▲ / ▼





Используйте *Прокрутка меню вверх* и *Прокрутка меню вниз* кнопки для выбора нужной программы.

Use the *Scroll Up* and *Scroll Down* buttons to select the desired formula.

☑

Кнопка *Следующий* не используется во время нормальной работы.

The *Next* button is not used during normal operation.

| Отображение или действие<br>[Display or Action]                                    | Объяснения  | Explanation  |
|--|---|--|
|   | Кнопка <i>Отмена сигнала</i> заглушает сигнал оператора, когда программа успешно завершена. Так же, если сигнал оператора запрограммирован на подачу химии, добавьте химикат и нажмите эту кнопку для продолжения работы. | The <i>Signal Cancel</i> button silences the operator signal that sounds when a formula completes normally. Also, if an operator signal is programmed with a chemical injection, add the chemical and press this button to resume operation. |
|   | Кнопка <i>Ручной (механический)</i> не используется во время нормальной работы.   | The <i>Manual</i> button is not used during normal operation.  |
|   | Кнопка <i>Отменить</i> отменяет все невыполненные этапы текущей программы и включает процедуру выключения машины. Программа затем, не может быть продолжена.  | The <i>Terminate</i> button cancels all remaining steps in the current formula and starts the shutdown procedure for the machine. The formula can not be resumed.  |
|  | Кнопка <i>Разблокировать дверь</i> позволяет Вам открыть дверь, если все остальные условия безопасности соблюдены.  | The <i>Unlock Door</i> button allows you to open the door if all other safety conditions are met.  |

— Окончание BICJHF01 —

— End of BICJHF01 —

## Глава 2

# Нормальная работа

## Chapter 2

# Normal Operation

BICJVO03 (Published) Book specs- Dates: 20090831 / 20090831 / 20100607 Lang: RUS01 Applic: CJV CJH CJF CJX

### 2.1. Нормальная работа машины

### Normal Machine Operation

#### 2.1.1. Начните отсюда для безопасности

#### Start Here for Safety

Этот документ создан для напоминания оператору стирально-отжимной машины, что необходимо для управления машиной. Не начинайте работу на машине, если опытный оператор не рассказал Вам все детали управления.

This document is designed to remind the person operating this washer-extractor what is required to operate this machine. Do not attempt to operate this machine before a trained operator has explained the details to you.



**ОПАСНОСТЬ [1]: Разные опасности**— Невнимательные действия оператора могут убить или серьезно поранить персонал, повредить или разрушить машину, повредить помещение, и/или аннулировать гарантию.

**DANGER [1]: Multiple Hazards**— Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.



**ВНИМАНИЕ [2]: Опасность электрошока и электроожога**—Контакт с электричеством может убить или серьезно поранить. Электрическое напряжение всегда есть внутри корпуса машины, если автоматический выключатель не отключен.

**CAUTION [2]: Electrocution and Electrical Burn Hazards**—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.








- Не открывайте и не снимайте крышки электропитка машины.
- Уточните расположение главного выключателя электропитания машины используйте для отключения в случае аварийной ситуации.
- Не обслуживайте машины без квалификации и авторизации. Вы должны четко понимать все опасности сервиса и как их избегать.

- Do not unlock or open electric box doors.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.
- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.



### 2.1.2. Проверьте настройки выключателя.

### Check Switch Settings

| Отображение или действие<br>[Display or Action]                                   | Объяснения   | Explanation   |
|---|--|---|
|  | Проверьте, что <i>работа/программа</i> переключатель находится в положении  . | Check that the <i>run/program</i> keyswitch is at  . |
|  | Проверьте, что любой <i>Аварийная остановка</i> выключатель в положении <i>Выкл.</i>   | Check that any <i>emergency stop</i> switches are in the <i>out</i> position.   |
|  | Проверьте наличие главного выключателя, расположенного в  .                   | Check that the master switch, if provided, is at  .  |

#### Дополнение 1

##### Задержка безопасности включения электропитания

Некоторые Milnor® стирально-сушильные машины не оснащены датчиком, определяющим момент прекращения вращения корзины. Поэтому при первом включении следует выждать не менее 80с до выполнения каких-либо дальнейших действий. За это время корзина полностью остановится, если ранее произошло отключение питания при отжиге на высокой скорости, а затем подача энергии возобновилась до момента остановки корзины.

#### Supplement 1

##### The Power-up Safety Delay

Some Milnor® washer extractors do not use a speed sensing device to verify that the basket has stopped rotating. Therefore, when power is first applied to the machine, at least 80 seconds must elapse before any further operations can be attempted. This provides sufficient time for the basket to coast to a complete stop if power was lost while the machine was in a high speed extract and restored before the basket stopped.

### 2.1.3. Загрузите машину

Загрузите машину в соответствии с загрузочной массой и плотно закройте загрузочную дверь.

### Load the Machine

Load the machine to the rated capacity and securely close the loading door.

## 2.1.4. Выберите и запустите программу

## Select and Start a Formula

**Отображение или действие**  
[Display or Action]

РАБОТА ПРОГРАММЫ  
00 ОК ДЛЯ ВЫКЛ ПИТ.

RUN FORMULA  
00 OK TO POWER OFF



РАБОТА ПРОГРАММЫ  
07 ПРОГРАММА НОМЕР  
07

RUN FORMULA  
07 FORMULA NUMBER 07



РАБОТА ПРОГРАММЫ  
НЕ СУЩЕСТВУЕТ

RUN FORMULA  
DOES NOT EXIST

**Объяснения**

Это *Работа программы* дисплей. С этого дисплея можно отключить питание машины, не рискуя повредить электронику, или Вы можете выбрать и запустить программу стирки.

шагает вперед/назад по 30 программам.

Пример показаний:  
*ПРОГРАММА 07* выбрана для работы

включает машину с выбранной программой.

сообщает, что выбранная программа для работы не запрограммирована. Это сообщение появляется на три секунды.

**Explanation**

This is the *Run Formula* display. From this display, you can disconnect power from the machine without risking damage to electronic parts, or you can select a formula to run.

indexes forward/backward through the 30 formulas.

Example display: *Formula 07* selected for running

starts the machine with the selected formula.

indicates that the formula selected for running has not been programmed. This display appears for three seconds.

## 2.1.5. Мониторинг работы

## Monitor Operation

Отображение или действие  
[Display or Action]

```
23:04 F02S01 02:37
ТЕМП A168/D170 LEV 1
```

```
23:04 F02S01 02:37
ТЕМП A168/D170 LEV 1
```

```
23:04 ШАГ 01 02:37
ТЕМП A168/D170 SPD 0
```

```
23:04 STEP 01 02:37
ТЕМП A168/D170 SPD 0
```

```
23:04 F02S01 02:37
```

```
23:04 F02S01 02:37
```

```
ТЕМП A168/D170 LEV 1
```

```
ТЕМП A168/D170 LEV 1
```

## Объяснения

Эти сообщения выводятся попеременно при нормальной работе некоторых моделей E-P Plus®. Модели E-P Express® отображают информацию о текущем этапе цикла, но не показывают температуру в машине.

ШАГ01 текущий шаг.

ОТЖИМ обозначает, что машина отжимает белье.

ЗАДЕРЖКА обозначает, что таймер остановился на время подачи химии. Оборудование для подачи химии должно быть правильно установлено для того, чтобы эта функция работала.

Температура в машине E-P Plus® измеряется в градусах Цельсия или Фаренгейта, что задается в настройках.

A168 показывает, что текущая достигнутая температура 168 градусов. Температура отображается, только если машина оснащена и настроена, контролировать температуру.

## Explanation

These two displays alternate during normal operation on some E-P Plus® models. E-P Express® models display other data about the step, but not bath temperature data.

STEP01 is the current step.

EXTRACT indicates that the machine is extracting the goods.

TIMEHALT indicates that the timer is stopped for a chemical injection. The chemical supply equipment must be properly installed for this feature to work.

Temperature in this E-P Plus® machine is measured in degrees Fahrenheit or Celsius, according to machine configuration.

A168 indicates that the current achieved temperature is 168 degrees. Temperature is displayed only if machine is equipped with and configured for temperature control.

**Отображение или действие**  
[Display or Action]

**Объяснения**

**Explanation**

|  |   |  |
|--|---|--|
|  | <p>D170 показывает, что заданная температура для этого шага 170 градусов. Температура отображается, только если машина оснащена и настроена, контролировать температуру.</p> <p>УР2 показывает что уровень ванны достигнутый - уровень 2.</p> | <p>D170 indicates that the desired temperature for this step is 170 degrees. Temperature is displayed only if the machine is equipped with and configured for temperature control.</p> <p>LEV 2 indicates that the bath level achieved is Level 2.</p> |
| <div style="border: 1px solid black; padding: 2px; display: flex; justify-content: space-between;"> <span>СКОР 0</span> <span>УР 2</span> </div> | <p>СКОР 0 обозначает скорость ванны для этого шага.</p>   | <p>SPD 0 indicates the bath speed for this step.</p>   |
| <div style="border: 1px solid black; padding: 2px; display: flex; justify-content: space-between;"> <span>SPD 0</span> <span>LEV 2</span> </div> |   |  |
|  | <p>ПОДОЖДИТЕ УРОВНЯ 2 Н, означает, что запрограммирован уровень 2 для этого шага, но еще не достигнут. Н обозначает, что клапан горячей воды открыт; С что клапан холодной воды открыт, и 3 обозначает дополнительную воду.</p>               | <p>WAIT FOR LEVEL 2 H indicates that Level 2 is programmed for this step, but is not yet achieved. The H indicates that the hot water valve is open; C indicates cold water, and 3 indicates extra water.</p>  |
|  | <p>СНЕМ 03 отображается, когда подается химикат 03. Номер каждого химиката (присоединяется до 5) отображается, когда этот химикат подается в машину.</p>  | <p>CHEM 03 is displayed when Chemical 03 is being injected. The number for each chemical (up to five may be connected) is displayed as the chemical is injected.</p>   |
|  | <p>FINAL EXTRACT показывает, что работает шаг окончательного отжима программы.</p>  | <p>FINAL EXTRACT indicates that the step in progress is the final step of the wash formula.</p>  |

### 2.1.6. Как отменить выполнение работающей программы.

### How to Terminate a Running Formula

Отображение или действие  
[Display or Action]

Объяснения

Explanation



Отменяет текущую программу и возвращает машину в положение *Работа программы* на дисплее (смотри Раздел 2.1.4 “Выберите и запустите программу”).

Cancels the current formula and returns the machine to the *Run Formula* display (see Section 2.1.4 “Select and Start a Formula”).

### 2.1.7. Как перезапустить машину после потери питания.

### How to Restart after Losing Power

Управление запоминает шаг программы, который выполнялся при потере или отключении питания в автоматическом режиме.

The control remembers the formula and step it was executing if power fails or if the wall disconnect is turned off while the machine is operating in automatic mode.

**Отображение или действие**  
[Display or Action]

НАЖМИТЕ СТАРТ - ВКЛ.  
ШАГ xx - ПРОГ. yy

PRESS START TO RUN  
STEP xx - FORMULA yy

**Объяснения**

На большинстве моделей машин, это сообщение появляется при восстановлении питания. Программа и шаг, который выполнялся при потере питания, появляются на дисплее.

1

Перезапускает программу с указанного на дисплее места. Если в ванне изменились уровень и температура, то (по команде) должны быть приведены в соответствие с программой, даже если до потери питания они достигали нужного уровня. Любые химикаты будут поданы вновь по команде.

Если потеря питания произошла вовремя слива, то шаг стирки будет полностью повторен, и далее по программе.

Если потеря питания произошла вовремя отжима, то предыдущий шаг полоскания будет повторен до отжима.

**Explanation**

On most machine models, this display appears when power is restored. The formula and step which were in progress when power was interrupted are shown.

Resumes the formula at the displayed formula and step. If the outage occurred in a bath step, level and temperature (if commanded) must again be satisfied, even if these were already satisfied before power was lost. Any commanded chemicals will be injected again.

If the outage occurred during the drain part of a bath step, the bath step will be repeated, then followed by the next commanded step.

If the outage occurred during an extract step, the previous bath will be repeated before the extract step begins.

2.1.8.



**Разгрузите машину**

**ОПАСНОСТЬ 3: Опасности захватывания и серьезного ущерба**—

Контакт с обрабатываемыми изделиями может привести к наматыванию изделий на части Вашего тела и ограничить Ваши движения. Изделия обычно изолированы в барабане за заблокированной дверью барабана.

- Не трогайте белье внутри или частично свисающее снаружи вращающегося барабана.

Когда программа остановлена преждевременно, барабан останавливается 25 секунд, если последний шаг была стирка. Если последний шаг был отжим, время

**Unload the Machine**

**DANGER 3: Entangle and Sever Hazards**—

Contact with goods being processed can cause the goods to wrap around your body or limbs and dismember you. The goods are normally isolated by the locked cylinder door.

- Do not touch goods inside or hanging partially outside the turning cylinder.

When the formula ends or is terminated, the cylinder coasts for 25 seconds if the last step was a bath step. If the last step was an extract, the coast time may be as much as 180

остановки может достигать 180 секунд. Не пытайтесь открыть дверь раньше времени полной остановки барабана.

seconds. Do not attempt to open the door early.

**Отображение или действие**  
[Display or Action]

РАЗБЛОКИРОВКА ДВЕРИ  
ПОЖАЛУЙСТА ПОДОЖДИТЕ

UNLOCKING THE DOOR  
PLEASE WAIT

ОЖИДАНИЕ РАЗГРУЗКИ  


WAITING TO UNLOAD  




**Объяснения**

отображается на дисплее на протяжении последних 15 секунд остановки, или на протяжении всего времени остановки если программа была отменена досрочно.

По окончании времени остановки барабана, звучит сигнал оператора.

Заглушает сигнал оператора. Дверь разблокирована, и Вы можете разгружать машину.

**Explanation**

display during the last 15 seconds of coast, or during the entire coast time if the formula was manually terminated.

At the end of the coast time, the operator alarm sounds.

Silences the operator alarm. The door unlocks so you can unload the machine.

— Окончание BICJVO03 —

— End of BICJVO03 —

## Глава 3

# Корректирование ошибок

## Chapter 3

# Correcting Errors

BICJHT04 (Published) Book specs- Dates: 20090831 / 20090831 / 20100607 Lang: RUS01 Applic: CJV CJH CJF CJX

### 3.1. Сообщение об ошибке во время нормальной работы

Если появляется сообщение об ошибке в нижней строке дисплея пока машина работает, таймер в верхней части дисплея остановится. По мере исправления ошибки, таймер продолжит обратный отсчет. Для избавления от большинства ошибок, можно прекратить исполнение программы и выключить питание. Если Вы хотели бы, продолжить работу этой программы, не делайте так. Читайте руководство далее.

### Error Messages During Normal Operation

If an error message appears on the bottom line of the display while the machine is running, the timer shown on the top line will stop counting. When the error is corrected, the timer resumes counting down. To troubleshoot most errors, suspend the formula in progress and turn power off. Do not terminate the formula if it is to be resumed after the error is corrected. See the reference manual for more information.



| Отображение или действие<br>[Display or Action]   | Объяснения   | Explanation  |
|---|--|--|
| <div data-bbox="279 331 630 394" style="border: 1px solid black; padding: 2px;">УРОВЕНЬ ЕЩЕ ЕСТЬ</div> <div data-bbox="279 405 630 470" style="border: 1px solid black; padding: 2px;">LEVELS STILL MADE</div>                      | <p>Микропроцессор по-прежнему получает информацию, что уровень достигнут прямо перед или во время шага отжима, или сразу перед наполнением для шага стирки.<br/>Эта ошибка самоочищающаяся когда уровень потерян.</p>  | <p>The microprocessor is still receiving information that a level is made just before or during an extract step, or immediately before the fill for a bath step. This error is self-clearing when level is lost.</p>   |
| <div data-bbox="279 667 630 730" style="border: 1px solid black; padding: 2px;">ОЧЕНЬ ДЛИТЕЛЬНОЕ<br/>НАПОЛНЕНИЕ ВОДОЙ</div> <div data-bbox="279 741 630 806" style="border: 1px solid black; padding: 2px;">TOO LONG TO FILL</div>  | <p>Время наполнения превышает 10 минут. Проверьте клапана залива воды, грязевики, подающие линии, и давление воды. Машина проложит наполнение до тех пор, пока не наберет нужный уровень воды, тогда ошибка автоматически исчезнет и машина продолжит работу в нормальном режиме.</p>  | <p>Time to fill to level exceeded 10 minutes. Check the water valves, strainers, supply lines, and water pressure. The machine will continue to fill until level is reached, at which time the error will automatically clear and normal operation will resume.</p>  |
| <div data-bbox="279 1037 630 1100" style="border: 1px solid black; padding: 2px;">ОЧЕНЬ ДЛИТЕЛЬНЫЙ<br/>НАГРЕВ ПАРОМ</div> <div data-bbox="279 1110 630 1176" style="border: 1px solid black; padding: 2px;">TOO LONG TO STEAM</div> | <p><b>Только для моделей E-P Plus.</b>Превышено заданное максимальное время нагрева паром до выбранной температуры. Проверьте паровой клапан, фильтр, главный паросборник, уровень давления и пр. Подача пара выполняется до достижения заданной температуры, при этом ошибка автоматически сбрасывается и возобновляется нормальный режим работы.</p> | <p><b>E-P Plus models only.</b>The configured maximum time to steam up to the desired temperature has been exceeded. Check the steam valve, strainer, main steam header and pressure, etc. Steaming will continue until temperature is achieved, when the error will automatically clear and normal operation will resume.</p> |

| Отображение или действие<br>[Display or Action]  | Объяснения  | Explanation  |
|--|---|--|
| <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">ОЧЕНЬ ДЛИТЕЛЬНОЕ<br/>ОХЛАЖДЕНИЕ</div> <div style="border: 1px solid black; padding: 2px;">TOO LONG TO COOL</div> | <p><b>Только для моделей E-P Plus.</b>Превышено заданное максимальное время охлаждения до выбранной температуры. Проверьте клапан охлаждения и фильтр (если имеется), давление холодной воды, положение вентиля на заборной линии холодной воды. Охлаждение продолжается до достижения заданной температуры, при этом ошибка автоматически сбрасывается.</p>  | <p><b>E-P Plus models only.</b>The configured maximum time to cool down to the desired temperature has been exceeded. Check the cooldown valve and strainer if equipped, cold water pressure, and position of vernier valve on cooldown inlet. Cooldown will continue until the desired temperature is achieved, when the error will automatically clear.</p>  |
| <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">ОЧЕНЬ ДЛИТЕЛЬНЫЙ<br/>СЛИВ</div> <div style="border: 1px solid black; padding: 2px;">TOO LONG TO DRAIN</div>      | <p>Машина не слила вода правильно в соответствующий промежуток времени. Самоочищающаяся ошибка исчезнет, когда уровень воды в барабане будет достаточно низким для продолжения работы.</p>  | <p>The machine did not drain properly in the allotted drain time. This self-correcting error will clear when the water level in the basket is low enough to begin the next operation.</p>  |
| <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">ПРОВЕРЬТЕ ДАТЧИК<br/>ТЕМПЕРАТУРЫ</div> <div style="border: 1px solid black; padding: 2px;">CHECK PROBE</div>     | <p><b>Только для моделей E-P Plus.</b>Данное сообщение об ошибке указывает на то, что электрическое сопротивление температурного датчика вышло за допустимый диапазон. Проверьте датчик, отсоединив его контакты от платы процессора и измерив сопротивление датчика точным цифровым омметром. Сопротивление между выводами датчика должно составлять от 2 до 35кОм. Сопротивление между каждым из выводов и "землей" должно быть бесконечно большим.</p> | <p><b>E-P Plus models only.</b>This error message indicates that the resistance of the temperature probe is outside the specified range. Test the probe by disconnecting the probe leads from the processor board and checking the resistance with an accurate digital ohmmeter. Resistance between the two leads must be between 2K and 35K Ohms. Resistance between each lead and ground must be infinite.</p> |

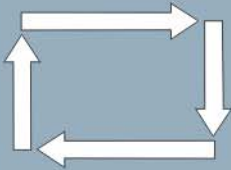
| Отображение или действие<br>[Display or Action] | Объяснения   | Explanation   |
|---|--|---|
| ВНЕШНЯЯ ОШИБКА                                  | <p>На большинстве машин эта ошибка говорит о том, что подача химии снаружи сломалась, а точнее обычно это происходит когда во внешнем устройстве для подачи химии, закончился продукт. По мере наполнения устройства химией и подача химии может быть продолжена, ошибка автоматически исчезает, позволяю оператору продолжить работу.</p> | <p>On most machines, this error indicates that the programmed chemical injection failed, usually because the chemical supply system is empty. When chemicals are added and can be injected, this error clears automatically, allowing operation to resume.</p>  |
| EXTERNAL FAULT                                  | <p>На модели 48040F7J/F7B , эта ошибка говорит о снижении давления воздуха в системе подшипника ниже минимального уровня, который защищает подшипники от попадания на них воды.</p>  | <p>On 48040F7J/F7B models, this error indicates that the bearing air pressure is below the minimum required to help protect the bearing from water contamination.</p>   |
| ОШИБКА ТОРМОЗА                                  | <p>Эта ошибка появляется только на моделях машин с тормозной системой цилиндра (барабана). Тормоз нажат, когда должен быть отжат. Это обычно происходит, при недостаточном давлении воздуха необходимом для открывания нормально-нажатого тормоза. Проверьте линию подачи сжатого воздуха.</p>   | <p>This error appears only on machine models equipped with a cylinder brake. The message indicates that the brake is engaged when it should be disengaged. This is usually because the machine is not receiving sufficient air pressure to open the normally-closed brake. Check the plant compressed air supply.</p> |
| BRAKE PRESS. FAULT                              |  |   |

| Отображение или действие<br>[Display or Action]  | Объяснения   | Explanation  |
|--|--|--|
| <div style="border: 1px solid black; padding: 2px; text-align: center;">THREE WIRE DISABLED</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">THREE WIRE DISABLED</div>  | <p>Отключено трехпроводное реле. Данное реле установлено в цепи питания машины. После подачи напряжения на реле кратковременным нажатием <i>Пуск</i> кнопки (1), оно вместе с реле перегрузки двигателя, контактами блокировки дверцы и пр. остается включенным за счет собственных нормально разомкнутых контактов. Если какой-либо из указанных контактов размыкается, машина останавливается и выводится указанное сообщение. Данная ошибка сбрасывается только нажатием <i>Пуск</i> кнопки (1) и только после устранения причины ее возникновения.</p> | <p>The three-wire relay de-energized. This relay provides control circuit power to the machine. Once energized by momentarily depressing the <i>Start</i> button (1), it is held energized by its own normally open contacts, along with motor overloads, door interlocks, etc. Should any of these contacts open even momentarily, the machine stops and this display appears. This error can only be cleared by depressing the <i>Start</i> button (1), and only then if the error has been cleared.</p> |
| <div style="border: 1px solid black; padding: 2px; text-align: center;">ОШИБКА ИНВЕРТЕРА</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">INVERTER FAULT</div>  | <p>Эта ошибка появляется, если микропроцессор не получает сигнала от инвертера в течении 14 секунд с начала программы. После 14 секунд без подачи питания, останавливается таймер, барабан остается на месте, и открывается сливной клапан. Для восстановления, нажмите <i>Следующий</i> кнопку (2).</p>   | <p>This error message appears if the microprocessor does not receive an input from the inverter within 14 seconds of the beginning of the formula. After 14 seconds without an inverter input, the timer stops, the basket is stationary, and the drain valve opens. To recover, press the <i>Next</i> key (2).</p>  |
| <div style="border: 1px solid black; padding: 2px; text-align: center;">РАЗБАЛАНСИРОВКА<br/>ЦИКЛ ВОССТАНОВЛЕНИЯ</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">VIBRATION SW TRIPPED<br/>RECOVERY SEQUENCE</div> | <p>При срабатывании датчика разбалансировки, таймер останавливается. По истечении 45 - 85 секунд, барабан включает реверс и наполняется водой. По достижении низкого уровня воды, барабан прокручивается в реверсе еще одну минуту со скоростью стирки, затем переходит в режим отжима.</p>  | <p>When the vibration switch closes, the timer stops. After 45 to 85 seconds (120 seconds on 42032F7J models), the basket reverses at wash speed as the cylinder fills with water. When low level is achieved, the cylinder reverses for one additional minute at wash speed, then accelerates to extract speed.</p>   |

Dansk

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# Brugervejledning—

## vaskecentrifuge modeller med E-P Plus<sup>®</sup> and E-P Express<sup>®</sup> knapper

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Læs sikkerhedsvejledningen

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063 - 0400, U.S.A.

**Gældende Milnor® produkter ifølge modelnummer:**

|          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|
| 30015T5J | 30015V7J | 30022T5J | 30022V6J | 30022X8J | 36021V5J | 36021V7J |
| 36026V5J | 36026V7J | 36026X8J | 42026V6J | 42026X7J | 42030V6J | 42032X7J |
| MWR18J4- | 30022H7J | 30022H8J | 30022F8J | 36030F8J | 42032F7J | 48040F7B |
| 48040F7J | 68036F5B | 30010G5X | 30015G5X | 30015T5X | 30022T5X | MWR18X4- |



# Indholdsfortegnelse

| Afsnit   | Figurer, tabeller og tillæg                       |
|--|---|
| <b>Kapitel 1. Beskrivelse af knapper</b>   |   |
| <b>1.1. Betjeningsknapper på E-P Plus® og E-P Express® modeller</b><br>(Dokument BICJHF01) | Figur 1: Typisk betjeningspanel                   |
| <b>Kapitel 2. Normal drift</b>   |   |
| <b>2.1. Normal maskindrift</b> (Dokument BICJVO03)   |   |
| 2.1.1. Start her for sikkerhed   |   |
| 2.1.2. Kontroller indstillinger for kontakter  | Tillæg 1: Sikkerhedsforsinkelse af strømtilførsel |
| 2.1.3. Fyld maskinen   |   |
| 2.1.4. Vælg og start en formel   |   |
| 2.1.5. Monitorhandling   |   |
| 2.1.6. Sådan afsluttes en kørende formel   |   |
| 2.1.7. Sådan genstartes efter strømsvigt   |   |
| 2.1.8. Tøm maskinen  |   |
| <b>Kapitel 3. Rette fejl</b>   |   |
| <b>3.1. Fejlmeddelelser under normal drift</b> (Dokument BICJHT04)                         |   |

# Kapitel 1

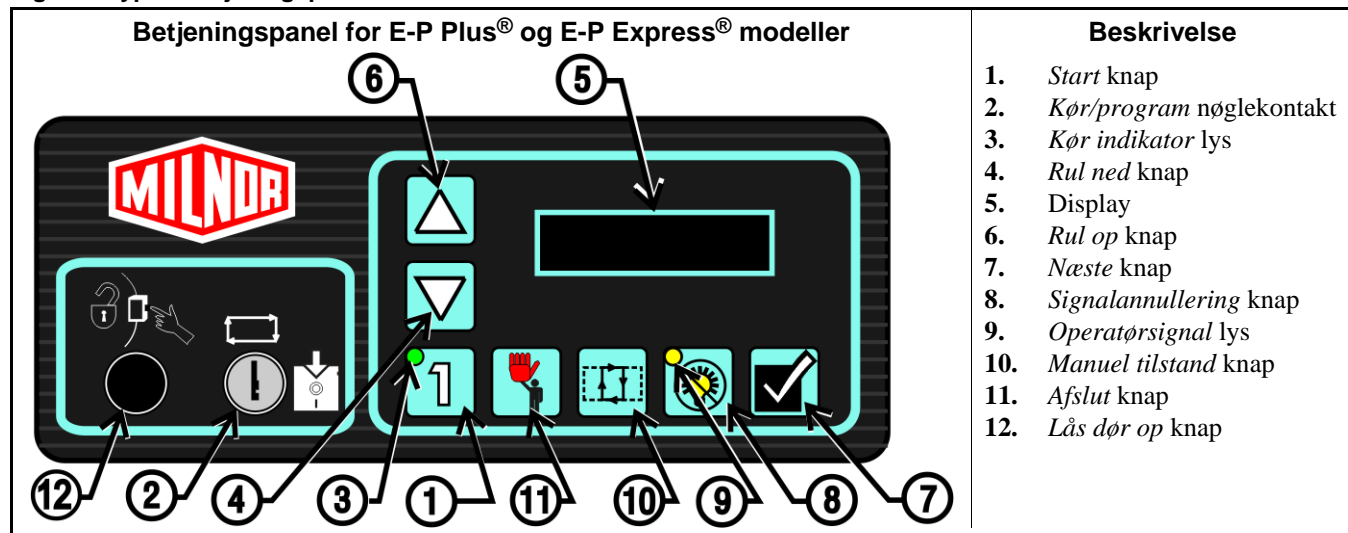
## Beskrivelse af knapper

BICJHF01 (Published) Book specs- Dates: 20090831 / 20090831 / 20130809 Lang: DAN01 Applic: CJV CJH CJF CJX

### 1.1. **Betjeningsknapper på E-P Plus<sup>®</sup> og E-P Express<sup>®</sup> modeller**

Dette dokument beskriver brugerknapper under normal maskindrift. Yderligere oplysninger om andre knapper vist i [Figur 1](#) findes i referencemanualen.

Figur 1: Typisk betjeningspanel



Visning eller handling

Forklaring

- ① Når displayet viser *Kør formelen*, tryk på denne knap for at starte formelen.
- ☐ / ☒ Under normal drift skal *Kør/program* nøglekontakten indstilles til ☐. Dette er den automatiske position.
- ▲ / ▼ Brug *Rul op* og *Rul ned* knapper til at vælge formelen.
- ☑ Knappen *Næste* bruges ikke under normal drift.
- 🔊 Knappen *Signalannullering* slukker operatørsignalet, som lyder når en formel afslutter normalt. Også, hvis et operatørsignal er programmeret med en kemisk indsprøjtning, tilføj kemikalier og tryk på denne knap for at genoptage driften.
- 🔧 Knappen *Manuel* bruges ikke under normal drift.
- 🛑 Knappen *Afslut* annullerer alle resterende trin i den aktuelle formel og starter nedlukningsproceduren for maskinen. Formlen kan ikke genoptages.
- 🔓 Knappen *Lås låge op* gør det muligt at åbne lågen, hvis alle andre sikkerhedskrav er opfyldt.

— Slutning på BICJHF01 —

# Kapitel 2

## Normal drift

BICJVO03 (Published) Book specs- Dates: 20090831 / 20090831 / 20130809 Lang: DAN01 Applic: CJV CJH CJF CJX

### 2.1. Normal maskindrift

#### 2.1.1. Start her for sikkerhed

Dette dokument er beregnet til at påminde de personer, der betjener denne vaskecentrifuge, hvad der kræves til at betjene maskinen. Forsøg ikke at betjene maskinen, før en uddannet operatør har forklaret dig alle detaljer.



**FARE 1: FARE: Meget farligt**—Handlinger foretaget uden omtanke kan dræbe eller tilføje skade til personer, beskadige eller ødelægge maskinen, forvolde skade på ejendom og/eller gøre garantien ugyldig.



**FORSIGTIG 2: FARE: Fare for stød og forbrænding fra elektricitet**—Kontakt med elektrisk strøm kan slå dig ihjel eller skade dig alvorligt. Der er elektrisk strøm i kabinettet, medmindre hovedstrømmen til maskinen er afbrudt.

- Oplås eller åbn ikke låger til elektriske bokse.
- Vær bekendt med hovedafbryderen til maskinen og anvend den i nødstilfælde til at afbryde al elektrisk strøm fra maskinen.
- Foretag ikke reparation på maskinen, medmindre du er kvalificeret og autoriseret hertil. Du skal forstå farerne og vide, hvordan de kan undgås.

#### 2.1.2. Kontroller indstillinger for kontakter

##### Visning eller handling

##### Forklaring

- |  |   |
|--|---|
|  | Kontroller, at <i>kør/program</i> nøglekontakten er ved .               |
|  | Kontroller, at alle <i>nødstop</i> kontakter er i <i>ud</i> positionen. |
|  | Kontroller, at hovedkontakten, hvis findes, er ved .                    |

## Tillæg 1

**Sikkerhedsforsinkelse af strømtilførsel**

Nogle Milnor® vaskecentrifuger bruger ikke en hastighedsføler for at kontrollere, om kurven stoppede rotationer. Derfor, når strømmen tilsluttes maskinen for første gang, skal der udløbe mindst 80 sekunder, før alle andre handlinger kan foretages. Dette giver tilstrækkelig tid for kurven til at stoppe helt, hvis strømmen afbrydes mens maskinen var i høj fart og genoprettes, før kurven stoppede.

**2.1.3. Fyld maskinen**

Fyld maskinen til den nominelle kapacitet, og luk lågen forsvarligt.

**2.1.4. Vælg og start en formel****Visning eller handling**

KØR FORMLEN  
00 OK TIL STRØM FRA



KØR FORMLEN  
07 FORMEL NUMMER 07



KØR FORMLEN  
FINDES IKKE

**Forklaring**

Dette er *Kør formelen* displayet. Fra dette display kan du koble maskinen fra strømmen uden at risikere skader på de elektroniske dele, eller du kan vælge en formel, der skal køres.

indekser frem/tilbage gennem de 30 formler.

Eksempel på display: *Formel 07* valgt til at køre

starter maskinen med den valgte formel.

angiver, at den valgte formel, der skal køres, ikke er blevet programmeret. Dette display vises i tre sekunder.

## 2.1.5. Monitorhandling

### Visning eller handling

|       |           |       |
|-------|-----------|-------|
| 23:04 | F02S01    | 02:37 |
| TEMP  | A168/D170 | LEV 1 |

|       |           |       |
|-------|-----------|-------|
| 23:04 | STEP 01   | 02:37 |
| TEMP  | A168/D170 | SPD 0 |

|       |        |       |
|-------|--------|-------|
| 23:04 | F02S01 | 02:37 |
|-------|--------|-------|

|      |           |       |
|------|-----------|-------|
| TEMP | A168/D170 | LEV 1 |
|------|-----------|-------|

|        |     |
|--------|-----|
| HAST 0 | NIV |
| 2      |     |

### Forklaring

Disse to display vises på skift under normal drift på nogle E-P Plus® modeller. E-P Express® modeller viser andre data om trinnet, men ikke data om badtemperatur.

STEP01 er det aktuelle trin.

EXTRACT angiver, at maskinen centrifugerer.

TIMEHALT angiver, at timeren er stoppet for en kemisk indsprøjtning. Udstyret med den kemiske forsyning skal installeres korrekt, så denne funktion kan virke.

Temperaturen i denne E-P Plus® maskine måles i Fahrenheit eller Celsius, i henhold til maskinkonfigurationen.

A168 angiver, at den aktuelle temperatur er 168 grader. Temperaturen vises kun, hvis maskinen er udstyret med og konfigureret for temperaturkontrol.

D170 angiver, at den ønskede temperatur for dette trin er 170 grader. Temperaturen vises kun, hvis maskinen er udstyret med og konfigureret for temperaturkontrol.

NIV 2 angiver, at det opnåede badniveau er Niveau 2.

HAST 0 angiver badhastigheden for dette trin.

VENT PÅ NIVEAU 2 H angiver, at Niveau 2 er programmeret for dette trin, men endnu ikke nået. H angiver, at varmtvandsventil er åben; C angiver koldt vand, og 3 angiver ekstra vand.

KEM 03 vises, når Kemikalie 03 indsprøjtes. Nummeret for hvert kemikalie (op til 5 kan tilsluttes) vises, når kemikaliet indsprøjtes.

SIDSTE CENTRIF. angiver, at det igangværende trin er det sidste trin i vaskeformlen.

## 2.1.6. Sådan afsluttes en kørende formel

### Visning eller handling



### Forklaring

Annulerer den aktuelle formel og sætter maskinen tilbage til *Kør formlen* displayet (see [Afsnit 2.1.4 "Vælg og start en formel"](#)).

### 2.1.7. Sådan genstartes efter strømsvigt

Knappen husker formlen og trinnet, som blev udført før strømsvigt, eller hvis stikket tages ud mens maskinen kører i automatisk tilstand.

#### Visning eller handling

```
TRYK PÅ START TIL AT
KØRE
TRIN xx - FORMEL yy
```

#### Forklaring

På de fleste maskinmodeller vises dette display, når strømmen vender tilbage. Formlen og trinnet, der var i gang da strømmen forsvandt, vises her.

1

Genoptager formlen ved den viste formel og trin. Hvis strømsvigt opstår i et bad-trin, skal niveau og temperatur (hvis befalet) atter være opfyldt, også selv om disse allerede blev opfyldt før strømmen forsvandt. Alle befalede kemikalier indsprøjtes igen.

Hvis strømsvigt opstår under udtømningen i bad-trinnet, vil bad-trinnet gentages, og derefter følger det næste befalede trin.

Hvis strømsvigt opstår under et centrifugeringen, vil den forrige bad gentages, før centrifuge-trinnet begynder.

### 2.1.8. Tøm maskinen



**FARE 3: FARE: Fare for indvikling og alvorlige skader**—Kontakt med beklædning under behandling kan bevirke at beklædningsstykket vikler sig om kropsdele og lemmer og gør dig handicappet. Beklædningen er normalt afskærmet af den låste tromledør.

- Rør ikke materialer, der er inde i eller delvist udenfor drejecylinderen.

Når formlen ender eller afsluttes, roterer cylinderen i 25 sekunder, hvis det sidste trin var en bad. Hvis det sidste trin var centrifuge, kan cylinderen bevæge sig i helt op til 180 sekunder. Undlad at åbne lågen for tidligt.

#### Visning eller handling

```
LÅSER DØREN OP
VENT VELIGST
```

#### Forklaring

display under de sidste 15 sekunder af bevægelsen, eller under hele varigheden af bevægelsen, hvis formlen blev afsluttet manuelt.

```
VENTER PÅ TØMNING
```

Ved enden af bevægelsen lyder operatøralarmen.

2

Slukker operatøralarmen. Lågen låses op, så du kan tømme maskinen.

— Slutning på BICJVO03 —

# Kapitel 3

## Rette fejl



### 3.1. Fejlmeddelelser under normal drift

Hvis en fejlmeddelelse vises på den nederste linje af displayet mens maskinen kører, vil timeren vist på den øverste linje stoppe tællingen. Når fejlen udredes, vil timeren genoptage nedtællingen. For at foretage fejlfinding for de fleste fejl, skal du stoppe formelen der er i gang, og slukke for strømmen. Afslut ikke formelen, hvis den skal genoptages efter at fejlen er blevet udredet. Se referencemanualen for yderligere oplysninger.

#### Visning eller handling

VANDSTAND LAVES  
FORTSAT

#### Forklaring

Mikroprocessoren modtager stadigvæk information om, at vandstanden laves lige før eller under et udtrækstrin eller umiddelbart før påfyldningen til et bad-trin. Denne fejl løser sig selv, når vandstanden er tabt.

FOR LÆNGE TIL  
PÅFYLDNING

Tiden til at fylde op til niveau overstiger 10 minutter. Kontrollér vandventiler, sier, forsyningsledninger og vandtryk. Maskinen vil fortsat fylde op, indtil niveauet er nået, hvorefter fejlen udredes automatisk og normal drift genoptages.

FOR LÆNGE TIL DAMP

**Kun E-P Plus modeller.** Den konfigurerede maksimale tid til at dampen når den ønskede temperatur er blevet overskredet. Kontrollér dampventilen, si, hoved damp-samlekasse og -tryk, osv. Dampning fortsætter indtil temperaturen er opnået, når fejlen udredes automatisk og normal drift genoptages.

FOR LÆNGE TIL  
NEDKØLLING

**Kun E-P Plus modeller.** Den konfigurerede maksimale tid til at køle ned til den ønskede temperatur er blevet overskredet. Kontrollér nedkøllingsventil og si, hvis findes, koldt vandtryk og placeringen af nonius-ventilen på koldt vandsindløb. Nedkøllingen fortsætter indtil den ønskede temperatur er nået, når fejlen udredes automatisk.

FOR LÆNGE TIL  
UDTØMNING

Maskinen tømmer ikke ud korrekt i den tildelte udtømningstid. Dette er en selvkorrigerende fejl, når vandstanden i kurven er tilstrækkeligt lavt til at starte den næste handling.

KONTROLLER SONDE

**Kun E-P Plus modeller.** Denne fejlmeddelelse angiver, at modstanden af temperaturføleren er uden for det angivne område. Test sonden ved at koble sondens ledninger fra processorkortet og kontrollere modstanden med en nøjagtig digital ohmmeter. Modstanden mellem de to ledninger skal være mellem 2K og 35K Ohm. Modstanden mellem hver ledning og jord skal være uendelig.

EKSTERN FEJL

På de fleste maskiner angiver denne fejl, at den programmerede kemiske indsprøjtning mislykkedes, som regel fordi det kemiske forsyningssystem er tomt. Når kemikalierne tilføjes og kan indsprøjtes, udredes denne fejl automatisk og driften kan blive genoptaget.

På 48040F7J/F7B modeller angiver denne fejl, at lejets lufttryk er under det minimum, der kræves til at beskytte lejet mod vandforurening.

**Visning eller handling**

BREMSE TRYKFEJL

**Forklaring**

Denne fejl vises kun på maskinmodeller udstyret med en cylinderbremse. Meddelelsen angiver, at bremsen er aktiveret, når den burde være deaktiveret. Dette sker som regel, når maskinen ikke modtager tilstrækkeligt lufttryk til at åbne den normalt lukkede bremse. Kontroller anlæggets trykluft.

TRE LEDNINGER  
DEAKTIVERET

Det tre-ledningers relæ er deaktiveret. Dette relæ giver kontrolkredslobsstrøm til maskinen. Når det aktiveres ved kort tryk på *Start* knappen (1), bliver det aktiveret af dets egne normalt åbner kontakter, sammen med motorens overbelastninger, dørlås, osv. Hvis nogen af disse kontakter åbnes, selv meget kortvarigt, stopper maskinen og denne meddelelse vises. Denne fejl kan kun udredes ved at trykke på *Start* knappen (1), og først derefter, hvis fejlen er udredet.

FEJL I INVERTER

Denne fejlmeddelelse vises, hvis mikroprocessoren ikke modtager et input fra inverteren inden for 14 sekunder fra starten af formelen. Efter 14 sekunder uden et inverter-input stopper timeren, kurven er stoppen, og afløbsventilen åbnes. Tryk på *Næste* tasten (2) for at udrede fejlen.

VIBRATIONSKNAP  
UDLØST  
GENOPRETNINGSSEKVEN

Når vibrationsknappen lukker, stopper timeren. Efter 45 - 85 sekunder (120 sekunder på 42032F7J modeller), vender kurven ved vaskehastigheden mens cylinderen fyldes med vand. Når lavt niveau er opnået, vender cylinderen i et ekstra minut ved vaskehastighed, og derefter accelererer til centrifugeringshastighed.

— Slutning på BICJHT04 —