### Published Manual Number/ECN: HMINVTRNF/202005245A

- Publishing System: TPAS
- Access date: 06/09/05
- Document ECN's: Latest Available



# Kit Instruction— KHRINVTRHV KHRINVTRLV KHRINVTSHV KHRINVTSLV KMINVTRNF



#### Published Document Number: BIRQLR01

- Specified Date: 20050609
- As-of Date: 20050609
- Access Date: 20050609
- Custom: n/a
- Applicability: RQL
- Language Code: ENG01, Purpose: publication, Format: 1colA



## Document—

Minimizing Inverter Interference from 30-, 36-, and 42-inch Washer-extractors

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BIRQLR01 (Published) Book specs- Dates: 20050609 / 20050609 / 20050609 Lang: ENG01 Applic: RQL

## Minimizing Inverter Interference from 30-, 36-, and 42-inch Washer-extractors

Occasionally the frequency of the inverter drive can cause problems with other electronic devices, including security systems at convalescent facilities. The procedures described in this document are intended to minimize these problems, without significantly reducing the effectiveness of the washer-extractor.

**Note 1:** This document does not include the theory behind the procedures and devices described herein. Additional information on some of these aspects is included in other Milnor documents.

## 1. Before You Begin

Read and understand all hazard messages contained in this document.



**WARNING** 1: 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.

- 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.
- Do not attempt unauthorized servicing, repairs, or modification.
- Abide by the current OSHA lockout/tagout standard when lockout/tagout is called for in the service instructions. Outside the USA, abide by the OSHA standard in the absence of any other overriding standard.



**CAUTION 2**: **Entangle and Sever Hazards**—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

• The procedures described in this document require personnel to work in and around areas of the machine where there is a possibility of becoming entangled in electrical wiring, air tubing, or other machine parts. Always be aware of entanglement hazards.

## 2. Change the Inverter Carrier Frequency

It may be possible to eliminate any interference problems without modifying the equipment in the machine. This procedure describes changing a setting in the inverter to reduce the level of interference. Specific keystrokes vary according to the inverter model used in the machine; see the documentation that was provided with the inverter.

- 1. With the machine idle, enter the programming mode of the inverter.
- 2. Decrease the inverter carrier frequency by one increment (e.g., from 2 to 1).
- 3. Run the machine and observe other equipment for signs of interference.
- 4. If the interference continues, increase the carrier frequency to the synchronous frequency (usually 7), then test the machine again.
- 5. If the problems persist, continue to Section 3.

### 3. Install the Inverter Reactor and Ferrite Beads

If the procedure described in Section 2 eliminated the problem with the machine running at wash speed, but did not eliminate the problem in extract speed, install the inverter reactor and ferrite

beads. You can purchase the reactor kit from your Milnor dealer. For 30-inch models, the part number for the kit is KHRINVTRNF.

#### Supplement 1

#### **Components in Kits**

The inverter reactor kit for washer-extractors contains these components:

- 1 each 09MX050A74 (Reactor for 30-inch models)
- 3 each 08AL4FERR (Ferrite Beads)
- 1 each 09MVFILTR1 (Filter Capacitor)

#### For 36-inch and 42-inch machine models, the reactor part number is 09MX100A74.

1. Mount the reactor in the electrical control box, as shown in Figure 1.

#### Figure 1: Typical Location for Inverter Reactor



- 2. Wire the reactor to the inverter output wires (between the reactor and the motor).
- 3. Between the reactor and the motor, pass each wire through a ferrite bead twice (see Figure 2).

#### Figure 2: Proper Threading of Wire Through Ferrite Bead



**Tip:** If the interference persists with the reactor and ferrite beads located between the inverter and the motor, re-wire the added components to between the motor contactor and the inverter.

### 4. Install the Filter Capacitor

In some cases, the filter capacitor may be required to eliminate the maximum amount of inverter interference.

- 1. Connect the ground wire from the capacitor to the bus ground of the machine.
- 2. Connect the other three wires from the capacitor to the power legs at the inverter (L1, L2, and L3).

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ົມ **JVPA** E SPEED CONTROLLER 7J, H8J & V6J (GPD31 PELLERIN MILNOR CORPORATION VARIABLE 30022H7J  $\ddot{\bigcirc}$ FOR 30015V

(1) ADDED TO MACHINES BUILT AFTER 3/18/04.

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сw ccw K21 K22 K18 к19 K20 WASH 1 × WASH 2 × × DRAIN × × NUMMUN EXTRACT 1 × × EXTRACT 2 × × × × × × EXTRACT 3 OUT OF EXTRACT ×

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