

## Introduction

### Purpose

This manual provides instructions for installing the Alphanumeric Keypad Kit (M04003K001) for Encore® 500 Ultra-Hi™ and Encore 500 Enhanced Customer Interface Module (E-CIM™) dispensers.

This manual is intended for Gilbarco® Authorized Service Contractors (ASCs) and it is recommended that this kit be installed by Gilbarco-certified ASCs.

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### Required Tools and Materials

The following tools and materials are required to install the Alphanumeric Keypad Kit.

- Phillips® and Flat-blade Screwdrivers
- ArmorAll®
- Isopropyl alcohol (those with a higher percentage of alcohol work best)
- Lint free rags
- Permatex® Decal Remover (product number 765-1085)

*Note: Available at National Automotive Parts Association (NAPA®) Auto Parts stores under trade name Decal and Paint Stripper.*

- Putty knife (2 inches wide)
- Soft squeegee

## Parts Lists

The following tables list the parts used in the Alphanumeric Keypad Kit for Encore 500 Ultra-Hi and Encore 500 E-CIM dispensers:

*Note: This kit is intended for a single-side unit. You must order two kits for dual-sided units, such as dual masters.*

### Encore 500 Ultra-Hi

Description	Part Number	Quantity
Keypad, Customer Input	M00141B003	1
Cable, Customer Keypad	M00715A003	1
Overlay, Encore/Eclipse® Alphanumeric Keypad	EU03007G001	1
Adhesive	M06966B001	1
Document, Installation	MDE-4250	1

### Encore 500 E-CIM

Description	Part Number	Quantity
Keypad, Customer Input	M07763B002	1
Cable, Customer Keypad	M00715A003	1
Graphic	ENE1702G001	1
Document, Installation	MDE-4250	1

## Related Documents

Document Number	Title	GOLD Library
MDE-4625	Graphic Panel Application for The Advantage® Series, Encore, Eclipse and Encore S	<ul style="list-style-type: none"> <li>• Advantage &amp; Legacy Models</li> <li>• Encore and Eclipse</li> </ul>
MDE-3804	Encore and Eclipse Series Start-Up/Service Manual	Encore and Eclipse
MDE-3860	Programming Quick Reference Card	Encore and Eclipse
MDE-3893	Encore/Eclipse Owner's Manual	Encore and Eclipse
MDE-3985	Encore Installation Manual	Encore and Eclipse

## Required Reading

Before installing the equipment, the installer must read, understand, and follow:

- This manual
- NFPA 70, The National Electrical Code (orderable at [www.nfpa.org](http://www.nfpa.org))
- Applicable federal, state, and local codes and regulations

Failure to read, understand, and follow the information in the reference manuals above may adversely affect the safe use and operation of the equipment.

## Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
BIOS	Basic Input/output System
CIM	Customer Interface Module
CRIND	Card Reader IN Dispenser
E-CIM	Enhanced Customer Interface Module
NAPA	National Automotive Parts Association
NFPA	National Fire Protection Association
POS	Point of Sale
TRIND	Transmitter/Receiver IN Dispenser

## Overview

The Alphanumeric Keypad allows customers to enter alphanumeric information such as name, license number, customer number, trailer number, mileage, fuel volume, and so on, into the Card Reader in Dispenser (CRIND®) device. The application software downloaded from the POS (Point of Sale) must support the entry of the above information.

## Features of Alphanumeric Keypad

Following are the features of the Alphanumeric Keypad:

- Allows customers to enter alphabetic and numeric data via the CRIND device.
- The alphabetic and numeric keys are located together in the Customer Interface Module (CIM™) area.
- This kit is available as a factory-installed kit or as a field-installed kit.
- This kit is available only for Encore 500 Ultra-Hi, Encore 500 E-CIM, and Automated Attendant.
- The keypad can be interchanged with the existing 3 X 5-3/4-inch keypads.
- This kit can be used with a Cash Acceptor or Transmitter in Dispenser device (TRIND®).
- Eight additional soft keys are located around the monochrome display, if required.

## Interfaces

### System Interface

The Alphanumeric Keypad is designed to work with the customer's POS system that is configured to read the keys.

### User Interface

The user interface is determined by the customer's POS provider.

### Hardware Interface

The Alphanumeric Keypad interfaces to the CRIND BIOS through the current door node customer keypad interface. The customer POS interfaces to the CRIND device and pump via the Gilbarco two-wire protocol.

# Important Safety Information

**Notes: 1) Save this Important Safety Information section in a readily accessible location.**

**2) Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.**

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.


## Preliminary Precautions


You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

## Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

**⚠ WARNING**

 The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.

 You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

## Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

## Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

## Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call a Gilbarco Authorized Service Contractor or call the Gilbarco Support Center at 1-800-800-7498. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

## Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

## Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

## Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

### Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

### Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:



**DANGER:** Alerts you to a hazard or unsafe practice which will result in death or serious injury.



**WARNING:** Alerts you to a hazard or unsafe practice that could result in death or serious injury.



**CAUTION** with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.  
**CAUTION** without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

## Working With Fuels and Electrical Energy

### Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

**No Open Fire**



Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

**No Sparks - No Smoking**



Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

**Working Alone**

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

**Working With Electricity Safely**

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

**Hazardous Materials**

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

**WARNING**  
The pump/dispenser contains a chemical known to the State of California to cause cancer.


**WARNING**  
The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**In an Emergency**


**Inform Emergency Personnel**


Compile the following information and inform emergency personnel:


- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

**WARNING**  
 Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

**WARNING**  
DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

**WARNING**  
 Gasoline inhaled may cause unconsciousness and burns to lips, mouth, and lungs. Keep airway open. Seek medical advice immediately.

**WARNING**  
 Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

**WARNING**  
 Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

**WARNING**  
DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

**IMPORTANT:** Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

**Lockout/Tagout**

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

## Installing Alphanumeric Keypad Kit

To install the Alphanumeric Keypad Kit on the Encore 500 Ultra-Hi and Encore 500 E-CIM units, proceed as follows:

### Preparing Customer Interface Door for Installation

To prepare the customer interface door for installation, proceed as follows:

- 1 Read all instructions before beginning the installation and observe all safety precautions during installation.
- 2 Collect and arrange all tools and equipment for safety and convenience.
- 3 Ensure that all power has been removed from the installation area. Refer to *MDE-3893 Encore/Eclipse Owner's Manual* for details on removing system power.

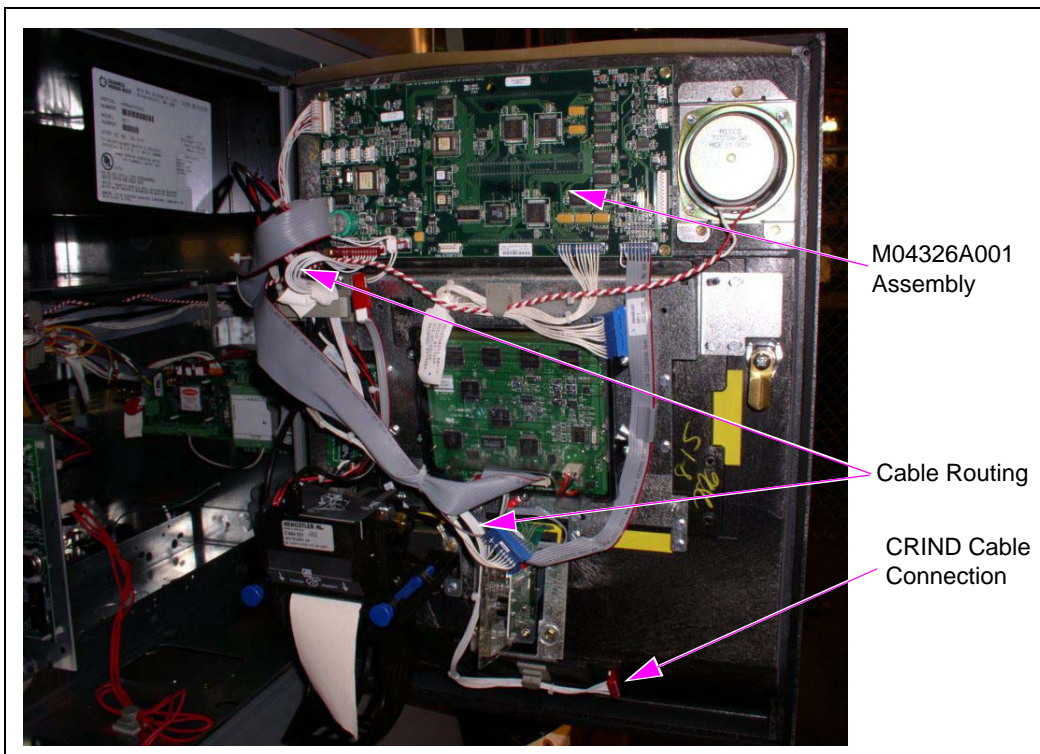
### Removing Existing CRIND Keypad

To remove the existing CRIND Keypad, proceed as follows:

- 1 Locate the CIM Door lock, insert the key, and open the door.
- 2 Locate the CRIND Keypad Cable Connector (refer to [Figure 1](#) on [page 7](#)) at the inside lower portion of the CIM Door.
- 3 Disconnect the cable from the keypad connector.
- 4 Place flat-blade screwdriver through the slot beside the cable connector and push firmly to release the CRIND Keypad, which is held in place with adhesive.
- 5 Remove the keypad from the CIM Door.
- 6 Clean the surface where the Alphanumeric Keypad will be placed (the area from which the CRIND Keypad was removed) with isopropyl alcohol.

*Note: Use a putty knife, if required, to remove all adhesive before cleaning with alcohol.*

Figure 1: Encore Unit with CIM Door Opened



## Installing Alphanumeric Keypad

To install the Alphanumeric Keypad, proceed as follows:

- 1 Locate the Customer Input Keypad (M00141B003 for Encore 500 Ultra-Hi and M07763B002 for Encore 500 E-CIM).
- 2 Ensure that the mounting surface for the keypad on the front of the CIM Door is clean and dry.
- 3 Add adhesive on the door before installing the keypad.  
*Note: Encore 500 Ultra-Hi only.*
- 4 Remove the protective covering on the back of the keypad to expose the self-sticking adhesive. Ensure that you do not touch the adhesive area.
- 5 Position the keypad on the CIM Door. Ensure that the connector on the keypad is positioned through the slot (refer to [Figure 2](#) on [page 8](#)) in the CIM Door provided for the cable. Press the keypad firmly in place on the CIM Door to ensure that the keypad is secured with the adhesive.  
*Note: Use the soft squeegee to ensure that the entire adhesive surface makes contact with the door.*
- 6 Locate the Overlay [(EU03007G001) Encore 500 Ultra-Hi] or Graphic [(ENE1702G001) Encore 500 E-CIM]. [Figure 3](#) on [page 8](#) shows the keypad overlay for Encore 500 Ultra-Hi.

Figure 2: CIM Door Front View (Encore 500 Ultra-Hi)

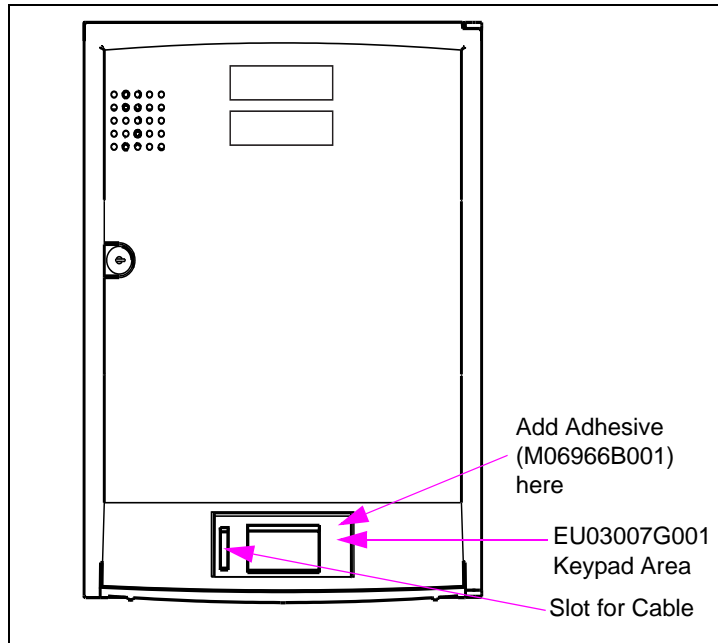
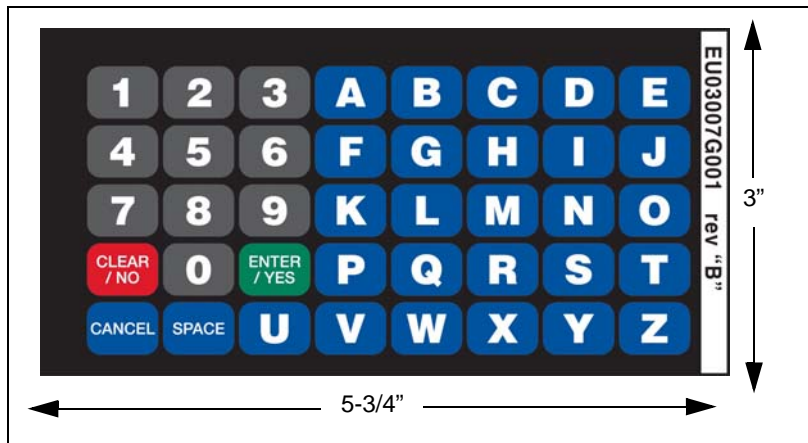


Figure 3: EU03007G001 Alphanumeric Keypad Overlay (Encore 500 Ultra-Hi)



- 7 Follow the procedures in *MDE-4625 Graphic Panel Application for The Advantage Series, Encore, Eclipse and Encore S* to apply the decal to the face of the Alphanumeric Keypad.

To complete the installation, proceed to [“Completing Installation” on page 9.](#)

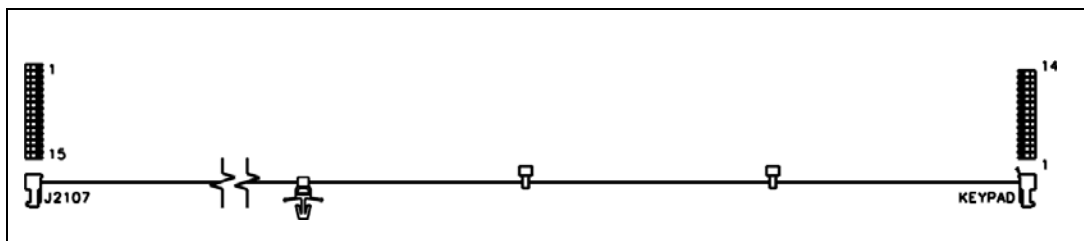


## Completing Installation

To complete the installation, proceed as follows:

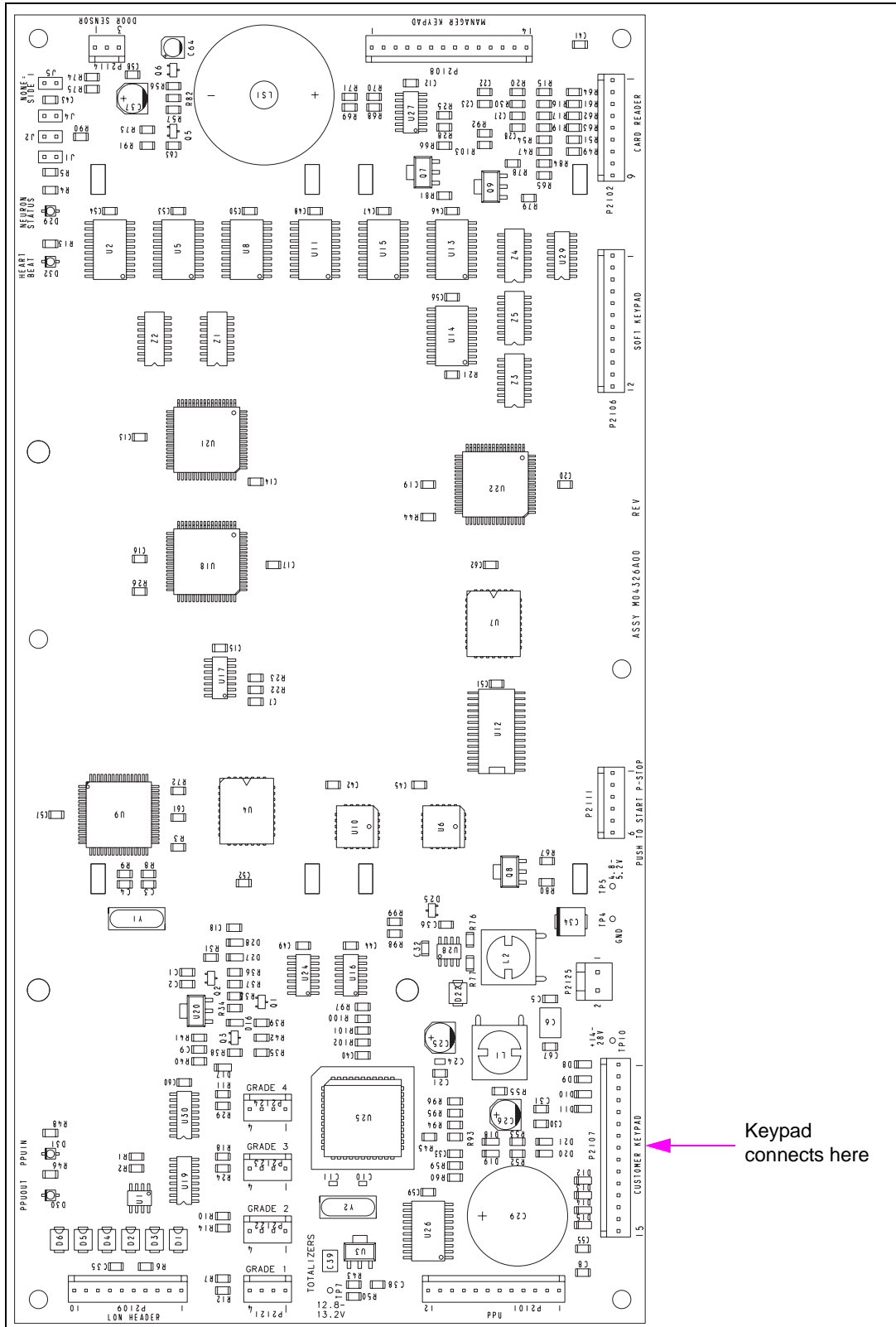
- 1 Disconnect all connections to the supply and remove the cabling connected to the CRIND Keypad.
- 2 Locate the Customer Keypad Cable (M00715A003) in the Alphanumeric Keypad Kit.  
*Note: If this cable is already present in the existing CRIND, use it without replacing it with cable found in the kit.*
- 3 Connect the jack on the cable labeled as “Keypad” to the plug on the keypad (refer to [Figure 4](#)).  
*Note: The plug is located at the slot at the back of the CIM Door.*

**Figure 4: Customer Keypad Cable**



- 4 Route the cable as shown in [Figure 1](#) on [page 7](#) and connect the J2107 jack on the cable to the P2107 plug on the Pump Door Node 2 (M01785A001) or Door Node 3 (M04323A001) Assembly (refer to [Figure 5](#) on [page 10](#)).  
*Note: The Door Node is located inside the unit behind the main door.*
- 5 Close and lock the CIM Door.
- 6 Proceed to “[Activating Keypad for Encore 500 Ultra-Hi and Encore 500 E-CIM Units](#)” on [page 11](#) to activate the Alphanumeric Keypad.

Figure 5: Door Node 3 (M04326A001)



Keypad connects here

## Activating Keypad for Encore 500 Ultra-Hi and Encore 500 E-CIM Units

The CRIND BIOS must be configured to read the 16 additional keys in the fifth row, and the sixth and seventh columns on the keypad. The configuration is performed using the customer's POS system. Each customer must refer to the POS system that is responsible for activating the Alphanumeric Keypad.

*Note: Test the keypad for proper response.*

Installing the Alphanumeric Keypad Kit on Encore 500 Ultra-Hi and Encore 500 E-CIM units is now complete.

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Phone (336) 547-5000 · <http://www.gilbarco.com> · Printed in the U.S.A.

MDE-4250B Alphanumeric Keypad Installation Kit (M04003K001) for Encore® 500 Ultra-Hi™ and Encore 500 E-CIM™ Units · June 2013