

# **PREMIER C SERIES DISPENSERS**

**Installation Manual**



**5870**

Version **3.0**

**MAY 2000**

# MANUAL HISTORY

**Date of issue for original version and subsequent versions:**

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**NOTE:** If entries are shown in *bold Italics* on this page, they represent new page(s) found in this latest version.

Previous version numbers are contained within this latest version printing. Use this Manual History page as a guide.

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# READ ME FIRST

## Equipment Inspection

When the dispensers arrive at the installation site, the unpacked units should be inspected for possible shipping damage. If damage is evident, it must be reported to the carrier. Shipping damage is not covered under the Tokheim warranty policy.

After unpacking and prior to installation, the delivered equipment should be inspected to insure that all the required materials are on hand, and the dispensers have all the ordered options and markings. Compare the model number on the dispenser model/serial plate to the model number notation information in section 1 of this manual. If discrepancies in dispenser options and markings are determined, contact Tokheim World Wide Order Support at 219-470-4640.

## Start-up Checklists



**Checkout forms can be ordered at no charge through:  
Tokheim Service Parts  
PO Box 663  
Fremont, IN 46737  
Phone (219) 470-4710  
Fax 1-800-866-1999**

Proper installation of today's sophisticated electronic dispensing systems is essential to ensure trouble-free performance. Therefore, Tokheim has established inspection and checkout procedures to be followed to verify proper equipment installation.

A properly completed checkout form (Form 4861) must be submitted by an authorized Tokheim distributor to begin the equipment warranty. A Tokheim certified technician must perform the checkout/start-up. Checkout forms must be submitted within 15 days after checkout and start-up completion in order to be paid. For more information on Tokheim's checkout and start-up policy, see Form 5004, "Warranty Registration and Checkout Procedures for Tokheim Equipment."



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## DISCLOSURE NOTICE

This document contains information proprietary to Tokheim Corporation. The data contained herein, in whole or in part, may not be duplicated, used, or disclosed outside the recipient or purchaser for any purpose other than to evaluate or operate the equipment described within the document.

## DISCLAIMER

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## !!! FCC WARNING !!!

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and has been found to comply as a class “A” device with Part 15, Subpart “J” of the FCC rules at date of manufacture.

## IMPORTANT

THIS EQUIPMENT MUST BE INSTALLED AND USED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THE NATIONAL ELECTRICAL CODE (NFPA NO. 70) AND THE AUTOMOTIVE AND MARINE SERVICE STATION CODE (NFPA 30A).

It is the owner’s and operator’s responsibility to ensure that the proper warning signs are posted per the current edition of NFPA 30A, Code #9-9. These include, but are not limited to,

- “STOP MOTOR”
- “NO SMOKING”
- “WARNING — IT IS UNLAWFUL AND DANGEROUS TO DISPENSE GASOLINE INTO UNAPPROVED CONTAINERS”.

TOKHEIM DISPENSERS SHALL NOT BE USED FOR DIRECT FUELING OF AIRCRAFT WITHOUT FILTERS, SEPARATORS, AND OTHER EQUIPMENT NECESSARY TO ENSURE PRODUCT PURITY.

# Safety Information

The following requirements are mandatory and shall be followed when installing, using, or working around Tokheim equipment. These hazards or unsafe practices may result in death or severe injury to persons, or damage to equipment or property.

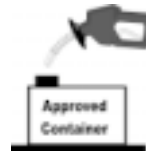
## DANGER! FIRE AND EXPLOSION HAZARD



**No Smoking** - Never permit smoking in the dispensing area. Sparks and embers from burning cigarettes or pipes can set fuels and their vapors on fire.



**No Flames** - Never permit open flames in the dispensing area. Flames from lighters, matches, welding torches, etc. can set fuels and their vapors on fire.



**Dispense In Approved Containers** - Dispense gasoline and other petroleum products into approved containers that are on the ground. To prevent static discharge, never dispense gasoline into a portable container that is in or on a vehicle, including trucks. Always use Tokheim approved and UL Listed hoses and nozzles with this dispenser.

## WARNING! FIRE AND ELECTRICAL HAZARD



**High Voltage** - To reduce the risk of electrical shock when servicing, turn off all power to all equipment. In submersible pump applications, turn off power to the submersible pump and any other dispensers which use that submersible pump. AC power can feed back into a shut off dispenser when dispensers share a common submersible pump or starter relay.



**Stop Button** - The Stop Button may not shut off all power to the dispenser. Be sure all employees are trained how to shut off all power to the system in case of emergency. Code #4-1.2 of the current edition of NFPA 30A requires that:

*“A clearly identified and easily accessible switch(es) or circuit breaker(s) shall be provided at a location remote from dispensing devices, including remote pumping systems, to shut off the power to all dispensing devices in the event of an emergency.”*

Additionally, Code #9-4.5 of the current edition of NFPA 30A requires that:

*“Emergency controls specified in 4-1.2 [listed above] shall be installed at a location acceptable to the authority having jurisdiction, but controls shall not be more than 100 ft. (30m) from dispensers.”*

## WARNING! SERVICE HAZARD



**Turn Power Off** - Before servicing, always turn off all power to the dispenser and submerged pumps at the master panel. Close any impact valve before performing any maintenance or service to the dispenser, including the changing of fuel filters or strainers.




**Block Islands** - Block islands so no vehicle can pull up to the dispenser being worked on. Unauthorized people or vehicles in the work area are dangerous.



**Clean Up Spills** - Promptly clean up product spills on the driveway. Use an absorbent recommended by regulatory agencies. Dispose of absorbent as required by regulatory agencies.

# Section 1: Introduction

## Scope

 **WARNING**  
*All installations must conform to NFPA (National Fire Protection Agency) 30, 30A, 70 and applicable National, State, and Local code requirements. Otherwise, severe injury or death could result.*

This manual is provided to assist those who install Tokheim dispensers onto the islands and connect the electrical power and communications wiring. Please read, understand, and follow this manual and all applicable NFPA requirements before installing the equipment.

Failure to install the dispensers per Tokheim specifications may void the Tokheim Warranty. Express permission must be obtained for alternative wiring schemes.

Information for site preparation and underground piping is found in the Premier C Series Site Preparation Manual, Form 5869.

Technical information on Tokheim dispensers is found in the Premier C Technical Reference Manual, Form 4817A.

## Conventions used in this Manual

### DANGER

“DANGER” indicates an imminently hazardous situation which, if not avoided, **WILL** result in **death or serious injury**.

### WARNING

“WARNING” indicates a potentially hazardous situation which, if not avoided, **COULD** result in **death or serious injury**.

### CAUTION

“CAUTION” indicates a potentially hazardous situation which, if not avoided, **MAY** result in **minor or moderate personal injury** or property damage.



Tips provide useful information that can make your work easier.



Notes supply information that emphasizes or supplements important points in the text. Notes may also refer you to related information elsewhere in the manual.

## DOCUMENT-on-DEMAND

Tokheim has a FAX-back service that allows its customers to retrieve documents 24-hours-a-day, 7-days-a-week. The documents that are available consist mainly of Dispenser Outline Drawings, Dispenser Foundation Plans, Wiring Diagrams, and other related Technical Information.

To access this service, dial **(219) 484-1864** and follow the automated instructions to retrieve your document. If you do not know the number of the document you want, press **9999** and an Index of all available documents will be faxed to you.

### Foundation Plans:

- 0272 H413C-R, H426C-R, H422C-R, H426C-REB, H422C-RB3/4/5, H413C-REB
- 0273 H412C-R, H424C-R, H424C-RB3/4, H414C-R, H428C-R, H428C-REB
- 0274 H311C-R, H312C-R, H322C-R, H324C-R, H311C-RB3/5, H322C-RB3/5

### Wiring Diagrams:

- 0107 Model 67 Interface Box

## Related Documents

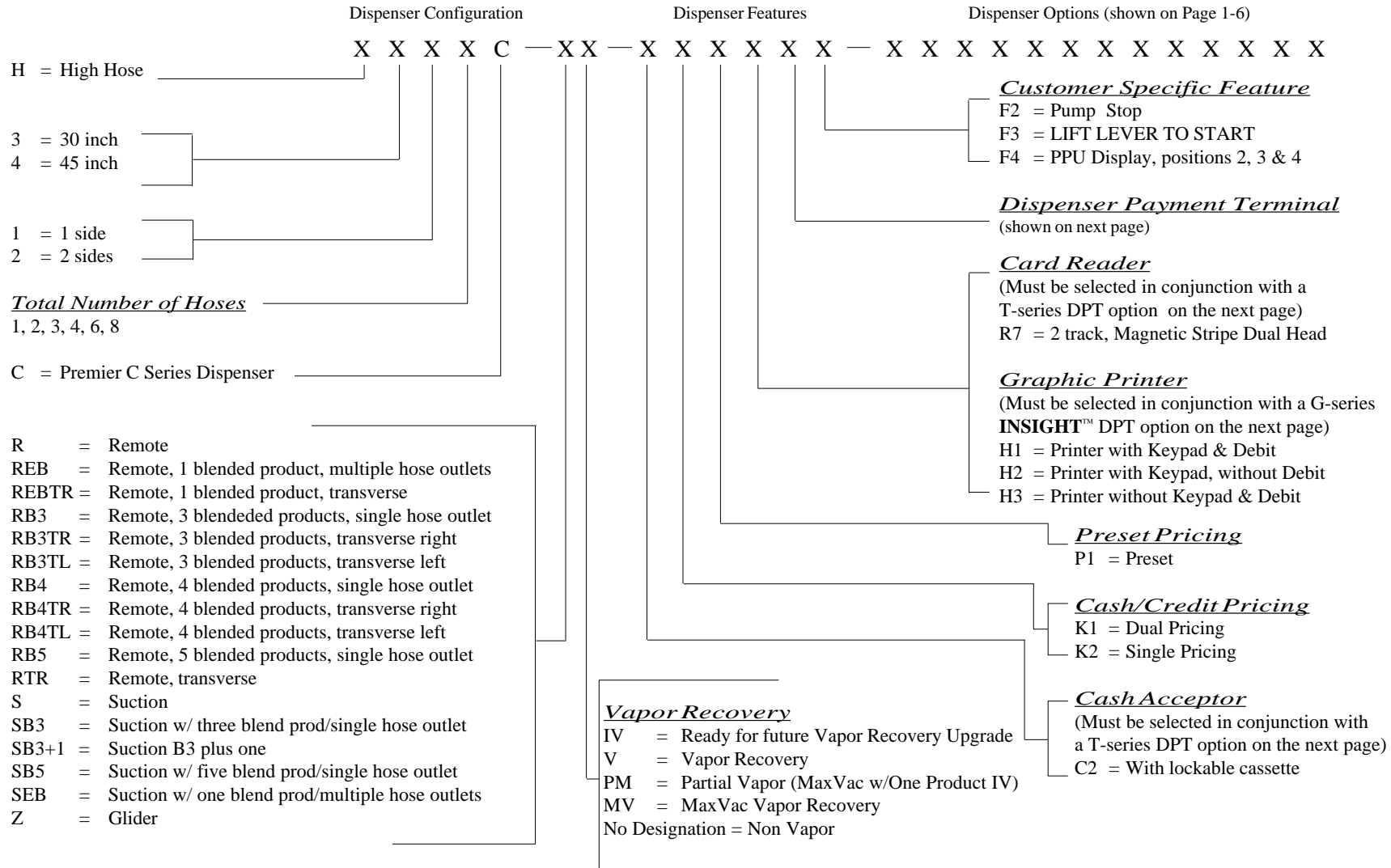


**These documents can be ordered from:**  
**Tokheim Service Parts**  
**PO Box 663**  
**Fremont, IN 46737**  
**Phone 219-470-4710**  
**Fax 888-865-4344**

- Premier Site Preparation Manual, Form 5869
- Premier C Programming Manual, Form 5871
- Premier C Technical/Reference Manual, Form 4817A
- Premier C User Guide, Form 5872
- Premier C Parts Manual, Form 5866
- The ONE Manual (Care of Your Pumps), Form 1680B

# PREMIER C MODEL DISPENSERS

## TOKHEIM MODEL NUMBER NOTATION



# PREMIER C MODEL DISPENSERS

## TOKHEIM MODEL NUMBER NOTATION

Dispenser Configuration	Dispenser Features	Dispenser Options (shown on Page 1-6)
X X X X C	XX	X X X X X X X X X X X X X X X

***Dispenser Payment Terminal***

(Includes Printer)

- T2 = Card Reader ONLY
- T3 = Cash Acceptor & Card Reader
- T4 = DEBIT Card Reader ONLY (TDS Plus)
- T5 = Cash Acceptor & DEBIT Card Reader (TDS Plus)
- T7 = Card Reader ONLY (Gasboy)
- T8 = Cash Acceptor & Card Reader (Gasboy)
- T9 = Card Reader ONLY (Hebrew display)
- T10 = Debit Card Reader (TDS)

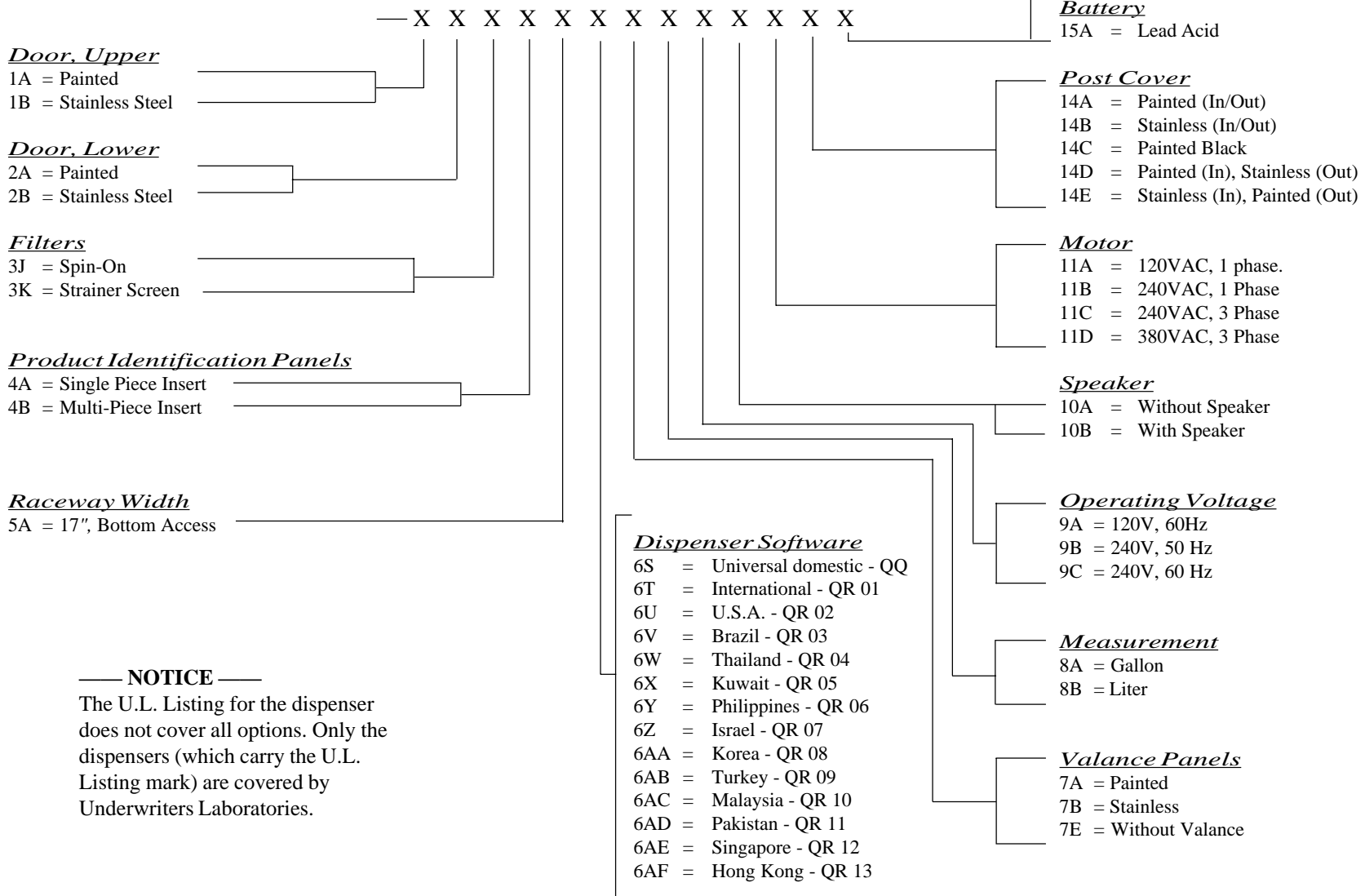
***INSIGHT™ Dispenser Payment Terminal***

- G9 = Card Reader Only - Dual Head
- G10 = Card Reader - Dual Head, Cash Acceptor, Locking Cassette

# PREMIER C MODEL DISPENSERS

## TOKHEIM MODEL NUMBER NOTATION

Dispenser Options



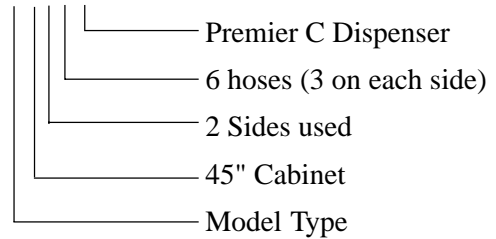
— NOTICE —  
 The U.L. Listing for the dispenser does not cover all options. Only the dispensers (which carry the U.L. Listing mark) are covered by Underwriters Laboratories.

## Premier C Dispenser Identification

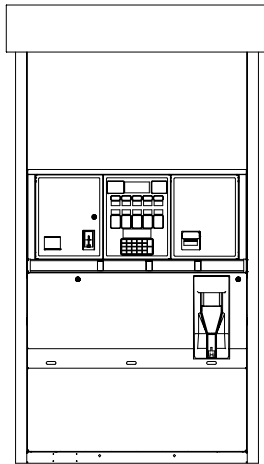


**Model number notation information is located on pages 1-3 thru 1-5.**

Model H426C =



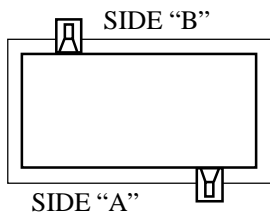
H422C-R,  
H422C-RB3/RB5



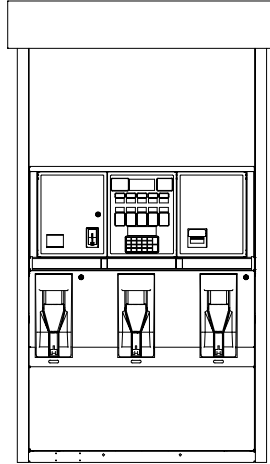
132984-1

**45" Cabinet**

H422C = 2 sides, 2 hoses, 3 products  
H422C-RB3/RB5 = 2 sides, 2 hoses,  
3 & 5 products



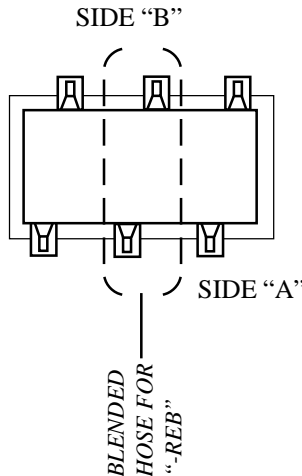
H413C-R, H426C-R (-S),  
H426C-REB,  
H426C-RTR, H426C-REBTR



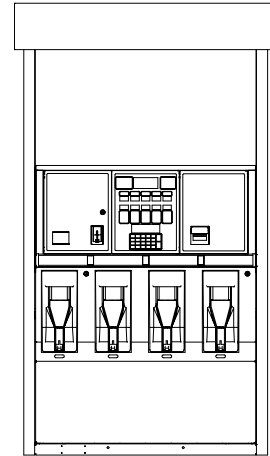
132984-2

**45" Cabinet**

H413C-R = 1 side, 3 hoses, 3 products  
H426C-R(-S) = 2 sides, 6 hoses, 3 products  
H426C-REB = 2 sides, 6 hoses,  
3 products (1 blended)  
H426C-RTR = 2 sides, 6 hoses, 3 products,  
transverse  
H426C-REBTR = 2 sides, 6 hoses,  
3 products, (1 blended), transverse



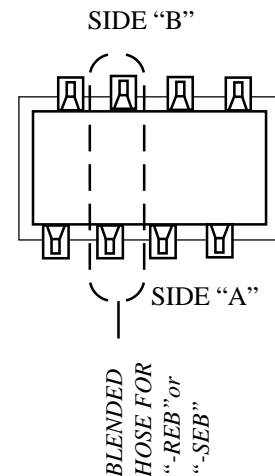
H428C-R,  
H428C-REB, H428C-SEB



132984-3

**45" Cabinet**

H428C-R = 2 sides, 8 hoses,  
4 products  
H428C-REB = 2 sides, 8 hoses,  
4 products (1 blended)  
H428C-SEB = 2 sides, 8 hoses,  
4 products (1 blended)

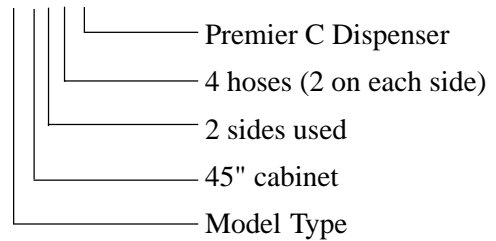


## Premier C Dispenser Identification (continued)

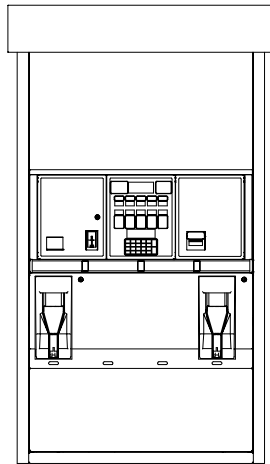


**Model number notation information is located on pages 1-3 thru 1-5.**

Model H424C =



H424C-RTL, H424C-RB3/4TL



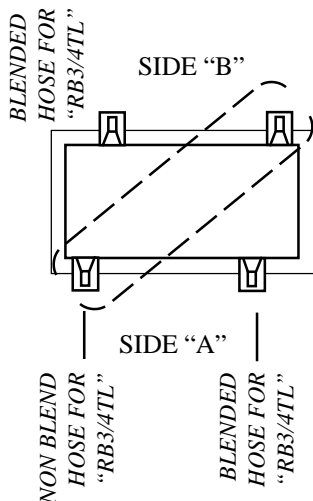
132986-4

45" Cabinet

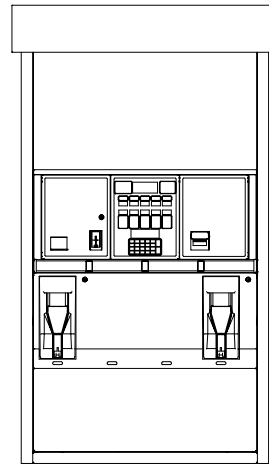
H424C-RTL = 2 sides, 4 hoses, 4 products,  
(3 manifolded products, +1 non-manifolded product)

H424C-RB3/4TL = 2 sides, 4 hoses, 4 or 5 products  
(3 or 4 blended products, +1 non-blended product)

*TL = Non-blended product/hose located on left.*



H424C-RTR, H424C-RB3/4TR



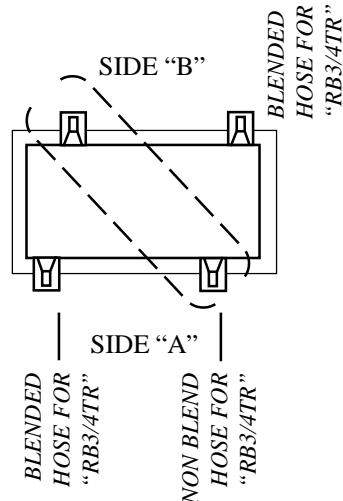
132986-4

45" Cabinet

H424C-RTR = 2 sides, 4 hoses, 4 products,  
(3 manifolded products, +1 non-manifolded product)

H424C-RB3/4TR = 2 sides, 4 hoses, 4 or 5 products  
(3 or 4 blended products, +1 non-blended product)

*TR = Non-blended product/hose located on right.*

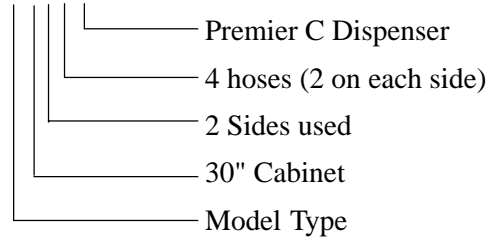


## Premier C Dispenser Identification (continued)

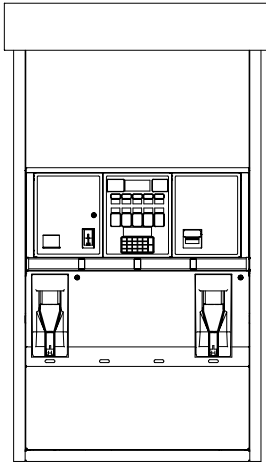


**Model number notation information is located on pages 1-3 thru 1-5.**

**Model H324C =**



H424C-R, H424C-RB3+1,  
H424C-SB3+1

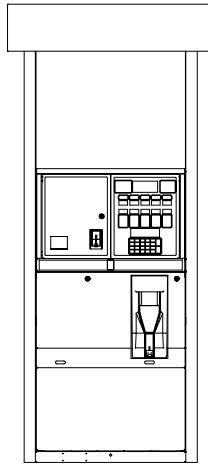


132986-4

**45" Cabinet**

H424C-R = 2 sides, 4 hoses, 4 products,  
(3 gas, 1 diesel)  
H424C-RB3+1 = 2 sides, 4 hoses,  
4 products  
H424C-SB3+1 = 2 sides, 4 hoses,  
4 products

H322C-R, H322C-S,  
H322C-RB3/RB5, H322C-SB3/SB5

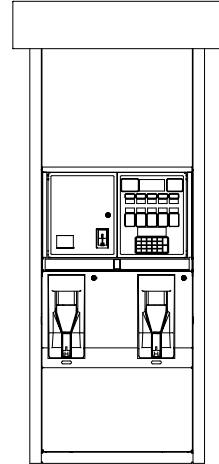


132986-5

**30" Cabinet**

H322C-R = 2 sides, 2 hoses, 1 product  
H322C-S = 2 sides, 2 hoses, 1 product  
H322C-RB3/RB5 = 2 sides, 2 hoses, &  
3/5 products respectively  
H322C-SB3/SB5 = 2 sides, 2 hoses, &  
3/5 products respectively

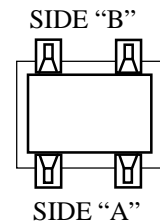
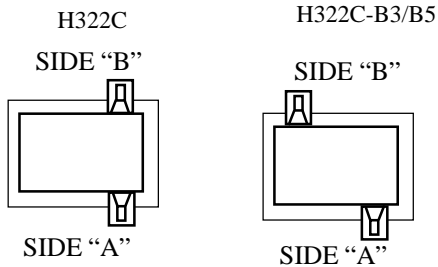
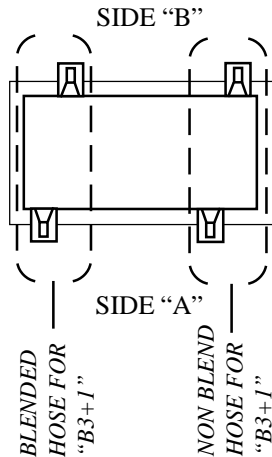
H324C-R, H324C-S



132986-4

**30" Cabinet**

H324C-R = 2 sides, 4 hoses,  
2 products  
H324C-S = 2 sides, 4 hoses,  
2 products



# Section 2: Typical Installation & Wiring










**⚠ WARNING**  
**All installations must conform to NFPA (National Fire Protection Agency) 30, 30A, 70 and applicable National, State, and Local code requirements. Otherwise, severe injury or death could result.**

This section provides information for proper installation and wiring of your Premier C series dispensers and related equipment. It is essential that you understand the requirements of the system before attempting the installation. You should be familiar with, and have available for reference, the appropriate programming manuals and installation manuals for all other equipment to be installed and connected with dispensers.

Failure to install the equipment per Tokheim specifications may void the Tokheim Warranty. Express permission must be obtained from Tokheim for alternative wiring and/or installation schemes. *Contact Tokheim Solution Center 1-800-866-6762 for approval.*

## Section 2 Contents

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*DPT (any model) System Wiring Diagram* ..... 2-23

 <h1 style="margin: 0;">DANGER</h1>	   
<p>Gasoline and petroleum products are flammable. The hazard or unsafe practice may result in death or severe injury to persons or damage to equipment or property. <b>Follow ALL safety precautions as outlined in the Safety Information section at the front of this manual.</b></p>	   

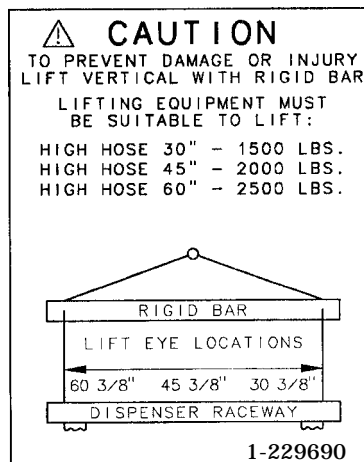
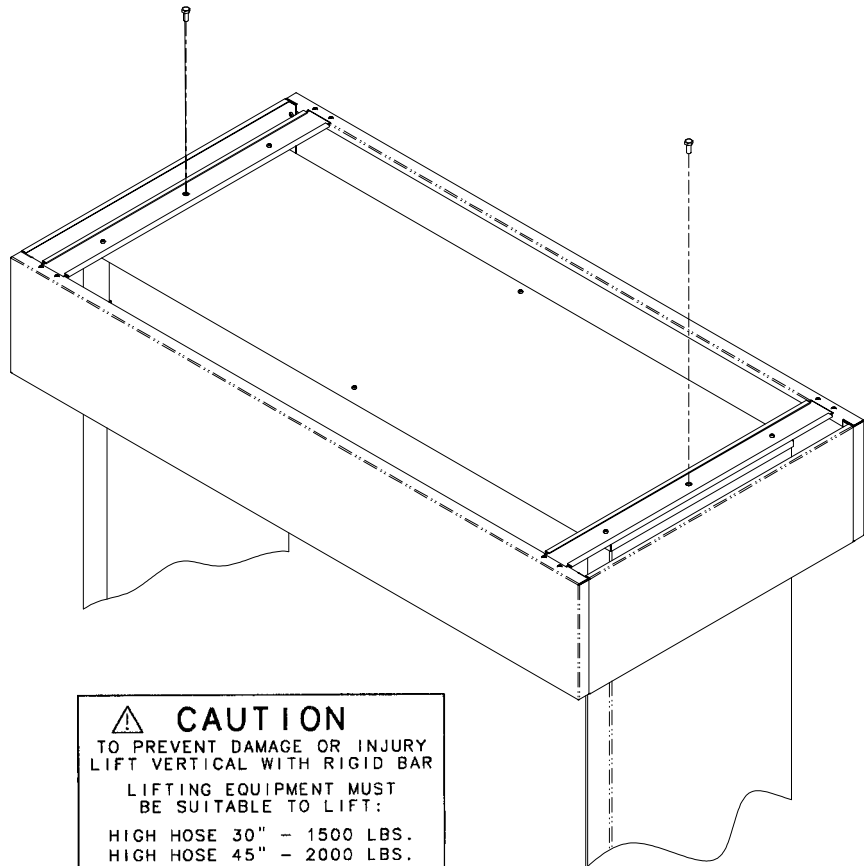
## Moving the Dispenser

**IMPORTANT!**

**Make sure side A of the dispenser is positioned onto the island per customer specifications. To determine side A of the dispenser, see the illustration on the next page.**

1. Remove the carton and unbolt the wooden pallet from the dispenser.
2. Remove and save the center hex-head bolt from each end of the raceway as shown in the illustration below. These bolts are screwed into the dispenser lift brackets.
3. Screw a  $5/16$  -18 eyebolt (not included) securely into the top of each lift bracket.
4. Attach a rigid bar to the eyebolts as shown on the lifting instruction label attached to the top of the raceway (see label below).
5. Lift and position dispenser. Use a hoist, crane or fork lift suitable to lift:  
1,500 lbs. - 30" Dispenser  
2,000 lbs. - 45" Dispenser
6. Remove lifting hardware and install the hex-head bolts that you removed in step 2.

**⚠ WARNING**  
Lifting equipment can be hazardous and must be rated to lift the weight of the dispenser. Equipment could fall and cause severe injury or death. Stand clear from the dispenser when lifting and lowering.



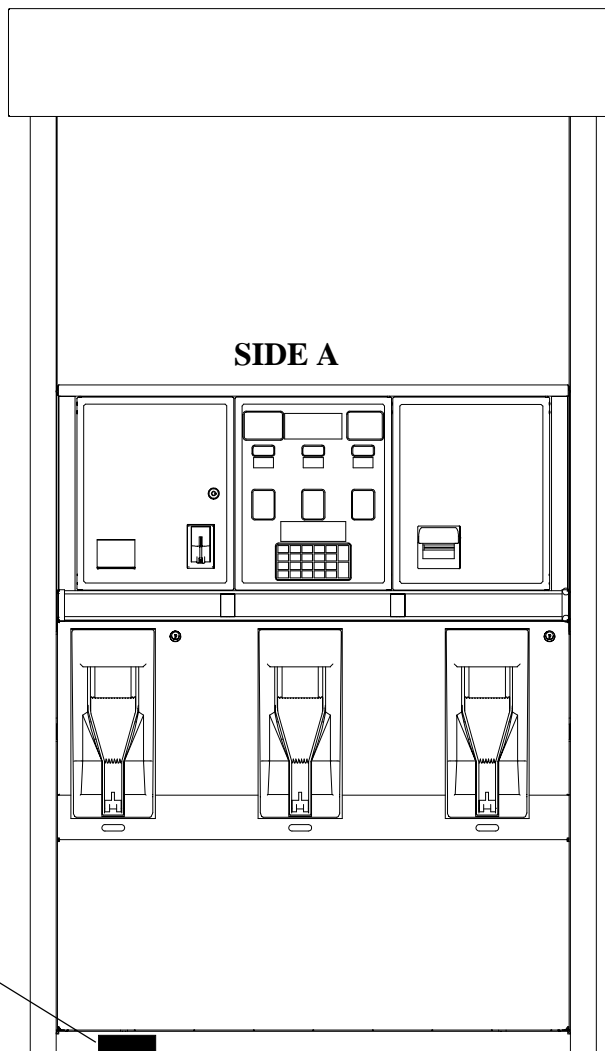
## Determining Side A on the Dispenser

1. Look at the base of the dispenser.
2. Locate the model/serial number plate. The side with the model/serial number plate is Side A of the dispenser as shown below.



**Never use the location of a specific product on the dispenser to determine Side A. Use the serial plate as the reference.**

Model/Serial plate location



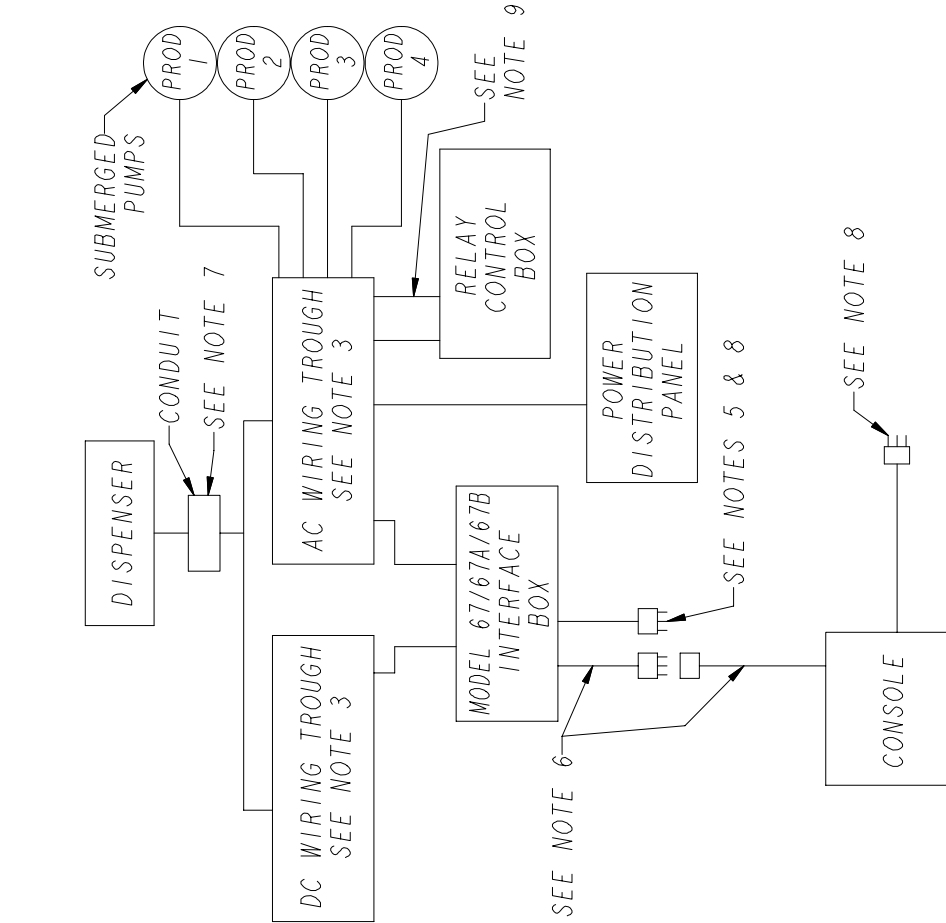
## General Installation and Wiring Requirements



**Consult your local Tokheim distributor and/or service representative for any assistance.**

- All installations must conform to NFPA (National Fire Protection Agency) 30, 30A, 70 and applicable National, State, and Local code requirements. Otherwise, severe injury or death could result.
- All wiring **MUST** be accomplished by a qualified electrician.
- All wires in a Class 1, Group D, Division 1 or 2 area, must be gas and oil resistant (i.e. THWN).
- All wires **MUST** be stranded copper conductor. Terminal connectors supplied with all Tokheim equipment are designed to accept **STRANDED WIRE ONLY**. Use of solid conductor wire can result in operational failures due to bad or broken connection.
- All wires **MUST** be color coded and/or labeled to facilitate equipment checkout and service.
- All wires must be pulled and connected as a continuous run. No splices or field box terminal connectors can be used.
- All field wiring enters the dispenser connection box, which is located on side B of the hydraulics compartment.
- Speaker and call button wiring are likely to be a class 2 circuit and must be wired in accordance with NEC 725-54, Exception 2,b.,2. Class 2 circuits must be routed in separate conduits from all other circuits.
- The DPT circuitry has been evaluated by U.L. as a class 1 circuit. DPT conductors can be run in the same conduit with the dispenser AC wiring in accordance with N.E.C. (National Electrical Code) 725-26. The dispenser and the model 69 interface box are considered functionally associated.
- **The National Electrical Code requires** that a switch or other acceptable means that will turn off all power simultaneously (including grounded neutral) must be used (Refer to NEC CODE, Article 514-5). An emergency shut-off system (per N.F.P.A. 30A, see page iv) should be in place. In console operation, the Model 67/67A/67B interface boxes provide an emergency relay for this function.
- **Dispensers with MaxVac vapor recovery systems:**  
Install approved hoses and nozzles per the specification found in Exhibit 2 of the CARB Executive Order G-70-154.

## Typical Installation - All Models Remote Dispenser without Hose Controller

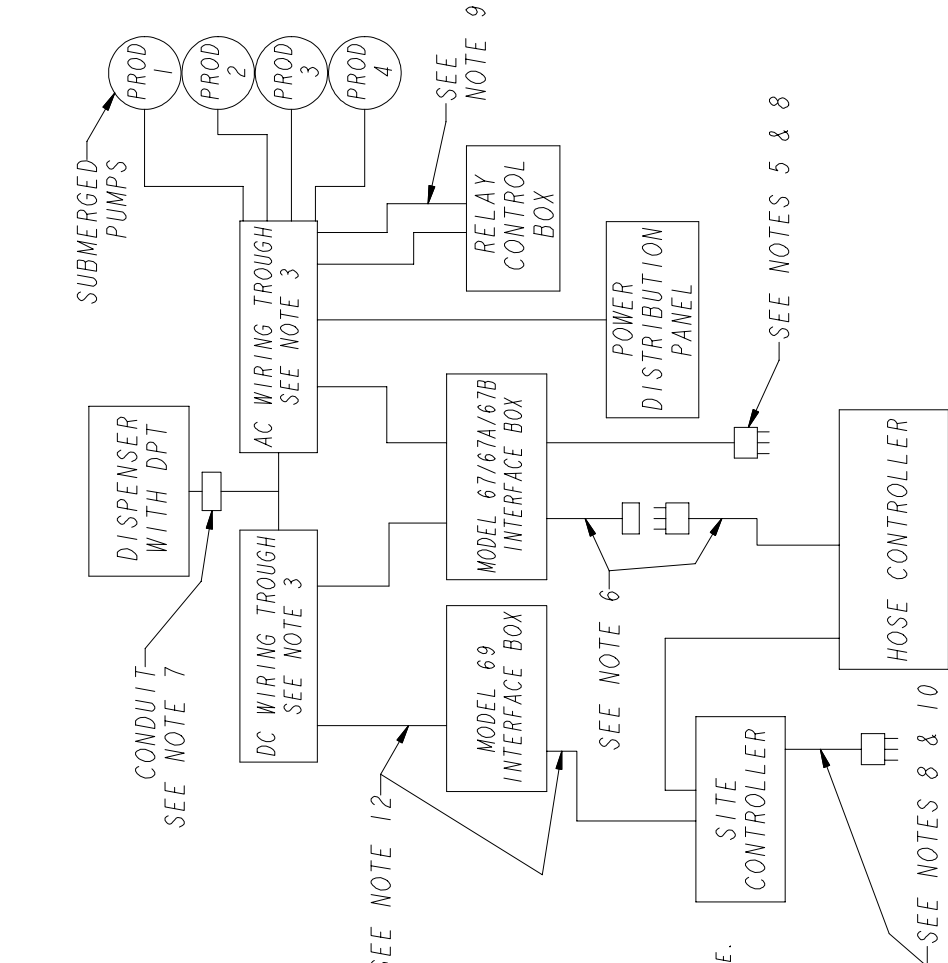


NOTES:

1. EQUIPMENT MUST BE INSTALLED AND USED IN ACCORDANCE WITH STATE, LOCAL N.F.P.A. NO. 30A AND 70 CODES AND REGULATIONS, AND APPLICABLE N.E.C. CODES. WIRE ALL CIRCUITS N.E.C. CLASS I. SEE INTERCOM MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR APPROPRIATE N.E.C. CLASS FOR INTERCOM WIRING.
2. ALL EQUIPMENT EXCEPT DISPENSERS SHOULD BE INSTALLED IN A BUILDING WHERE TEMPERATURE WILL NOT BE LESS THAN 32 DEGREES F. OR HIGHER THAN 110 DEGREES F.
3. WIRING TROUGHS, CONDUITS AND WIRE FURNISHED BY THE INSTALLER.
5. APPROX. 12 FT. LONG 115V POWER CORD FOR APPROVED GROUNDED RECEPTACLE.
6. APPROX. 11 FT. SIGNAL CABLE BETWEEN INTERFACE BOX AND CONTROL CONSOLE. MODEL 180 SIGNAL CABLE EXTENSION IS AVAILABLE AS AN OPTIONAL ACCESSORY. RECOMMENDED MAX. TOTAL LENGTH NOT TO EXCEED 350 FT.
7. DISPENSER WIRING LENGTH NOT TO EXCEED 500 FT.
8. ALL TOKHEIM EQUIPMENT WIRING MUST BE ON THE SAME PHASE OR ERRATIC OPERATION MAY RESULT. DO NOT USE SAME CIRCUITS USED FOR LIGHTING, COOLERS, PUMP MOTORS, ECT... ALL REQUIRE THREE (3) WIRE EARTH GROUND RECEPTACLES. GROUND IS NOT TO BE SHARED WITH AC COMMON.
9. MOTOR LEADS AND POWER DISTRIBUTION LEADS TO BE RUN IN SEPARATE CONDUIT FROM OTHER LEADS.
10. 115V POWER CORD FOR APPROVED GROUNDED RECEPTACLE.
11. ALL PERIPHERAL EQUIPMENT MUST BE U.L. LISTED. IF EQUIPMENT IS LISTED PER U.L. 478, THEN EQUIPMENT CANNOT BE INSTALLED OVER A CLASS I, GROUP D, DIV. 2 HAZARDOUS LOCATION.
12. DISPENSER PAYMENT TERMINAL WIRING BETWEEN SITE CONTROLLER AND THE DISPENSERS CANNOT EXCEED 1000 WIRE FEET PER COMMUNICATION CHANNEL.
13. SEE FOLLOWING WIRING DIAGRAMS FOR APPROPRIATE FIELD WIRING CONNECTIONS.

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## Typical Installation - All Models Remote Dispenser with Hose Controller



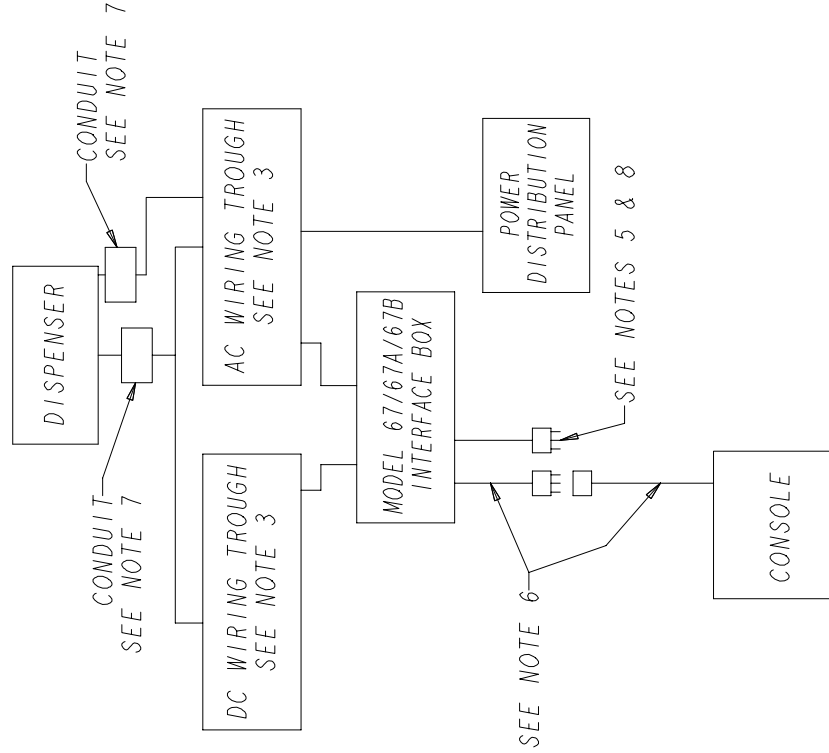
- NOTES:
- EQUIPMENT MUST BE INSTALLED AND USED IN ACCORDANCE WITH STATE, LOCAL N.F.P.A. NO. 30A AND 70 CODES AND REGULATIONS, AND APPLICABLE N.E.C. CODES. WIRE ALL CIRCUITS N.E.C. CLASS I. SEE INTERCOM MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR APPROPRIATE N.E.C. CLASS FOR INTERCOM WIRING.
  - ALL EQUIPMENT EXCEPT DISPENSERS SHOULD BE INSTALLED IN A BUILDING WHERE TEMPERATURE WILL NOT BE LESS THAN 32 DEGREES F. OR HIGHER THAN 110 DEGREES F.
  - WIRING TROUGHS, CONDUITS AND WIRE FURNISHED BY THE INSTALLER.
  - APPROX. 12 FT. LONG 115V POWER CORD FOR APPROVED GROUND RECEPTACLE.
  - APPROX. 11 FT. SIGNAL CABLE BETWEEN INTERFACE BOX AND CONTROL CONSOLE. MODEL 180 SIGNAL CABLE EXTENSION IS AVAILABLE AS AN OPTIONAL ACCESSORY. RECOMMENDED MAX. TOTAL LENGTH NOT TO EXCEED 350 FT.
  - DISPENSER WIRING LENGTH NOT TO EXCEED 500 FT.
  - ALL TOKHEIM EQUIPMENT WIRING MUST BE ON THE SAME PHASE OR ERRATIC OPERATION MAY RESULT. DO NOT USE SAME CIRCUITS USED FOR LIGHTING, COOLERS, PUMP MOTORS, ECT... ALL REQUIRE THREE (3) WIRE EARTH GROUND RECEPTACLES. GROUND IS NOT TO BE SHARED WITH AC COMMON.
  - MOTOR LEADS AND POWER DISTRIBUTION LEADS TO BE RUN IN SEPARATE CONDUIT FROM OTHER LEADS.
  - 115V POWER CORD FOR APPROVED GROUND RECEPTACLE.
  - ALL PERIPHERAL EQUIPMENT MUST BE U.L. LISTED. IF EQUIPMENT IS LISTED PER U.L. 478, THEN EQUIPMENT CANNOT BE INSTALLED OVER A CLASS I, GROUP D, DIV. 2 HAZARDOUS LOCATION.
  - DISPENSER PAYMENT TERMINAL WIRING BETWEEN SITE CONTROLLER AND THE DISPENSERS CANNOT EXCEED 1000 WIRE FEET PER COMMUNICATION CHANNEL.
  - SEE FOLLOWING WIRING DIAGRAMS FOR APPROPRIATE FIELD WIRING CONNECTIONS.

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REVISED 3-96

## Typical Installation - Premier C Suction Dispenser without Hose Controller

NOTES:

1. EQUIPMENT MUST BE INSTALLED AND USED IN ACCORDANCE WITH STATE, LOCAL N.F.P.A. NO. 30A AND 70 CODES AND REGULATIONS, AND APPLICABLE N.E.C. CODES. WIRE ALL CIRCUITS N.E.C. CLASS 1. SEE INTERCOM MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR APPROPRIATE N.E.C. CLASS FOR INTERCOM WIRING.
2. ALL EQUIPMENT EXCEPT DISPENSERS SHOULD BE INSTALLED IN A BUILDING WHERE TEMPERATURE WILL NOT BE LESS THAN 32 DEGREES F. OR HIGHER THAN 110 DEGREES F.
3. WIRING TROUGHS, CONDUITS AND WIRE FURNISHED BY THE INSTALLER.
5. APPROX. 12 FT. LONG 115V POWER CORD FOR APPROVED GROUNDED RECEPTACLE.
6. APPROX. 11 FT. SIGNAL CABLE BETWEEN INTERFACE BOX AND CONTROL CONSOLE. MODEL 180 SIGNAL CABLE EXTENSION IS AVAILABLE AS AN OPTIONAL ACCESSORY. RECOMMENDED MAX. TOTAL LENGTH NOT TO EXCEED 350 FT.
7. DISPENSER WIRING LENGTH NOT TO EXCEED 500 FT.
8. ALL TOKHEIM EQUIPMENT WIRING MUST BE ON THE SAME PHASE OR ERRATIC OPERATION MAY RESULT. DO NOT USE SAME CIRCUITS USED FOR LIGHTING, COOLERS, PUMP MOTORS, ECT... ALL REQUIRE THREE (3) WIRE EARTH GROUND RECEPTACLES. GROUND IS NOT TO BE SHARED WITH AC COMMON.
9. MOTOR LEADS AND POWER DISTRIBUTION LEADS TO BE RUN IN SEPARATE CONDUIT FROM OTHER LEADS.
10. 115V POWER CORD FOR APPROVED GROUNDED RECEPTACLE.
11. ALL PERIPHERAL EQUIPMENT MUST BE U.L. LISTED. IF EQUIPMENT IS LISTED PER U.L. 478, THEN EQUIPMENT CANNOT BE INSTALLED OVER A CLASS 1, GROUP D, DIV. 2 HAZARDOUS LOCATION.
12. DISPENSER PAYMENT TERMINAL WIRING BETWEEN SITE CONTROLLER AND THE DISPENSERS CANNOT EXCEED 1000 WIRE FEET PER COMMUNICATION CHANNEL.
13. SEE FOLLOWING WIRING DIAGRAMS FOR APPROPRIATE FIELD WIRING CONNECTIONS.

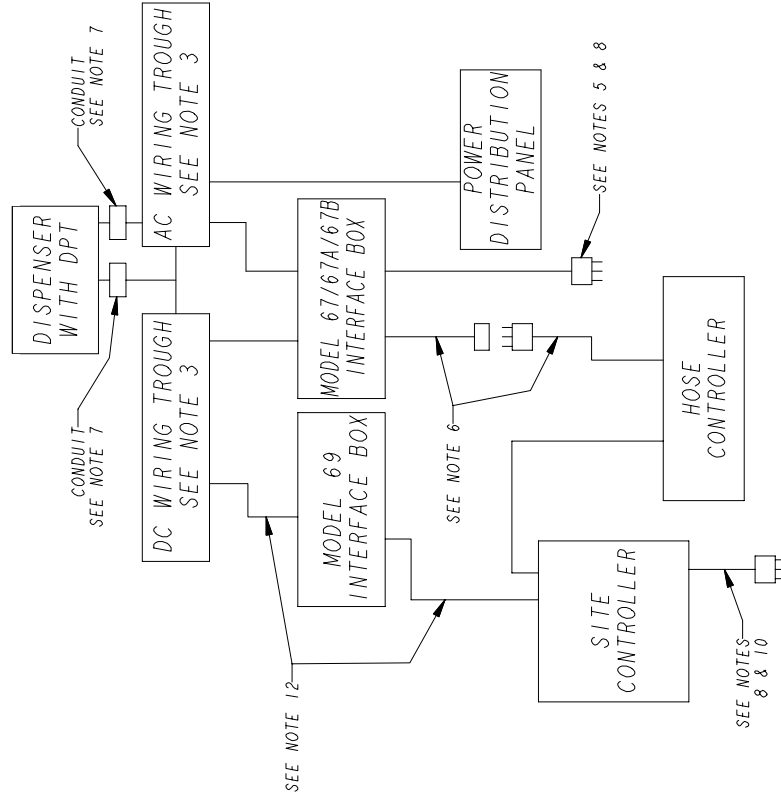


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REVISED 3-96

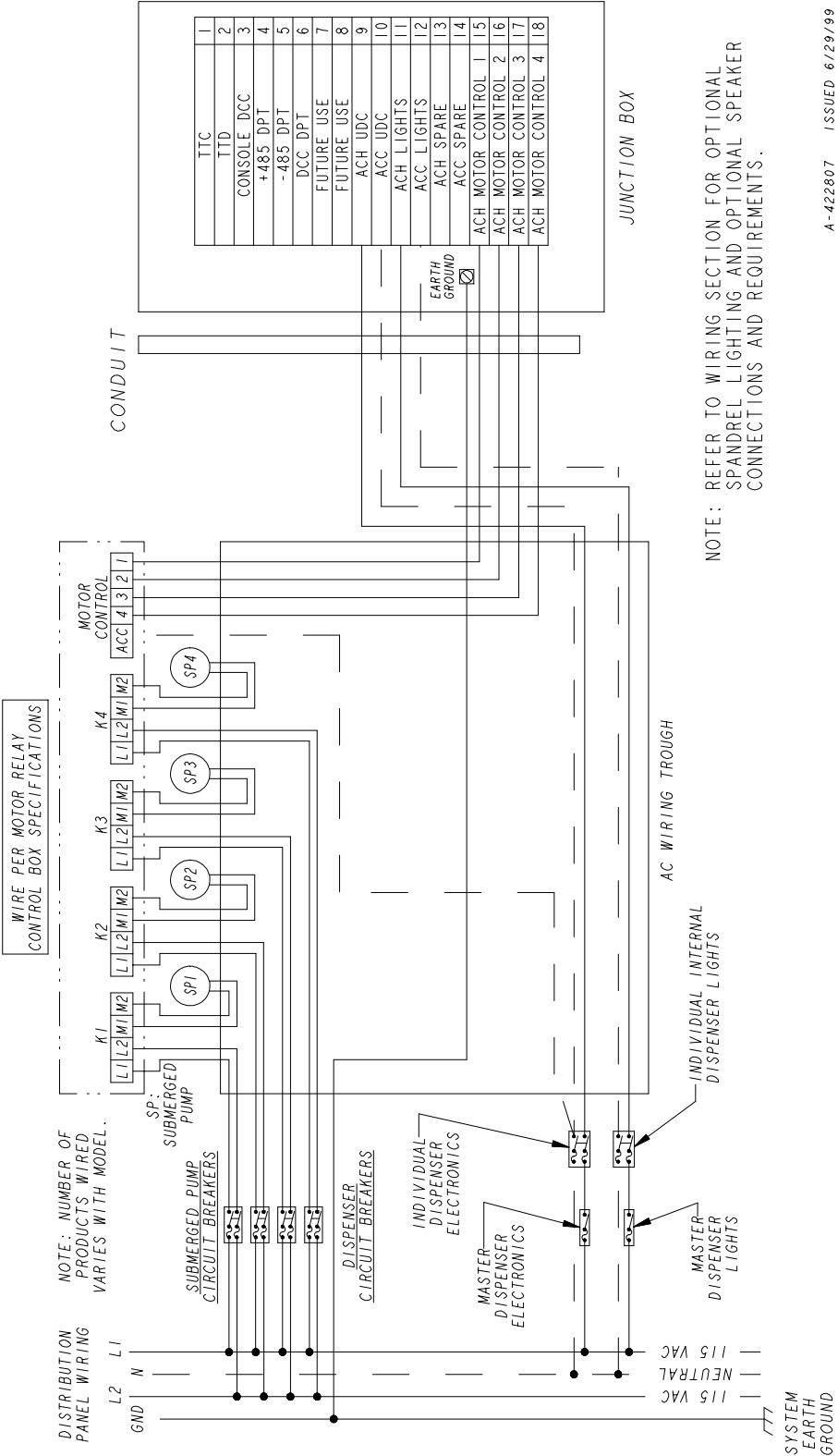
## Typical Installation - Premier C Suction Dispenser with Hose Controller

NOTES:

1. EQUIPMENT MUST BE INSTALLED AND USED IN ACCORDANCE WITH STATE, LOCAL N.F.P.A. NO. 30A AND 70 CODES AND REGULATIONS, AND APPLICABLE N.E.C. CODES. WIRE ALL CIRCUITS N.E.C. CLASS 1. SEE INTERCOM MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR APPROPRIATE N.E.C. CLASS FOR INTERCOM WIRING.
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7. DISPENSER WIRING LENGTH NOT TO EXCEED 500 FT.
8. ALL TOKHEIM EQUIPMENT WIRING MUST BE ON THE SAME PHASE OR ERRATIC OPERATION MAY RESULT. DO NOT USE SAME CIRCUITS USED FOR LIGHTING, COOLERS, PUMP MOTORS, ECT... ALL REQUIRE THREE (3) WIRE EARTH, GROUND RECEPTACLES. GROUND IS NOT TO BE SHARED WITH AC COMMON.
9. MOTOR LEADS AND POWER DISTRIBUTION LEADS TO BE RUN IN SEPARATE CONDUIT FROM OTHER LEADS.
10. 115V POWER CORD FOR APPROVED GROUNDED RECEPTACLE.
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12. DISPENSER PAYMENT TERMINAL WIRING BETWEEN SITE CONTROLLER AND THE DISPENSERS CANNOT EXCEED 1000 WIRE FEET PER COMMUNICATION CHANNEL.
13. SEE FOLLOWING WIRING DIAGRAMS FOR APPROPRIATE FIELD WIRING CONNECTIONS.



# Premier C Model Wiring Diagram Remote Dispenser, Stand-Alone

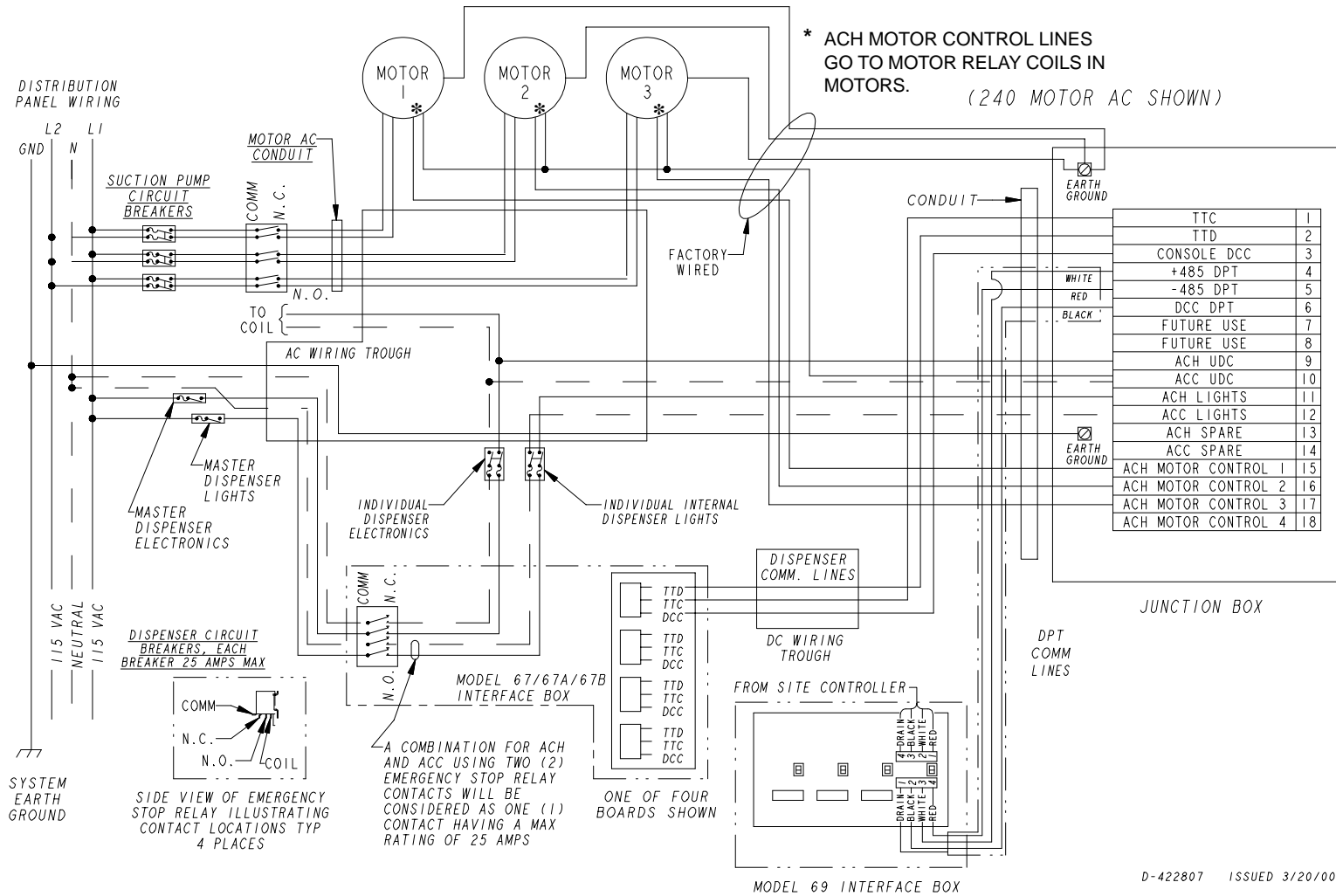


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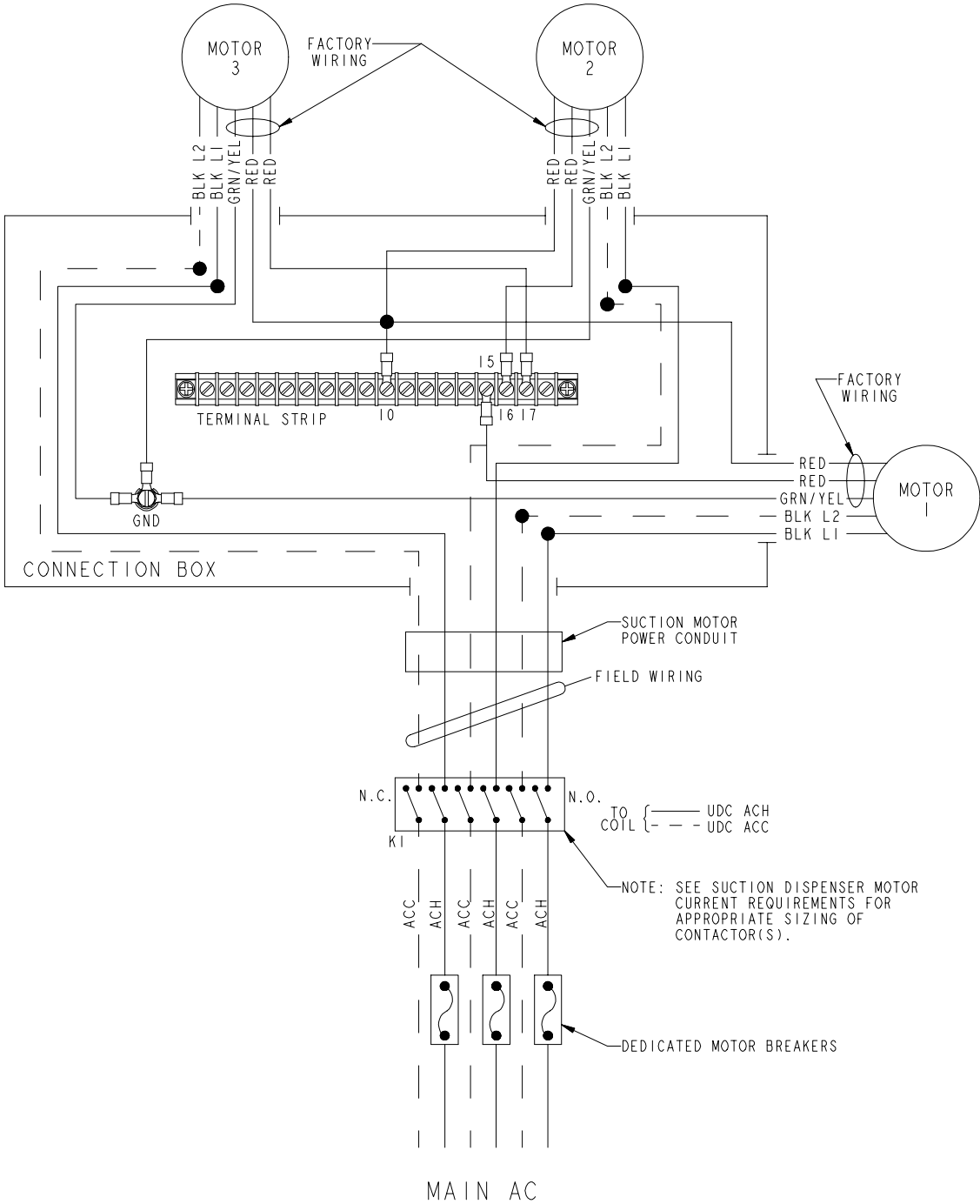


## Premier C Model Wiring Diagram Suction Dispenser with DPT (any model) and Console Control

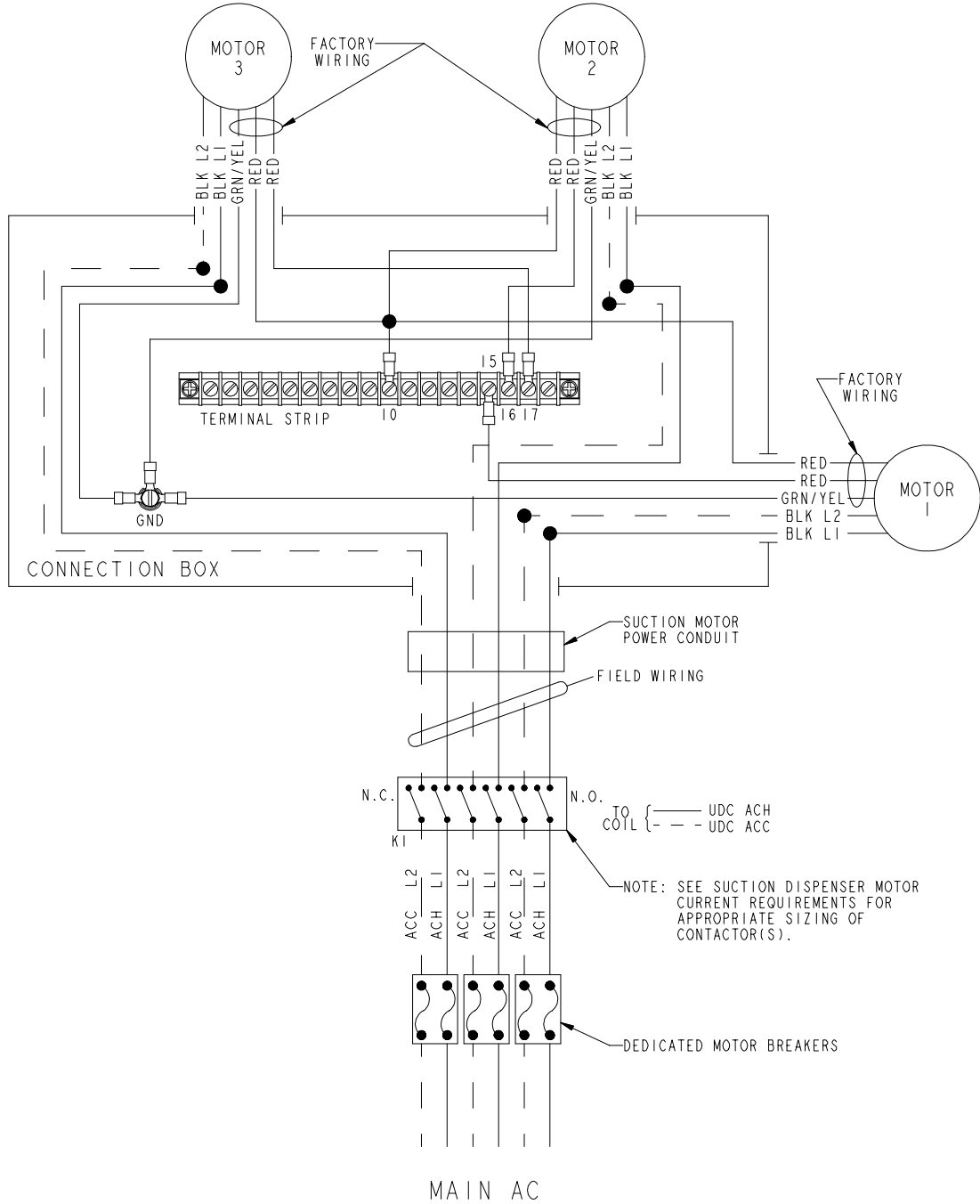


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# Premier C Suction Dispenser Motor / Junction Box Wiring Schematic - 120 VAC, 50/60 HZ

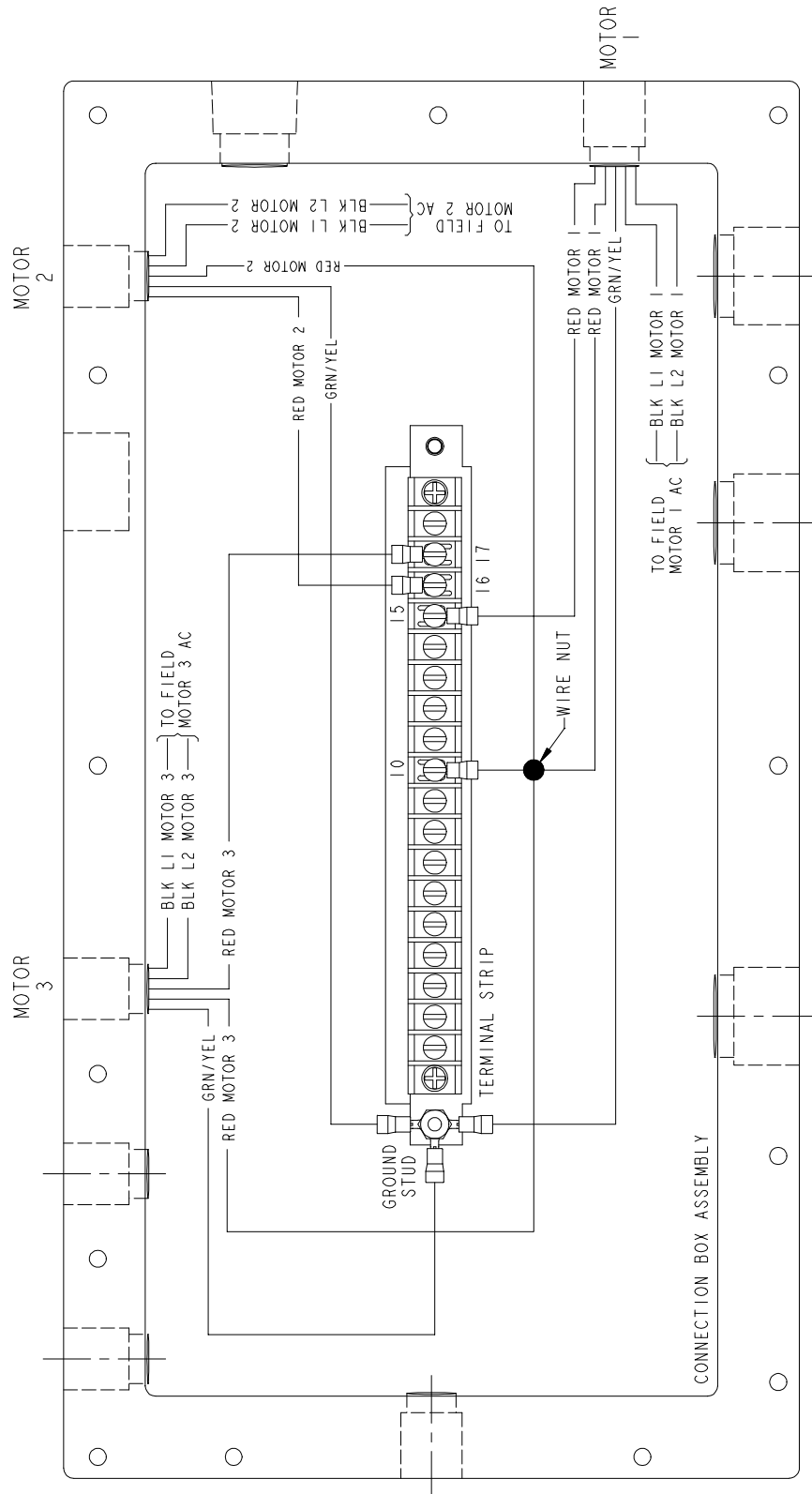


## Premier C Suction Dispenser Motor / Junction Box Wiring Schematic - 240 VAC, 50/60 HZ



F-422807 ISSUED 3/20/00

**Premier C Suction Dispenser Motor Wiring**  
**120/240 VAC, 50/60 HZ**



## Dispenser Connection Box Wiring

**⚠ WARNING**  
**Hazard of electrical shock. More than one disconnect switch may be required to de-energize the device. Open the circuit before removing cover. Keep cover secured when power is applied.**



### Locating the Connection Box

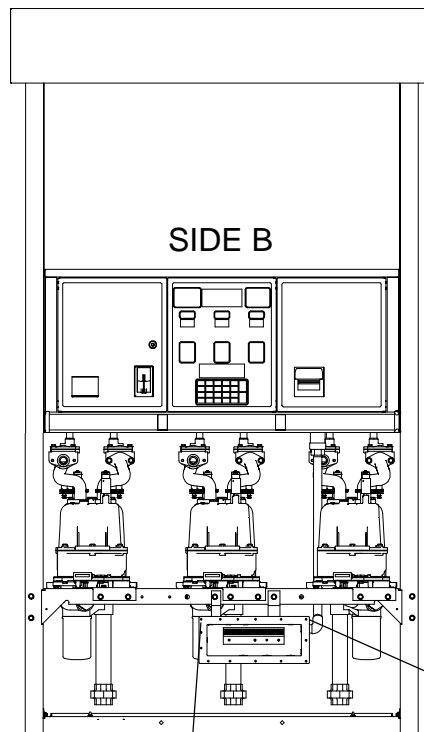
The connection box is located on Side B of the dispenser, behind the lower door. Side B is the side that does *not* have the serial plate attached to the base of the dispenser. Unlock the lower door on side B of the dispenser to gain access to the connection box. Be sure to follow the tightening order shown below when replacing the cover to the connection box.

### Terminal Block Signals

You may or may not require connections to all of the signals, depending on the type of dispenser and options installed.



**At the completion of installation, it is the installer's responsibility to make sure that any unused openings of the dispenser junction box are plugged.**

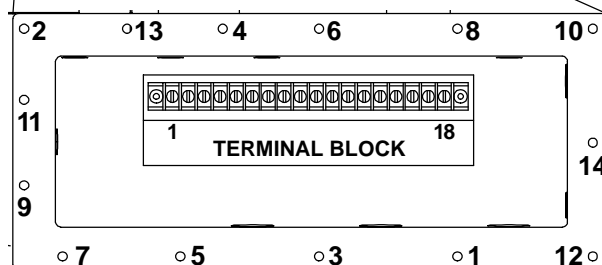


TERMINAL BLOCK SIGNALS

1	TTC
2	TTD
3	CONSOLE DCC
4	+ 485 DPT
5	- 485 DPT
6	DCC DPT
7	NO CONNECTION
8	NO CONNECTION
9	ACH UDC
10	ACC UDC
11	ACH LIGHTS
12	ACC LIGHTS
13	ACH SPARE
14	ACC SPARE
15	ACH MOTOR CONTROL 1
16	ACH MOTOR CONTROL 2
17	ACH MOTOR CONTROL 3
18	ACH MOTOR CONTROL 4

**⚠ WARNING**  
**When replacing the connection box cover, tighten the cover bolts using the tightening order shown. An incorrect tightening order may result in a flame path violation.**

TIGHTENING ORDER FOR COVER BOLTS



## Other Dispenser Options Wiring

### Intercom/Speaker Wiring



**There are no connections to the terminal strip in the connection box for Intercom/Speaker wiring or Spandrel wiring.**

The intercom/speaker wires should be connected based on the intercom manufacturer's specification. Intercom/speaker field wires will be joined together with the dispenser intercom/speaker wires in the dispenser connection box.

The dispenser call button switch is software controlled. To use the call button, program the appropriate keybutton on the operator interface keypad. This button is programmed in Mode F29. The keypad function code for the call button is "cb". For more information, refer to the Programming Manual, Form 5871.

#### Wires to Dispenser Speaker

Blue = Speaker +  
Violet = Speaker -

#### Wires to J30 on Dispenser Mother Board (Intercom Call Button)

Brown = Common  
Red = Normally Closed Switch Position  
Orange = Normally Open Switch Position

### **WARNING**

**Hazard of electrical shock. More than one disconnect switch may be required to de-energize the device. Open the circuit before removing cover. Keep cover secured when power is applied.**

### Spandrel Lighting Wiring

The spandrel lighting wires will be joined together with the AC field wires in the dispenser connection box. Connect the spandrel lighting earth ground wire to the ground screw in the connection box. A ground screw is located on either side of the terminal strip in the connection box.

#### Wires to Spandrel Lighting

Black = ACH  
White = ACC  
Green = Earth Ground



## Model 67 & 67A Interface Box



**The 67/67A Interface Box also contains an emergency shut-off relay. When properly wired, it can be used for dispensers connected to control consoles equipped with an Emergency Stop switch.**

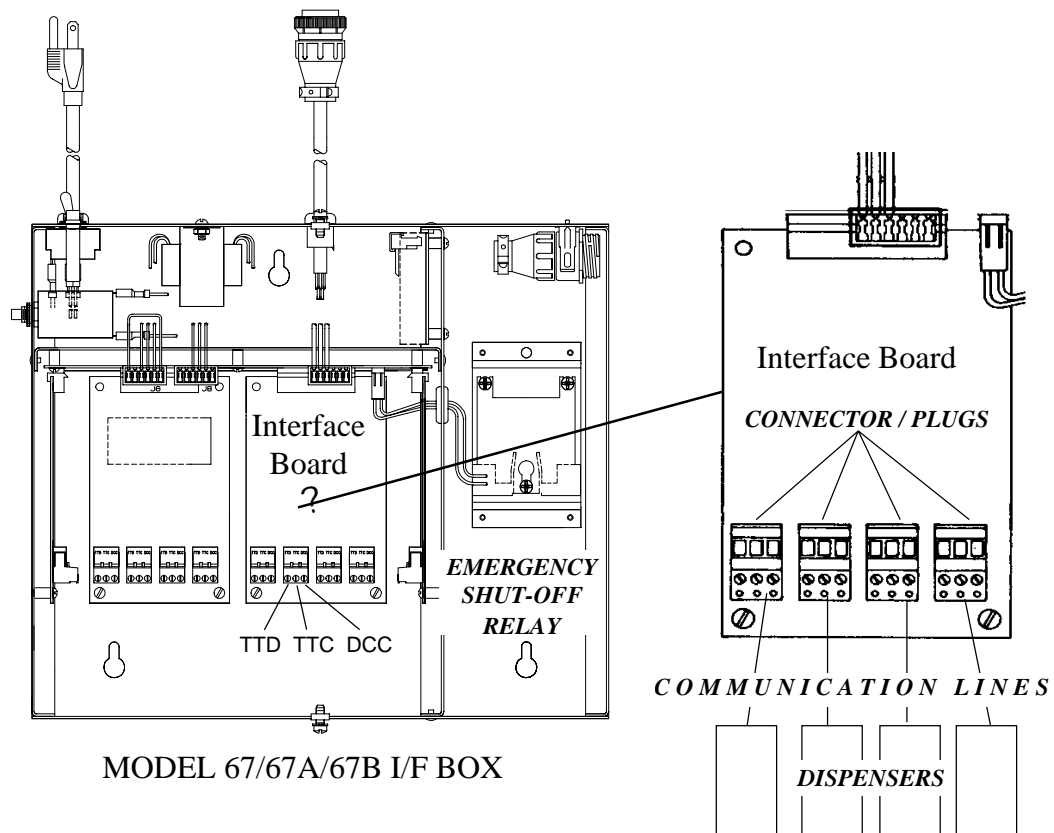
The Model 67 interface (I/F) box is required when a console is used with a Premier dispenser. The interface box allows the console to talk to the dispensers (TTD) and the dispensers to talk to the console (TTC).

There are 3 types of 67/67A interface boxes available:

- 67-8 Contains 2 interface boards and one console communication cable
- 67-16 Contains 4 interface boards and one console communication cable
- 67-32 Contains 4 interface boards and two console communication cables

Each I/F box has 2 or 4 interface boards. Each interface board has 4 connectors/plugs located at the bottom of the board. Each connector/plug can interface one (1) set of dispenser communications lines.

There is only one set of communication lines between the Premier dispenser and the interface box, regardless of the number of fueling positions or hoses.



MODEL 67/67A/67B I/F BOX



**The communication signal names (TTD, TTC, & DCC) are located on the front of the plugs and can only be seen if the plug is removed from the connector.**

## Model 67B Interface Box

### Use of Each Model and Configuration:



**The 67B can be configured for RS232. See Form 5115, 67B Interface Box Installation Guide.**

*(refer to the drawings on the next page for a pictorial definition)*

The Model 67B interface (I/F) box uses an RS232 to RS422 converter to provide RS422 communication to consoles, POS terminals, and hose controllers.

**The model 67B-8** is used to connect a maximum of 8 dispensers, with up to 16 fueling positions.

**The model 67B-16** (as configured at the factory, jumpers on the mother board are installed) is used to connect more than 8 dispensers, with a maximum of 16 dispensers; and a maximum of 16 fueling positions. If there are 8 or less dispensers, use the 67B-8.



**Jumpers JU1 & JU2 on the mother board are installed for this configuration.**

When the jumpers are installed, the external cable, labeled 1 - 16, is used for fueling positions 1 thru 16. This configuration is used for sites having a combination of single and dual sided dispensers requiring a 3rd Interface (I/F) board, and that do not have more than 16 fueling positions. This configuration still allows you to maintain consecutive positions 1 thru 16 utilizing a *single* cable leading to the console. Any of the I/F boards (on the left side or the right side) may be connected in any order to the dispensers.

**The model 67B-32** (jumpers are cut) is used when you are required to connect more than 8 dispensers with a maximum of 16 dispensers; and *more than 16 fueling positions* with a maximum of 32 fueling positions. If there are 8 or less dispensers, use the 67B-8. If there are more than 8 dispensers, and not more than 16 fueling positions, use the 67B-16 with jumpers installed as described above.



**Jumpers JU1 & JU2 on the mother board are cut for this configuration.**

By cutting the jumpers JU1 and JU2 (located on the Mother board), the left half of the box and the cable labeled 1-16 is dedicated to a maximum of 8 dispensers and fueling positions 1 thru 16. The right half of the box and the cable labeled 17-32 is dedicated to a maximum of 8 additional dispensers and fueling positions 17 thru 32.

### Definition of Terms

**Fueling positions:** A single sided dispenser has 1 fueling position and a dual sided dispenser has 2 fueling positions.

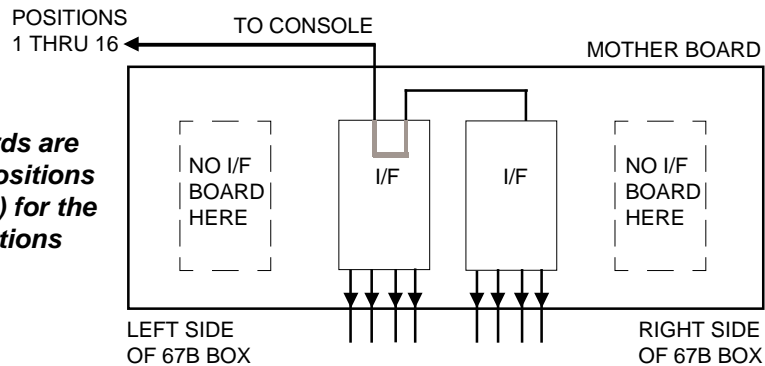
**Communication wiring:** Each dispenser has one set of 3 communication wires regardless of whether the dispenser has 1 or 2 fueling positions. Brown (Talk to Console), Red (Talk to Dispenser), and Orange (DC Common).

**I/F board:** Communications Interface board is located in the 67B Interface Box. This board allows console communication to and from the dispensers. Each board contains four connectors (which connect to the communication wiring) for a maximum of 4 single (1 to 4 fueling positions) or 4 dual sided dispensers (1 to 8 fueling positions).

**Model 67B-8 (8 dispensers and 16 fueling positions)**



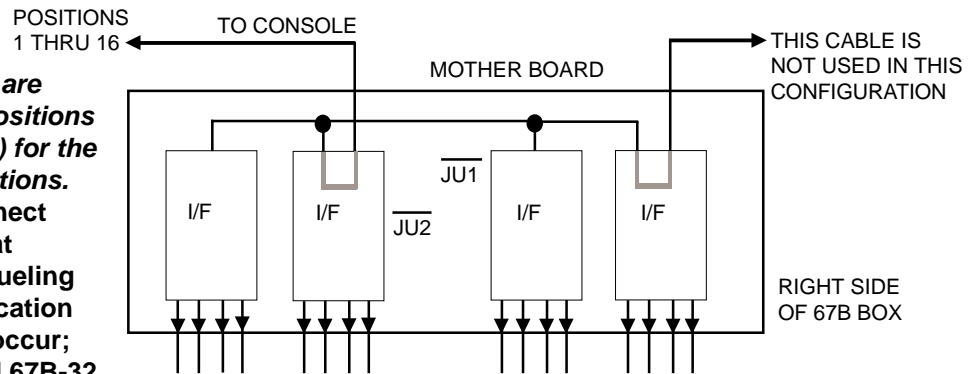
**These two circuit boards are dedicated to fueling positions 1 thru 16 (in any order) for the dispenser communications**



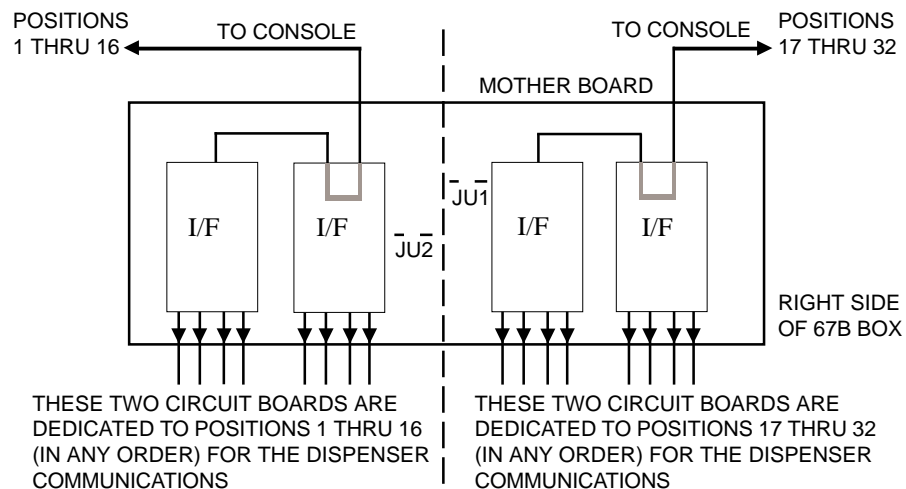
**Model 67B-16 from factory with jumpers installed (16 dispensers and 16 fueling positions)**



**All four circuit boards are dedicated to fueling positions 1 thru 16 (in any order) for the dispenser communications. Do not attempt to connect dispensers at sites that require more than 16 fueling positions or communication polling problems will occur; instead, refer to model 67B-32 with JU1 and JU2 cut.**



**Model 67B-32 with jumpers JU1 and JU2 cut (16 dispensers and 32 fueling positions)**



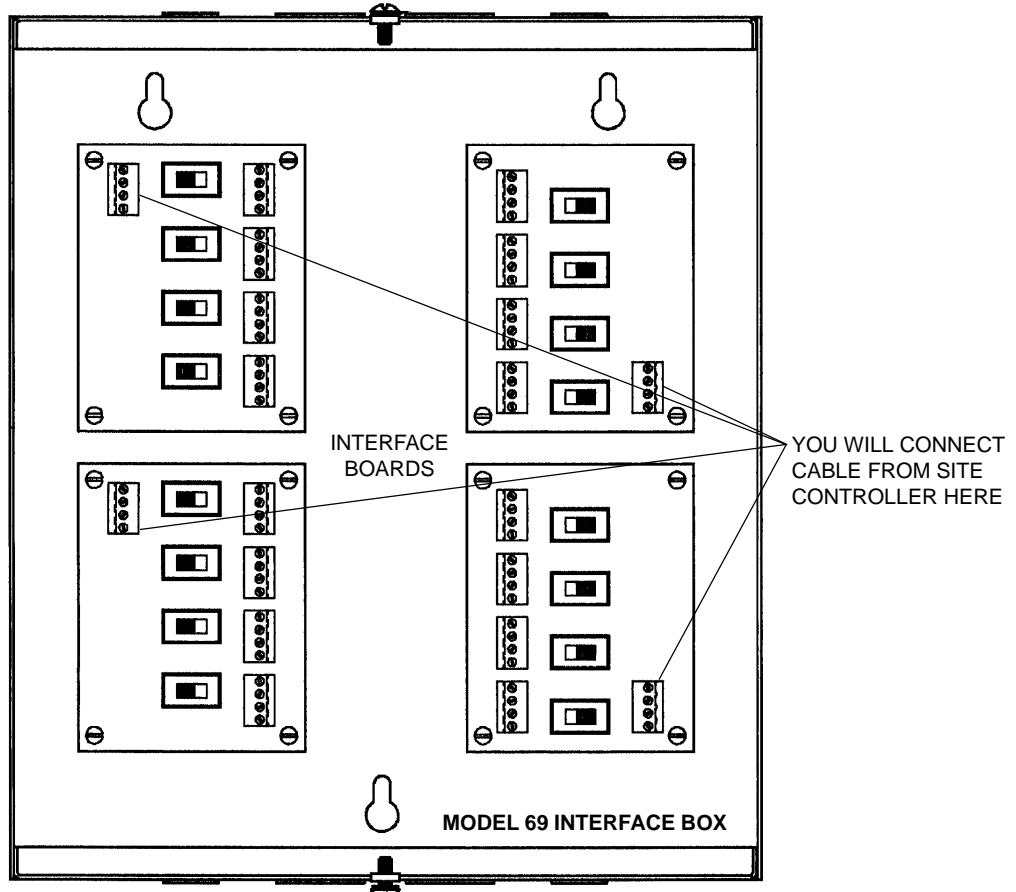
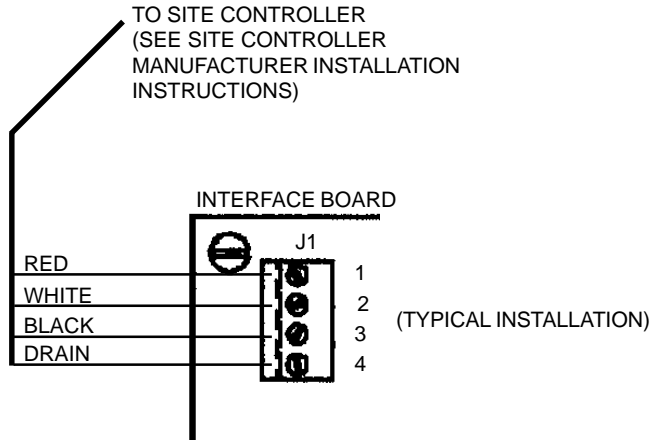
## Model 69 Interface Box

### Connections from Model 69 Interface Box to the Dispenser Connection Box

See the Premier C Site Preparation manual, Form 5869, for DPT cable specifications. Refer to the site controller installation manual for proper wiring configuration. Each Interface Board communicates with 1 to 8 DPTs (any model).



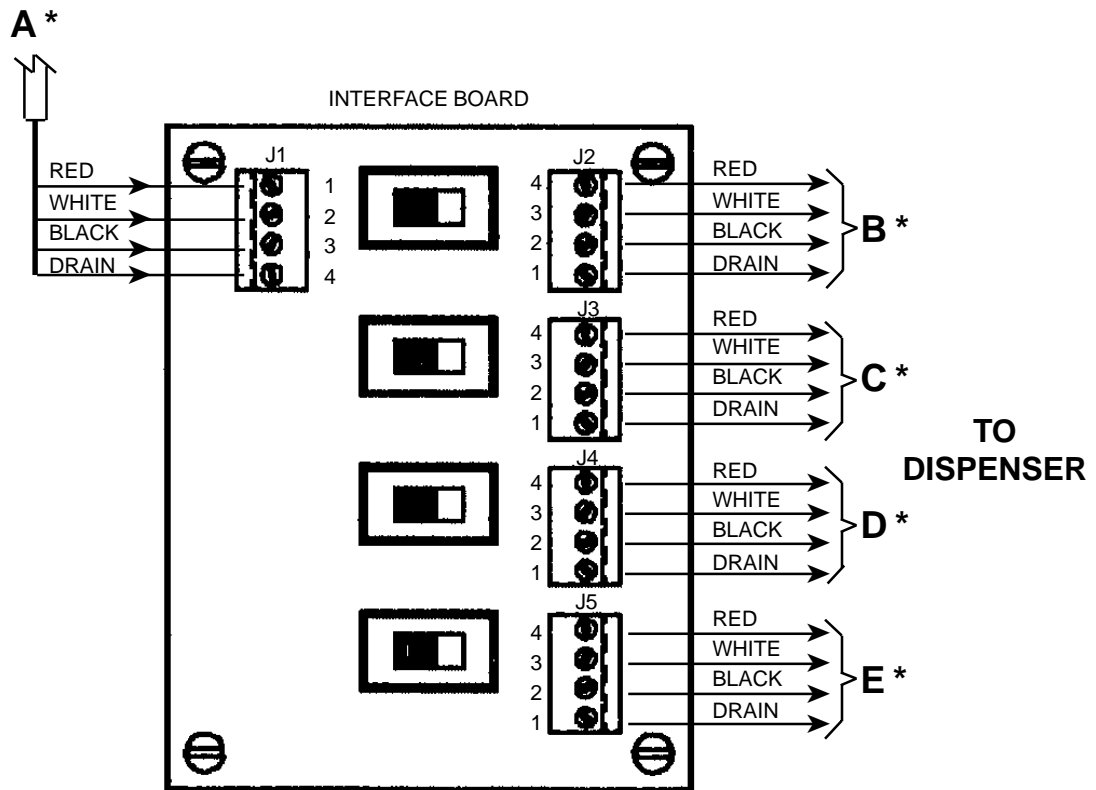
**For dispensers equipped with the Tokheim Debit System (TDS), refer to Form 5707, Tokheim Encryption Device (TED) Installation Manual.**



## Model 69 Interface Box (continued)

### Connections from Model 69 Interface Box to the Dispenser Connection Box

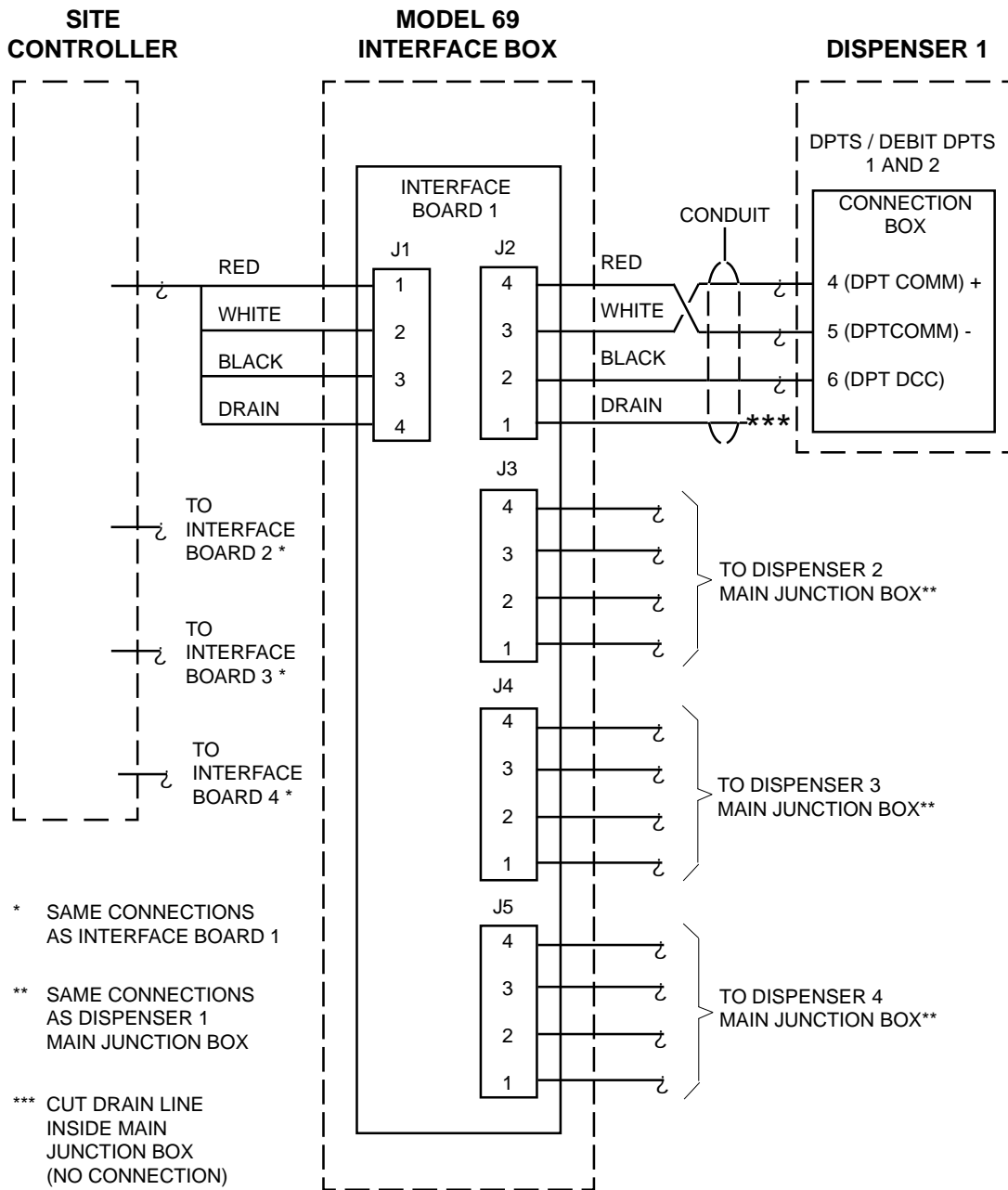
#### FROM SITE CONTROLLER



\* This drawing depicts typical connections to the DPT interface board (8 DPTs – any model). If the number of DPTs exceeds 8, connect additional interface boards in the same manner.

**Total Wire Length must not exceed 1000 feet.**  
**Total Wire Length = A + B + C + D + E combined.**

## DPT (any model) System Wiring Diagram: Model 69 Interface Box to the Dispenser Connection Box





## **Section 3: Equipment Assembly & Final Checks before Start-up**

### **Scope**

This section provides information for proper assembly and final checks of your Premier C series dispensers and related equipment. You should be familiar with, and have available for reference, the appropriate manuals for all other equipment connected to the dispensers.

## Installing Hoses

Install the nozzles, swivels (if applicable), and hoses by following the manufacturer's instructions. These items are not included with the dispenser.



**Nozzles, swivels, and hoses are not included with the dispenser.**

## Modifying Nozzle Boots

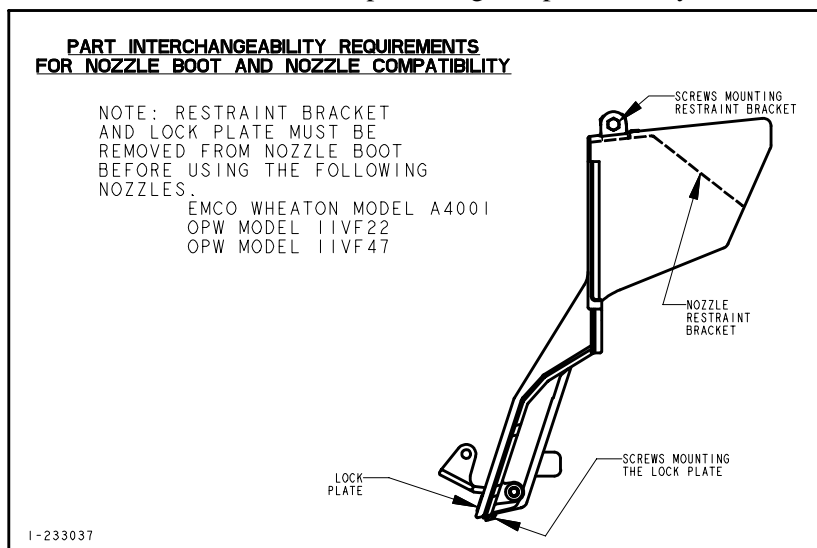
### Lift-to-Start Nozzle Boots

Dispensers equipped with lift-to-start nozzle boots will require modification of the nozzle boot if the following vapor recovery nozzles are being used:

- EMCO Wheaton Model A4001
- OPW Model 11VF22
- OPW Model 11VF47

Reference the drawing below for the following instructions.

1. Remove the nozzle restraint bracket by removing the two restraint bracket mounting screws.
2. Remove the lock plate by removing the lock plate mounting screws.
3. The nozzle boot can now accept the larger vapor recovery nozzle.



**Order parts from:  
Tokheim Service Parts  
PO Box 663  
Fremont, IN 46737  
Phone (219) 470-4710  
Fax 1-800-866-1999**

### Standard Nozzle Boots

Dispensers equipped with standard nozzle boots will require modification if the vapor recovery nozzles are too long. A nozzle boot extension is available from Tokheim Service Parts (part #232729-3). This part extends the bottom resting point so that longer nozzles can be use. Order one extension for each nozzle boot.

## Last Checks before Start-up

The following final checks should be performed prior to start-up and testing.

- All dispensers must be properly secured to their islands.
- All conduit work must be complete.
- All junction box covers must be secured.
- A sufficient volume of fuel must be put in the tank to ensure that the liquid level is above the bottom of the suction pipe or submerged pump.
- Remove any water in the tanks through a fill opening, using a suitable pump. *Do not use the Tokheim dispensers to remove water. Serious damage may occur.*
- Make sure that the dispenser manuals, keys, and consumables (printer paper) are given to the customer.

## Starting Up and Testing Dispensers

Checkout and start-up procedures must be performed by a Tokheim certified technician using the Warranty Registration and Checkout Procedures manual, Form 5004, and the Premier C Series Dispensers Programming manual, Form 5871.



**For information on setting DIP switches on the Expanded Computer board or DPT Controller boards, please refer to the Premier C Technical Reference manual (Form 4817A).**

### IMPORTANT

*It is the policy of Tokheim Corporation to pay its distributors for performing checkout and start-up procedures on NEW equipment sold directly by Tokheim and installed at major oil companies and/or independent or jobber locations within the distributor's marketing area. A Tokheim certified technician must perform the checkout/start-up. This program is limited to authorized Tokheim Distributors only.*



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## Section 4: Glossary

### A

Ampere, a measuring unit for electric current in a circuit.

### AC

Alternating current, also abbreviated VAC.

### ACC

AC Common, the current-carrying conductor at ground potential

### ACH

AC Hot, the current-carrying conductor at 120 VAC above ground potential.

### AMPS

Another abbreviation for ampere, see A above.

### ASR

(Tokheim) Authorized Service Representative.

### BATTERY BACKUP TIME

The time the dispenser will remain powered up after the loss of AC power.

### BLENDED PRODUCT

Product composed of a percentage (blend ratio) of two grades of fuel.

### BLENDER DISPENSER

Premier C series dispensers that allows the mixing of two grades of fuel to create a mid-range grade.

### CB(n)

Circuit breaker (n). Device used for over-current protection.

### CONSOLE OPERATION

**(with key arming)** - A fueling point operating mode that allows a sale to begin only after the arming key is placed on the keyswitch area.

**(with permanent arming)** - A fueling point operating mode that allows a sale to begin upon receipt of a valid approval command from the console.

### **CPU**

Central Processing Unit. The name of the circuit board which performs all the “computer” functions for programming and processing fuel sales.

### **CUSTOMER SERVICE**

Tokheim Solution Center 1-800-866-6762

### **DCC**

Direct Current Common.

### **DHC**

Dedicated Hose Controller. A Tokheim dispenser controller.

### **DPT**

Dispenser Payment Terminal

### **DUAL-PHASE PULSER**

A device in the dispenser that generates two pulse streams, one lagging the other by 90 degrees (quadrature). It is used by the CPU board to keep track of volume dispensed. U.S.A. measurement: 400 pulses = one gallon  
Metric measurement: 100 pulses = 1 liter.

### **FCC**

Federal Communications Commission.

### **GROUND**

A reference point for all device grounds located at the main power panel ground bus.

### **HZ**

Hertz, a unit of measure for frequency (cycles per second).

### **INSIGHT™**

A model of Tokheim Dispenser Payment Terminal that includes a graphic display and a standard or graphic printer.

**L1**

AC Hot in a 240 VAC system, 120 VAC above ground potential, 90 degrees out of phase from L2.

**L2**

AC Common in a 240 VAC system, 120 VAC above ground potential, 90 degrees out of phase from L1.

**N.F.P.A.**

National Fire Protection Agency.

**NON-BLEND DISPENSER**

A dispenser with up to four straight grade products and up to four hoses per side.

**PERIPHERAL EQUIPMENT**

All equipment designed or adapted for use with the Tokheim Premier dispensers, point-of-sale consoles, printers, etc.

**PSI**

Pounds per Square Inch. A unit of measure for pressure.

**PULSES**

Electrical impulses from dual-phase pulser that is used by the CPU board to keep track of the volume dispensed.

U.S.A. measurement: 400 pulses = one gallon

Metric measurement: 100 pulses = 1 liter

**RC**

Remote Control dispenser model. See REMOTE.

**REMOTE**

Dispensers having remote control of submerged pumps. Pump is located within the product tank, not in the dispenser.

**RS-485**

An EIA (Electronic Industries Association) standard that defines a protocol for serial data communications. Allows several devices to be connected to a single cable, distributed over a wide area.

### **SIDE A OR B**

All programming of a Premier dispenser is done on side A. Side B is the opposite of side A. To determine side A of the dispenser, see Section 2.

### **SLOW FLOW**

A dispenser mode in which the fast flow valve has closed while the slow flow valve has remained open to provide a reduced rate of fuel flow.

### **STAND-ALONE OPERATION**

The mode of operation when the dispenser does not require interaction with a console to dispense product.

### **SUCTION PUMP**

A pump that is located in the dispenser and pulls the product from the tanks by suction.

### **TDS**

Tokheim **D**ebit **S**ystem - provides secure debit transactions at the dispenser when used with the Tokheim Encryption Device (TED).

### **TDS Plus**

Tokheim **D**ebit **S**ystem Plus - the name for the original debit system provided by Tokheim that incorporates a secure pin pad at the dispenser.

### **TED**

Tokheim **E**ncryption **D**evice – used with Tokheim Debit System (TDS) to provide secure debit transactions.

### **THHN**

Thermoplastic High Heat Resistant, Nylon Coated Wire

### **THWN**

Thermoplastic Heat and Water Resistant, Nylon Coated Wire

**TTC**

Talk to Console communication signal.

**TTD**

Talk to Dispenser communication signal.

**TRANSVERSE DISPENSER**

Transverse dispenser models have their products arranged in a transverse (reverse) order from side A to side B. The last two letters of the model number identifies a transverse left (TL) or a transverse right (TR) dispenser. Programming for transverse operation is performed in Modes F23 and F29.

**U.L.**

Underwriter's Laboratories.

**VAC, AC**

AC Voltage, Alternating Current

**VDC**

DC Voltage, Direct Current



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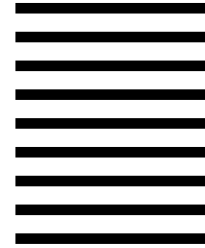


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