

# **INSTALLATION INSTRUCTIONS**

## **115V NCR OPTIC HEATER KIT**

### **6003-K001-V003**

B005-0000-2471

497-0524640 Issue D





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To maintain the quality of our publications, we need your comments on the accuracy, clarity, organization, and value of this book. Please use the link below to send your comments.

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# Preface

## Audience

This book is written for end users (System Administrator and Maintenance Technician), NCR Field Engineering, and VAR/OEM Hardware and System Integrators

**Notice:** This document is NCR proprietary information and is not to be disclosed or reproduced without consent.

## SAFETY AND COMPLIANCE INFORMATION

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing the Wayne Helix Printer. Before proceeding, check the relevant hazard and safety information. Fire, explosion or electrical shock could occur and cause death or serious injury if these safe service procedures are not followed.

All work must be carried out in accordance with NFPA (National Fire Protection Association) 30, 30A, and 70, and any local authority.

### PRELIMINARY PRECAUTIONS

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

### EMERGENCY TOTAL ELECTRICAL SHUT-OFF

Locate the forecourt emergency fuel shut-off valves and electrical isolation breakers. Understand how to use these, should they be required. Locate the switch or circuit breakers that shut-off all power to all fueling equipment and dispensing devices.

### TOTAL ELECTRICAL SHUT-OFF BEFORE ACCESS

Any procedure requiring access to electrical components or the electronics of a pump/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 the OPTIC heater kit.

### EVACUATION, BARRICADING, AND SHUT-OFF

Any procedures requiring accessing a pump/dispenser head requires the following three actions:

- An evacuation of all unauthorized persons and vehicles
- Using safety tape or cones as barricades to the effected units
- A total electrical shut-off of the affected unit(s)

### SAFETY EQUIPMENT

Throughout the Disassembly and Installation procedures of the OPT Retrofit Kit involves working with and around hazardous materials and apparatuses. Use of proper safety equipment such as ANSI (American National Safety Institute) Personal Protective Equipment such as safety glasses, insulated gloves, and protective footwear.

## **READ THE MANUAL**

Read, understand and follow this manual and any other labels or related materials supplied with the equipment. If you do not understand a procedure, call NCR. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

## **FOLLOW THE REGULATIONS**

Regulations in OSHA (Occupational Safety and Health Administration), national, state and local codes, including customer requirements 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 and may affect the safe use and operation of the equipment.

## SAFETY SYMBOLS AND TERMINOLOGY

**Caution:** 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 hazard. Obey safety directives that follow this symbol to avoid possible injury or death.

### Signal Words

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

**Caution:** Designates a hazard or unsafe practice which may result in minor injury, property or equipment damage.

**Note:** To emphasize points or remind installer of something, or to indicate the possibility of minor problems in the outcome of what installer is doing.

## OUT OF BOX FAILURE (OBF)

If you experience an out of box failure (OBF) during installation or staging related to a missing, wrong or defective unit or item, simply provide NCR with a detailed description of the issue and the item will be replaced free of charge. For assistance with this process send an email to [CustomerSat.Retail@ncr.com](mailto:CustomerSat.Retail@ncr.com) with the following details:

- NCR Sales Order # (Sales Order # are located on the box)
- Date of Product Installation
- Product Model #
- Unit Serial #
- NCR part # of defective/missing/wrong component
- Description of Failure (please be specific. For example: "display will not power on")
- Customer/Requestor's contact name, phone number and/or e-mail address
- Address to ship replacement part(s)

Transport the product in its original packaging to prevent impact damages.

If you do not have access to a computer, you may leave a voice message at: 1-800-528-8658 (USA), or (International) +1-770-623-7400. When leaving a message, please provide a phone number and/or an email address so NCR can contact you if additional details are needed.

**Note:** Used equipment that experiences a failure does not qualify as an OBF and should go through the NCR warranty process.

## WARRANTY

Warranty terms vary by region and country.

All parts of this product that are subject to normal wear and tear are not included in the warranty. In general, damages due to the following are not covered by the warranty.

- Improper or insufficient maintenance
- Improper use or unauthorized modifications of the product.
- Inadequate location or surroundings.

For detailed warranty arrangements please consult your contract documents.

## RETURNING DEFECTIVE HARDWARE FOR SERVICE

Use the following procedure to report/return defective hardware.

- Call the NCR Customer Care Center at 1-800-262-7782 and have the following information available when you place the call.
- Class/Model number of the defective equipment
- Serial Number of the defective equipment
- Equipment location in the store
- Description of the problem, including any system error codes, error condition, or guidance to the area of failure.

The NCR Agent will provide you with a work order number, which serves as your Return Material Authorization (RMA). Please provide the RMA on the outside of the shipping box.

**Note:** A work order must be opened for each device that is shipped for repair.

## REVISION RECORD

Issue	Date	Remarks
A	February 2019	First Issue
B	May 2020	Updated to accommodate new PID and UL certificate
C	January 2021	Updated Helix Standard section with new bracket and bracket placement.
D	August 2021	Global Replace FROM 6003-K001-V002 TO6003-K001-V003

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# INSTALLATION COMPONENTS

## REQUIRED OR PRE-INSTALLED ADDITIONAL KITS

Additional Required Retrofit Kits	UL Listing Information	Amount Required
Option 1: OPTIC 5 for Wayne Vista	UL Listed by Report Retrofit Kit Part Number 6001-0007-8801	One per side of the dispenser
Option 2: OPTIC 5 for Gilbarco Advantage	UL Listed by Report Retrofit Kit Part Number 6001-0001-8801	One per side of the dispenser
Option 3: OPTIC 5 for Tokheim Premier B	UL Listed by Report Retrofit Kit Part Number 6001-0008-8801	One per side of the dispenser
Option 4: OPTIC 5 for Tokheim Premier C	UL Listed by Report Retrofit Kit Part Number 6001-0009-8801	One per side of the dispenser
Option 5: OPTIC 5 for Gilbarco Encore 300/500	UL Listed by Report Retrofit Kit Part Number 6001-0003-8801	One per side of the dispenser
Option 6: OPTIC 5 for Gilbarco Encore 500S	UL Listed by Report Retrofit Kit Part Number 6001-0004-8801	One per side of the dispenser
Option 7: OPTIC 5 for Gilbarco Encore 500S Non-ECIM	UL Listed by Report Retrofit Kit Part Number 6001-0011-8801	One per side of the dispenser
Option 8: OPTIC 5 for Wayne Ovation1	UL Listed by Report Retrofit Kit Part Number 6001-0005-8801	One per side of the dispenser
Option 9: OPTIC 5 for Wayne Ovation2	UL Listed by Report Retrofit Kit Part Number 6001-0012-8801	One per side of the dispenser
Option 10: OPTIC 5 for Wayne Eclipse	UL Listed by Report Retrofit Kit Part Number 6001-0006-8801	One per side of the dispenser
Option 11: OPTIC 5 for Gilbarco Advantage – NCR Solution	UL Listed by Report Retrofit Kit Part Number 6001-0013-8801	One per side of the dispenser
Option 12: OPTIC 12 for Gilbarco Encore 500S	UL Listed by Report Retrofit Kit Part Number 6002-0001-8801	One per side of the dispenser
Option 13: OPTIC 12 for Gilbarco Encore 300/500	UL Listed by Report Retrofit Kit Part Number 6002-0004-8801	One per side of the dispenser
Option 14: OPTIC 12 for Gilbarco Encore500S Non-ECIM	UL Listed by Report Retrofit Kit Part Number 6002-0005-8801	One per side of the dispenser
Option 15: OPTIC 12 for Wayne Ovation1	UL Listed by Report Retrofit Kit Part Number 6002-0002-8801	One per side of the dispenser
Option 16: OPTIC 12 for Wayne Ovation2	UL Listed by Report Retrofit Kit Part Number 6002-0006-8801	One per side of the dispenser
Option 17: OPTIC 12 for Wayne Helix Headless	UL Listed by Report Retrofit Kit Part Number 6002-0003-8801	One per side of the dispenser
Option 18: OPTIC 12 for Wayne Helix Standard	UL Listed by Report Retrofit Kit Part Number 6002-0007-8801	One per side of the dispenser

## HEATER KIT CONTENTS

**Note:** One heater kit is used per dispenser.

**Caution:** Do not proceed unless two NCR OPTIC5 or OPTIC12 kits are being installed (or already installed) into the applicable dispenser.

115 Volt OPTIC Heater Kit Contents (497-0521546; 6003-K001-V003)

ITEM	P/N	QTY	DESCRIPTION
1	006-8611215	8	SCREW,6-32X0.500, MACHINE, PHIL, PAN, STL, (4 Used)
2	006-8611426	8	NUT - #6-32 KEP LOCK (4 Used)
3	006-8611458	4	CABLE CLAMP, 3/16" (2 Used)
4	006-8627165	3	SCREW, HI-LO #6-19 X 3/8", PAN HEAD POZIDRIV, ZINC-PLATED (2 Used)
6	006-8616073	12	CABLE TIE - 2.5MM WIDTH, 100MM LENGTH (9 Used)
14	006-8627144	10	SCREW, M4X12, PANHEAD, POZIDRIV, ZINC-PLATED (2 Used)
15	497-0522505	1	SHIELD BRACKET MOUNT, OPTIC HEATER
16	006-8617730	2	LOCKNUT, 8-32 KEPS, CLEAR TRIVALENT
18	497-0522788	1	OFFSET LINK PLATE, OPTIC HEATER
19	497-0522796	1	WIRE GUARD, OPTIC HEATER
20	006-8626667	4	SCREW, #8-32X3/8", TORX, THREAD-FORMING, ZINC-PLATED STEEL (4 Used)
21	NCR Heater Assembly	1	OPTIC Heater
22	497-0524577	1	OPTIC heater Mounting plate
23	497-0529988	1	Heater Mount, Helix Standard
24	006-8627136	2	NUT, M4 BINX
25	007-7023310	1	M2.9x6mm Self Thread cutting screw

**Notes regarding placement or mounting location of thermostat:**

- For all dispensers, the thermostat mounting location must be lower than the heater. This will ensure that the thermostat is at a colder location within the dispenser and does not shut off the heater due to warmer air flow from the heater.
- The thermostat should not be mounted in front of the hot air exit of the heater. This will ensure that the thermostat does not read an artificially warm dispenser cavity temperature.
- Follow thermostat placement instructions in this guide for optimal heater operation.

**Notes regarding heater operation:**

1. **CAUTION:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit. Any remaining cables hanging in

front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

2. **WARNING:** Heater surfaces are hot! Do not touch!

## **REQUIRED TOOLS**

- Phillips head screw driver and adjustable wrench for heater bracket installation
- Torx screwdriver for tightening cage against heater bracket
- Tape measure or 12-inch ruler for adjusting and setting heater cage length
- Applicable keys to open/unlock each dispenser type

## **RECOMMENDED MATERIALS**

N/A

# PREPARATION AND INSTALLATION OF THE 115V NCR OPTIC HEATER KIT INTO OPTIC-EQUIPPED DISPENSERS

**Note:** The installer will be instructed to disconnect and reconnect connectors from the Non- CUB or Non Invenco Link power supply.

**Note:** The terms CUB and Invenco Link are used interchangeably throughout this document. The Invenco Link (or CUB) is a communication device that creates a high-speed network based on IEEE 1901.

**Note:** The power supply with the CUB attached as shown in Figure 1 below is **NOT** to be used to provide A/C power to the OPTIC heater on any dispenser.



Figure 1

## WAYNE VISTA DISPENSER

1) Locate Side B of the dispenser.

**Note:** For the purposes of this procedure, Side B of the dispenser refers to the side without the manufacturer's label/Serial Number Plate.

**Note:** References to "left-hand" and "right-hand" are as viewed into the pump on the Side the installer is working on.

2) Use a Wayne Security Key to unscrew the two security bolts (Figure 2) at the top left and top right of the electronics head bezel.

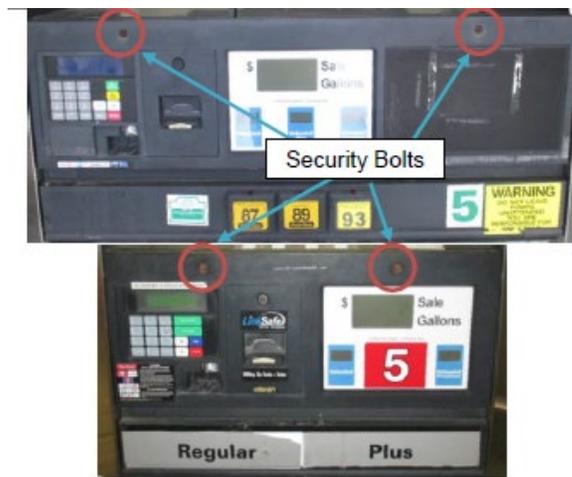


Figure 2

3) Lower the electronics head bezel by pulling the top forward until it fully rests on the suspension cables.

4) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).

**Note:** For Vista, the power supply bracket can remain mounted to the inner dispenser wall during installation of the heater in the following steps, even though the pictures below do show the power supply bracket removed from the dispenser during heater installation.

5) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Advantage, Vista, Encore, Eclipse, Tokheim B alignment mark as shown in Figure 3 and Figure 4.

**View of alignment without Wire Guard (497-0522796) present.**

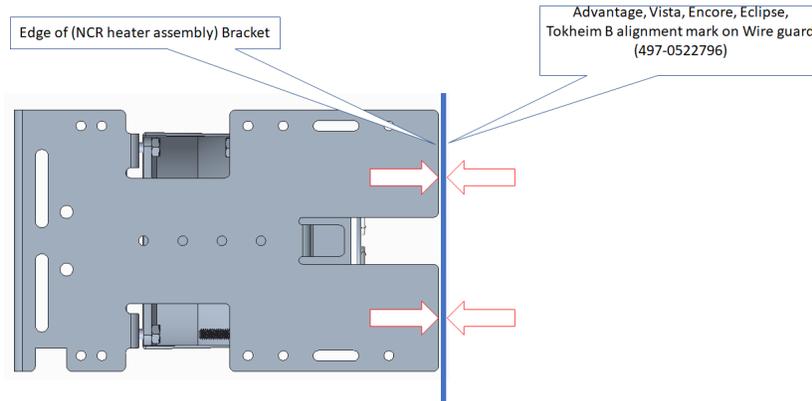


Figure 3

**View of alignment with Wire Guard (497-0522796) present.**

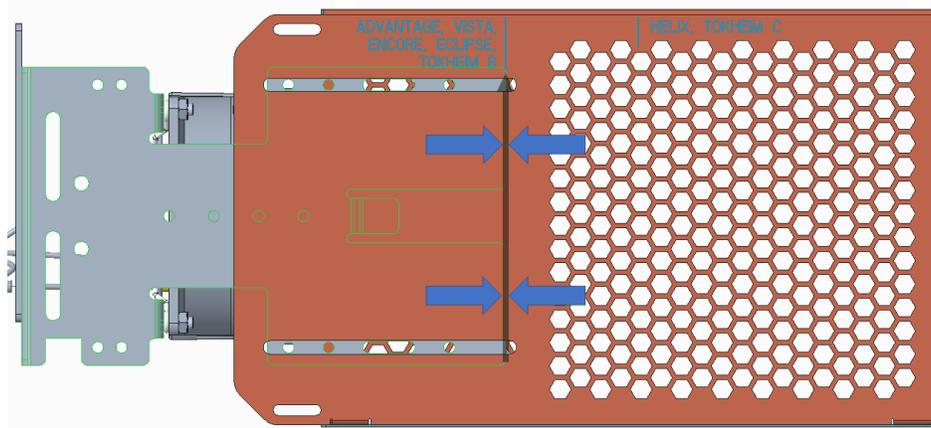


Figure 4

- 6) Insert and tighten four of the thread forming 006-8626667 screws at the locations shown in Figure 5 to secure the wire guard (497-0522796) to the NCR heater assembly.

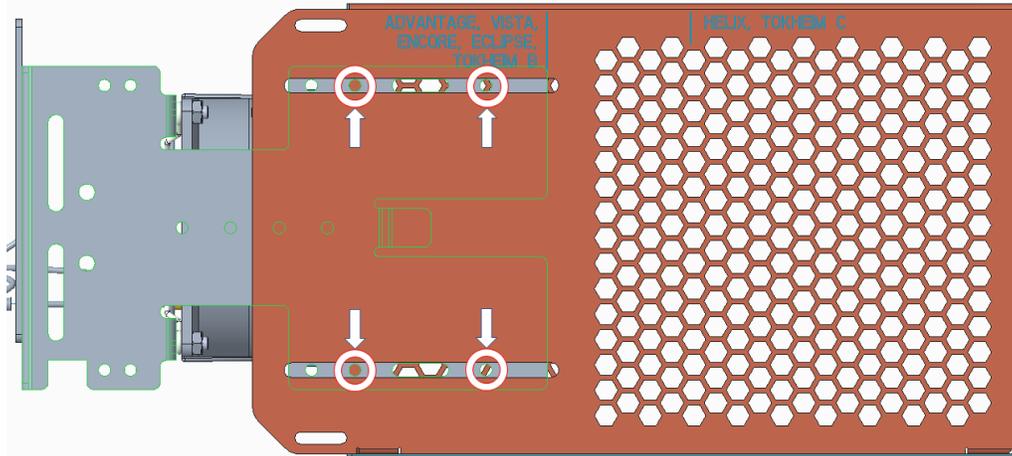


Figure 5

- 7) Mount NCR heater + wire guard (497-0522796) assembly to OPTIC Heater Shield Bracket Mount (497-0522505) using two pairs of 6-32 screws and nuts (006-8611215; 006-8611426). As shown in Figure 6 and Figure 7 below

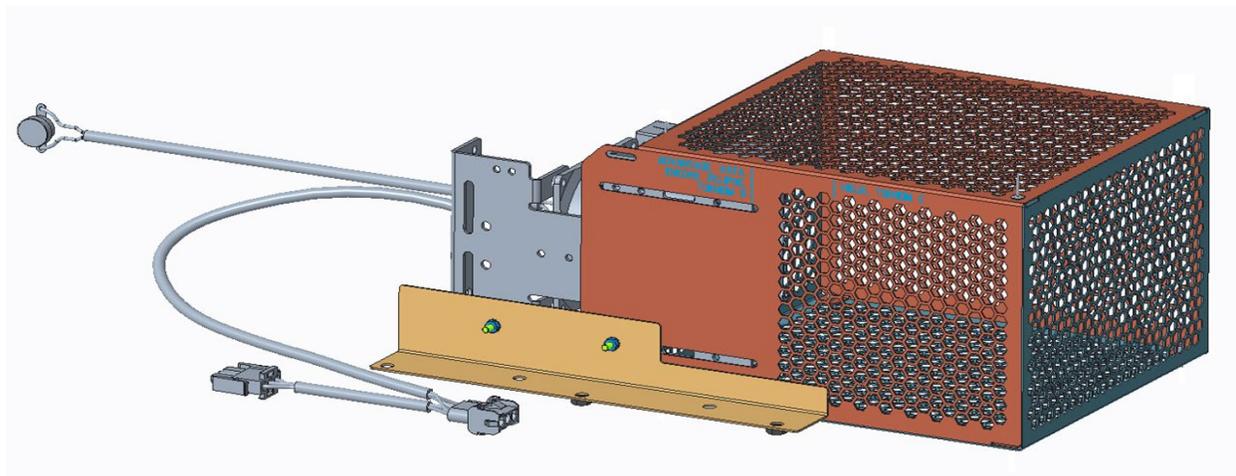


Figure 6

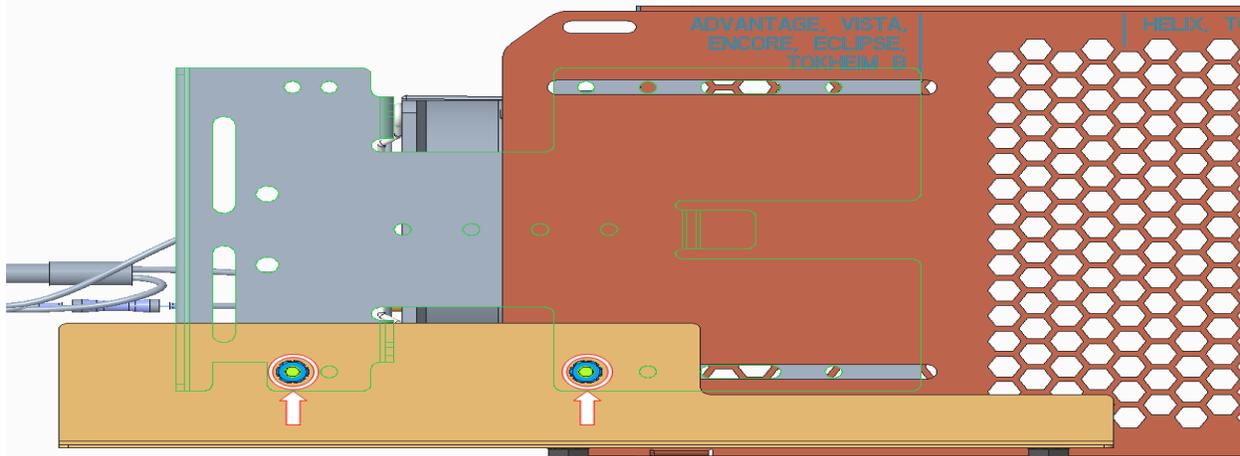


Figure 7

- 8) Identify the retrofit power supply assembly without the Invenco Link installed. It should be approximately located towards the front left of the B side of the dispenser. See Figure 8 below.

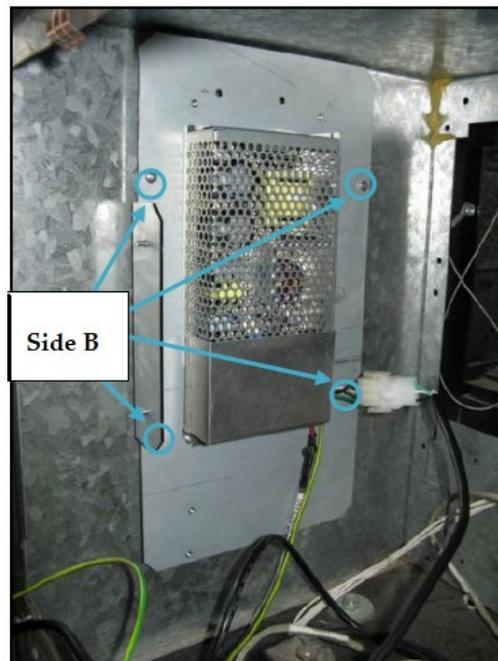


Figure 8

- 9) Secure the NCR heater + wire guard (497-0522796) + OPTIC Heater Shield Bracket Mount (497-0522505) assembly to the non-Invenco Link installed power supply bracket with the heater outlet facing the top of the power supply bracket as shown in Figure 9 and Figure 10 using two of the provided 8-32 nuts (006-8617730).

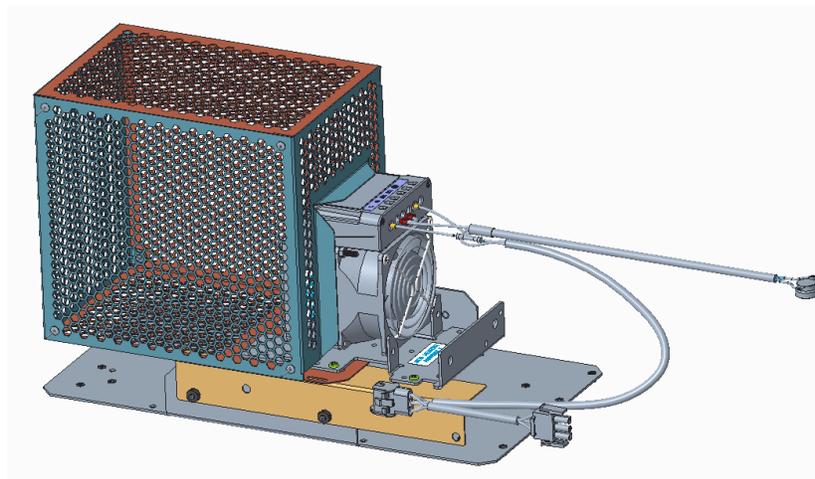


Figure 9

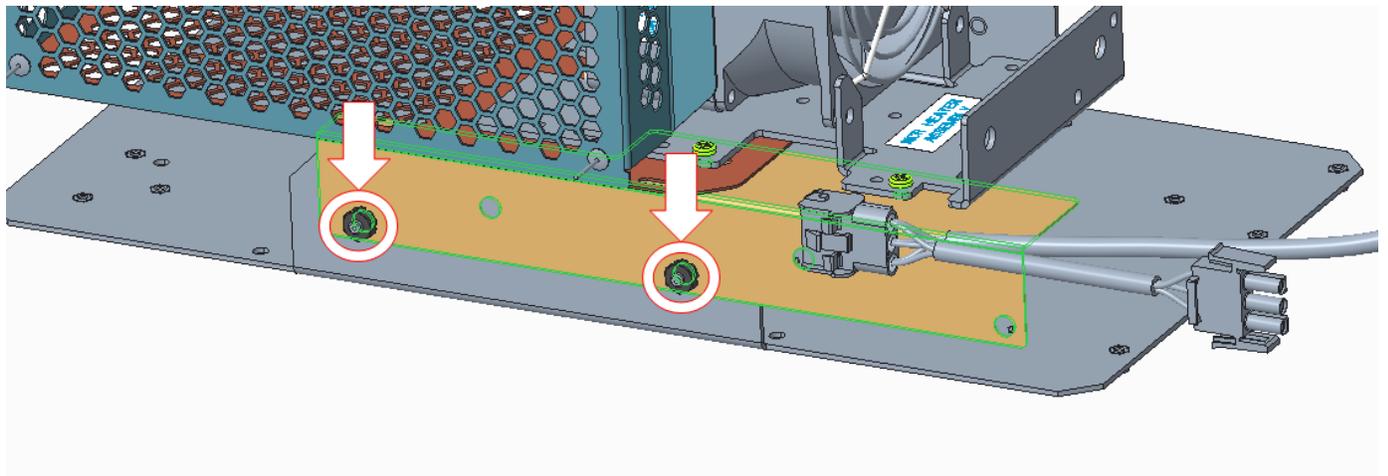


Figure 10

10)The heater is to be installed in the following orientation in the dispenser as shown with the heater outlet facing upwards in a vertical orientation as shown in Figure 11 below.



Figure 11

11) Secure thermostat (identified in Figure 12) to the bottom corner hole in the OPTIC Heater Shield Bracket Mount (497-0522505) as shown in Figure 13 or on the NCR heater assembly bracket as shown in Figure 14 using one of the supplied cable ties (006-8616073).

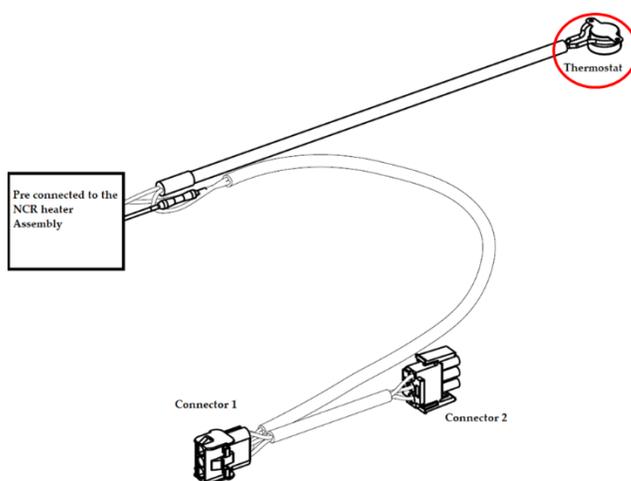


Figure 12

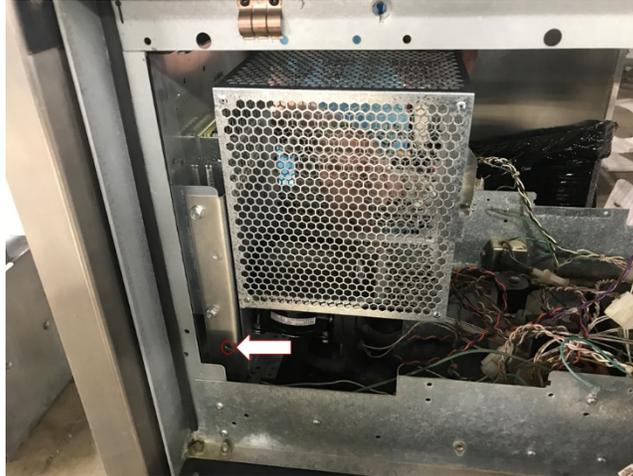


Figure 13

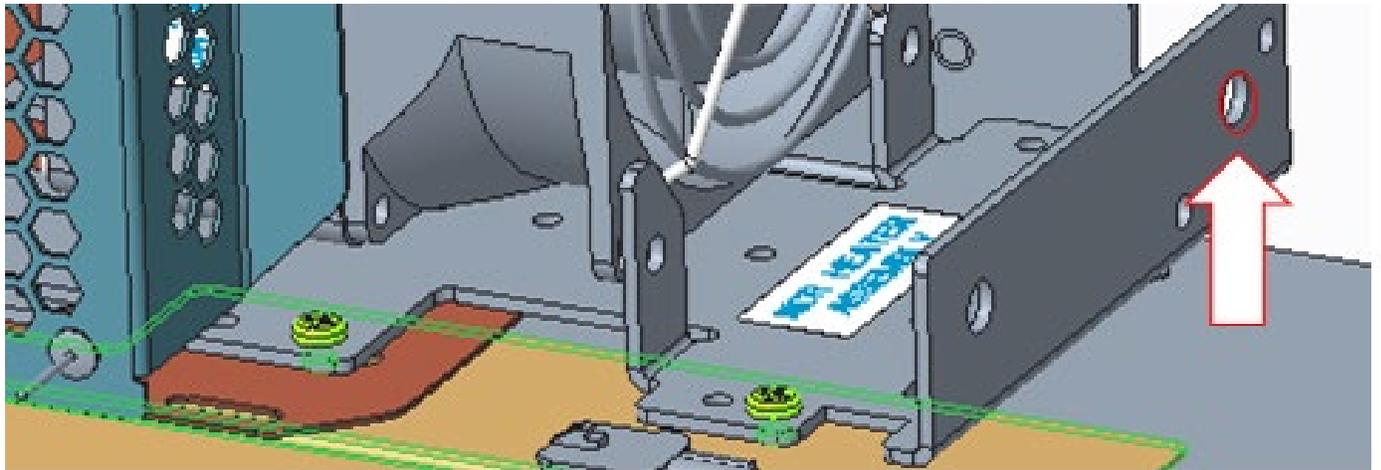


Figure 14

12) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 15 below.

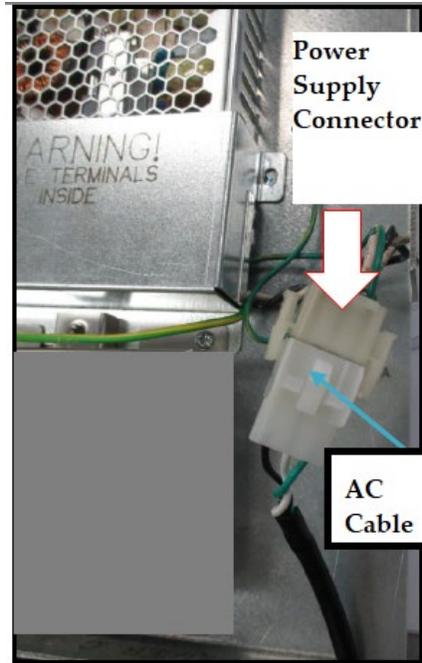


Figure 15

13) Attach Connector 1 (identified in Figure 16) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 17.

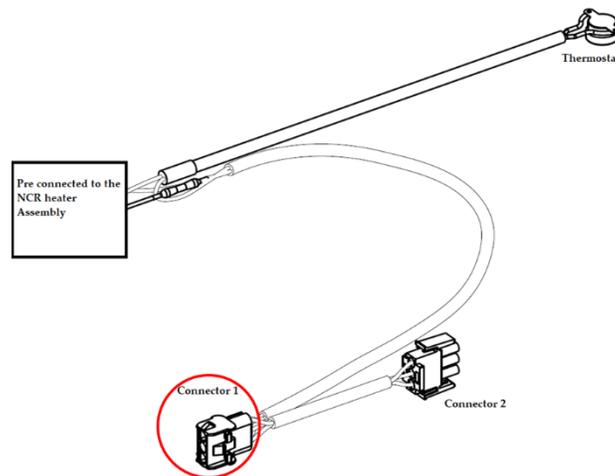


Figure 16

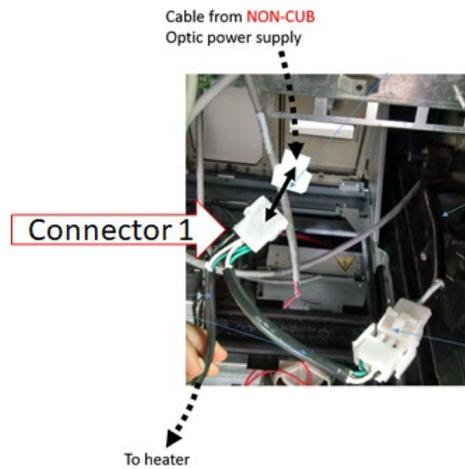


Figure 17

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

14) Affix Connector 2 (identified in Figure 18) to the existing dispenser A/C power cable as shown in Figure 19.

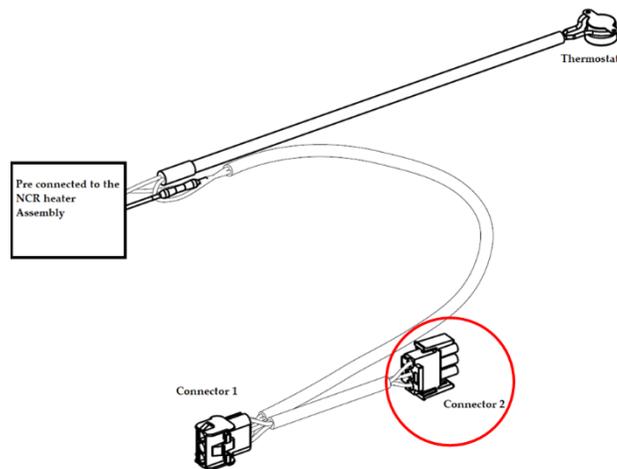


Figure 18

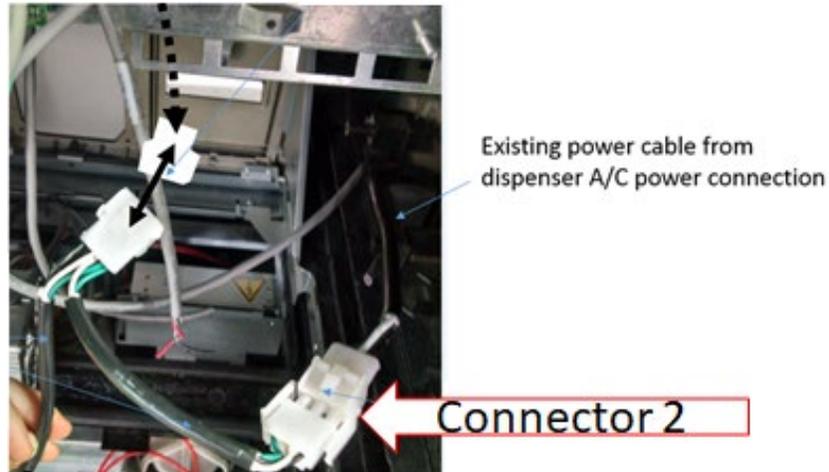


Figure 19

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit.

**Warning:** Heater surfaces are hot! Do not touch!

- 15) Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained away from the heater outlet using one of the additional supplied cable ties (006-8616073).
- 16) All wires are to be routed away from any sharp edges and door joints/gaskets.
- 17) Raise the electronics head bezel by pushing the top of the head bezel upward toward the pump chassis ensuring no cables or wiring is in the threshold of the opening.
- 18) Lock the dispenser by using a Wayne Security Key to fasten the two security bolts (Figure 20) at the top left and top right of the electronics head bezel.

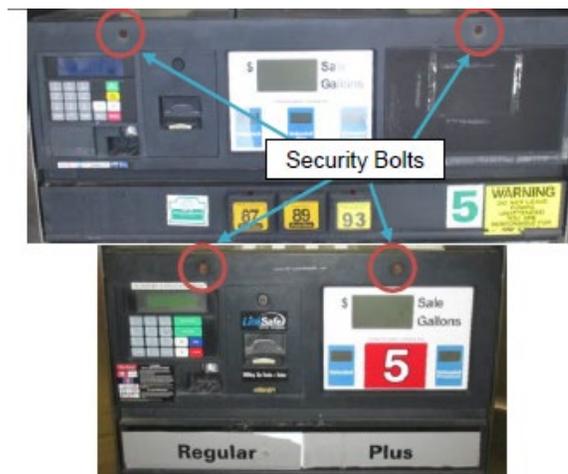


Figure 20

## GILBARCO ADVANTAGE DISPENSER

### Opening the Gilbarco Advantage Wide Dispenser

- 1) Identify the security bolt locations (either 2 or 4 bolts depending on the pump configuration). See Figure 21 below.



Figure 21

**Note:** The security bolts have a captive shield attached. Do not remove or discard from the dispenser.

- 2) Disengage the security bolts from the dispenser using a 3/8in nut driver.
- 3) Unlock the two dispenser electronic options doors to access the inner latches using GVR security key. See Figure 22.



Figure 22

- 4) Disengage 4 inner latches holding the main dispenser door. see Figure 23



Figure 23

5) Open the large dispenser door

## Opening the Gilbarco Advantage Narrow Dispenser

1) Identify the security bolt locations (either 2 or 4 bolts depending on the pump configuration). See Figure 24



Figure 24

**Note:** The security bolts have a captive shield attached. Do not remove or discard from the dispenser.

2) Disengage the security bolts from the dispenser using a 3/8in nut driver.

- 3) Unlock the dispenser electronic options door to access the inner latches using GVR security key. See Figure 25



Figure 25

- 4) Disengage the vertical slide latch located inside the dispenser. See Figure 26



Figure 26

- 5) Disengage 3 inner latches holding the main dispenser door. See Figure 27.

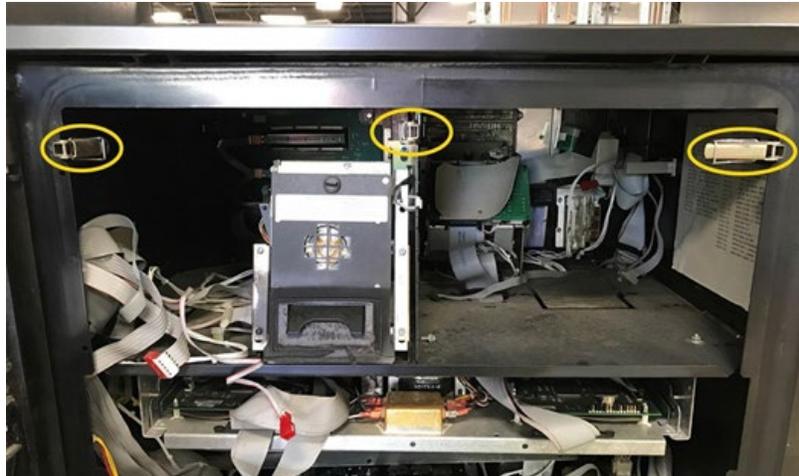


Figure 27

6) Open the large dispenser door.

#### *OPTIC Heater Install*

- 1) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
- 2) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Advantage, Vista, Encore, Eclipse, Tokheim B alignment mark as shown in Figure 28 and Figure 29.

#### **View of alignment without Wire Guard (497-0522796) present.**

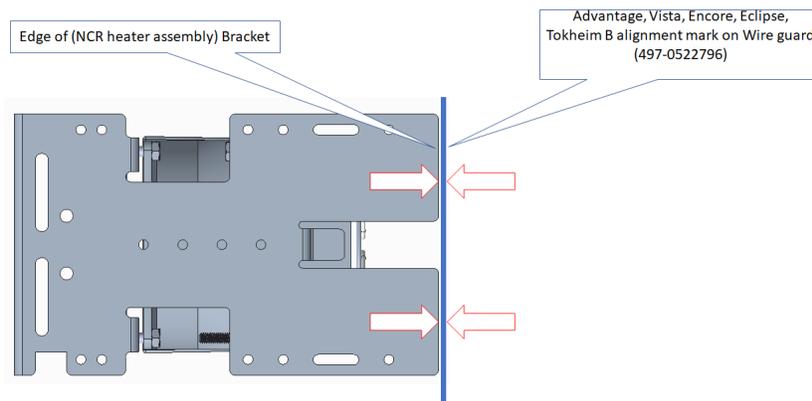


Figure 28

**View of alignment with Wire Guard (497-0522796) present.**

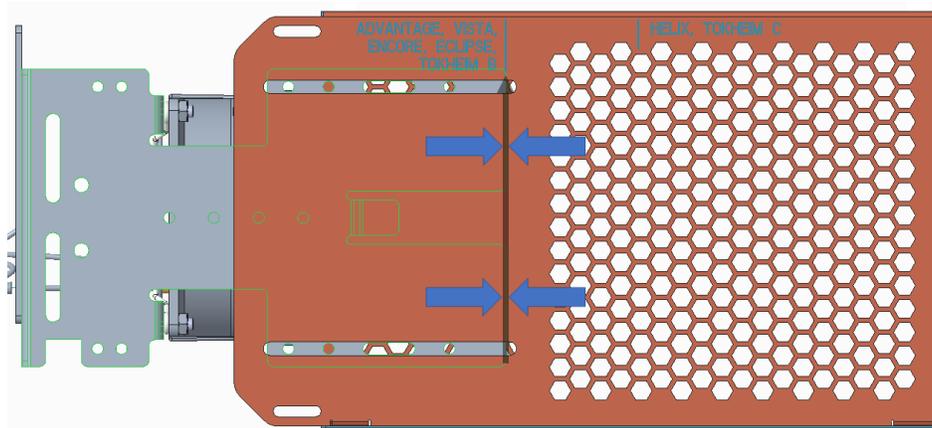


Figure 29

- 3) Insert and tighten two of the thread forming 006-8626667 screws at the locations shown in Figure 30 to secure the wire guard (497-0522796) to the NCR heater assembly.

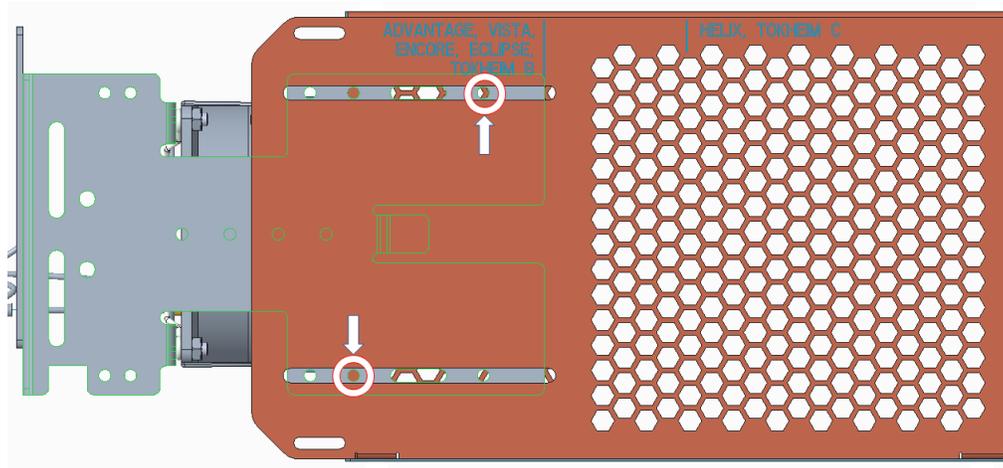


Figure 30

- 4) The heater (NCR heater assembly) with wire guard attached is to be oriented as shown in Figure 31 when mounting it inside the dispenser.

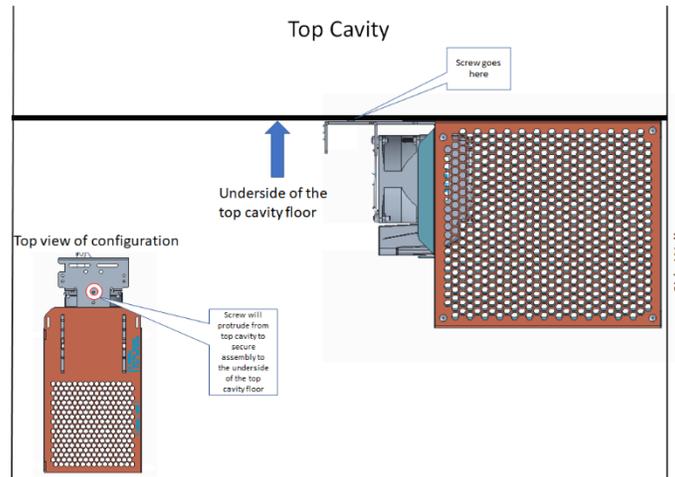


Figure 31

- 5) Mount the heater assembly to the underside of the top cavity floor at as shown in Figure 32, Figure 33, Figure 34, and Figure 35 using one provided thread-forming screw 006-8626667.

**Note:** Ensure that the NCR heater Assembly+Wire Guard Assembly should not interfere with the hole that is used for wire routing between the top and bottom enclosure cavities.



Figure 32

006-8626667 goes into this through hole from top cavity to mount heater in bottom cavity

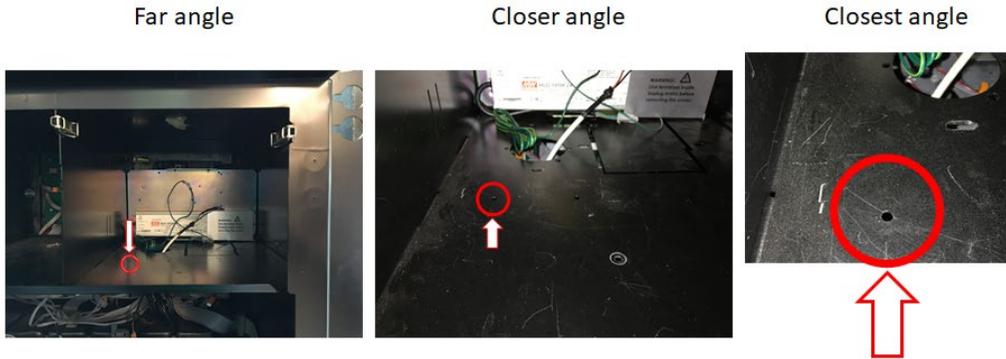


Figure 33

Looking from bottom cavity to the underside of the top cavity floor

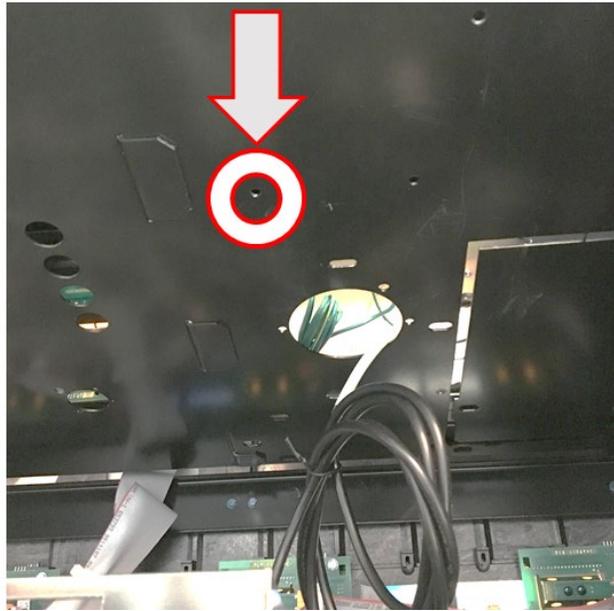


Figure 34

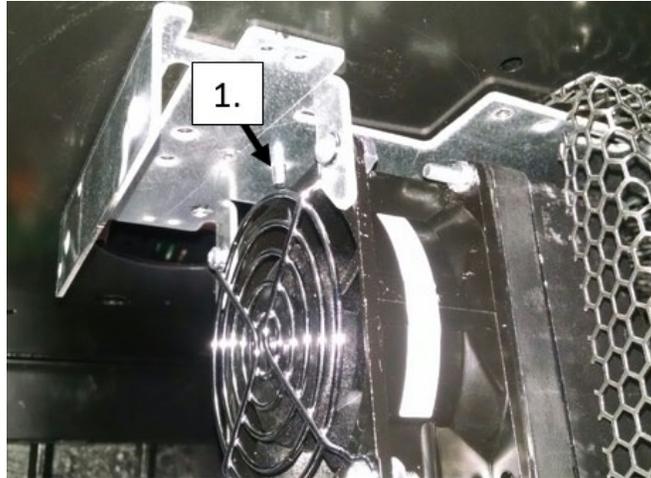


Figure 35

**Note:** The heater must face the side wall of the dispenser.

- 6) Secure the thermostat (identified in Figure 36) to any available opening along the bottom rail of the dispenser [2] using a supplied cable tie (006-8616073) as shown in Figure 37.

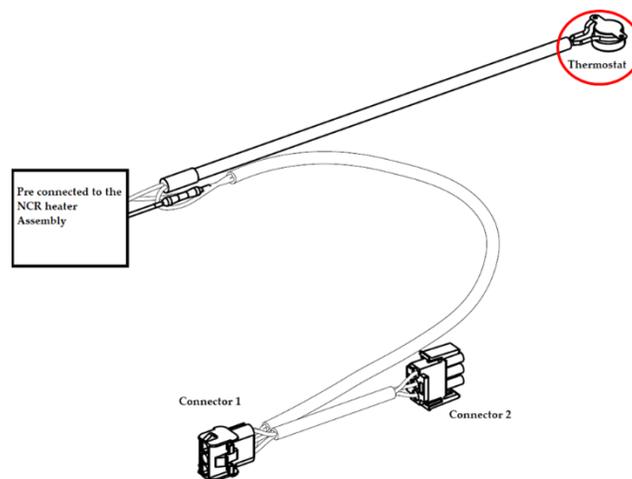


Figure 36



Figure 37

- 7) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 38 below.

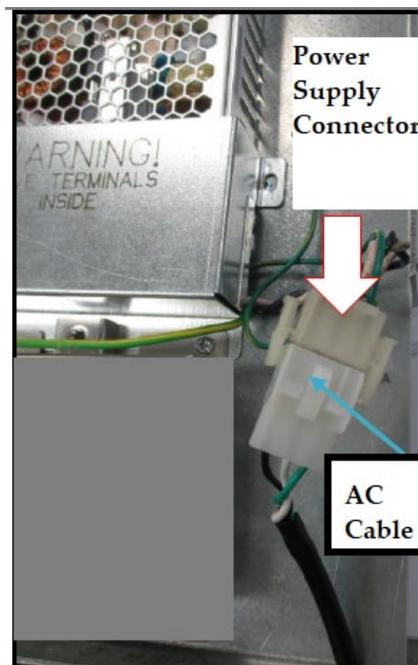


Figure 38

- 8) Route the Connector 1 side of the OPTIC Heater cable (identified in Figure 39) through the circular opening into the top cavity where the non-Invenco Link OPTIC power supply is located.
- 9) Attach Connector 1 (identified in Figure 39) to the non-Invenco Link OPTIC power supply cable as shown in Figure 40.

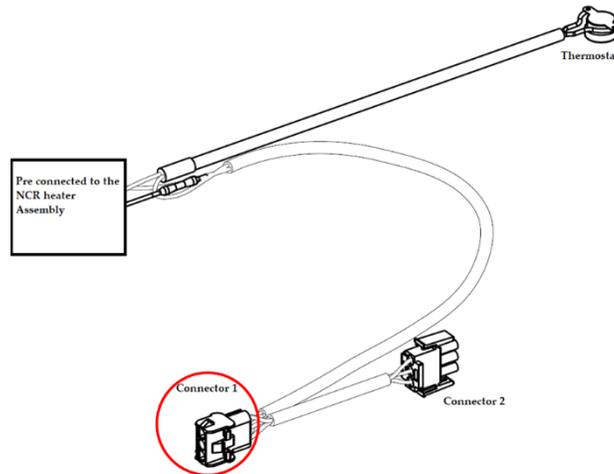


Figure 39

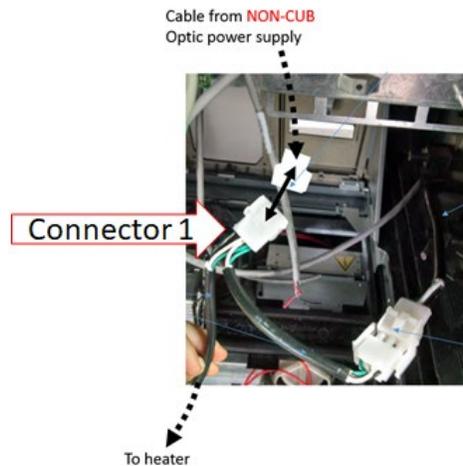


Figure 40

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

- 10) Affix Connector 2 (identified in Figure 41) to the existing dispenser A/C power cable as shown in Figure 42.

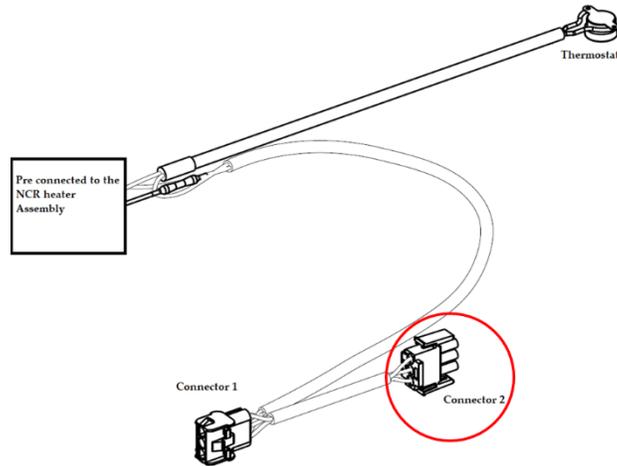


Figure 41

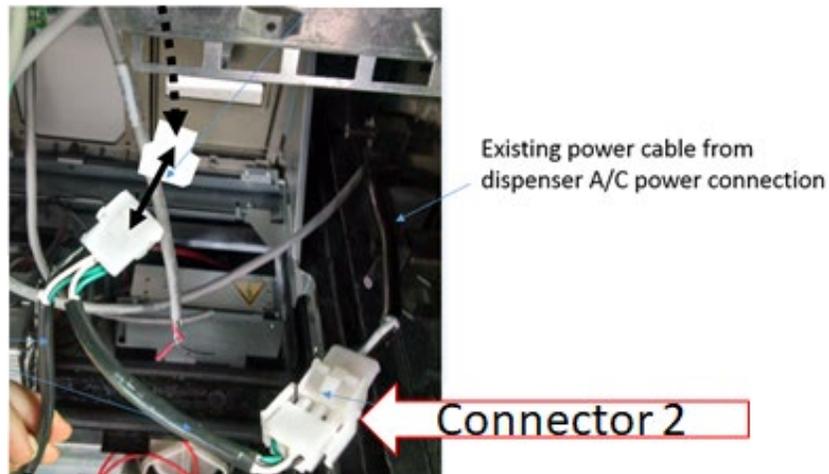


Figure 42

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit.

11) Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

12) All wires are to be routed away from any sharp edges and door joints/gaskets.

## Closing the Gilbarco Advantage Wide Dispenser

- 1) Close the large dispenser door.
- 2) Engage 4 inner latches holding the main dispenser door. See Figure 43.



Figure 43

- 3) Lock the two dispenser electronic options doors using GVR security key. See Figure 44.



Figure 44

- 4) Engage the security bolts from the dispenser using a 3/8in nut driver. See Figure 45 below



Figure 45

## Closing the Gilbarco Advantage Narrow Dispenser

- 1) Close the large dispenser door.
- 2) Engage 3 inner latches holding the main dispenser door. See Figure 46 below.

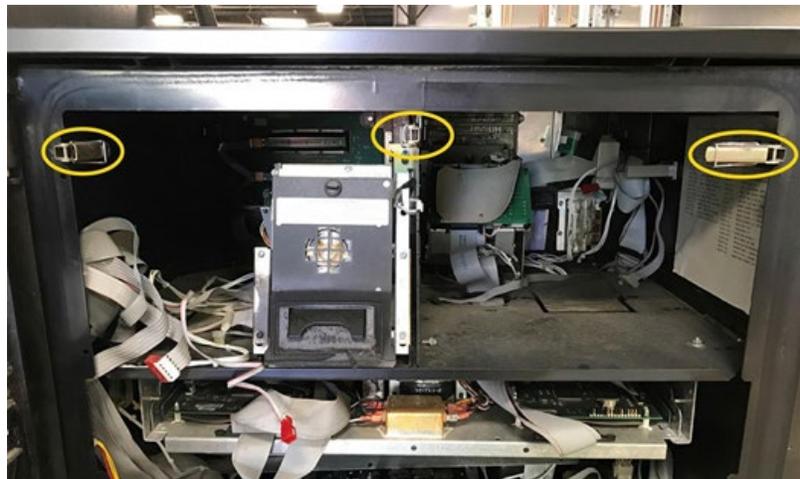


Figure 46

- 3) Engage the vertical slide latch located inside the dispenser. See Figure 47 below.



Figure 47

- 4) Lock the dispenser electronic options door using GVR security key. See Figure 48 below.



Figure 48

- 5) Engage the security bolts from the dispenser using a 3/8in nut driver. See Figure 49 below.



Figure 49

# TOKHEIM PREMIER B DISPENSER

## Tokheim Premier B Narrow

- 1) Identify the A Side of the dispenser. To determine Side A on the Premier Dispenser:
  - a) Look at the base of the dispenser.
  - b) Locate the Model/Serial number plate on one of the dispenser sides (the U.L. and F.C.C. plates are nearby) and stand facing it.
  - c) You are looking at SIDE A. See Figure 50

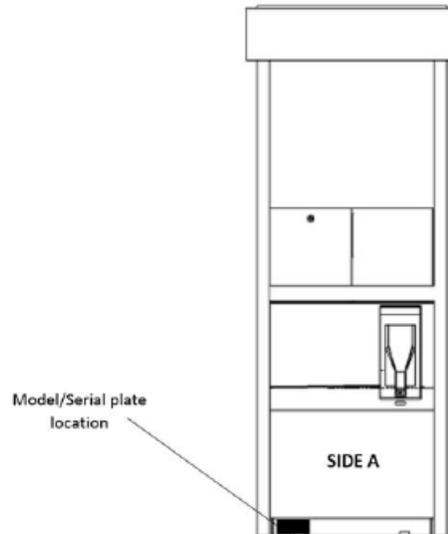


Figure 50

- 2) Unlock OPTIC door on Side A. See Figure 51 below.



Figure 51

- 3) Next, let the door swing down. See Figure 52 below.



Figure 52

- 4) Repeat steps 2) and 3) to open side B of the dispenser.
- 5) The following steps are to be performed ONLY on the B Side of the dispenser.
  - a) "Unlock" the Money/Volume Display Dial by pulling the lock latch to the left (towards the left-side of the dispenser) completely. The lock latch is located behind the upper left-hand side of the Money/Volume Display Dial. Use the following pictures as a visual aid to help locate and unlock the latch. See Figure 53 and Figure 54.

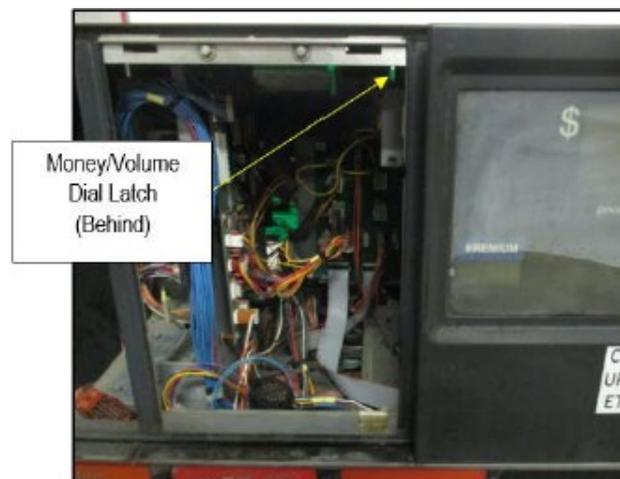


Figure 53

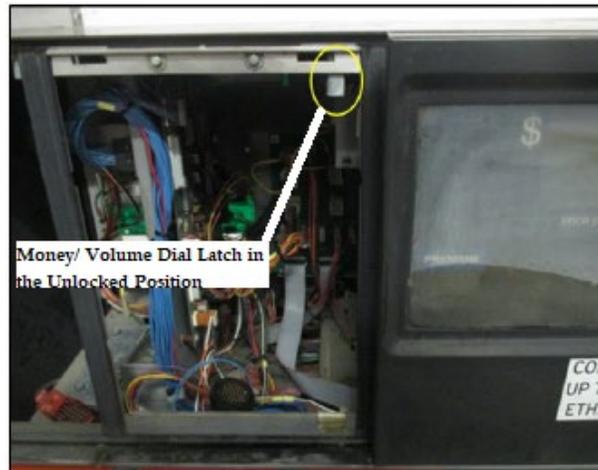


Figure 54

- b) Lower the Money/Volume Dial forward, lift it off the track, and set it aside. Do not discard the Money/Volume Dial. It will be reused during the installation process. See Figure 55 for the Money/Volume dial being lowered and Figure 56 for the Money/Volume Dial set aside.



Figure 55



Figure 56

- c) Loosen the two lock screws (some setups of dispensers use half-turn screws, others use full thread screws) that secure the Money/Volume Assembly to the dispenser face. See Figure 57.

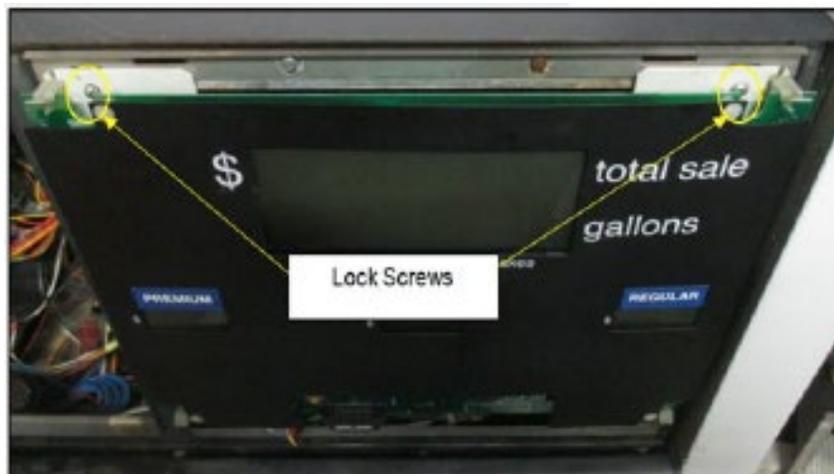


Figure 57

- d) Lower the Money/Volume Assembly by laying it forward completely. See Figure 58.



Figure 58

**Note:** Both power supply assemblies will be removed during this installation.

**Note:** Unplugging the cables will allow the power supplies to be removed from the dispenser.

**Note:** The power supply *with* the Invenco Link installed is the power supply that is to be associated with Side A of the Dispenser.

**Note:** The power supply assembly *without* the Invenco Link installed is to be associated with Side B of the Dispenser.

- 6) Uniquely label/mark each connection prior to disconnecting connections from the power supplies so that they can easily be identified upon reinstallation.
- 7) Unplug and label/mark the Yellow Cat5e Network Cable from the Invenco Link port labeled "LAN1" annotated in Figure 59 below.

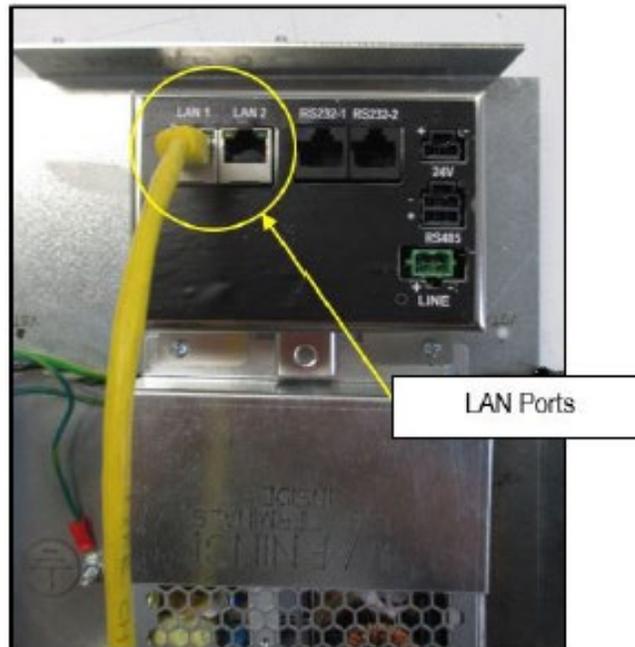


Figure 59

- 8) Unplug and label/mark the Red Cat5e Data Cable from the Invenco Link port labeled "RS232-1" annotated in Figure 60 below.

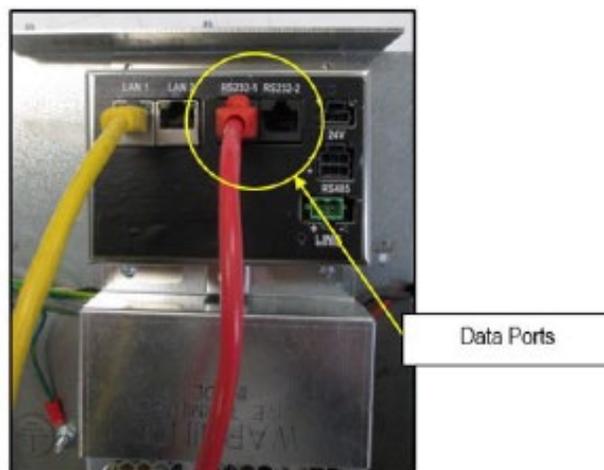


Figure 60

- 9) Similarly to steps 7)-8) Unplug and mark the remaining Yellow Cat5e, Red Cat5e, and Tokheim communications wire assembly cables from the Invenco Link ports labeled "LAN2", "RS232-2", and LINE respectively. See Figure 61 below.

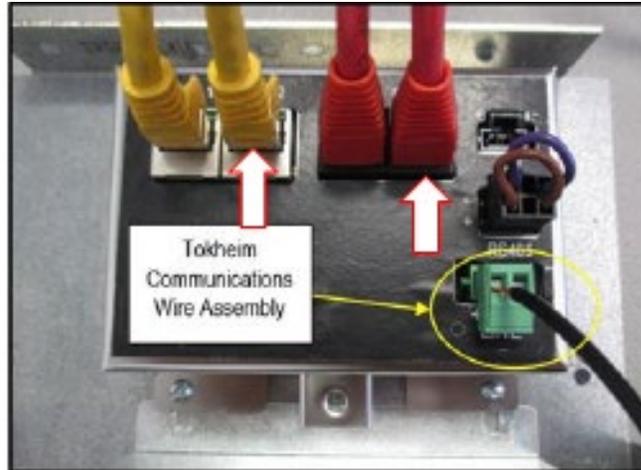


Figure 61

- 10) Remove the Large 3-Position Harness (female socket) of the A/C Wiring Assembly from the Large 3-Position Harness (male socket) pigtail that is present on the Power Supply Assembly with the Invenco Link installed. See Figure 62.

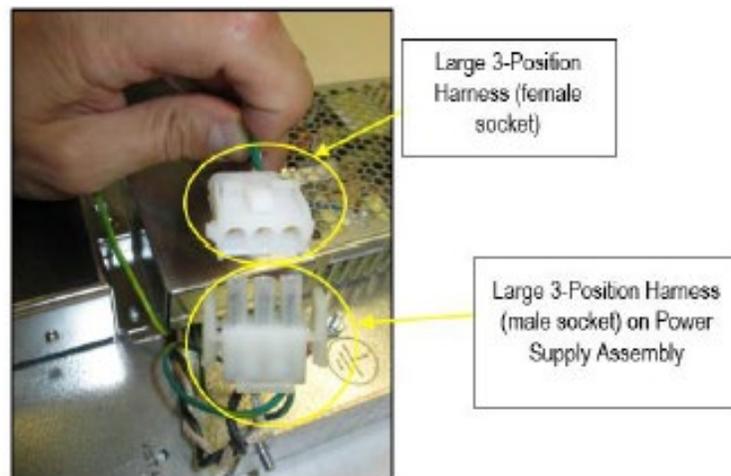


Figure 62

- 11) On side A Remove the cable tie attached to the Cable Restraint Anchor Point located to the left of the tamper prevention shield. See Figure 63.

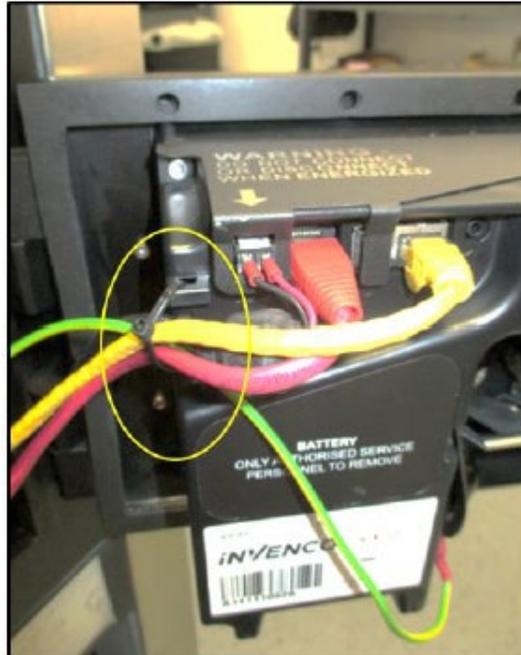


Figure 63

- 12) Use a 3mm hex driver or Allen key to remove and retain the tamper prevention plate and two screws (1 per side) on the back of the Tokheim Premier B Door EMV Sub-Assembly. See Figure 64.

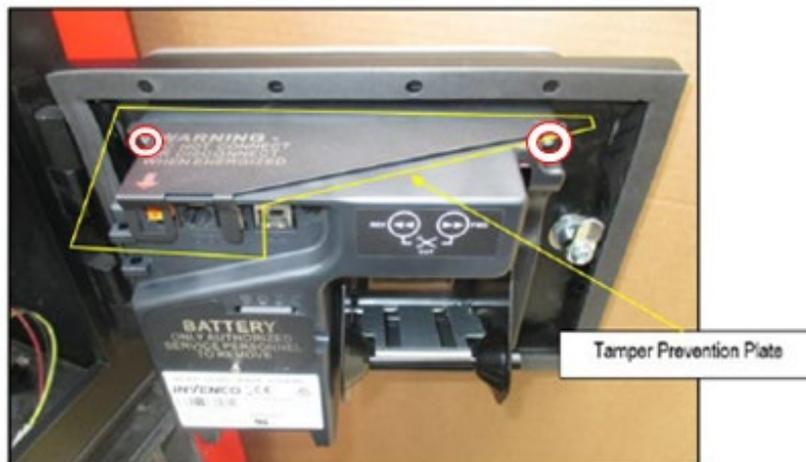


Figure 64

- 13) Disconnect the DC wiring assembly from port labeled "VDC" on the back of the Tokheim Premier B Door EMV Sub-Assembly. See Figure 65.

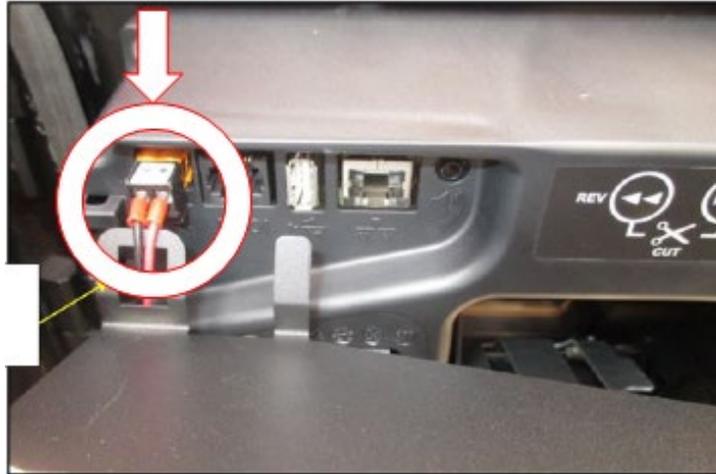


Figure 65

- 14) Disconnect the female spade terminal to the male spade stud on the OPTIC unit's paper spool. See Figure 66

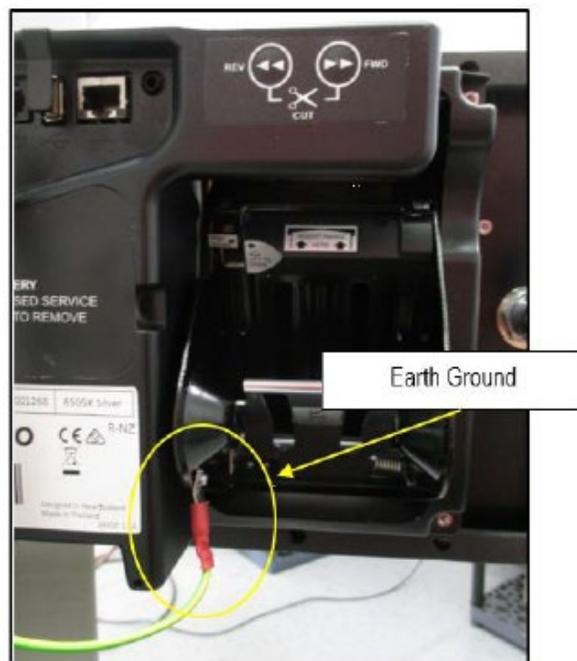


Figure 66

- 15) Remove the power supply bracket with Invenco Link power supply attached by first loosening the two feet mounting screws. Discard mounting screws. See Figure 67 below.

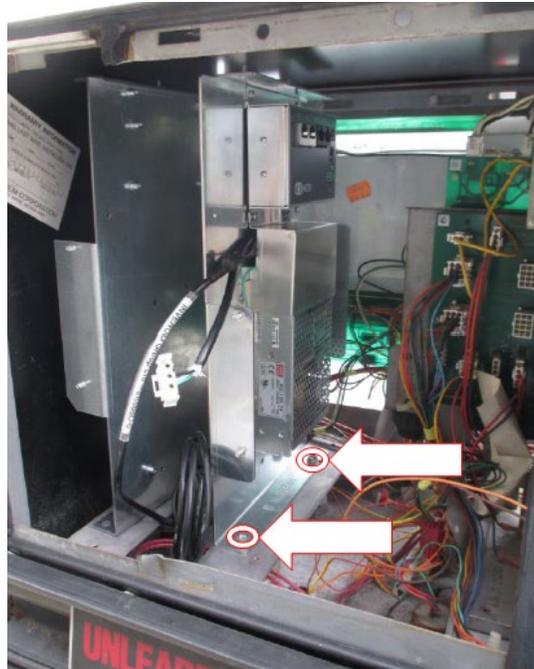


Figure 67

- 16) Loosen the Non Invenco Link power supply bracket with power supply attached by first removing the two feet mounting screws. Retain mounting screws for reinstallation. See Figure 68.

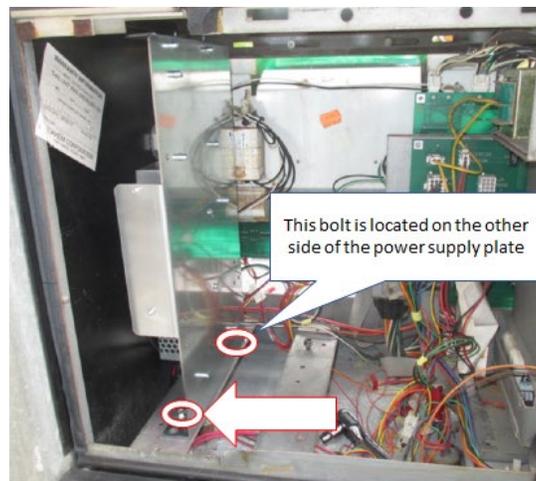


Figure 68

- 17) Remove the Large 3-Position Harness (female socket) of the A/C Wiring Assembly from the Large 3-Position Harness (male socket) pigtail that is present on the Non Invenco Link Power Supply Assembly. See Figure 69.

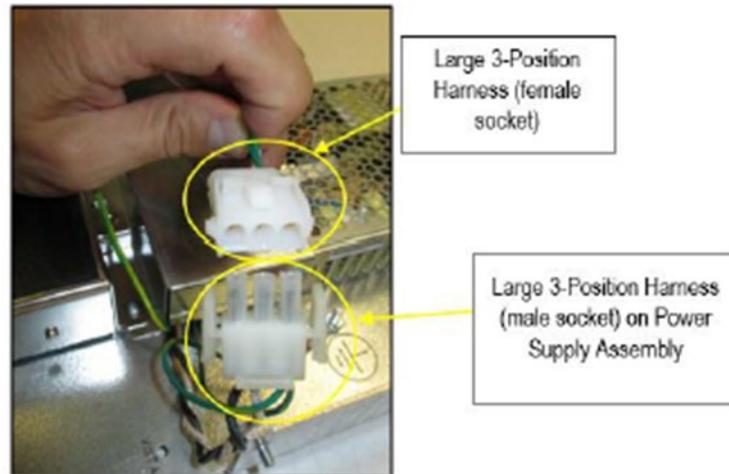


Figure 69

- 18) Mark both connectors that were just disconnected in step 17) with SIDE B.
- 19) Repeat steps 11) – 14) ON the B side of the dispenser.
- 20) Remove the Non Invenco Link power supply bracket with power supply attached from the dispenser.
- 21) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
- 22) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Advantage, Vista, Encore, Eclipse, Tokheim B alignment mark as shown in Figure 70 and Figure 71.

**View of alignment without Wire Guard (497-0522796) present.**

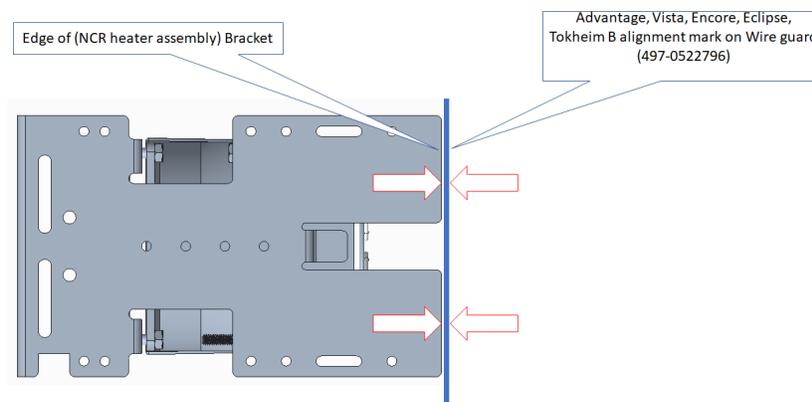


Figure 70

View of alignment with Wire Guard (497-0522796) present.

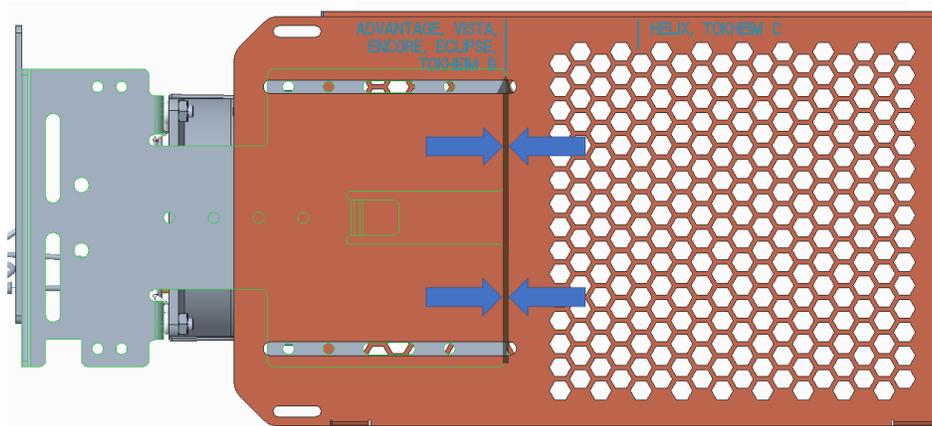


Figure 71

23) Insert and tighten four of the thread forming 006-8626667 screws at the locations shown in Figure 72 to secure the wire guard (497-0522796) to the NCR heater assembly.

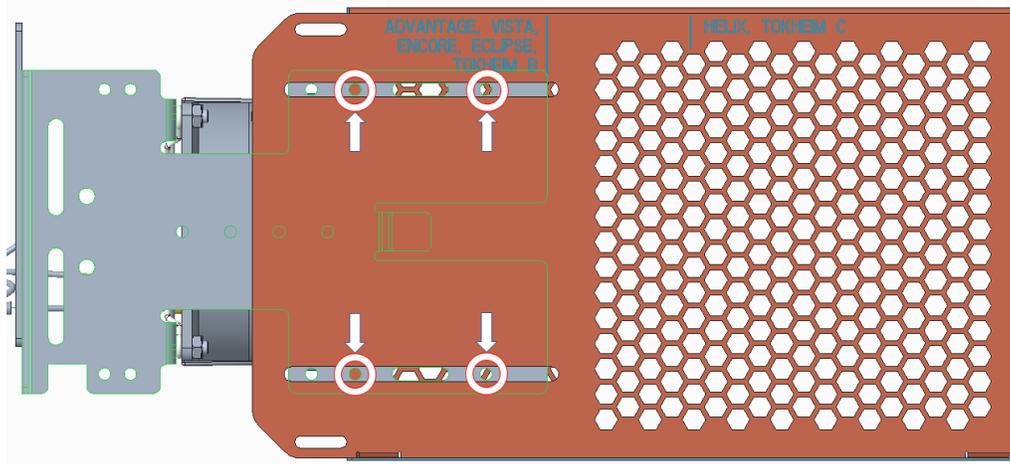


Figure 72

24) Place both power supply assemblies back-to-back.

25) Ensure that both power supply brackets have the Premier B side down. See Figure 73 below.



Figure 73

26) Secure both power supply assemblies together “back to back” by installing two pairs of the provided 6-32 screws and nuts (006-8611215 and 006-8611426) at [1] See Figure 74 below.

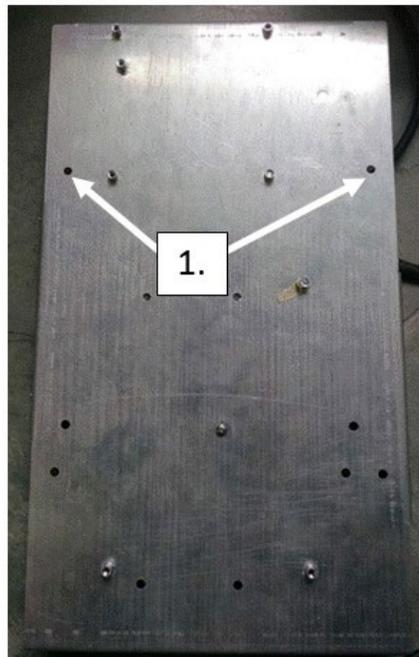


Figure 74

- 27) The Invenco Link-mounted power supply is to be positioned on the right side when looking at the A side of the dispenser.
- 28) Secure the locked pair of power supply assemblies to the dispenser frame by fastening the non-Invenco Link power supply back to the inner DPT mount rail using either the bolts retained in step 16) in the dispenser or a pair of provided 6-32 screws and nuts (006-8611215 and 006-8611426). See Figure 75 below



Figure 75

- 29) Insert the NCR heater + wire guard (497-0522796) assembly [4] at the location shown with the heater aimed downward. See Figure 76 below.

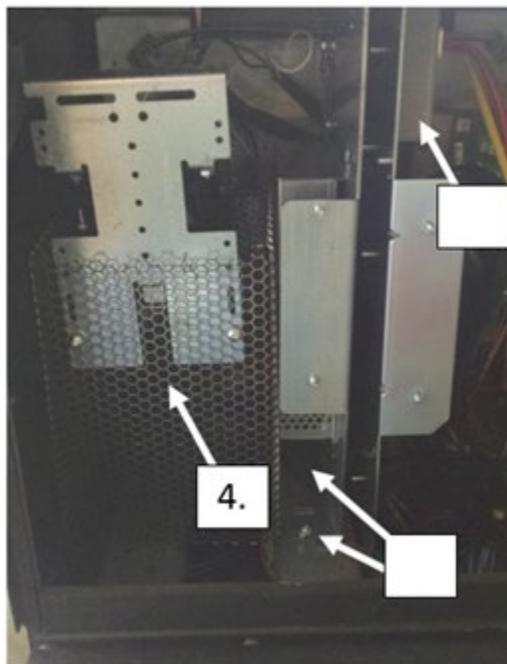


Figure 76

30) Attach OPTIC heater offset link plate (497-0522788) as shown using one pair of provided 6-32 screw and nut (006-8611215 and 006-8611426) and one provided 8-32 nut (006-8611730). This will ensure the front-to-back location of the heater wire guard (497-0522796) and ensure the wire guard does not slide forward See Figure 77 below.

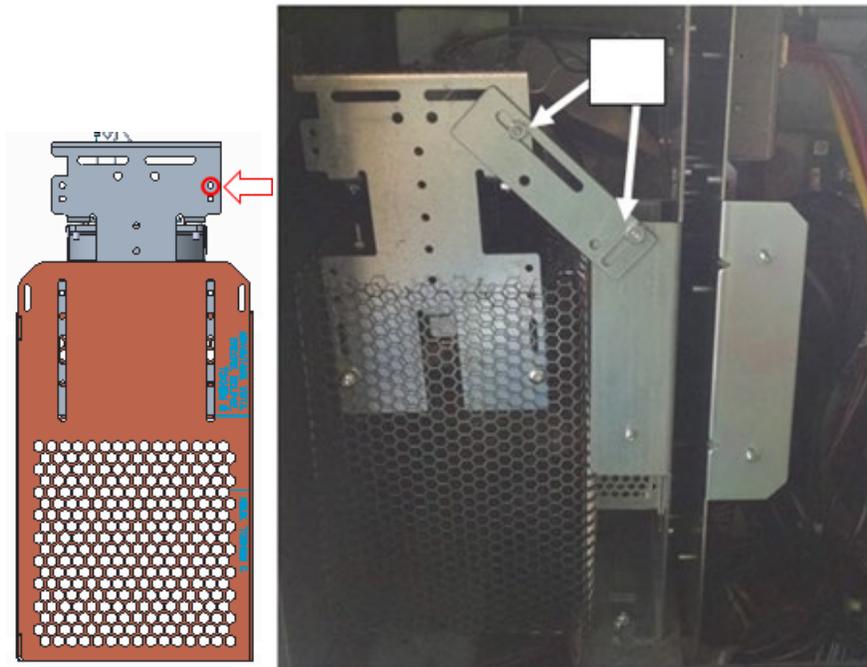


Figure 77

31) Position thermostat (identified in Figure 78) at the following location as shown in Figure 79 and secure with provided cable tie (006-8616073).

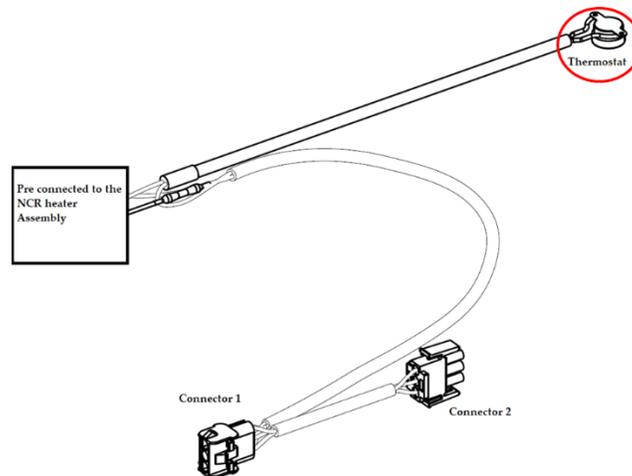


Figure 78

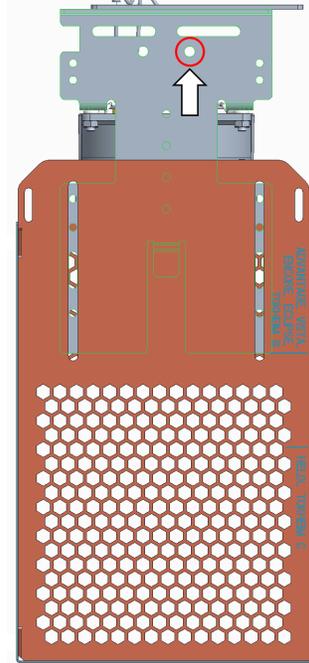


Figure 79

32) Attach Connector 1 (identified in Figure 80) to the NON-Invenco Link OPTIC power supply cable (previously marked as SIDE B in step 18)) as shown in Figure 81.

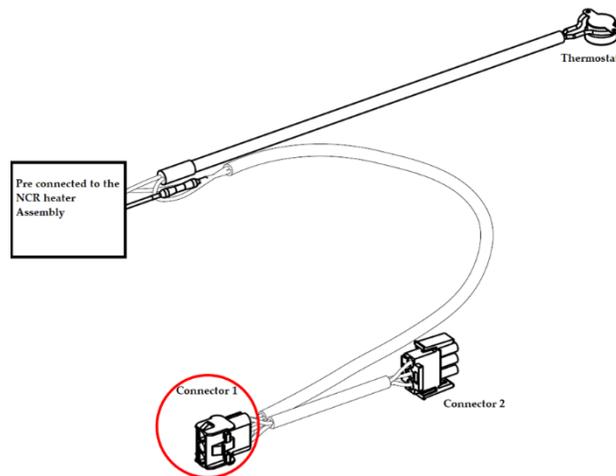


Figure 80

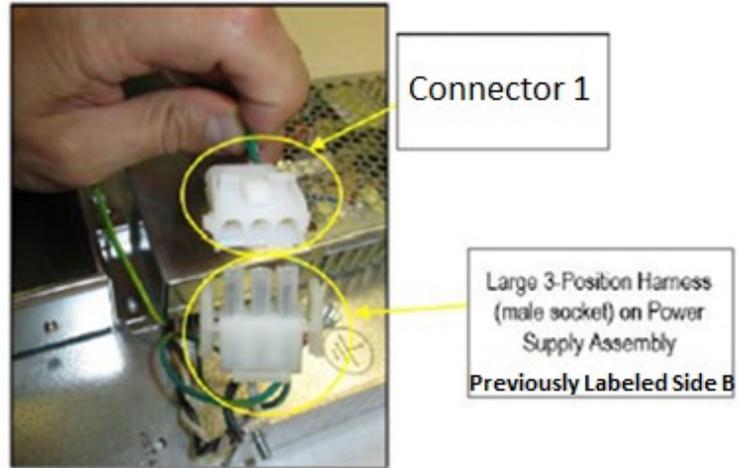


Figure 81

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

33) Affix Connector 2 (identified in Figure 82) to the existing dispenser A/C power cable (previously marked as SIDE B in step 18)) as shown in Figure 83.

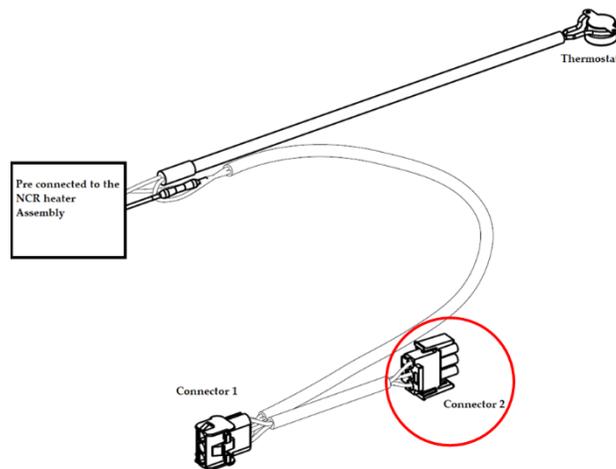


Figure 82

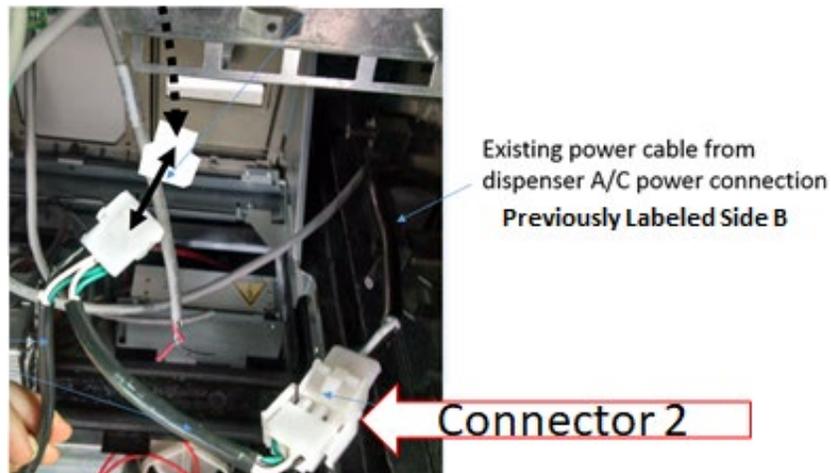


Figure 83

- 34) Reconnect the cables that were previously disconnected in steps 7) – 10).
- 35) On side A Acquire the tamper prevention plate and screws that were retained in step 12).
- 36) Locate the DC wiring assembly cable attached to the power supply with the Invenco Link attached to it.
- 37) Feed the open end of the DC wiring assembly cable through the opening on the tamper prevention shield and plug it into the OPT Terminal labeled "VDC." See Figure 84

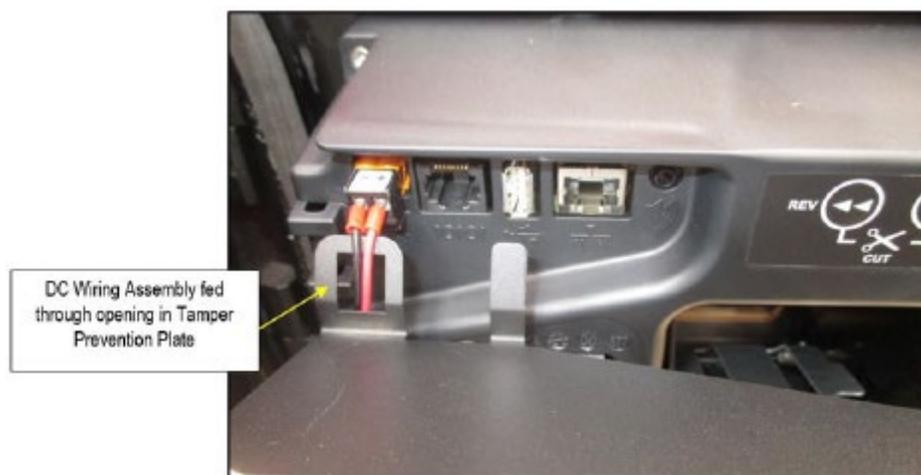


Figure 84

- 38) Re-fasten the tamper prevention shield to the back of the OPT.
- 39) Locate the Earth Ground Cables that is pre-wired to the Power Supply with the Invenco Link and attach the female spade terminal to the male spade stud on the OPT unit's paper spool. See Figure 85.

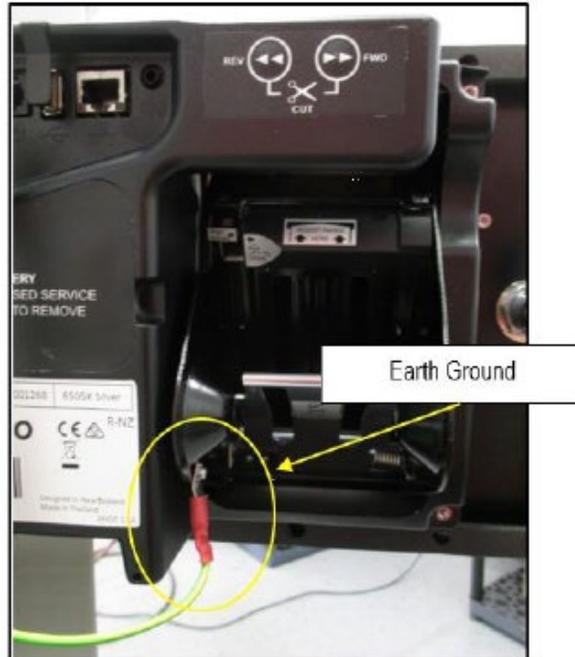


Figure 85

40) Using a zip-tie, gather all cable assemblies attached to the OPT unit, including the Earth Ground, and secure them to the Cable Restraint Anchor Point located to the left of the tamper prevention shield. See Figure 86 and Figure 87.



Figure 86



Figure 87

41) Feed excess cabling into the electronics cavity so that the majority of the cables' slack will be placed inside of the Dispenser Head. Re-use any existing cable restraints that may be present. It may be necessary to use zip-ties or additional cable restraints to secure the loose wiring. These must be provided by the installer.

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit. Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

42) Re-secure all loose wires such that they do not interfere with closing any panels.

43) All wires are to be routed away from any sharp edges and door joints/gaskets.

44) The following steps are to be performed ONLY on the B side of the dispenser.

- a) Push up and Re-fasten the Money/Volume Display Assembly to the Dispenser Frame. See Figure 88

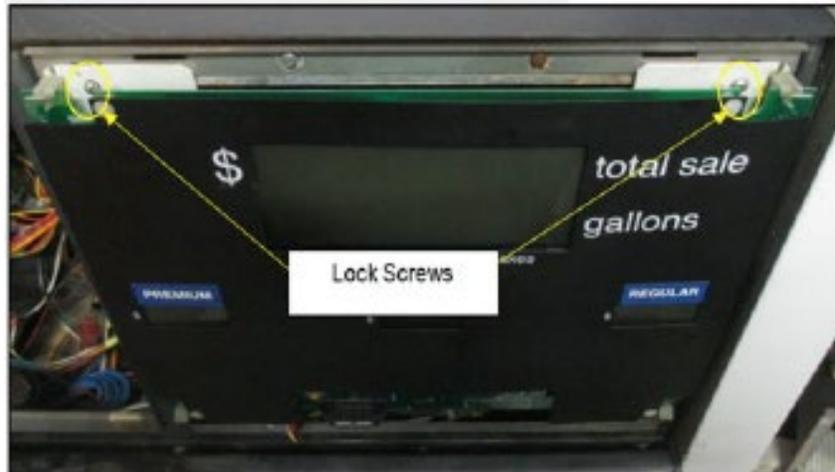


Figure 88

- b) Re-insert the bottom lip of the Money/Volume Dial into the Electronics Enclosure Support. See Figure 89



Figure 89

- c) Push the top of the dial forward until it stops.  
 d) Reach inside the OPT sub-door opening and push the Lock Latch (the one that was pulled to unlock the dial in the Disassembly Procedure) towards the right completely until the Money/Volume Dial is secured. See Figure 90.



Figure 90

45) Swing the OPTIC door closed. See Figure 91.



Figure 91

46) Use the appropriate key to lock the OPTIC door after ensuring that all cables are secured behind the OPTIC unit. See Figure 92.



*Figure 92*

47) Repeat steps 45) and 46) for the B side of the dispenser.

## Tokheim Premier B Wide

1. Identify the A Side of the dispenser. To determine Side A on the Premier Dispenser:
  - a. Look at the base of the dispenser.
  - b. Locate the Model/Serial number plate on one of the dispenser sides (the U.L. and F.C.C. plates are nearby) and stand facing it.
  - c. You are looking at SIDE A. See Figure 93.

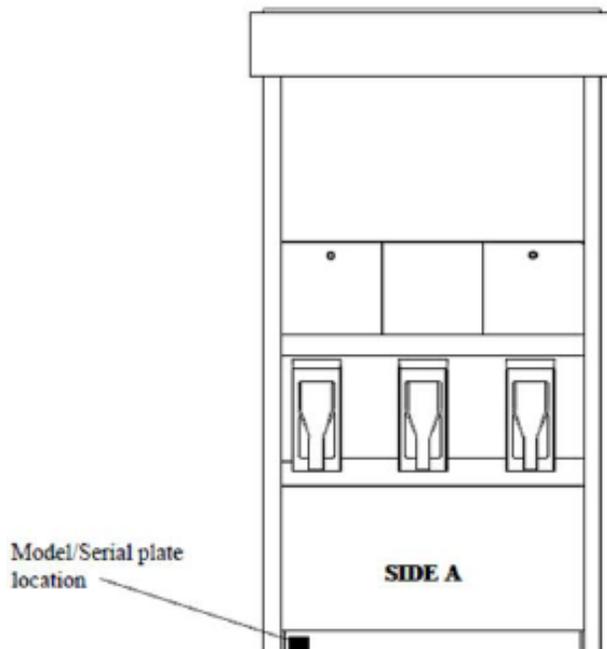


Figure 93

2. Unlock OPTIC door on Side B. See Figure 94 below.



Figure 94

3. Next, let the door swing open.
4. Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
5. Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Advantage, Vista, Encore, Eclipse, Tokheim B alignment mark as shown in Figure 95 and Figure 96.

**View of alignment without Wire Guard (497-0522796) present.**

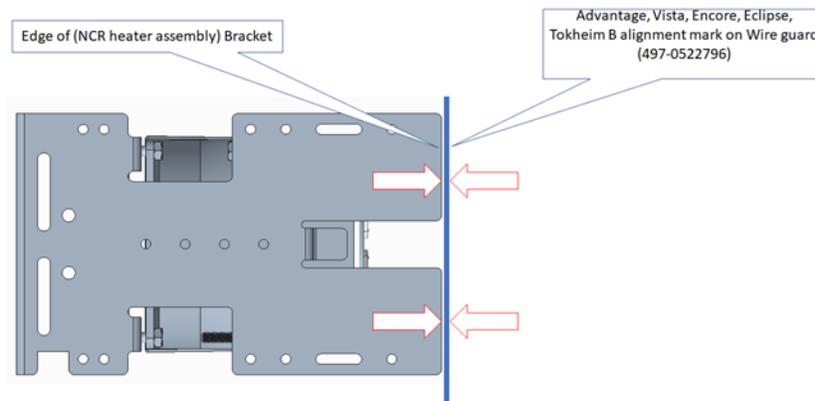


Figure 95

**View of alignment with Wire Guard (497-0522796) present.**

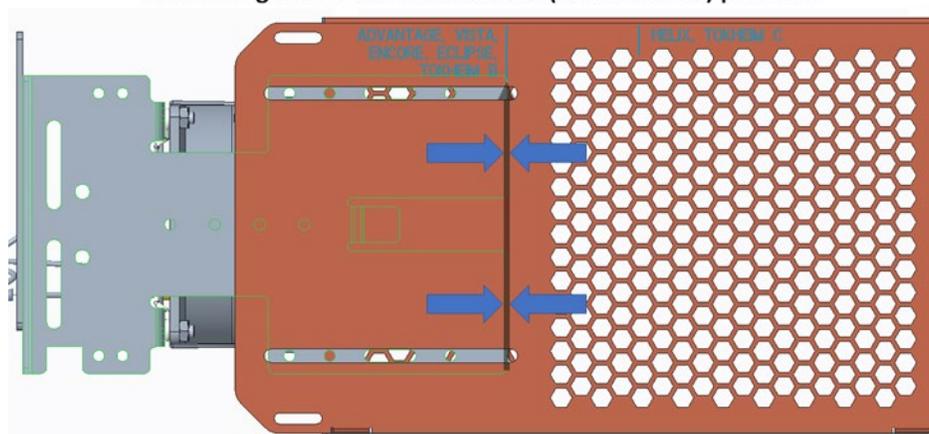


Figure 96

6. Insert and tighten three of the thread forming 006-8626667 screws at the locations shown in Figure 97 to secure the wire guard (497-0522796) to the NCR heater assembly.

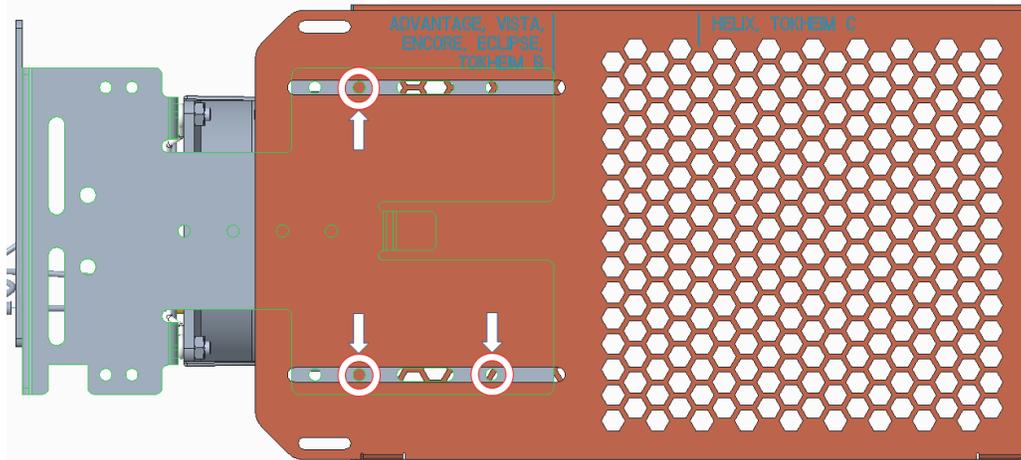


Figure 97

7. Mount the NCR heater and wire guard (497-0522796) assembly onto the power supply assembly bracket by using the OPTIC heater offset link plate (497-0522788) to join both parts with the provided thread forming screw (006-8626667) and 8-32 nut (006-8611730). See Figure 98.

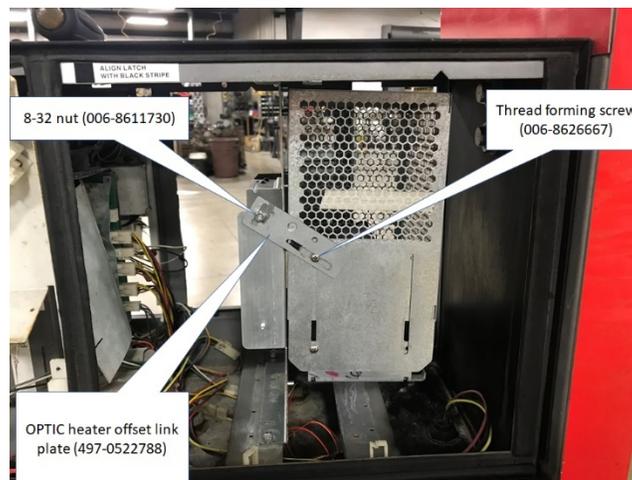


Figure 98

8. Position thermostat (identified in Figure 99) at the following location as shown in Figure 100 and secure with provided cable tie (006-8616073).

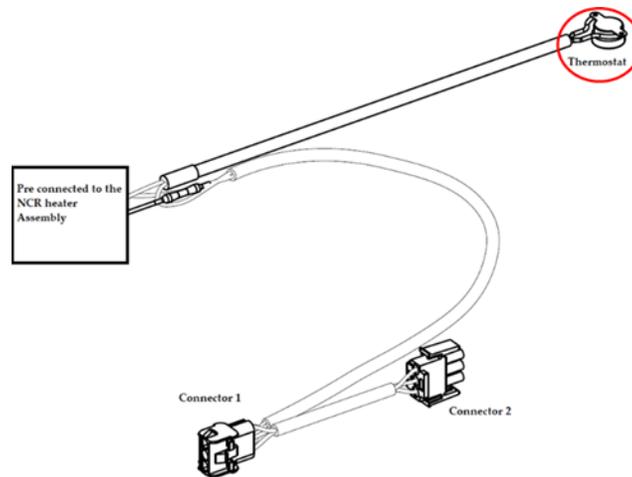


Figure 99

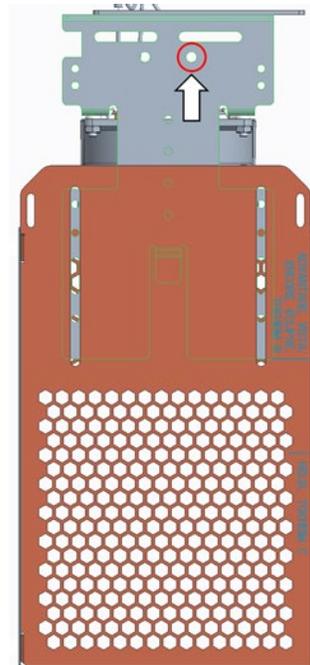


Figure 100

9. Remove the Large 3-Position Harness (female socket) of the A/C Wiring Assembly from the Large 3-Position Harness (male socket) pigtail that is present on the Non Invenco Link Power Supply Assembly. See Figure 101

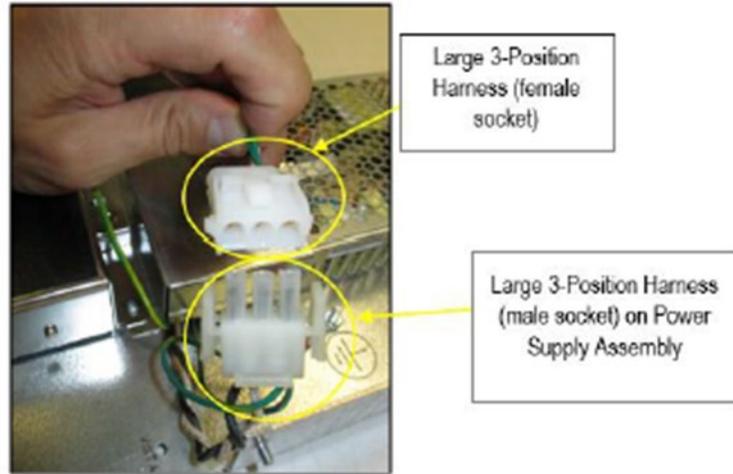


Figure 101

10. Attach Connector 1 (identified in Figure 102) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 103.

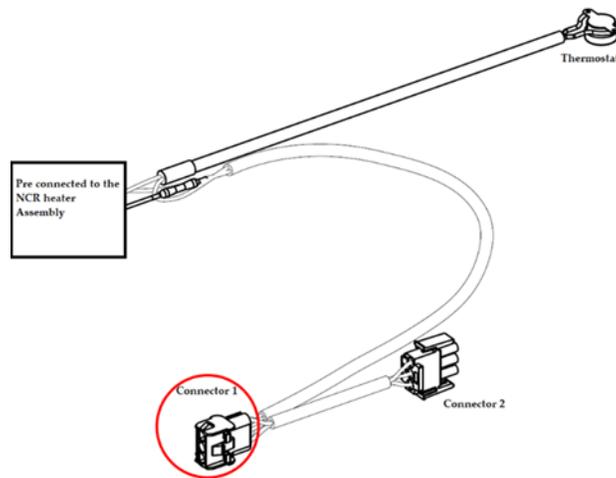


Figure 102

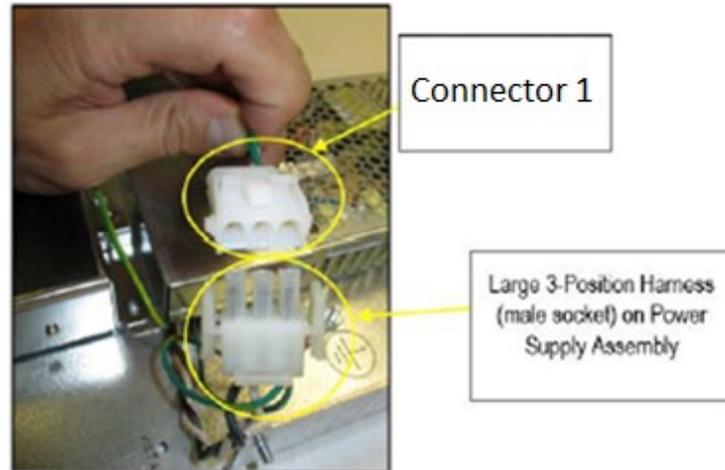


Figure 103

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

11. Affix Connector 2 (identified in Figure 104) to the existing dispenser A/C power cable as shown in Figure 105.

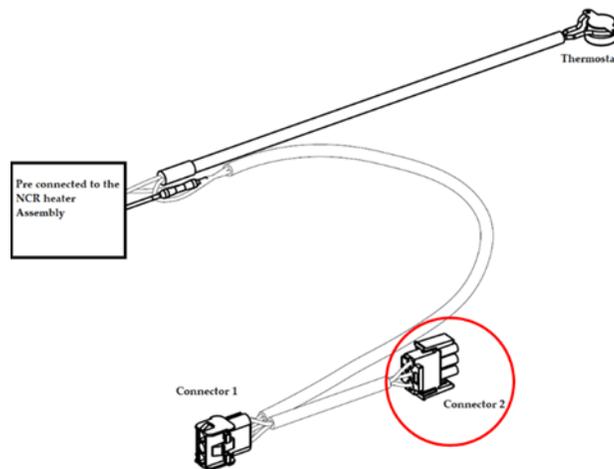


Figure 104

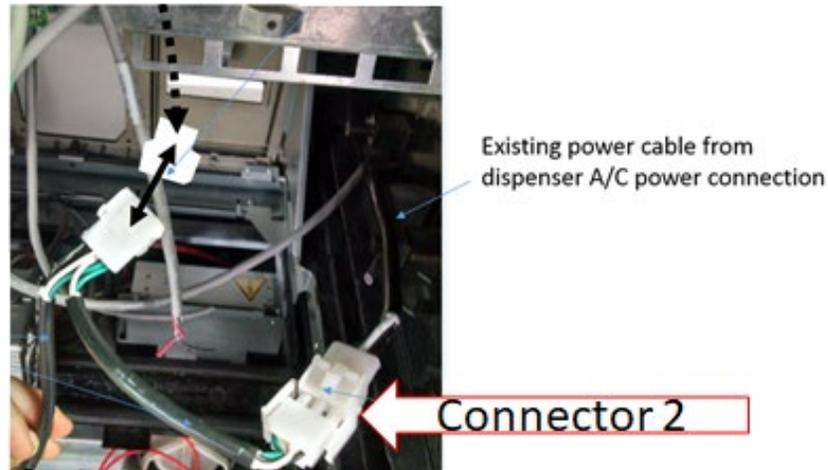


Figure 105

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit. Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

12. Re-secure all loose wires such that they do not interfere with closing any panels.
13. All wires are to be routed away from any sharp edges and door joints/gaskets.
14. Swing the OPTIC door closed.
15. Use the appropriate key to lock the OPTIC door



Figure 106

# TOKHEIM PREMIER C DISPENSER

## Tokheim Premier C WIDE Installation

- 1) Identify the A Side of the dispenser. To determine Side A on the Premier Dispenser:
  - a) Look at the base of the dispenser.
  - b) Locate the Model/Serial number plate on one of the dispenser sides (the U.L. and F.C.C. plates are nearby) and stand facing it.
  - c) You are looking at SIDE A. See Figure 107

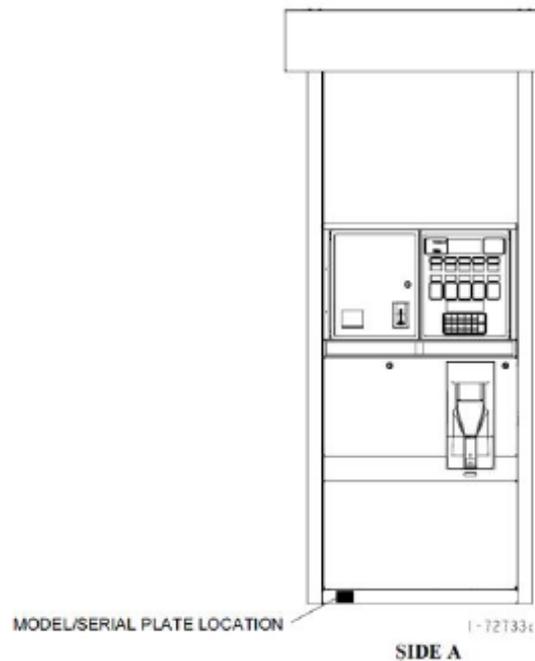


Figure 107

- 2) Using a TPX88 Tokheim key, unlock OPTIC door on Side A. See Figure 108

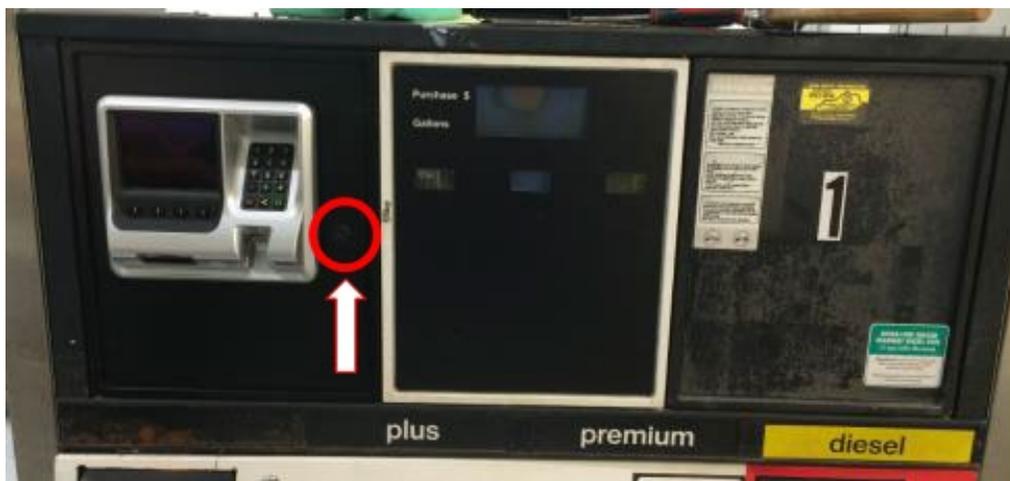


Figure 108

- 3) Next, let the door swing open.
- 4) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
- 5) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Helix, Tokheim C alignment mark as shown in Figure 109

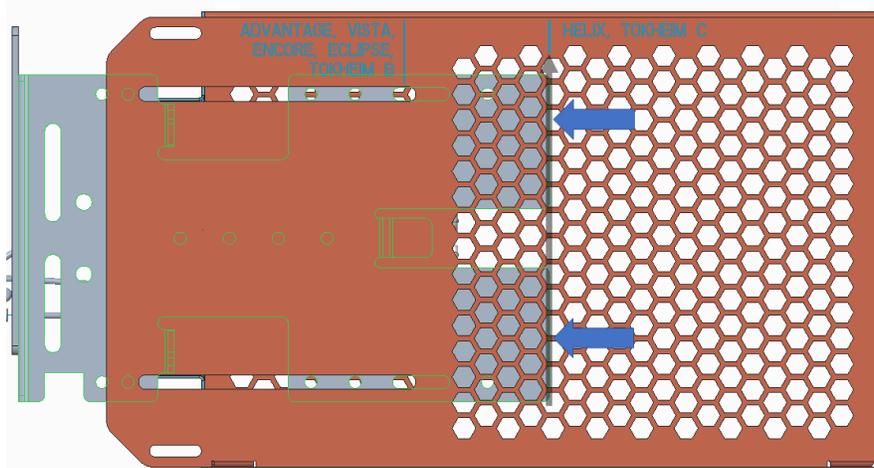


Figure 109

- 6) Insert and tighten two of the thread forming 006-8626667 screws at the locations shown in Figure 110 to secure the wire guard (497-0522796) to the NCR heater assembly.

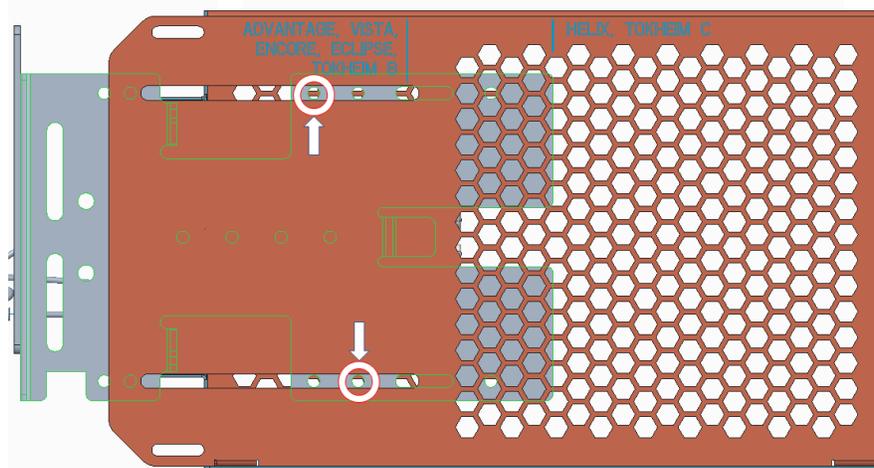
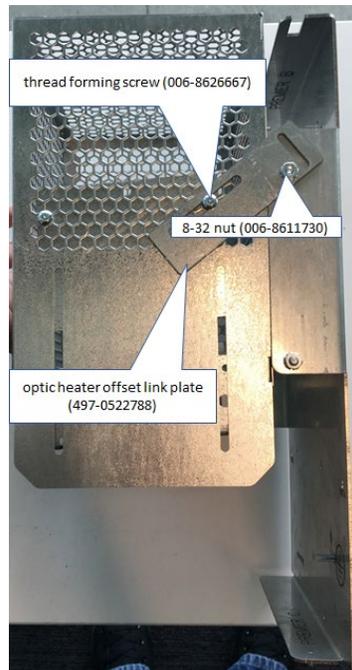


Figure 110

- 7) Mount the NCR heater and wire guard (497-0522796) assembly onto the power supply assembly by using the OPTIC heater offset link plate (497-0522788) to join both parts with the provided thread forming screw (006-8626667) and 8-32 nut (006-8611730).

**Note:** The NCR heater and wire guard (497-0522796) assembly should be mounted on the power supply assembly bracket inside the dispenser in the following configuration. See Figure 111.



*Figure 111*

8) Tighten screws and nuts such that the weight of the heater allows the entire assembly to hang fixed like shown. See Figure 112.



Figure 112

- 9) Secure thermostat (identified in Figure 113) to any available hole or slot along the bottom of the NCR heater assembly using a provided cable tie (006-8616073).

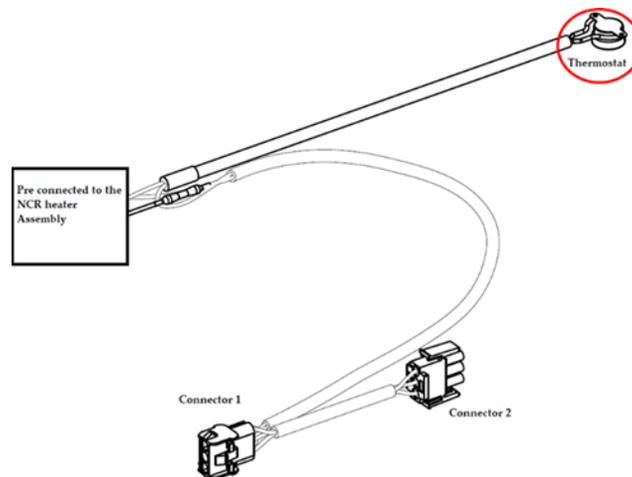


Figure 113

- 10) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 114 below.

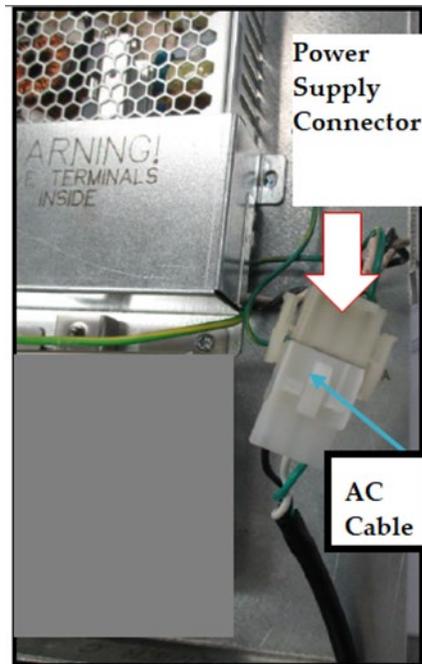


Figure 114

11) Attach Connector 1 (identified in Figure 115) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 116.

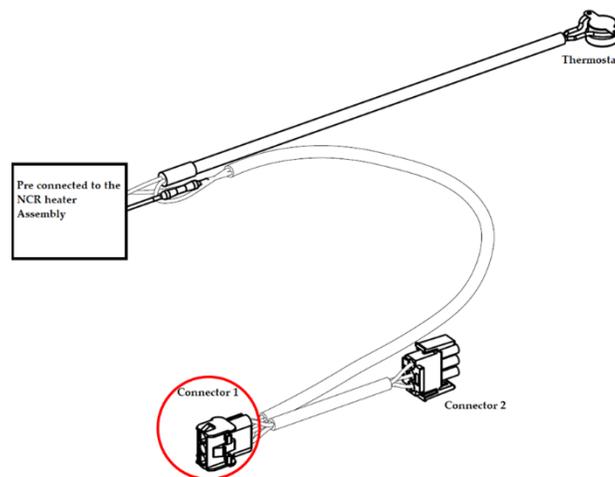


Figure 115

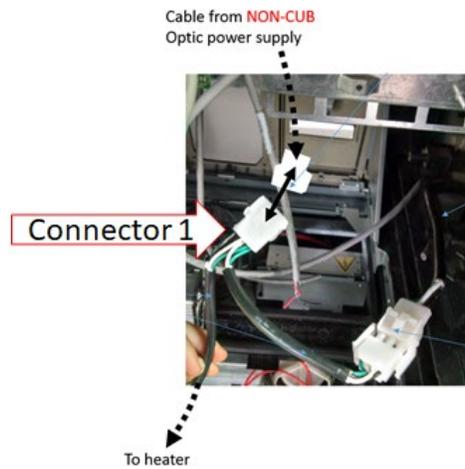


Figure 116

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

12) Affix Connector 2 (identified in Figure 117) to the existing dispenser A/C power cable as shown in Figure 118.

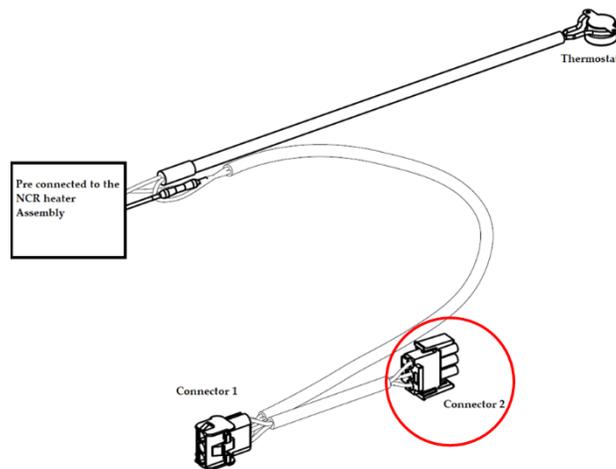


Figure 117

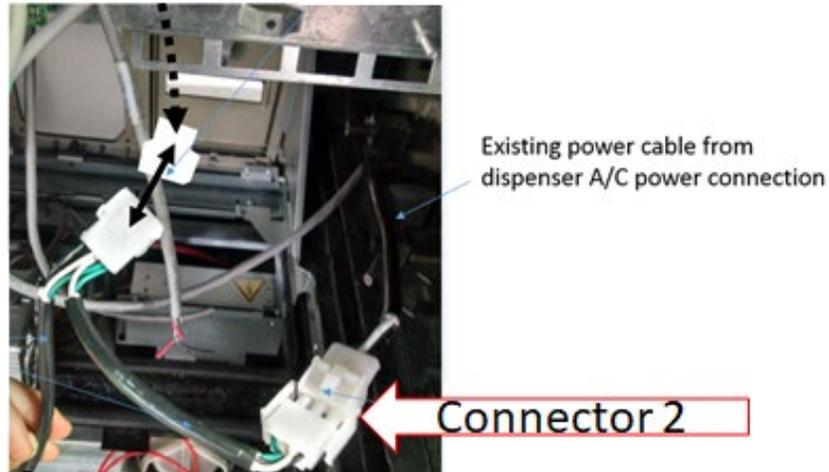


Figure 118

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit.

13) Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

14) All wires are to be routed away from any sharp edges and door joints/gaskets.

15) Swing the OPTIC door shut

16) Use the TPX88 Tokheim key to lock the OPTIC door after ensuring that all cables are secured behind the OPTIC unit.

### Tokheim Premier C NARROW Installation

- 1) Identify the A Side of the dispenser. To determine Side A on the Premier Dispenser:
  - a) Look at the base of the dispenser.
  - b) Locate the Model/Serial number plate on one of the dispenser sides (the U.L. and F.C.C. plates are nearby) and stand facing it.
  - c) You are looking at SIDE A. See Figure 119

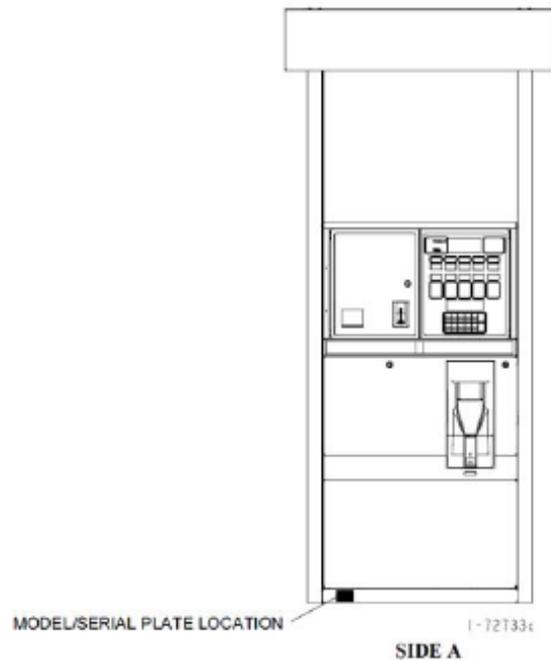


Figure 119

- 2) Using a TPX88 Tokheim key, unlock OPTIC door on Side A.
- 3) Next, let the door swing open.
- 4) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
- 5) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Helix, Tokheim C alignment mark as shown in Figure 120

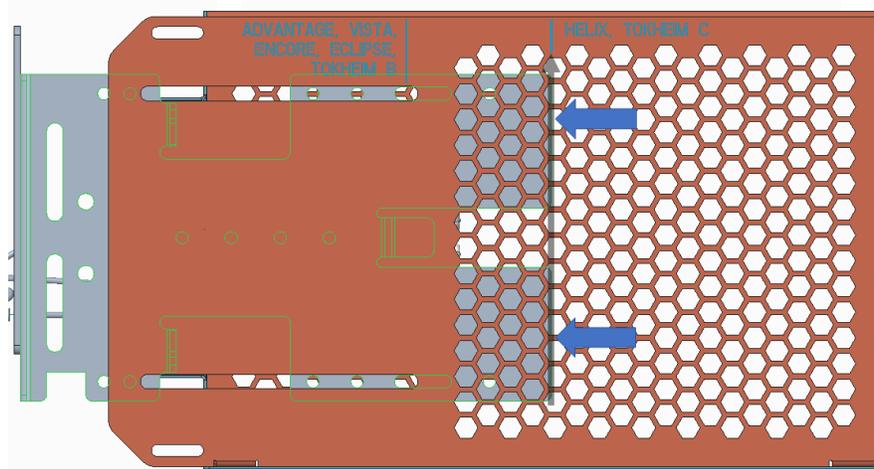


Figure 120

- 6) Insert and tighten two of the thread forming 006-8626667 screws at the locations shown in Figure 121 to secure the wire guard (497-0522796) to the NCR heater assembly.

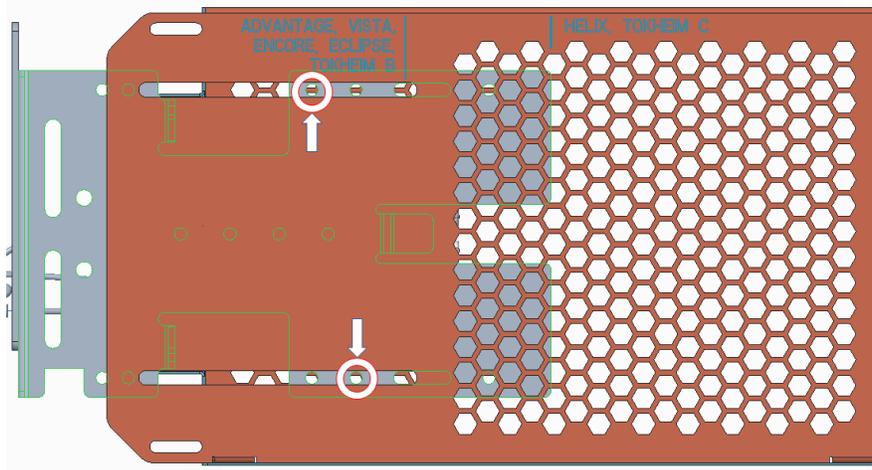


Figure 121

- 7) The wire guard can be assembled either to the right or left side of the power supply assembly as shown below. See Figure 122.

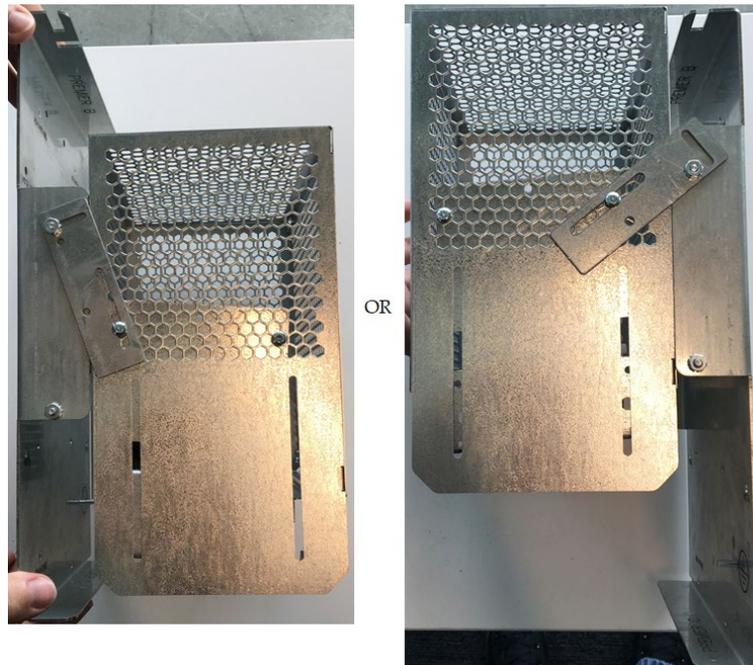


Figure 122

- 8) The NCR heater assembly will be mounted approximately in the locations shown in Figure 123 and Figure 124.



Figure 123

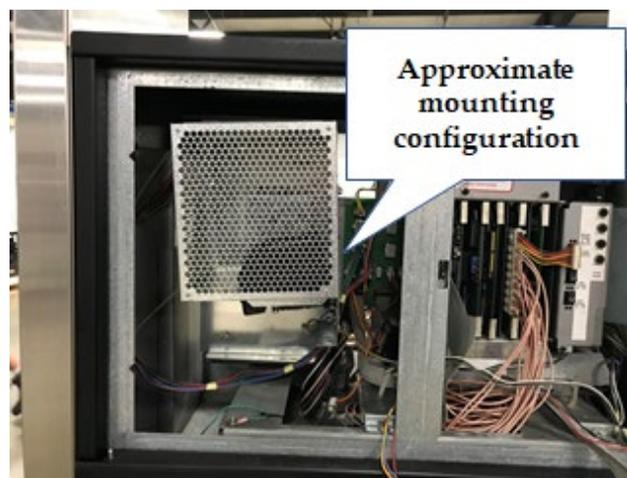


Figure 124

- 9) Mount the NCR heater and wire guard (497-0522796) assembly onto the power supply assembly by using the OPTIC heater offset link plate (497-0522788) to join both parts with the provided thread forming screw (006-8626667) and 8-32 nut (006-8611730).

**Note:** The NCR heater and wire guard (497-0522796) assembly should be mounted on the power supply assembly bracket inside the dispenser in the following configuration. See Figure 125.

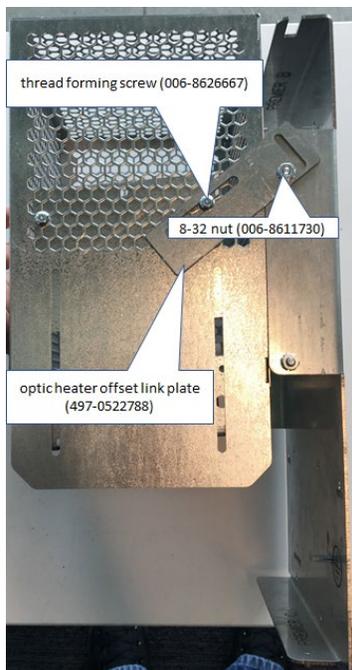


Figure 125

10) Secure thermostat (identified in Figure 126) to any available hole or slot along the bottom of the NCR heater assembly using a provided cable tie (006-8616073).

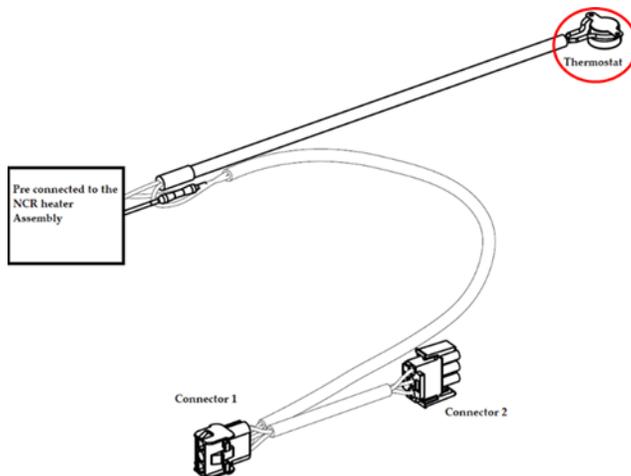


Figure 126

11) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 127 below.

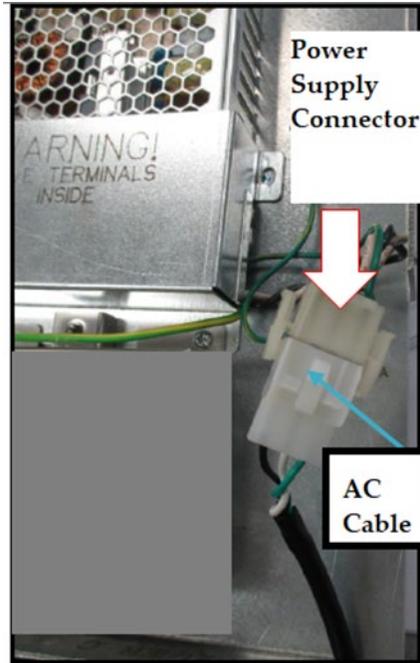


Figure 127

12) Attach Connector 1 (identified in Figure 128) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 129.

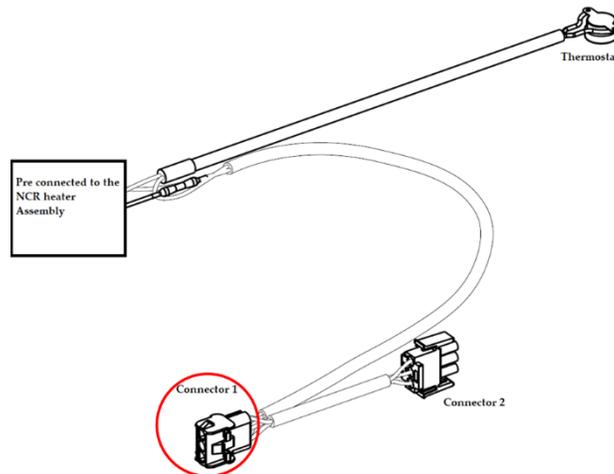


Figure 128

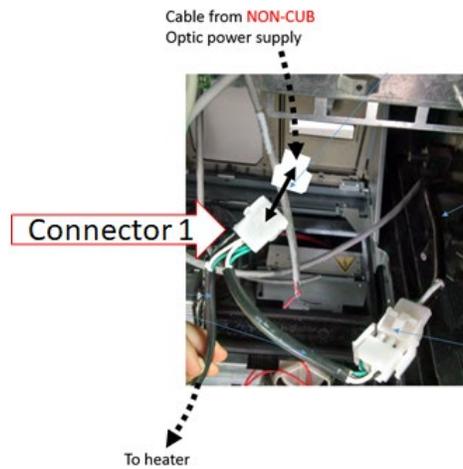


Figure 129

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

13) Affix Connector 2 (identified in Figure 130) to the existing dispenser A/C power cable as shown in Figure 131.

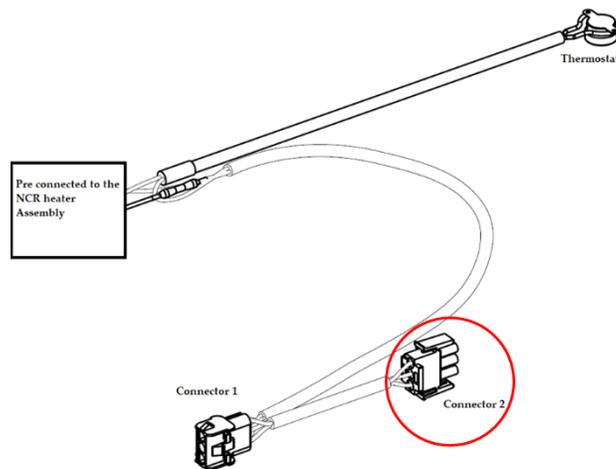


Figure 130

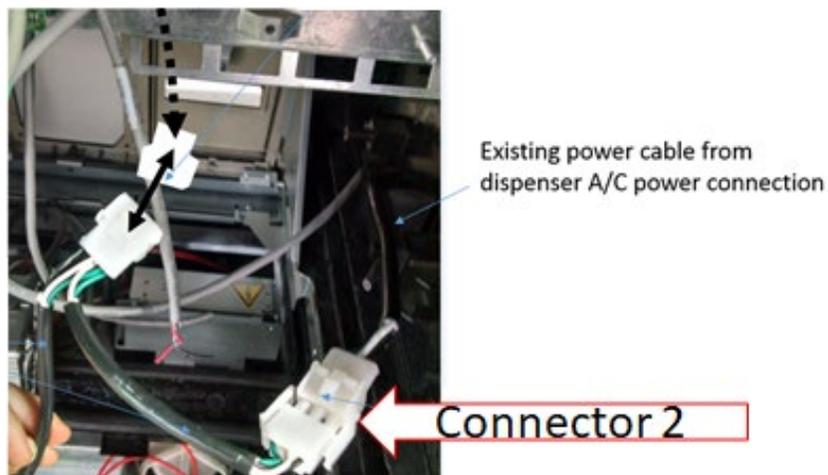


Figure 131

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit.

14) Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

15) All wires are to be routed away from any sharp edges and door joints/gaskets.

16) Close the OPTIC door

17) Use the TPX88 Tokheim key to lock the OPTIC door after ensuring that all cables are secured behind the OPTIC unit.

## GILBARCO ENCORE 300/500/500S DISPENSER

Opening the Gilbarco Encore 300/500 (with OPTIC 5 Installed)

- 1) Unlock and open the outer dispenser door using the appropriate key to access the internal components. See Figure 132 and Figure 133.



Figure 132



Figure 133

- 2) Disengage the side paddles inside the electronics cavity and open the main dispense door. See Figure 134 below.



Figure 134

## Opening the Gilbarco Encore 500s (with OPTIC 5 and 12) or 300/500 with OPTIC 12 Installed

- 1) Remove the lower door using the GCBO Lower Door Key. See Figure 135 and Set Figure 136 aside.



Figure 135



Figure 136

- 2) Using a '751' key, unlock the main door on the dispenser.
- 3) Undo door latch located underneath the lower left-hand side of the dispenser door. See Figure 137 and Figure 138 .



Figure 137



Figure 138

- 4) Open the door until it fully locks into place. See Figure 139.



Figure 139

#### *Heater Install*

- 1) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
- 2) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Advantage, Vista, Encore, Eclipse, Tokheim B alignment mark as shown in Figure 140 and Figure 142.

**View of alignment without Wire Guard (497-0522796) present.**

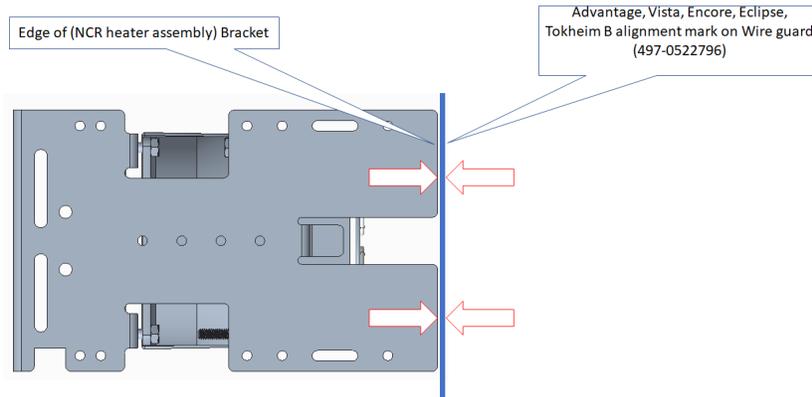


Figure 140

**View of alignment with Wire Guard (497-0522796) present.**

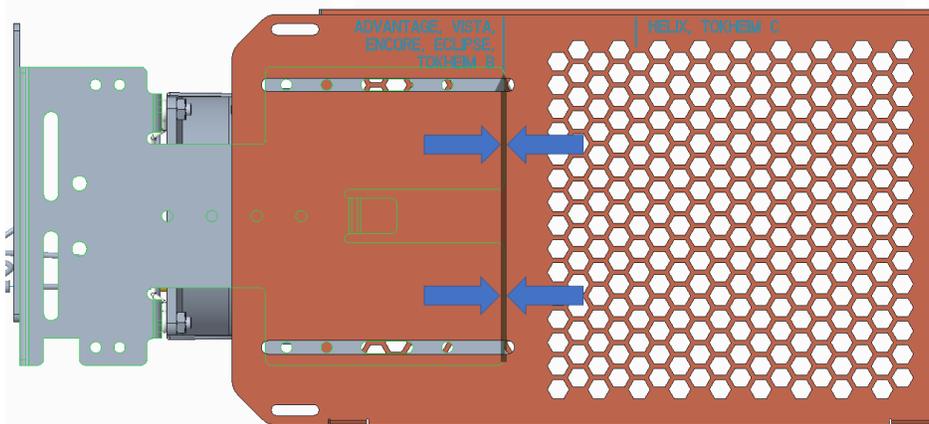


Figure 141

- 3) Insert and tighten four of the thread forming 006-8626667 screws at the locations shown in Figure 142 to secure the wire guard (497-0522796) to the NCR heater assembly.

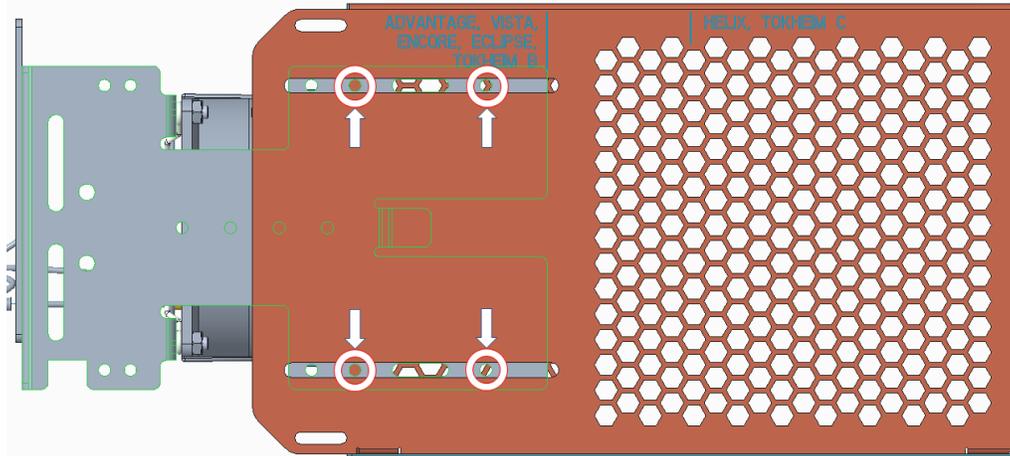


Figure 142

- 4) Identify the vacant end along the top rail (top left or top right; whichever side the OPTIC power supplies do not reside).

**Caution:** Do not proceed with the installation of the kit if another component is installed opposite of the OPTIC power supply where the heater is supposed to be installed. Contact customer service.

- 5) Orient and mount the heater assembly as shown using one of the provided 6-32 screws (006-8611215) and nuts (006-8611426) with nut on the bottom. See Figure 143.



Figure 143

- 6) The screw and nut should be installed at the locations called out in Figure 144 and Figure 145.

6-32 screw (006-8611215) with respect to the location on heater bracket

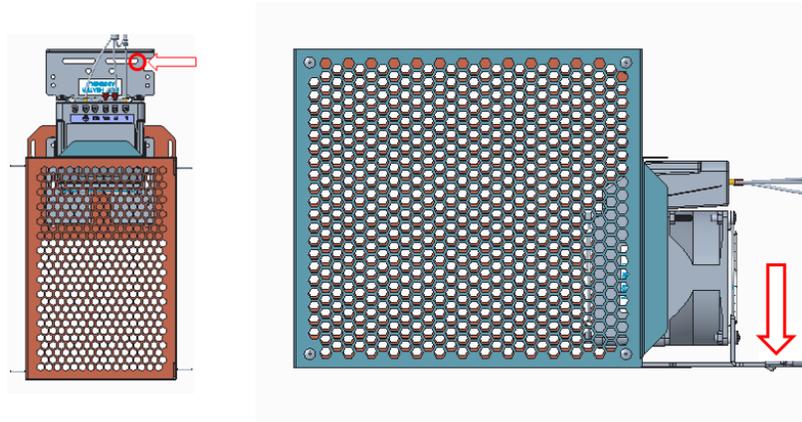


Figure 144

Dispenser through hole location

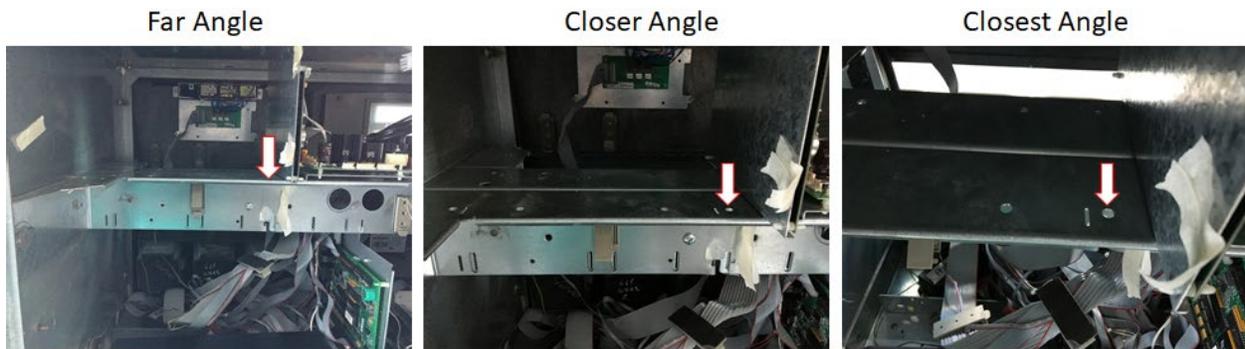


Figure 145

- 7) Use a cable tie (006-8616073) to secure the thermostat (identified in Figure 146) at the bottom of the dispenser to an available opening/hole near area [2] See Figure 147.

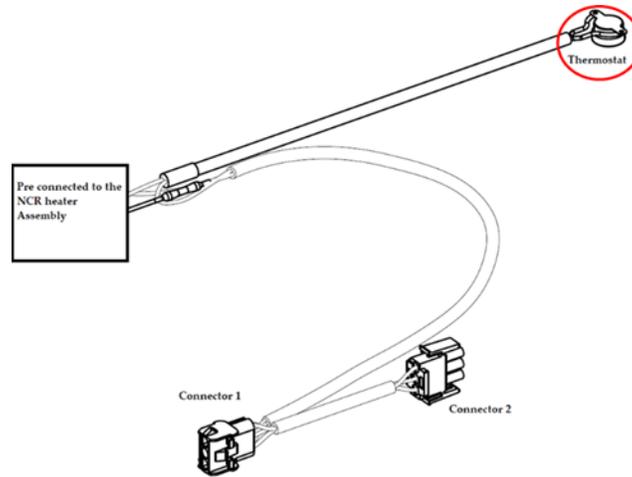


Figure 146

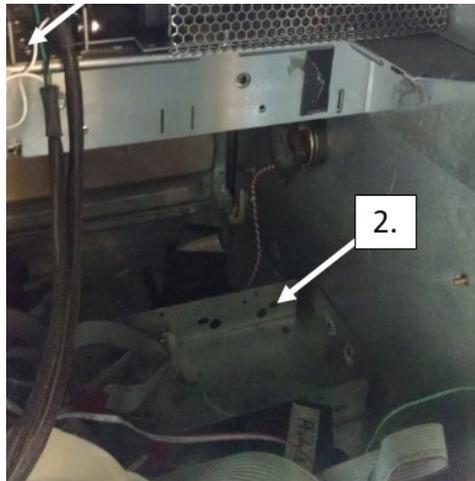


Figure 147

- 8) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 148 below.

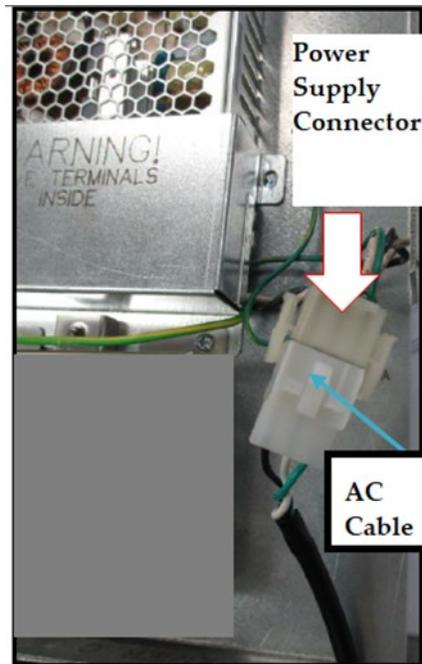


Figure 148

- 9) Attach Connector 1 (identified in Figure 149) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 150.

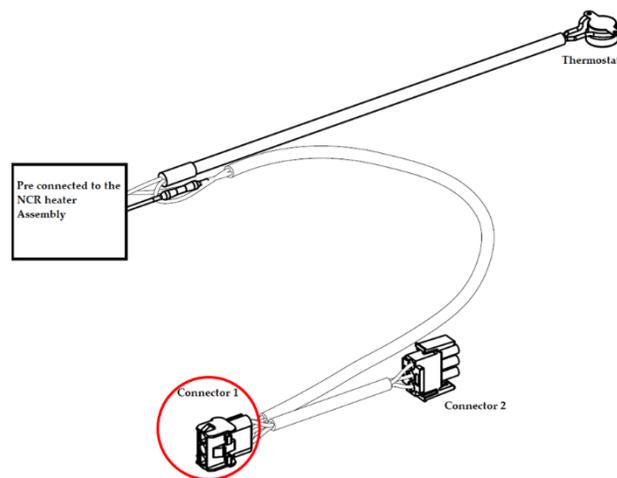


Figure 149

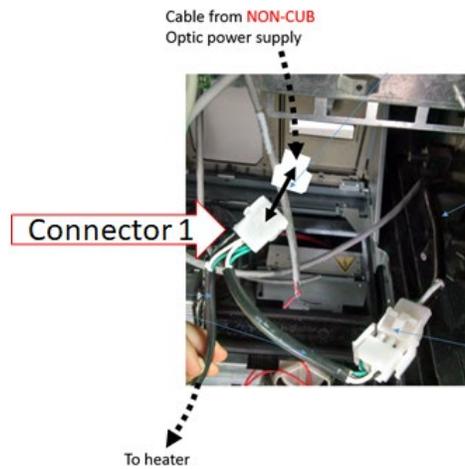


Figure 150

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

10) Affix Connector 2 (identified in Figure 151) to the existing dispenser A/C power cable as shown in Figure 152.

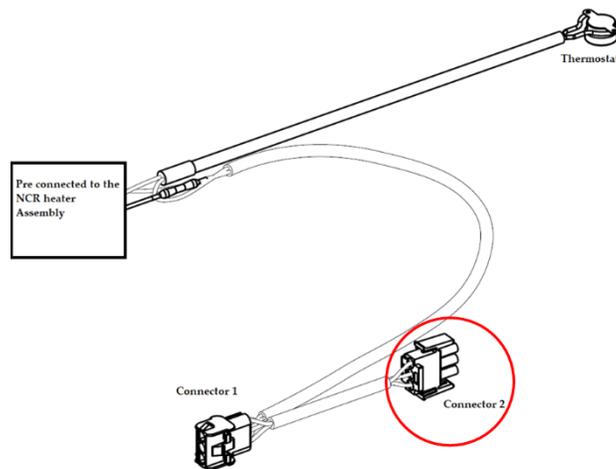


Figure 151

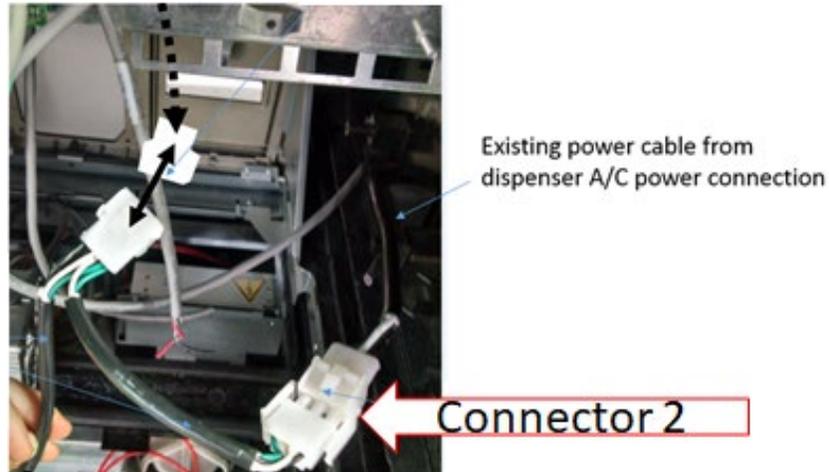


Figure 152

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit. Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

### Closing the Gilbarco Encore 300/500 (with OPTIC 5 Installed)

- 1) All wires are to be routed away from any sharp edges and door joints/gaskets.
- 2) Close the main dispenser door see Figure 153

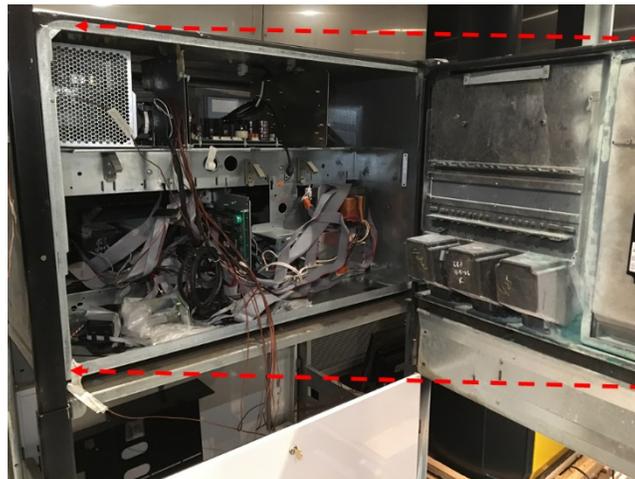


Figure 153

- 3) Engage the side paddles inside the electronics cavity to secure the main dispense door. See Figure 154 below.



Figure 154

- 4) Close and lock the outer dispenser housing using the appropriate key. See Figure 155 and Figure 156.



Figure 155



Figure 156

### Closing the Gilbarco Encore 500s (with OPTIC 5 and 12) or 300/500 with OPTIC 12 Installed

- 1) Route cables and wires away from sharp edges or pinching in the modular door gasket.
- 2) Disengage the prop rod and close the door.
- 3) Push the door slightly up and in to engage the bottom latch. See Figure 157



Figure 157

- 4) Secure and lock the top of the door. See Figure 158



*Figure 158*

5) Replace Lower door using GCBO Lower Door Key. See Figure 159 and Figure 160.



*Figure 159*



Figure 160

## WAYNE OVATION<sub>1</sub> OR OVATION<sub>2</sub> DISPENSER

- 1) Unlock and open the outer dispenser housing using the appropriate key and / or security torx driver to access the internal components. See Figure 161.



Figure 161

- 2) Acquire the heater (NCR heater assembly)
- 3) Remove and discard four M4 mounting screws, M4 nuts, secondary grill (on the fan side of the heater), and OPTIC heater bracket from the heater body. See Figure 162 and Figure 163.

**Caution:** Be sure not to remove the grille on the Heater side (opposite of the fan side).

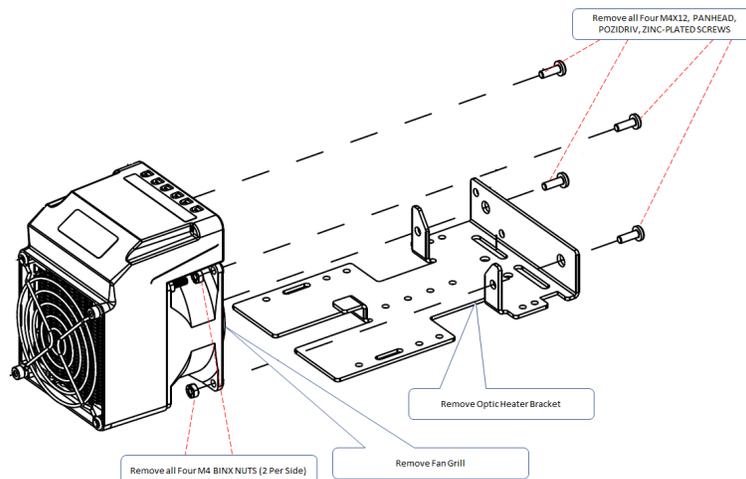


Figure 162

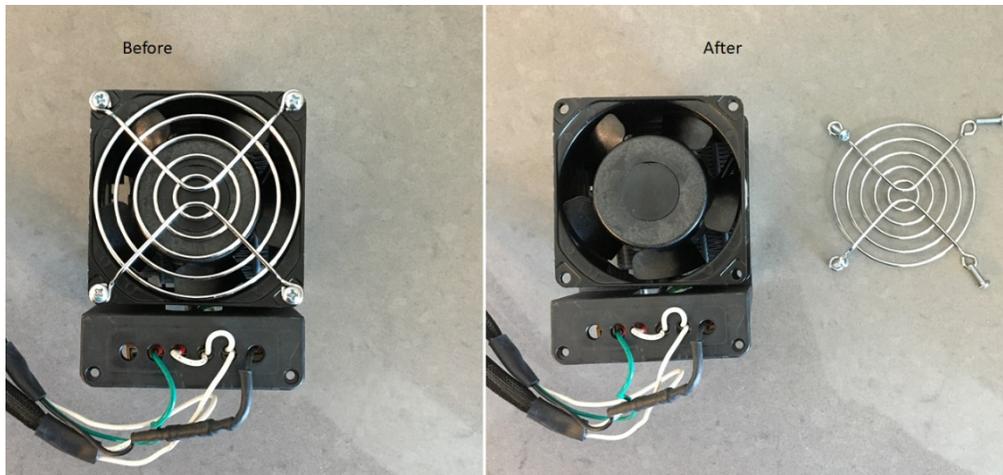


Figure 163

4) Locate the existing heater mount opening in the top of the Ovation cavity.

**Note:** The OPTIC heater will be installed approximately as shown in Figure 164.

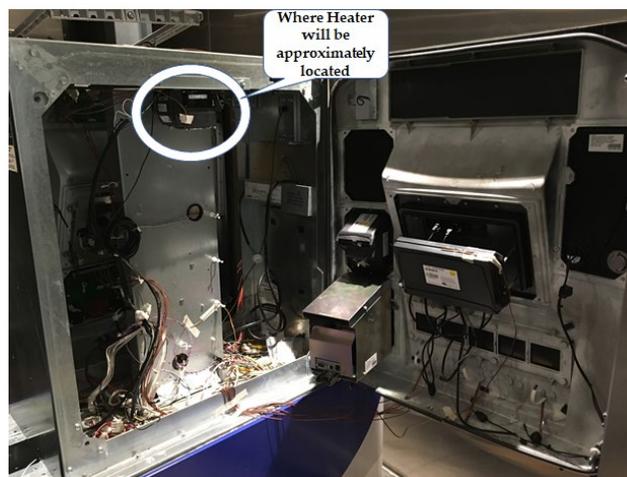


Figure 164

**Note:** If a preexisting heater is present, do not proceed with the installation of the kit and contact customer service.

- 5) Route heater cable through opening [1] first before securing heater to dispenser.
- 6) Orient and mount the heater as shown using two supplied 6-32 screws and nuts (006-8611215 and 006-8611426) as required at both corner locations [2]. See Figure 165 below.

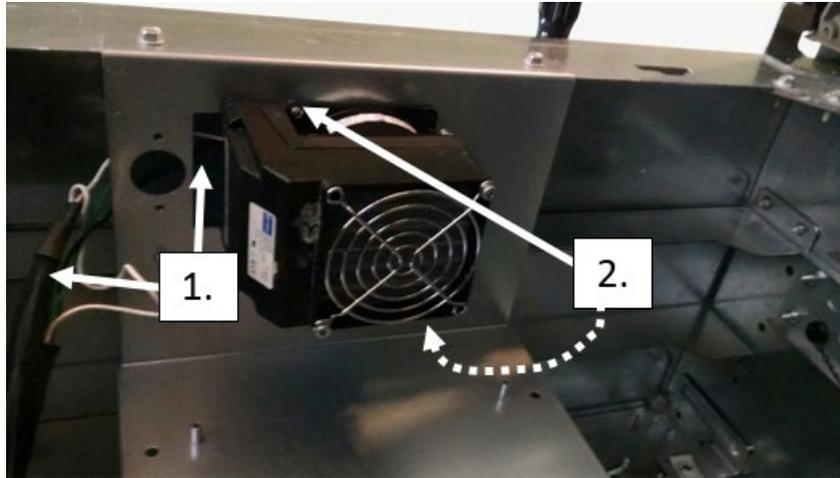


Figure 165

- 7) Using cable tie (006-8616073), secure the thermostat (identified in Figure 166) to any available mounting hole at the bottom of the dispenser [3] on the side that is opposite the heater (out of the direct air flow from the heater). See Figure 167 below.

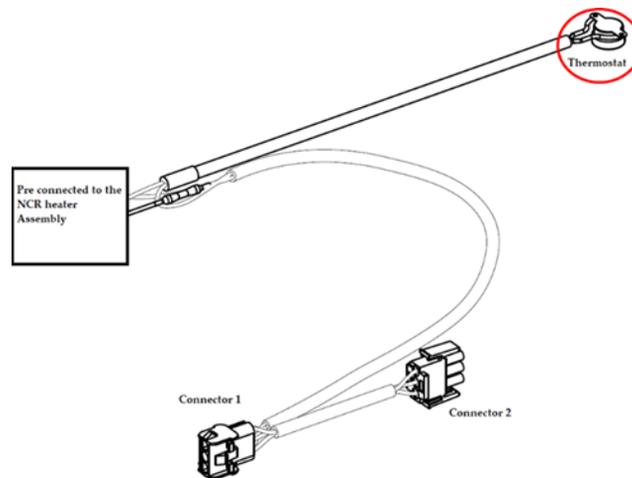


Figure 166



Figure 167

- 8) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 168 below.

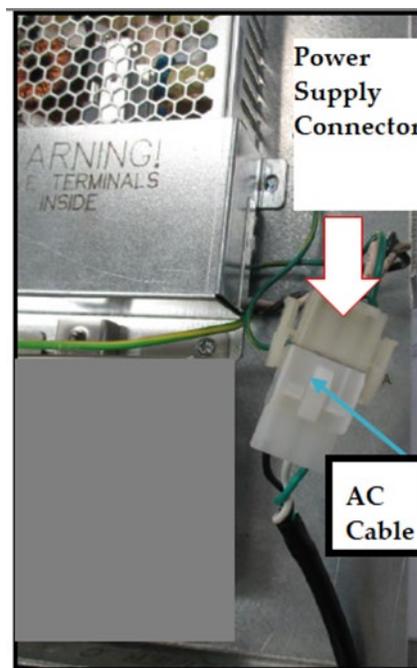


Figure 168

- 9) Attach Connector 1 (identified in Figure 169) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 170.

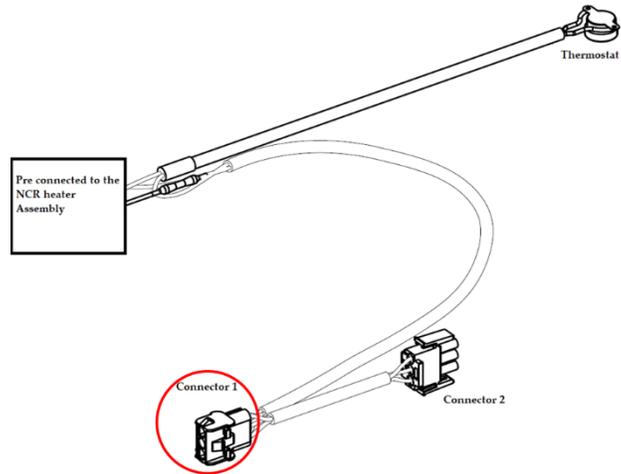


Figure 169

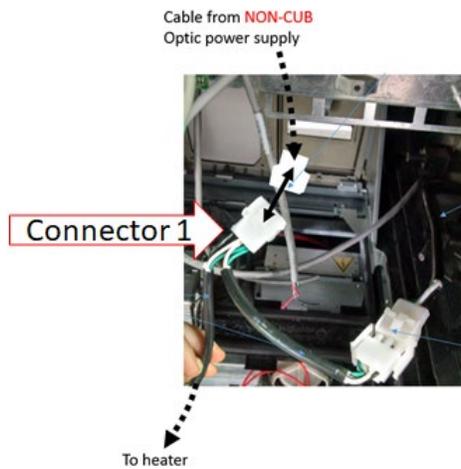


Figure 170

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

10) Affix Connector 2 (identified in Figure 171) to the existing dispenser A/C power cable as shown in Figure 172.

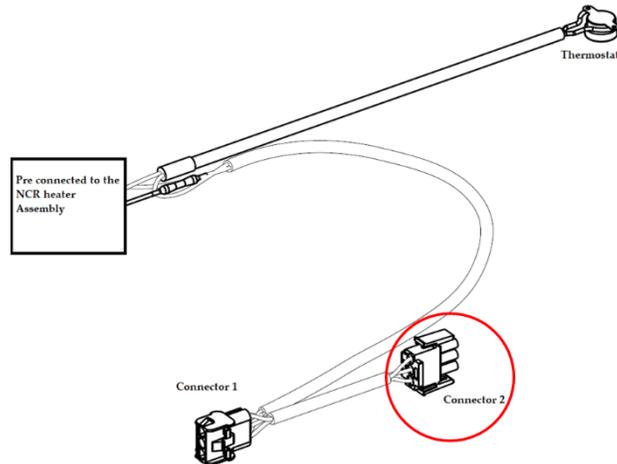


Figure 171

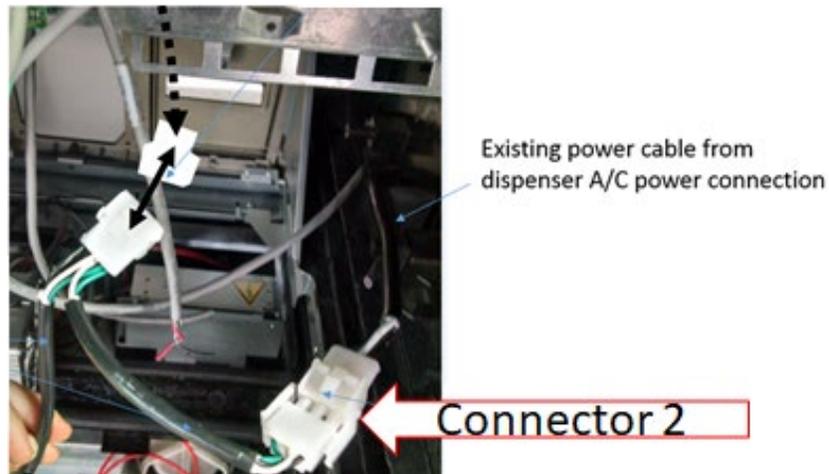


Figure 172

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit.

**Warning:** Heater surfaces are hot! Do not touch!

- 11) Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).
- 12) All wires are to be routed away from any sharp edges and door joints/gaskets.
- 13) Lock and close the outer dispenser housing using the appropriate key and / or security torx driver. See Figure 173.



Figure 173

## WAYNE ECLIPSE DISPENSER

- 1) Identify Side A and Side B:
  - a) Open both sides of the dispenser and Identify the Weights and Measures Switch. This is identified by the metal bracket closed by a sealed wire. The side with this switch is Side A. See Figure 174

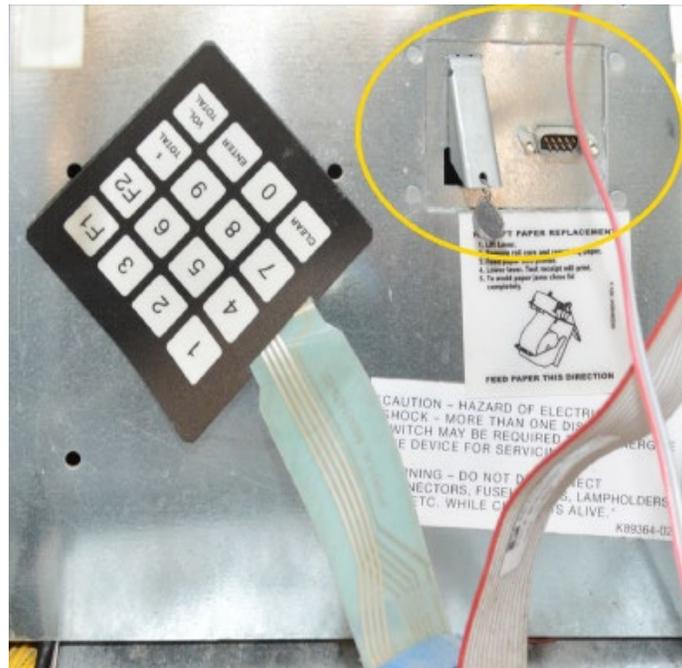


Figure 174

- 2) Open the dispenser.
  - a) Use a 751 key to open the bottom printer door and to reach the main door latch. See Figure 175.



Figure 175

- b) Push down and hold the door latch near the bottom of the Dispenser inside of the Printer door. See Figure 176



Figure 176

- c) Pull open the main dispenser door.
- 3) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
  - 4) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Advantage, Vista, Encore, Eclipse, Tokheim B alignment mark as shown in Figure 177 and Figure 178.

**View of alignment without Wire Guard (497-0522796) present.**

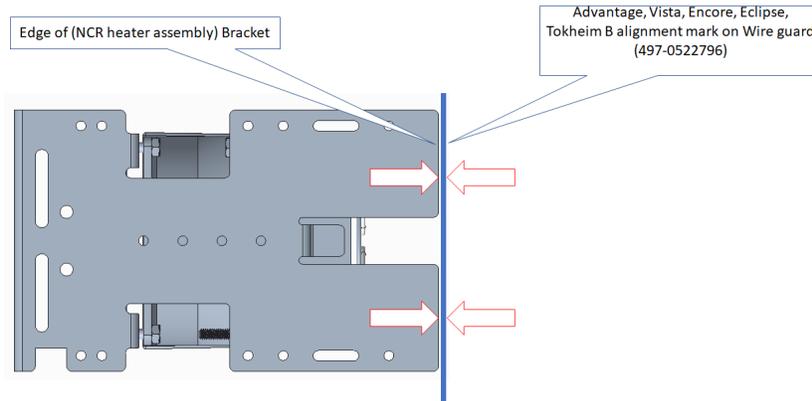


Figure 177

**View of alignment with Wire Guard (497-0522796) present.**

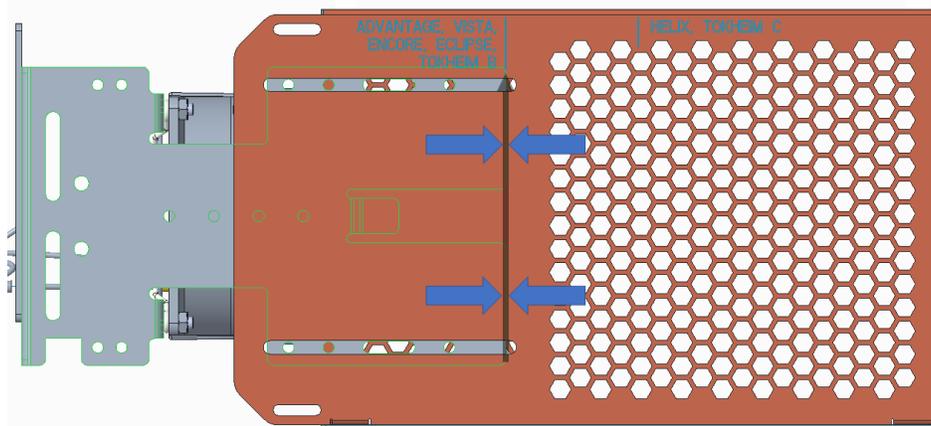


Figure 178

- 5) Insert and tighten two of the thread forming 006-8626667 screws at the locations shown in Figure 179 to secure the wire guard (497-0522796) to the NCR heater assembly.

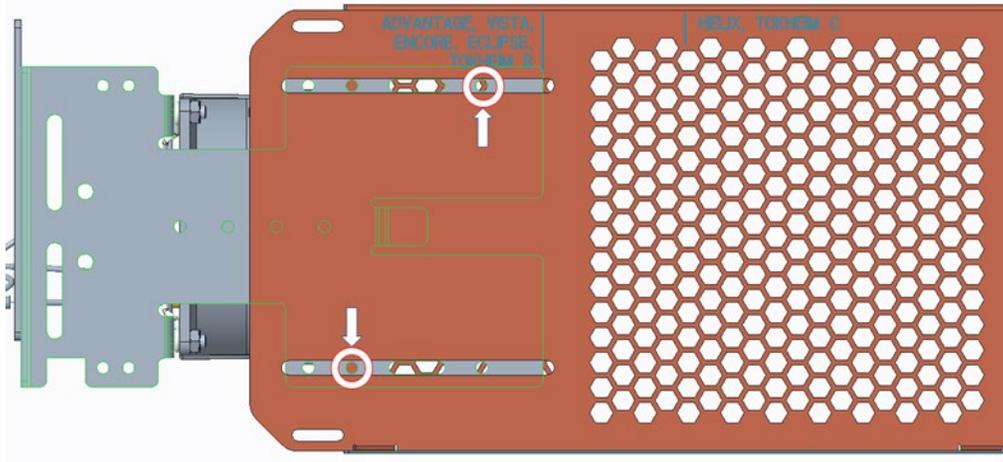


Figure 179

**Note:** All cables and cable bundles must be re-routed away from the front of the heater exit.

**Note:** In the example below, a cable bundle initially wraps around the side of the power supply bracket plate (497-0517788), which could potentially lie in front of the heater. This cable bundle must be re-routed to go underneath the power supply bracket plate.

- 6) First cut the cable restraint to enable more cable slack, then tucking cable bundle under the bracket and securing with supplied cable tie (006-8616073) through the existing hole as shown in Figure 180 below.

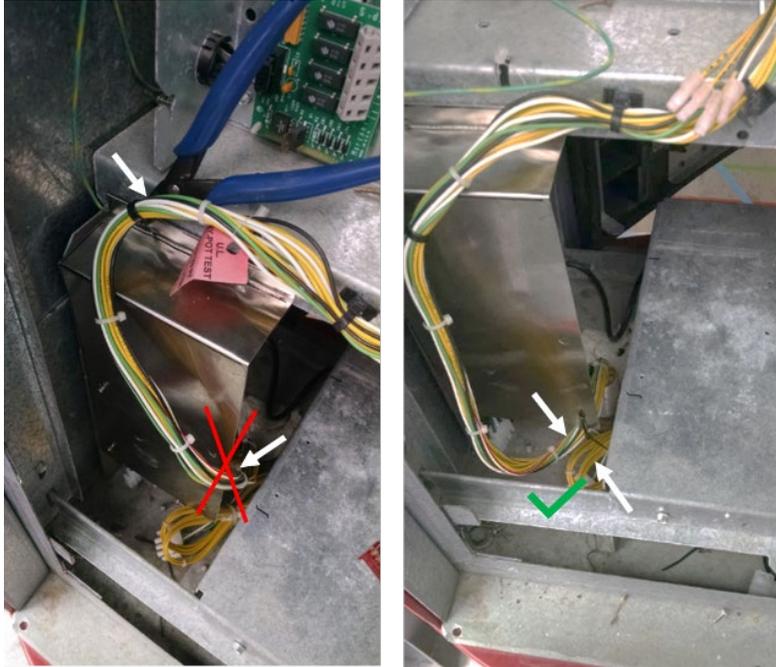


Figure 180

- 7) Mount the heater assembly at location [1] below using one of the provided 6-32 screws (006-8611215) and 6-32 nuts (006-8611426). See Figure 181 and Figure 182 below.

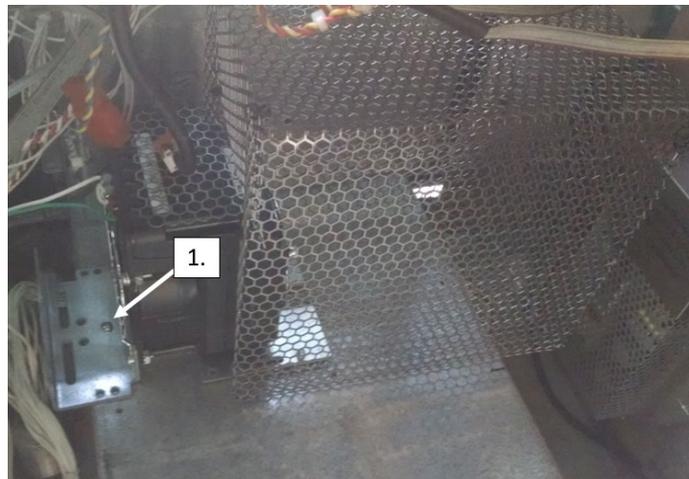


Figure 181

## Dispenser through hole location

Far angle

Close angle



Figure 182

- 8) Tuck all excess thermostat cabling into the bottom cavity below the heater.
- 9) Secure the thermostat (identified in Figure 183) with a cable tie (006-8616073) to an available opening like shown [2]. See Figure 184 below.

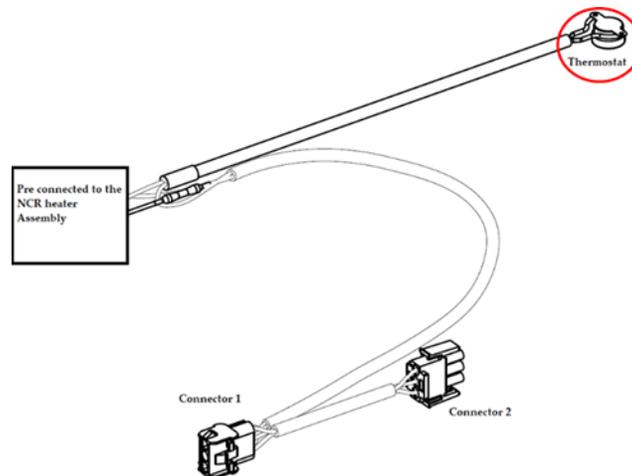


Figure 183



Figure 184

10) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 185 below.

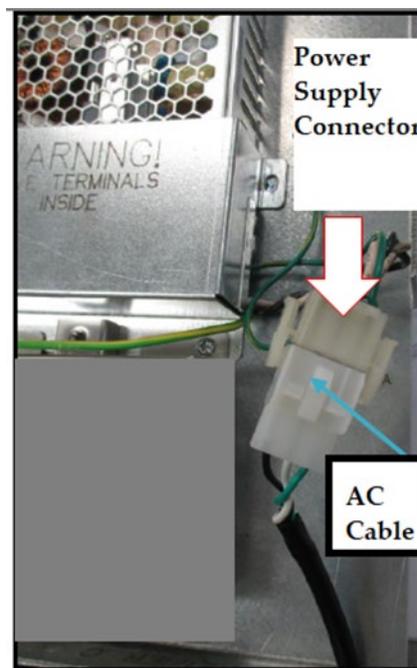


Figure 185

11) Attach Connector 1 (identified in Figure 186) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 187.

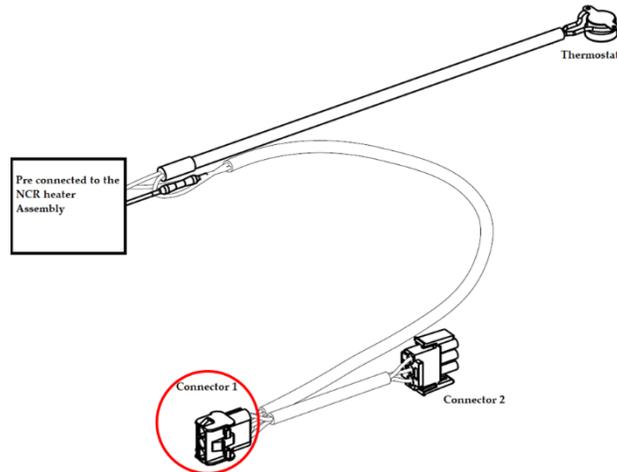


Figure 186

Cable from **NON-CUB**  
Optic power supply

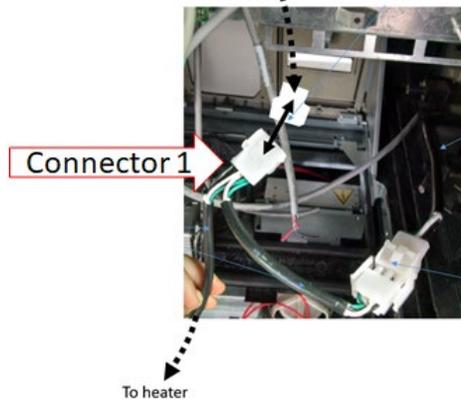


Figure 187

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

Affix Connector 2 (identified in Figure 188) to the existing dispenser A/C power cable as shown in Figure 189.

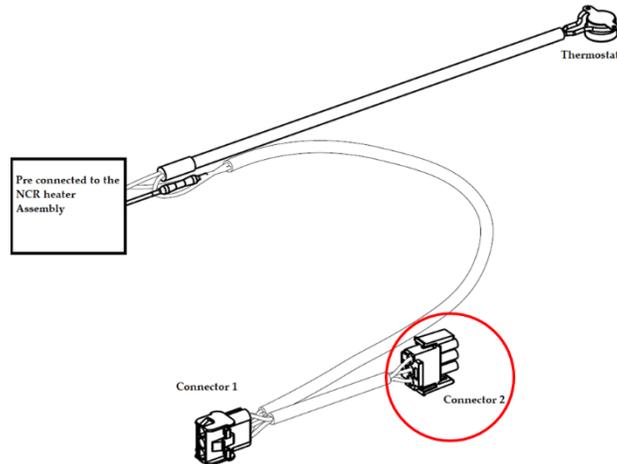


Figure 188

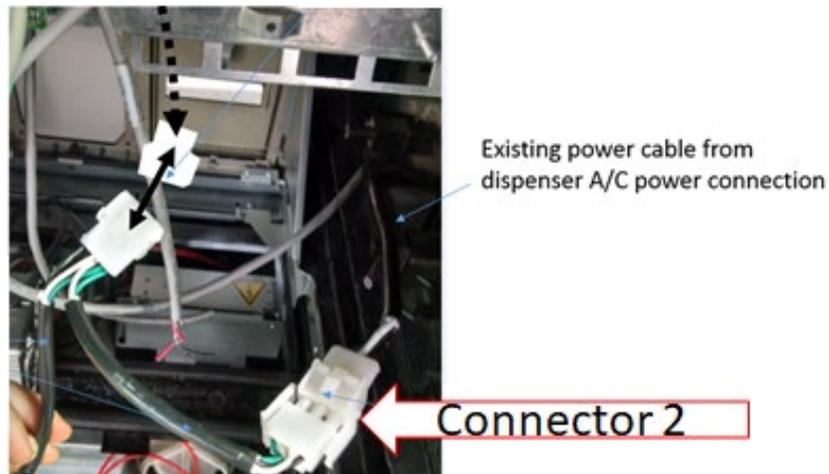


Figure 189

**Caution:** After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit.

12) Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

13) All wires are to be routed away from any sharp edges and door joints/gaskets.

14) Push the dispenser door closed until the inner latch re-engages.



15). Use a 751 key to close the bottom printer door.

## WAYNE HELIX HEADLESS DISPENSER

- 1) Unlock the Helix. The lock is located on the bottom of the frame collar. See Figure 190 below.



Figure 190

- 2) Place the prop rod in the upper right corner of the frame collar. See Figure 191 below.



Figure 191

- 3) Loosen and retain the two mounting screws that secure the OPTIC panel to the dispenser. The OPTIC door panel will then swing forward and hang on its tethers. See Figure 192.



Figure 192

- 4) Temporarily remove all connections to the customer display and note the connection locations.

**Note:** To remove the grounding wire a screw must also be removed. Retain the screw.

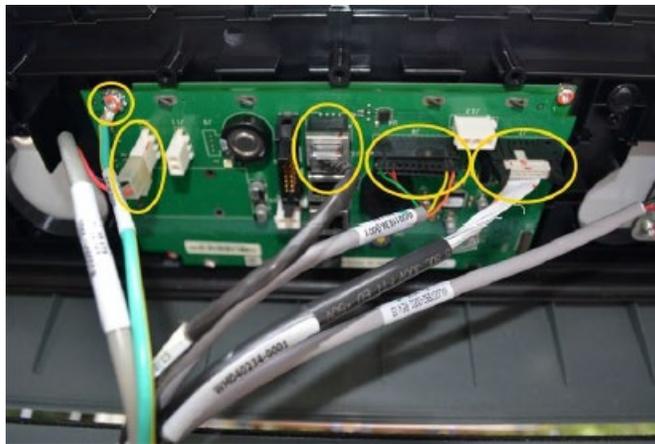


Figure 193

- 5) Temporarily detach the OPTIC door tethers by removing the M4 screw and washer (One pair per side) from the dispenser tether brackets. Retain M4 screws and washers for reinstallation. See Figure 194.



Figure 194

- 6) Allow the door panel to tilt forward until it rests in the horizontal position.
- 7) Repeat steps 1) - 6) for the opposite side of the dispenser to allow internal access to both sides of the dispenser.
- 8) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
- 9) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Helix, Tokheim C alignment mark as shown in Figure 195.

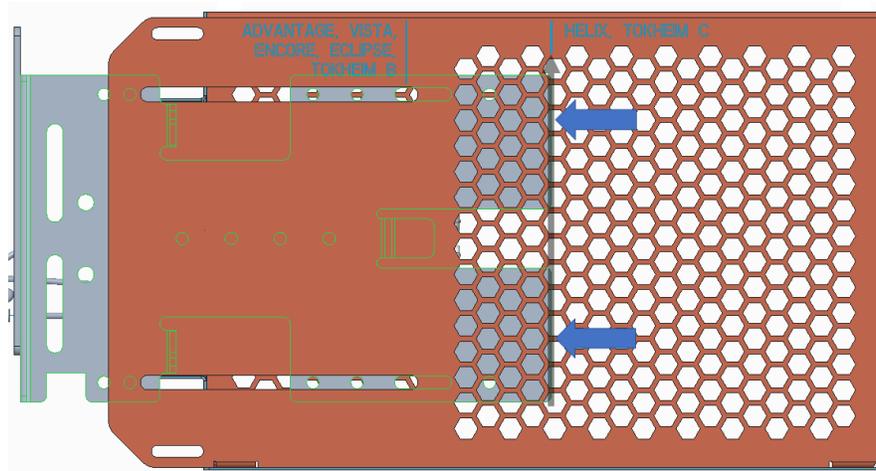


Figure 195

- 10) Insert and tighten two of the thread forming 006-8626667 screws at the locations shown in Figure 196 to secure the wire guard (497-0522796) to the NCR heater assembly.

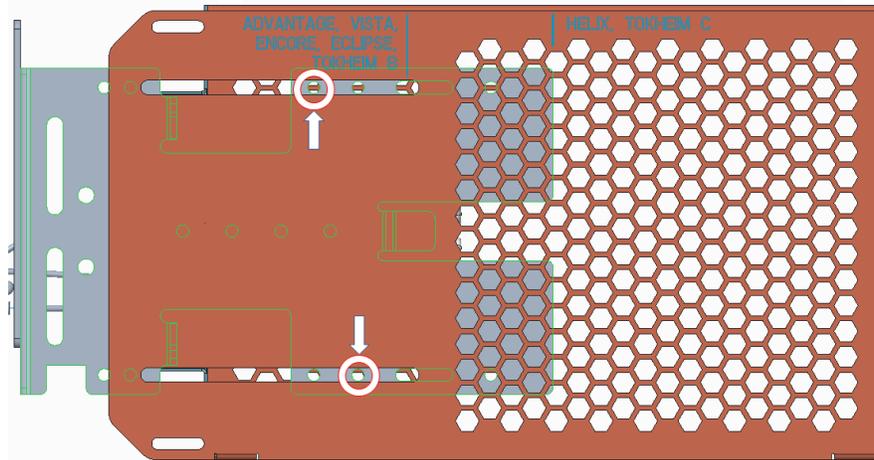


Figure 196

- 11) Mount the heater on “Side A” of the dispenser so that it is not directly under the OPTIC power supplies and their associated cabling, which are in the larger top cavity of “Side B”. See Figure 197 below.

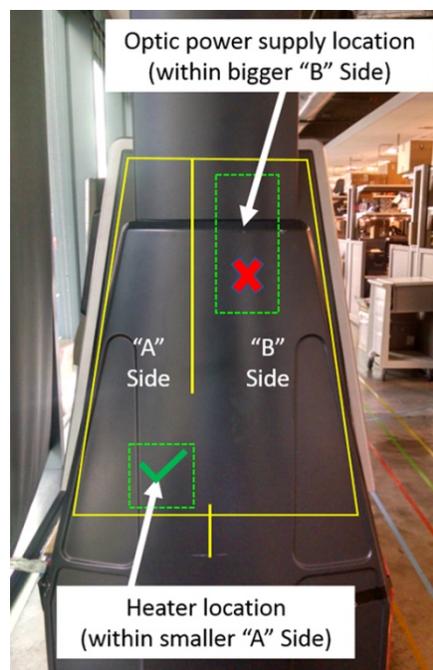


Figure 197

- 12) Attach OPTIC Heater Mounting Plate (497-0524577) to NCR heater assembly bracket using two provided 8-32 (006-8626667) screws and 8-32 nuts (006-8617730) at locations as shown. See Figure 198 and Figure 199 below.

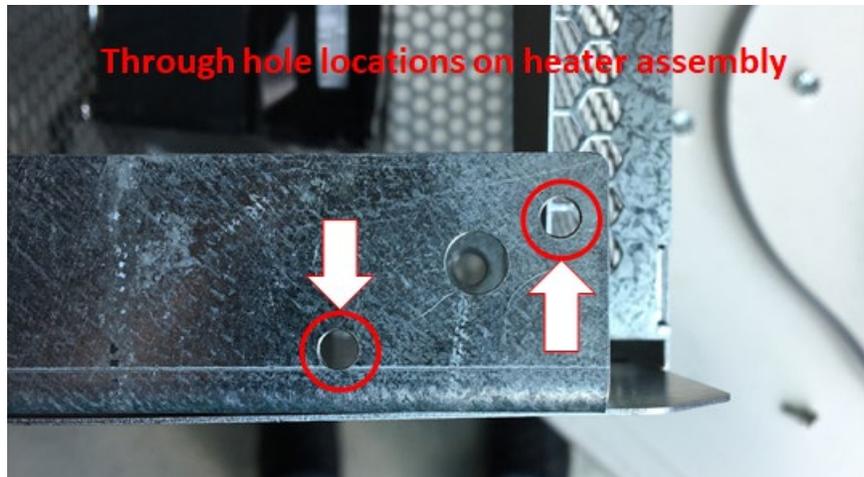


Figure 198

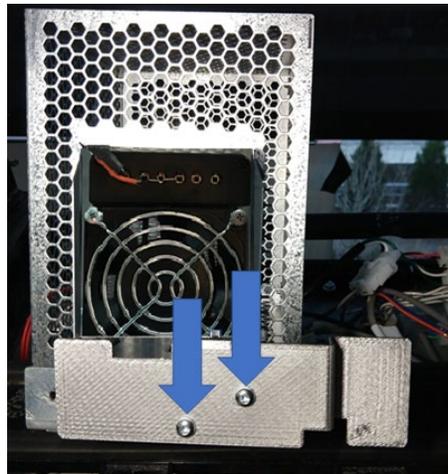


Figure 199

13) Fasten thermostat (identified in Figure 200) to the location on the heater bracket as depicted in Figure 201 using one the provided cable ties (006-8616073).

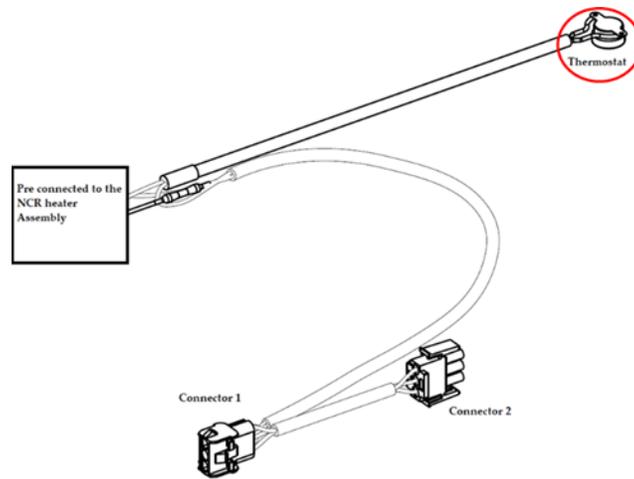
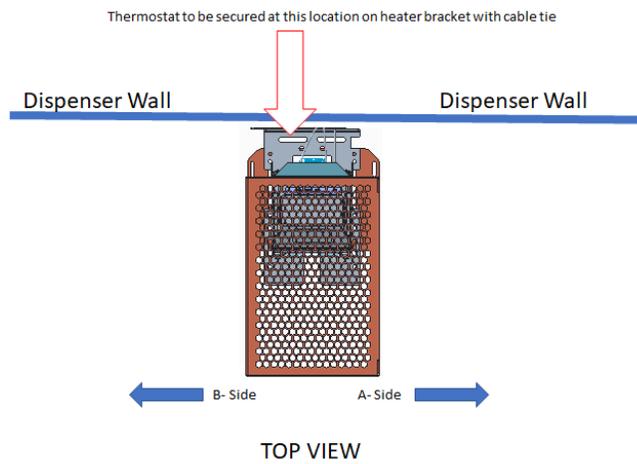


Figure 200



TOP VIEW

Figure 201

14) Position heater along bottom dispenser wall like shown. See Figure 202 below.

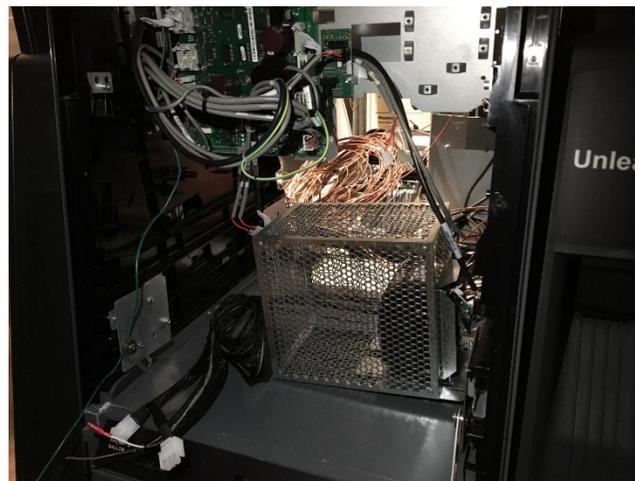


Figure 202

- 15) Install the OPTIC heater mounting plate (497-0524577) by passing the cutout in the plate past the plastic tooth in the pump wall. The bent tab on the top of the bracket will slide behind that tooth to capture the bracket. Figure 203 and Figure 204

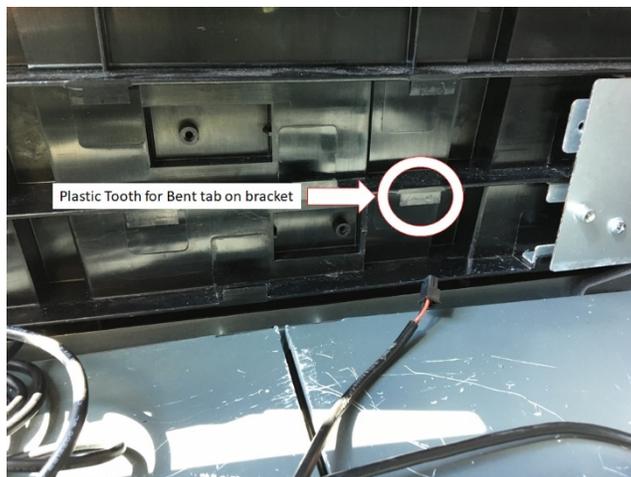


Figure 203

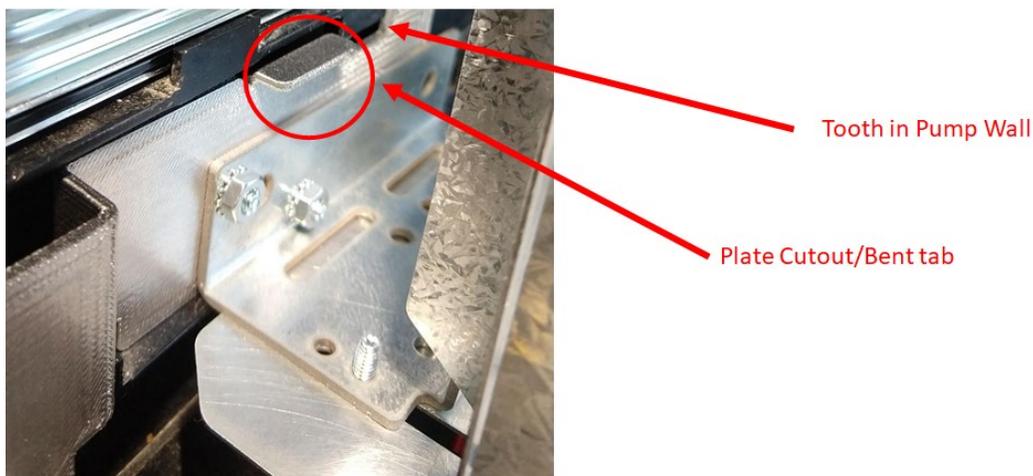


Figure 204

- 16) Secure OPTIC Heater mounting Plate (497-0524577) to dispenser wall by installing one 6-32 screw (006-8611215) fully into the bracket to hold the assembly in place. The screw prevents the bracket from backing out. It will hit a metal bracket in the pump wall if you try to slide the assembly backwards. See Figure 205 and Figure 206 below.

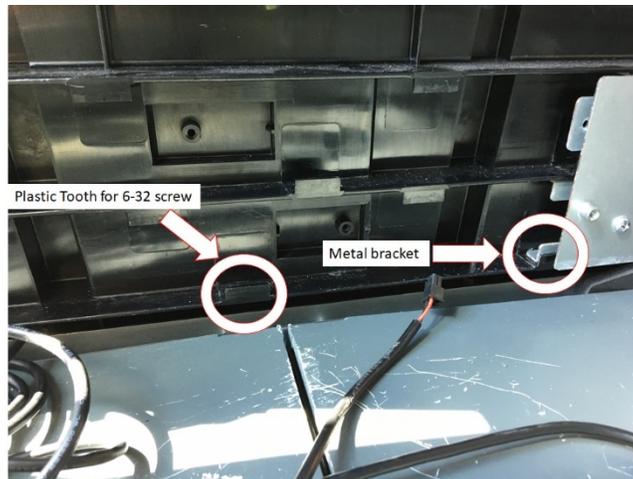


Figure 205



Plastic Tooth in pump outlined in red

Figure 206

- 17) Once thermostat is secure and the heater is installed, the printer cables must be routed away from the wire guard, as shown in the following steps.
- 18) On the A-Side printer (the printer on the same side as heater and directly in front of the wire guard (497-0522796), loosen the M4 screw holding the ground ring terminal and printer chassis lid to the printer chassis. Retain screw for later use. See location as described in Figure 207.



Figure 207

19) Install the M4X12 screw (006-8627144) at the same location that the ground ring terminal and M4 screw were just removed from see Figure 208.



Figure 208

20) Push ground/bond wire that was just detached in step 18), to the B side of the dispenser. See Figure 209.

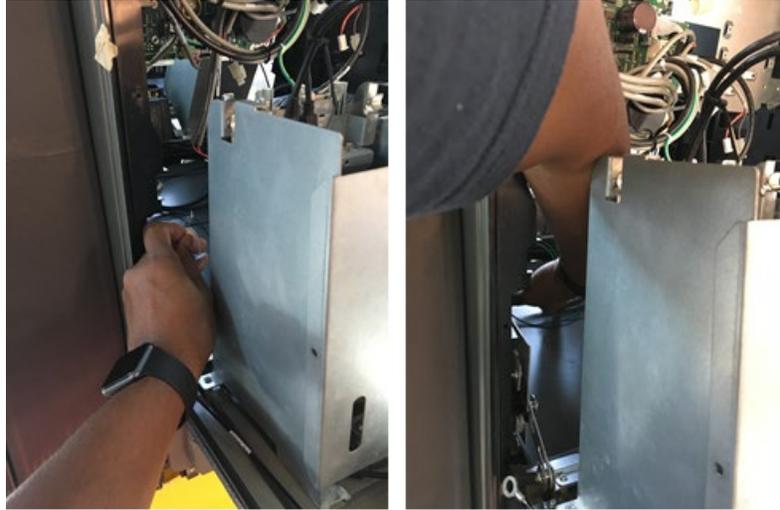


Figure 209

21) Route ground/bond wire [8] up and over the inner top of the dispenser. See Figure 210.



Figure 210

22) Remove and discard the M4 screw that secures the other side of the printer lid to the printer chassis. See Figure 211.

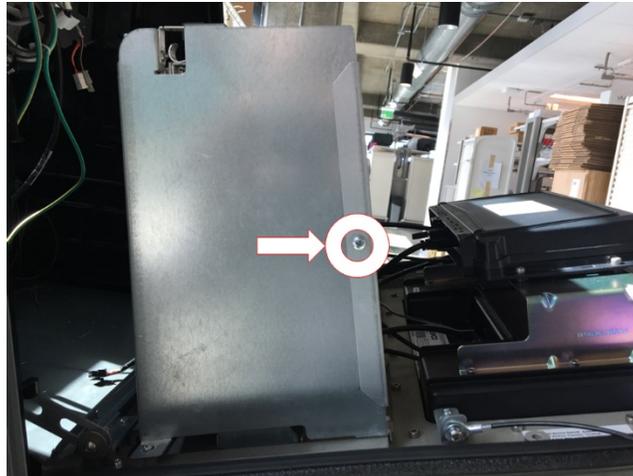


Figure 211

23) Using one of the provided cable clamps (006-8611458) and screw retained in step 18), attach cable clamp and ground ring terminal to printer chassis through the mounting hole on the other side of the printer lid. Hardware should be stacked as depicted in Figure 212. See Figure 213 below.

## Hardware Stack up

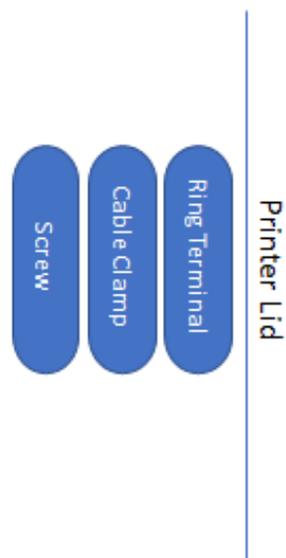


Figure 212



Figure 213

24) Secure both printer cables together at the approximate height [1] of the dotted line) with one of the supplied cable ties (006-8616073). See Figure 214 below.

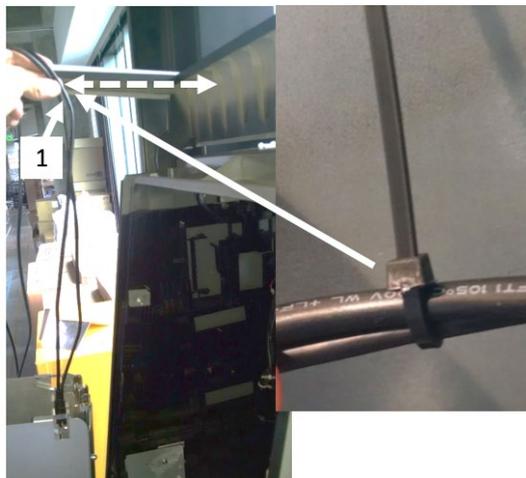


Figure 214

25) Secure the bundled printer cables to the pre-mounted cable clamp at the same location determined in step 24) using supplied cable tie(s) (006-8616073) as applicable. See Figure 215 below.

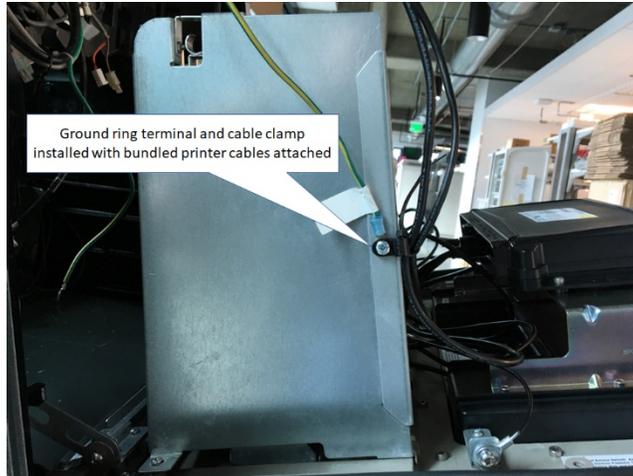


Figure 215

26) Identify all remaining printer cable slack and secure with provided cable tie (006-8616073). See Figure 216 below.



Figure 216

27) Then tuck excess cable loop up under the APC module (identified in the figure below) and above the printer. See Figure 217 below.

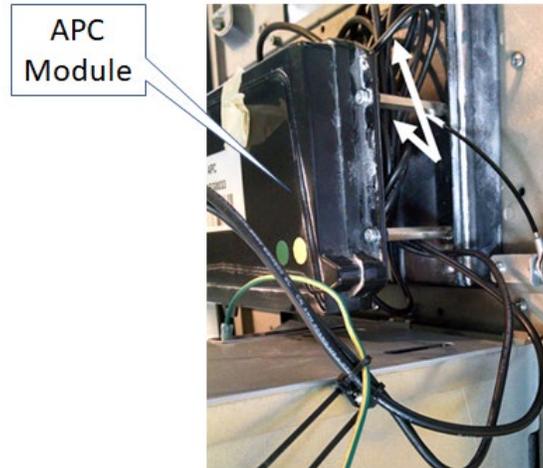


Figure 217

28) Repeat steps 18) – 19) and 22) - 27) (routing & placement of printer cables and printer ground wire) for the printer located on the B-Side of the dispenser using three more provided cable ties (006-8616073) and one more provided cable clamp (006-8611458).

**Note:** On the B-Side, the printer ground wire does not have to be routed up and over the inner top of the dispenser since the heater is on the opposite A-Side. For the B-side printer, the printer ground wire can be bundled with the loop of printer cables that already are being tucked away up under the APC module (identified previously in Figure 217).

29) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 218 below.

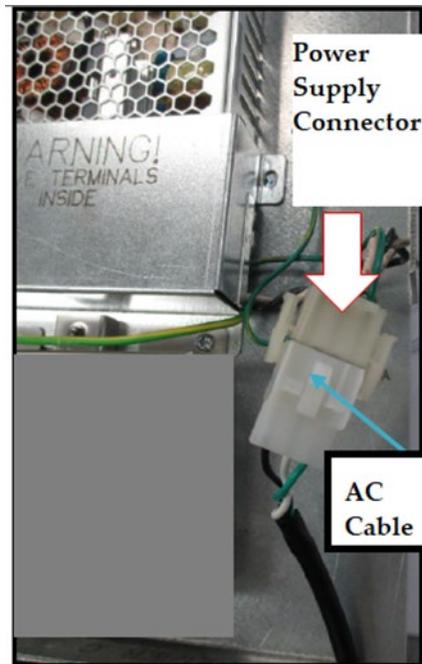


Figure 218

30) Attach Connector 1 (identified in Figure 219) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 220.

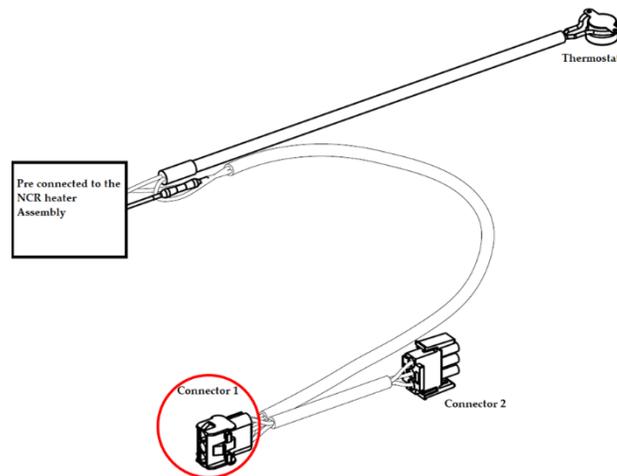


Figure 219

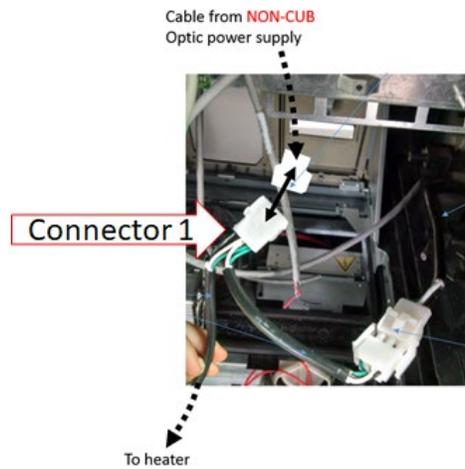


Figure 220

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

31) Affix Connector 2 (identified in Figure 221) to the existing dispenser A/C power cable as shown in Figure 222.

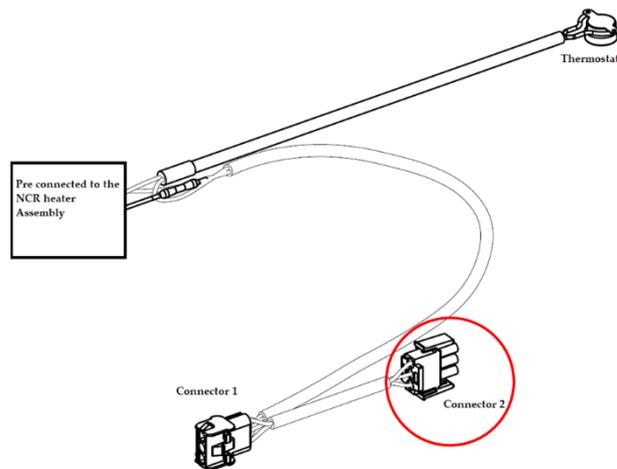


Figure 221

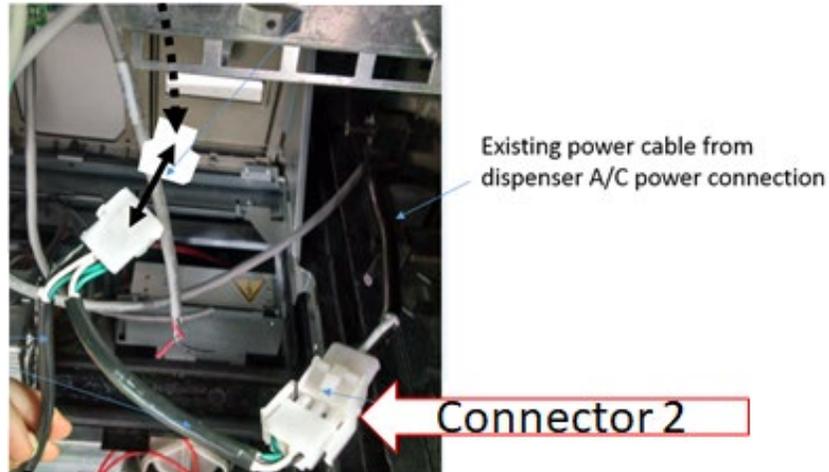


Figure 222

- 32) Tilt the door panel towards the dispenser.
- 33) Reattach the top M4 screws and washers securing both door tethers to the dispenser. See Figure 223.



Figure 223

- 34) Reattach all connections to the customer display. See Figure 224

**Note:** To attach the grounding wire, reattach the screw that was previously removed and retained.



Figure 224

35) After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit. Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

36) All wires are to be routed away from any sharp edges and door joints/gaskets.

37) Secure the door panel to the dispenser with the two mounting screws. See Figure 225.



Figure 225

38) Open printer door. See Figure 226



Figure 226

39) Fully slide printer outward [6] to confirm that there is a minimal amount of slack [7] in the printer cables to allow the cables to remain connected when the printer slides in and out. See Figure 227 below.



Figure 227

40) Close the printer door. See Figure 228.



Figure 228

- 41) Slightly push up on the dispenser frame that is held up by the prop rod.
- 42) Remove and stow the prop rod in the upper right corner of the frame collar. See Figure 229.



Figure 229

- 43) Swing the door frame closed and lock the dispenser. See Figure 230.



*Figure 230*

44) Repeat steps 32) – 43) for the opposite side of the dispenser.

## WAYNE HELIX STANDARD DISPENSER

- 1) Unlock the Helix. The lock is located on the bottom of the frame collar. See Figure 231 below.



Figure 231

- 2) Place the prop rod in the upper right corner of the frame collar. See Figure 232 below.



Figure 232

- 3) Loosen and retain the two mounting screws that secure the panel to the dispenser. The door will then slide forward. See Figure 233



Figure 233

- 4) Repeat steps 1) - 3) for the opposite side of the dispenser to allow internal access to both sides of the dispenser.
- 5) Acquire the heater (NCR heater assembly) and OPTIC heater wire guard (497-0522796).
- 6) Slide the wire guard (497-0522796) around the NCR heater assembly so that the edge of the bracket aligns with the Helix, Tokheim C alignment mark as shown in Figure 234.

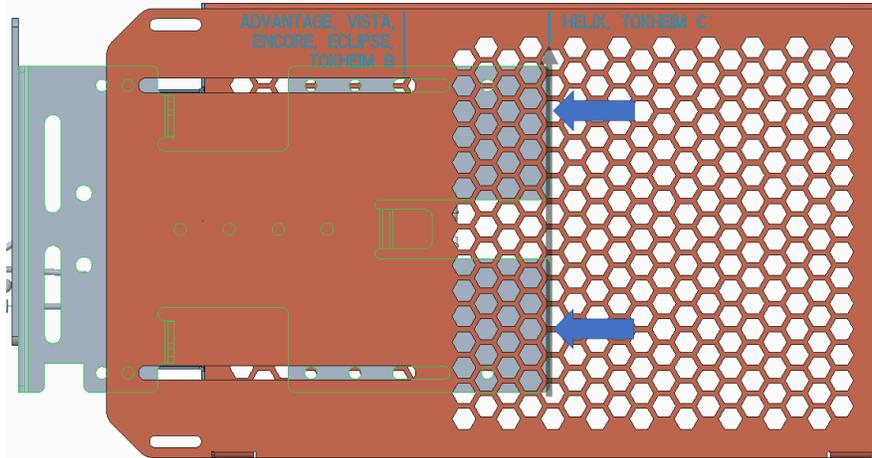


Figure 234

- 7) Insert and tighten two of the thread forming 006-8626667 screws at the locations shown in Figure 235 to secure the wire guard (497-0522796) to the NCR heater assembly

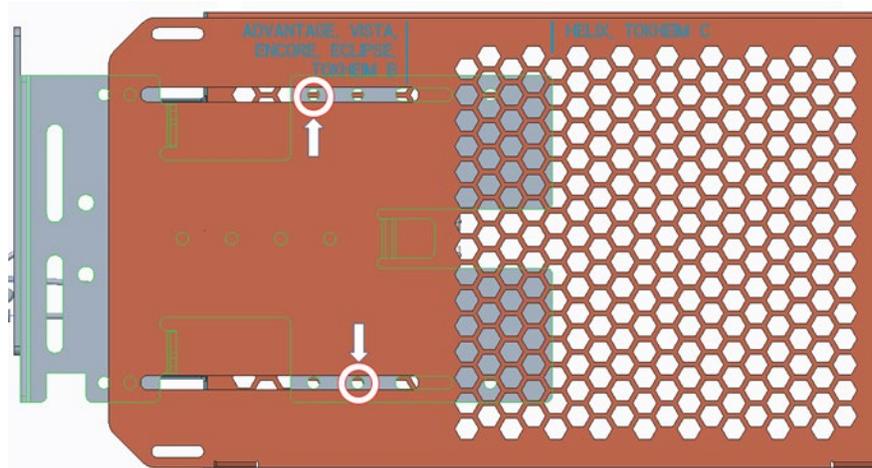


Figure 235

- 8) Mount the heater on "Side A" of the dispenser so that it is not directly under the OPTIC power supplies and their associated cabling, which are in the larger top cavity of "Side B". See Figure 236 below.

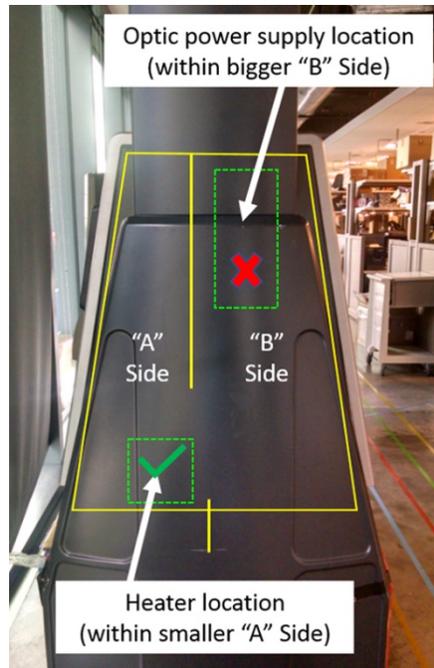


Figure 236

- 9) Attach Heater Mount, Helix Standard (497-0529988) to NCR heater assembly bracket using two provided M4X12 (006-8627144) screws and M4 nuts (006-8627136) at locations as shown. See Figure 237 and Figure 238 below.



Figure 237



Figure 238

10) Fasten thermostat (identified in Figure 239) to the location on the heater bracket as depicted in Figure 240 using one the provided cable ties (006-8616073).

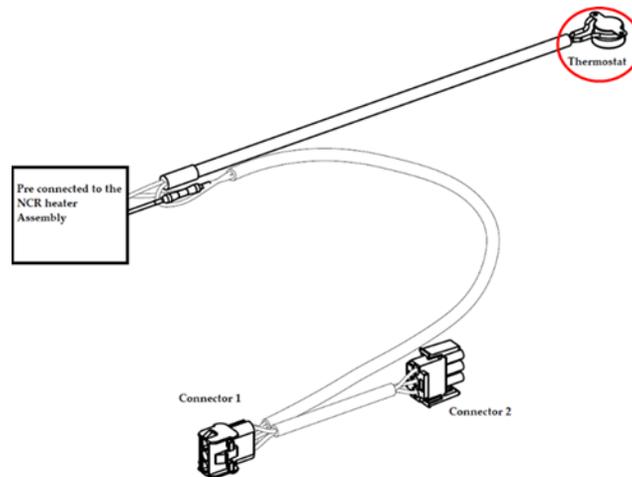
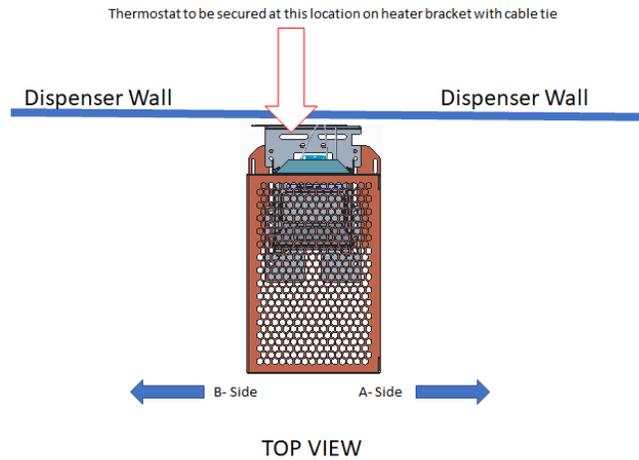
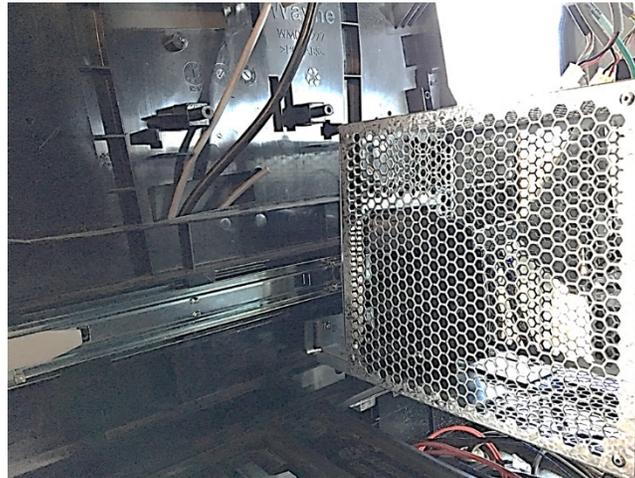


Figure 239



*Figure 240*

11) Position heater along bottom dispenser wall like shown. See Figure 241 below.



*Figure 241*

12) Install the Heater Mount, Helix Standard (497-0529988) to pump cavity as shown in Figure 242, Figure 243, and Figure 244 below.

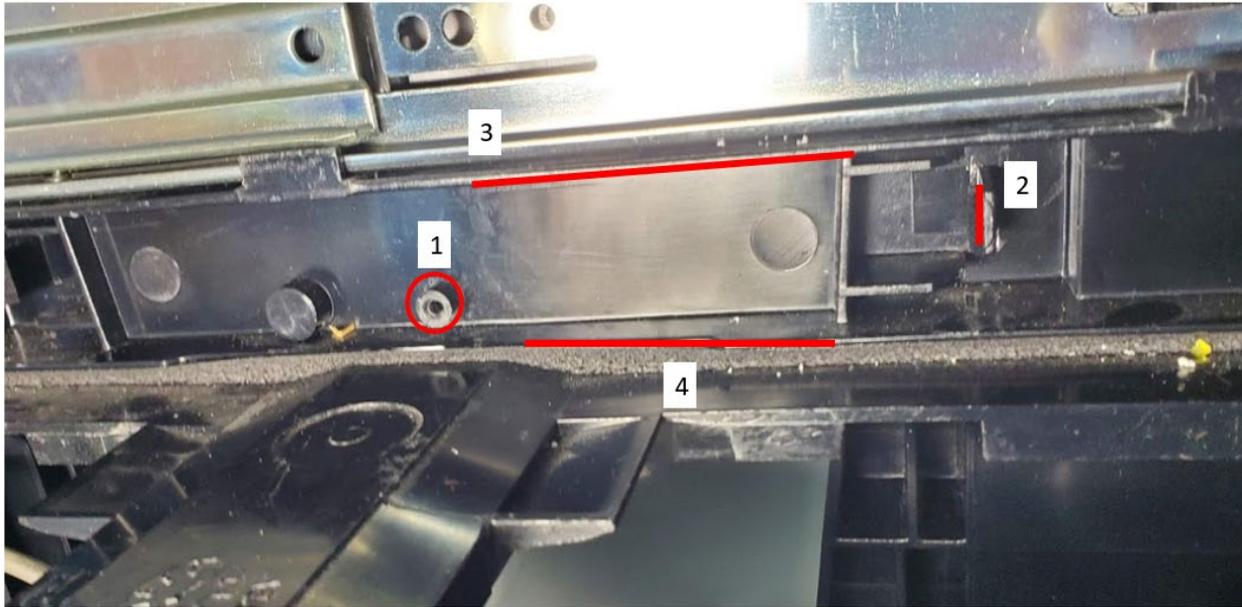


Figure 242

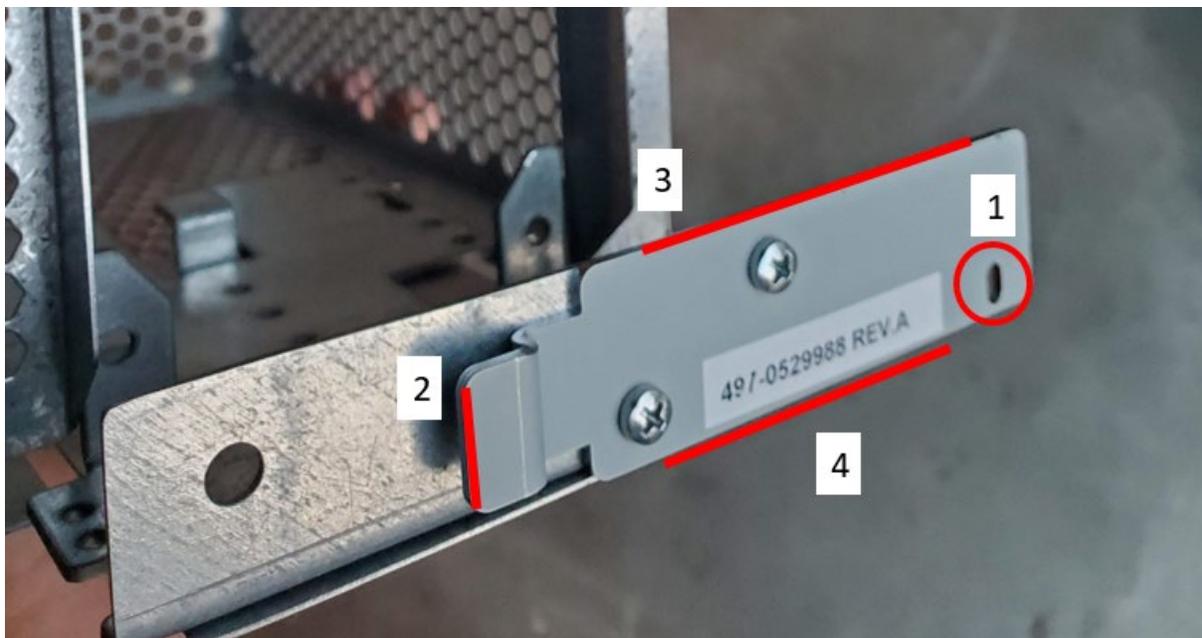


Figure 243

- 13) Secure OPTIC Heater mounting Plate (497-0524577) to dispenser wall by installing one M2.9x6mm Self Thread cutting screw fully into the bracket to hold the assembly in place.

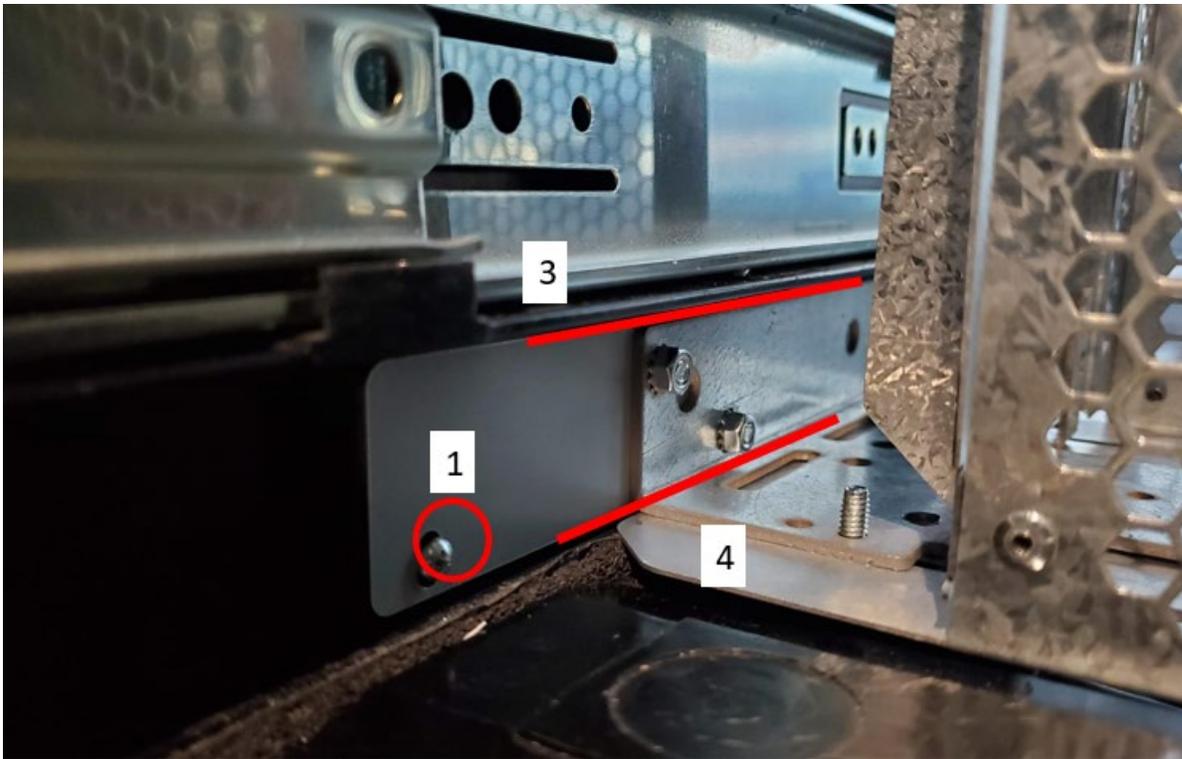


Figure 244

- 14) Once the heater is installed, the printer cables must be routed away from the heater grille, as shown in the following steps.
- 15) On the A-Side printer (the printer on the same side as heater and directly in front of the wire guard (497-0522796), loosen the M4 screw holding the ground ring terminal and printer chassis lid to the printer chassis. Retain screw for later use. See location as described in. See Figure 246

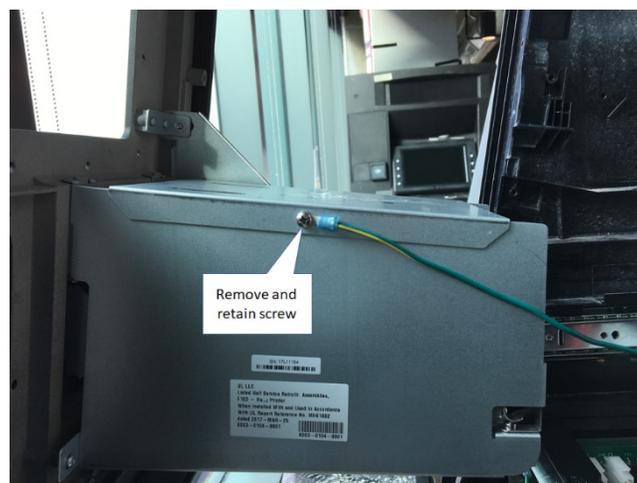


Figure 245

- 16) Install the M4X12 screw (006-8627144) at the same location that the ground ring terminal and M4 screw were just removed from. See Figure 247 below.



Figure 246

- 17) Push ground/bond wire that was just detached in step 15), to the B side of the dispenser. See Figure 248.

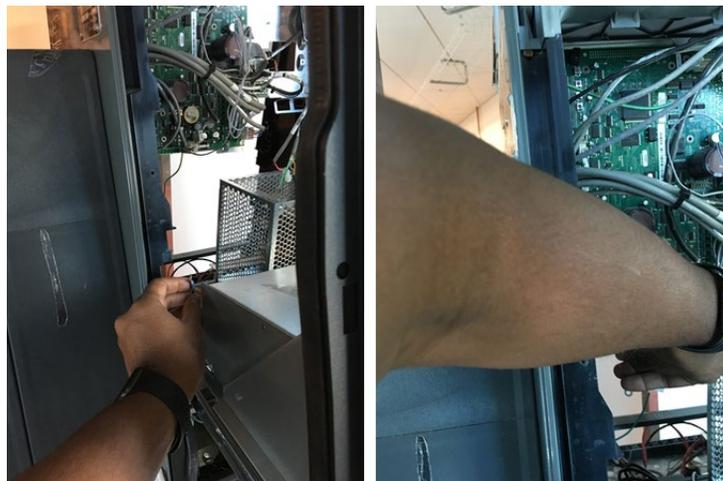


Figure 247

- 18) Route ground/bond wire up and over the inner top of the dispenser. See Figure 249



Figure 248

19) Remove and discard the M4 screw that secures the other side of the printer lid to the printer chassis. This screw is located opposite side of the screw that was replaced in 16) See Figure 250 .

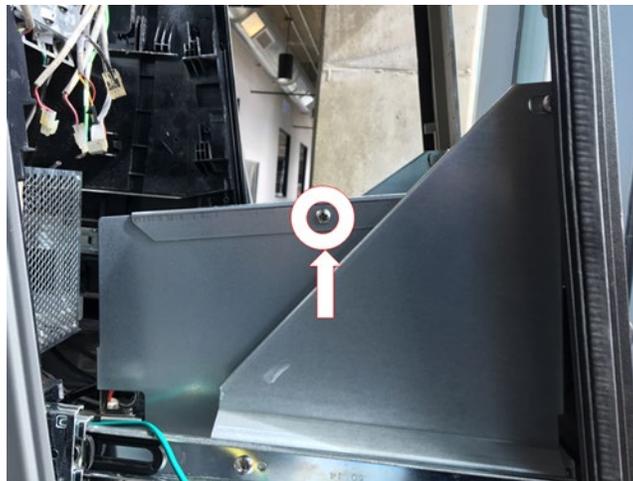


Figure 249

20) Using one of the provided cable clamps (006-8611458) and screw retained in step 15), attach cable clamp and ground ring terminal to printer chassis through the mounting hole on the other side of the printer lid. Hardware should be stacked as depicted in Figure 251. See Figure 252.

## Hardware Stack up

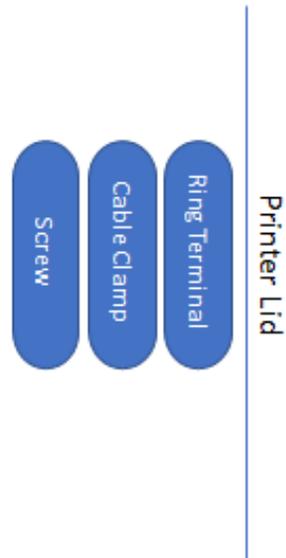


Figure 250



Figure 251

- 21) Secure both printer cables together at the approximate height of the dotted line with one of the supplied cable ties (006-8616073). See Figure 253



Figure 252

22) Secure the bundled printer cables to the pre-mounted cable clamp at the same location determined in step 21) using supplied cable tie(s) (006-8616073) as applicable. Figure 254.



Figure 253

23) Identify all remaining printer cable slack and secure with provided cable tie (006-8616073). See Figure 255.



Figure 254

24) Stow excess cable loops behind the APC module and above the printer. See Figure 256 below.

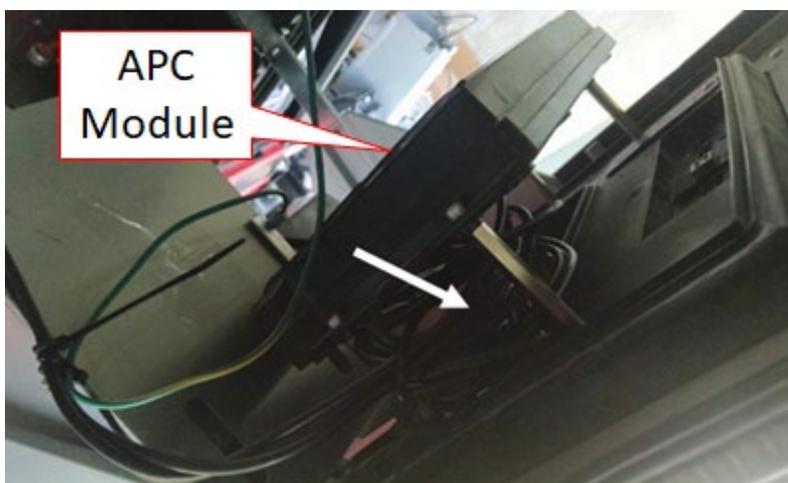


Figure 255

25) Repeat steps 15) – 16) and 19) – 24) (mounting, and routing & placement of printer cables and printer ground wire) for the printer located on the B-Side of the dispenser using the remaining provided cable ties (006-8616073) and one more provided cable clamp (006-8611458).

**Note:** On the B-Side, the printer ground wire does not have to be routed up and over the inner top of the dispenser since the heater is on the opposite A-Side. So, for the B-

side, the printer ground wire can be bundled with the loop of printer cables that already are being tucked away up under the APC module.

26) Disconnect the AC power cable that is attached to the power supply connector without the Invenco Link attached. See Figure 257 below.

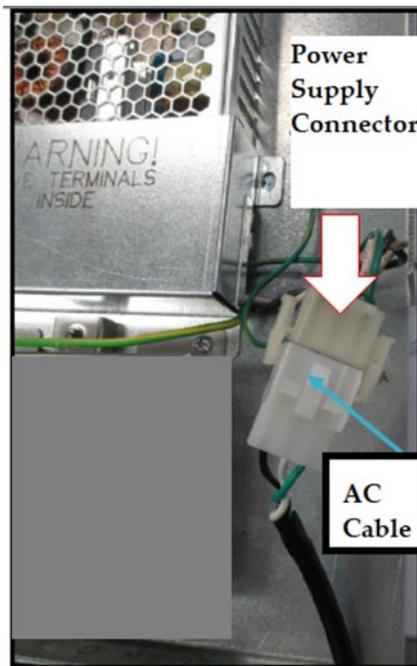


Figure 256

27) Attach Connector 1 (identified in Figure 258) to the NON-Invenco Link OPTIC power supply cable as shown in Figure 259.

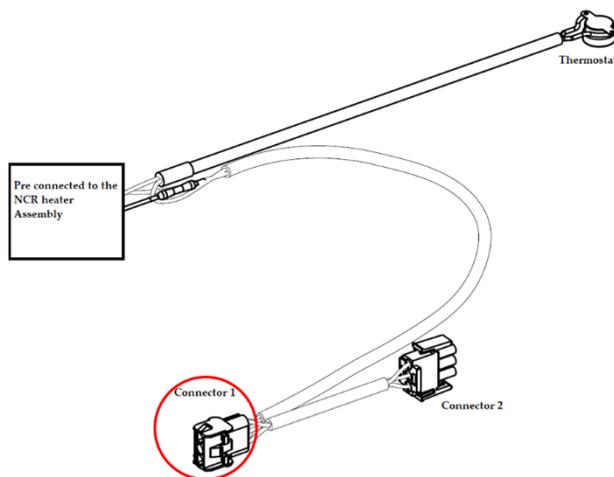


Figure 257

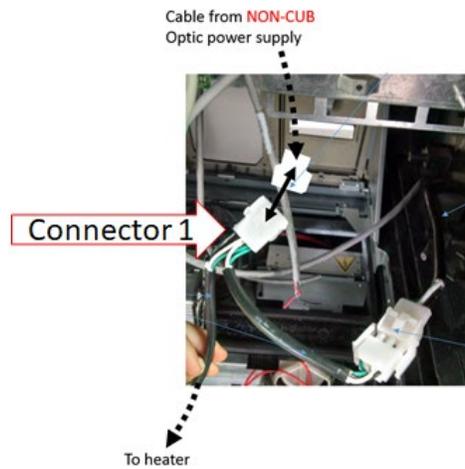


Figure 258

**Note:** The power cable leading from the Invenco Link-Equipped OPTIC power supply should not be used to make this connection.

28) Affix Connector 2 (identified in Figure 260) to the existing dispenser A/C power cable as shown in Figure 261.

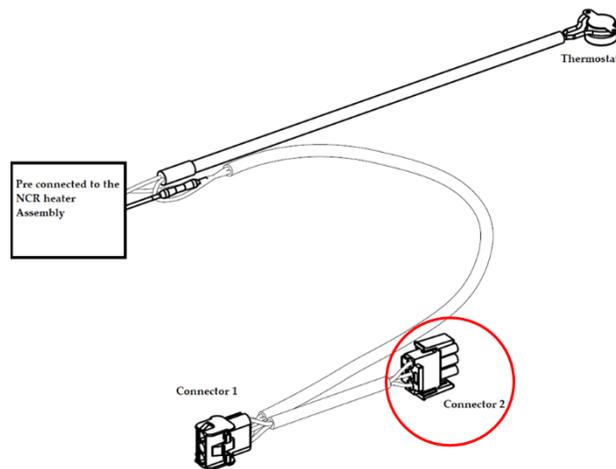


Figure 259

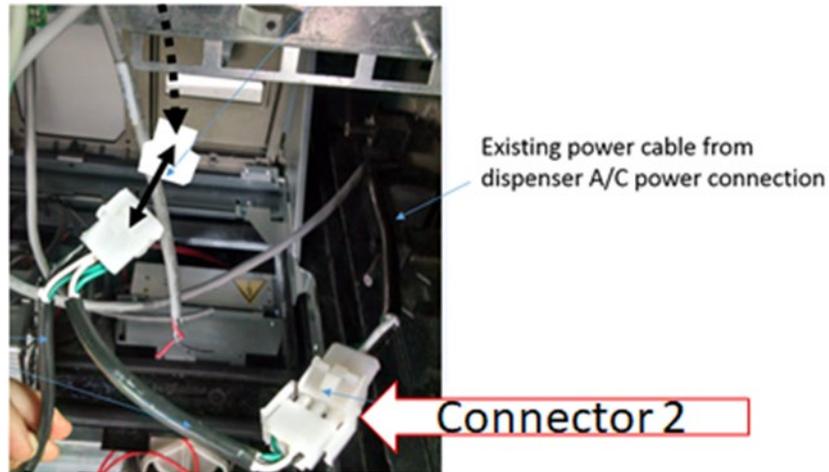


Figure 260

29) Slide the door panel towards the dispenser.

30) After all cables are reconnected, double check that no cables are hanging or lying in front of the heater exit. Any remaining cables hanging in front of the heater or lying in front of the heater exit should be re-routed and restrained using one of the additional supplied cable ties (006-8616073).

**Warning:** Heater surfaces are hot! Do not touch!

31) All wires are to be routed away from any sharp edges and door joints/gaskets.

32) Open printer door See Figure 262



Figure 261

**Note:** There is additional slack in the two cables exiting the back of the printer that must be secured.

33) Use a supplied cable tie (006-8616073) to bundle both printer cables together approximately as shown. See Figure 263 below.



Figure 262

34) Affix both printer cables to the last moving hole on the slide rails as shown using a supplied cable tie (006-8616073). See Figure 264 and Figure 265 below.



Figure 263



Figure 264

35) Confirm that there is a minimal amount of slack in the printer cables to allow the cables to remain connected when the printer slides in and out. See Figure 266 below.



Figure 265

36) Close the printer door. See Figure 267



Figure 266

37) Secure the door panel to the dispenser with the two mounting screws. See Figure 268.



Figure 267

- 38) Slightly push up on the dispenser frame that is held up by the prop rod.
- 39) Remove and stow the prop rod in the upper right corner of the frame collar. See Figure 269.



Figure 268

- 40) Swing the door frame closed and lock the dispenser. See Figure 270



*Figure 269*

41) Repeat steps 29) – 40) for the opposite side of the dispenser.



# MERLIN REVISION D