

KIT INSTRUCTIONS

Processor Upgrade

7702-K204/K206
Issue A



The product described in this book is a licensed product of NCR Corporation.

NCR is a registered trademark of NCR Corporation. NCRSelfServ Checkout is a trademark of NCR Corporation in the United States and/or other countries. Other product names mentioned in this publication may be trademarks or registered trademarks of their respective companies and are hereby acknowledged.

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Where creation of derivative works, modifications or copies of this NCR copyrighted documentation is permitted under the terms and conditions of an agreement you have with NCR, NCR's copyright notice must be included.

It is the policy of NCR Corporation (NCR) to improve products as new technology, components, software, and firmware become available. NCR, therefore, reserves the right to change specifications without prior notice.

All features, functions, and operations described herein may not be marketed by NCR in all parts of the world. In some instances, photographs are of equipment prototypes. Therefore, before using this document, consult with your NCR representative or NCR office for information that is applicable and current.

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.

EMail: FD230036@ncr.com

Copyright © 2017
By NCR Corporation
Duluth, GA U.S.A.
All Rights Reserved

Revision Record

Issue	Date	Remarks
A	Apr 2017	First Issue

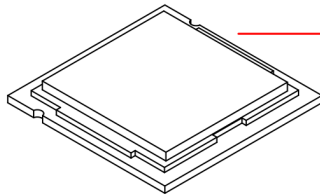
Processor Upgrade

Introduction

This kit provides the components to upgrade the processor of any of the following:

- RealPOS XR7 POS (7702)
- NCR SelfServ XK7 Kiosk (8820)
- NCR SelfServ 90 Kiosk (7709)

Kit Contents



For 7702-K204: Intel Core i3-4350T Processor, 006-8624391
For 7702-K206: Intel Core i5-4590T Processor, 006-8624392

Not shown:
Shin Etsu X23 7783D Thermal Grease with Syringe
006-8612565

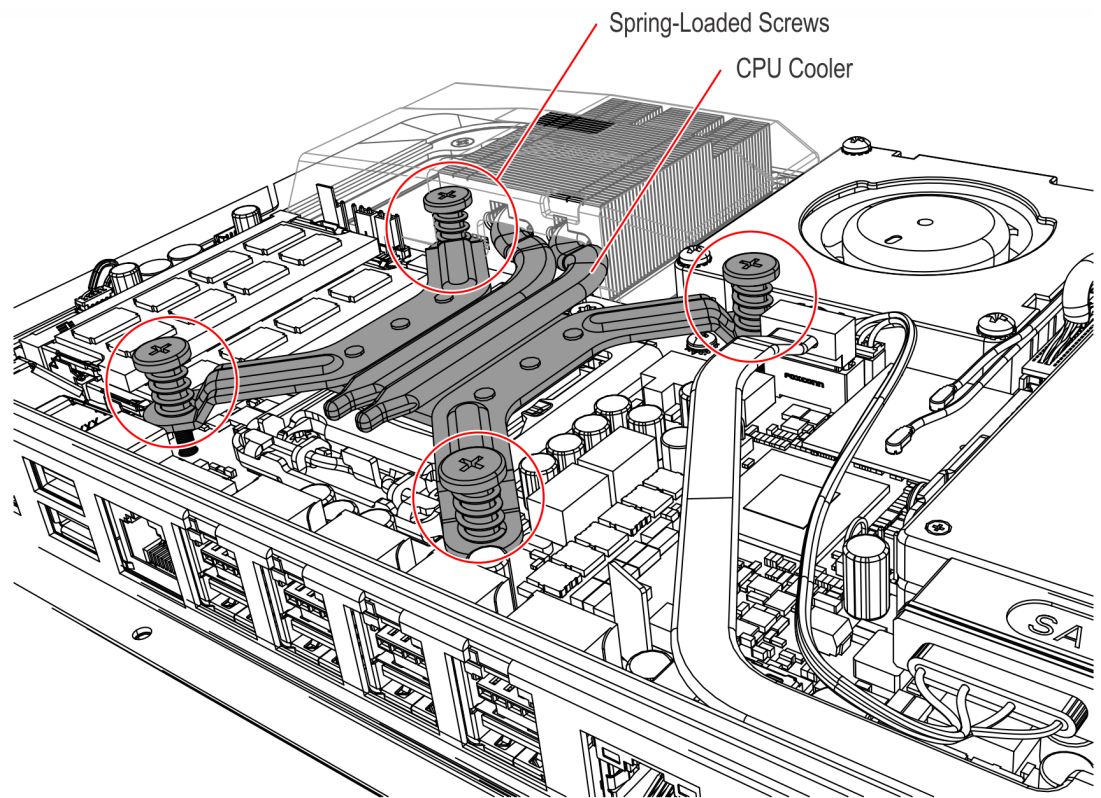
CCP-70770

Installation Procedure

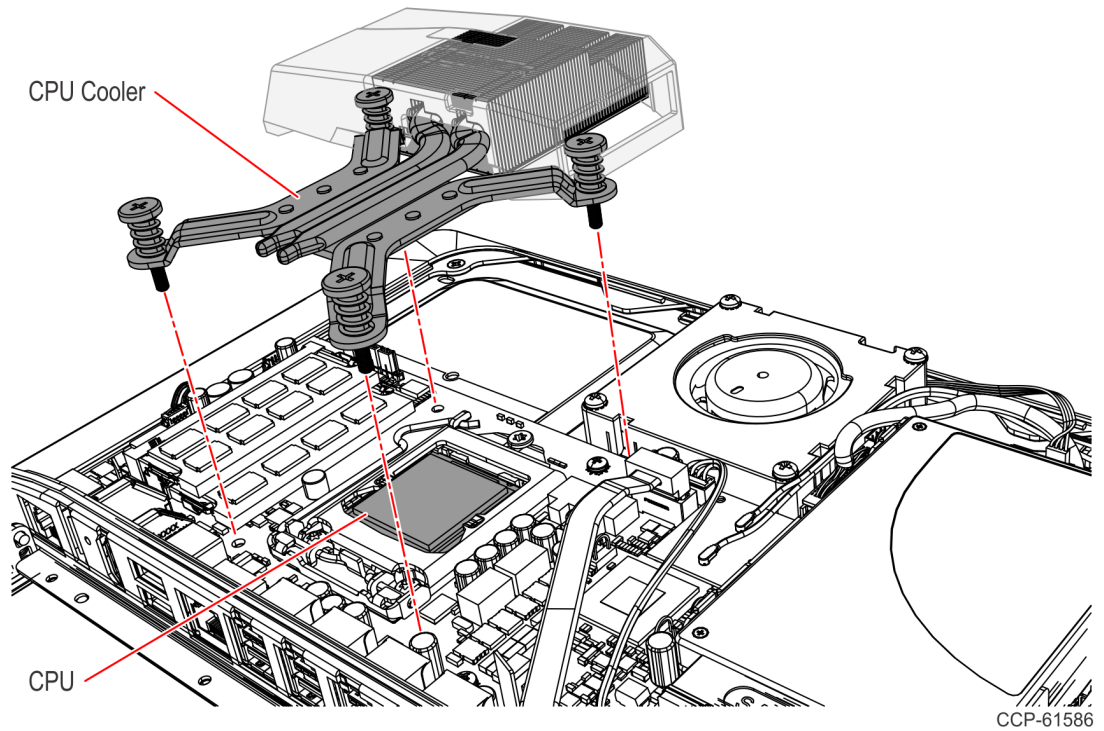
1. Access the Motherboard. Refer to the following procedures for instructions on how to access the motherboard:
 - [RealPOS XR7 POS \(7702\)](#)
 - [NCR SelfServ XK7 Kiosk \(8820\)](#)
 - [NCR SelfServ 90 Kiosk \(7709\)](#)
2. Loosen the spring-loaded screws of the CPU Cooler.




Note: Use a sequential rotating pattern when loosening the spring-loaded screws. Loosen each screw a little at a time to evenly raise the CPU Cooler from the CPU.




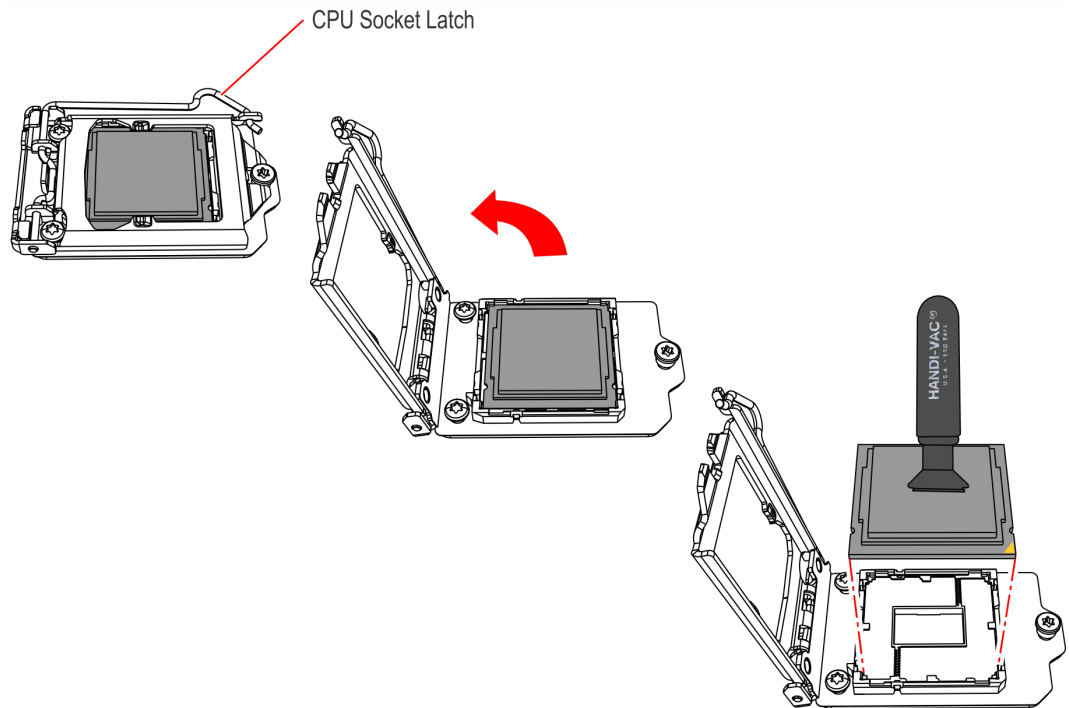
3. Remove the CPU Cooler.



4. Remove the CPU from the Motherboard.
 - a. Press down on the CPU Socket Latch and open the Socket Cover.
 - b. Note the orientation of the CPU Module (gold triangle location).
 - c. Carefully remove the CPU with the Handi-Vac CPU Removal Tool and place it in an anti-static packing to protect the CPU contacts from damage and contamination.

 **Caution:** Always use the Handi-Vac CPU Removal Tool when handling the CPU.

 **Caution:** Do not touch the CPU contacts.



CCP-61587

5. Install the new CPU Module.
 - a. Using a purely vertical motion carefully place the new CPU into the CPU Socket. (The gold triangle on the CPU must align with beveled corner on the socket.)



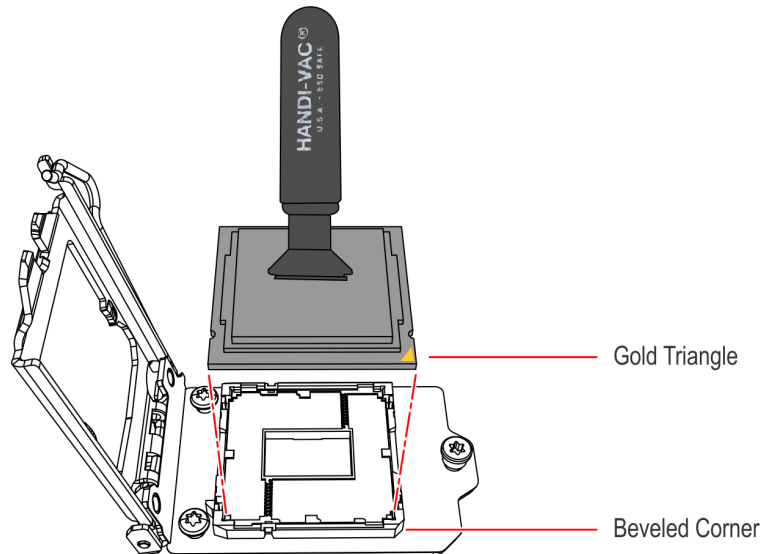
Caution: Always use the Handi-Vac CPU Removal Tool when handling the CPU.



Caution: Do not touch the CPU contacts.



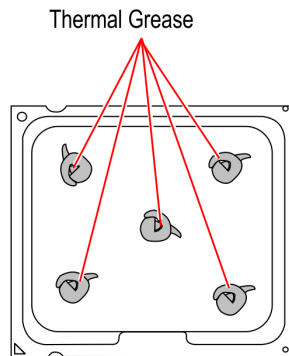
Caution: Do not insert the CPU at an angle or force the CPU into the socket.



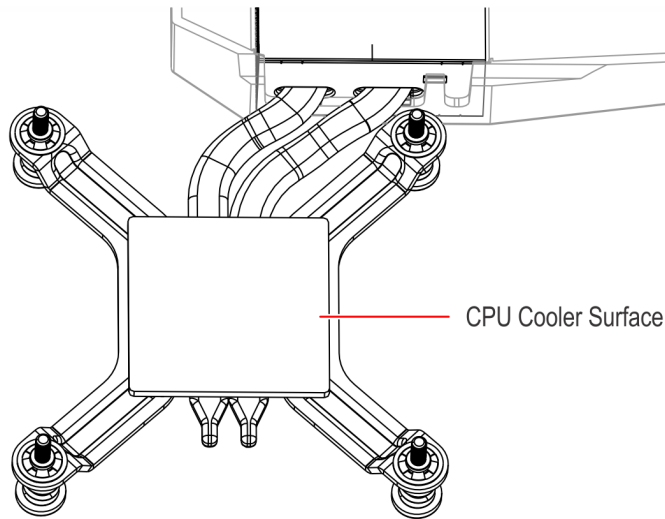
CCP-61588

- b. Gently close the Socket Cover.
 - c. Lock the Socket by lowering the CPU Socket Latch and locking it.

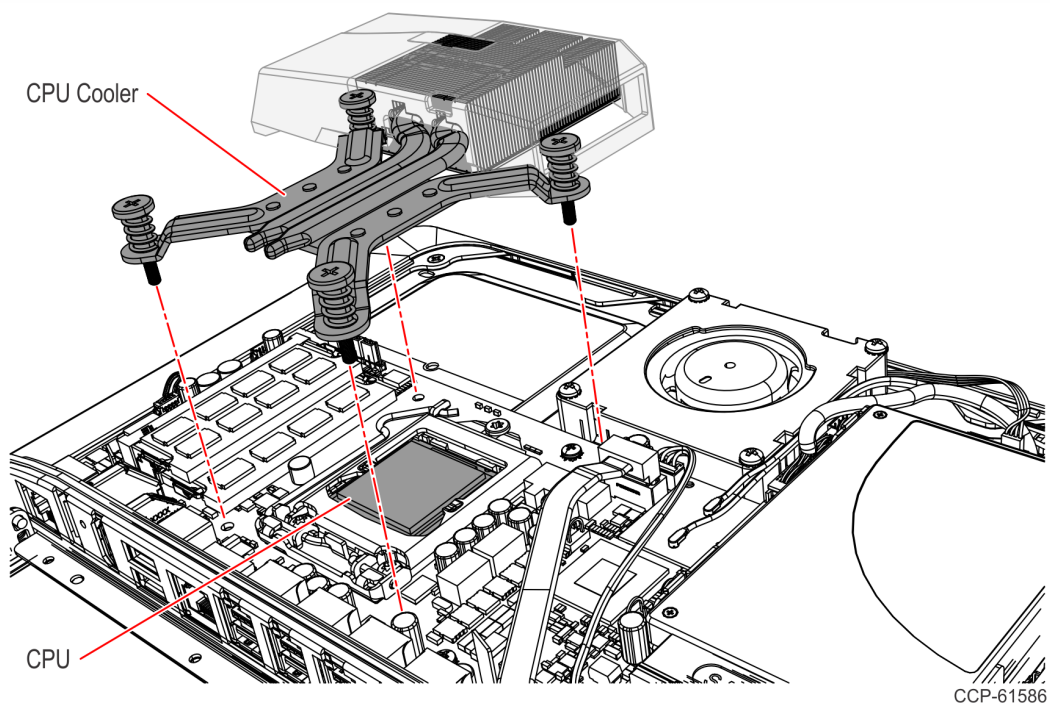
6. Apply thermal grease to the top of the new CPU. Use approximately one half of the contents of the grease syringe in the pattern shown below. Do not use the entire contents of the syringe. Too much grease can block the airflow around the CPU heat spreader. The goal is for the processor chip to be evenly covered with grease once the CPU Cooler is installed.
 - Do not apply the grease with a bare fingertip or talc-coated glove. Oils on skin and particulate on the glove can contaminate the grease.
 - Make sure none of the grease gets on the circuit board. Heatsink grease is a strong electrical conductor and can short signals on the board if it crosses trace paths.
 - Recheck to make sure no foreign contaminants are present on the top of the CPU.



7. Remove the old thermal grease from the CPU Cooler surface.
 - Remove as much of the existing grease from the CPU Cooler surface using a nonabrasive, dull object. A paper towel is an effective choice.
 - Do not use a sharp, metal object such as a razor blade, knife, trowel, or similar as it may scratch the CPU Cooler surface.
 - Remove remaining residue using a non-abrasive, lint free cloth and rubbing alcohol.
 - Make sure the surface is completely clean and lint free. Residue can mix with fresh grease to cause uneven contact and non-uniform cooling.
 - Make sure no grease contacts the circuit board. Thermal grease is a strong electrical conductor and can short signals on the Motherboard.



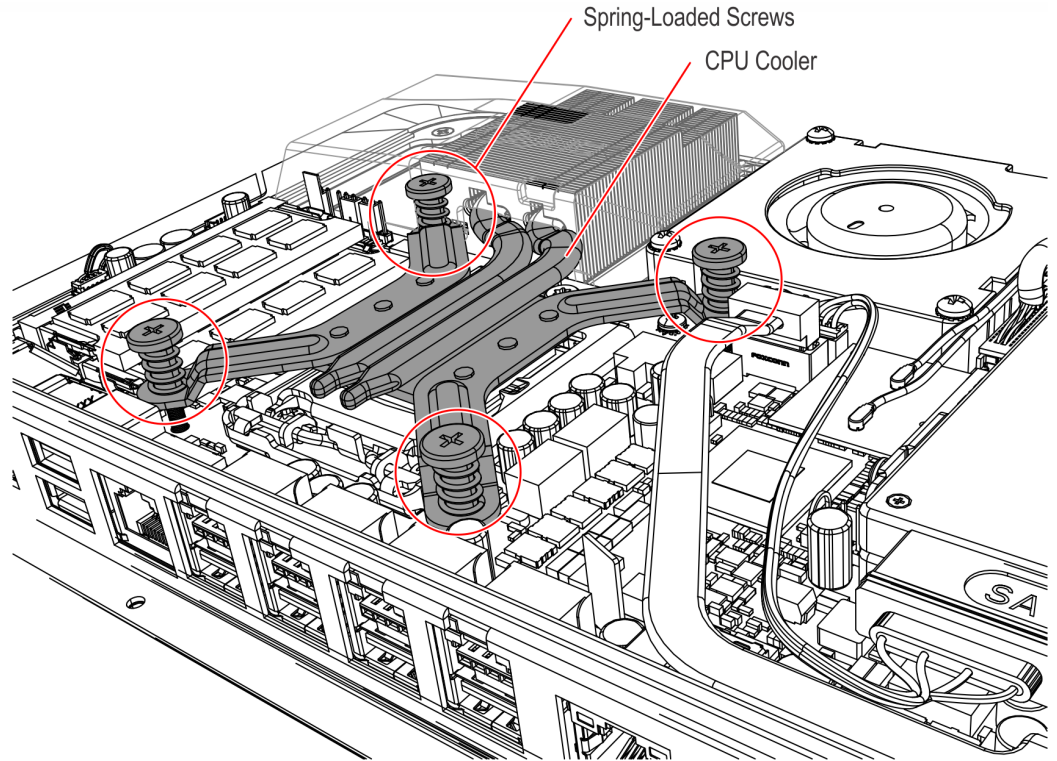
8. Install the CPU Cooler on the Motherboard.
 - a. Position the CPU Cooler over the CPU.



- b. Tighten the spring-loaded screws.



Note: Use a sequential rotating pattern when tightening the spring-loaded screws. Tighten each screw a little at a time to evenly lower the CPU Cooler onto the CPU.



CCP-61585

9. Reinstall the Rear Cover of the Display, then, if applicable, reinstall the Display on the Kiosk.




Note: For the NCR SelfServ 90 Kiosk (7709), reinstall the Motherboard Bracket, then the Rear Cover, and then reinstall the Display on the Kiosk. Refer to [Reinstalling the Kiosk Display Head](#) for the complete procedure.

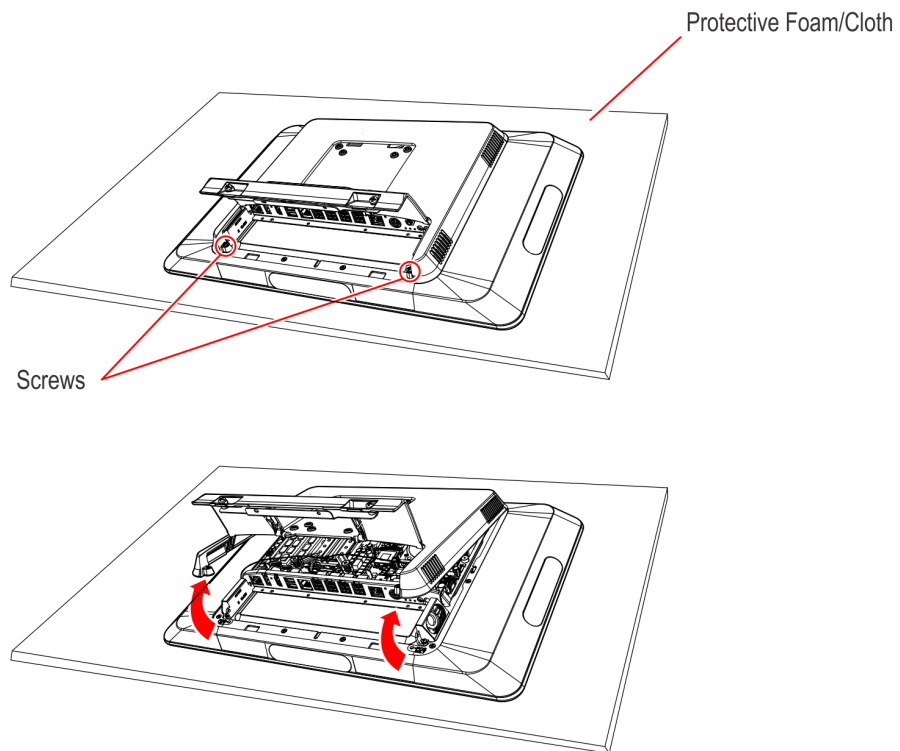
Accessing the Motherboard

RealPOS XR7 POS (7702)

1. Lay the Display face down on a flat surface.

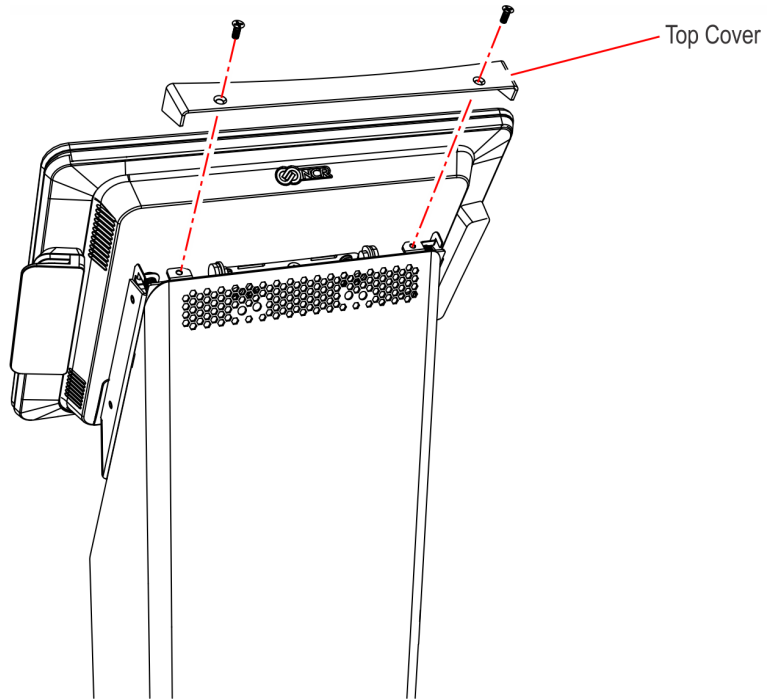
 **Caution:** Always use a soft material (cloth, foam) to protect the display screen when placing the display face down.

2. Remove the Rear Cover.
 - a. Loosen the two captive screws that secure the Rear Cover to the chassis.
 - b. Pivot the Rear Cover as shown to remove it.

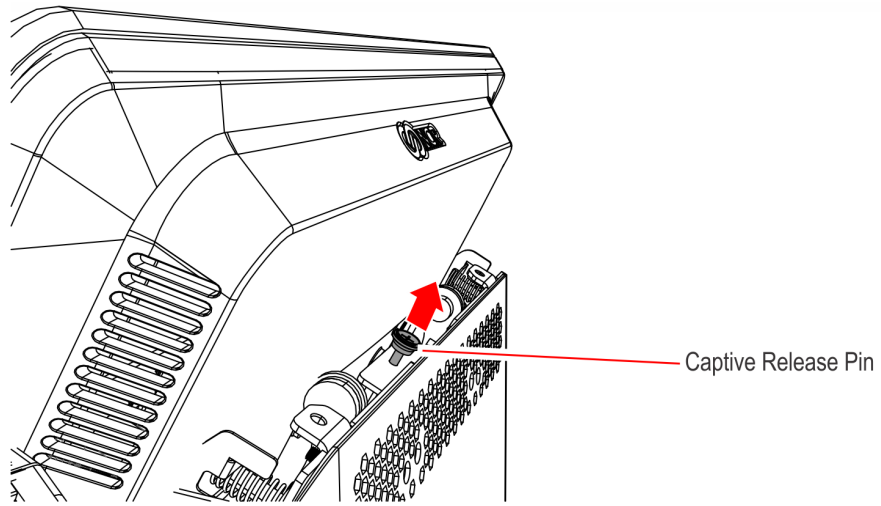


NCR SelfServ XK7 Kiosk (8820)

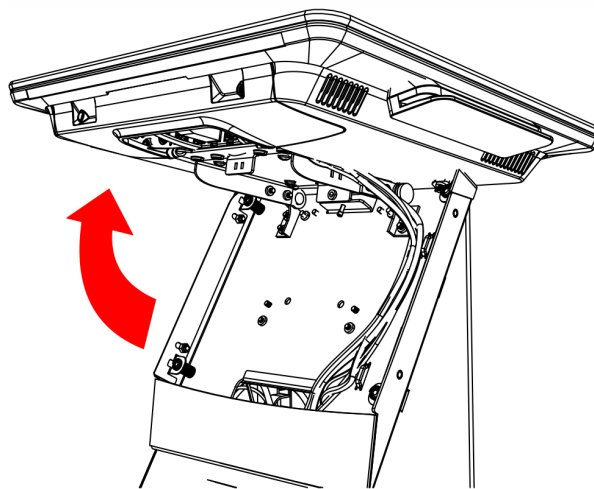
1. Remove the Top Cover (2 screws) from the Kiosk Cabinet.



2. Loosen the Captive Release Pin in the top of the Cabinet and raise the Display to the service position.

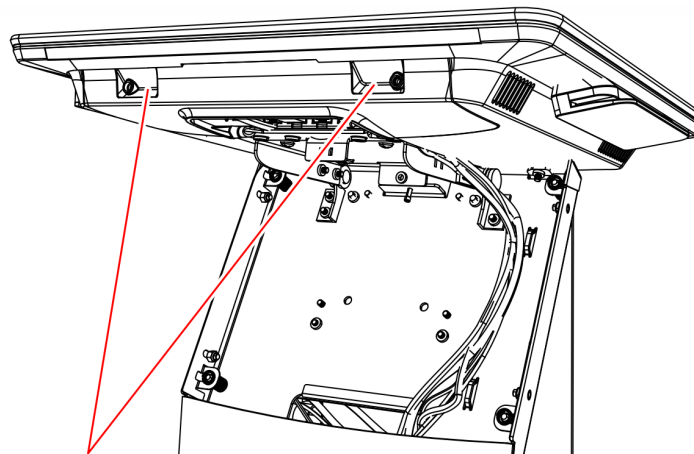


33821



33822

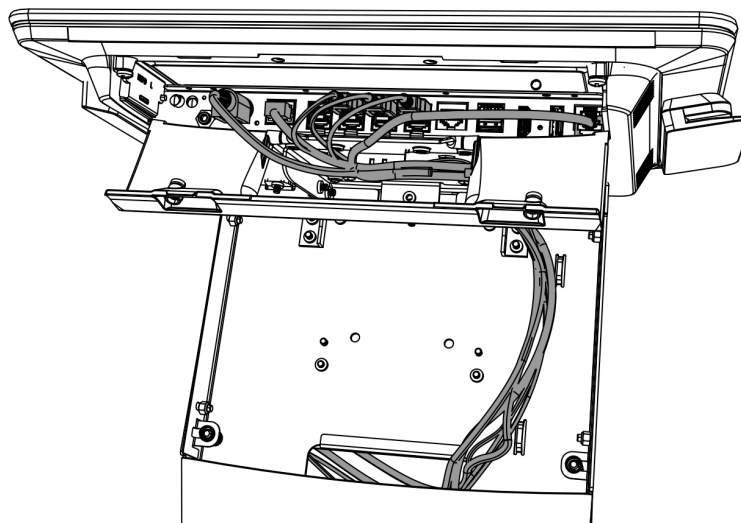
3. Open the Cable Cover. Press on the indentations to unlatch it and then pivot it open.



Press Here

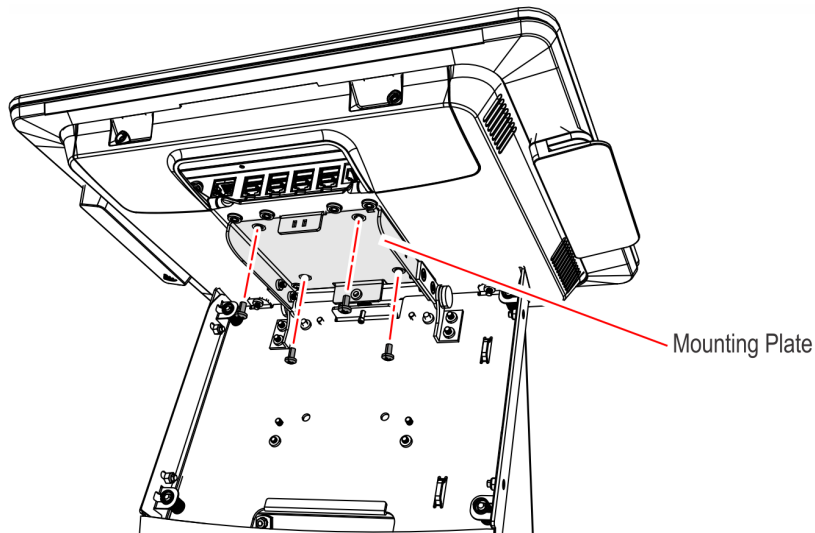
33825

4. Disconnect the cables from the I/O Panel.



33883

5. Remove the Display from the Mounting Plate (4 screws).



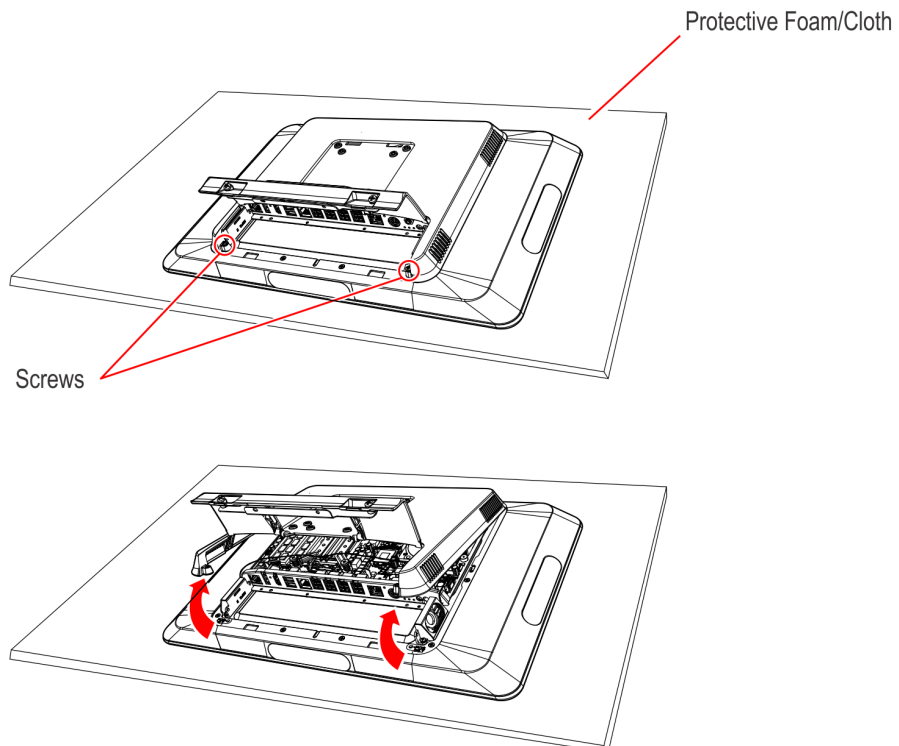
33884

6. Lay the Display face down on a flat surface.



Caution: Always use a soft material (cloth, foam) to protect the display screen when placing the display face down.

7. Remove the Rear Cover.
 - a. Loosen the two captive screws that secure the Rear Cover to the chassis.
 - b. Pivot the Rear Cover as shown to remove it.



CCP-60643

NCR SelfServ 90 Kiosk (7709)

To access the Motherboard of the NCR SelfServ 90 Kiosk, follow these steps:

- A. Access the components.
- B. Remove the Kiosk Display Head.
- C. Remove the Rear Cover of the Display Head.
- D. Remove the Motherboard Bracket.



Note: For detailed instructions on each step, refer to the succeeding sections.

Accessing the Components

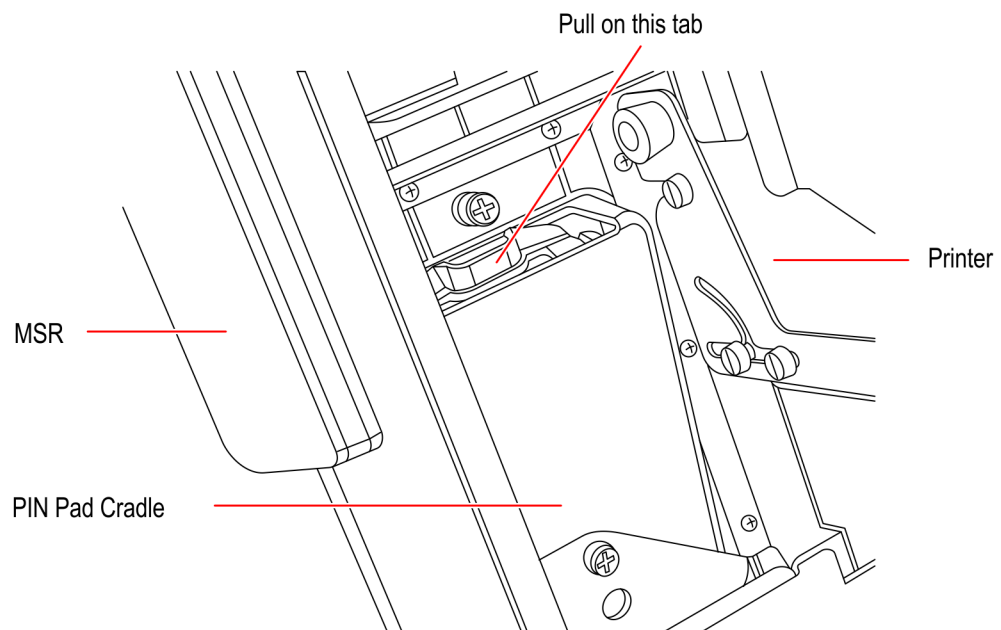
1. Shutdown the Kiosk System Application and turn off the kiosk by unplugging the AC Power Cord from the AC Power Receptacle.
2. If the Checkpoint option is used, unplug the Checkpoint AC Power Cord from the AC Power Receptacle.
3. Unlock and open the kiosk.

Removing the Kiosk Display Head



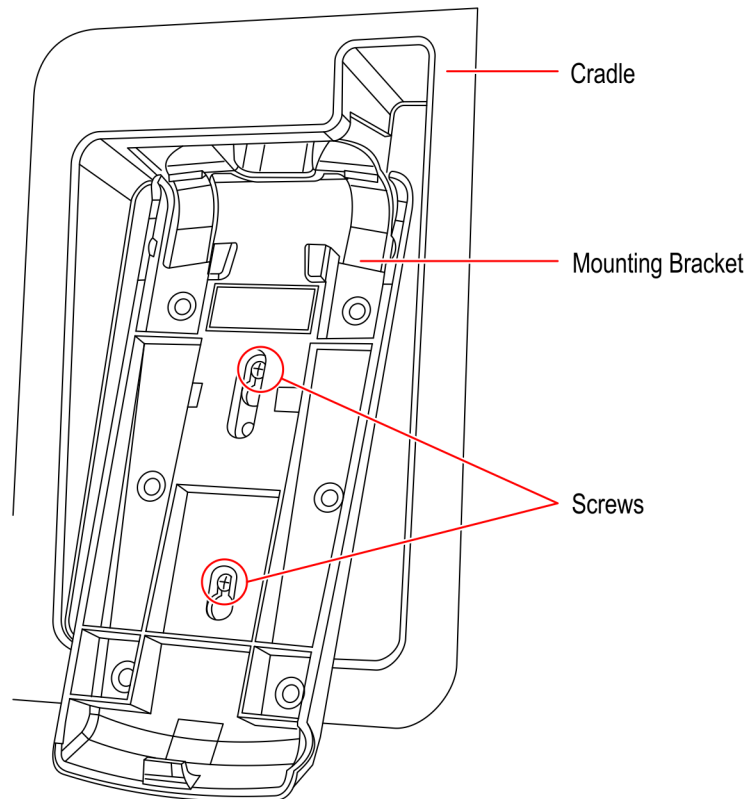
Caution: Make sure to note how the cables are routed and managed before disconnecting them.

1. Disconnect the cables from the Motherboard.
2. Remove the PIN Pad.
 - a. While holding the PIN Pad from outside of the kiosk, pull on the tab on the upper portion of the Mounting Bracket (accessed from the inside of the kiosk), and then remove the PIN Pad.



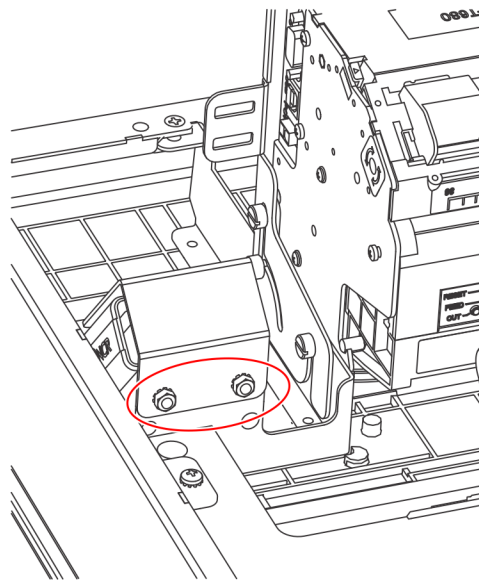
- b. Disconnect the PIN Pad Cable from the PIN Pad.

- c. Loosen the two screws that secure the Mounting Bracket to the PIN Pad Cradle.



CCP-60090

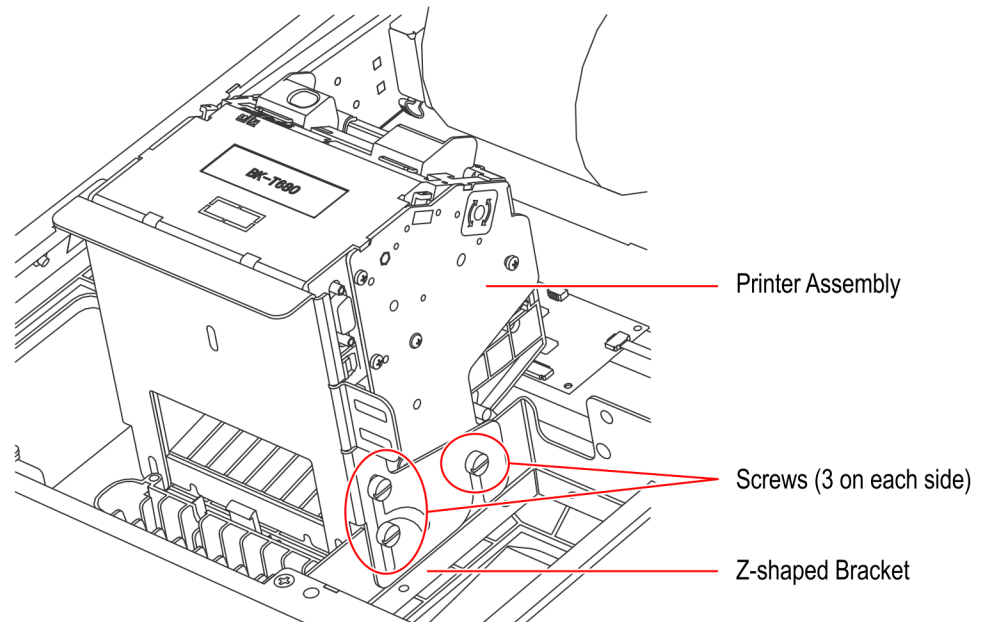
- d. Slide up and remove the Mounting Bracket.
3. Remove the Imaging Scanner.
 - a. Remove the two nuts that secure the Imaging Scanner Assembly to the kiosk and then, remove the assembly from the studs.



CCP-60037

- b. Remove the three screws that secure the Imaging Scanner to its existing bracket.
- c. Disconnect the Imager USB Cable from the Imaging Scanner.

4. Remove the Receipt Printer.
 - a. Disconnect the Printer USB and Power Cables from the Receipt Printer.
 - b. Remove the six screws (three on each side) that secure the Printer Assembly to the Z-shaped Bracket.



CCP-60039


- c. Gently lift off the Printer Assembly from the kiosk.

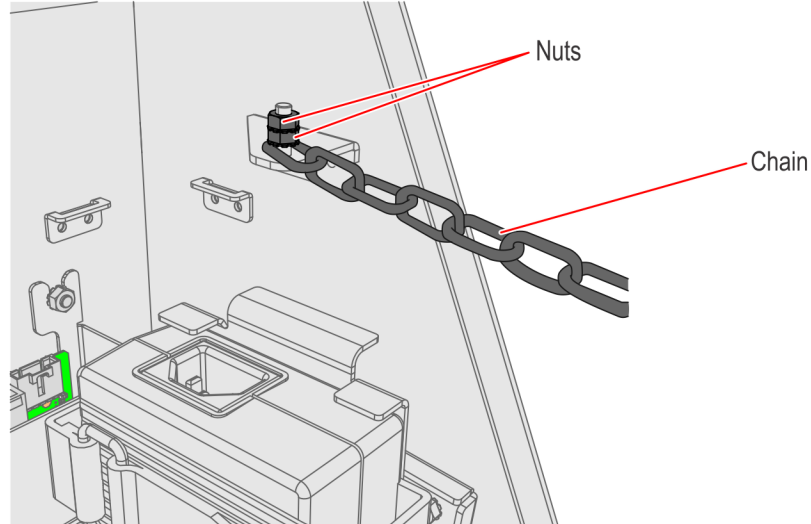


Note: Be careful not to damage the Printer Chute and the areas around the Printer Opening.

5. Disconnect the Coupon Sensor Cable from the I/O Daughtercard.


6. While supporting the Kiosk Display Head, remove the two nuts securing the Display Head Chain to the Kiosk cabinet and remove the chain from the stud.

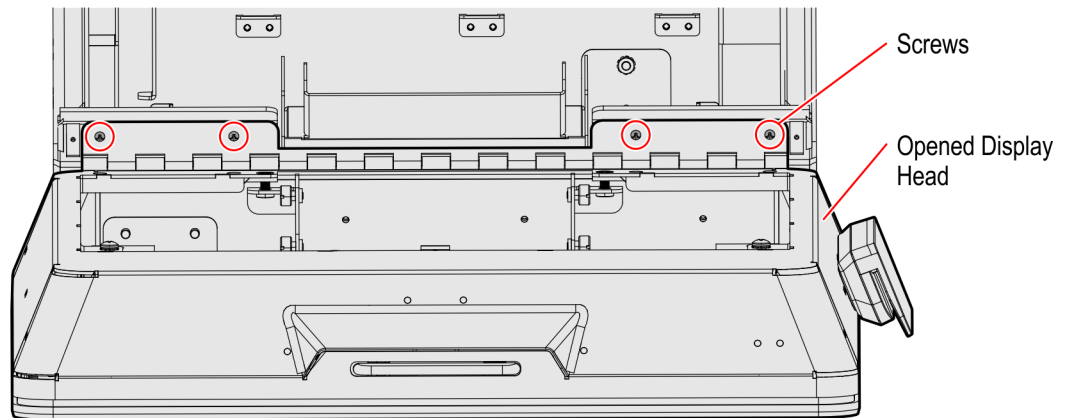
 **Warning:** Make sure to properly support the display head so as not to accidentally drop it.



CCP-60828


7. While supporting the Kiosk Display Head, remove the four screws that attach the hinge to the kiosk cabinet.

 **Warning:** Make sure to properly support the display head so as not to accidentally drop nor damage it.



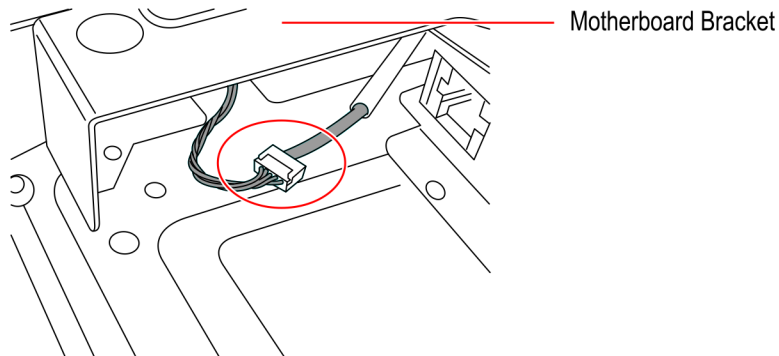
CCP-61015

8. Carefully place the Kiosk Display Head on a flat surface cushioned with bubble wrap or soft cloth.

 **Caution:** Be careful not to scratch nor damage the display.

Removing the Rear Cover

1. If the kiosk has an MSR, disconnect the MSR Cable from the MSR Extension Cable. These two cables are found under the Motherboard Bracket.

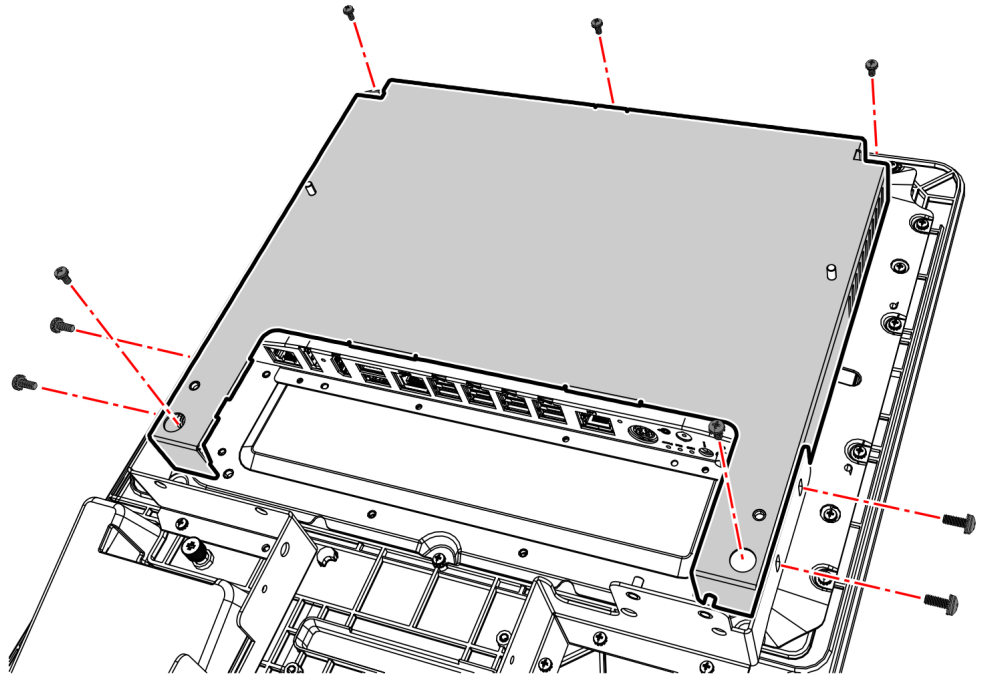


CCP-60030

2. Remove the four screws that secure the hinge to the Rear Cover.
3. Remove the four screws and two nuts that secure the Rear Cover to the Display Head.
4. Carefully lift off the Rear Cover from the Display Head.

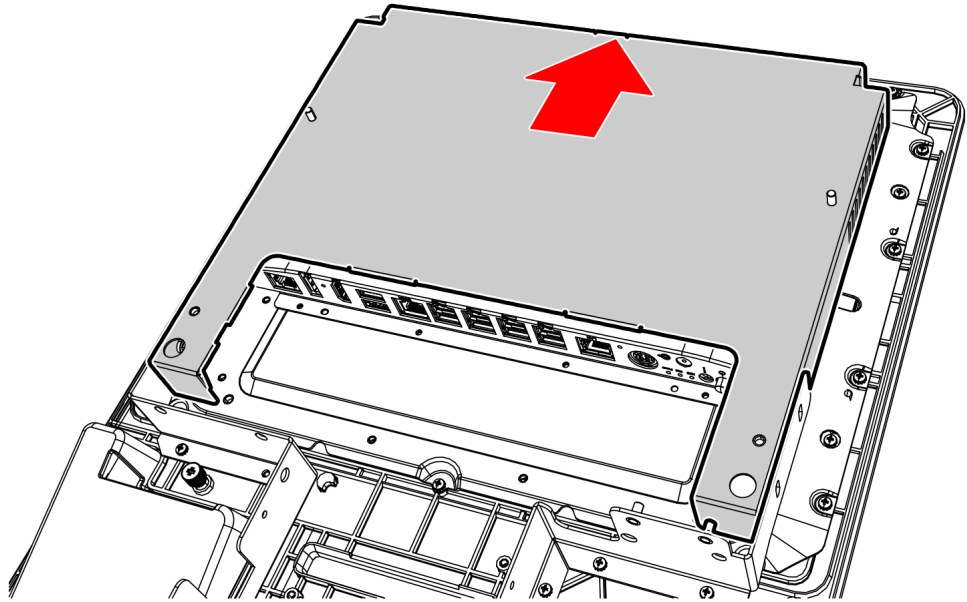
Removing the Motherboard Bracket

1. Remove the nine screws that secure the Motherboard Bracket.



CCP-70881

2. Slide and lift the Motherboard Bracket to remove it from the Display Head Assembly.



CCP-70882

Reinstalling the Kiosk Display Head

NCR SelfServ 90 Kiosk (7709)

To reinstall the Kiosk Display Head, follow these steps:

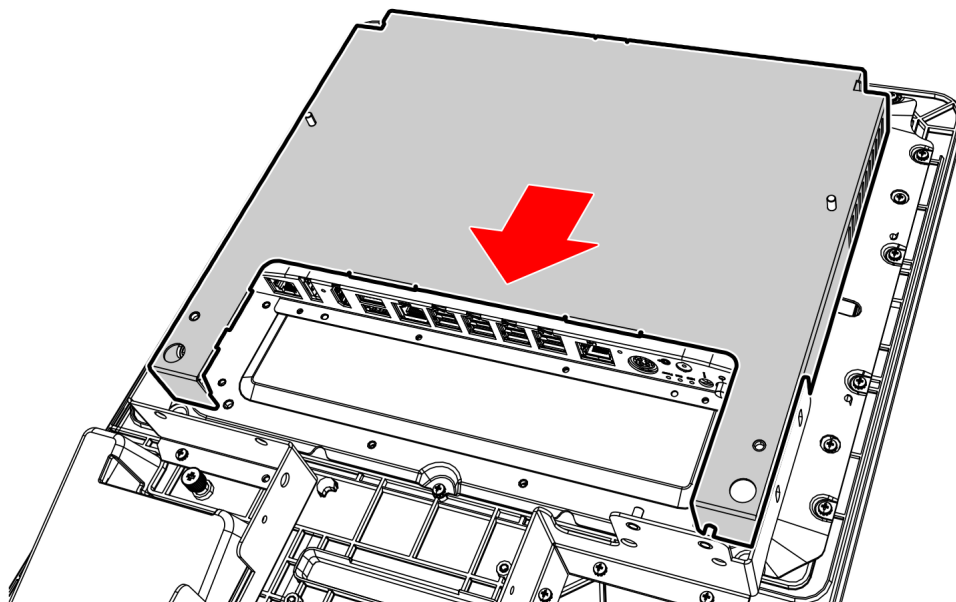
- A. Reinstall the Motherboard Bracket.
- B. Reinstall the Rear Cover of the Display Head.
- C. Reinstall the Kiosk Display Head.
- D. Close the Kiosk.



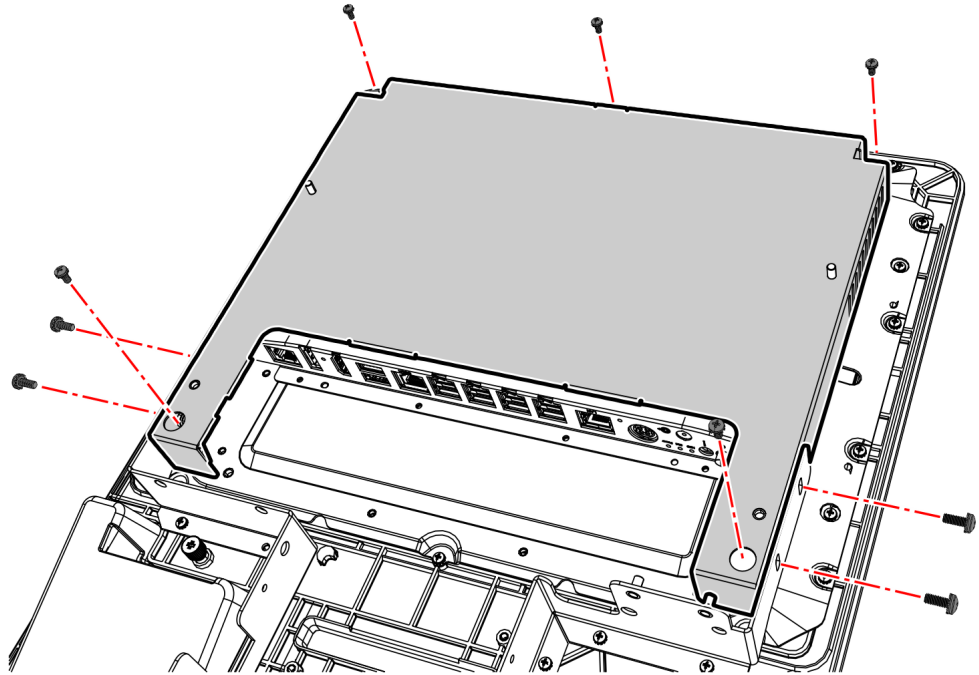
Note: For detailed instructions on each step, refer to the succeeding sections.

Installing the Motherboard Bracket

1. Slide the Motherboard Bracket onto the back of the Display Head.



2. Secure the Motherboard Bracket with nine screws.



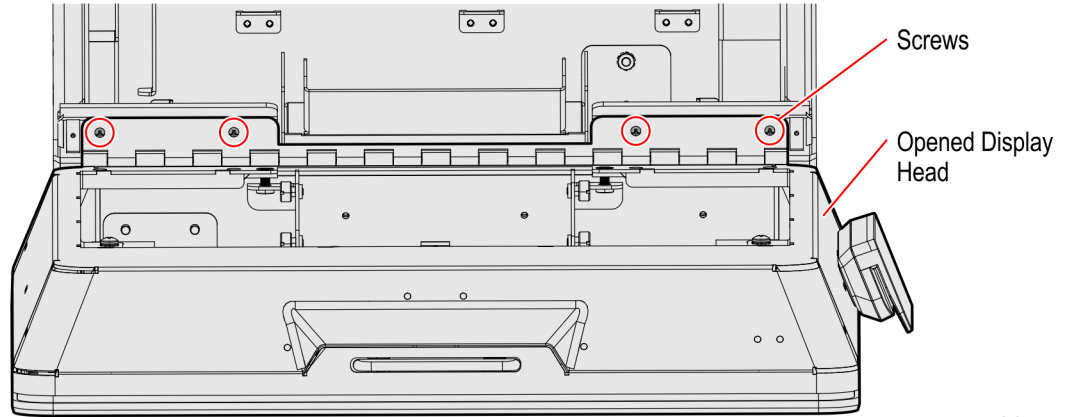
CCP-70881

Installing the Rear Cover

1. Carefully lower the Rear Cover to the Display Head and secure it with four screws and two nuts.
2. Using the four screws, attach the hinge to the Rear Cover.
3. If the kiosk has an MSR, connect the MSR Cable to the MSR Extension Cable.

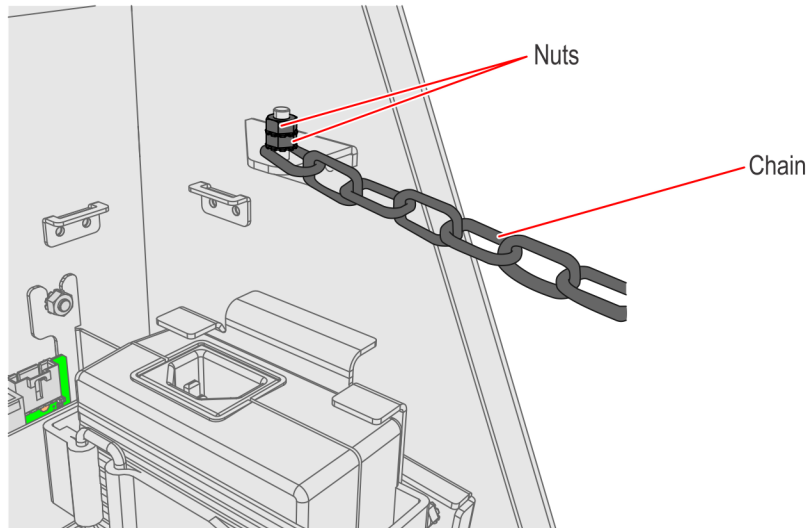
Installing the Kiosk Display Head

1. Position the Display Head against the bottom part of the cabinet.
2. Attach and secure the hinge to the cabinet with four screws.



CCP-61015

3. Attach the chain to the stud and secure with two nuts.



CCP-60828

4. Connect the Coupon Sensor Cable to the Coupon Sensor Port of the I/O Daughtercard.

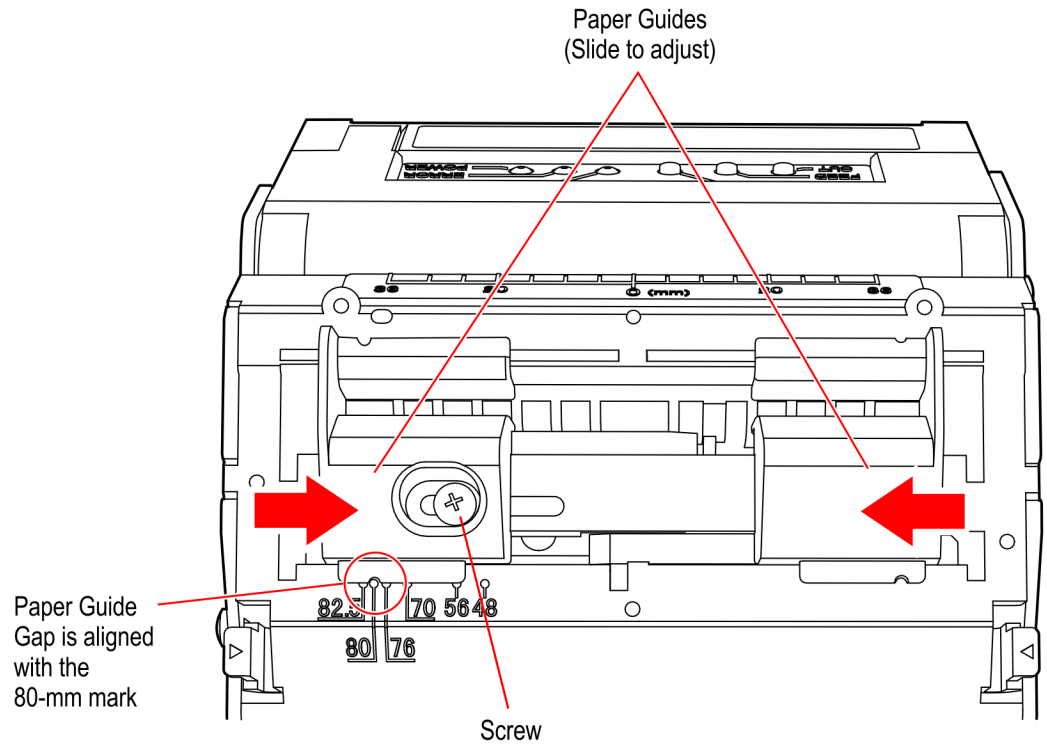
5. Reinstall the Receipt Printer.

- a. Before installing the Printer Assembly to the kiosk, ensure that the following are correct:

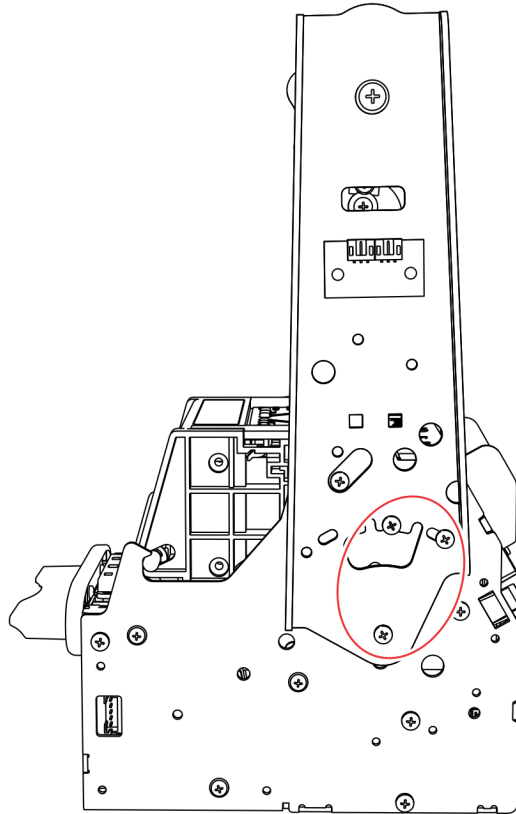
- Printer Width is set to 80 mm. Adjust if necessary.



Note: To adjust the Paper Guides, loosen the screw, slide the guides toward or away from each other, and re-tighten the screw.



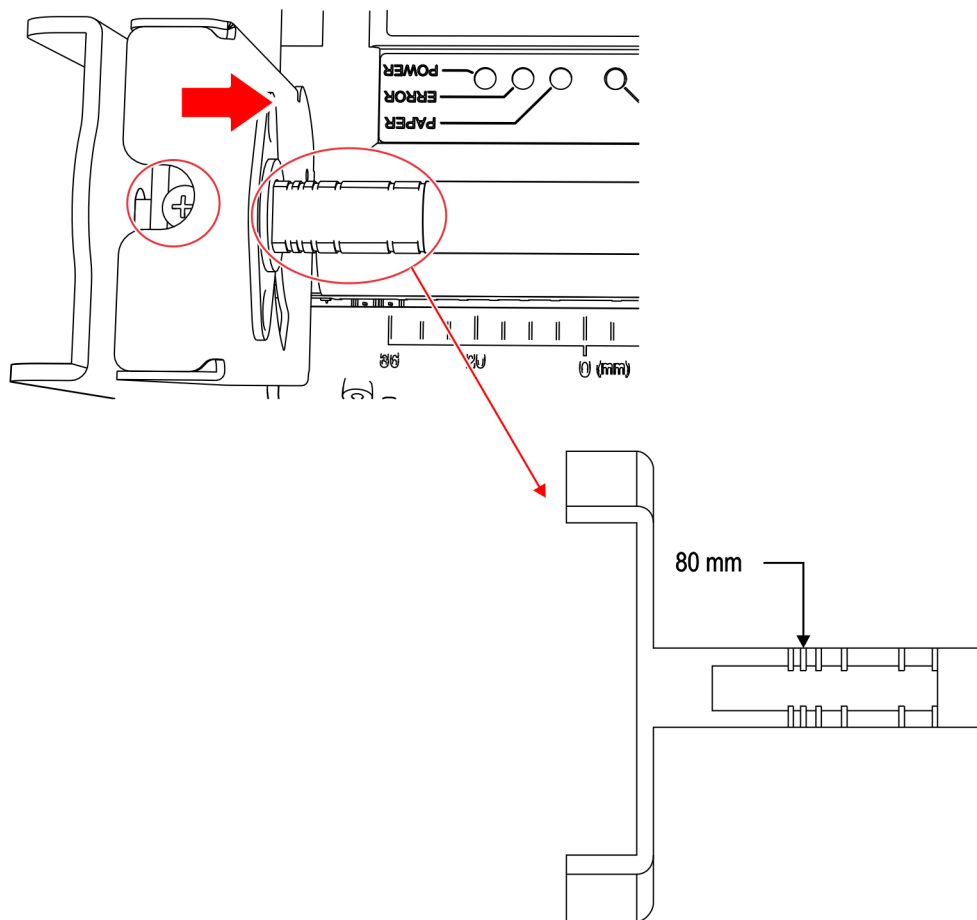
- The Mounting Screws in the cantilever are positioned as shown in the image below.



- Paper Sensor Metal Guide is set to 80 mm. Adjust if necessary.



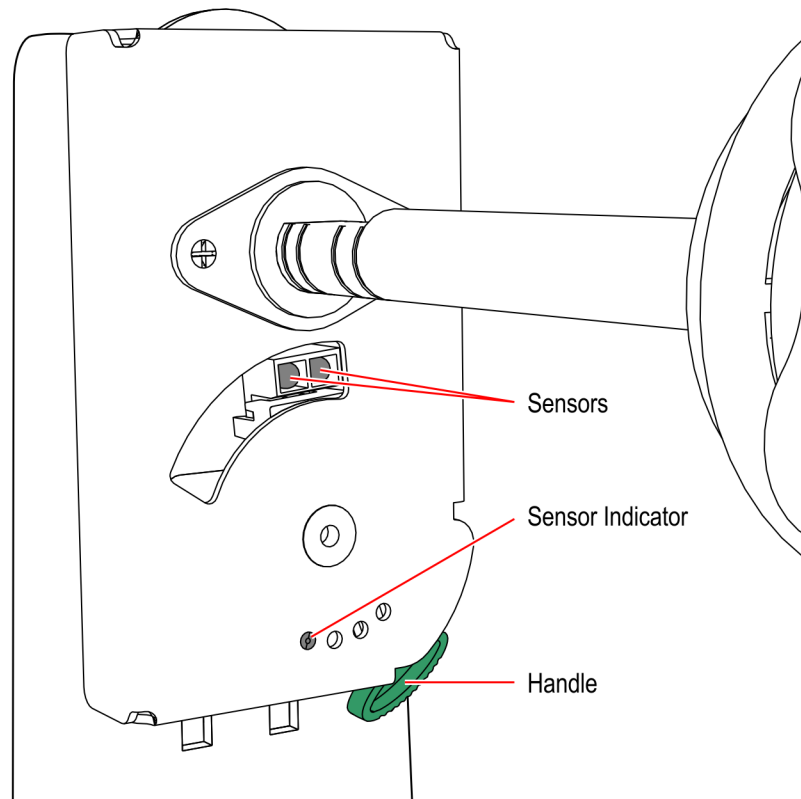
Note: To adjust the Paper Sensor Metal Guide, loosen the screw at the top, slide the metal guide to the 80-mm mark, and re-tighten the screw.



- Paper Near-end Sensor is set to the first slot as shown in the image below.



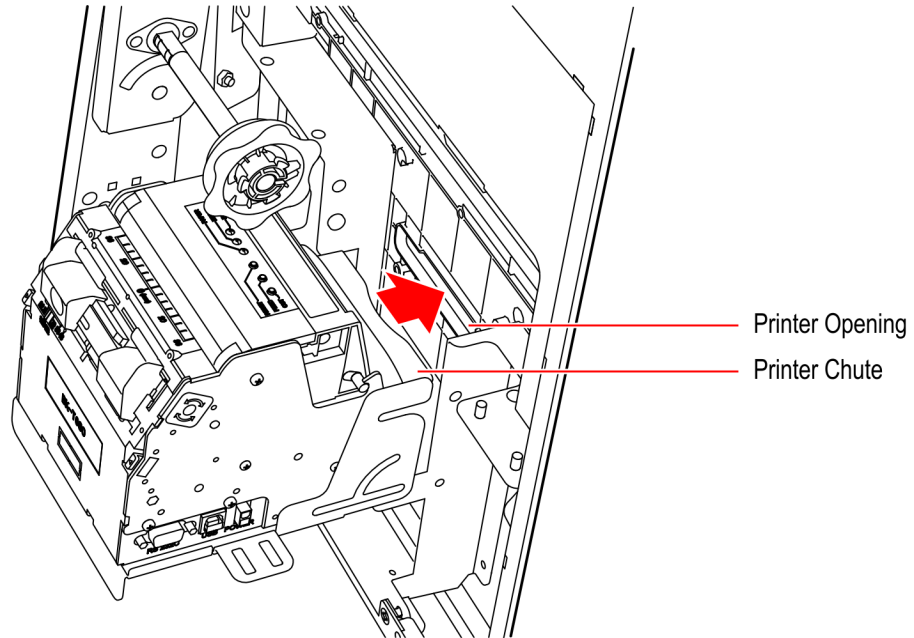
Note: Use the Green Handle to move the Sensor Indicator from one slot to another.



- b. Install the Printer Assembly to the kiosk, aligning the Printer Chute with the Printer Opening.

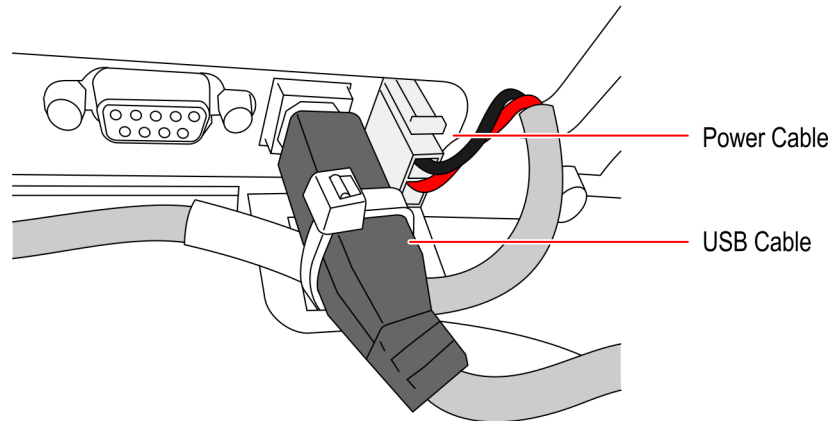


Note: Be careful not to damage the Printer Chute and the areas around the Printer Opening.



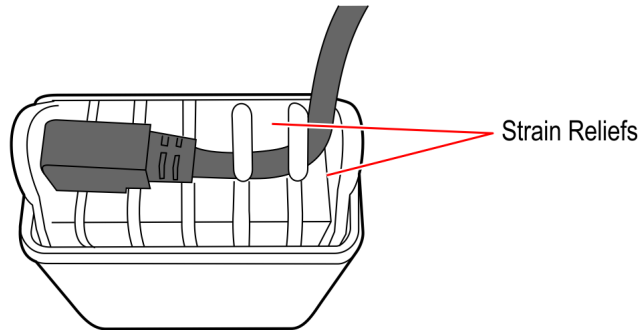
CCP-60041

- c. Using the six screws (three on each side), secure the Printer Assembly to the Z shaped Bracket.
- d. Connect the Printer USB and Power Cables.



CCP-60042

6. Reinstall the Imaging Scanner.
 - a. Connect the Type B end of the Imager USB Cable to Imaging Scanner and route the cable through the strain reliefs.

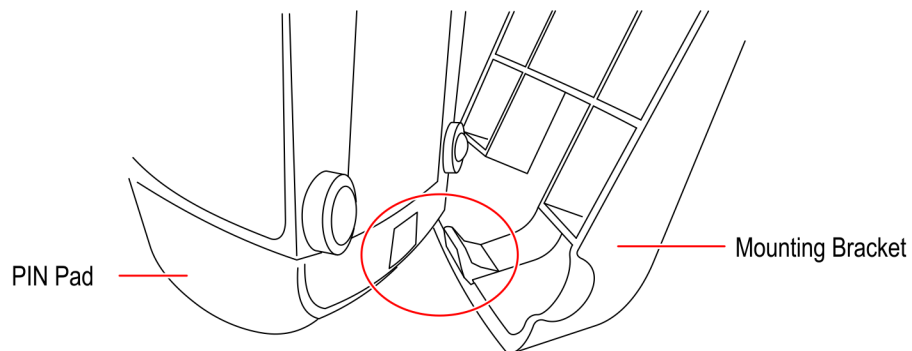


CCP-60038

- b. Align the bracket holes to the slots at the back of the Imaging Scanner and secure with three screws.
 - c. Mount the Imaging Scanner Assembly to the two studs and secure with two nuts.

7. Reinstall the PIN Pad.

- a. Position the Mounting Bracket onto the screws, and then tighten the screws.
- b. Connect the PIN Pad Cable to the PIN Pad.
- c. Mount the PIN Pad to the Mounting Bracket by aligning the slot on the lower back of the PIN Pad with the small tab on the lower portion of the Mounting Bracket.



CCP-60071

- d. Push the PIN Pad until it snaps to the upper portion of the Mounting Bracket.
8. Connect the cables to the Motherboard.

Closing the Kiosk

1. Close the kiosk.
2. If the Checkpoint option is used, plug the Checkpoint AC Power Cord to the AC Power Receptacle.
3. Reconnect the AC Power Cord to the AC Power Receptacle.

7709 Block Diagram

