Electronic Vault Attendant (EVA) Elite Hardware Installation Guide

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Document History

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Contents

TP-821320-001A

Figures

Tables

PREFACE TO FCC NOTICE

Diebold requires each of its products to undergo complete testing before shipment. Each product must pass stringent requirements of quality control. In addition, much effort and consideration has been devoted to assure the utmost in reliable equipment operation.

FCC NOTICE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications of this product not expressly approved by Diebold could void the user's authority to operate the equipment.

Section 1
General Description and Introduction

1.1 Document Scope

This document provides installation and setup guidelines for the following components of the Electronic Vault Attendant (EVA) Elite system:

- Mounting lock cover assemblies to SD doors
- Interconnection cabling and setup for the touch screen workstation, dock assembly, and peripheral components

Refer to the *EVA and EVA Elite Electronic Vault Attendant Setup and Administration Guide* (TP-821366-001B) for details relating to software installation, setup, and administration.

1.2 Description

The EVA Elite system may be configured to provide institution customers with the following functions:

- Register and access to a secure vault area without assistance.
- Access control to safe deposit boxes.
- Unassisted access to safe deposit boxes for which the customer has a key.

1.3 Installation Tools and Equipment

Have the following tools on site for installation of the EVA Elite system:

- Standard hand tools
- Level (36-inch minimum)

Special Tools

The following special tools are required to complete the installation:

- simple green® concentrated cleaner degreaser/deodorizer
- Hand held computer (RFID reader)
- Installation template kit (41-021051-000A)
- Laser level
- Isopropyl alcohol
- Tin snips, heavy-duty, straight cut
- Plumb bob and string line
- Carpenter's square

The installation template kit (41-021051-000A) contains the following door templates that may be used to locate the base plate onto a Diebold SD box door:

- Five-inch door template (41-021048-000A)
- Seven-inch door template (41-021048-000B)
- 10-inch door template (41-021048-000C)

If this is a retrofit install (SD sections are already installed and operational), confirm that a sufficient quantity of guard keys are on hand. One guard key is required for each SD box door that will be retrofitted with a new lock cover assembly.

Reference Documentation

Refer to the following manuals for additional information:

- *EVA and EVA Elite Electronic Vault Attendant Setup and Administration Guide* (TP-821366-001B)
- *Safe Deposit (SD) Sections Parts List Manual* (AA-000126-000B)
- *LM Series SD Box Installation Manual* (AA-000208-0000)
- *223-Series Daygate Installation Guide* (TP-821074-001B)

Additional information about products, support, and replacement items is available on Diebold's Web site at *http://www.diebold.com/*.

1.4 SD Lock Compatibility

Not all models of SD locks are compatible with the EVA Elite system. For example, a single-nose lock, where the guard key functions as a prep key, cannot be adapted for the EVA Elite system. Additionally, the configuration and size of certain SD locks or SD doors may not allow for the installation of the lock cover assembly. Prior to installing the EVA Elite system, always confirm that the SD sections currently installed are adaptable for installation of the system.

1.5 System Components

Standard components (Figure 1-1) of the EVA Elite system are as follows:

- Touch screen workstation
- Docking assembly
- Key assembly
- Lock cover assembly

Touch Screen Workstation (41-021181-000A)

The touch screen workstation functions as the user interface, the host controller for peripheral devices, and the administration control point for the system application. Generally, peripheral devices are connected to the touch screen workstation via USB 2.0 cable.

Docking Assembly (41-020278-000A)

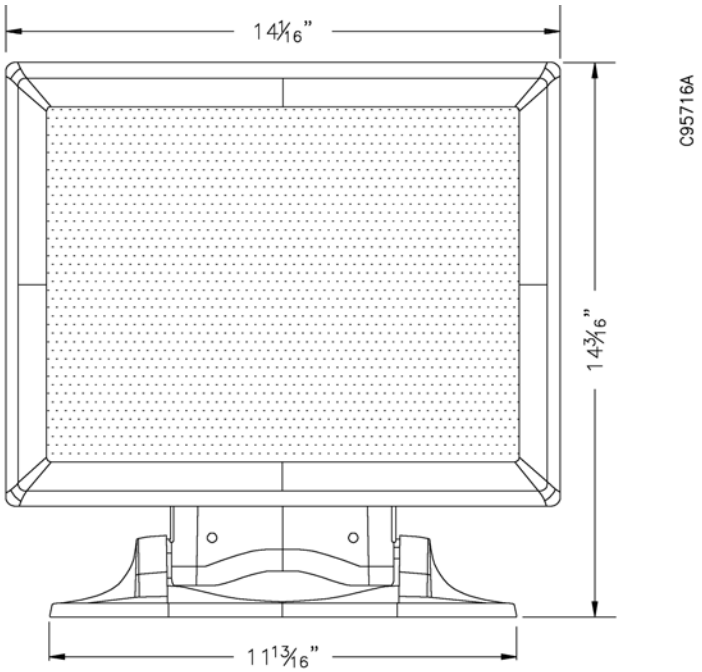
The docking assembly stores up to three key assemblies. The docking assembly communicates with the touch screen workstation to control distribution of the key assemblies. The docking assembly also serves as the charging station for the key assemblies.

Key Assembly (41-020285-000A)

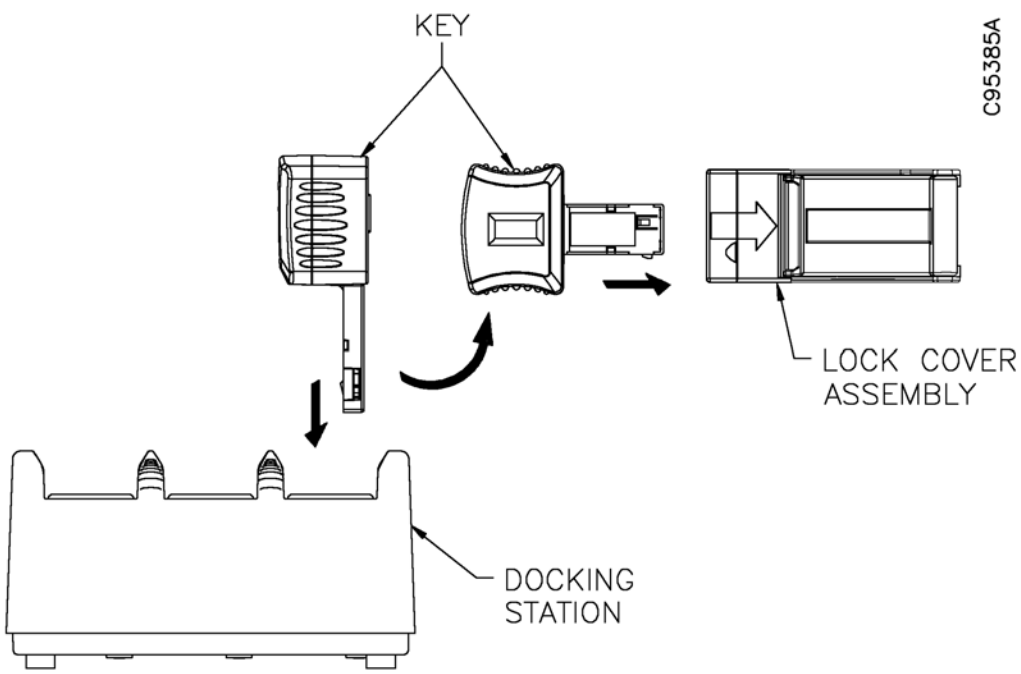
Up to three key assemblies (keys) are stored in the docking assembly until retrieved by a user. Each key is an RFID (radio-frequency identification) device, that when activated, contains the data required to open a designated lock cover assembly.

Lock Cover Assembly (41-020895-000A)

One lock cover assembly is attached to each SD box door. The lock cover assembly is opened via an activated key to provide access to a specific SD customer keylock nose.



View A Touch Screen Workstation



View B Docking Assembly, Key Assembly, Lock Cover Assembly

Figure 1-1 System Components

2.1 Site Preparation

Prior to installation of the lock cover assemblies, verify that the increased door width resulting from installation of the lock cover will not inhibit door swing and prevent removal of the interior bond boxes. SD sections must be located to allow the adjacent door assemblies to swing freely to the full-open position. See Figure 2-1.

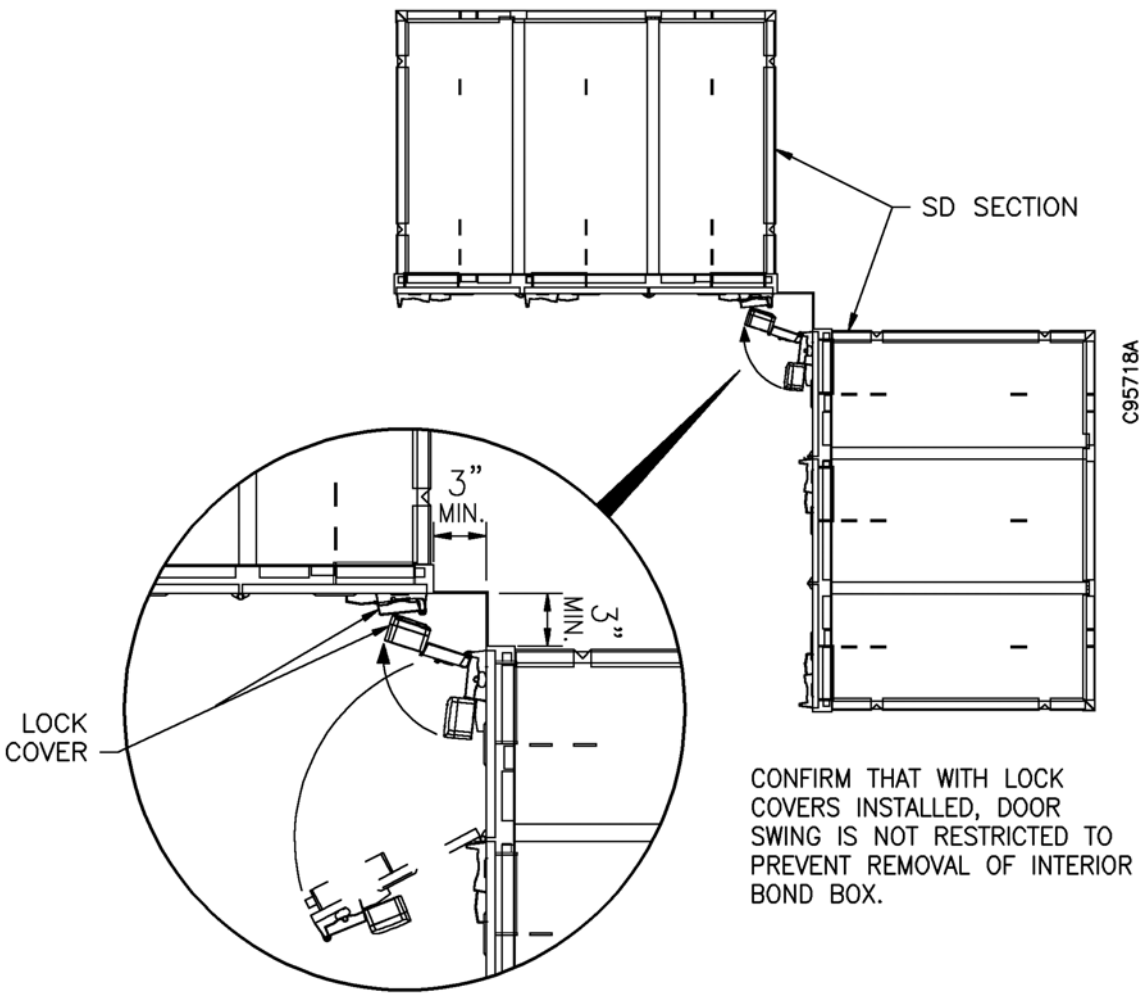


Figure 2-1 SD Section, Overhead View

2.2 Preparing the Safe Deposit (SD) Locks and Doors

Prior to installing the components of the EVA Elite system, you must perform the procedures in this section to prepare the existing SD sections for the installation of the lock cover assembly.

2.2.1 Clean the Exterior Surface of SD Sections

CAUTION

The information provided in this section describes the only approved method for cleaning SD exteriors prior to installing the lock cover assemblies. Use of other cleaning methods or solutions may impair the reliability of the adhesive that is used to secure the lock cover to the SD box door.

1. Wipe the exterior, finished surface of the SD sections with a clean rag saturated with simple green® Concentrated Cleaner Degreaser/Deodorizer. Do not dilute with water.

2. With a clean, dry rag wipe the surface of the SD sections until dry.

3. Wipe the exterior, finished surface of the SD sections with a clean rag saturated with isopropyl alcohol (minimum 70% by volume). Do not dilute the isopropyl alcohol with water.

4. Use a clean, dry rag to wipe the surface of the SD sections until dry.

2.2.2 Enable (unlock) the Guard Nose (lock)

If the SD sections to be modified are equipped with double-nose locks, the guard nose (Figure 2-2) of each lock must be enabled.

The following procedure is one method that may be used to enable the guard nose.

1. Insert the guard key into the nose farthest from the bolt side of the SD lock. Turn the guard key to the right (clockwise) to a full stop.

2. Snap off the bow of the guard key so that the blade of the key remains lodged in the keyway of the lock (the section of guard key that remains in the lock should be flush with the nose). This procedure keeps the guard nose in the unlocked position.

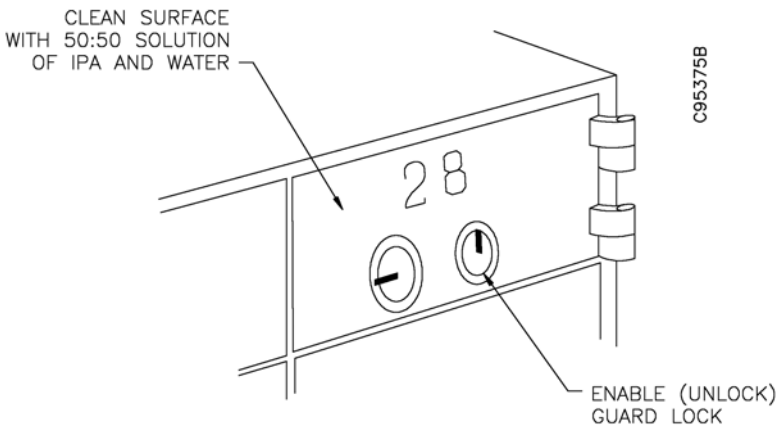


Figure 2-2 Preparation Details, SD Box Door

2.3 Installing the Lock Cover Assemblies to the SD Box Doors

If this is a new installation, the SD box number plates may be installed after this procedure. Each lock cover assembly is composed of the following pieces that are assembled and applied to the SD door on site (Figure 2-3):

- Base plate assembly, with 6-32 machine screw
- Tag cover
- Lock cover assembly

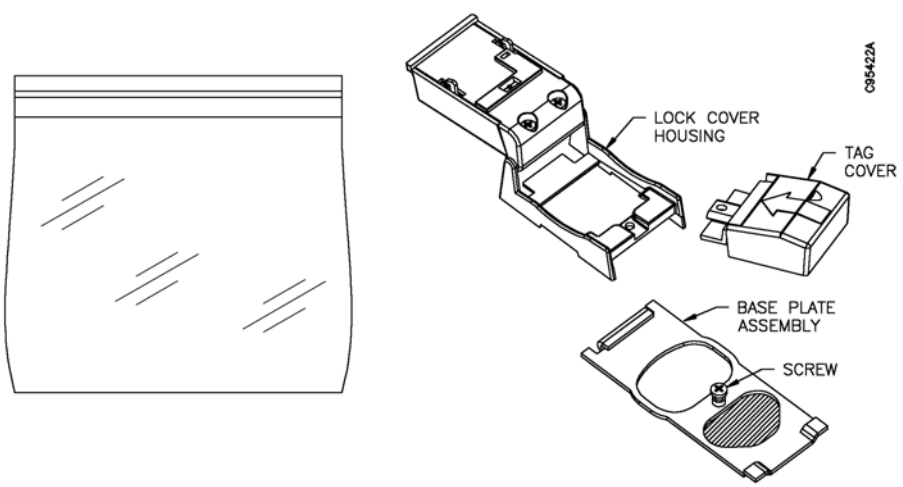


Figure 2-3 Lock Cover Assembly Parts

2.3.1 Pre-installation Checklist for Lock Cover Assembly

Refer to Table 2-1 before you begin installation of the base plates, tag covers, and lock cover housings.

Table 2-1 Pre-installation Checklist for Lock Cover Assembly

✓	Pre-installation Checks
	Confirm that the Site Survey has been completed. You should not continue with the installation until it is confirmed that the Site Survey has been completed.
	Confirm that adjacent SD sections are positioned to allow door swing to the full-open position after the lock cover assemblies are installed. See Figure 2-1.
	Confirm that no base plates are bent or bowed to prevent full contact with the surface of the SD door. Proper bonding strength is dependent of full adhesive-to-surface contact.
	Confirm that the SD number frames are removed from SD doors that are less than 3 inches in height.
	Confirm that all SD door surfaces are dry and free of condensed moisture, oil, and grease.
	Verify that the base plate assemblies are at room temperature. To assure proper bonding, the temperature of the base plate assembly must be at a minimum of 72° F (minimum).
	Confirm that the SD locks currently installed are compatible for conversion to the lock cover assemblies.
	Confirm that all lock cover assemblies are in the OPEN position prior to installation onto the base plate. The upper housing door must not be snapped to the closed position until after the lock cover assembly is screwed to the base plate as the final step in the installation of the lock cover assembly.
	Confirm that the installation template kit (41-021051-000) is on hand if you are installing lock cover assemblies onto Diebold 5-inch, 7-inch, and 10-inch SD doors. If you are installing lock cover assemblies onto non-Diebold doors, you must have a laser level or plumb-bob on hand to ensure you maintain a clean, level installation.
	If the SD doors to be modified are equipped with double-nose locks, confirm that each guard lock has been permanently disabled to the unlocked position. See Section 2.2.2.
	Confirm that a handheld RFID tag reader is on hand.

2.3.2 Install the Base Plate (Mounting Bracket Bases)

NOTE

Diebold recommends that you install ALL base plates before you proceed with installation of the tag covers and lock housings. This provides time for the adhesive to cure and improve the bonding strength of the base plate to the SD door.

NOTE

To accommodate installation of the base plate, the number frame must be removed on SD box doors that are less than three inches high.

1. Verify that all procedures in Section 2.2 are complete.

2. Confirm the following before you begin installing lock cover assemblies:

   - Ensure all surfaces are dry and free of condensed moisture.

   - Verify the temperature range at the installation site is within the adequate range as defined by the following guidelines:

     - Best: 70°F to 100°F (21°C to 38C°)
     - Adequate: 50°F to 60°F (10°C to 15C°)
     - Not recommended: below 50°F (10°C)

   - Once the base plate is attached to the SD door, the adhesive tape on the base plate will achieve about 50% of ultimate bonding strength after 20 minutes. Total bonding strength is achieved after 72 hours.

3. Install the first base plate to an SD box door. Diebold recommends that you install the first base plate on an SD box door that can easily be used as a plumb reference point for aligning all the remaining base plates that are to be installed. Observe the following guidelines and precautions as you install the initial base plate:

CAUTION

If access to the lock nose or guard key stub is required after a lock cover assembly has been installed, you must remove the adhesive tape that secures the lock nose. The guard key stub can be grasped by tweezers, pliers, or another suitable tool and the guard lock can be placed in a locked position. The guard key stub may then be removed if desired. To reinstall a new lock cover assembly, you must reinstall the guard key stub and secure the lock nose with an adhesive tape.

- On a double-nose lock, the guard nose will be concealed by the double-sided tape.
- The hinge-side edge of each base plate is aligned flush along the opening edge of the SD door. See Figure 2-5. Confirm the base plate does not inhibit opening or closing the SD door.
- The left-most opening at the bottom of the base is centered over the customer nose of the SD lock.
- Confirm that the bubble edge of the mounting bracket base does not make contact with the number frame on the SD box door. A small gap between the bracket base and number frame is required to allow for installation of the lock cover assembly.
- Door templates may be used to locate the base plate onto SD box doors that are 5", 7", or 10" high. Door templates are not available for 2" and 3" high SD box doors.

CAUTION

The adhesive used on the double-sided tape to affix the lock cover assembly to the SD door is designed for one-time installation. Once the lock cover assembly is affixed to the door, it cannot be moved or removed without great difficulty. Test fit each lock cover assembly with the tape attached. Attempting to remove a lock cover assembly that has been affixed to the door may cause damage to the assembly and may result in an undesirable finished appearance.

a. Remove the protective peel-away sheet attached to the two pieces of double-sided tape located on the rear of the bracket mounting base.

See Figure 2-4. Prior to attachment to the SD door, visually confirm that the tape has maintained its adhesive quality.

b. Observe the following guidelines as you affix the base plate to the SD box door:

- If a door template is used to locate the base plate (5", 7", and 10" high doors only), rest the bottom of the template on the steel frame as you align the hinge side of the base plate so that it is flush along the opening edge of the SD box door. See Figure 2-6.

CAUTION

Confirm that the base plate is properly aligned and positioned on the SD box door. If not positioned properly, remove the base plate immediately before you apply pressure to permanently affix the base plate to the door. DO NOT reuse the base plate.

- With the base plate properly aligned and affixed to the door, apply a minimum of 15 psi to the base for approximately 5 seconds. To ensure proper bonding, apply pressure at the points noted in Figure 2-7.

- Confirm that the tape on the rear of the base is securely affixed to the guard nose. This will ensure that the guard nose remains in the unlocked position and does not rotate over time. See Figure 2-5.

NOTE

If, at a later date, the customer desires to change an SD door to operate using the guard nose and guard key, the tape that conceals the guard nose is readily removable to allow removal of the key stub.

4. Using the top or bottom edge of the base plate installed in the previous step as a plumb point, use a laser line level (Figure 2-8) to project a laser "chalk line" along the remaining doors of a section. Observe the following guidelines as you install the remaining base plates:

- The top of each base plate in the SD section (modular group of safe deposit boxes of uniform size) should be parallel side-to-side.

- The vertical edges of each base plate in the SD section should be vertically plumb.

5. Verify that all base plates are installed and securely attached to the SD box doors. Confirm that the base plates do not inhibit the SD door operation.

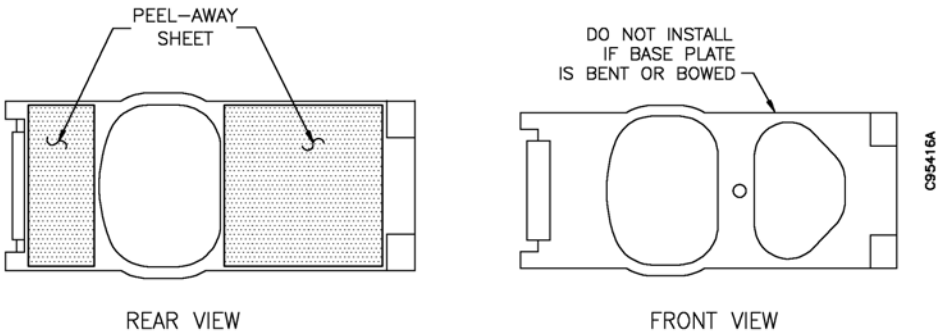


Figure 2-4 Base Plate (Mounting Bracket Base)

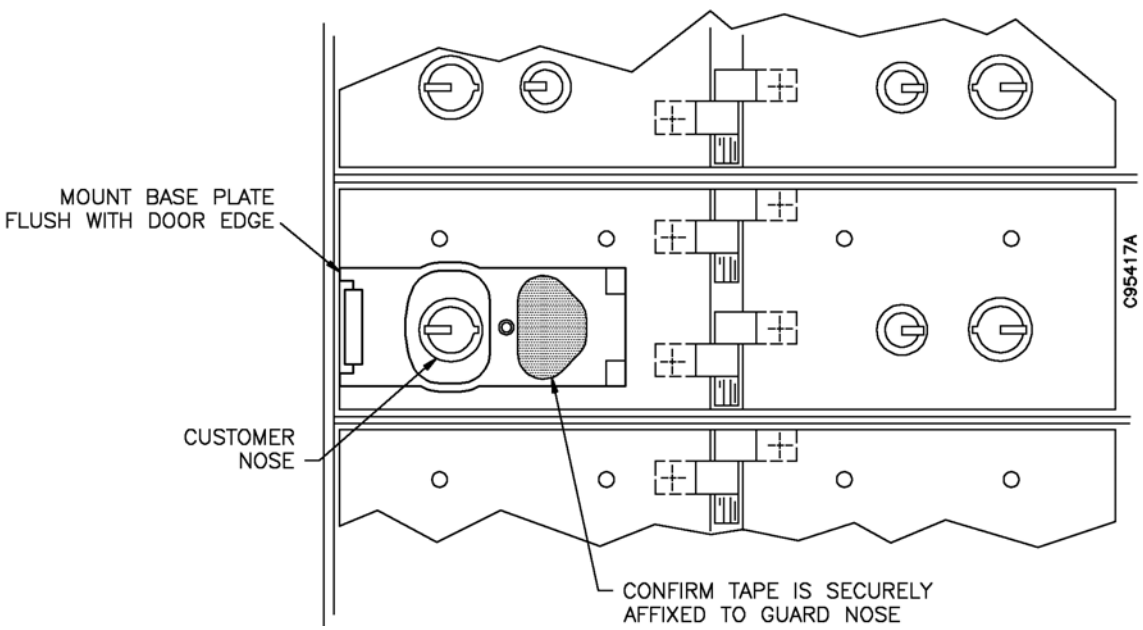
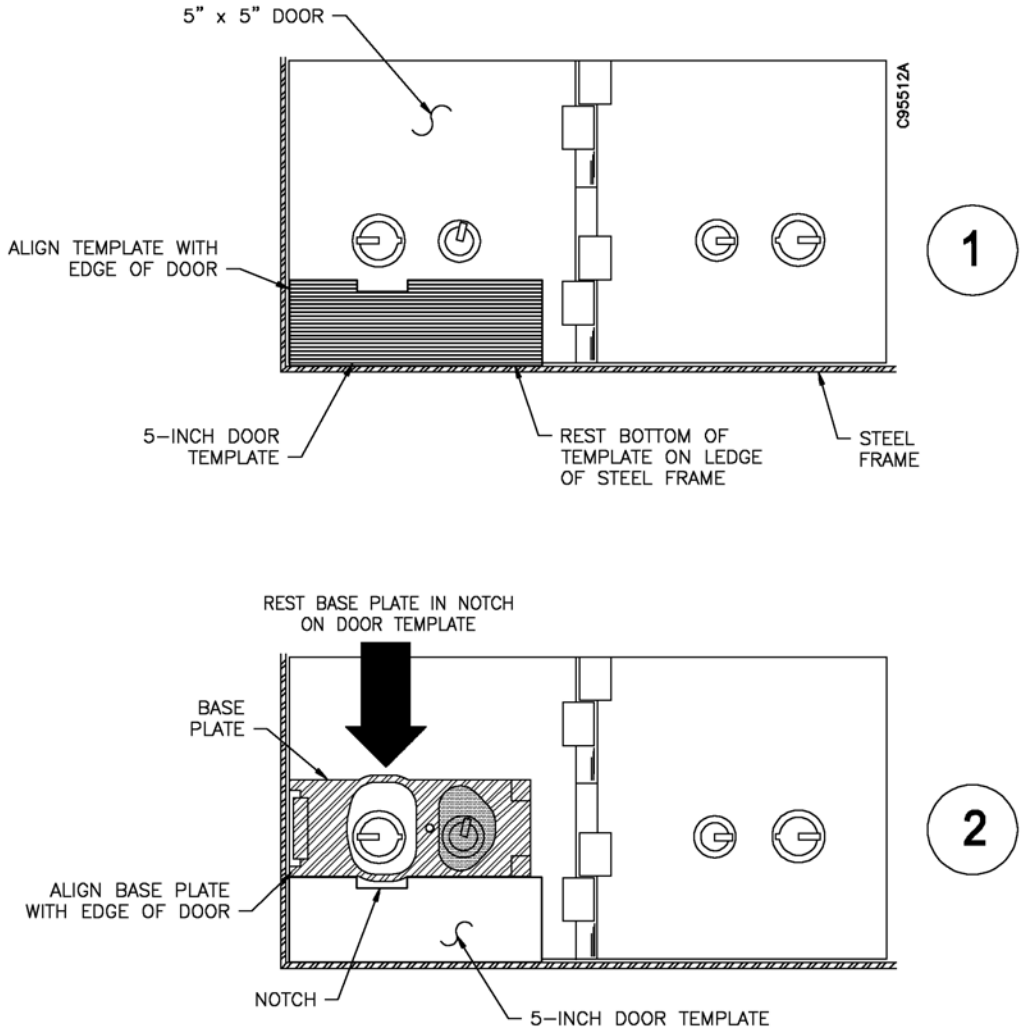


Figure 2-5 Installing the Base Plate



NOTE

Templates have been designed for use with Diebold 5-inch, 7-inch, and 10-inch SD doors. If you are installing base plates onto SD doors not manufactured by Diebold, you should use a plumb-bob or laser level to ensure proper alignment.

Figure 2-6 Using a Door Template

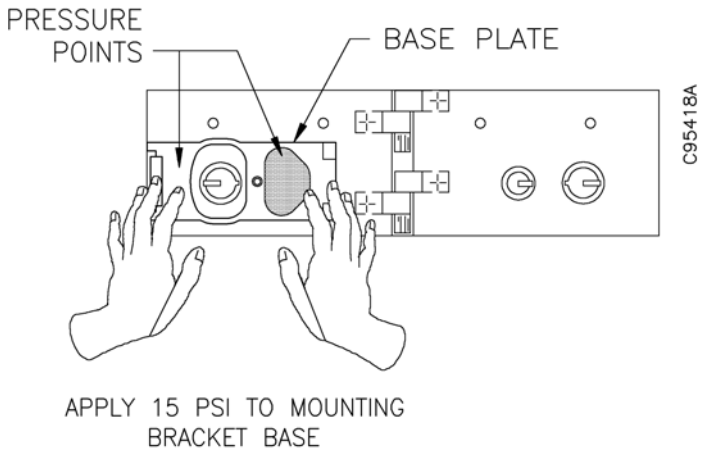


Figure 2-7 Apply Pressure to Mounting Bracket Base

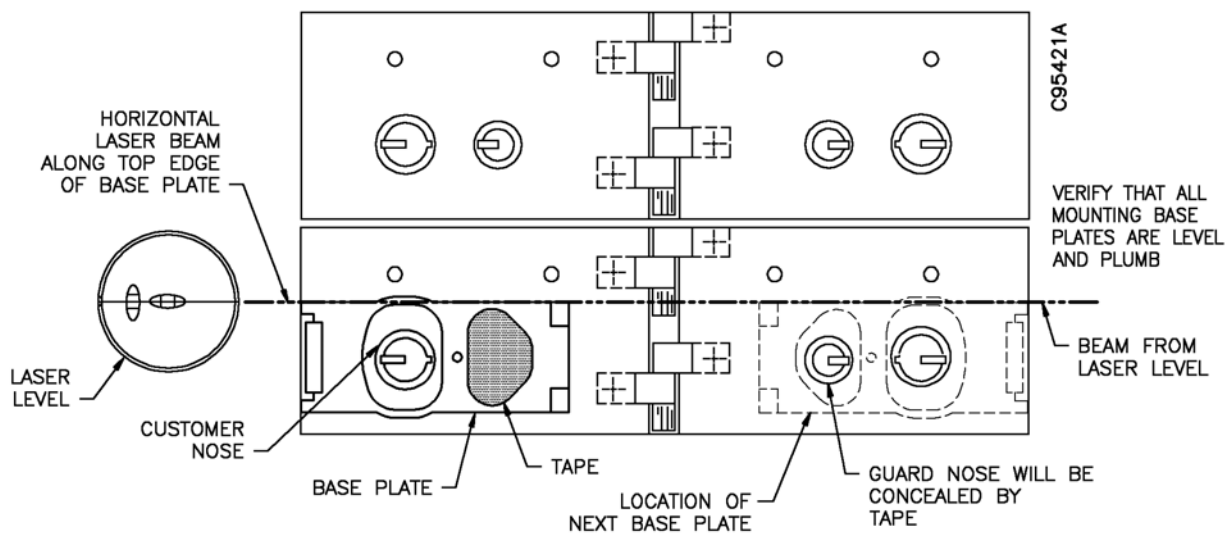


Figure 2-8 Using a Laser Level

2.3.3 Install Tag Covers and Lock Cover Housings

NOTE

Diebold recommends that you install ALL base plates before you proceed with installation of the tag covers and lock housings. This provides time for the adhesive to cure and improve bonding strength of the base plate to the SD door.

Perform the following procedures after the base plate assemblies are properly affixed to the SD box doors.

CAUTION

The lock cover assembly is shipped in the open position. The upper housing door must not be snapped to the closed position until after the lock cover assembly is screwed to the base plate as the final step in the installation of the lock cover assembly.

1. Slide each open lock cover housing into the knurled lip on the base plates installed in Section 2.3.2. See Figure 2-9. Do not snap the upper housing door to the closed position at this time. If you inadvertently snap the upper housing door closed, see Appendix B for the procedure to reopen the latch door.

NOTE

Due to the small surface area of the 2 x 5-inch size SD door, inaccurate readings may occur if you attempt to use the handheld computer to read RFID tags after all the lock cover assemblies are affixed to the doors.

If you are installing lock cover assemblies onto 2 x 5-inch SD doors, you must read the RFID tags before the tag covers are installed on the base plates. See Section 3.

2. Slide tag covers onto the base plates and into the opening of the lock cover assembly. The tabs on the bottom of each tag cover are interlocked with tabs on the base plates. See Figure 2-10.

3. Use the 6-32 machine screw provided with the base plate to secure each lock cover housing and tag cover to the base plates.

4. With all lock cover assemblies secured using the 6-32 machine screws, snap the upper housing of each lock cover assembly to the closed position (Figure 2-11).

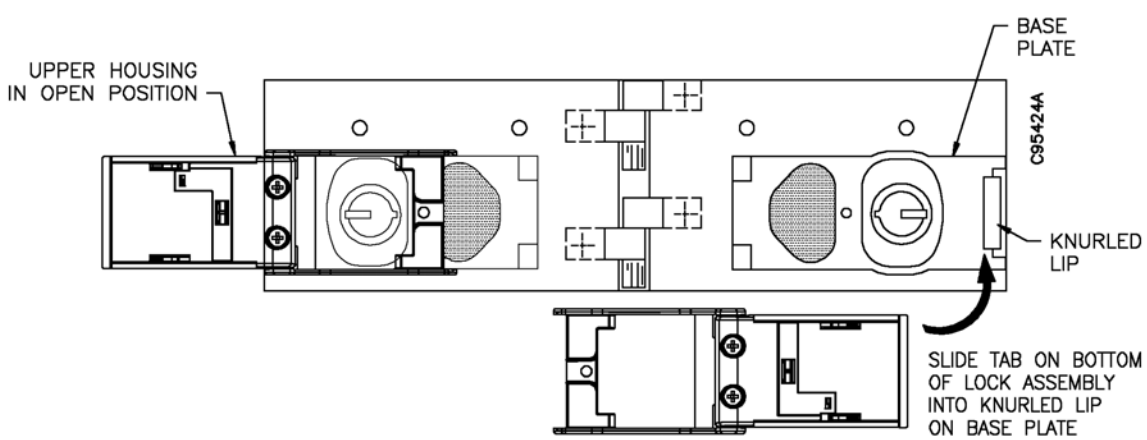
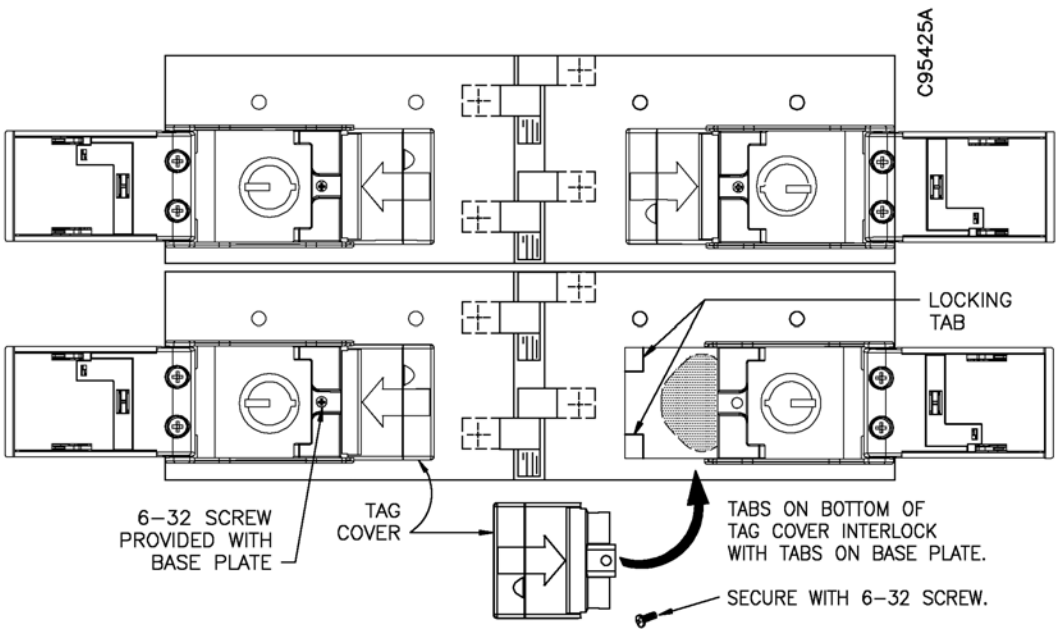


Figure 2-9 Mounting the Lock Cover Assembly



NOTE

To access the guard lock after the lock cover housing is secured to the base plate, remove the 6-32 machine screw. The tape covering the lock nose may be removed.

Figure 2-10 Mounting the Tag Cover

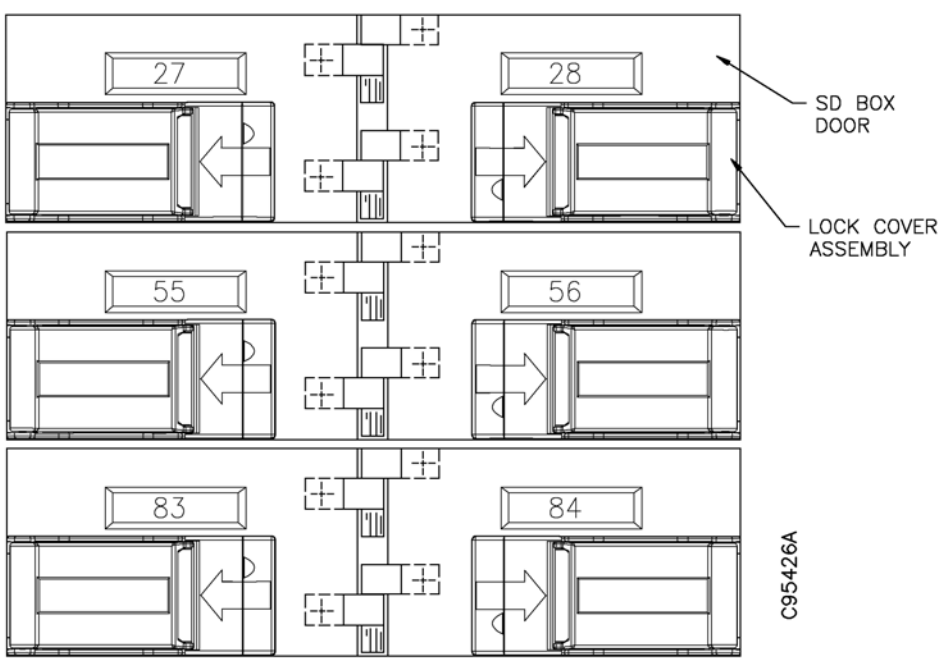


Figure 2-11 Lock Cover Assemblies in Closed Position

2.3.4 Install SD Box Number Labels Onto the Upper Lock Cover Housing

The required quantity of adhesive number labels are shipped with each order. Each roll of labels is numbered in lots of 250 (for example, 1 through 250, 251 through 500). Perform the following procedure after all lock cover assemblies are mounted to the SD box doors. This procedure is to be performed even in retrofit situations where the existing number frame is still attached to the SD box door.

1. Clean the exterior surface of each lock cover assembly with a 50:50 mixture of isopropyl alcohol and water.

2. Install one number label onto the recess surface area of each lock cover assembly. See Figure 2-12.

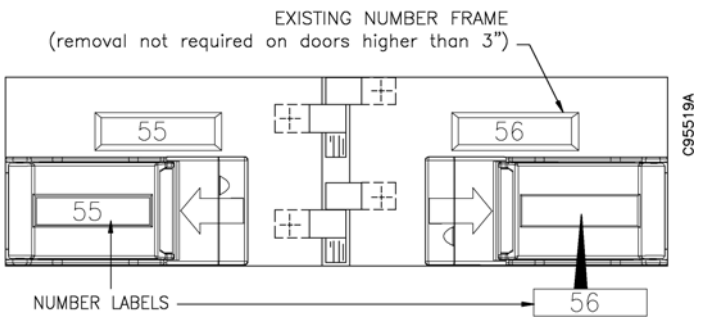


Figure 2-12 Installing Number Labels

2.4 Interconnection Procedures and Component Hookup

NOTE

The lock cover assembly described in Section 2.2 and Section 2.3 may be installed on SD boxes not located in a vault as these lock cover assemblies are not particularly adapted for SD boxes in vaults.

Refer to Figure 2-13 for an illustration showing an interconnection diagram with the mandatory and optional components of the EVA Elite system. Refer to Table 2-2 for a description of specific procedures that may be required as a result of available hardware options

NOTE

Diebold recommends that you begin charging the key assemblies as soon as the docking station setup is complete. This will ensure that the key assemblies are fully charged when the system is turned over to the customer.

The docking assembly and optional signature capture device are generally installed in an area convenient to the touch screen workstation.

If the system configuration requires that a card reader be installed at the hand recognition reader, refer to Section 2.5.6 for wiring details.

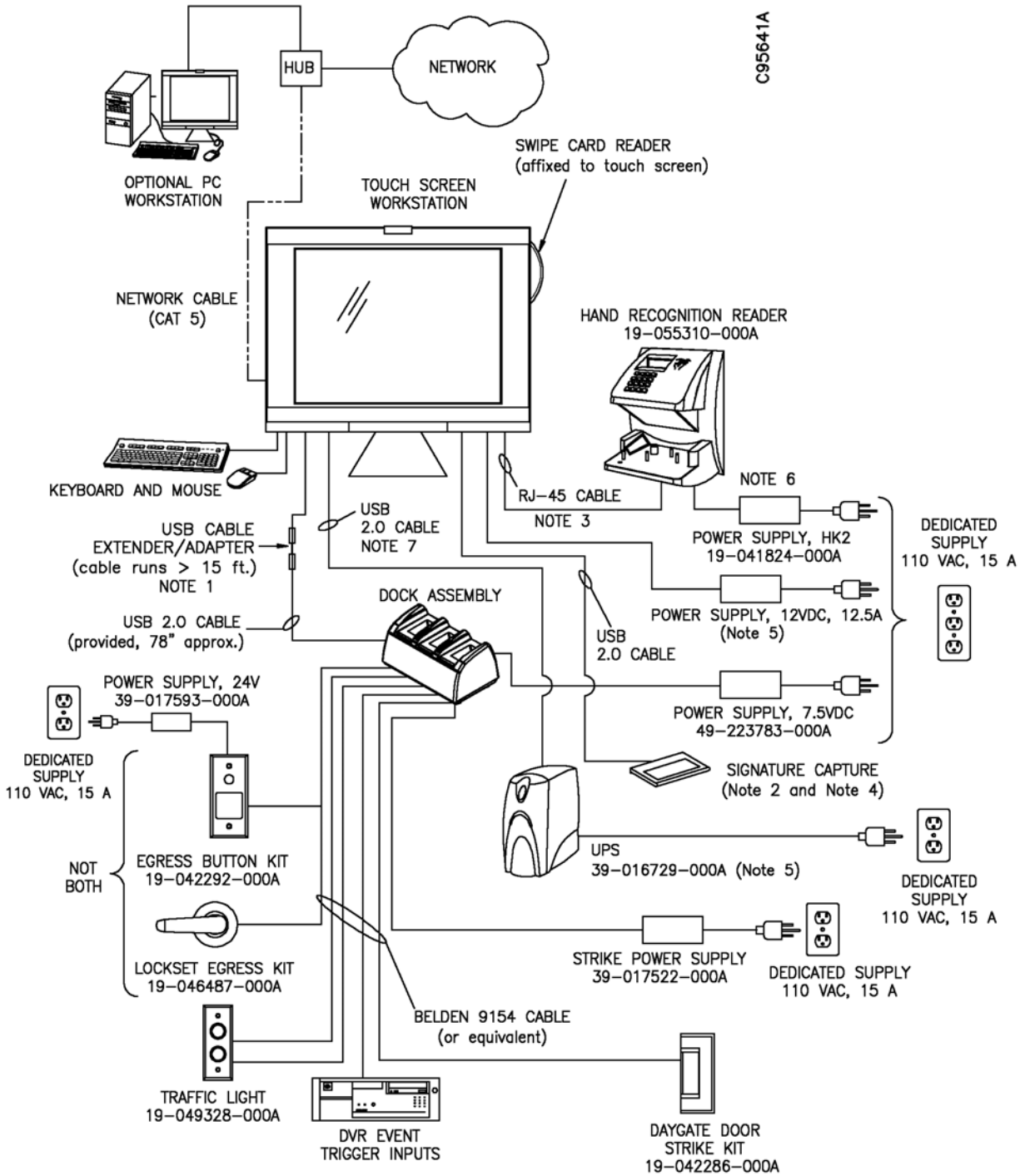


Figure 2-13 System Interconnection Diagram (sheet 1 of 2)

Notes:

1. If USB cable length is greater than 15 ft. (5 M), use appropriate procedures to prevent signal and voltage loss. A 150 ft. long USB extender cable (49-226161-000A) is available.
2. The number of USB devices is limited. Confirm and verify component requirements prior to starting the installation.
3. Use cable 29-016865-000A (14 ft.) or 29-016865-000B (100 ft.). Remove RJ-45 plug for connection to a 3-pin, RS232, Molex connector on hand recognition reader. Observe defined pin-outs. See Figure 2-33 for detail.
4. Depending on the number of USB devices, a self-powered, 4-port, USB hub (49-226162-000A) may be required.
5. If a UPS is installed, the touch screen workstation power supply is plugged into the UPS.
6. Battery backup (19-041825-000A) is available for the hand reader power supply.
7. The UPS requires USB connectivity rather than a serial connection.

   Diebold recommends that the USB cable from the UPS be connected directly to a USB port on the touch screen workstation (not to a USB hub). If the UPS is plugged into the USB hub, the power adapter for the USB hub must be plugged into the UPS to ensure an orderly shutdown of the system. The power adapter is not provided with the USB hub.

Figure 2-13 System Interconnection Diagram (sheet 2 of 2)

Table 2-2 Added Procedures for Peripheral Devices

IF HARDWARE OPTION IS AS FOLLOWS...	THE FOLLOWING PROCEDURE IS REQUIRED...
Release of daygate locking mechanism	Lock egress kit (19-042292-000A)
Video recording at a camera	DVR trigger inputs use Belden 9154 cable for interconnection between DVR trigger inputs and SD dock CCA.
Traffic signal device	Faceplate for traffic light is modified for EVA. Local purchase of electrical box and faceplate required. See Section 2.5.5.
Signature capture device	If device is further than 15 feet from the touch screen workstation, USB cable extender is required. USB connections at touch screen workstation are limited. USB hub may be required. See Table 4-1 for part number information.
HandKey II biometric hand reader	If distance between touch screen workstation and hand reader is greater than 14 feet, use RJ-45 patch cable (29-016865-000B). Maximum cable length is 50 feet. Cut and dress patch cable as required. As an option, a field-installed kit (19-041825-000A) is available to provide and control battery backup for the hand reader.
Daygate control interface module	If USB cable length is greater than 15 feet, use appropriate procedures to prevent signal loss. To extend distance up to 150 feet, the USB extension adapter (49-226161-000A) is available.
Entry to the vault without customer interaction with the EVA touch screen workstation	If distance between touch screen workstation and hand reader is greater than 14 feet, use RJ-45 patch cable (29-016865-000B). Maximum cable length is 50 feet. Cut and dress patch cable as required.

2.4.1 Touch Screen Workstation (41-021181-000A)

The touch screen workstation, equipped with a 15-inch LCD diagonal display and magnetic stripe card reader, is generally installed on a welcoming pedestal located near the daygate. The cables for peripheral devices and power are attached to connectors located beneath a slide-out drawer located at the bottom of the monitor. See Figure 2-14.

See Figure 2-15 for an illustration showing a touch screen workstation connection diagram.

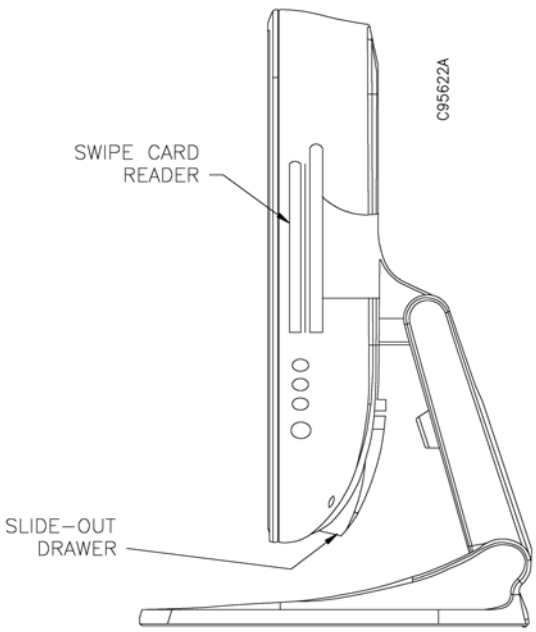
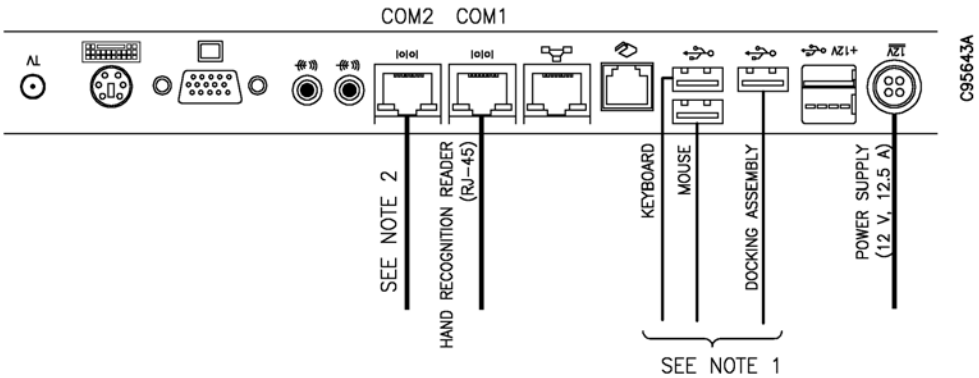


Figure 2-14 Touch Screen Workstation, Side View



NOTES

1. A self-powered USB 4-port hub may be added if additional USB ports are required.
2. If the RS232-to-RS485 converter is required, it MUST be connected to COM 2. In this instance, the UPS must be connected to a USB port. If no RS232-to-RS485 converter is required, this serial connection (COM 2) may be used by the UPS.

Figure 2-15 Touch Screen Workstation Connection Diagram

Install the Compact Flash Drive

An 8 megabyte Compact Flash card (used to back up the EVA database), is generally installed at the factory. If this did not occur, you will be required to install the compact flash card to enable the system to execute scheduled backups of the system database.

1. Locate the compact flash card that shipped with the system.
2. Turn off power to the touch screen workstation and disconnect the power supply.
3. Carefully place the touch screen workstation facedown on a soft, flat surface. Unsnap and remove the rear, plastic, cover insert. See Figure 2-16.
4. Remove two screws that secure the CF door flap and remove the flap.
5. Insert and press the CF card into the slotted metal guide rails. When inserted correctly, the black eject button will click.
6. Close the flap and replace the two screws that secure the flap in place.
7. Reinstall the rear, plastic cover.

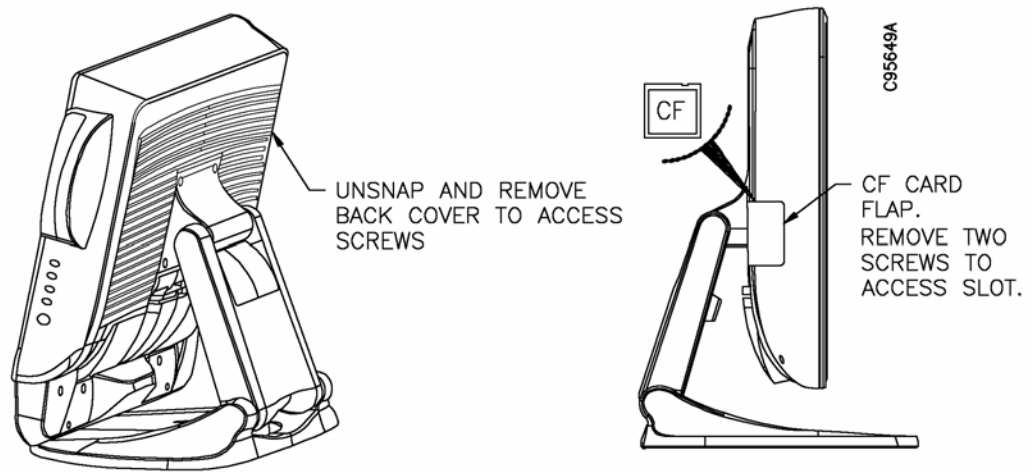


Figure 2-16 Installing the Compact Flash Card

2.4.2 Docking Station Access and Connection Detail

CAUTION

To prevent electro-static discharge (ESD) damage, wear a properly grounded anti-static wrist strap whenever handling CCAs.

NOTE

Diebold recommends that you begin charging the key assemblies as soon as the docking station setup is complete. This will ensure that the key assemblies are fully charged when the system is turned over to the customer.

To complete interconnection between the touch screen workstation and optional parts for daygate access, you must remove the base of the docking station to access interior components on the SD dock CCA. To access the SD dock CCA (41-020090-000A), remove three pan head self-tapping screws from the base. See Figure 2-17. See Figure 2-18 for an illustration showing component locations on the CCA.

Refer Table 2-3 to for interconnection details.

Table 2-3 SD Dock CCA Interconnection Detail

SD Dock CCA	Cable Type	Connection Point
J1	Power supply (39-017565-000A)	110 VAC, 15 A, power outlet
JP2	USB 2.0	Touch screen workstation
JP9 (STRIKE)	Belden 9154	Daygate door strike kit (19-042286-000A)
JP9 (DOOR RLS)	Belden 9154	Lockset egress kit (19-046487-000A)
		Egress button kit (19-042292-000A)

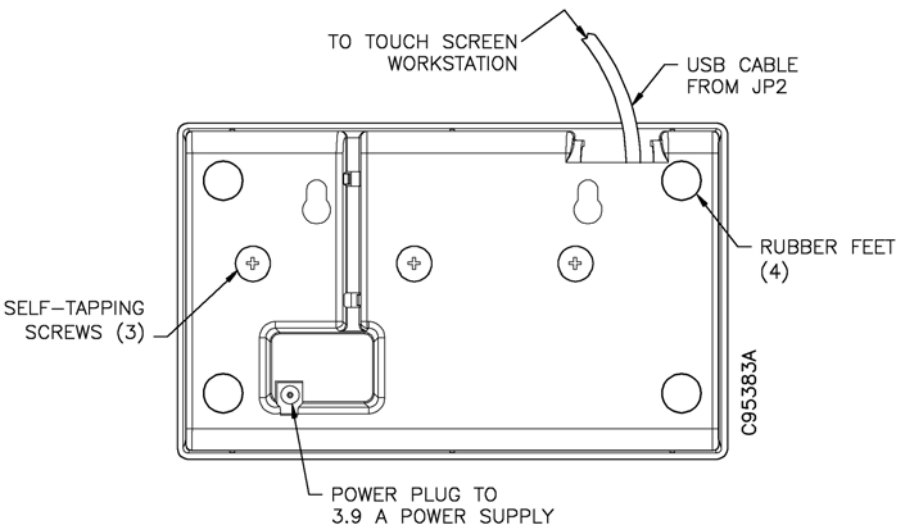
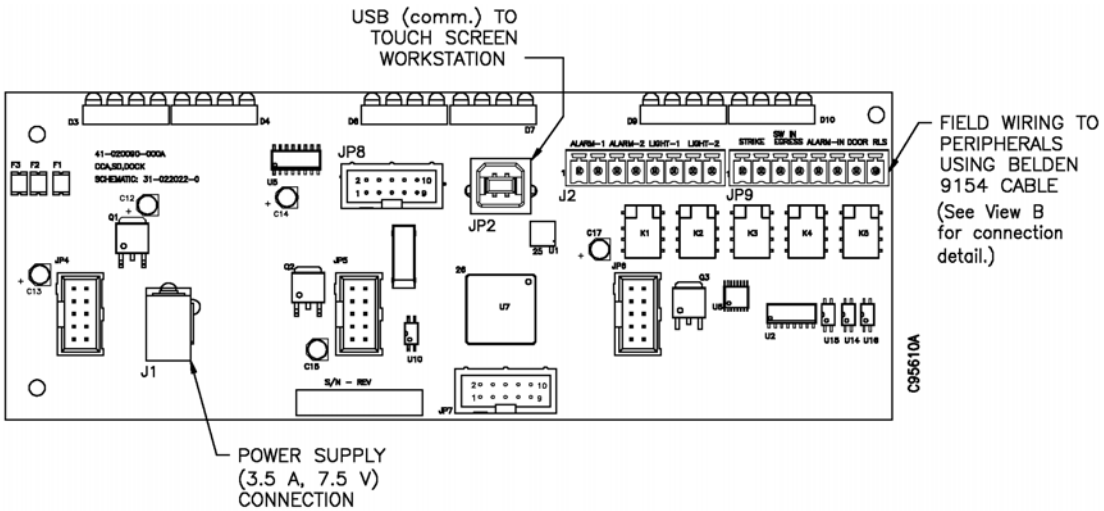
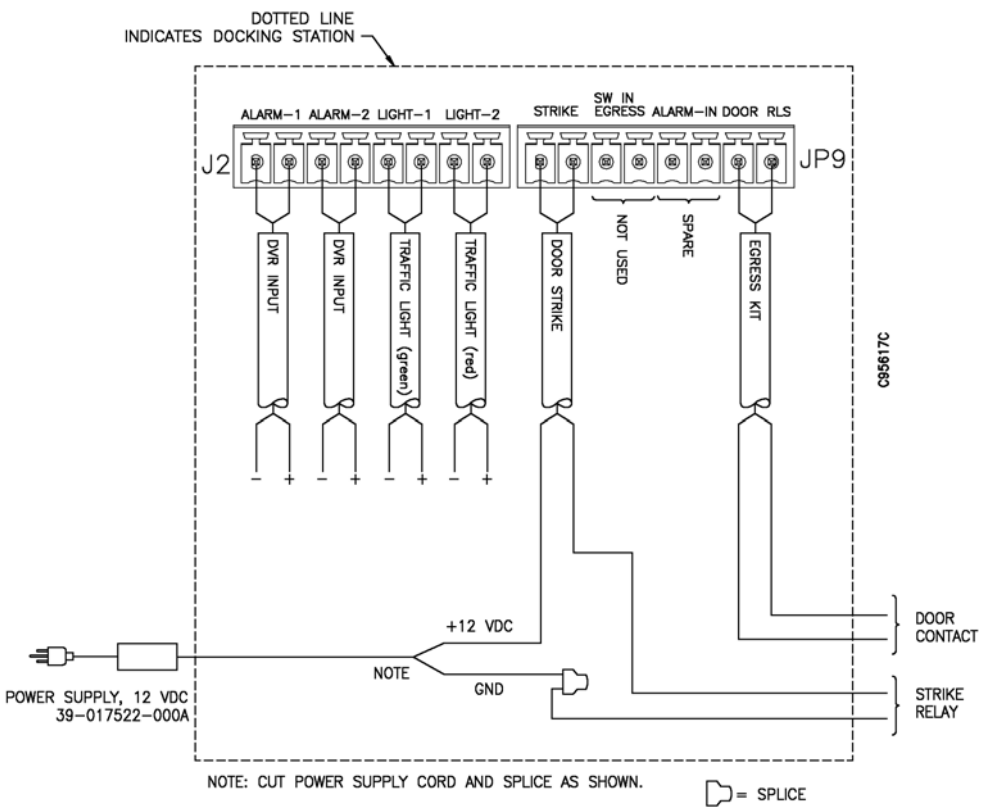


Figure 2-17 Docking Station, Base (bottom view)



View A Component View



NOTE

Use Belden 9154 (20 AWG, 2-conductor, shielded-pair) cable, or equivalent, for wiring connections.

View B Interconnection Detail

Figure 2-18 SD Dock CCA

2.4.3 UPS (option)

The uninterruptible power supply or UPS (39-017425-000A) prevents data corruption by performing an orderly shutdown of the EVA application and Windows® XP operating system in the event of a power outage.

The installer is required to make the following connections (Figure 2-19):

- Perform the following connection as required. Note that newer-generation devices may only provide for the USB connectivity.

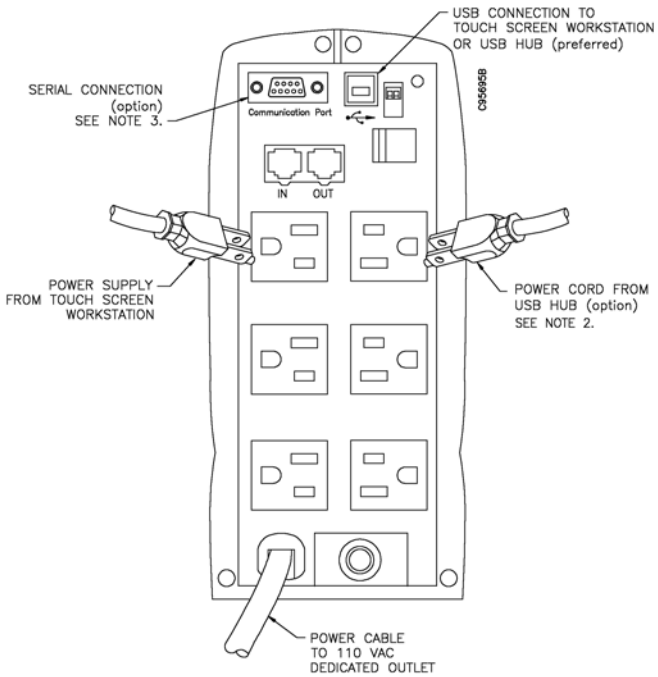
  - If no RS232-to-RS485 data converter is required, install a serial cable connection between the UPS and COM 2 of the touch screen workstation. The serial cable is provided.

  - If an RS232-to-RS485 data converter is required, the installer must set up the UPS for USB connectivity. In this instance, COM 2 on the touch screen workstation is reserved for the serial connection to the data converter.

- Power connection to a standard, dedicated 110 VAC outlet. The power cord is provided.

- The power supply from the touch screen workstation is plugged into a battery backup outlet at the rear of the UPS.

The installer may be required to perform software installation and configuration procedures using the EVA touch screen workstation. These procedures are provided in the *EVA and EVA Elite Electronic Vault Attendant Setup and Administration Guide* (TP-821366-001B).



NOTES

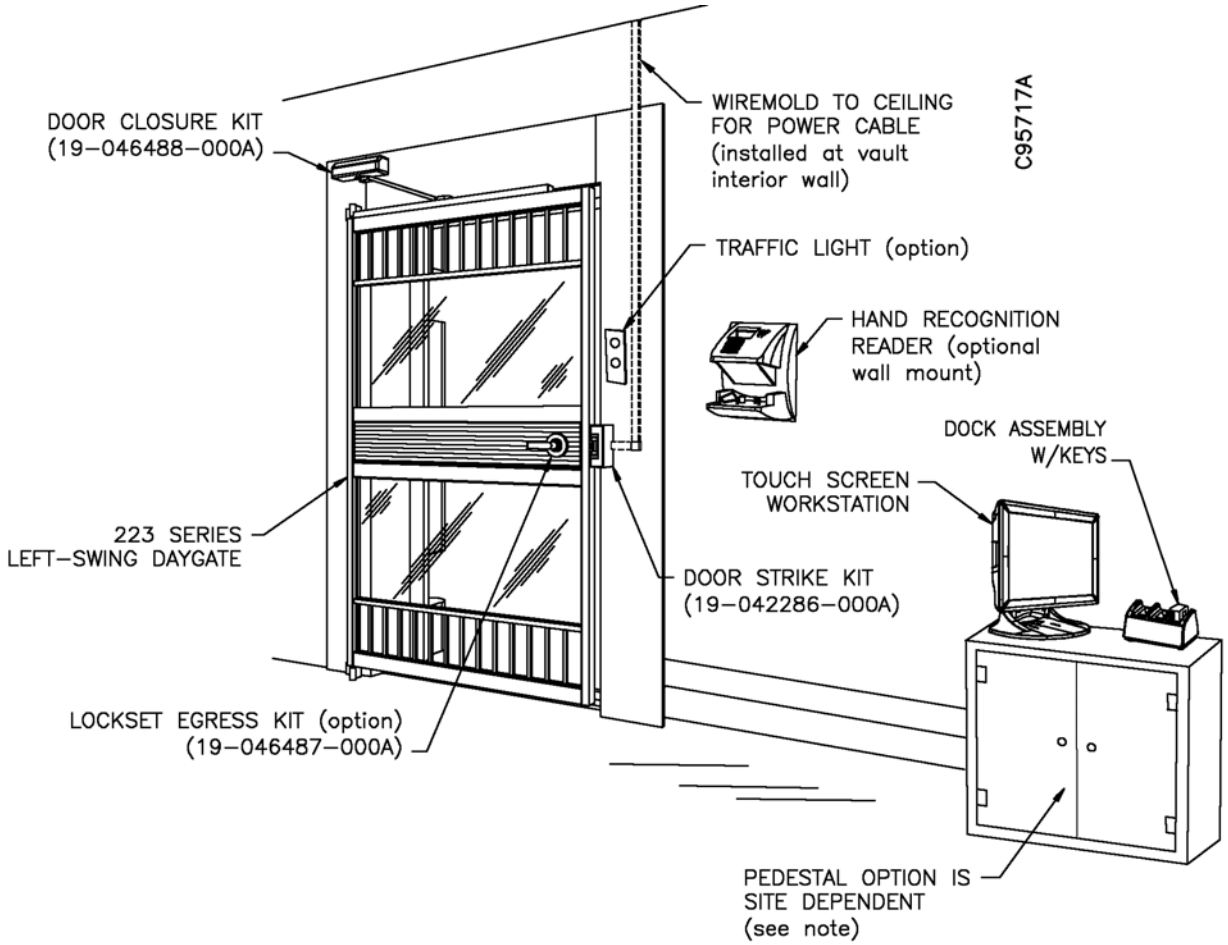
1. UPS shown is for demonstration. The UPS at your installation may be different.
2. Diebold recommends that the USB cable from the UPS be connected directly to a USB port on the touch screen workstation (not to a USB hub). If the UPS is plugged into the USB hub, the power adapter for the USB hub must be plugged into the UPS to ensure an orderly shutdown of the system. The power adapter is an option that must be purchased separately.

Figure 2-19 Rear of UPS

2.5 Installing the Daygate Access Control Components

If the EVA Elite system is equipped with the ability to manage access to the vault area, you may be required to install the site dependent items at the vault entrance. The following is a partial list of items that may be required (Figure 2-20):

- Daygate door strike kit (19-042286-000A). The automated latch kit will replace the manual latch currently installed on the daygate.
- Door closure kit (19-046488-000A)
- Hand recognition reader
- Access control swipe card reader



NOTE

Keyboard and mouse secured out of sight for use by institution personnel.

Figure 2-20 Daygate Access Control Components

2.5.1 Daygate Door Strike Kit (19-042286-000A)

The automated door strike kit replaces the manual latch currently installed on the daygate.

Installation instructions are supplied separately with the daygate door strike kit. Refer to Figure 2-21 for an illustration showing the steps required to install the latch components. Refer to Figure 2-22 for an illustration showing the wiring requirements for the kit.

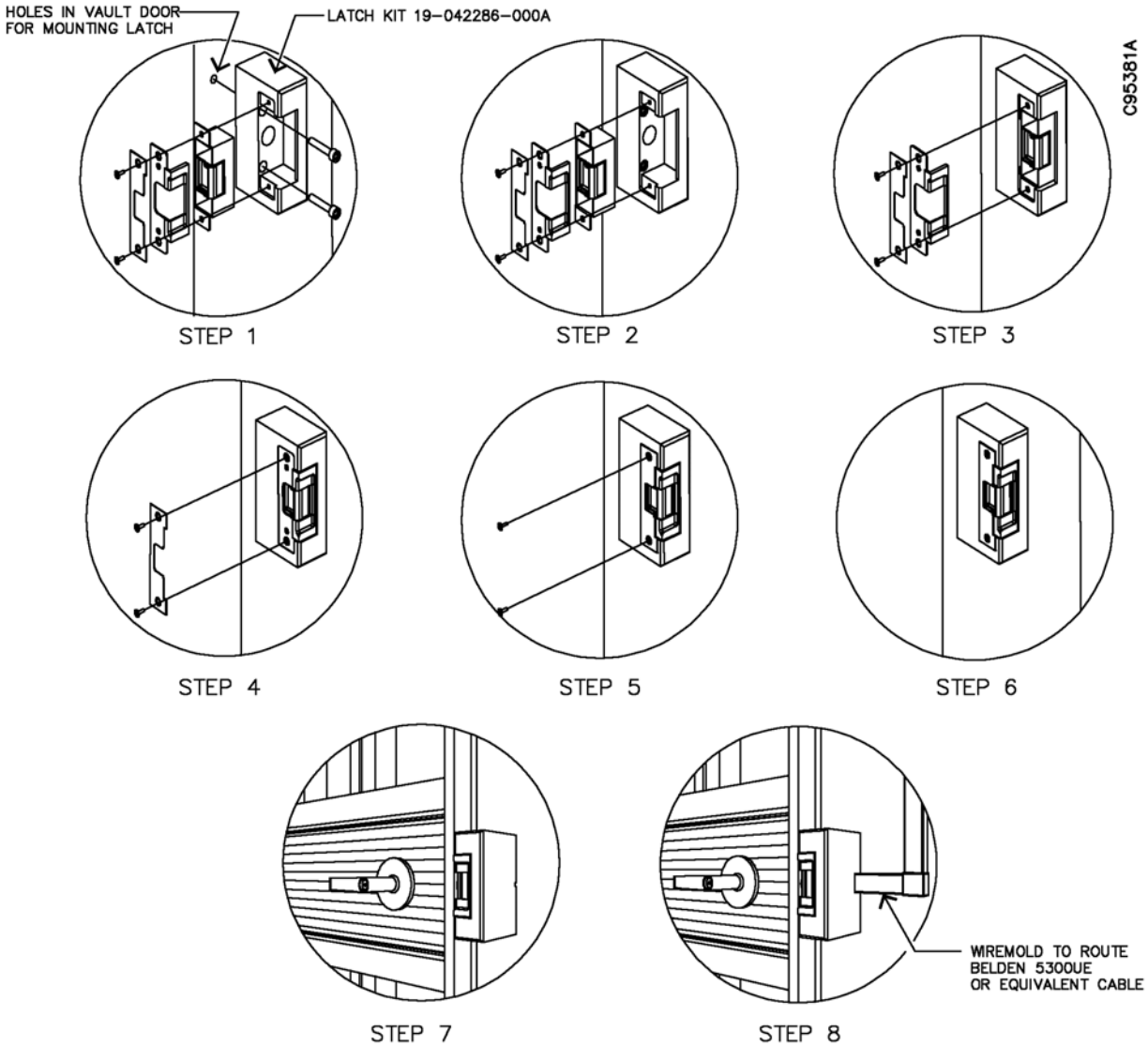
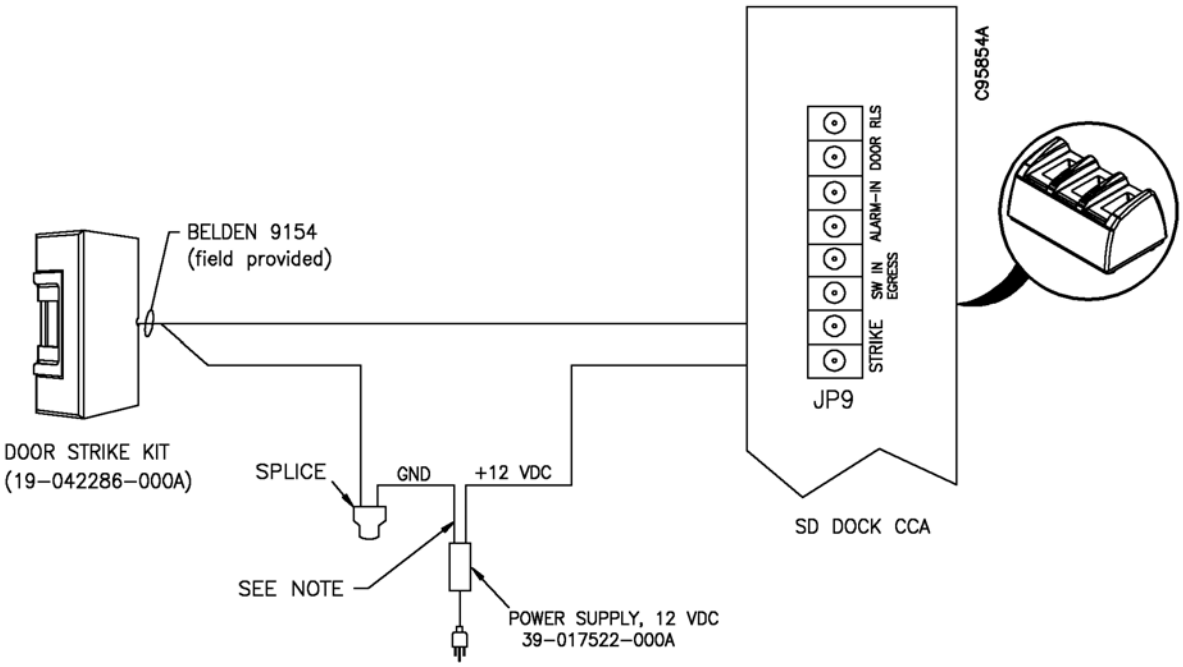


Figure 2-21 Daygate Door Strike Kit Installation



NOTE

Cut supply power cord and splice as required.

Figure 2-22 Daygate Door Strike Kit Wiring Diagram

2.5.2 Door Closure (Hinge) Kit (19-048488-000A)

This kit includes a pneumatic closure, sliding rail, and an adjustable arm that will close daygates that are up to 10 inches below the vault door fascia. Installation instructions are supplied separately with the door closure kit. See Figure 2-23 for general installation guidelines for daygate installation.

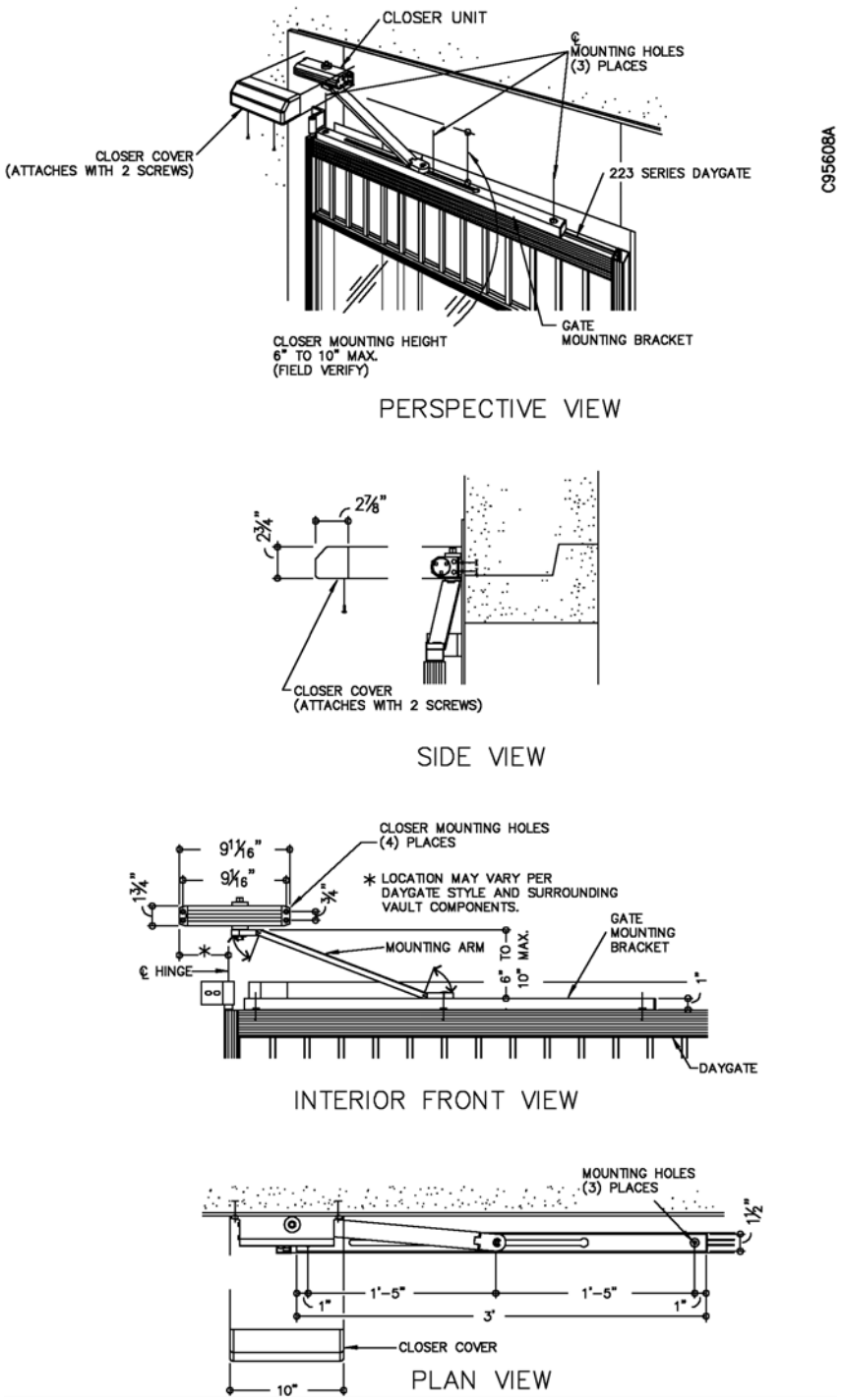


Figure 2-23 Door Closure Kit Installation Guidelines

2.5.3 Daygate Lockset Egress Kit (19-046487-000A)

This request to exit (REX) kit or the egress button kit (19-042292-000A, Section 2.5.4) must be installed if the system will use the One At A Time Access option. This kit replaces the standard daygate lockset with a modified version that incorporates an internal microswitch. This lockset has a rigid (keyed) entrance side and a free wheeling exit side that activates the microswitch when the customer exits the vault. The normally open contacts of the microswitch are used to notify the system that the vault is empty.

An 18-inch length of flex conduit is provided to secure the wiring from the lockset as it is routed from the hinge side of the daygate to the vault door's vestibule cladding (Figure 2-24). See Figure 2-25 for suggested wiring diagram details for the daygate lock egress kit.

This kit can only be used on daygates equipped with tempered glass (bar-style daygates use the egress button kit). Instructions and templates for installing the lockset are provided with the lock egress kit.

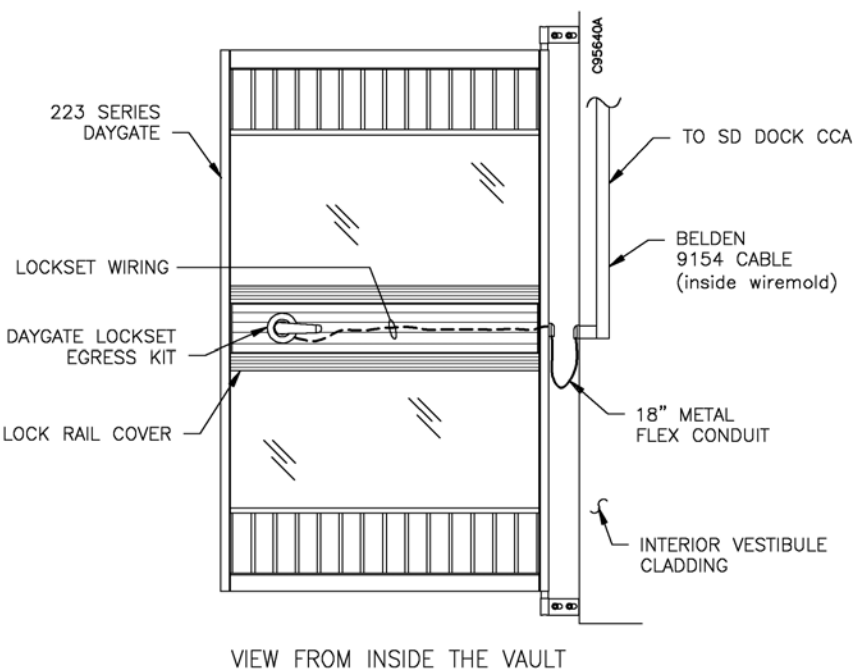


Figure 2-24 Daygate Lockset Egress Kit Wire Routing Detail (Glass Daygate)

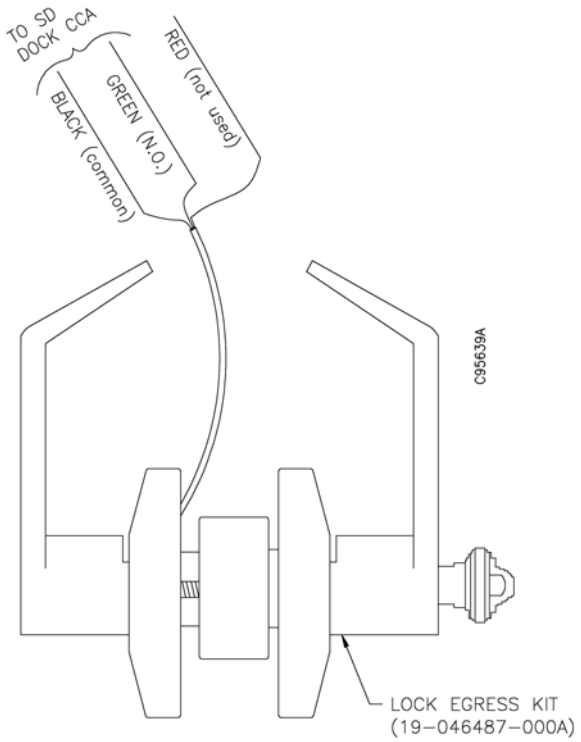


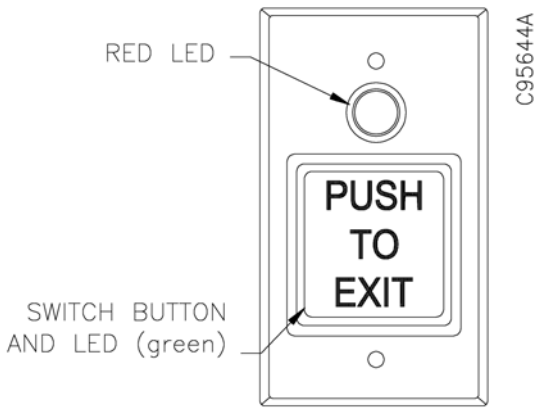
Figure 2-25 Daygate Lock Egress Kit Wiring Diagram

2.5.4 Egress Button Kit (19-042292-000A)

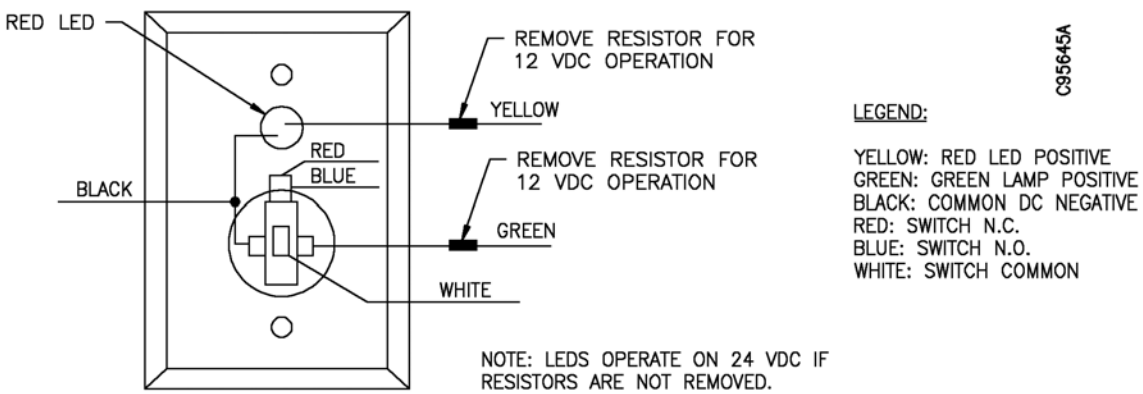
This request to exit (REX) kit or the daygate lock egress kit (19-046487-000A) must be installed if the system will use the One At A Time Access option. This kit is comprised of an illuminated PUSH TO EXIT momentary release button (Figure 2-26) and a standard (NEMA) electrical box. Installation instructions are provided with the kit. The required 24-volt power supply (39-017593-000A) is shipped separately as part of each sales order.

This kit must be installed when the vault entrance is equipped with a bar-type daygate. The egress button must be mounted at the interior of the vault at a location beyond the reach of someone standing at the exterior of the vault (Figure 2-27).

When the button is pressed, the lock is released and the display screen at the touch screen workstation will NOT display a "vault in use" message. In this application, the green PUSH TO EXIT lamp is on constant. The red LED is not operational. See Figure 2-28 for an EVA hookup diagram.



View A Front View



View B Rear View

Figure 2-26 Egress Button Kit (19-042292-000A)

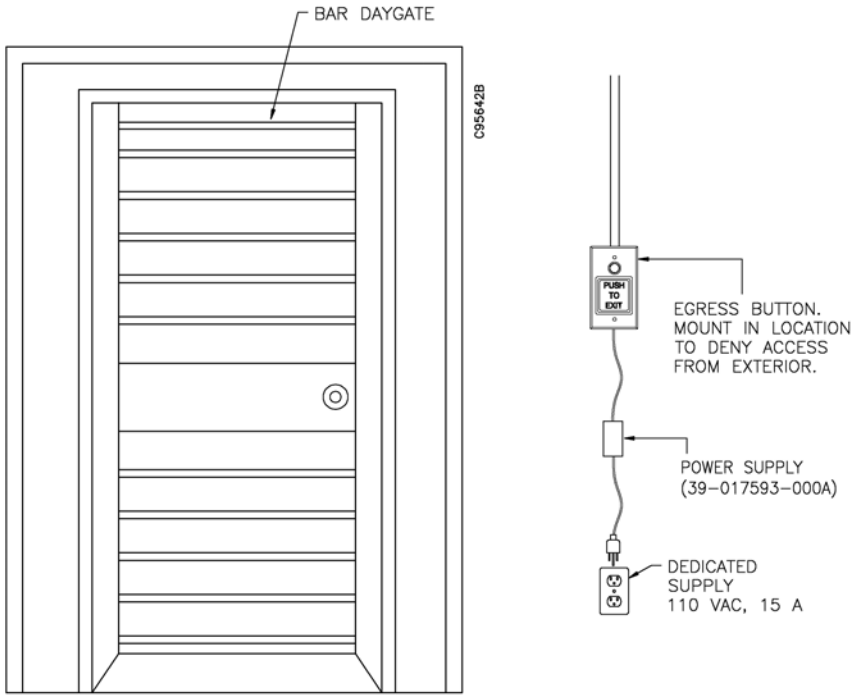


Figure 2-27 Vault Interior with Egress Button Kit (bar daygate)

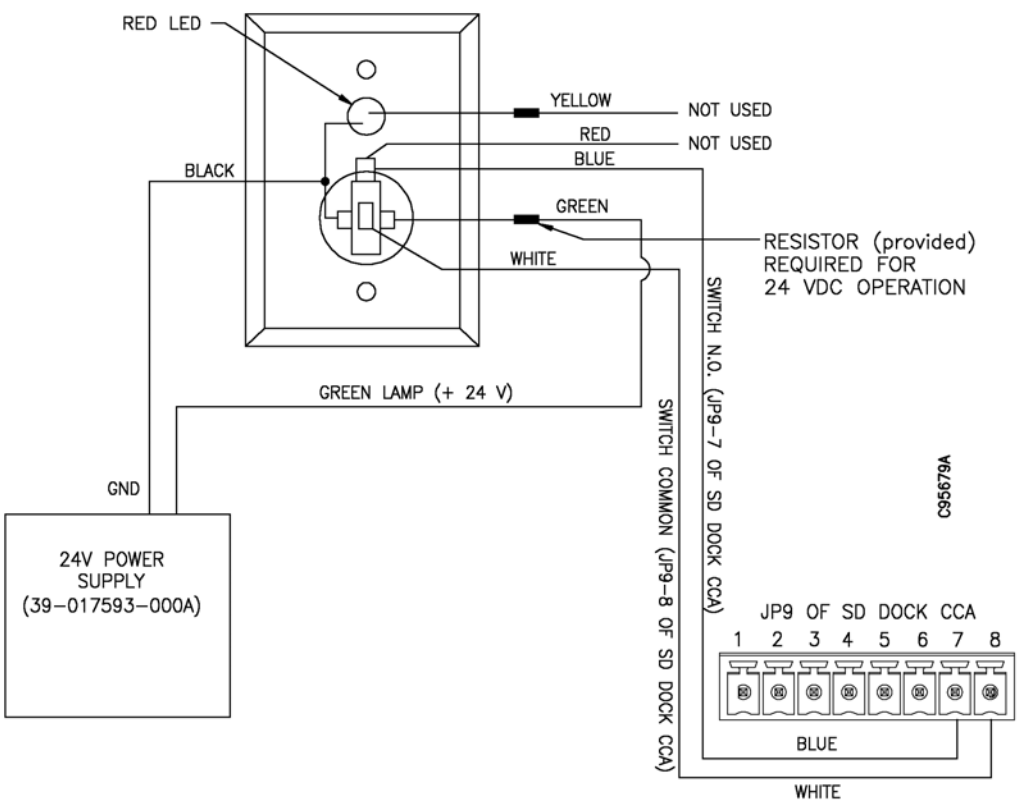


Figure 2-28 Egress Button Kit Wiring Diagram

2.5.5 Traffic Light Option (19-049328-000A)

A traffic light may be installed on the exterior wall next to the daygate. The institution uses the EVA software to configure the operation of the traffic light.

Components of the traffic light must be modified for use with EVA. The following components must be purchased locally prior to installation of the traffic light:

- Standard, metal, single-gang electrical box
- Blank faceplate for single-gang electrical box

Retrofit Procedure

1. Per installation requirements, locate and install the electrical box.

2. Refer to Figure 2-29 and fabricate two mounting holes into the blank faceplate.

3. Refer to Figure 2-30 and remove the two lamps from the existing faceplate provided with the traffic light. Dispose of the existing faceplate.

4. Install the traffic light lamps onto the new, modified faceplate. Mount the modified faceplate to the electrical box.

5. Refer to Figure 2-13 and Figure 2-18, View B for wiring connection detail to the SD dock CCA.

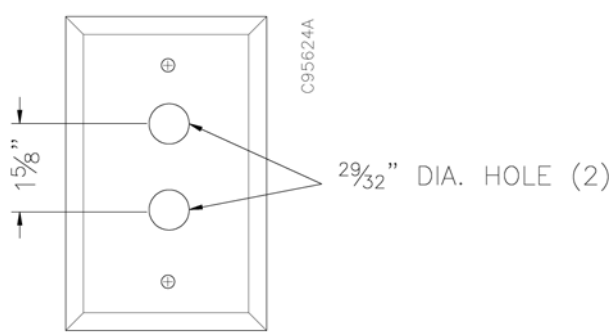


Figure 2-29 Faceplate for Traffic Light

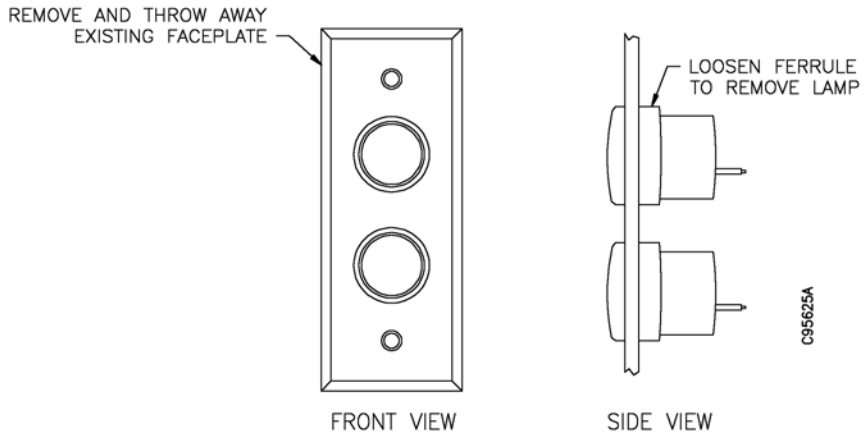


Figure 2-30 Lamp Removal for Traffic Light

2.5.6 Hand Recognition Reader (19-055310-000A)

If the biometric hand recognition reader (HandKey® II) is not mounted to the optional kiosk, it may be mounted on an interior wall at a location near the daygate. See Figure 2-31 for mounting details. Consider the open swing radius when the hand reader is unlatched from the wall mount. See Figure 2-32 for dimensions.

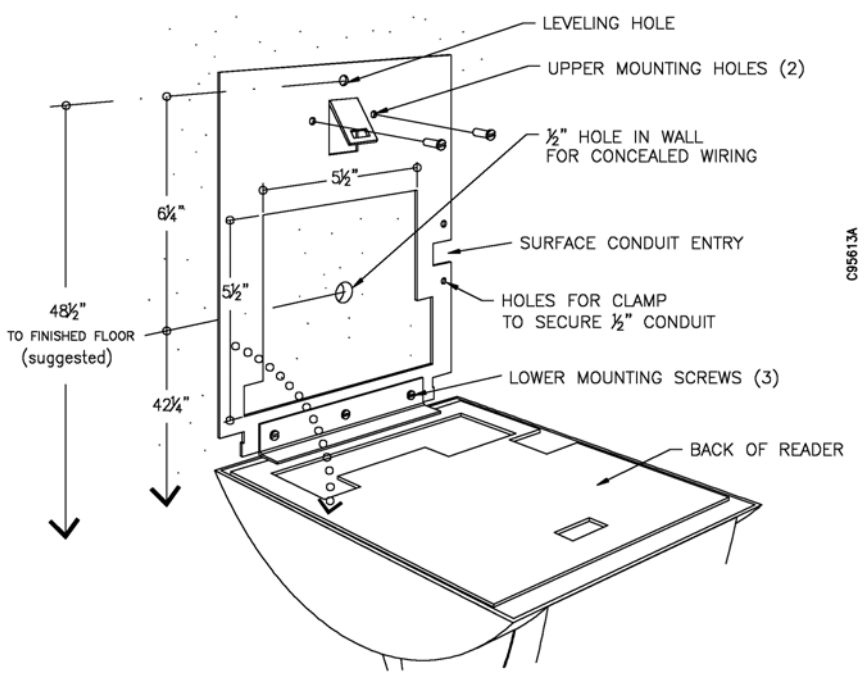
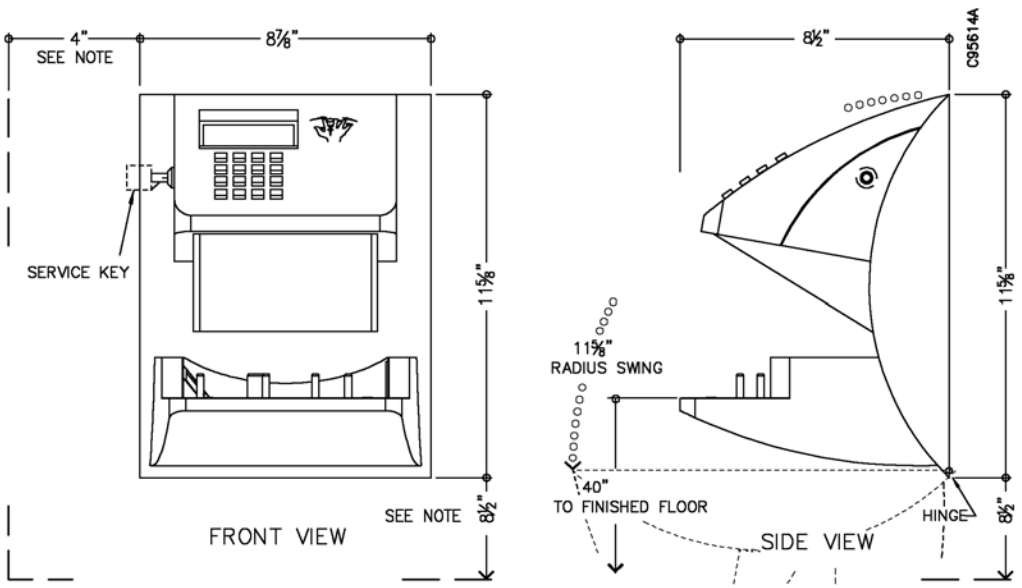


Figure 2-31 Hand Recognition Reader Wall Mounting Detail



NOTE

Dimension is minimum clearance required for key access or service entry.

Figure 2-32 Hand Recognition Reader Dimension Detail

2.5.6.1 Hand Recognition Reader Wiring Details

Wiring details for the hand recognition reader are dependent on the generation of the CCA installed within the reader. Terminal and pin numbers are different for different generation CCAs. Any required configuration and set up procedures are provided in the *EVA and EVA Elite Electronic Vault Attendant Setup and Administration Guide* (TP-821366-001B). A 12VDC power supply (19-041824-000A) is provided. The hand reader power supply may also be equipped with a battery backup device (19-041825-000A).

The hand recognition reader communicates with the touch screen workstation via an RS-232 cable connection. SeeFigure 2-33 for wiring details. Cable runs longer than 50 feet may require a cable connection using RS-485 (EIA-485) hookup and wiring rather than the standard RS-232 connection. SeeAppendix A.

Connecting Ethernet Cable to Hand Recognition Reader CCA (50 ft. or less)

Use cable 29-016865-000A (14 ft.) or 29-016865-000B (100 ft.) to make the wiring connection between the hand recognition CCA and the COM1 port of the touch screen workstation. Alternate wiring configurations are required for cable runs longer than 50 feet. SeeAppendix A.

1. At the touch screen workstation, plug the RJ-45 connector from the Ethernet cable into the COM1 port. See Figure 2-15.

NOTE

Depending on the generation of CCA installed in the reader, removal of the RJ-45 connector may not be required.

2. If required, use the appropriate tool to remove the RJ-45 connector from the opposite end of the Ethernet cable.

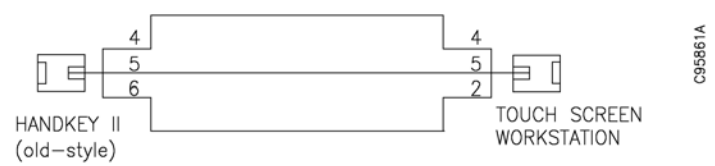
3. Strip off approximately 1-inch of cable sheath.

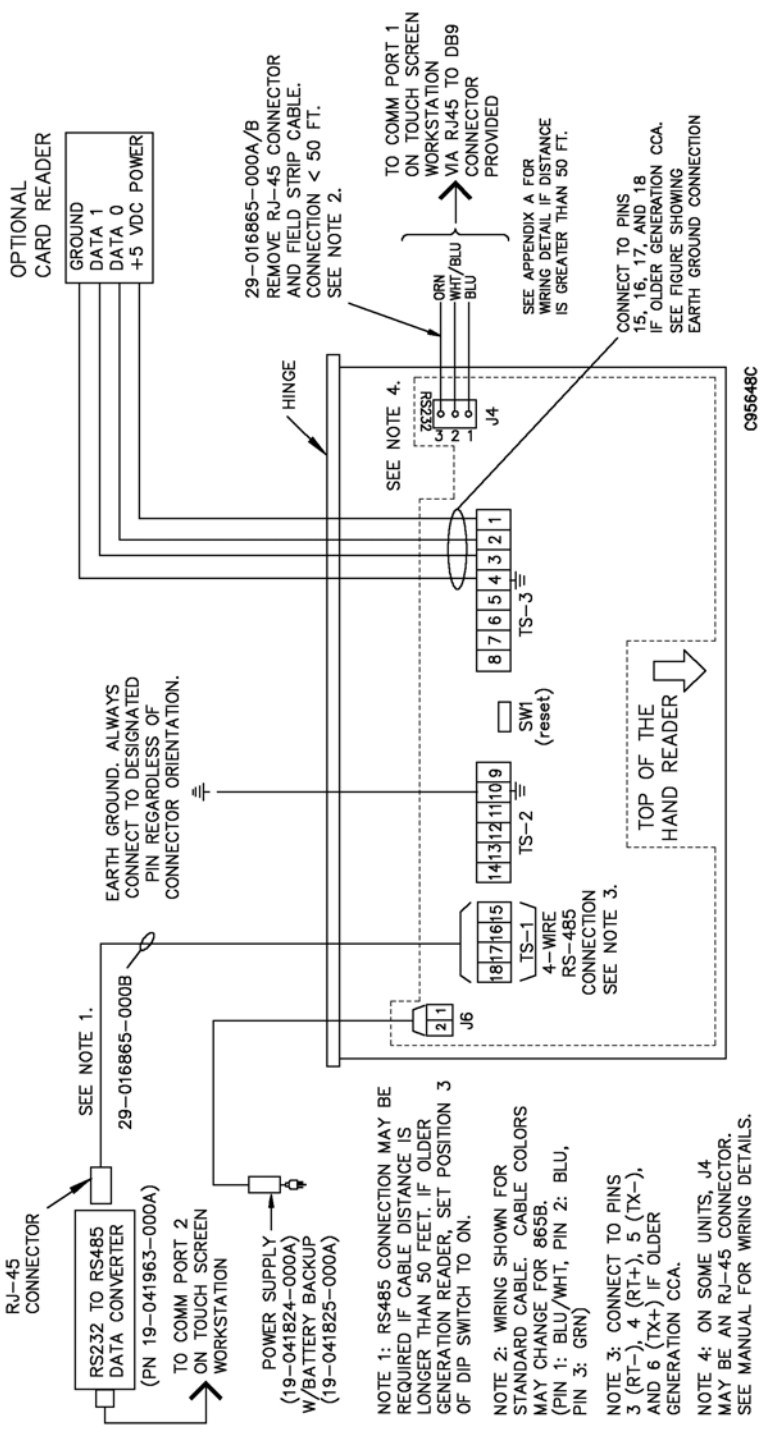
4. Untwist the wired pairs.

5. At the hand recognition reader, terminate the cabling at the 3-pin, RS-232, Molex connector (J4) on the main CCA of the hand recognition reader. Cut the unused wire leads and use electrical tape to dress the unused wire leads. Refer to Figure 2-33 for a wiring diagram.

Old-style HandKey II. Older model hand recognition readers may have an RS-232 modular connector at J4. In this instance, the connection details will not be as shown in Figure 2-33. Cut and dress the patch cable using the pin-outs diagramed in the following table.

Old-style HandKey II (RS-232)	Touch Screen Workstation (Comm 1)
4	4
5	5
6	2





NOTE

Newer generation of the CCA shown. Connections to older generation CCAs will differ. Always use terminal 10 for the earth ground connection.

Figure 2-33 Hand Recognition Reader Wiring Details

2.5.6.2 Hand Recognition Reader Earth Ground and Shielding

CAUTION

Do not connect the hand recognition reader's power supply to a switched duplex outlet. The reader must have a constant source of power for proper operation.

The hand recognition reader MUST be grounded with a solid, reliable earth ground connection. This connection establishes a common ground return point used to protect internal semiconductor devices from electrostatic discharge (ESD) and from external signal line transients. Diebold recommends that the earth ground source be identified by a qualified electrician familiar with electrical codes as well as wiring and grounding techniques. If the sending and receiving stations do not agree on the ground reference for the signal voltages, communication errors may result. Additionally, damage may result if the voltages are abnormally different.

2.5.6.3 Earth Ground Connection Details

Use ground terminal 10 on the unit's CCA to make the earth ground connection. Do NOT use terminal 2 to establish the earth ground connection; terminal 2 is not directly connected to ground. See Figure 2-34.

Earth ground the unit when there is a good earth ground source near each unit and when there are very long cable runs between units. Carry an earth ground to each unit when there are no earth grounds convenient to the unit and the unit's power supply is floating.

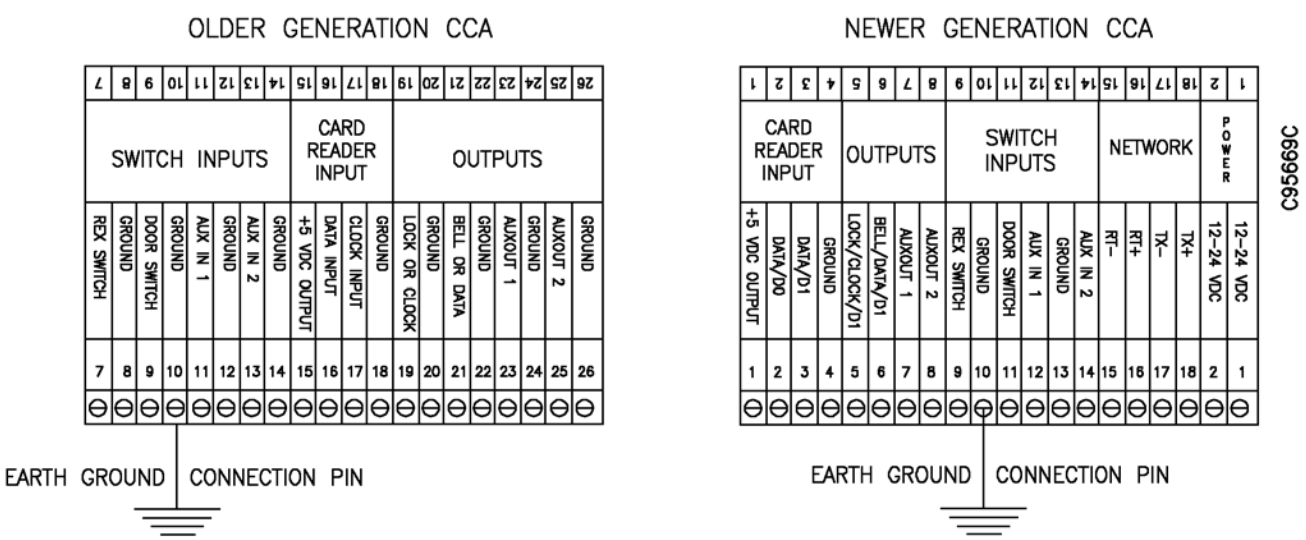


Figure 2-34 Hand Recognition Reader Earth Ground Connection (mandatory)

Earth Ground

One method of establishing a ground reference is to connect each unit's main board ground to earth ground. Earth ground is found on the third pin on standard AC line sockets (round one in the middle). If the building wiring is functioning correctly, this should be a low-impedance path to a true ground.

2.5.6.4 Hand Recognition Reader Battery Backup Option

As an option, a field-installed kit (19-041825-000A) is available to provide and control battery backup for the hand recognition reader.

Operation

The switch to battery power is automatic and occurs when the input voltage falls to about 10.5 volts. When input power is restored, the unit switches off of battery operation and the battery charger is re-enabled to recharge the battery. Generally, a fully-charged battery will provide approximately two hours of operation.

Components and Installation

In addition to installation instructions, the following items ship with the battery backup kit and are installed internally on the hand recognition reader:

- Power fail PCB. Using standoffs and nuts provided, P8 of this PCB is plugged into J8 on the underside of the main PCB.
- 2-pin, plastic jumper. This jumper is installed on J7 of the main PCB.
- 12-volt, sealed lead acid battery. The battery is mounted internally into the chassis provided. The battery plug is connected to J4 on the main PCB.

Refer to the instructions that ship with the kit for complete installation procedures, warnings, and guidelines.

2.5.6.5 Setting Communication Method DIP Switch (older generation readers)

Older-generation hand recognition readers are equipped with a 5-position DIP switch (S1). As default, position 3 of this DIP switch is set to the OFF position for RS-232 communication. If the hand reader is using RS-485 cabling for connection to the touch screen workstation, you must reset position 3 of this DIP switch to the ON position. Generally, all other switch positions will be set to the OFF position.

Newer-generation hand recognition readers are not equipped with a DIP switch.

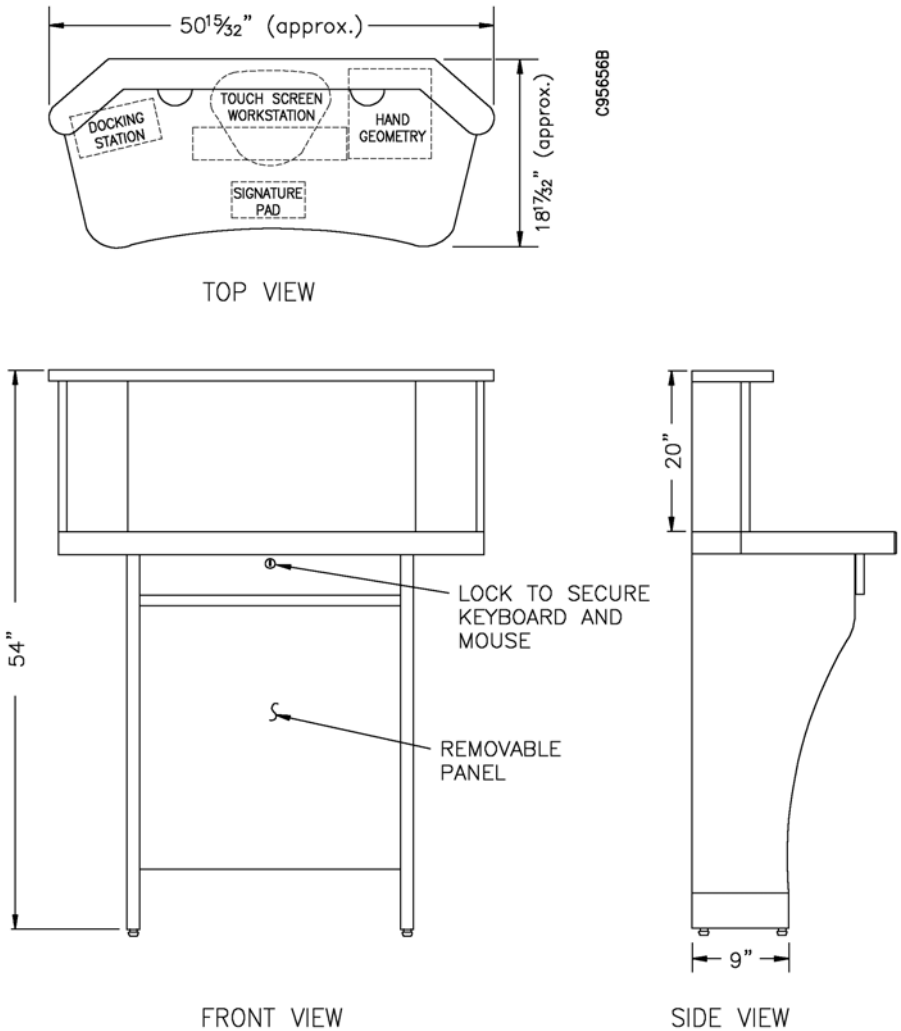
2.5.7 Signature Capture Pad (option)

As an option, a signature capture device may be installed on the countertop in the area near the touch screen workstation. This device interfaces with the touch screen workstation via USB 2.0 cable (provided). This device is not connected to an AC power source. Two styles of signature capture pads are available:

- Signature pad, 1 x 5 (economy): 49-224003-000A
- Signature pad, 1 x 5, LCD: 49-224004-000A

2.6 EVA Kiosk (41-021255-000A)

The optional EVA kiosk (Figure 2-35) is installed at a location near the vault entrance. The EVA kiosk is pedestal desk designed to support input devices (for example, touch screen workstation and hand geometry reader) that will be used by the institution's customers. The EVA kiosk is equipped with a locked drawer to secure the keyboard and mouse. The unit is also equipped with a removable panel to provide access to cables and electrical outlets.



NOTE

Newer units may vary by size and in appearance.

Figure 2-35 EVA Kiosk

Section 3
Reading RFID Tags

3.1 Description

Each tag cover is equipped with an unique RFID (radio-frequency identification) tag. Each unique tag must be read by a handheld computer (Figure 3-1). The data captured by the handheld computer must then be transferred to the institution's computer where the data is stored.

NOTE

Due to the small surface area of the 2 x 5-inch size SD door, inaccurate readings may occur if you attempt to use the handheld computer to read RFID tags after all the lock cover assemblies are affixed to the doors.

If you are installing lock cover assemblies onto 2 x 5-inch SD doors, you must read the RFID tags before the tag covers are installed on the base plates.

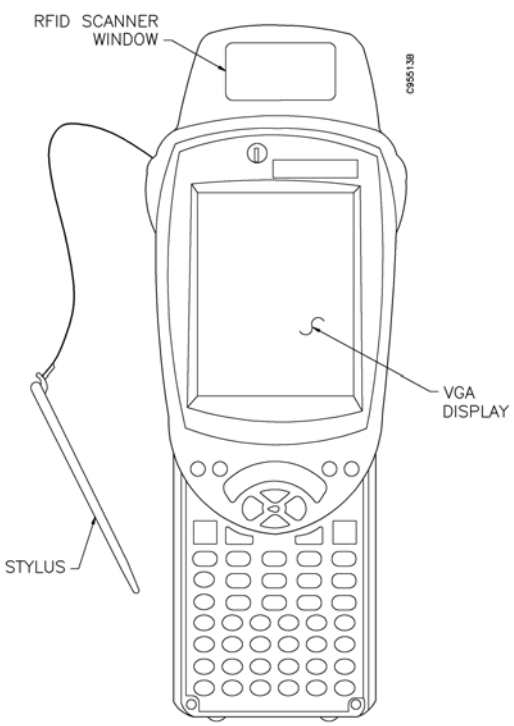


Figure 3-1 Typical Handheld Computer (RFID tag reader)

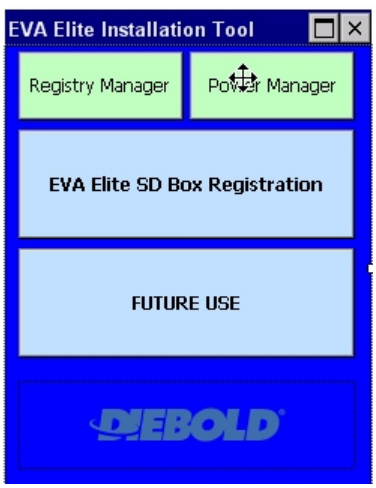
3.2 Reading RFID Tags for Installation

NOTE

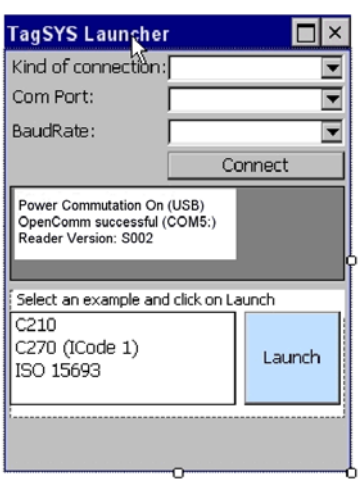
The tag reader software must be installed on the handheld computer before you can perform the procedures in this section. Refer to *Installing EVA Tag Software Onto the Handheld Computer* (BU-IB1666-000A) for information required to install the tag reader software.

1. Using the stylus provided, tap the touchscreen on the handheld computer to open the ***Windows Mobile 6 Start Menu***.

2. With the ***Windows Mobile 6 Start Menu*** displayed, select SD Install. The following screen is displayed.

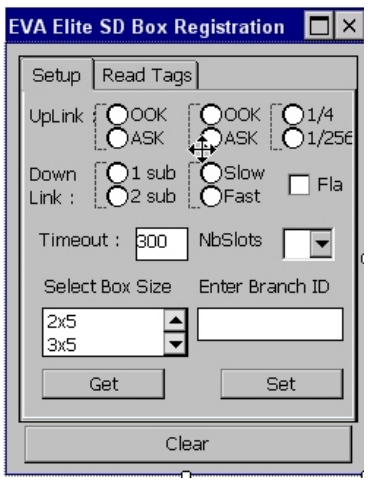


3. With the ***EVA Elite Installation Tool*** screen displayed, use the stylus to select EVA Elite SD Box Registration. The following screen is displayed.



G652002_2

4. With the ***TagSYS Launcher*** screen displayed, use the stylus to highlight ISO 15693. With ISO 15693 selected, tap the Launch button. The following screen is displayed.



5. With the ***EVA Elite SD Box Registration*** screen displayed, verify that the following Down Link options are active:

   - 2 sub
   - Slow

6. With the ***EVA Elite SD Box Registration*** screen displayed, perform the following steps:

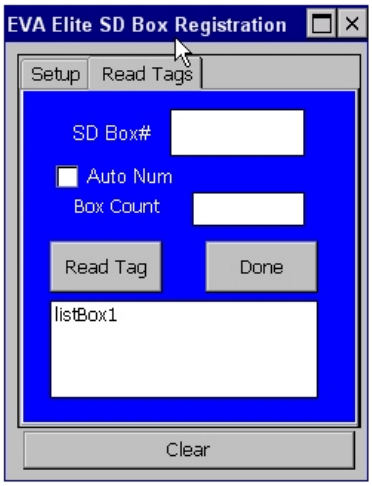
   - From the Select Box Size drop-down list, click on the applicable SD box size.

   - Use the keypad on the handheld computer to enter the Branch ID in the Enter Branch ID window.

7. With the ***EVA Elite SD Box Registration*** screen displayed, use the stylus to tap the Set button. Verify that the following message is displayed:

   Set Configuration OK.

8. With the ***EVA Elite SD Box Registration*** screen displayed, use the stylus to tap the Read Tags tab at the top of the display. The following screen is displayed.



9. With the ***Read Tags*** screen displayed, use the numeric keypad on the handheld computer to enter the first SD box number to be registered. As the numeric keys are pressed, the key numbers are displayed in the SD Box # field.

   To auto-increment the SD box numbers, select the Auto Num option.

10. Position the RFID scanner window of the handheld computer near the tag cover of the first SD box to be registered. Hold the handheld computer so that the top end of the handheld computer is in contact with tag cover (at a 90-degree angle). See Figure 3-2.

11. With the handheld computer in contact with the tag cover, use the stylus to tap the **Read Tag** button located near the center of the display screen. To indicate that the RFID tag has been read successfully, the message box at the bottom of the screen will display the box number (the box count will increment by one) and the RFID data (for example Box #100XXXXXXXX...).

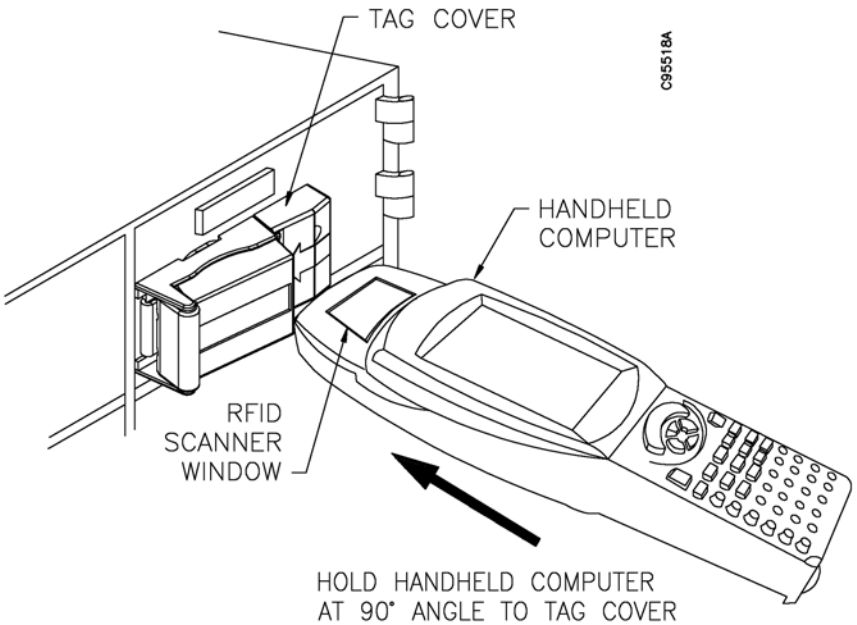
12. Proceed to the next SD box to be read. If the Auto Num option was not selected in Step 9, use the numeric keypad on the handheld computer to enter the next SD box number to be registered. As the numeric keys are pressed, the key numbers are displayed in the SD Box # field.

13. Position the handheld computer near the tag cover of the SD box to be registered. Hold the handheld computer so that the top end of the handheld computer is in contact with tag cover at a 90-degree angle.

14. Repeat Step 12 and Step 13 for each SD box to be registered. Verify that each SD box number is correctly displayed after read.

15. After all SD boxes are registered, use the stylus to tap the **Done** button located on the touch screen of the handheld computer. A message is displayed to indicate the number of boxes registered.

16. Click on the **Ok** button twice to exit the application.



NOTE

If you are installing lock cover assemblies onto 2 x 5-inch SD doors, you must read the RFID tags before the tag covers are installed onto the base plates.

Figure 3-2 Reading the RFID Tag

3.3 Downloading Data From Handheld Computer

CAUTION

Before you complete the procedures in this section, it is essential that you verify that ALL RFID tags have been read and are loaded onto the handheld computer. Tags that are not read and loaded onto the handheld computer will cause a sequence error when the data is uploaded. Such an error may cause the system to deny access to certain SD box users.

Perform the following procedure to transfer SD box data from the handheld computer to a laptop PC. A USB-connected, external CD drive is required to complete the procedure.

1. Confirm that Microsoft® ActiveSync is loaded onto the laptop. If this utility is not installed, you must download this utility from the Microsoft Web site.

2. Locate the USB cable provided with the handheld computer. Connect this USB cable to the handheld computer and to the laptop computer.

3. Using the ActiveSync utility, download the *.csv file from the handheld computer to the laptop. The *.csv file contains the SD box data that will eventually be loaded into the EVA database on the touch screen workstation.

4. Using your laptop PC, copy the SDBoxData.txt file to a CD.

5. Refer to *EVA and EVA Elite Electronic Vault Attendant Setup and Administration Guide* (TP-821366-001B) for procedures required to transfer the *.csv file to the EVA touch screen workstation.

Section 4
Parts Listing

Refer to Table 4-1 for a listing of parts that may be required during the installation process.

Table 4-1 Parts Listing

Figure/Item	Description	Part Number	Qty.
Figure 4-1	SD lock cover kit	41-021050-000A	1
1	Lock cover assembly	41-020895-000A	1
2	Base plate, w/mounting screw	41-020897-000A	1
3	Tag cover	41-020896-000A	1
Figure 4-2			
1	Dock assembly	41-020278-000A	1
2	Power supply, swtchr., 9.0V, 3.9 A, desktop	49-223783-000A	1
not shown	Cable, logic, USB, A-B, 78-3/4"	49-211496-000B	1
Figure 4-3	Key Assembly	41-020285-000A	1
Figure 3-1	EVA handheld computer[1]	41-021685-000A	1
Figure 4-4	Kit, installation template[2]	41-021051-000A	1
1	Template, 5-inch door	41-021048-000A	1
2	Template, 7-inch door	41-021048-000B	1
3	Template, 10-inch door	41-021048-000C	1
not shown	SD number labels, adhesive, roll of 250 (1 through 250)	11-034642-000A	1
not shown	SD number labels, adhesive, roll of 250 (251 through 500)	11-034642-000B	1
not shown	SD number labels, adhesive, roll of 250 (501 through 750)	11-034642-000C	1
not shown	SD number labels, adhesive, roll of 250 (751 through 1000)	11-034642-000D	1
Figure 2-14	Touch screen workstation	41-021181-000A	1
Figure 2-19	Uninterruptible power supply	39-017425-000A	1
Figure 2-21	Door strike kit[3]	19-042286-000A	1
Figure 2-23	Door closure kit	19-048488-000A	1
Figure 2-25	Daygate lockset egress kit	19-046487-000A	1
Figure 2-26	Egress button kit	19-042292-000A	1
Figure 2-31	Hand recognition reader	19-055310-000A	1
not shown	Power supply, hand recognition reader[4]	19-041824-000A	1
not shown	Battery backup, hand recognition reader	19-041825-000A	1
Figure 2-30	Traffic light	19-049328-000A	1
not shown	Signature pad, 1 x 5, economy	49-224003-000A	1
not shown	Signature pad, 1 x 5, LCD	49-224004-000A	1
Figure 2-35	Kiosk	41-021255-000A	1
Figure 4-5	USB cable extender/adapter[5]	49-226161-000A	--
Figure 4-6	USB hub, 4-port, self-powered, 2.0[6]	49-226162-000A	--

[1] Part number for EVA scanner kit which is part of the tool loaner program. Part number includes the Psion Teklogix Workabout Pro G2 handheld computer and an installation CD containing the EVA handheld software (tag reader).

[2] Templates have been designed for use with Diebold 5-inch, 7-inch, and 10-inch SD doors. If you are installing base plates onto SD doors not manufactured by Diebold, use a plumb-bob or laser level to ensure proper alignment.

[3] Includes door strike w/prep faceplate, latch bolt, mounting box, and hardware.

[4] Housed locally within the Handkey reader. Charging power provided by the wall outlet power supply.

[5] Extends distance of USB device from a USB-enabled computer up to 150 ft.

[6] Powered by USB 2.0 upstream connection to USB port of touch screen workstation (3 ft. cable provided). Optional 5V, 2A power adapter must be purchased separately.

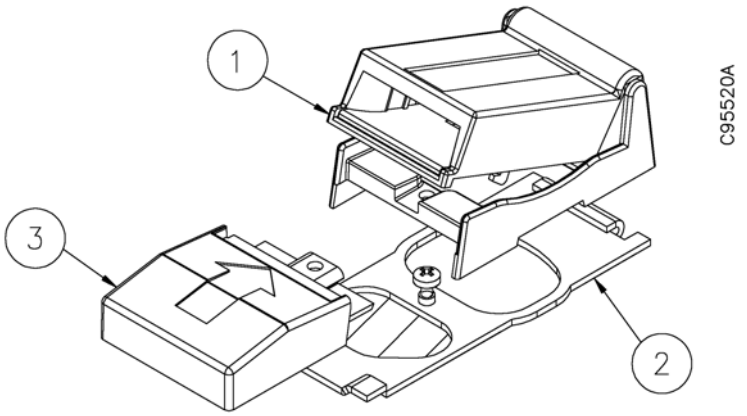


Figure 4-1 SD Lock Cover Kit Illustrated Parts

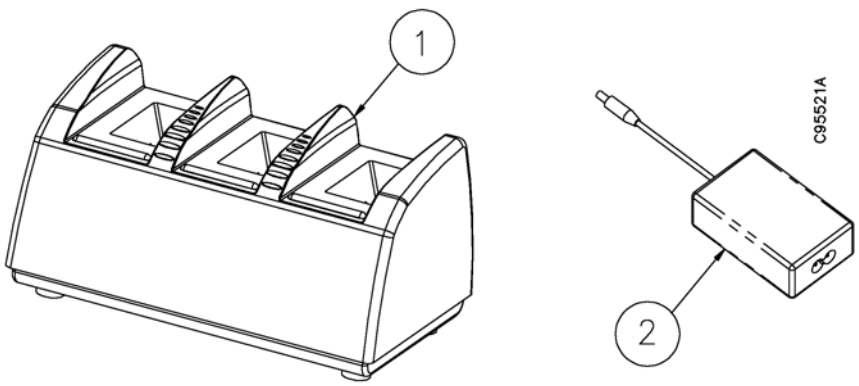


Figure 4-2 Dock Assembly Illustrated Parts

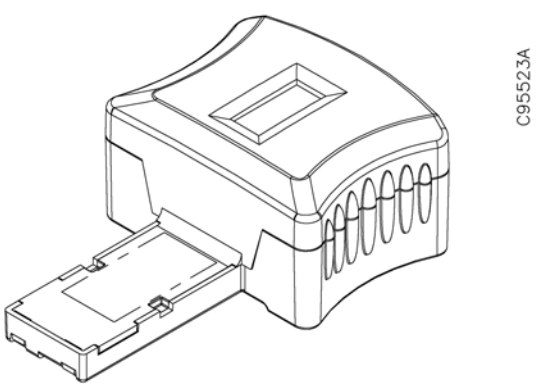


Figure 4-3 Key Assembly

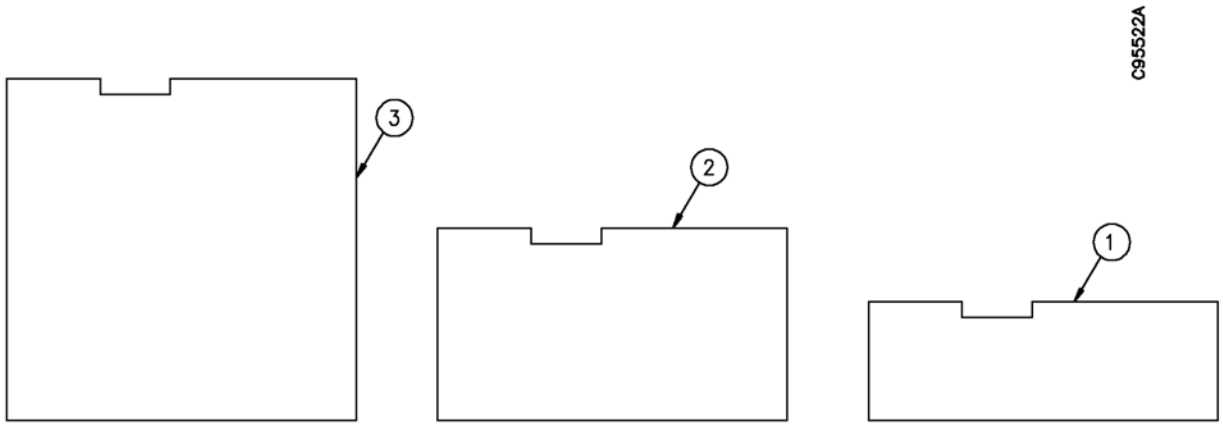


Figure 4-4 Installation Templates

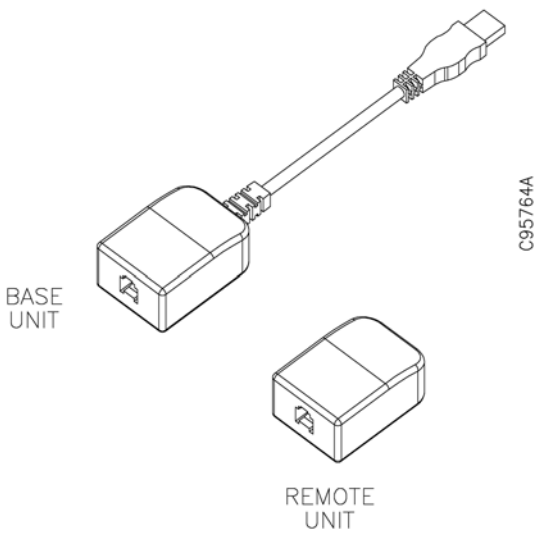


Figure 4-5 USB Adapter/Extender

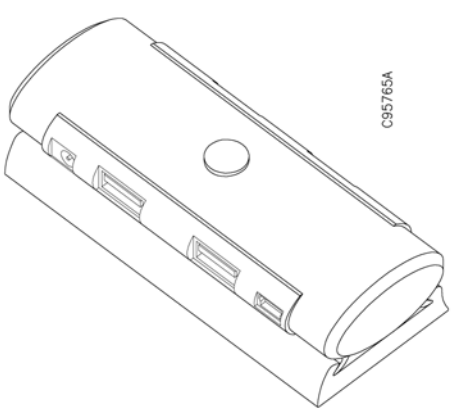


Figure 4-6 4-port USB Hub

Appendix A
Diagrams for Adding Converters Between Hand Reader and Touch Screen Workstation

Additional connection procedures are required when the distance between the hand recognition reader and the touch screen workstation exceeds 50 feet. Refer to the figures that follow:

- Figure A-1: Connections Required When Distance Between Hand Reader and Touch Screen Workstation Exceeds 50 Feet
- Figure A-2: Interface Converter Wiring Diagram

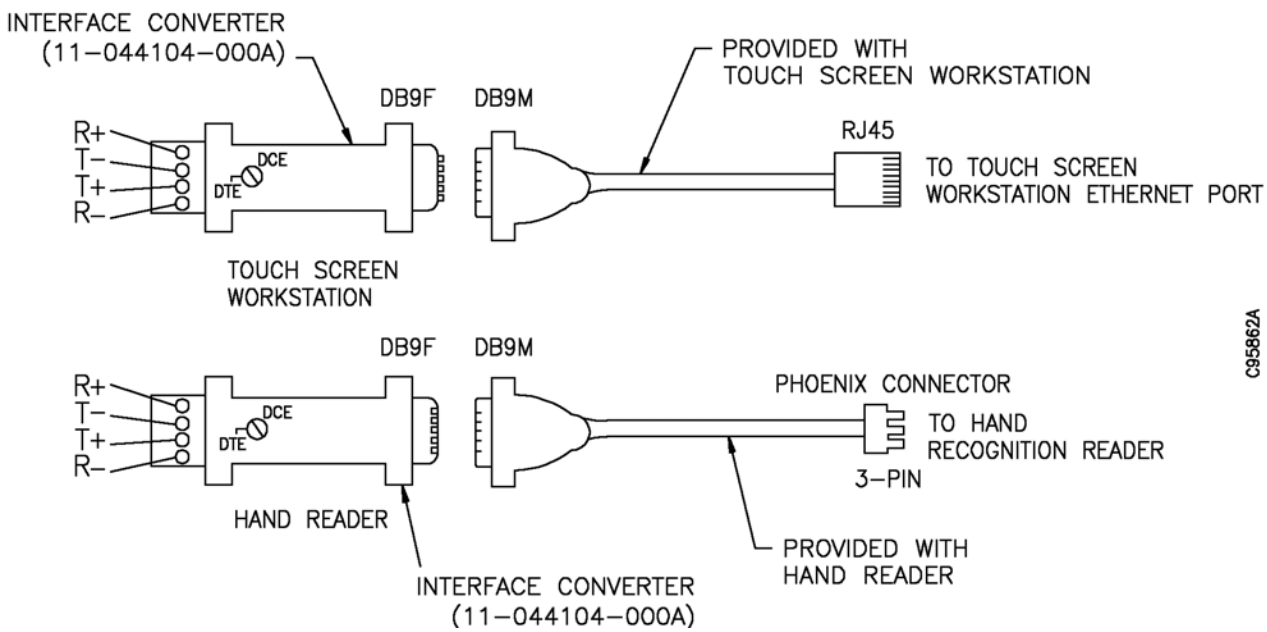
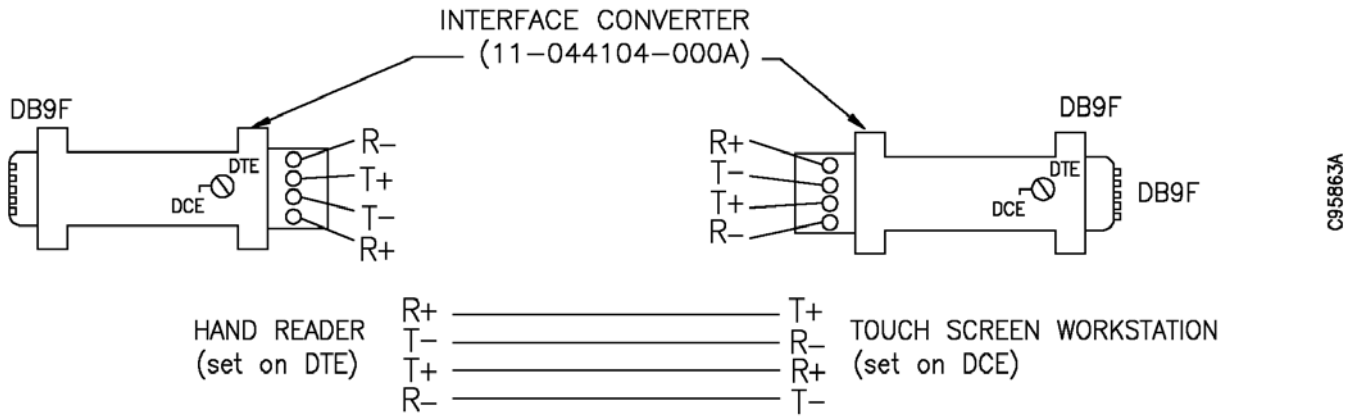


Figure A-1 Connections Required When Distance Between Hand Reader and Touch Screen Workstation Exceeds 50 Feet



NOTE

Two converters are required when distance between hand reader and touch screen workstation exceeds 50 feet.

Figure A-2 Interface Converter Wiring Diagram

Appendix B
Releasing a Closed Lock Cover Assembly

The lock cover assembly is shipped in the open position. The upper housing door must not be snapped to the closed position until after the lock cover assembly is screwed to the base plate as the final step in the installation of the lock cover assembly. If you inadvertently snap the upper housing door closed you will not be able attach the tag cover or the entire assembly to the base plate. Refer to the procedure in this section to reopen the latch door.

1. Locate the slider brackets and the latch on the bottom of the lock cover assembly. See Figure B-1.

2. Use the blade of a small flatblade screwdriver to push the knob on the latch to the extreme left.

3. While using the screwdriver to secure the latch, press down on one of the slider brackets and move the slider bracket to the retracted position.

4. With the slider bracket in the retracted position, the upper housing is released from the hinge base.

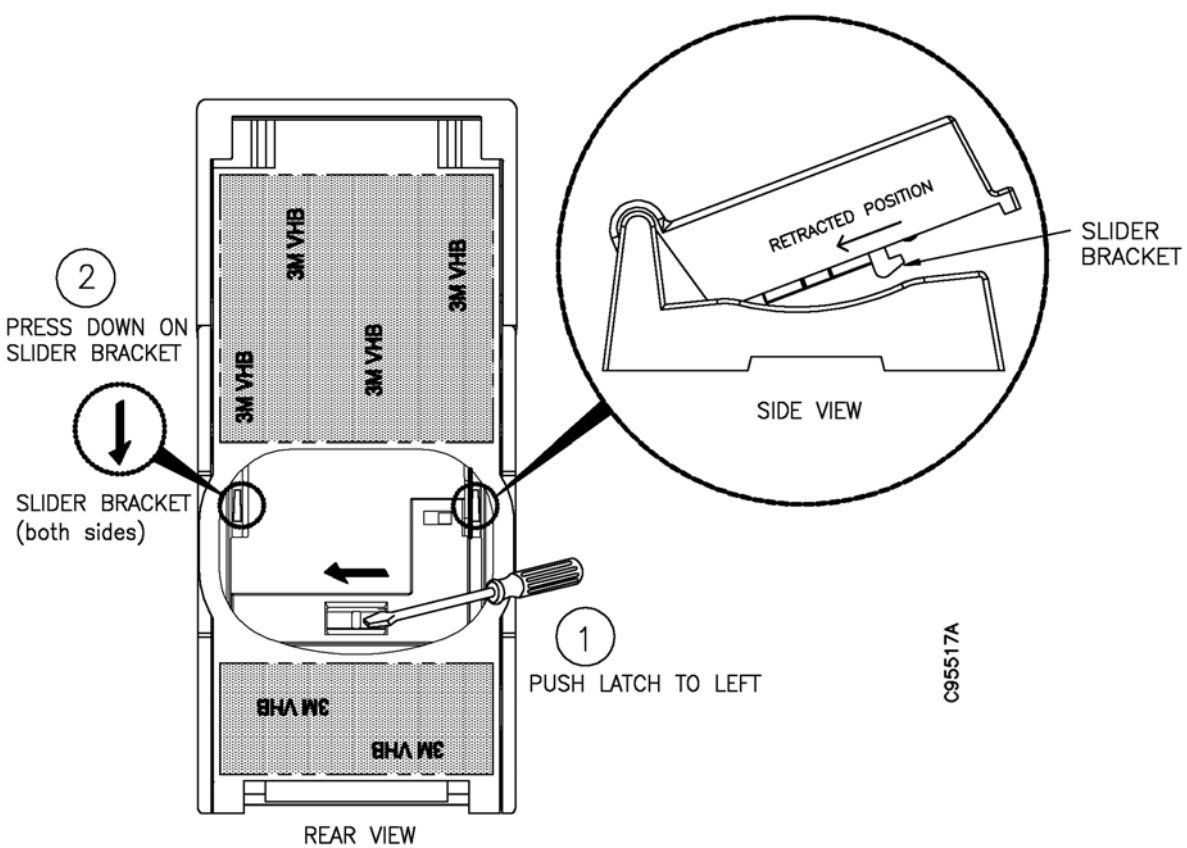


Figure B-1 Releasing a Closed Lock Cover Assembly