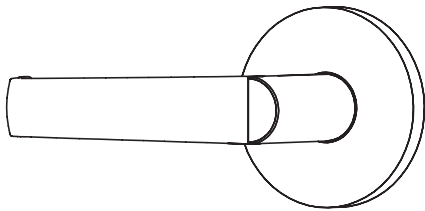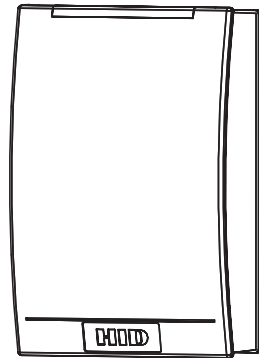# Certification Exhibit

FCC ID: U4A-SCYICLS3
IC: 6982A-SCYICLS3

FCC Rule Part: 15.225, 15.249
IC Radio Standards Specification: RSS-210

ACS Project Number: 11-0394

Manufacturer: Assa Abloy
Model: C2-IA/IK

Manual

SARGENT®

ASSA ABLOY

C2

Incepta™ Series C2 with Aperio™ Technology

Mortise Lock

Installation Instructions

ASSA ABLOY, the global leader
in door opening solutions

Table of Contents

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1 **Warning**

Changes or modifications to this device not expressly approved by ASSA ABLOY could void the user's authority to operate the equipment.

FCC:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful Interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada:

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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.

Cet appareillage numérique de la classe B répond à toutes les exigences de l'interférence canadienne causant des règlements d'équipement. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

"This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la
puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and SARGENT Manufacturing makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.

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2 General Description

The SARGENT® Incepta Series C2 lock with Aperio™ Technology makes it easy and cost-effective to bring access control to doors. It uses local wireless communication between the lock and an Aperio hub to connect to an access control system, eliminating the greatest cost and inconvenience of traditional access control – the wiring at the door. The Incepta Series C2 utilizes HID® iCLASS® 13.56 MHz smart card technology and all technology features are supported by the physical security of SARGENT ANSI/BHMA Grade 1 hardware.

This product is operated by six (6) "AA" alkaline batteries. SARGENT mortise locks are designed with quality components to provide high security, performance, and durability.

The Incepta Series mortise lock may be used for both indoor and outdoor applications. A weather-protective gasket is required for outdoor applications.

3 Specifications

Lock
- IEEE 802.15.4 UHF interface
- AES 128 bit encryption

Credential Support
- HID 13.56 MHz iCLASS (full authentication, all formats)

4 System Overview

When a user presents a supported credential to the lock, the Aperio system is designed to send the credential wirelessly to the Aperio Hub. The Aperio Hub (wired through RS-485 or Wiegand) then communicates with an EAC (Electronic Access Control) system. The EAC system provides the access decision to the Aperio Hub where access to the lock is either granted or denied.


Electronic Access Control System

Access Control Panel

TCP/IP

RS-485/Wiegand

Aperio Hub

IEEE 802.15.4 (2.4GHz)
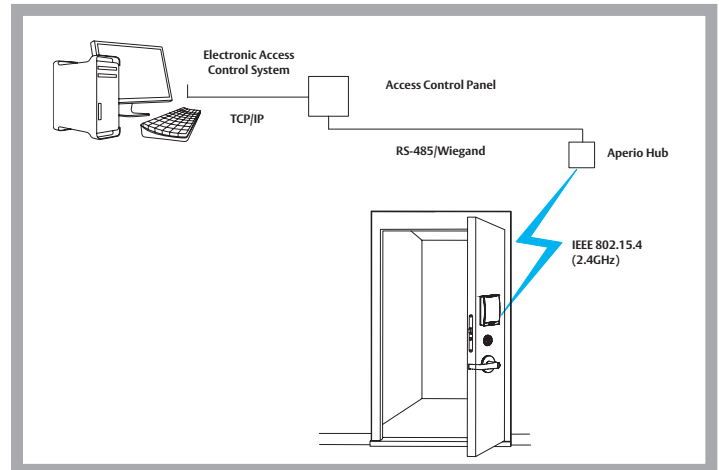
⚠ To comply with "Fire Listed" doors, the batteries must be replaced with alkaline batteries only.

Warning: SARGENT Mfg. Co. Incepta Series C2 locksets utilizing a door position switch (DPS) are not rated for, or intended for use in life safety applications.

11/11/11

5 **Parts Breakdown**

13.56 MHz iCLASS
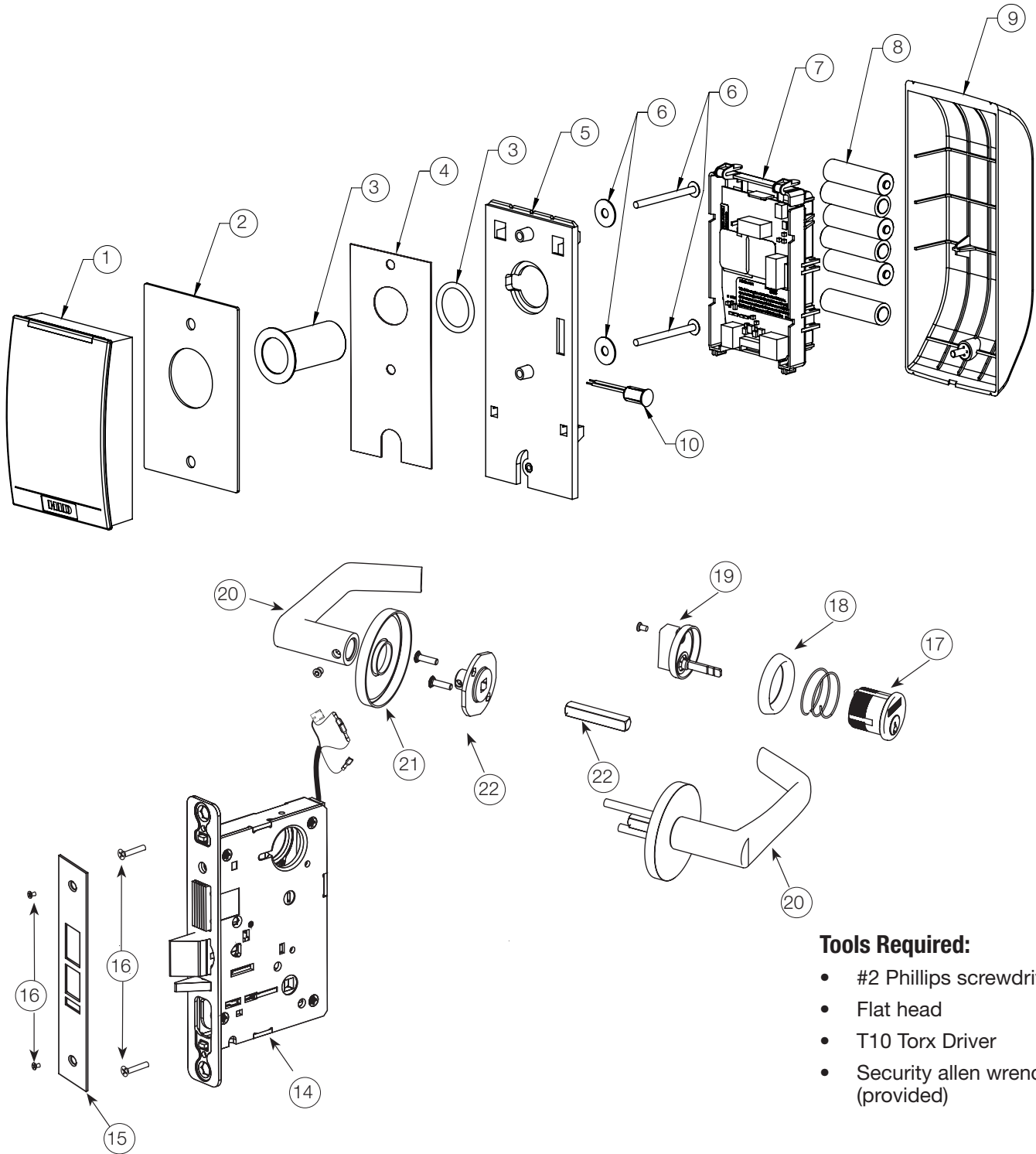
Tools Required:

- #2 Phillips screwdriver
- Flat head
- T10 Torx Driver
- Security allen wrench (provided)

Parts Breakdown 13.56 MHz iCLASS (Continued)

ITEM	PART NO.	DESCRIPTION	QTY.
1	52-4481	Reader Assembly	1
2	52-1332	Gasket (Optional)	1
3	52-2847	Conduit Pack (Optional)	1
4	52-1370	Fire Shield	1
5	52-1327	Mounting Plate	1
6	52-4488	Screw Pack	1
7	52-4486	Controller Module	1
8	01-0898	AA battery	6
9	52-4483	Inside Cover Assembly	1
10	52-4321	Door Position Switch Pack	1
11	A8120	Field Prep Template (not shown)	1
12	4697	Door Manufacturers Template (not shown)	1
13	A8122	Instructions (not shown)	1
14	C2-7976-hand-finish	Lock body with dead bolt with Cylinder	1
	C2-7977-hand-finish	Lock body with dead bolt without Cylinder	
	C2-7978-hand-finish	Lock body without dead bolt with Cylinder	
	C2-7979-hand-finish	Lock body without dead bolt without Cylinder	
15	79-0035	Without dead bolt	1
	79-0036	With dead bolt (shown)	1
16	77-4236	Mortise Screw Pack - Specify Finish (Includes: Wood and Metal Lock body Screws, Faceplate Screws, and Strike Screws)	1
17	Consult Factory	#41 Mortise Cylinder	1
18	13-2131	97 Ring	1
19	77-4081	130W Turn Lever	1
20	Consult Factory	Reference Incepta Catalog	1
21	78-3696	O-rose	1
22	79-2162	Trim Pack	1

11/11/11

6 Lock Installation

1 Prepare Door

A. Verify Hand and Bevel of Door

Stand on outside of locked door when determining door hand.

LH
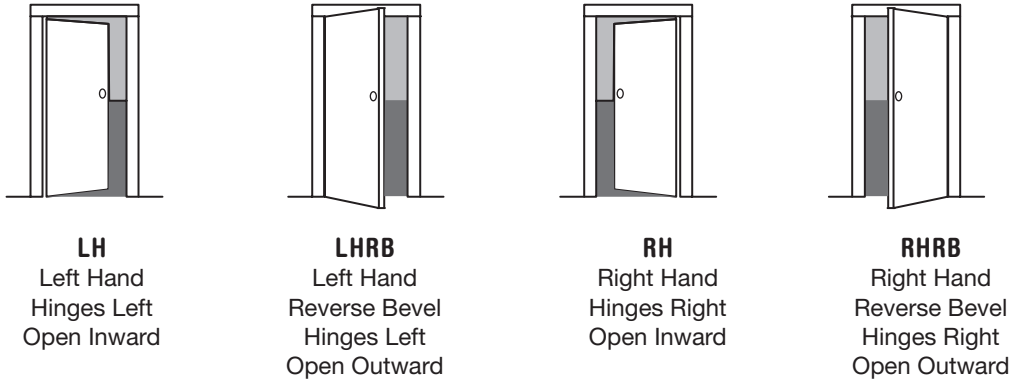Left Hand
Hinges Left
Open Inward

LHRB
Left Hand
Reverse Bevel
Hinges Left
Open Outward

RH
Right Hand
Hinges Right
Open Inward

RHRB
Right Hand
Reverse Bevel
Hinges Right
Open Outward

Fig. 1A

B. Door Preparation

Prior to installation, all holes must be free of burrs, debris and sharp edges.

Prepare door according to appropriate template (see website **www.intelligentopenings.com**).

- Field Template: A8120 (ships with product)
- Door Manufacture's Template: 4697

Outside of Door

Inside of Door

Ribbon Cable Hole

Through-bolt Hole

Outside Cylinder Hole
(only with cylinder
installation)

Lever Handle Hole

External DPS
Hole

Mortised
Pocket

Ribbon Cable Hole

Through-bolt Hole

Inside of Lock body
Wire Hole

Thumb Turn Lever Hole

Lever Handle Hole

Fig. 1B

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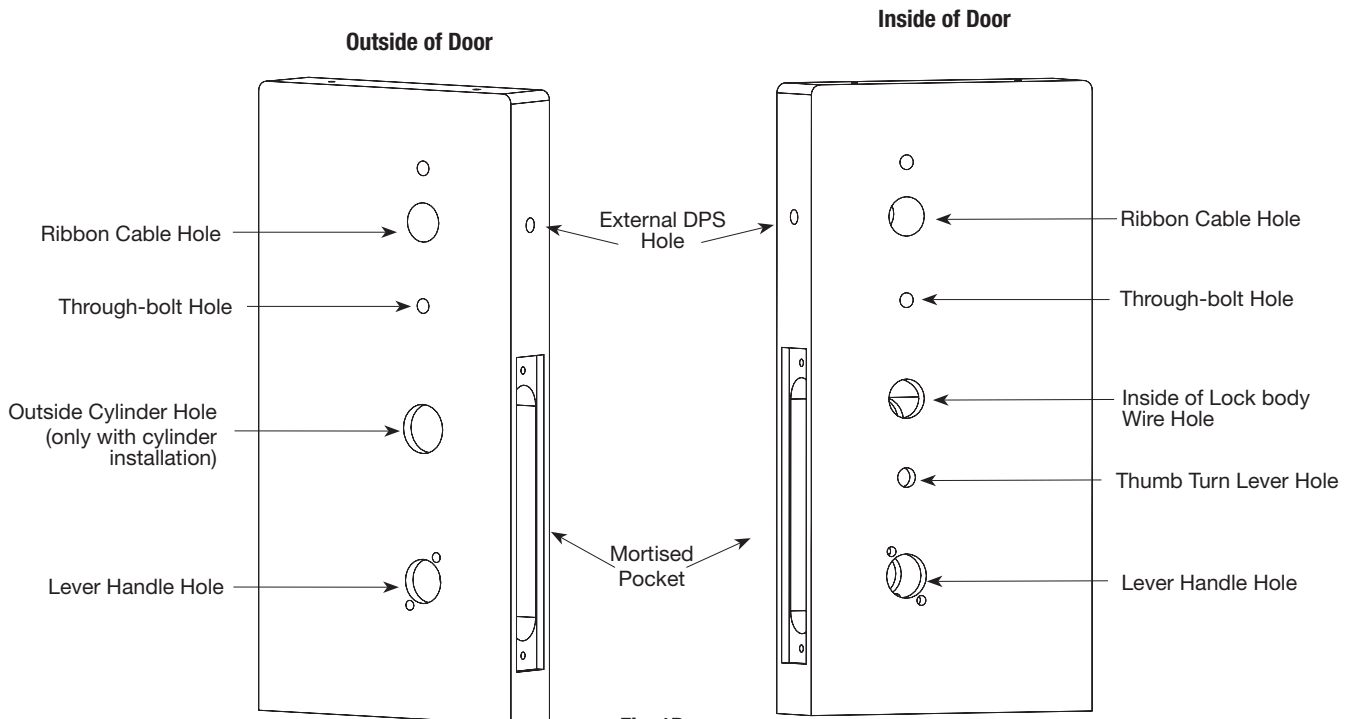
2 How to Change Hand of Lock body

A. Reverse Lock Hand

1. Position lock body so the red surface of the locking piece is visible.

2. Insert blade type screwdriver into locking piece slot to rotate locking piece.

3. Push locking piece toward the back of the lock body and rotate the locking piece 180° until RED surface is on opposite side.

    Note: Red indicates locked (outside) side.
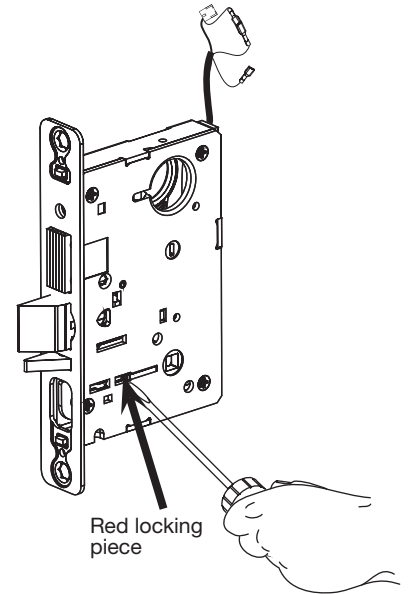
B. Reverse Latch Hand

1. Rotate the latchbolt 180°.

2. Flip deadlatch by hand to match bevel of latchbolt.

Red locking piece

Fig. 2A

Red locking piece
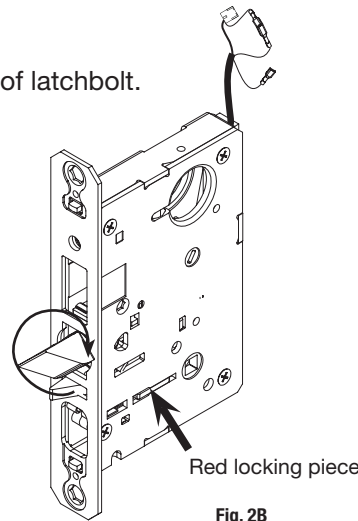
Fig. 2B

3 Install Lock body

1. Feed the wire harness through the mortise pocket and inside preparation hole as depicted in Fig. 3.

2. Carefully push the lock body into the pocket while lightly applying tension to the wire harness.
    Note: Do not pull the lock into the pocket with the harness alone. Ensure that the wire harness is not pinched between the lock and the mortise pocket.

3.   Insert (2) #12-24 screws into the lock body and tighten with a screw driver.

Inside of Door

Mortise Connectors

(2) #12-24 screws

Fig. 3

11/11/11

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ASSA ABLOY
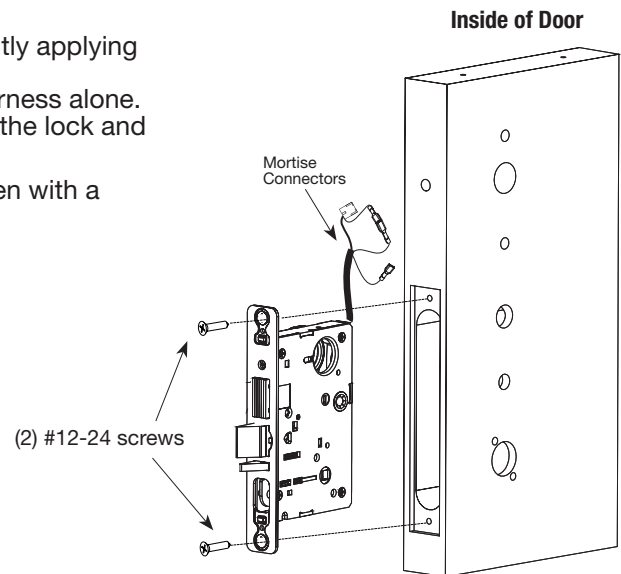
4   Assemble Trim

1. With outside lever horizontal, insert the mounting post through outside of door and lock body.

   Make certain the lever spindle is properly engaged inside the lock body (Fig 4A).

2. On the inside of the door, insert spindle into square hole of mortise lock (Fig 4B).

3. Slide inside adapter and plate assembly over spindle and secure with (2) 8-32 X 5/8" Phillips oval head and lock washer machine screws.

Outside of Door

Inside of Door

8-32 X 5/8" Phillips Oval Head and Lock Washer Machine Screw

Fig. 4A

Fig. 4B
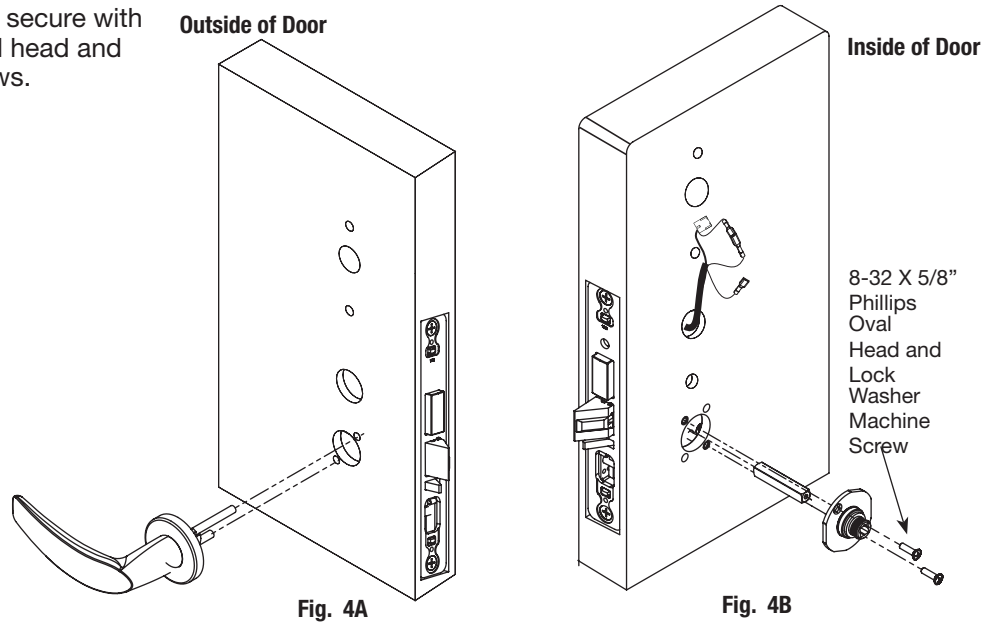
5   Install Inside Rose and Inside Lever Assembly

1. Rotate the inside rose first counter clock wise to seat the threads then clockwise to securely tighten.

2. Slide lever handle onto spindle until fully seated. Be sure handle is horizontal and facing the hinge side of the door. Push lever onto spindle so minimum gap is visible.

3. Tighten the set screw securely with a T20 Torx.

4. Before closing the door, test that the lever is functional and ensure smooth operation of the latchbolt.

Inside of Door

Spindle

Rose

Set Screw

Inside Lever

Fig. 5A

Fig. 5B

11/11/11

Profile Series C2 Mortise Lock
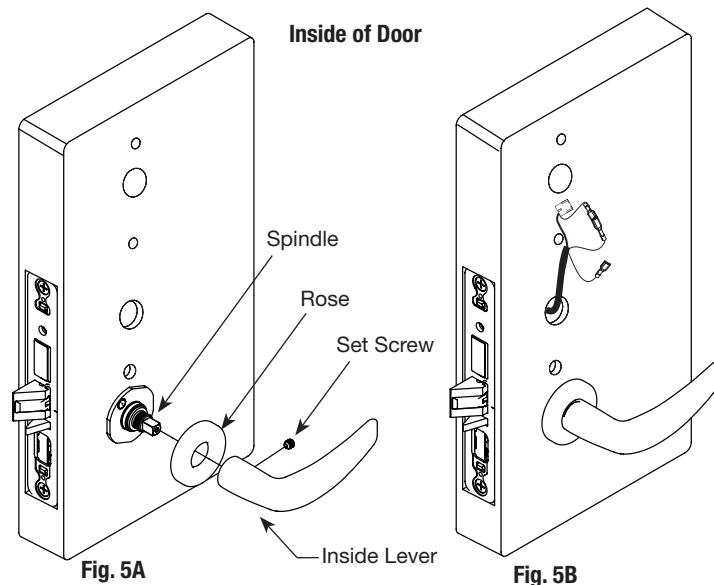
6 Outside Cylinder Installation

1. Slide the spring and the rosette onto the cylinder.

2. Rotate the cylinder into cylinder hole with fingers.

3. Insert key 75% of the way and utilize the key to rotate the cylinder into the rest of the cylinder hole.
     Note: Do not attempt to tighten all the way.

4. Verify the orientation of the cylinder has the Sargent logo as depicted in Fig. 6A.

5. Hand tighten the cylinder clamp set screw to prevent
     unscrewing of the cylinder (Fig 6C).

5. Test cylinder function:

- • Key retracts latchbold and deadbolt (7976 function)

- • Cylinder not present for 7977 and 7979 functions.

     NOTE: Use lever handle holes to manipulate mortise to ease thread engagement of cylinder.

IMPORTANT: Position cylinder so that the SARGENT logo is positioned correctly.

SARGENT ASSA ABLOY

Correct   **Incorrect**

Fig. 6A

Outside of Door

Rosette

Spring

Cylinder

Fig. 6B

Phillips Screwdriver

Cylinder Clamp-Screw
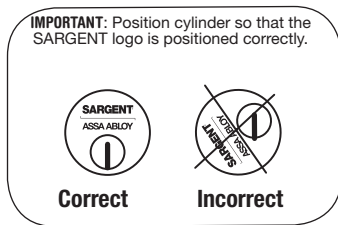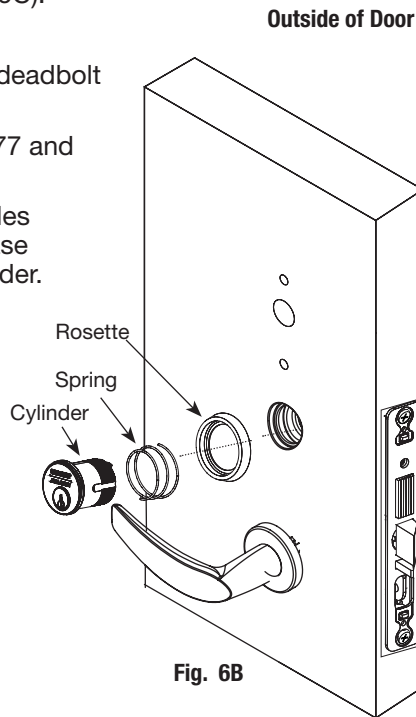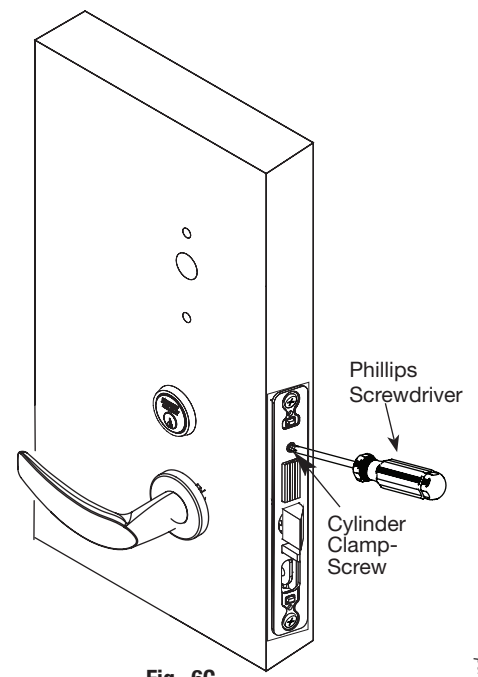
Fig. 6C

7 Install Thumb Turn

1. Insert thumb turn into preparation hole and engage slot in lock body.

2. Project deadbolt

3. Orient mounting plate so screw hole is vertical (aligned with preparation holes).

4. Secure plate with phillips screw provided.

5. Test thumb turn for function by retracting and projecting the deadbolt.

Inside of Door

Phillips screw

Thumb Turn

Fig. 7

11/11/11
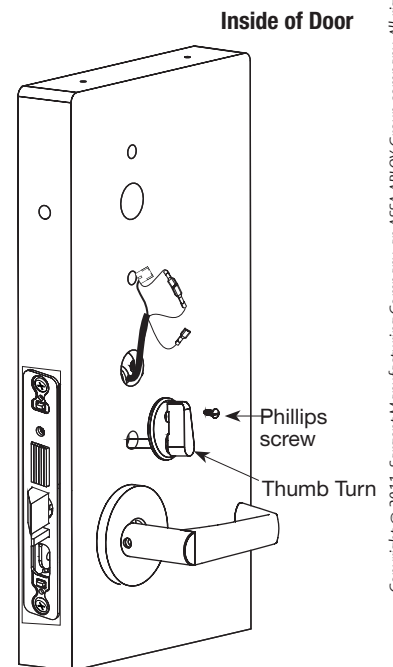
8 Attach Front Plate

Attach front plate with (2) flat head screws.

Outside of Door

(2) flat head screws
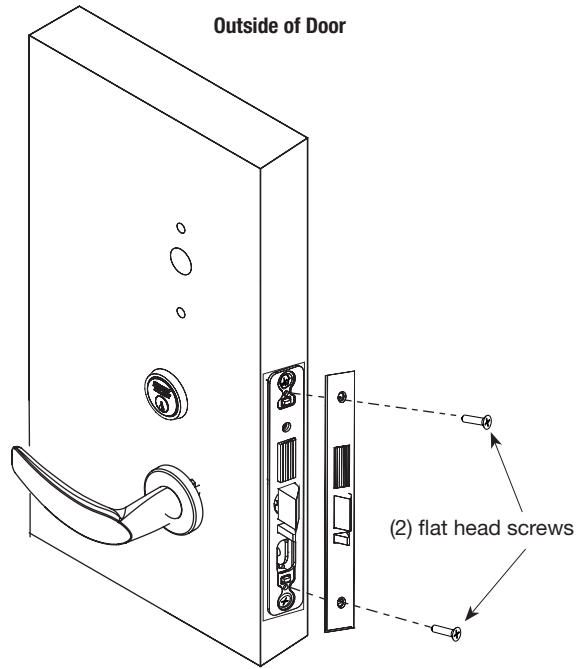
Fig. 8

9 DPS (Door Position Switch) Installation

1. FOR METAL DOORS ONLY: assemble plastic collar (not shown) to DPS sensor prior to door insertion.

2. Feed DPS wire harness through the hole in the door edge, connector first.

3. Pull the DPS wire harness out the door preparation hole on the inside of the door.

4. Seat the plastic DPS sensor into the door edge hole by hand.

   IMPORTANT: DO NOT UTILIZE TOOLS TO SEAT SWITCH

Door Position Switch (DPS)
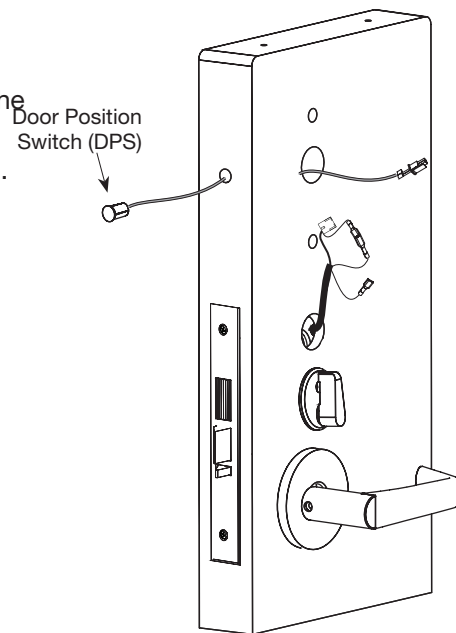
Fig. 9

10 Inside Mounting Plate Installation

1. Assemble (1) washer to each through bolt (2 sets provided)
2. Insert through bolts and washers into upper and lower mounting plate holes.
3. Assemble fire shield to mounting plate by aligning the mounting plate posts with holes..

Mounting Plate

2x Through bolts

Fig. 10A

Fire shield

2x Through bolts

open slot
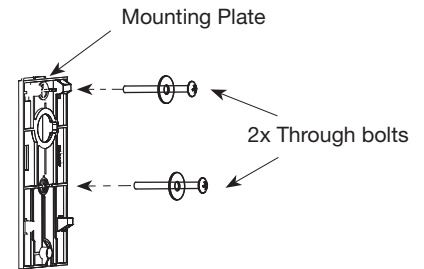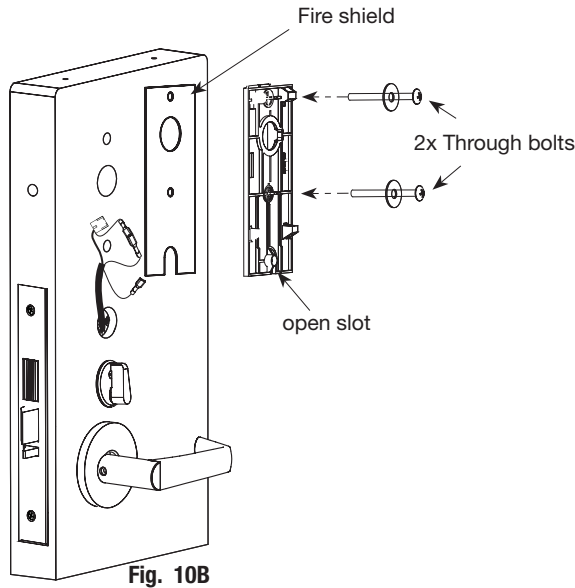
Fig. 10B
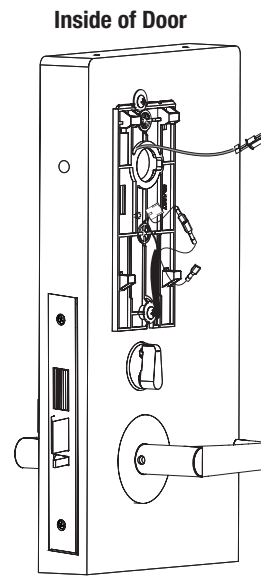
Inside of Door

Fig. 10C

11 Weather Conduit Installation (Optional P/N 52-2847)

Install weather conduit on **NON FIRE-RATED** exterior doors only (Fig. 11A).

1. Carefully insert the weather conduit into the ribbon cable hole on the inside of the door.

2. Place the O-ring around the weather conduit on the outside and up against the door (Fig. 11B).

Ribbon Cable Hole

O-Ring

Fig. 11B

Fig. 11A   **Inside of Door**

11/11/11
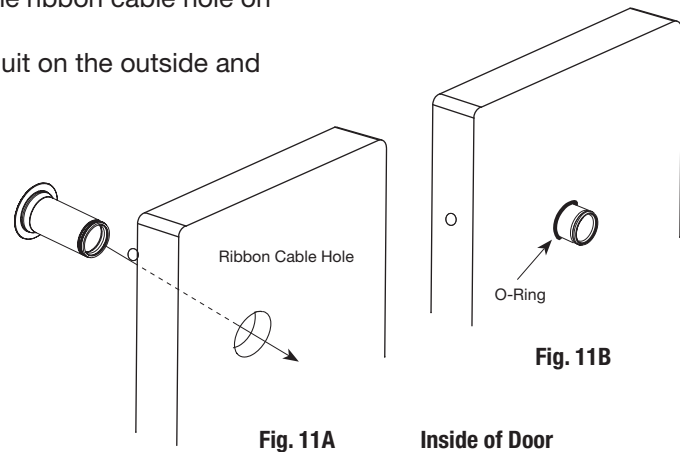
12 Gasket Installation (Optional P/N 52-1332)

Fire-rated doors require a gasket on the outside of the door (Fig. 11A).

1. Place the gasket on the on the reader posts.
2. Continue to step 13.
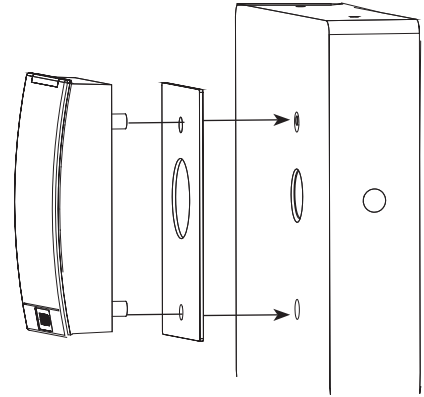
Fig. 12

13 Outside Reader Installation

1. Orient the reader so the HID logo is at the bottom and the lens is at the top.
2. Feed the ribbon cable through the door (from out side to inside).
3. Install the reader to the outside of door by aligning the mounting posts with the door preparation holes. Hold the reader in position with hand.
4. Tighen the (2) through bolts on the inside of the door to secure the reader.

Outside of Door

Inside of Door

HID Reader

Fig. 13A

Fig. 13B

11/11/11

Profile Series C2 Mortise Lock

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Inside of Door
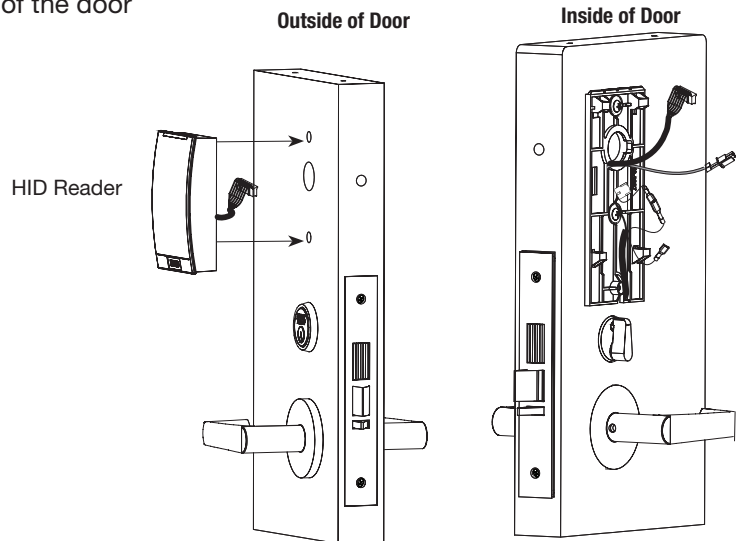
14 Configuring RX Switch Handing

1. Each lever handle has a sensor installed but only the inside lever is utilized for RX sensing.

2. To properly configure the RX functionality, connect the terminals as indicated below:
   RH or RHRB door handing (blue to blue)
   LH or LHRB door handing (yellow to blue)

3. Note: Factory default is blue to blue
   IMPORTANT: grasp each connector firmly before separating.
   Do not pull wires apart.

Wire harness

DPS

Lock body wiring
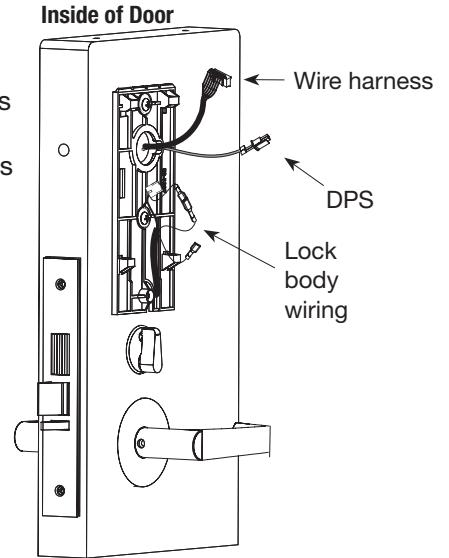
Fig. 14

15 Battery Housing Installation

1. Connect the outside reader ribbon cable to the top of the battery housing (See Fig.15B for detail).

2. Connect the DPS wire to the 3-wire header at the lower left corner of the PCB.

3. Connect the lock body harness to the 5-wire header at the lower right corner of the PCB.
   IMPORTANT: Confirm the correct connector orientation prior to assembly. Do not force connectors.
   Note: If the HID wire harness must be twisted to connect to the battery housing the HID reader has been installed upside down. Please turn the HID reader right side up and reinstall, then connect.
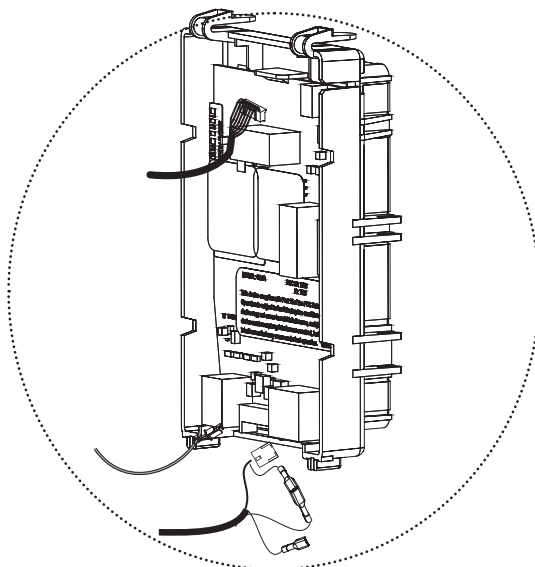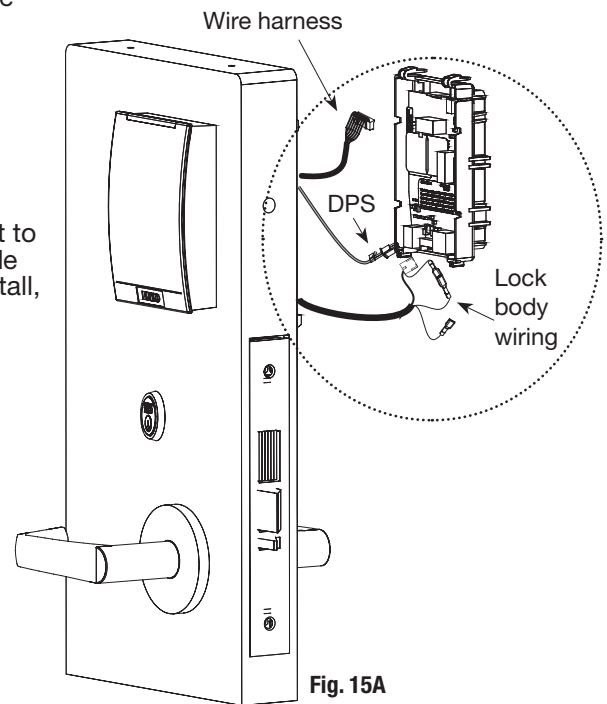
Wire harness

DPS

Lock body wiring

Fig. 15A

Fig. 15B

Inside of Door

16 Secure Battery Housing

1. Position the DPS and harness below the tabs of the mounting plate.

2. Align the tabs of the battery housing with the tabs of the mounting plate. Push down.

3. Lightly press the lock harness to assemble.

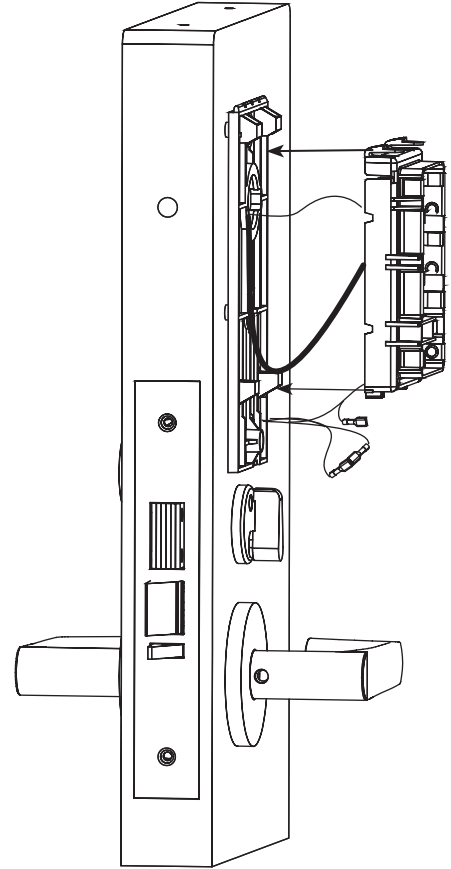4. Snap battery compartment into position.

Fig. 16

Inside of Door

17 Battery Installation

1. Place (6) "AA" alkaline batteries in the compartment, being careful to align polarity properly.

2. After batteries are installed an audible "beep" will sound, the lock motor will cycle and red LED lights will flash.

Fig. 17

11/11/11
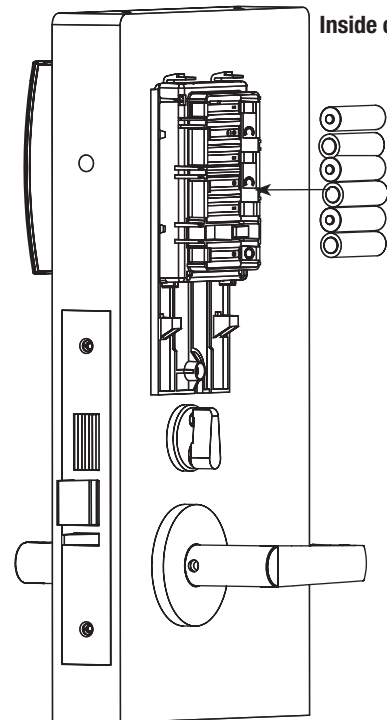
18 Inside Cover Installation

1. Assemble cover by hooking top edge on inside mounting plate.
2. Carefully press bottom of cover toward door without pinching any wires.
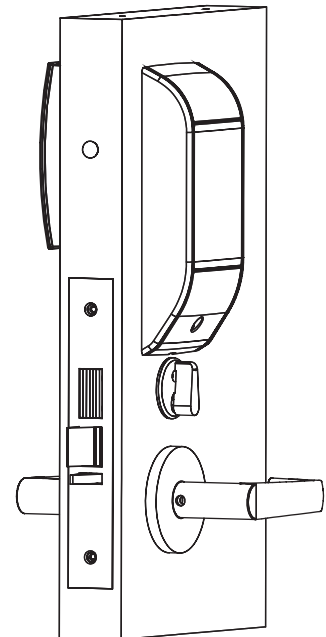3. Secure the cover utilizing a 1/8" security Allen wrench.

Inside of Door

Inside Cover

1/8" Security Allen Screw
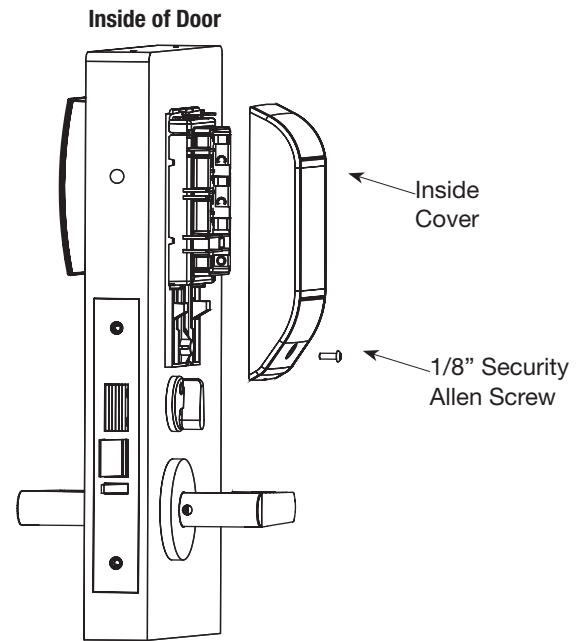
Fig. 18

7 Maintenance

For battery replacement:

When replacing the (6) "AA" alkaline batteries in the compartment, please note batteries must be replaced within 5 minutes to prevent the internal clock from becoming inaccurate.

11/11/11

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8   Operational Check

For 7976- and 7978-function mortise locks with cylinders:

1. Insert key into cylinder and rotate.

   There should be no friction against lock case, wire harness or any other obstructions.

   (Refer to **Section -6 Wiring** if harness friction exists).

2. Check that the key retracts the latch:

   The key should rotate freely.

3. Throw the deadbolt:

   Check that the key retracts both the deadbolt and the latch.

4. Try the inside lever:

   Ensure it retracts latch and deadbolt (if provided).

5. Present a valid iCLASS credential to un-lock outside lever and retract latch.

11/11/11
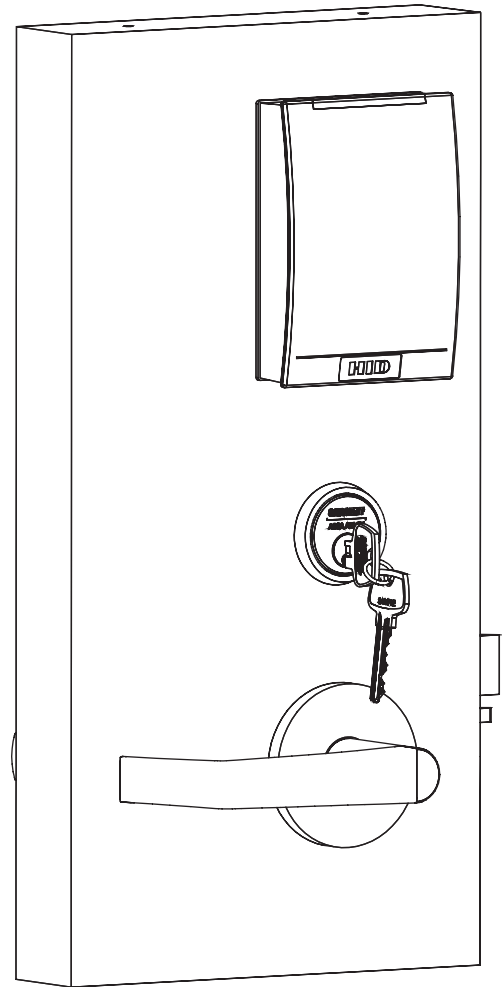
9 Lock LED Indications

1 Lock Normal Operation LED indication

The lock has three LED lights that support an optical scheme with red, yellow and green. The indication scheme is described by the figures below:

Indication	LED pattern	Description
Card read (configurable)		One yellow flash (.25 second)
Access granted, EAC offline or online		One green flash (1 second)
Access denied, EAC online		One red flash (1 second)
Access denied, EAC offline		Three red flashes (.5 s each)
Lock mechanism is blocked when closing		Continuous red flashes blocked when closing (.125 seconds every 1 second)
Error in lock, maintenance required		Ten red flashes (.125 s each), maintenance required; repeated if lock can't close
Time to replace the battery		Continuous yellow flashes (.25 seconds every 5 seconds)
Battery reached end of life, lock disabled		Continuous red flashes of life, (.25 seconds every 5 seconds)

Fig. Lock Normal operation LED indication

NOTE: When the lock mechanism is blocked (lock jammed) the knob must be turned to release it.

The "Error in lock" indication is also shown instead of the POST flashes if the battery is not accepted as new after a power-on-reset.

2 Lock Maintenance LED Indication

Some special LED indication schemes are used during lock maintenance actions:

Indication	LED pattern	Description
Enter configuration mode		Five yellow flashes (.125 s each)

Fig. Lock maintenance LED indication

3 Lock Self Test LED Indication

After replacing the battery, a Power On Self Test (POST) is performed. The result is indicated using a series of red and green LED flashes as is described by the figure below:
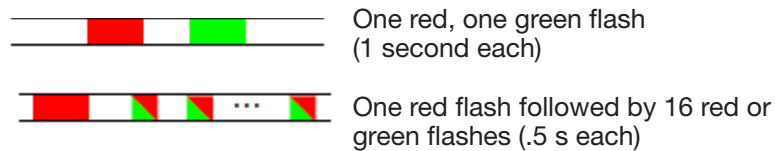

One red, one green flash
(1 second each)

One red flash followed by 16 red or green flashes (.5 s each)

Fig. Lock POST LED indication

The first flash is always red. If the POST fails, the color of the 16 trailing flashes indicate the status of each individual test as described by the following table:

Blink	Meaning if Red	Code in Event Log
2	Main board firmware corrupt	0x0001
3	Override list corrupt	0x0002
4	Production data corrupt	0x0004
5	Security data corrupt	0x0008
6	Configuration data corrupt	0x0010
7	Battery power low	0x0020
8	RFID reader circuit error	0x0040
9	Voltage regulator error	0x0080
10	Card detection circuit error	0x0100
11	Secure area communication error	0x0200
12	Secure area memory corrupt	0x0400
13	Secure area sensor or motor error	0x0800
14	Radio modem communication error	0x1000
15	Radio modem memory corrupt	0x2000
16	Radio modem configuration error	0x4000
17	Radio modem RF circuit error	0x8000

NOTE: If the battery is not accepted as new after a power on reset, no POST is performed. Instead, the 10 quick red flashes used to indicate Error in lock is shown.

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