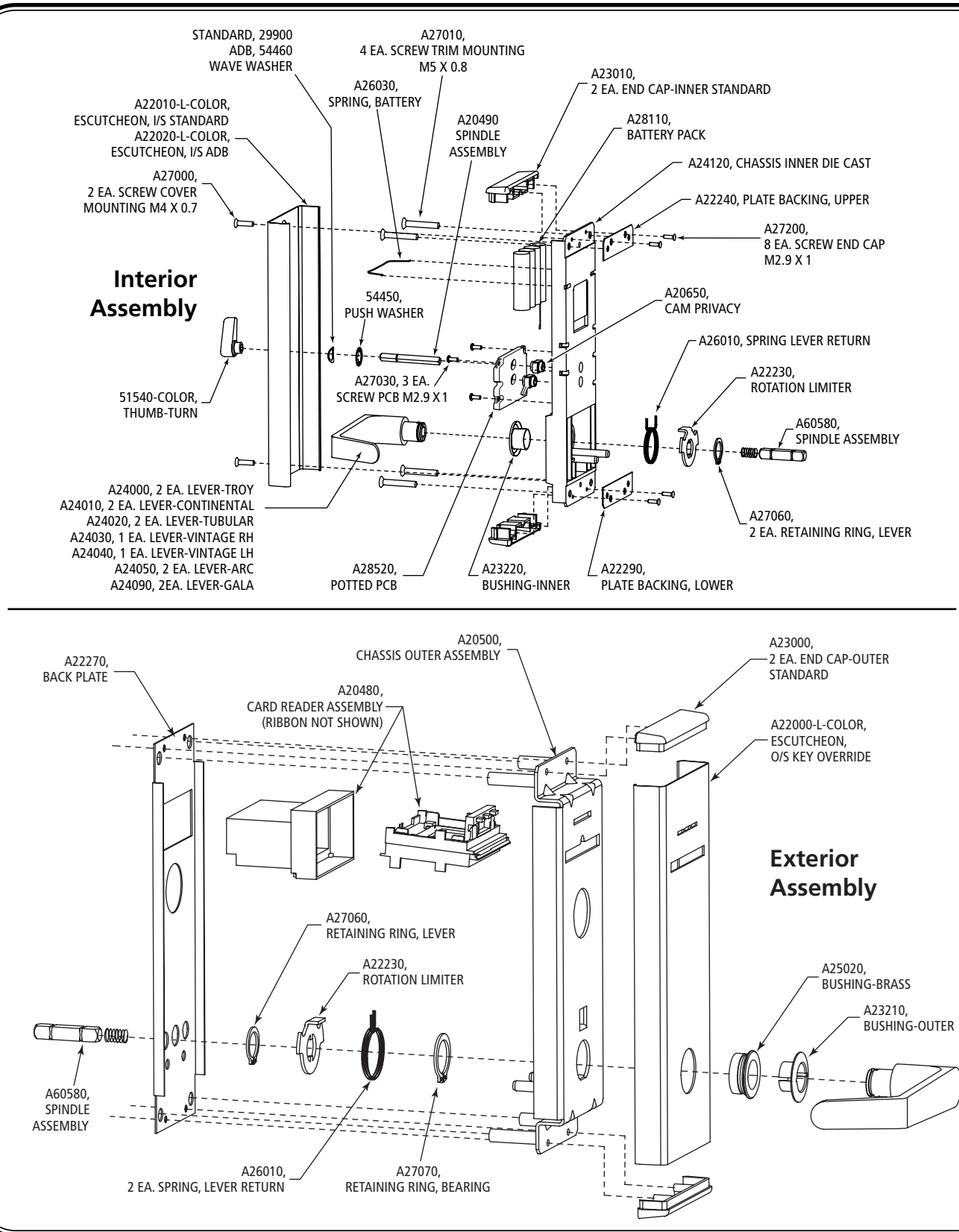# SAFLOK MT™

Installation Instructions

All parts needed to install your SAFLOK MT are included with each unit.
Check to make sure all parts are accounted for before you begin installation.
Do not substitute any of the parts, as it can result in poor performance of your lock.

Interior Assembly

- STANDARD, 29900 ADB, 54460 WAVE WASHER
- A27010, 4 EA. SCREW TRIM MOUNTING M5 X 0.8
- A23010, 2 EA. END CAP-INNER STANDARD
- A26030, SPRING, BATTERY
- A28110, BATTERY PACK
- A22010-L-COLOR, ESCUTCHEON, I/S STANDARD A22020-L-COLOR, ESCUTCHEON, I/S ADB
- A20490 SPINDLE ASSEMBLY
- A24120, CHASSIS INNER DIE CAST
- A27000, 2 EA. SCREW COVER MOUNTING M4 X 0.7
- A22240, PLATE BACKING, UPPER
- A27200, 8 EA. SCREW END CAP M2.9 X 1
- 54450, PUSH WASHER
- A20650, CAM PRIVACY
- A26010, SPRING LEVER RETURN
- A22230, ROTATION LIMITER
- A60580, SPINDLE ASSEMBLY
- 51540-COLOR, THUMB-TURN
- A27030, 3 EA. SCREW PCB M2.9 X 1
- A27060, 2 EA. RETAINING RING, LEVER
- A24000, 2 EA. LEVER-TROY A24010, 2 EA. LEVER-CONTINENTAL A24020, 2 EA. LEVER-TUBULAR A24030, 1 EA. LEVER-VINTAGE RH A24040, 1 EA. LEVER-VINTAGE LH A24050, 2 EA. LEVER-ARC A24090, 2EA. LEVER-GALA
- A28520, POTTED PCB
- A23220, BUSHING-INNER
- A22290, PLATE BACKING, LOWER

Exterior Assembly

- A22270, BACK PLATE
- A20500, CHASSIS OUTER ASSEMBLY
- A23000, 2 EA. END CAP-OUTER STANDARD
- A20480, CARD READER ASSEMBLY (RIBBON NOT SHOWN)
- A22000-L-COLOR, ESCUTCHEON, O/S KEY OVERRIDE
- A27060, RETAINING RING, LEVER
- A22230, ROTATION LIMITER
- A25020, BUSHING-BRASS
- A23210, BUSHING-OUTER
- A60580, SPINDLE ASSEMBLY
- A26010, 2 EA. SPRING, LEVER RETURN
- A27070, RETAINING RING, BEARING

Step 1

Door Preparation

• For new construction installations, the door manufacturer shall prepare the door using the SAFLOK MT Door Prep. Template (see MT Door Prep. Template). The door edge prep. is a standard full mortise prep. for a 1-1/4″ x 8″ front plate (a 1″ x 8″ and 1″ x 7-3/4″ custom front is available). The door surface holes are customized for the SAFLOK trim.

Step 2

Door Preparation - *Retrofit*

• For retrofit installations, remove the existing hardware and assure that the door edge prep. is appropriate for the SAFLOK mortise lock (see Fig. 1). Position and clamp the drill fixture onto the door. The fixture has two positioning posts that rest inside the 1-1/4″ x 8″ x 15/16″ deep mortise pocket, establishing the proper backset for the trim.

• When the fixture is clamped, its surfaces should be parallel with the door surfaces and door edge. Drill the holes from both sides without disturbing the fixture's position. One 3/4″ hole needs to be on the inside door surface only. Remove the fixture and complete the rectangular cutout by sawing or grinding between the four holes. Also, notch material on the inside surface for easier routing of the motor wire. After machining, remove debris from the mortise cutouts.
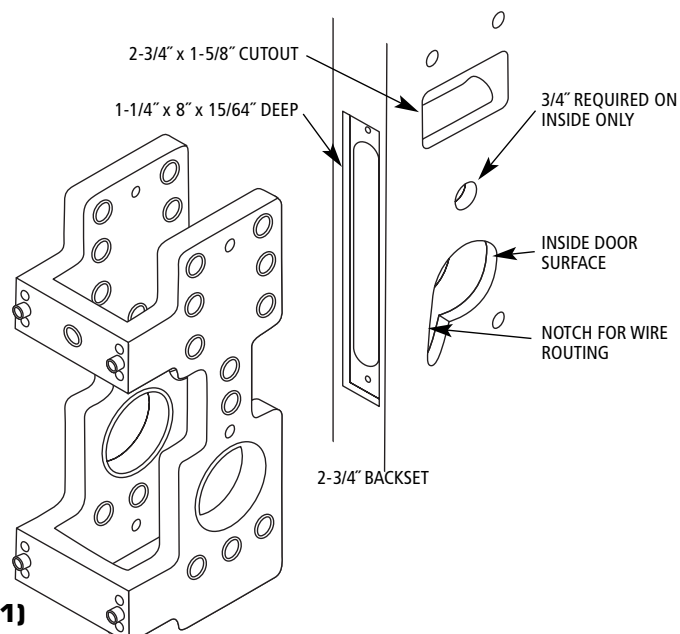
Step 3

Mortise Case Installation

• The mortise front plate has an adjustable bevel. Align the front plate to the bevel of the door edge and tighten the two bevel adjust screws at the top and bottom of the mortise case. Position the mortise case in the door edge with the motor wire routed out the notch (see Fig. 2). Use care to ensure the motor wires do not get pinched or pulled as the mortise is inserted into the pocket.

• Fully tighten the two #12 screws to firmly attach the mortise front to the door. Under no circumstances should these screws be left loose or tightened after the lock trim is installed. (If this ever seems necessary, the door prep. machining is incorrect.) Install the strike and scalp plates with the screws provided and test for proper mechanical latch engagement into the strike plate.
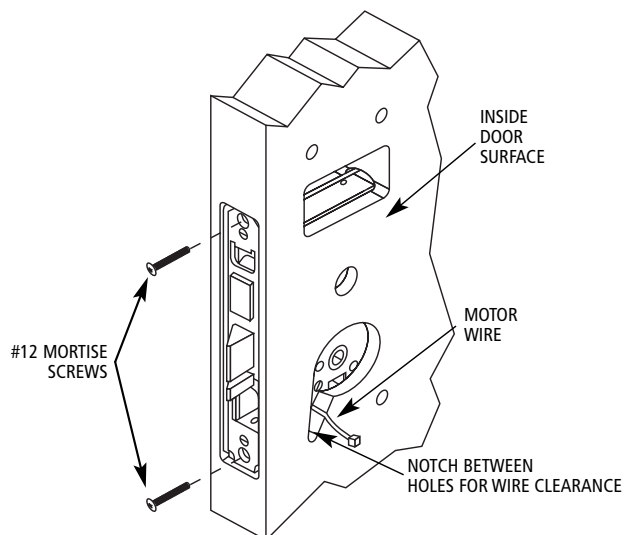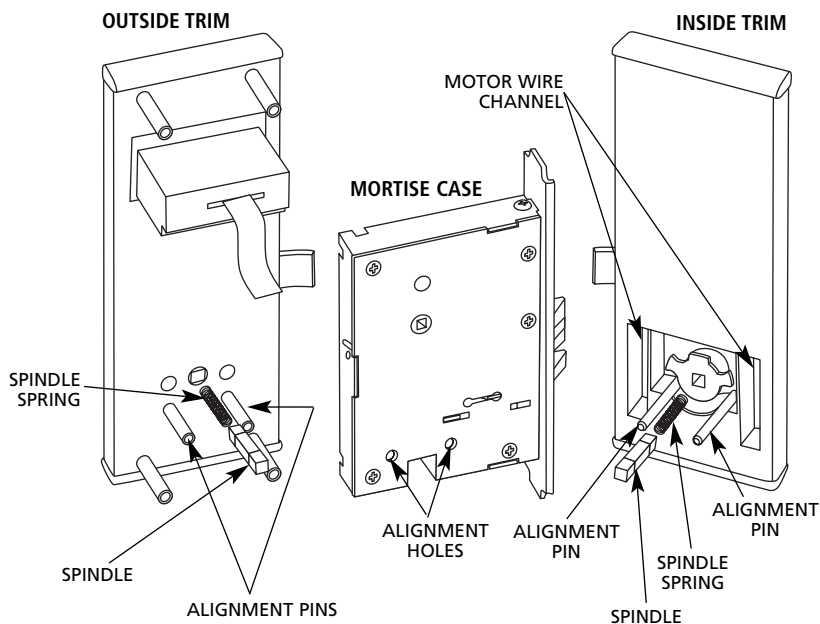
Step 4

Lock Trim Installation

• Both the outside and inside trim assemblies have 1/4″ alignment pins that fit into holes in the mortise case. These pins establish an accurate trim position with respect to the mortise case assembly, allowing the levers and bolt mechanism to operate freely without binding. The holes machined in the door surfaces should not influence the trim's position. There should be clearance between the features of the outside trim and the door prep. holes. If the outside trim fits tightly because the through bolt posts or card reader enclosure rubs on the door prep. holes, then remove the mortise and enlarge the holes to achieve a free fit. Under no circumstances should the 1/4″ alignment pins be bent or removed to allow a free fit (see Fig. 3).

• Position the outside trim on the door with the card reader ribbon cable passing through the rectangular cutout. Use a card so the ribbon cable does not get pulled or cut. On metal doors, it may be necessary to deburr the inside rectangular

2-3/4″ x 1-5/8″ CUTOUT
1-1/4″ x 8″ x 15/64″ DEEP
3/4″ REQUIRED ON INSIDE ONLY
INSIDE DOOR SURFACE
NOTCH FOR WIRE ROUTING
2-3/4″ BACKSET

(FIG. 1)

INSIDE DOOR SURFACE
MOTOR WIRE
#12 MORTISE SCREWS
NOTCH BETWEEN HOLES FOR WIRE CLEARANCE

(FIG. 2)

OUTSIDE TRIM
INSIDE TRIM
MOTOR WIRE CHANNEL
MORTISE CASE
SPINDLE SPRING
SPINDLE
ALIGNMENT PINS
ALIGNMENT HOLES
ALIGNMENT PIN
SPINDLE SPRING
SPINDLE
ALIGNMENT PIN

(FIG. 3)

hole or insulate the bottom edge of the rectangular hole with a piece of tape (see Fig. 4). SAFLOK spacer plates will be required for doors less than 1-3/4″ thick.
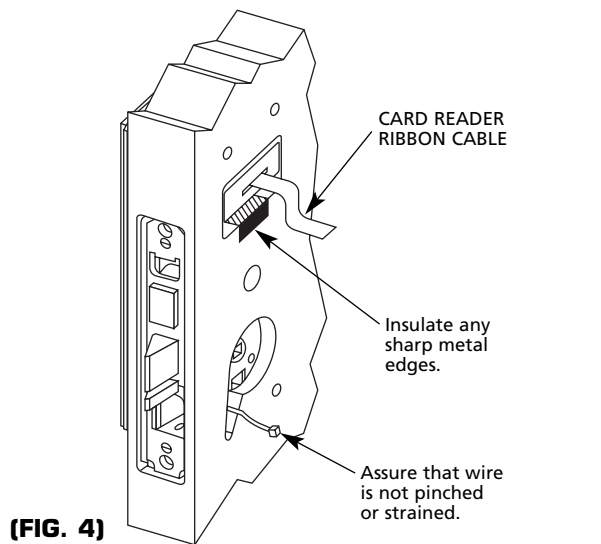
- Feed the ribbon cable and motor wire through the appropriate channel and holes in the back plate and position the back plate onto the door surface with the alignment pins inserted into the mortise case holes. Check for a free fit and ensure the back plate is resting flat on the door without pinching the motor wire. Install four M5 flathead bolts and tighten. When using a power screwdriver, use caution to avoid cross threading and over torquing (see Fig. 5).

- Insert the ribbon into the ribbon connector (see Fig. 6). Do not bend the ribbon sharply. Route the excess ribbon upward over the battery (see Fig. 7).

- Connect the motor wire, then battery wire (if not factory attached) to the PCB as shown (see Fig. 5).

- The indicator mark on the switch cam should face 6:00 for the standard application and 3:00 for the ADB application (see Fig. 6). Insert the dead bolt spindle assembly into the switch cam. The retaining ring should rest on the switch cam when fully inserted. (Proper position of the cam will allow the door to be opened when the dead bolt is retracted and block entry when the dead bolt is thrown for privacy. Emergency keys will override this electronic double lock). Install the inside escutcheon with the dead bolt thumb-turn pointed up. Fasten with two flathead M4 torx screws provided (see Fig. 8). Program the lock using the Lock Programmer & Interrogator (LPI) probe provided with the key encoding system. After programming the lock, test for proper function using appropriate keys per the instructions in the programming manual.
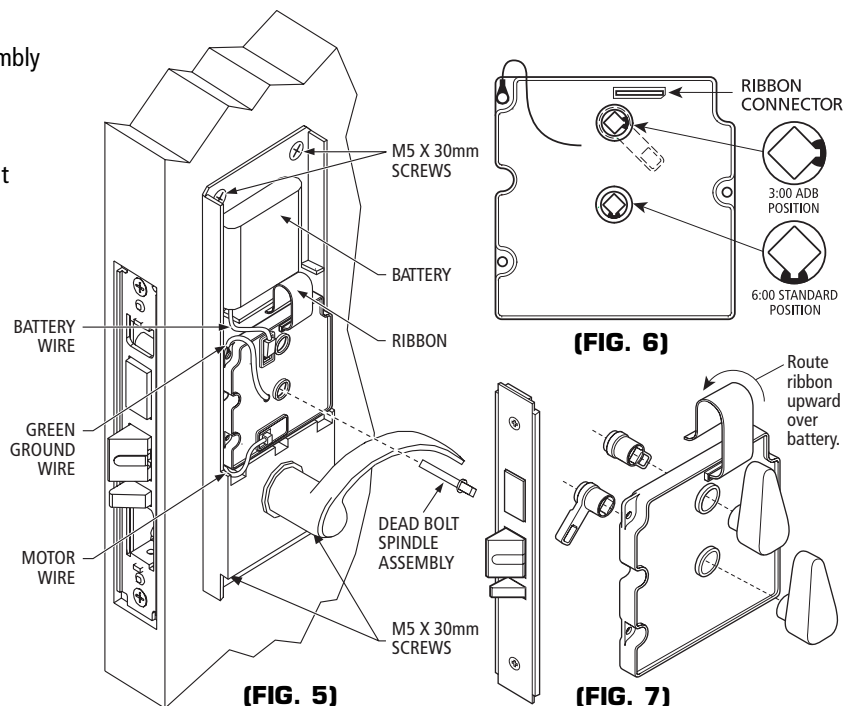
Step 5
Test Lock Functionality

- Insert a construction zone level keycard. The green light should flash nine times while the exterior handle becomes operable for use. If it does not, the table below has the most likely responses.

(FIG. 4)

CARD READER RIBBON CABLE

Insulate any sharp metal edges.

Assure that wire is not pinched or strained.

(FIG. 5)

M5 X 30mm SCREWS

BATTERY

BATTERY WIRE

RIBBON

GREEN GROUND WIRE

MOTOR WIRE

DEAD BOLT SPINDLE ASSEMBLY

M5 X 30mm SCREWS

(FIG. 6)

RIBBON CONNECTOR

3:00 ADB POSITION

6:00 STANDARD POSITION

(FIG. 7)

Route ribbon upward over battery.

(FIG. 8)

M4 X 16mm TORX SCREWS

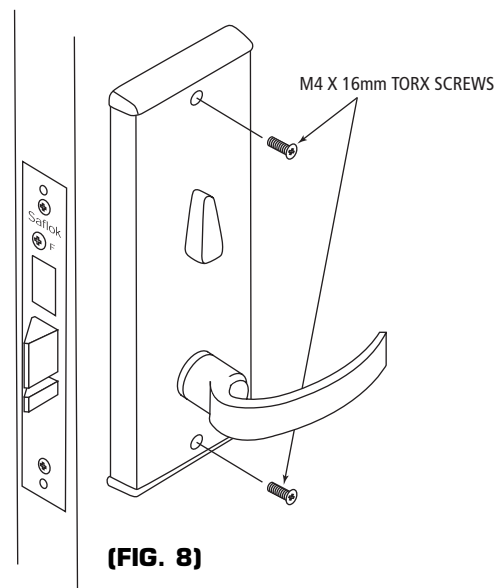| Lock Communication	Electronic Function Description
12 **yellow** blinking lights	Switch cam not aligned properly.
2 **yellow** blinking lights	Keycard not allowed. OR Keycard cancelled out by newer construction level keycard.
9 Red blinking lights and alternating **red** and **green** lights	Low battery condition – change the battery.
2 **yellow** and **red** simultaneously blinking lights	Bad track read or keycard data corrupted – may require a new access card.
9 simultaneously **red** and **green** blinking LEDs	Date not set – use LPI to reset date and time.
2 **red** blinking lights	Keycard not read (possibly upside down, wrong end, wrong key).

SAFLOK DOOR UNIT INSPECTION CRITERIA

Appearance

- Finish is free of blemishes or scratches that would distract from lock appearance
- Lock body and underplate (if used) is mounted straight on the door
- Door scalp is mounted straight and flush with door edge
- Jamb strike is mounted straight and is flush with the jamb face
- Correction of minor blemishes on the door jamb are the responsibility of the property's maintenance department

Lock Function

- Knob or lever rotates and moves freely
- Lever is horizontal to floor when at rest position
- Dead bolt extends fully and retracts without binding (door open)
- Lock latch and dead bolt engage jamb strike plate freely
- Anti-pick latch locks latch when depressed (door open)
- Anti-pick latch is depressed when the contact is made with the strike plate (door closed)

Electronics/Keycards

- Keycard can be inserted and withdrawn freely
- **Yellow** light flashes twice when incorrect keycard is used
- Double **red** flash if keycard is used wrong, so it cannot be read (or wrong card is used, i.e. credit card)
- **Green** light appears when proper keycard is used
- **Green** light flashing when lever is operated
- **Green** light continues to flash for a five-second cycle
- **Yellow** light flashes 12 times when the dead bolt is extended and guest/hotel keycard is used
- Dead bolt release functions properly when "E" (emergency) key is used
- All keycards function per specifications and property-designed master plan

Door Function

- Door closes and latches with little or no interference
- Dead bolt extends fully through the strike plate without interference (door closed)
- Spacing between door edge and inside door jamb does not exceed 3/16″ (door closed)

Note: If bumpers or other seals are added after strike plate installation and cause alignment and latch problems, this becomes the property's responsibility to correct (generally applies to new construction or new door installation).

Questions? Contact Customer Service at 800.999.6213.