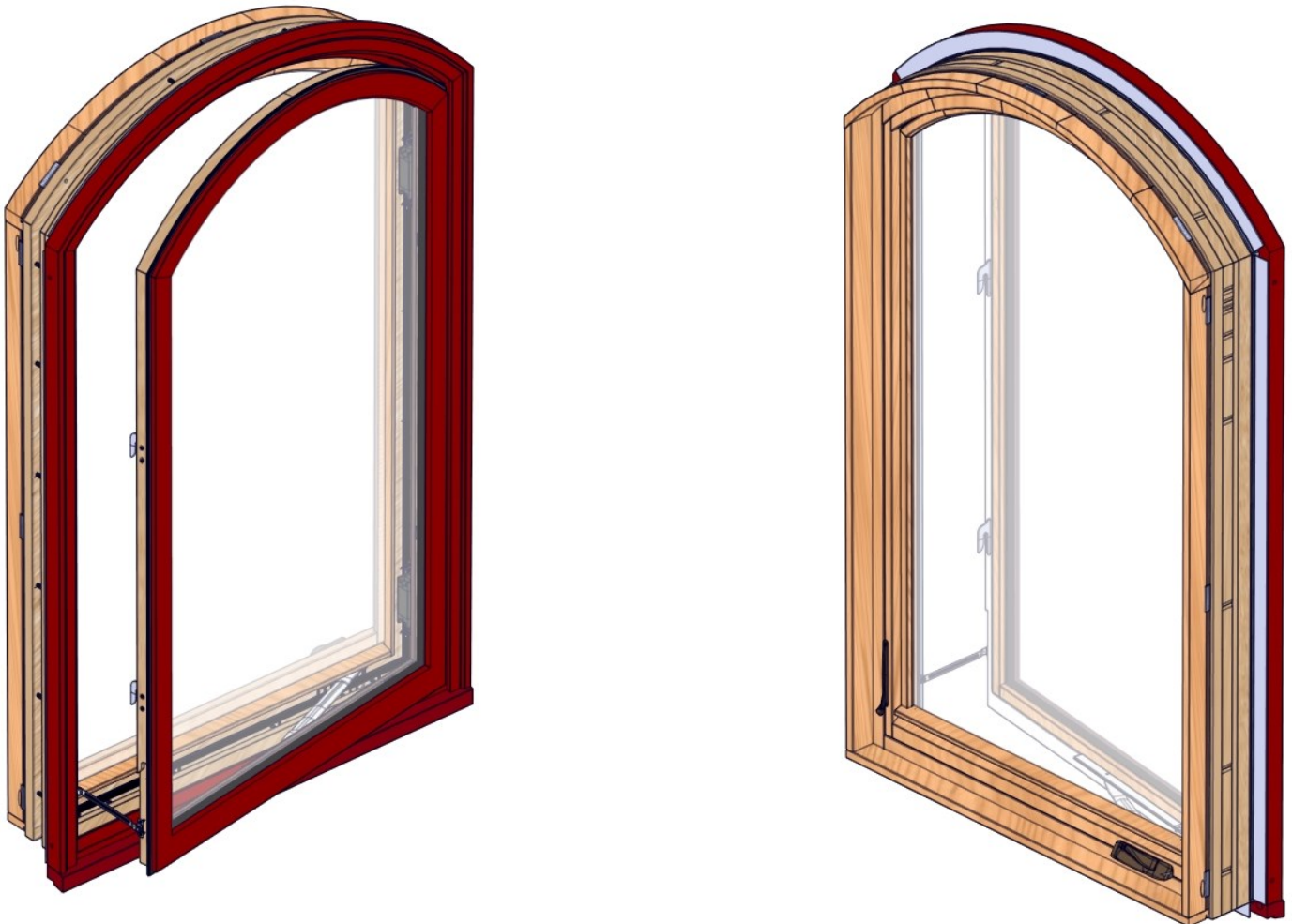




*Clearly the best.®*

## Arch Frame Windows

### Hardware Removal and Replacement





*Clearly the best.*

## Table Of Contents

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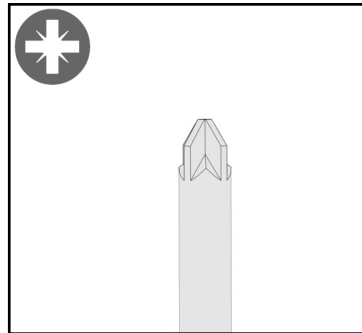
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## Required Tools

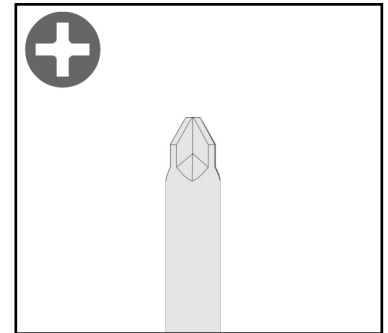
### User Supplied

#### Required Tools

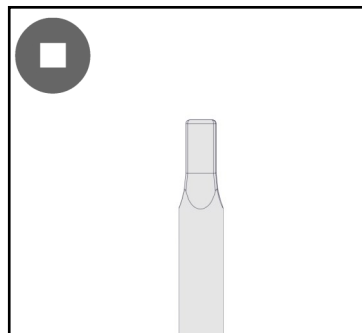
- Screwdriver with #3 Pozidrive
- Screwdriver with #2 Phillips Bit
- Screwdriver with Square Bit
- Screwdriver with small flat blade
- Putty Knife
- Rubber Mallet



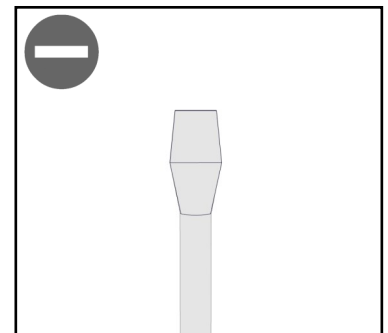
Screwdriver with Pozidrive



Screwdriver with Phillips Bit



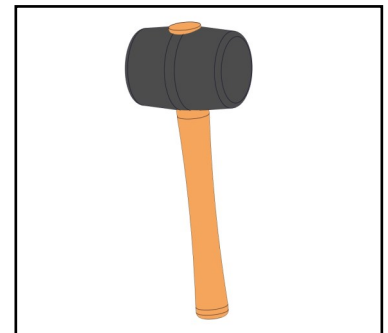
Screwdriver with Square Bit



Screwdriver with Flat Blade



Putty Knife



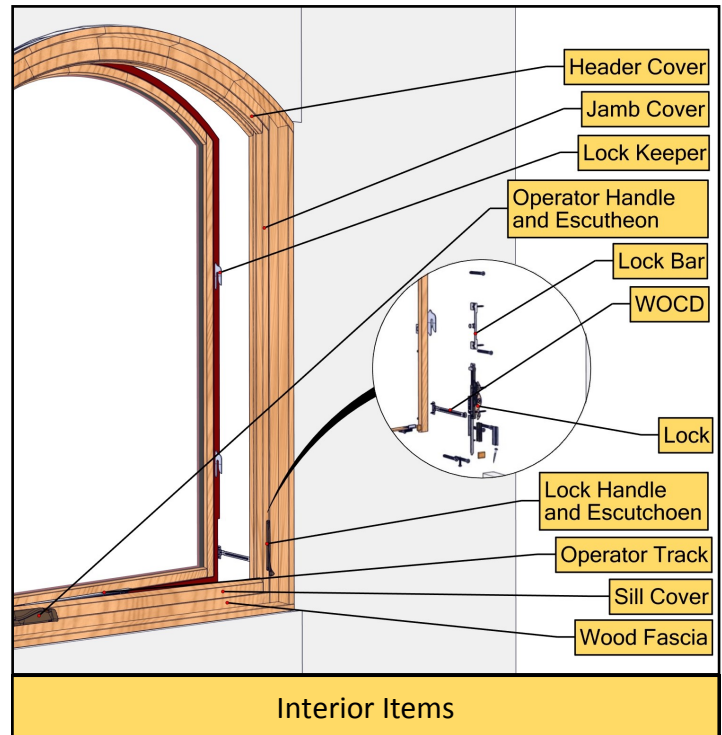
Rubber Mallet

## Preparation For Replacement

### Hardware

#### Replacement Items

- Operator
  - HA8400 | Long Arm, RH
  - HA8401 | Long Arm, LH
  - HA8402 | Short Arm, RH
  - HA8403 | Short Arm, LH
- Operator Track
  - HA0434SSTK | 14.5"
  - HA8407SSTK | 11.75"
- Lock Bar
  - HA7031xx | 1 Lock Point, 9.75"
  - HA7033xx | 2 Lock Points, 22.52"
  - HA7035xx | 2 Lock Points, 30.52"
  - HA7037xx | 3 Lock Points, 42.52"
  - HA7039xx | 3 Lock Points, 49.52"
  - HA7041xx | 3 Lock Points, 58.52"
- Lock
  - HA7027 | RH or LH
- Lock Keeper
  - HA8404SS
- WOCD
  - HA6209SS | RH
  - HA6208SS | LH
  - MI8165MI | Gasket
- Operator Handle and Escutcheon
  - HA069033xx | Handle and Metal Cover Kit, RH
  - HA06833000xx | Handle and Cover Kit, RH
  - HA069034xx | Handle and Metal Cover Kit, LH
  - HA06834000xx | Handle and Cover Kit, LH



## Preparation For Replacement

---

### Hardware (Continued)

- Lock Handle & Escutcheon
  - HA7028xx | Lock Handle & Escutcheon Kit
  - HA7210xx | Metal Lock Handle & Escutcheon Kit

#### Note:

- ◆ For Round-Top Windows, Header Cover does not need to be removed prior to removing Jamb Covers.
- ◆ For Arch-Top Windows, Header Cover must be removed prior to removing Jamb Covers.
- ◆ To access the Operator for replacement, only the Sill Cover must be removed.
- ◆ To access the Lock Bar or Lock Mechanism for replacement, only the strike-side Jamb Cover must be removed.
- ◆ When removing covers, place wood in a safe place to avoid damage.
- ◆ For all windows, Sill Cover must be removed prior to removing Jamb Covers.
- ◆ Hinge removal and Replacement Procedure is available in document LA7011.

## Preparation For Replacement

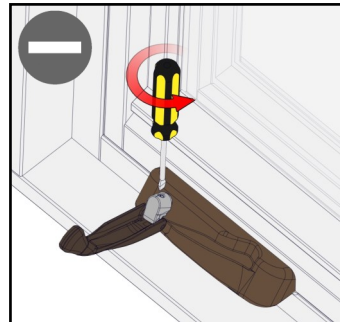
### Cover Removal

#### Removing Covers (Butt Joint Corners)

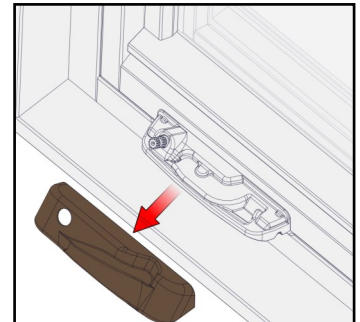
- Loosen set screw, remove operator handle, then remove escutcheon from sill by lifting off with hands.
- Remove lock handle by pulling outward, then remove escutcheon by prying outwards with putty knife.
- Using a putty knife, slide tool between Sill Cover and Wood Fascia, then pry upwards on tool. See cautionary note on page 7.

**Note:**

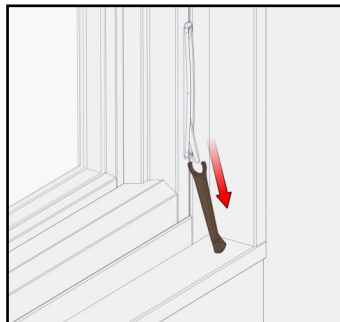
- ◆ When cover connectors are encountered while prying and sliding putty knife around window, remove tool and re-insert approximately 2" further along path and resume prying.
- Slide tool along window sill and continue to pry up.
- Remove cover by pulling away from frame.
- On Arch-top windows, there are two wood plugs in the header screen retaining groove that hide two screws.
- Remove plugs and screws.
- Remove header cover using a putty knife to insert between header cover and wood fascia.
- Pry down and remove trim by pulling away from frame.



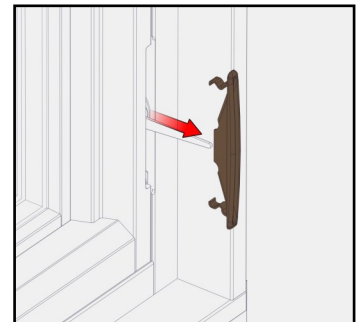
Remove Handle



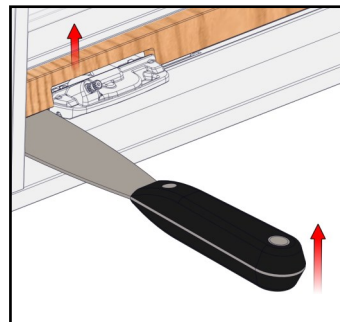
Remove Escutcheon



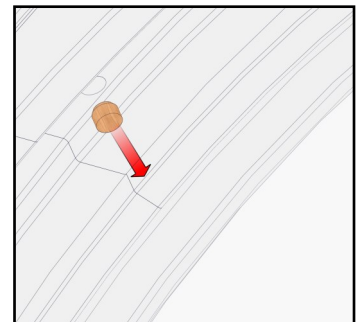
Remove Handle



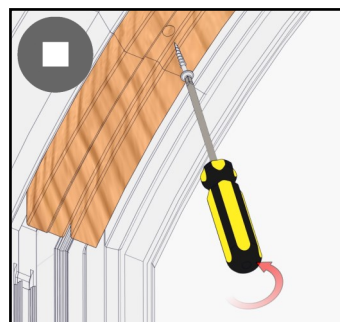
Remove Escutcheon



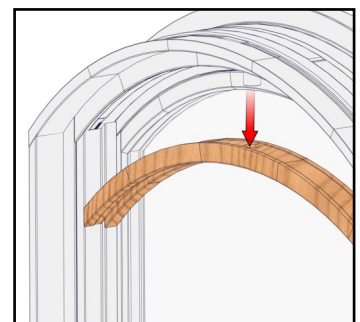
Sill Cover Removal



Remove Plug



Head Screw Removal

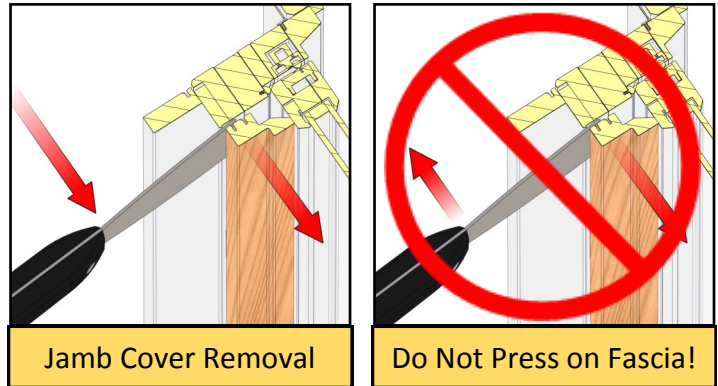


Head Cover Removal

## Preparation For Replacement

### Cover Removal (Continued)

- After removing sill and header covers, remove jamb cover.
- Remove jamb cover by slipping putty knife between jamb cover and wood fascia near bottom of window.
- Pry inwards (away from jamb), slide tool towards top of window, and continue prying inward.
- Remove cover by pulling away from frame.



#### Note:



- ◆ Prying with putty knife against the Wood Fascia Frame may crack or break the edge. Always pry away from fascia wood.

### Round Top Only (Miter Joint Corners)

- On Round-Top windows only, jamb covers must be removed before header. After removing sill cover, remove jamb covers.
- Remove jamb cover by slipping putty knife between jamb cover and wood fascia near bottom of window.
- Pry inwards (away from jamb), slide tool towards top of window, and continue prying inward.
- Remove cover by pulling away from frame.

## Preparation For Replacement

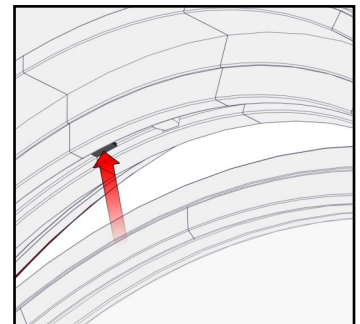
### Cover Replacement

#### Dual Lock

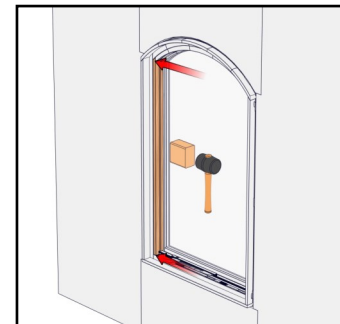
- If dual-lock interlocking strips, FA760501, are not present on head of frame or wood heads, adhere the required number of dual-lock interlocking strips by removing adhesive liner and pressing into fabricated slots at head of frame.
- Interlock the same quantity of dual-lock strips onto the strips already attached to frame.
- Remove adhesive liner from dual-lock strips.



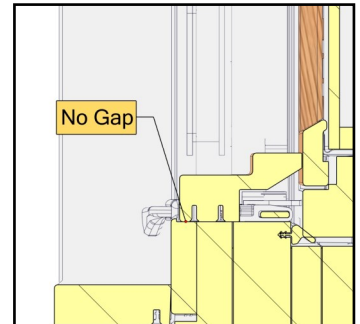
FA760501



FA760501 Install



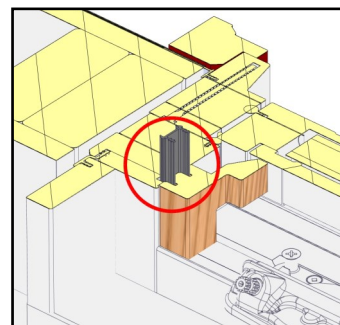
AT Jamb Cover Install



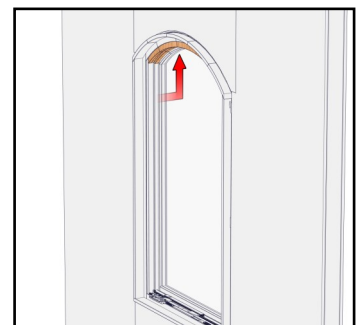
Jamb Cover Proper Gap

#### Arch Top Windows (Butt Joint Corners)

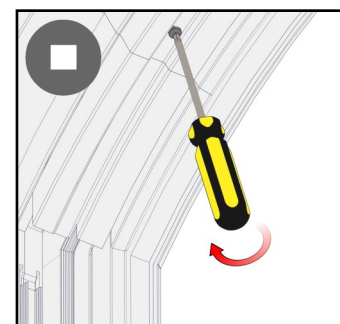
- Place base of strike-side jamb cover on sill.
- While aligning jamb cover kerfs with wood connectors, use heel of hand or non-marking rubber mallet and a block of wood to seat jamb cover firmly against frame.
- Repeat for opposite jamb cover (if previously removed).
- Place sill cover ends against jamb covers.
- Use heel of hand or non-marking rubber mallet and a block of wood, tap sill cover down, ensuring sill cover kerf aligns with wood connectors.
- Place header cover ends against jamb covers.
- Using heel of hand or non-marking rubber mallet and a block of wood, tap header cover into place.



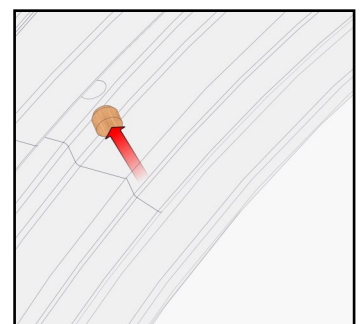
Jamb Cover With Kerf



AT Head Cover Install



AT Head Screw Install



Hole Plug Install

## Preparation For Replacement

### Cover Replacement (Continued)

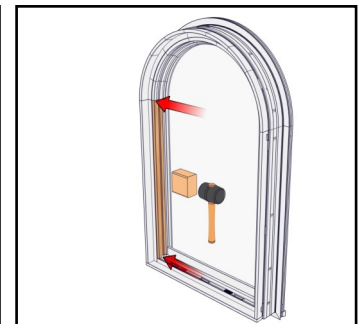
- On Arch Top windows, using #2 Square drive bit, drive two (2) #8 x 1 ½" screws, FA7608SS, through screw holes in header and fasten header to frame.

**Note:**

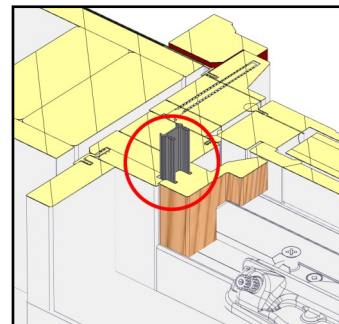
- ◆ On all windows except Round-Top, jamb covers must be installed prior to installing the sill and header covers.



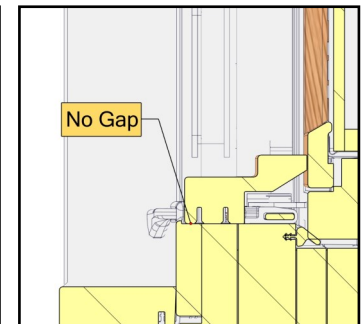
RT Head Cover Install



RT Jamb Cover Install



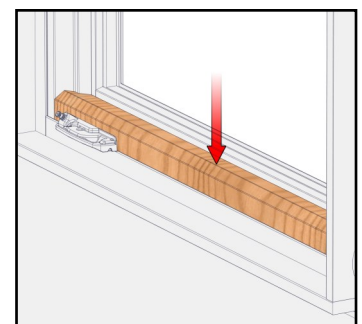
Jamb Cover With Kerf



Jamb Cover Proper Gap

### Round Top Only (Miter Joint Corners)

- Place Round Top head cover against frame head.
- Place strike-side jamb cover against end of head cover.
- While aligning jamb cover kerfs with wood connectors, use heel of hand or non-marking rubber mallet and a block of wood to seat jamb cover firmly against frame.
- Place opposite jamb cover against end of head cover (if previously removed).
- While aligning jamb cover kerfs with wood connectors, use heel of hand or non-marking rubber mallet and a block of wood to seat jamb cover firmly against frame near head.
- Place sill cover ends against jamb covers.
- Using heel of hand or non-marking rubber mallet and a block of wood, tap sill cover down, ensuring sill cover kerf aligns with wood connectors.



Sill Install

**Note:**

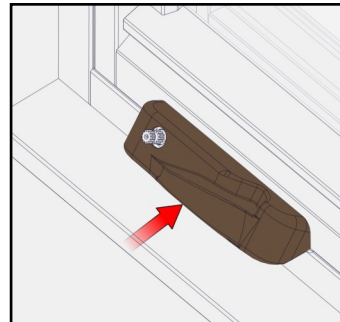
- ◆ For purposes of the hardware replacement described in this document, the Header Cover did not require removal for Round-Top Windows.

## Preparation For Replacement

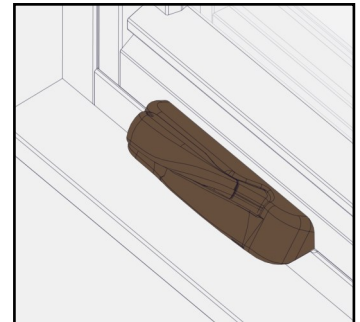
### Cover Replacement (Continued)

#### Replace Operator Handle and Escutcheon

- Install operator escutcheon and handle.
- Ensure that handle folds into recess on escutcheon.
- Tighten set screw on handle.



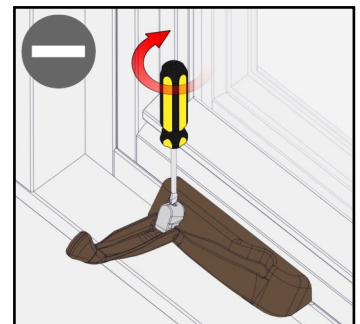
Escutcheon Install



Handle Install



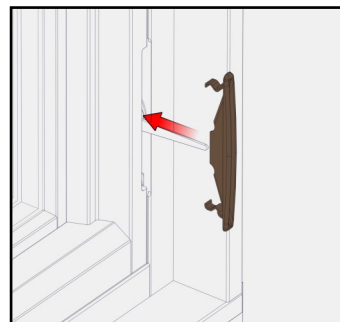
Incorrect Handle Install



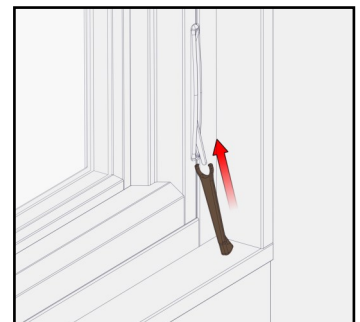
Secure Handle Set Screw

#### Replace Lock Handle and Escutcheon

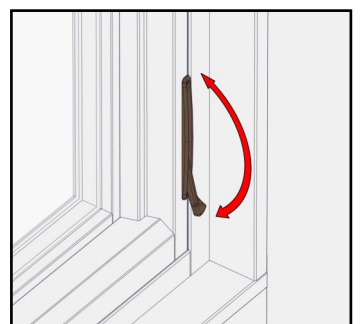
- Install lock escutcheon and handle.
- Confirm lock/unlock with handle.



Escutcheon Install



Handle Install



Lock / Unlock Motion

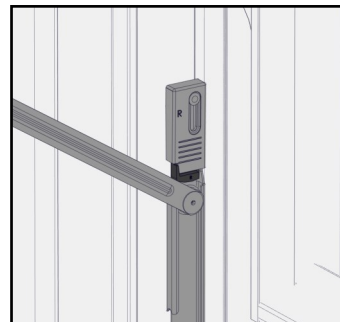
## Window Opening Control Device (WOCD) Removal

### WOCD Part Numbers

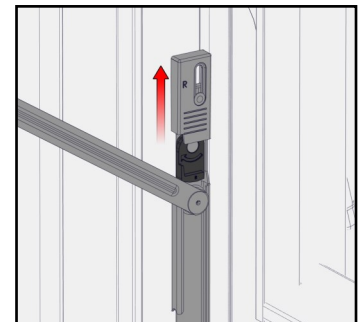
- HA6209SS | RH
- HA6208SS | LH
- MI8165MI | Gasket

### WOCD Removal

- Open and release WOCD
  - Unlock window and crank open to limit
  - Slide red cover up and hold
  - Rotate the orange tab toward the exterior (if tab is difficult to rotate, relieve pressure using the crank)
  - Continue to crank window open while holding the orange tab in place, until the window is fully open.
- Use Phillips screw driver and remove two (2) #6 x .5" FHSMS from WOCD Track on frame.
- Remove Track
- Use Phillips screw driver and remove two (2) #6 x .5" FHSMS from WOCD Bracket Arm on sash.
- Remove Bracket Arm



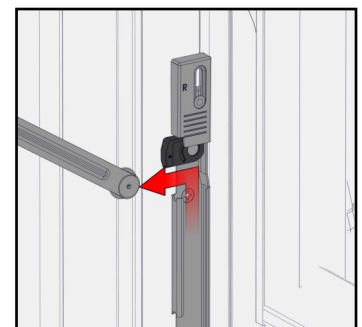
Window Max Opening



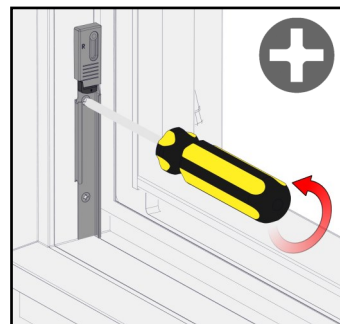
Slide Cover Up



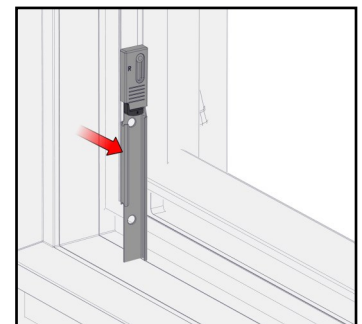
Rotate Tab



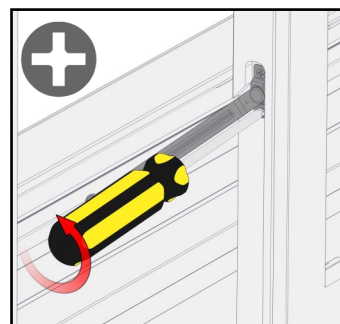
Hold Tab & Open Window



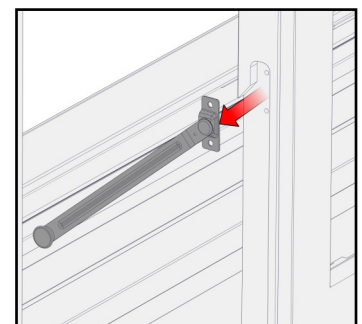
Remove Track Screw



Remove Track



Remove Arm Screw

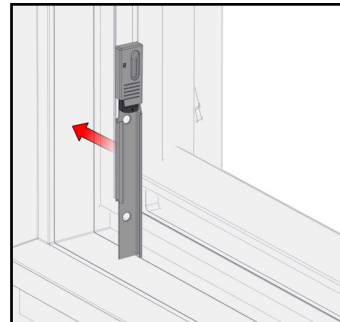


Remove Bracket Arm

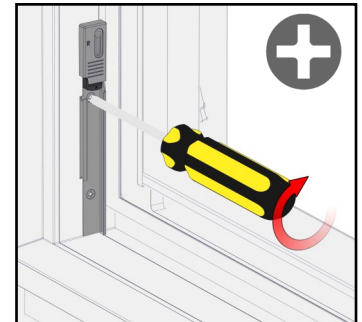
## Window Opening Control Device (WOCD) Replacement

### WOCD Replacement

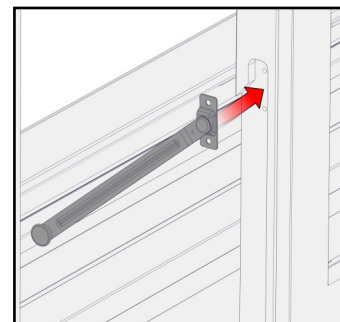
- Install WOCD Track.
- Use Phillips screw driver and install two (2) #6 x .5" FHMS through WOCD Track holes into frame.
- Install WOCD Bracket Arm.
- Use Phillips screw driver and install two (2) #6 x .5" FHSMS through WOCD Bracket Arm holes into sash.
- Close and engage WOCD
  - Crank window all the way closed. The WOCD will automatically reset at or near the fully closed position
  - Check for WOCD engagement by cranking window open until WOCD limits the window opening.
  - Crank window closed and securely lock the window



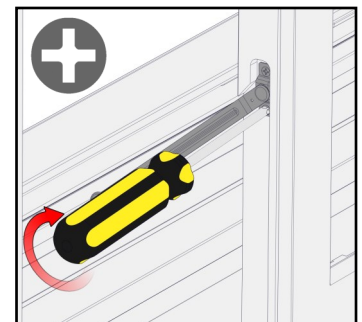
Track Install



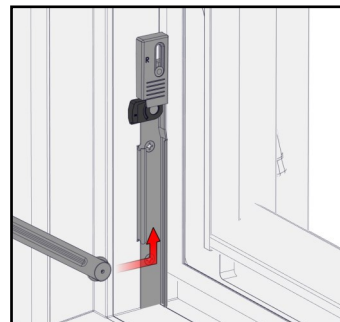
Track Screw Install



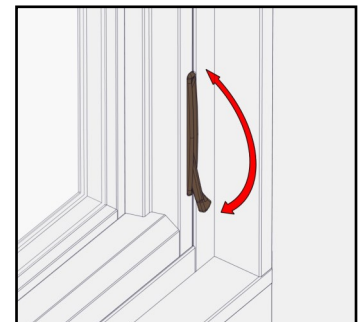
Bracket Arm Install



Arm Screw Install



WOCD Auto Install



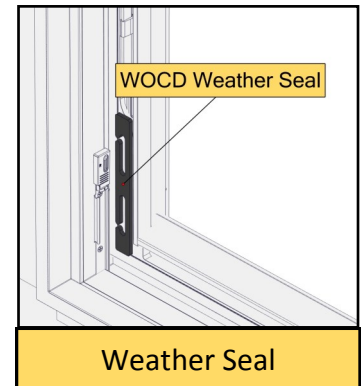
Lock Motion

## WOCD Weather Seal Removal and Replacement

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### WOCD Weather Seal Removal

- Remove WOCD Seal, MI8165MI by peeling away from frame.
- Ensure all seal material and adhesive are removed
- Clean surface with silane or alcohol.



### WOCD Weather Seal Replacement

- Replace adhesive liner from WOCD Seal, MI8165MI
- Align open slots towards outside of frame.
- Align lower outside corner of WOCD seal at lower corner of frame weather seal, pulling frame weather seal towards corner (diagonally) to allow for tight fitting of WOCD seal.
- Press entire surface of seal against frame surface for full adhesion.

## Operator Removal

### Operator Part Numbers

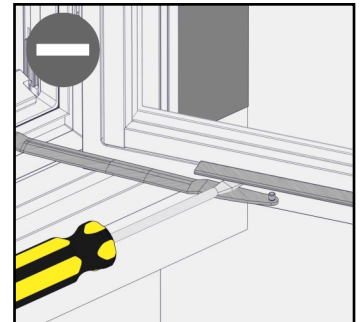
- HA8400EG
- HA8401EG
- HA8402EG
- HA8403EG

### Operator Removal

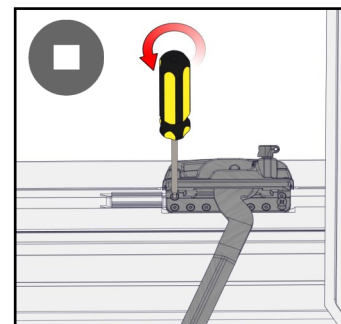
- Open window to open position.
- Remove Sill Cover, Operator Handle and Escutcheon following removal procedure at the beginning of this document.
- Disconnect operator arm from slider in track (located on sash). Slip flat head screwdriver or putty knife between operator arm and track, then pry downwards.
- Retract operator to a position where all mounting screws are visible.
- Using a Square Drive Screwdriver, remove seven(7) Operator mounting screws, FA0405SSTN.
- Using a #3 Pozidrive Screwdriver, remove Sash Stop Screw, FA7603ZP.
- Remove Operator.



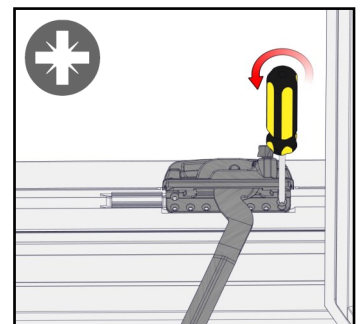
Open Window



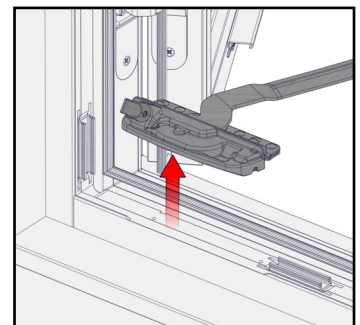
Track Disengagement



Remove FA0405SSTN



Remove FA7603ZP



Remove Operator

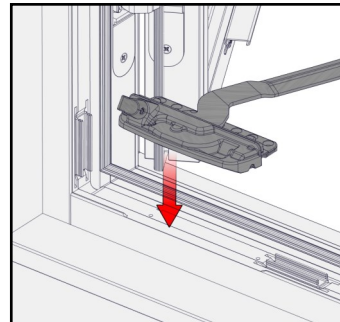
#### Note:

- ◆ For windows with operator HA8402 or HA8403, quantity of Operator mounting screws is eight (8) and there is no Sash Stop screw.

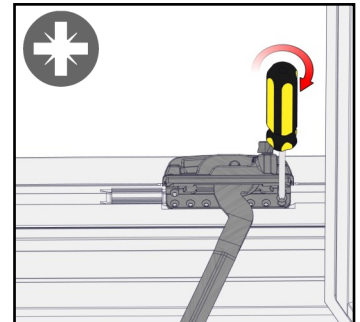
## Operator Replacement

### Operator Install

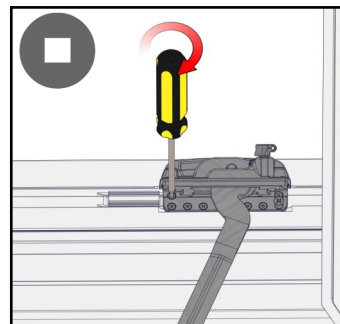
- Align mounting holes on new Operator with holes in frame.
- Using a Square Drive screwdriver, fix new Operator to frame using mounting screws saved from removal procedure.
- Using a #3 Pozidrive Screwdriver, drive Sash Stop screw into outer hole, closer to hinge side of window.
- Position Sash close to Operator arm, moving track slider along track until slider is over arm pin.
- Press pin into slider.
- Place Operator handle on Operator.
- Open and close window to ensure proper operation.
- Remove Operator handle.
- Replace Sill Cover, Operator Handle and Escutcheon following replacement procedure at the beginning of this document.



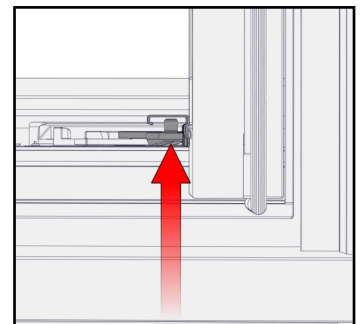
Operator Install



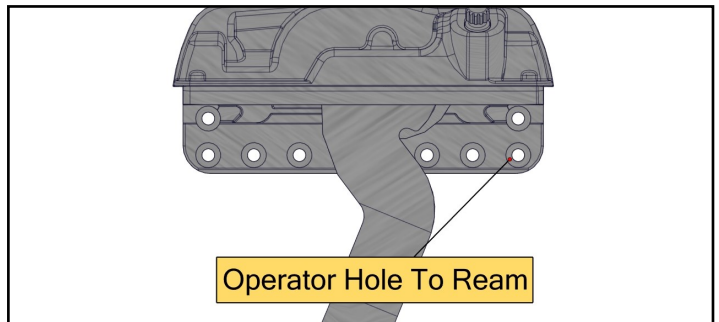
FA7603ZP Install



FA0405SSTN Install



Track Engagement



Operator Hole To Ream

For Windows using HA8400 or HA8401, the mounting hole on the Operator for FA7603ZP screw must be reamed to 1/4" before mounting to frame.

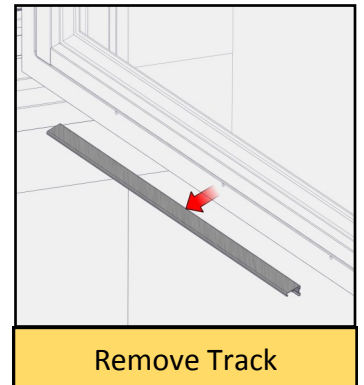
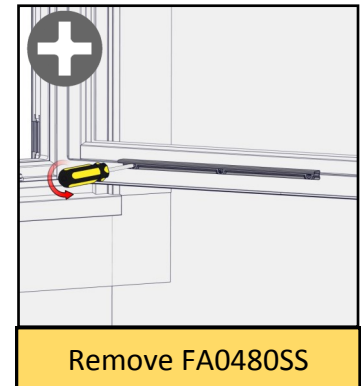
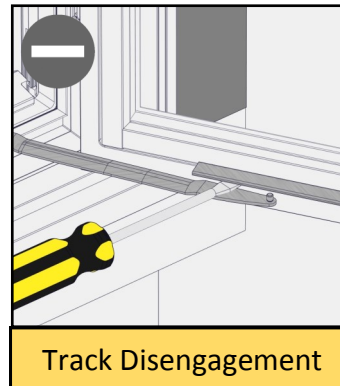
## Operator Track and Slider Removal and Replacement

### Operator Track Part Numbers

- HA0434SSTK
- HA8407SSTK

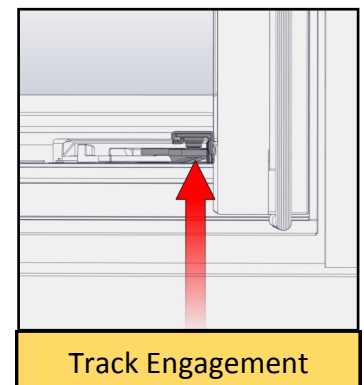
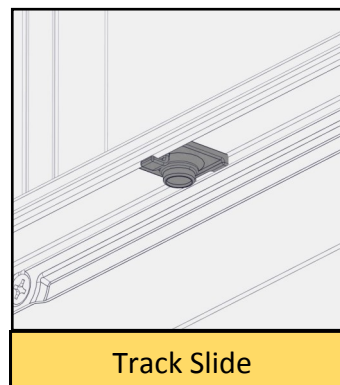
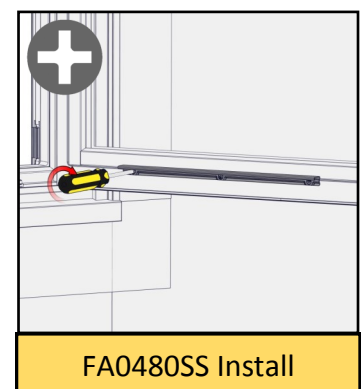
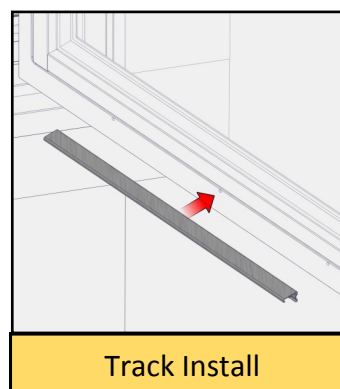
### Operator Track Removal

- Open window to open position.
- Disconnect operator arm from slider in track (located on sash). Slip flat head screwdriver or putty knife between operator arm and track, then pry downwards.
- Using a #2 Phillips Screwdriver, remove three (3) Operator Track mounting screws, FA0480SS.
- Remove Track from Sash.
- Remove slider from track by sliding off one end of track.



### Operator Track Replacement

- Align Track mounting holes with holes in Sash.
- Using a #2 Phillips Screwdriver, Install Track with three (3) Operator Track mounting screws, FA0480SS, previously removed.
- Ensure slider is installed in track with tab facing away from mounting face.
- Position Sash close to Operator arm, moving track slider along track until slider is over arm pin.
- Press pin into slider.
- Open and close window to ensure proper opera-

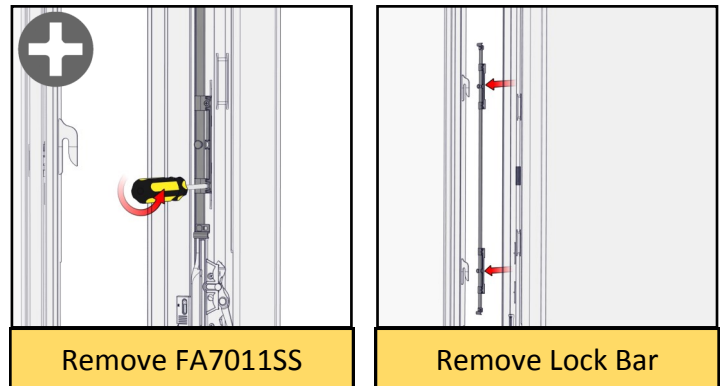


## Lock Bar Removal

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### Lock Bar Part Numbers

- HA7031xx
- HA7033xx
- HA7035xx
- HA7037xx
- HA7039xx
- HA7041xx



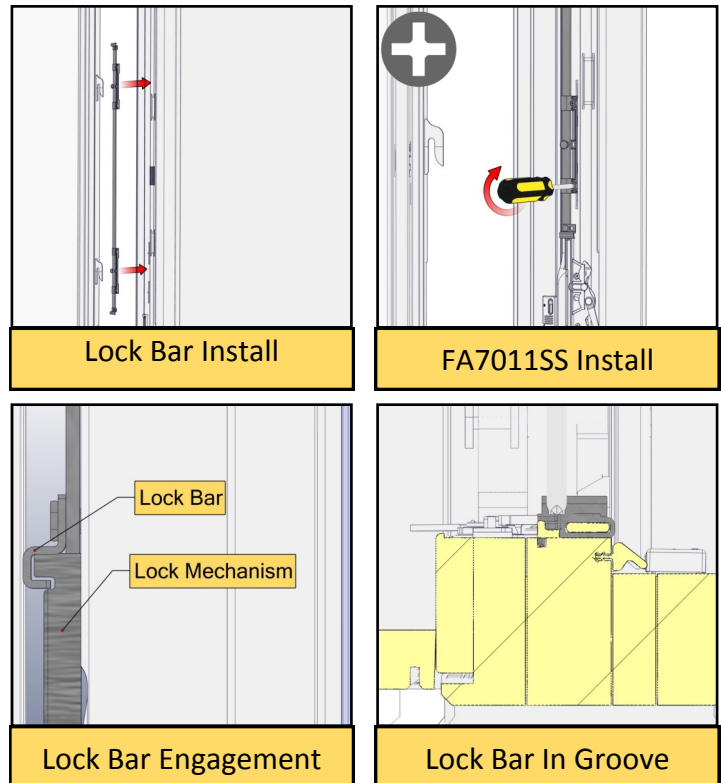
### Lock Bar Removal

- Open window to open position.
- Remove Operator Handle and Escutcheon, Lock Handle and Escutcheon, Sill Cover and strike-side Jamb Cover following removal procedure at the beginning of this document.
- Using a #2 Phillips Screwdriver, remove two (2) Lock Bar mounting screws, FA7011SS, per Lock Bar Guide.

## Lock Bar Replacement

### Lock Bar Install

1. Align Lock Bar Guide(s) mounting holes with holes in frame.
2. Ensure rib on back(s) of Lock Bar Guide(s) fits into fabricated slots in frame jamb.
3. Ensure hook at bottom of Lock Bar engages with hook at top of Lock Mechanism.
4. Using a #2 Phillips Screwdriver, mount Lock Bar with two (2) Lock Bar mounting screws, FA7011SS, per Lock Bar Guide.
5. Move Lock handle up and down to ensure proper operation.
6. Replace Sill Cover and strike-side Jamb Cover, Operator Handle and Escutcheon, Lock Handle and Escutcheon, following replacement procedure at the beginning of this document.



#### Note:

- Lock Bars are Non-Handed, which means these Lock Bars are used in both Left and Right handed operation.
- Follow instructions to ensure proper orientation of Lock Bar.
- First time operation of Lock Bar requires extra force to break sliding Lock Bar loose from guides.

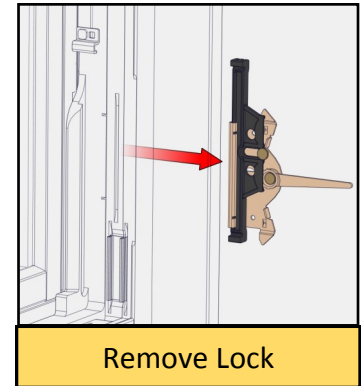
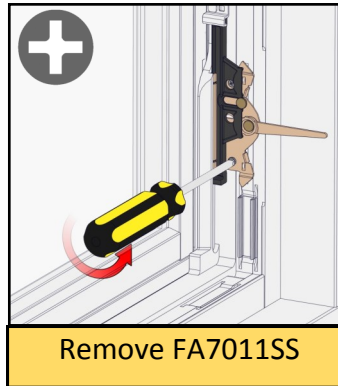
## Lock Mechanism Removal and Replacement

### Lock Mechanism Part Numbers

- HA7027

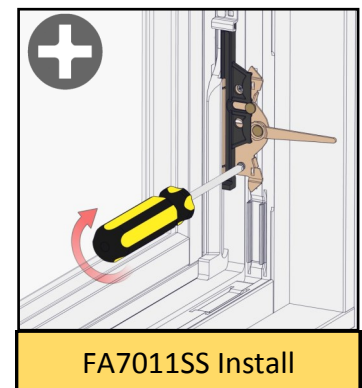
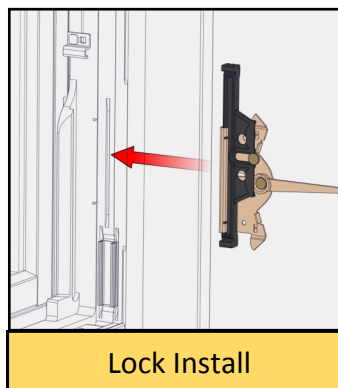
### Lock Mechanism Removal

- Open window to open position.
- Remove Operator Handle and Escutcheon, Lock Handle and Escutcheon, Sill Cover and strike-side Jamb Cover following removal procedure at the beginning of this document.
- Using a #2 Phillips Screwdriver, remove two (2) Lock Mechanism mounting screws, FA7011SS.
- Remove Lock Mechanism, HA7027, from Frame.



### Lock Mechanism Replacement

- Align hook on Lock Mechanism with hook on Lock Bar, see figure in Lock Bar Replacement.
- Align Lock Mechanism mounting holes with holes in frame.
- Using a #2 Phillips Screwdriver, mount Lock with two (2) Lock Mechanism mounting screws, FA7011SS, previously removed.
- Move Lock Handle up and down to ensure proper operation.
- Replace Sill Cover and strike-side Jamb Cover, Operator Handle and Escutcheon, Lock Handle and Escutcheon, following replacement procedure at the beginning of this document.



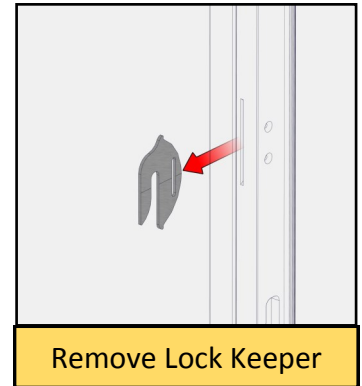
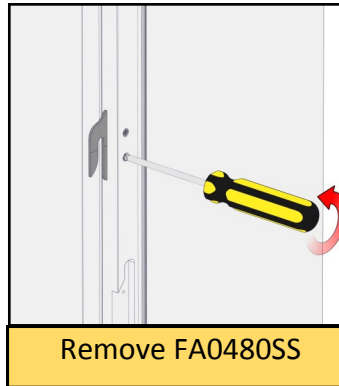
## Lock Keeper Removal and Replacement

### Lock Keeper Part Numbers

- HA8404SS

### Lock Keeper Removal

- Open window to open position.
- Using a #2 Phillips Screwdriver, remove two (2) Lock Keeper mounting screws, FA0480SS.
- Remove Lock Keeper from sash.



### Lock Keeper Replacement

- Insert Lock Keeper into slot in sash with open end of keeper facing down towards the bottom of the sash.
- Using a #2 Phillips Screwdriver, install the Lock Keeper with two (2) Lock Keeper mounting screws, FA0480SS, previously removed.
- Close window and move Lock Handle up and down to ensure proper operation.





*Clearly the best.*

## Revisions

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REVISIONS					
REV	ECN	DESCRIPTION	DATE	DRAWN	APPD.
A	4278ECNEG	INITIAL RELEASE	08/26/2016	BBB	VM