**Notice**

- For standard size sash, use dash (I) and Circular (○) marks on the sash for hardware locations.
- For custom-size sash, use measurements indicated in step for hardware locations.

**WARNING**

- Use caution when working at elevated heights and around unit openings. Follow manufacturers’ instructions for ladders and/or scaffolding. Failure to do so may result in injury or death.

- Follow manufacturers’ instructions for hand or power tools. Always wear safety glasses. Failure to do so may result in injury and/or product damage.

- Windows and doors can be heavy. Use safe lifting techniques and a reasonable number of people with enough strength to lift, carry and install window and door products to avoid injury and/or product damage.

**Tape broken glass before removal to reduce glass fragmentation.**

**Keep all hardware parts and screws for reuse.**
WARNING
Sash must be supported during entire removal and installation procedures. Failure to support Sash may result in injury or product damage.

WARNING
Wear gloves, safety glasses goggles or eye shields when handling glass. Tape broken glass with filament or duct tape before removal to reduce glass fragmentation.

CAUTION
When drilling into the Sash, drill only 1/8” deep to avoid penetrating the glass area or drilling through the Sash.

NOTICE
• Check the sash size, glass type, color, and kit contents to verify all parts are correct.
• The unit / sash opening must be plumb, level, square, and free of any bowed jambs. To check, measure frame diagonally from corner to corner. The measurements must be within 1/8” of each other.
• Inspect for any damage to the frame and vinyl cover. Repair as needed.
• If any of the above requirements are not met, have a qualified carpenter, builder, or contractor determine whether the window frame should be replaced or reinstalled, or if there are structural problems that need to be corrected before sash replacement.

CAUTION
Identify the hardware style that corresponds to the hardware on your window unit in one of the following sections A-G. Proceed to that section in the guide for detailed instructions on replacing your sash.

Table 1 - Keeper Position Dimensions
(Sections A & B)

<table>
<thead>
<tr>
<th>Overall Sash Height Dim.</th>
<th>DIM. “A”</th>
<th>DIM. “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2 or 22 1/2”</td>
<td>9 15/16”</td>
<td>N/A</td>
</tr>
<tr>
<td>C25 or 22 5/8” - 26 3/4”</td>
<td>12 1/8”</td>
<td>N/A</td>
</tr>
<tr>
<td>C3 or 26 7/8” - 34 3/8”</td>
<td>15 7/8”</td>
<td>N/A</td>
</tr>
<tr>
<td>C35 or 34 1/2” - 39 1/4”</td>
<td>18 5/16”</td>
<td>N/A</td>
</tr>
<tr>
<td>C4 or 39 3/8” - 46 3/8”</td>
<td>9 1/2”</td>
<td>34 5/16”</td>
</tr>
<tr>
<td>C45 or 46 1/2” - 51 1/4”</td>
<td>11 7/8”</td>
<td>36 3/4”</td>
</tr>
<tr>
<td>C5 or 51 3/8” - 58 1/4”</td>
<td>9 11/16”</td>
<td>46”</td>
</tr>
<tr>
<td>C55 or 58 3/8” - 63 1/4”</td>
<td>12 3/16”</td>
<td>48 7/16”</td>
</tr>
<tr>
<td>C6 or 63 3/8” - 70 1/4”</td>
<td>15 11/16”</td>
<td>52”</td>
</tr>
</tbody>
</table>

Dimension “A” is the distance from the edge of the sash to lower screw hole on the bottom keeper.

Dimension “B” is the distance from the edge of the sash to the lower screw hole on the top keeper.

Straight Arm
October 2011 through Present

Parts Included
(1) Sash
(1) Installation Guide

Installation Tools Needed:
• Safety Glasses
• Phillips Screwdriver
• Pliers
• Pencil
• Electric Drill
• 3/32” Drill Bit
• Pry Bar
• Utility Knife

Component Identification

Sash Channel

Waterbar Weatherstrip (Located on Top of Sash)

Casement Sash

12” Straight Arm Operator

14” Straight Arm Operator

22” Hinge

Keeper(s)
**Split Arm**  
**September 1998 to Current**

**Parts Included**

(1) Sash (custom sizes will not be pre-marked for hardware placement)

(1) Installation Guide

**Installation Tools Needed:**

- Safety Glasses
- Phillips Screwdriver
- Flat Blade Screwdriver
- Pencil
- Drill / Driver
- 3/32" Drill Bit

---

**Straight Arm**  
**September 1998 to September 2011**

**Parts Included**

(1) Sash (custom sizes will not be pre-marked for hardware placement)

(1) Installation Guide

**Installation Tools Needed:**

- Safety Glasses
- Phillips Screwdriver
- Pencil
- Drill / Driver
- 3/32" Drill Bit
- Pry Bar
- Utility Knife
- Pliers

---

**Split Arm**  
**May 1995 through September 1998**

**Parts Included**

(1) Sash

(1) Installation Guide

**Installation Tools Needed:**

- Safety Glasses
- Phillips Screwdriver
- Flat Blade Screwdriver
- Pencil
- Drill / Driver
- 3/32" Drill Bit

---

For corrosion resistant sash channel, use Section A
**Straight Arm**  
May 1995 through September 1998

**Parts Included**
(1) Sash  
(1) Installation Guide

**Installation Tools Needed:**
- Safety Glasses  
- Phillips Screwdriver  
- Pencil  
- Drill / Driver  
- 3/32” Drill Bit  
- Pry Bar  
- Utility Knife

---

**Split Arm**  
1966 through May 1995

**Parts Included**
(1) Sash  
(1) Installation Guide

**Installation Tools Needed:**
- Safety Glasses  
- Phillips Screwdriver  
- Pencil  
- Drill / Driver  
- 3/32” Drill Bit

---

**Straight Arm**  
1966 through May 1995

**Parts Included**
(1) Sash  
(1) Installation Guide

**Installation Tools Needed:**
- Safety Glasses  
- Phillips Screwdriver  
- Pencil  
- Drill / Driver  
- 3/32” Drill Bit  
- Pry Bar  
- Utility Knife

---

**Components Identification**

- Waterbar  
- Weatherstrip  
- (Located on Top of Sash)

---

**Straight Arm Operator**

**Split Arm Operator**

**Sash Bracket**

**Hinge**

**Keeper(s)**

---

**Notched**  
Operator Channel Type
Stationary
1966 through Present

Parts Included
(1) Sash
(1) Installation Guide

Installation Tools Needed:
• Safety Glasses
• Hammer
• Drill / Driver
• 3/32” Drill Bit
• Small Pry Bar
• Thin Blade Putty Knife
• Glass Clamps
• Vise Grips
• Pliers
• 4d Finish Nails

Additional Parts Required
(Available at your Andersen Dealer)
(1) Package 11/16” Flat Head Nails
(1) Package Sash Clips
(1) Package 1/2” x #6 Screws

1966 through April 1995, December 1998 to Present
Part Number 1359408
Sash Clip
Part Number 1359410

May 1995 through December 1998
11/16” Flat Head Nails
1/2” x #6 Screws
1. Remove Sill Stop
- Break varnish or paint seal by scoring between Sill Stop and Extension Jamb with a utility knife.
- Pry under Sill Stop from the exterior to remove Sill Stop. Use care to avoid damaging Sill Stop.
- Remove finish nails in Sill Stop by pulling through back side with pliers.

2. Remove Operator

**WARNING**
Removing Operator allows Sash to swing freely. During windy conditions, Sash may suddenly swing out and break free causing injury, product, and/or property damage. Support Sash during the entire replacement process.

- Remove screws from Operator base. Only three (3) of the five (5) screws shown are used depending on left or right hand operation. Keep screws for reuse.
- Slide Operator Arm Shoe off Operator Channel on bottom of Sash.

3. Remove Hinge Plate Screws

**WARNING**
When Hinge Screws are removed Sash is free to come out. To avoid injury, product, and/or property damage, use a reasonable number of people to support the Sash during the replacement process.

**WARNING**
Use extreme care when working around window opening. Never leave a window opening unattended, especially when children are present. Falling from window opening may result in severe injury or death.

- Open Sash sufficiently to access screw in Top and Bottom Hinge Plate. Top and Bottom Hinge remain attached to Sash. It may be necessary to move Sash for access to all screw locations. Keep screws for reuse.

4. Remove Sash Hardware
- Remove Top and Bottom Hinges from Sash.
- Remove Operator Channel from bottom of Sash.
- Remove Keeper(s) from Sash.
- Remove Snugger Screw(s) from Sash if present.
5. Attach Operator Channel

**NOTICE**
Dash ( | ) and Circular (○) marks on the Sash are predrill locations for standard size sash. Use only the mark indicated in each instruction. These marks are **NOT** used in **Step 5** for Operator Channel location.

- Position *Replacement Sash*, interior side up, with top of Sash facing away. Apply *Operator Channel* to bottom of Sash using measurement "A" found in table. Dimension "A" is measured from the opposite side of *Keeper(s)* location.

**CAUTION**
Drill only 1/8" deep to avoid sash or glass damage.

- Drill 3/32" holes 1/8" deep using *Operator Channel* as a template. Fasten using previously removed screws.

6. Attach Hinges

- Position *Bottom Hinge* with first screw hole over the ( | ) mark on the new Sash for standard sizes or at measured location for custom sizes.

- Predrill through ( | ) mark or measured location, 1/8" deep with a 3/32" drill bit and secure with previously removed 5/8" flat head stainless steel hinge screw. Repeat for remaining hinge holes.

- Repeat procedure for *Top Hinge*.

- Install *Snugger Screw*, using old Sash for location, measuring from end of Sash.

7. Attach Keepers

- Position keeper(s) according to location on old sash.
  - For standard sizes, position lower hole at ( | ) mark.
  - For custom sizes, measure according to Table-1 on page 2.

- Predrill through ( | ) mark(s) or measured location(s) 1/8" deep with a 3/32" drill bit, using *Keeper(s)* as a template. Note the open part of the *Keeper* faces away from the glass.

- Fasten using previously removed screws.

8. Install New Sash

- Install new *Sash* in frame opening reversing *Steps 1, 2, and 3*.

- Fasten *Top and Bottom Hinge Plate* to frame using hinge screws removed in **Step 3**.

- Fasten *Operator* using screws removed in **Step 2**.

- Fasten *Sill Stop* using finish nails.
1. Remove Stopper Screws
   - Open the Sash to about 30° and remove the Stopper Screws from the Top and Bottom Hinge Channel.
   - Keep screw for reuse.

2. Release Operator Arm
   - Release the Operator Arm Clip from the Sash Bracket using a flat blade screwdriver.
   - Crank Operator open to clear Sash.
   - Lift Operator Arm and swing out under Sash.

3. Release Hinge Arm
   - Lift Hinge Arm off Stud being careful to keep Adjustment Insert attached to arm.
   - If Limited Vent Control Plate is present, remove screw and slide it off Hinge Plate.

4. Remove Sash
   - Hold Sash firmly and slide Top and Bottom Hinge Shoes off ends of hinge channels and remove Sash.
   - Place Sash on a flat working surface with interior facing up.

5. Remove Sash Hardware
   - Remove Top and Bottom Hinges from Sash.
   - Remove Sash Bracket from bottom of Sash.
   - Remove Keeper(s) from Sash.
   - Remove Snugger Screw(s) from Sash if present.
   - Keep screws for reuse.
6. Attach Sash Bracket

**NOTICE**
Dash (|) and Circular (◎) marks on the Sash are predrill locations for standard size sash. For custom-size sash, use measurements shown. Use only the mark indicated in each instruction.

- Position replacement Sash, interior side up, with top of Sash facing away. Position **Sash Bracket** to bottom of Sash at the pre-marked dash (|) for standard sizes or at measured location for custom sizes.

**CAUTION**
Drill only 1/8” deep to avoid sash or glass damage.

- Predrill through (I) mark or measured location, 1/8” deep with a 3/32” drill bit. Using **Sash Bracket** as a template, drill remaining holes and secure with previously removed screws.

7. Attach Hinges

- Position **Bottom Hinge** (black or brown Hinge Shoe) with first screw hole over the (I) mark on the new Sash for standard sizes or at measured location for custom sizes.

- Predrill through (I) mark or measured location, 1/8” deep with a 3/32” drill bit and secure with previously removed 5/8” flat head stainless steel hinge screw. Repeat for remaining hinge holes.

- Repeat procedure for **Top Hinge** (white or almond Hinge Shoe).

8. Attach Keepers

- Position keeper(s) according to location on old sash.
  - For standard sizes, position lower hole at (I) mark(s).
  - For custom sizes, measure according to **Table-1** on page 2.

- Predrill through (I) mark(s) or measured location(s) 1/8” deep with a 3/32” drill bit, using **Keeper(s)** as a template. Note the open part of the **Keeper** faces away from the glass.

- Fasten using previously removed screws.

9. Install New Sash

- Install new **Sash** in frame opening reversing **Steps 1, 2, 3, and 4**.

- Slide **Top and Bottom Hinge Shoes** onto **Hinge Channels** toward frame’s side jamb.

- Insert and secure previously removed **Stopper Screws** in **Top and Bottom Hinge Channel**.

- Attach **Top and Bottom Hinge Arms** to frame using **Adjustment Insert** and **Clip**.

- Attach **Operator Arm** to **Sash Bracket** using screwdriver to snap **Stud Fastener** in place.
1. Remove Sill Stop

- Break varnish or paint seal by scoring between Sill Stop and Extension Jamb with a utility knife.
- Pry under Sill Stop from the exterior to remove Sill Stop. Use care to avoid damaging Sill Stop.
- Remove finish nails in Sill Stop by pulling through back side with pliers.

2. Remove Operator

**WARNING**
Removing Operator allows Sash to swing freely. During windy conditions, Sash may suddenly swing out and break free causing injury, product, and/or property damage. Support Sash during the entire replacement process.

- Remove screws from Operator base. Only three (3) of the five (5) screws shown are used depending on left or right hand operation. Keep screws for reuse.
- Slide Operator Arm Shoe off Operator Channel on bottom of Sash.

3. Remove Hinge Plate Screws

**WARNING**
When Hinge Screws are removed Sash is free to come out. To avoid injury, product, and/or property damage, use a reasonable number of people to support the Sash during the replacement process.

**WARNING**
Use extreme care when working around window opening. Never leave a window opening unattended, especially when children are present. Falling from window opening may result in severe injury or death.

- Open Sash sufficiently to access screw in Top and Bottom Hinge Plate. Upper and Lower Hinge remain attached to Sash. It may be necessary to move Sash for access to all screw locations. Keep screws for reuse.

4. Remove Sash Hardware

- Remove Top and Bottom Hinges from Sash.
- Remove Operator Channel from bottom of Sash.
- Remove Keeper(s) from Sash.
- Remove Snugger Screw(s) from Sash if present.
5. Attach Operator Channel

**NOTICE**

Dash (I) and Circular (O) marks on the Sash are predrill locations for standard size sash. Use only the mark indicated in each instruction.

These marks are **NOT** used in Step 5 for Operator Channel location.

- Position *Replacement Sash*, interior side up, with top of Sash facing away. Apply *Operator Channel* to bottom of Sash using measurement "A" found in table. Dimension "A" is measured from the opposite side of *Keeper(s)* location.

**CAUTION**

Drill only 1/8" deep to avoid sash or glass damage.

- Drill 3/32" holes 1/8" deep using *Operator Channel* as a template. Fasten using previously removed screws.

6. Attach Hinges

- Position *Bottom Hinge* with first screw hole over the (I) mark on the new Sash for standard sizes or at measured location for custom sizes.

- Predrill through (I) mark or measured location, 1/8" deep with a 3/32" drill bit and secure with previously removed 5/8" flat head stainless steel hinge screw. Repeat for remaining hinge holes.

- Repeat procedure for *Top Hinge*.

- Install *Snugger Screw*, using old Sash for location, measuring from end of Sash.

7. Attach Keepers

- Position keeper(s) according to location on old sash.
  - For standard sizes, position lower hole at (I) mark.
  - For custom sizes, measure according to Table-1 on page 2.

- Predrill through (I) mark(s) or measured location(s) 1/8" deep with a 3/32" drill bit, using *Keeper(s)* as a template. Note the open part of the *Keeper* faces away from the glass.

- Fasten using previously removed screws.

8. Install New Sash

- Install new *Sash* in frame opening reversing Steps 1, 2, and 3.
- Fasten *Operator* using screws removed in Step 2.
- Fasten *Sill Stop* using finish nails.
1. Remove Stopper Screws
   - Open the Sash to about 30° and remove the Stopper Screws from the Upper and Lower Hinge Channel.
   - Keep screws for reuse.

2. Release Operator Arm
   - Release the Operator Arm Clip from the Sash Bracket using a flat blade screwdriver.
   - If there is a sash Limited Vent Control Plate, remove screw and slide it off from the hinge plate.

3. Release Hinge Arms
   - Remove Fastener Screw from Top and Bottom Hinge Arms and window frame.
   - Crank Operator open to clear Sash.

4. Remove Sash
   - Hold Sash firmly and slide Top and Bottom Hinge Shoes off ends of hinge channels and remove Sash.
   - Place Sash on a flat working surface with the interior facing up.

5. Remove Sash Hardware
   - Remove Top and Bottom Hinges from Sash.
   - Remove Sash Bracket from bottom of Sash.
   - Remove Keeper(s) from Sash noting difference between upper and lower keepers.
   - Remove Snugger Screw(s) from Sash if present.
   - Keep screws for reuse.
6. Attach Sash Bracket

**NOTICE**
Dash (I) and Circular (⊙) marks on Sash indicate predrill locations. Use only the mark indicated in each instruction.

- Position replacement Sash, interior side up, with top of Sash facing away. Apply Sash Bracket to bottom of Sash using the (I) mark on the new Sash.

**CAUTION**
Drill only 1/8” deep to avoid sash or glass damage.

- Predrill through (I) mark 1/8” deep with a 3/32” drill bit. Using Sash Bracket as a template, drill remaining holes and secure with previously removed screws.

---

7. Attach Hinges

- Position Bottom Hinge (black or brown Hinge Shoe) with first screw hole over the (I) mark located on the replacement sash.
- Predrill through (I) mark(s) 1/8” deep with a 3/32” drill bit and secure with previously removed 5/8” flat head stainless steel hinge screw. Repeat for remaining hinge holes.
- Repeat procedure for Top Hinge (white or almond Hinge Shoe).

---

8. Attach Keepers

- Position Keeper(s) on Sash according to location on old Sash.
- Predrill through (I) mark(s) 1/8” deep with a 3/32” drill bit, using Keeper(s) as a template. Note the open part of the Keeper faces away from the glass.
- Fasten using previously removed screws.
9. Install New Sash

- Position Sash in frame opening and reverse procedure, Steps 4, 3, 2, and 1.
- Slide Top and Bottom Hinge Shoes onto Hinge Channels towards frame’s side jamb.
- Insert and secure previously removed Stopper Screws in the Top and Bottom Hinge Channel.
- Attach Top and Bottom Hinge Arms to frame using washer and Hinge Screw.
- Attach Operator Arm to Sash Bracket using screwdriver to snap Stud Fastener in place.
1. Remove Sill Stop
   - Break varnish or paint seal by scoring between Sill Stop and Extension Jamb with a utility knife.
   - Pry under Sill Stop from the exterior to remove Sill Stop. Use care to avoid damaging Sill Stop.
   - Remove finish nails in Sill Stop by pulling through back side with pliers.

2. Remove Operator

   **WARNING**
   Removing Operator allows Sash to swing freely. During windy conditions, Sash may suddenly swing out and break free causing injury and/or product damage. Support Sash during the entire replacement process.

   - Remove screws from Operator base. Only three (3) of the five (5) screws shown are used depending on left or right hand operation. Keep screws for reuse.
   - Slide Operator Arm Shoe off Operator Channel on bottom of Sash.

3. Remove Hinge Plate Screws

   **WARNING**
   When Hinge Screws are removed Sash is free to come out. To avoid injury, product, and/or property damage, use a reasonable number of people to support the Sash during the replacement process.

   **WARNING**
   Use extreme care when working around window opening. Never leave a window opening unattended, especially when children are present. Falling from window opening may result in severe injury or death.

   - Open Sash sufficiently to access screw in Upper and Lower Hinge Plate. Top and Bottom Hinge remain attached to Sash. It may be necessary to move Sash for access to all screw locations. Keep screws for reuse.

4. Remove Sash Hardware
   - Remove Top and Bottom Hinges from Sash.
   - Remove Operator Channel from bottom of Sash.
   - Remove Keeper(s) from Sash noting difference between upper and lower keepers.
   - Remove Snugger Screw(s) from Sash if present.
5. Attach Operator Channel

**NOTICE**

The Dash (I) and Circular (O) marks on the Sash are locations for predrilling. Use only the mark indicated in each instruction. These marks are NOT used in Step 5 for Operator Channel location.

- Position replacement Sash exterior side down with top of Sash facing away. Apply Operator Channel to bottom of Sash using measurement "A" found in table. Dimension "A" is measured from the opposite side of the Keeper(s) location.

**CAUTION**

Drill only 1/8" deep to avoid sash or glass damage.

- Predrill screw holes 1/8" deep with a 3/32" drill bit, using Operator Channel as a template and secure with previously removed screws.

6. Attach Hinges

- Position Bottom Hinge with first screw hole over the (I) mark located on the replacement Sash.
- Predrill through (I) mark(s) 1/8" deep with a 3/32" drill bit and secure with previously removed 5/8" flat head stainless steel hinge screw. Repeat for remaining hinge holes.
- Repeat procedure for Top Hinge.
- Install Snugger Screw, using old Sash for location, measuring from end of Sash.

<table>
<thead>
<tr>
<th>Overall Sash Width Dim.</th>
<th>DIM. &quot;A&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>22-15/16&quot;</td>
</tr>
<tr>
<td>CW</td>
<td>27-1/4&quot;</td>
</tr>
<tr>
<td>CXW</td>
<td>34-3/4&quot;</td>
</tr>
</tbody>
</table>

7. Attach Keepers

- Position Keeper(s) on Sash according to location on old Sash.
- Predrill through (I) mark(s) 1/8" deep with a 3/32" drill bit, using Keeper(s) as a template. Note the open part of the keeper faces away from the glass.
- Fasten using previously removed screws.

8. Install New Sash

- Install new Sash in frame opening and reverse procedure, Steps 3, 2, and 1.
- Secure Top and Bottom Hinge Plate to frame with hinge screws removed in Step 3.
- Attach Operator using screws removed in Step 2.
- Attach Sill Stop using finish nails.
1. Remove Stopper Screws
   - Open the Sash to about 30° and remove the Stopper Screws from the Upper and Lower Hinge Channel.
   - Keep screws for reuse.

2. Release Split Arm Stud Clip

   **WARNING**
   Releasing Operator Arm allows Sash to swing freely. During windy conditions, Sash may suddenly swing out and break free causing injury and/or product damage. Support Sash during entire replacement process.

   - Release the Split Arm Stud Clip from the Sash Bracket using a flat blade screwdriver.
   - If there is a sash Limited Ventilation Control Plate, remove screw and slide it off from the hinge plate.
   - Crank detached Split Arm out of the way for Sash removal.

3. Remove Sash

   **WARNING**
   Use extreme care when working around window opening. Never leave a window opening unattended, especially when children are present. Falling from window opening may result in severe injury or death.

   - Release Stud Clips on the Top and Bottom Hinge using a screwdriver.
   - Hold Sash firmly and slide the Top and Bottom Hinge Shoes off ends of hinge channels and remove Sash.
   - Place Sash on a flat working surface with the interior facing up.

4. Remove Sash Hardware

   - Remove Top and Bottom Hinges from Sash.
   - Remove Sash Bracket from bottom of Sash.
   - Remove Keeper(s) from Sash noting difference between upper and lower keepers.
   - Remove Snugger Screw(s) from Sash, if present.
   - Keep screws for reuse.
5. Attach Hinges

**NOTICE**

Sash are designed for universal replacement. The Dash (I) and Circular (O) marks on the Sash are locations for predrilling. Use only the mark indicated in each instruction.

- Position **Bottom Hinge** with first countersunk screw hole over the (O) mark located on the new Sash. (**Bottom Hinge** has a black shoe, **Top Hinge** has a white shoe.)

**CAUTION**

Drill only 1/8” deep to avoid sash or glass damage.

- Predrill through (O) mark(s) 1/8” deep with a 3/32” drill bit and secure with previously removed 5/8” flat head stainless steel hinge screw. Repeat for remaining hinge holes.
- Repeat for **Top Hinge**.

6. Attach Split Arm Bracket

- Position **Split Arm Bracket** with first screw hole over the (O) mark located on the new Sash.
- Predrill through (O) mark(s) 1/8” deep with a 3/32” drill bit and secure with previously removed 5/8” flat head stainless steel hinge screw. Repeat for remaining hinge holes.
- Install **Snugger Screw**, using old sash for location, measuring from end of Sash.

7. Attach Keepers

- Position **Keeper(s)** on Sash according to location on old Sash.
- Predrill through (O) mark(s) 1/8” deep with a 3/32” drill bit, using **Keeper(s)** as a template. Note the open part of the **Keeper** faces away from the glass.
- Fasten using previously removed screws.

8. Install New Sash

- Position **Sash** in frame opening and reverse procedure, Steps 1, 2, and 3.
- Secure **Top and Bottom Hinge Plate** to frame with hinge screws removed in Step 3.
- Attach **Operator** using screws removed in Step 2.
- Attach **Sill Stop** using finish nails.
1. Remove Stopper Screws
   - Open the Sash to about 30° and remove the Stopper Screws from the Top and Bottom Hinge Channel.
   - Keep screws for reuse.

2. Remove Sash
   - Release Stud Clips on the Top and Bottom Hinge using a screwdriver.
     
     **Notched Channel**
     - Hold Sash firmly and slide the Operator Arm Shoe to the notch, lift shoe up to release the Operator Arm.
     
     **Satin or Regular Channel**
     - Hold Sash firmly and slide the Operator Arm Shoe from its channel while sliding the Top and Bottom Hinge Shoes off the ends of the hinge channels and remove Sash.
     - Place Sash on a flat working surface with the interior facing up.

   - Open the Sash to about 30° and remove the Stopper Screws from the Top and Bottom Hinge Channel.
   - Keep screws for reuse.

3. Remove Sash Hardware
   - Remove Upper and Lower Hinges from Sash.
   - Remove Channel from bottom of Sash.
   - Remove Keeper(s) from Sash noting difference between upper and lower keepers.
   - Remove Snugger Screw(s) from Sash if present.
   - Keep screws for reuse.

   - Use extreme care when working around window opening. Never leave a window opening unattended, especially when children are present. Falling from window opening may result in severe injury or death.
4. Attach Hinges

**NOTICE**

Sash are designed for universal replacement. The Dash (I) and Circular (C) marks on the Sash are locations for predrilling. Use only the mark indicated in each instruction.

- Position **Bottom Hinge** with first countersunk screw hole over the (C) mark located on the new Sash. (**Bottom Hinge** has a black shoe, **Top Hinge** has a white shoe.)

**CAUTION**

Drill only 1/8" deep to avoid sash or glass damage.

- Predrill through (C) mark(s) 1/8" deep with a 3/32" drill bit and secure with previously removed 5/8" flat head stainless steel hinge screw. Repeat for remaining hinge holes.
- Repeat for **Top Hinge**.

5. Attach Operator Channel

**Silver Channel**

- Position edge of **Silver Channel** 1-3/8" in from Sash corner.
- Predrill screw hole 1/8" deep with a 3/32" drill bit and secure with previously removed screws in Step 3. Repeat for remaining Channel holes.
- Install **Snugger Screw** if present, using old sash for location, measuring from end of Sash.

**Regular Channel**

- Position **Regular Channel** centered on Sash.
- Predrill screw hole 1/8" deep with a 3/32" drill bit and secure with previously removed screws in Step 3. Repeat for remaining Channel holes.
- Install **Snugger Screw** if present, using old Sash for location, measuring from end of Sash.
6. Attach Keepers

• Position Keeper(s) on Sash according to location on old Sash.

• Predrill through (○) mark(s) 1/8" deep with a 3/32" drill bit, using Keeper(s) as a template. Note the open part of the Keeper faces away from the glass.

• Fasten using previously removed screws.

7. Install New Sash

• Position Sash in frame opening and reverse procedure, Steps 1, 2, and 3.

• Secure Top and Bottom Hinge Plate to frame with hinge screws removed in Step 3.

• Attach Operator using screws removed in Step 2.

• Attach Sill Stop using finish nails.
1. Determine Vintage of Unit
- Determine vintage of unit, by date on glass, pre or post April 1995.
- Locate unit size in chart below. The number in center of unit determines amount of clips required, marks on Sash indicate clip location.
- Use appropriate Clip Package or combination of packages. Properly dispose of any extra clips.

### 1966 through April 1995, December 1998 to Present Clip Packages

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>1359408</td>
</tr>
</tbody>
</table>

### April 1995 through December 1998 Clip Packages

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>1359410</td>
</tr>
</tbody>
</table>

### Stationary Casement/Awning and Picture Window Clip Location

**IMPORTANT**
- Number in center of unit shows number of Sash Clips required. Marks on Sash indicate clip location.
- For custom size sash use clip quantity of next wider or taller sash.

2. Position and Attach Clips
- Place Sash on a clean surface with the interior facing up.
- Locate Clip location and number of clips according to above chart.
- Use Clip as a template to drill 3/32” pilot holes 1/16” deep for Clip attachment.
- Attach Clips using 1/2” x #6 Screws provided.
1. Remove Sash Stops and Remove Sash

**WARNING**
Use extreme care when working around window opening. Never leave a window opening unattended, especially when children are present. Falling from window opening may result in severe injury or death.

- Break the varnish or paint seal by scoring with a thin blade putty knife or utility knife.
- Remove Sash Stops using a small pry bar. Gently pry up Sash Stops and carefully remove without scratching surrounding trim.
- With one person holding the Sash from the interior with glass clamps and/or vise grips and one person holding the Sash from the exterior with glass clamps, use a small pry bar to pry Sash Clips loose removing staples with a pliers.
- Remove the Sash.

**WARNING**
Windows and doors can be heavy. Use safe lifting techniques and a reasonable number of people with enough strength to lift, carry and install window and door products to avoid injury and/or product damage.

2. Install Sash and Apply Sash Stops

**NOTICE**
Sash Stops can be painted or stained prior to installation.

- While holding Sash securely with glass clamps, position it in the opening. Pull Sash inward tight against the frame with glass clamps or by gripping the Sash Clips with vise grips. Push the Sash tight from the exterior. **DO NOT** push on the glass.
- Fasten Sash Clips using 11/16" Flat Head Nails.
- Reposition the Sash Stops and secure them using 4d Finish Nails. Leave a 1/32" space between the Sash Stops and the Sash.
1. Remove Sash Stops and Remove Sash

**WARNING**
Use extreme care when working around window opening. Never leave a window opening unattended, especially when children are present. Falling from window opening may result in severe injury or death.

- Break the varnish or paint seal with a thin blade putty knife.
- Remove *Sash Stops* using a small pry bar. Gently pry up *Sash Stops* and carefully remove without scratching surrounding trim.
- With one person holding the *Sash* from the interior with glass clamps and/or vise grips and one person holding the *Sash* from the exterior with glass clamps, use a small pry bar to pry the *Sash Clips* loose removing staples with a pliers.
- Remove the *Sash*.

**WARNING**
Windows and doors can be heavy. Use safe lifting techniques and a reasonable number of people with enough strength to lift, carry and install window and door products to avoid injury and/or product damage.

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- Fasten *Sash Clips* using 11/16" Flat Head Nails.
- Reposition the *Sash Stops* and secure them using 4d Finish Nails. Leave a 1/32" space between the *Sash Stops* and the *Sash*.