

# NORWOOD

NEVER ORDINARY

## Window Installation

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**Introduction:**

Before you begin, please read and understand these installation instructions. The following installation instructions are recommended by Norwood and failure to follow them may void the warranty.

**The following installation instructions are the minimum required by Norwood. If local building codes exceed these installation instructions, then the local building codes must be followed.**

Because of newer construction methods and the increasing need for energy efficiency in our homes, this installation method seals the window to the exterior weather barrier. A sill pan is used to capture any water that may collect under the window and redirects it to the outside preventing it from entering the wall cavity.

Norwood recommends that the following 6 steps be followed during the window installation:

1. Make sure that the rough framing sill is level. It's important to begin with a level sill because any deviation of more than 1/8" in 2' is not acceptable; the unit must be installed level.
2. The unit must be installed plumb.
3. The unit must be installed square, check the diagonal measurements to make sure that they are correct.
4. Check the vertical plane of the wall. The wall must be straight to avoid twisting of the frame. See page below on how to check vertical plain.
5. Check the windows for proper operation and locking. The margins must be correct and have consistent clearance between the sash and the unit frame. We recommend having a clearance of 1/8" and that the unit is properly shimmed.
6. Due to settlement or movement in the building. The windows must be re checked for proper operation and locking and that the margins remain consistent and that there is a consistent 1/8" clearance between the sash and frames. Any required adjustments should be made before interior trim work is completed. The windows should remain in the locked position during construction.

**These steps are explained in greater detail below and failure to follow may void your warranty.**

These installation instructions are to be used in the installation of flat windows only. For any other window type such as bays and bows consult your local Norwood dealer.

**Material and Tools required for Installation.**

**Material:**

- #10 x 2" corrosion resistant pan head screws.
- High compression shims.
- Galvanized drip cap
- High quality exterior grade silicone sealant.
- Low expansion insulating foam or batt insulation. **Do Not use high expansion Foams.**
- 6" wide self-adhesive flashing.
- Building wrap
- Thin, rigid and bendable sheet metal for sill pan or pre-manufactured sill pan such as Sure Sill™ .

**Tools:**

- Hammer, Level, Tape Measure, Square, Metal cutting shears, Utility knife

**When purchasing silicone, self-adhesive material, and expansion insulating foam make sure that they are all compatible with each other.**

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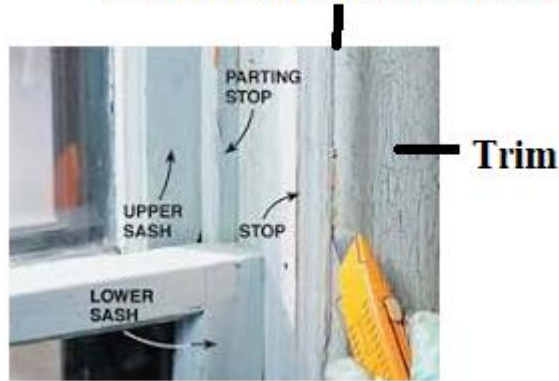
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## Removal of existing window if required

### From the interior remove the existing trim.

- With a utility knife score the interior finish where the trim joins to the window frame. (See picture 1)
- With a pry bar pry the casing from the window. A good idea would be to protect the wall from damage by putting a protective piece of wood under the pry bar.
- Once the trim is removed pull any nails from it and sit aside if it is to be reused.

### Score where trim meets Frame



Picture 1.

### Removing the window frame:

- Where possible the operating sash should be removed from the frame.
- Remove any insulation from between the window frame and rough opening.

Depending on how the existing window is installed removal of the frame may vary.

#### Through the frame:

- Using a reciprocating saw locate the nails/screws between the window frame and rough opening and cut them.

#### Through the exterior casing:

- Score the paint between the exterior trim and window frame as shown in picture 1.
- With a pry bar pry the casing from the window. A good idea would be to protect the wall from damage by putting a protective piece of wood under the pry bar.

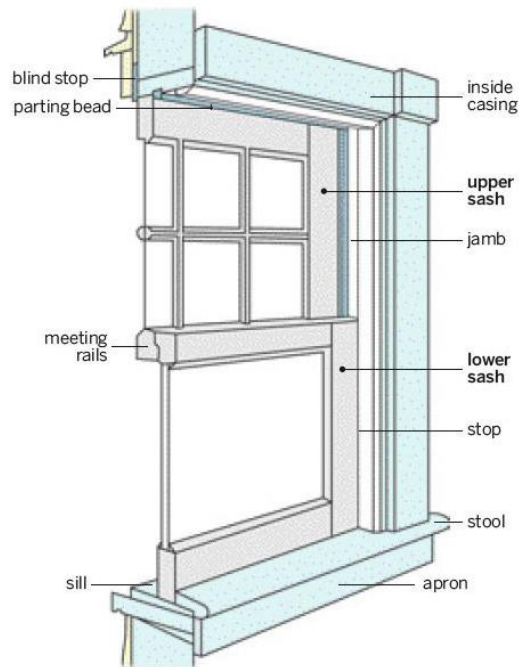
Once the both the interior and exterior trim has been removed and all nails/ screws have been cut with one person inside and one out push toward the exterior.

**Care should be taken as the window will be heavy.**

**If the existing frame and exterior trim is not being removed:**

- From the interior remove the stop
- Remove the bottom sash. If the sash is connected to a weight that is inside the jamb cut the cord and let the cord fall inside the jamb. The new window will not require this cord.
- Remove the parting bead.
- Remove the top sash.
- Because all windows are different remove any remaining pieces that are attached to the existing jamb. Be careful not to damage the existing window jamb.

Refer to picture below of a typical hung window.



**Disposal of Wood that has been painted with Lead Based paints.**

Many structures built before 1978 have paint that contains lead. Common renovation activities like sanding, stripping and cutting can create hazardous lead dust and chips by disturbing lead-based paint. Lead from paint, chips, and dust can pose serious health hazards to children and adults, if not taken care of properly. The Governmental Environmental Protection Agencies have developed requirements to ensure health risks are minimized during renovation, repair and painting of buildings that contain lead-based paint. Check with your local government for the proper disposal of any material that may contain lead paint.

Please visit the United States Environmental Protection Agency website for more information.

[www.epa.gov/lead](http://www.epa.gov/lead).

## Installation of new window

### Step 1, Checking the new window:

- Check to ensure that the window is the size, color, configuration, and grill pattern as ordered.
- Examine the windows for any shipping damage such as scuffed paint, broken glass, broken hardware or torn screens.

If there are any discrepancies, **DO NOT INSTALL THE UNIT**, please contact your local Norwood dealer for further instructions.

Unpack the window:

- Remove all cardboard wrapping and shipping blocks.
- Remove all strapping.
- Remove any dirt and dust from all trims with a clean cloth; this is to ensure that the silicone and flashing will stick.

### Step 2, Check the rough opening (RO):

- Make sure that the opening is level, square and plumb.
- Measure the opening, the opening should be  $\frac{3}{4}$ " larger than the window in both height and width. For larger windows measure in several places to ensure that the studs or header is not bowed.

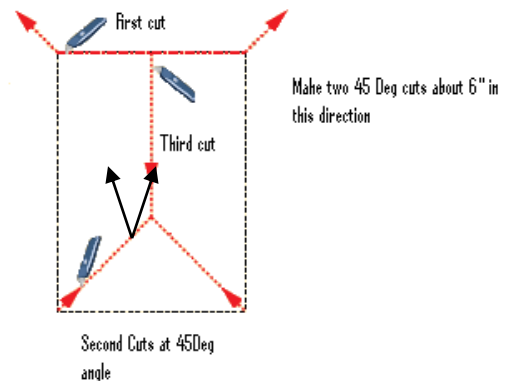
**Note: If a pre-manufactured sill pan is being used, the height of the sill pan must be added to the height of the R.O. Any problems found with the opening should be fixed before you continue.**

### Step 3, Cutting the Weather resistant Barrier:

- Start by cutting along the top of the weather barrier (tight to the header) from one side to the other.
- At the bottom of the opening cut an inverted "Y" in the weather barrier. Start at each bottom corner and cut at a 45° angle toward the center. From the Center where the 2 angle cuts meet cut straight up to the header.

-Fold the two sides and bottom of the weather barrier over the rough opening and fasten using staples to the interior of the opening. **DO NOT FASTEN THE TOP.**

- At the top of the opening cut two 6" 45° angle cuts in the weather barrier. Make the cuts up and away from the opening.
- Temporarily staple the top flap of weather barrier up and away from the opening, exposing the wall sheathing.

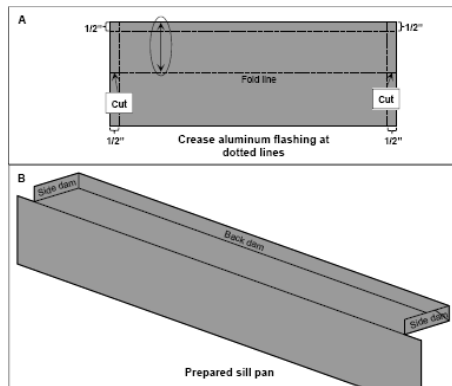


#### Step 4, Installing the sill pan:

**Note: With the development of more advanced and flexible water proofing materials by manufacturers such as Tyvec and Dupont, Norwood endorses their use for the sill pan applications in lieu of method below. The materials must be installed according to the manufactures directions and they must be applied in such a way that any potential water does not enter the building cavity.**

How to make the sill pan:

- The sill pan is made from thin, rigid and bendable sheet metal
- Measure the width of rough opening and cut the sheet metal 1" longer
- Measure the thickness of the wall and cut the sheet metal 3" wider.
- Measure the thickness of the wall and add 1/2". Make a line on the length of the sheet metal equal to that measurement. From that line cut in 1/2" from each end.
- On the wider side of the sheet metal bend the side and two ends (where you made the 1/2" cuts) up until they are at 90° angle. Fold the corners toward the outside of the bend.
- Fold the narrower side of the sheet metal in the opposite direction at a 90° angle.



- Place sill pan in the opening for a “dry fit”.
- If sill is not level place shims under the sill pan (not the window) to level it.
- Remove the sill pan and put two 3/8" beads of silicone on the sill.
- Put 3/8" bead of silicone on the inside of the downward lip of the sill pan.
- Place sill pan back into opening and press into silicone to ensure a good fit.
- Pre-drill pan for screws 16" on center, before inserting screw inject the hole with silicone.
- Cover the heads of the screws with silicone.

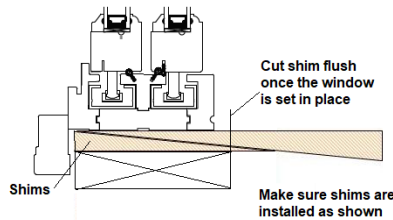
**Note: If a Pre-manufactured sill pan is being used, install it in accordance to manufacturer's instructions.**

## Step 5, Installing the window:

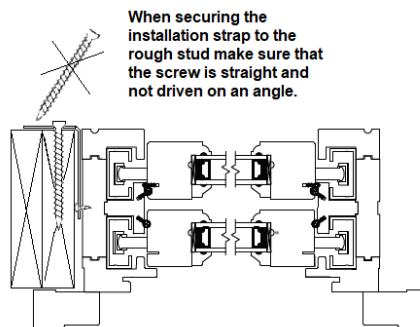
**Note: All Norwood windows are installed using installation straps screwed to the side of the window (at the factory) and fastened to the framing from the inside.**

**This is at least a two-person step, one person outside holding the window and one person inside to fasten the window to the framing.**

- For operating windows ensure the window is closed and locked.
- Put a continuous 3/8" bead of silicone around the sides and top of the window behind the exterior casing. **DO NOT silicone the bottom.**
- Place window in the opening.
- Center window in the opening.
- Level and Plumb the window using shims.
- Place shims 1" from top and bottom and behind each installation strap.
- For Double and Single hung windows shims must be placed at the meet rail.
- Where multiple windows are joined, place shims under joins. **Do not shim the head jamb**



- Bend the installation straps over the interior framing and secure with screws.



**Note: Do not install the installation strap screw to the rough stud opening at an angle. Doing so will pull the frame in at an angle and may cause operational issues.**

- Check any operating window for proper operation. If window is not operating properly, adjustments may be required to the shims (may be over shimmed).

Due to settlement or movement in the building. The windows must be rechecked for proper operation and locking and that the margins remain consistent and that there is a consistent 1/8" clearance between the sash and frames. Any required adjustments should be made before interior trim work is completed. The windows should remain in the locked position during construction

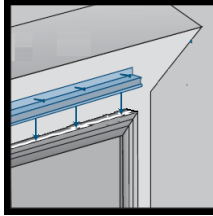
### **Tip:**

**Keep checking the gap between the sash and the window frame to ensure proper shimming. If the gap between the sash and the window frame is consistent, then the window is not over shimmed.**

**Note: DO NOT over shim and DO NOT shim the top.**

## Step 6, Installing Drip cap:

- Cut galvanized drip cap ¼" longer than width of window.
- Apply ¼" bead of silicone to top of the exterior trim of the window and the wall.
- Center drip cap over window on top of exterior trim and nail in place. Place nails in the exterior wall sheathing not through the top of exterior trim. Put silicone on the heads of the nails.



## Step 7, Applying self-adhesive flashing:

- Cut 2 pieces of self-adhesive flashing 12" longer than the height of the window and 1 piece 14" longer than the width of the window.
- Apply the two longer pieces of flashing tight to the exterior trim (1 piece on each side). Allow the flashing to go above the window 5" on each side.
- Apply the third piece of flashing at the top of the window tight to the exterior trim.
- Fold the weather barrier (temporarily stapled up above window) down over the flashing at the top of the window. Secure in place using building tape or silicone.
- Place tape over the diagonal cuts in the weather barrier at the top of the window.

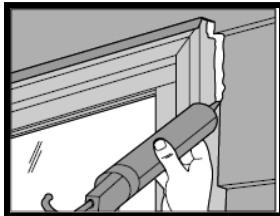


## Step 8, Finishing the installation:

- You could use either fiberglass insulation or low/minimal expansion foam to insulate the window.
- Before installing the exterior sheathing silicone where the exterior casing where it meets the exterior wall.

**Note: DO NOT pack fiberglass insulation too tight. FOLLOW ALL manufacturer's installation instruction on any expanding foam used.**

- After the exterior finish is complete silicone the sides of the window.







## Installing Curved top Windows

### **Step 1:**

- Prepare the opening in the same manner as for a rectangular window.

### **Step 2:**

- Install the window in the opening the same way as a rectangular window.

**Note: All Norwood windows are installed using installation straps screwed to the side of the window (at the factory) and fastened to the framing from the inside.**

### **Step 3:**

- Apply self-adhesive conformable flashing around the window.
- Fold down the weather barrier over the flashing.

### **Step 4:**

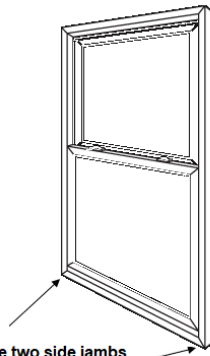
Finish the installation in the same manner as a rectangular window.

### **Addition notes on the final installation**

- Protect all windows during the construction stage.
- If the factory finish gets damaged during construction touch it up immediately using the touch up paint supplied.
- Operate all windows before interior trim is applied, make any necessary adjustments.
- After finishing the exterior façade to the windows, the brick or stone façade should allow space for the backer rod and caulk on the units installed with siding façade. On the units with masonry, the façade should allow for ¼" control joint on the side jamb and head (1/4" to 3/8" @ the sill).
- Check our web site at [norwoodwindows.ca](http://norwoodwindows.ca) and down load our Norwood Product Care and Installation Manual 2021 for important information on how to maintain your Norwood products.

### Twisted frames

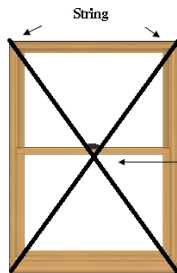
In an ideal installation condition, the face or plain of the window is parallel to the wall in which it is installed. However, even though the window jambs may be level and plumb if the jamb are not on the same plain it will give the appearance that the window is twisted or warped. See below.



Even though the two side jambs are plumb, if they are not on the same plain the window frame will appear to be warped.

You can check for this in several ways:

- Check the wall that the window is installed is plumb.
- String a string from each top corner to the opposite bottom corner, if there is a gap between the strings where they meet then the frame is twisted.



When string is pulled tight and if there is a gap where they cross the frame is twisted

If the above test shows that the frame is twisted then adjustments will have to be made to the wall to correct the problem. If the frame is not twisted then there may be an issue with the frame or sash.