



Removing Old Windows Part II -Frame Out

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Removing Steel Windows

Replacement Windows were designed to fit into old wood double hung frames with both sash removed. However, due to consistencies in wall thickness of most buildings, other window types (casement, sliders, and other metal windows) can be removed and the opening prepared to receive replacement windows designed to be installed against an exterior "stop." Replacement products can have a full frontal flanger, setback nailing flange or be smooth as box-frame windows have.

It is important to measure accurately and order exact sizes to maximize fit and minimize trim work. As you read the following guidelines you can better judge how to specify windows for a particular installation and how to more accurately estimate labor.

Removing A Steel Window

Note: These drawings are typical installations. Though not to exact scale, they are representative of most situations and are meant as a guide only.

Steel windows were usually installed with screws into the frame around the opening under the sash of operating units or outside the glass of fixed units. Usually covered with putty, most can be located with a little work.



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Remove the screws you can and drill out those you can't. Once the screws are removed, the whole window unit can be removed and the opening prepared with capping and/or new blindstop of aluminum/vinyl or wood as described in "aluminum window removal."

Under frequent circumstances, however, old steel windows are too firmly embedded to be "removed" as described above. The first step, then, is to remove the window operating assemblies by unscrewing or cutting with recipro-saw or hacksaw.

Once operating assemblies are removed, carefully remove or tape-protect all glass in the fixed panels.

Using the recipro-saw or hacksaw, cut all remaining muntins and bottom metal frame leaving sides and top intact to serve as outside blindstops.

There are a couple of ways to create "the blindstop" to mount the new window against. First is to leave the old frame intact. Using coil stock, shape a cap" to fit over the old steel frame remaining in the opening.

The "U" shaped cap (app. 1"x1"x1") will cover the frame and hide the old exterior putty or concrete embedment. Once caulked, the exterior will be neat, finished, and weathertight.

Cover or caulk all cracks and holes. Install new window against outside "blindstop" formed by remaining frame pieces covered by the "U" cap.







Removing Aluminum Windows

Aluminum windows are usually secured by fasteners through the exterior flange into the plywood sheathing or wall studs. Also fasteners can be mounted through the jamb (in the sash channel) into the wooden frame around the opening.

Most aluminum window frames can be pried up and out of the opening without disturbing the siding or interior finish. Begin by removing the operating sash from the window. If there is a fixed panel, remove glass carefully. In windows with fixed panels, the glass may need to be broken to remove it. Use nylon filament tape in a criss-cross pattern to minimize shattering.

Remove all visible screws in the window jambs. If this does not free the window, use a flat putty knife between the window frame and the internal jamb trim to locate the flange screws.

Using a cold chisel or putty knife, attempt to shear all the mounting screws between the flange and the side of the house.

Note: The drawings are typical conditions. Though not to exact scale, they are representative of most situations and are meant as a guide only.

Once all fasteners are sheared or weakened, carefully pry up the bottom frame using a block under the pry bar to protect the inside sill. If fasteners can't be sheared or weakened, careful prying can remove the window. Protect the opening as much as possible to minimize damage to siding or interior finish.

Once the bottom frame is arched sufficiently, use a recipro-saw or hacksaw and cut the frame piece. After it is cut, gentle use of the pry bar can remove both sides and top of frame without disturbing the siding or interior jamb, head, or sill trim.



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Depending on the condition of the opening and the type of exterior trim or siding, it may be necessary to cap the opening to make a smooth transition of outer and inner surfaces in preparation for the new window. At least cover or caulk all cracks and holes.

Wood furring can be used to fill gaps in between siding and interior walls and to provide structural support in the opening.

Most openings will now be ready for the installation of exterior "blindstops". Aluminum or vinyl angles (1" x 3") or wood (1" x 1" or 1" x 2") can be used for stops and should be installed to the outside allowing for depth of replacement window (3 1/4"). Install these stops on head and both jambs only. Sloped sills require the use of the provided sill angle. Flat sills should be caulked where the window meets the sill so as not to block drainage.

Install new window against outside stop, caulk and trim interior and cap exterior as necessary. It may be wise to cap the furring or outside stop before installation to minimize after-installation trim work.

Pre-extruded shapes or available "Snap-Trim" can make the job easier. Mount the angle of the snap trim with "pop rivet" to the top of window. After placed in opening, mount angle to other sides.

Plumb and square window using snap-trim angle and pop rivet to window and screw trim angles to interior window opening, cap exterior and caulk. Once all trim angles are secure "Snap Over" trim and caulk. The use of Snap Trim eliminates the need of stops and shims.

Frame Out -Destructive Tear Out

Metal Windows

Metal windows are often buried behind siding that was installed during new construction or a previous remodel of the home. "J" Channel was used to finish the newer siding, and cutting back everything to expose the window's fin can be an expensive approach. If the decision is for a Frame-Out, then a "destructive" Frame-Out may be the only alternative. This method is best when there is a large overhang or other architectural element on the home to limit the amount of direct rainfall on the new window.

The operable sash and any fixed panels of glass are removed down to the old frame - sill, header and jambs. A pry bar is used to get under the sill, and using a wood block to avoid damage to the interior finish, the sill of the old window is pried up, the



header pried down, and the jambs in from the side. This collapses the window into the opening so it can be removed. Prying the old frame, in essence, tears the mounting fin of the old window out of the space between the framing and the siding - destroying the continuity of the old flashing.

It is imperative that some continuity be restored using liquid flashing, or adhesive-backed flashing to repair the opening.

A drip cap and some functional sill pan should be created. "Cover" the 4 sides with cellular pvc of MDF board, which is sealed to the old opening.

The bottom line is to be sure that water is diverted, drained and dried to effect a weather resistant installation.

Taking the Old Frame Out

Removing the Old Frame

Depending on how the old window is finished on the outside, you can choose to remove the old frame completely versus leaving in the old frame. You start the same by removing the sash (operating and fixed) and cutting out the meeting stile.

Once the meeting stile is removed, used the reciprocal saw to cut the sill and header part of the frame slightly to facilitate bending and collapsing it using a crow bar to pry it up.

Use a wood block under the crowbar to minimize potential damage to the sill and header. Pry directly up and the frame will come out from between the siding and the sheathing. It won't take much effort to do so and that will "tear" the nailing fin slots away from the nails allowing the frame to collapse.

Do it on the bottom, the sides and the header and you should be able to remove it completely.









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Nailing Fin Frame-Out- Removal Sequence 1

Step 1: Step 3: A very common window Removed the siding installation of an old carefully nails carefully finned window has the from and make adjustmounting fin covered by ments as necessary to "J" Channels and drip expose the complete cap and has the fin. siding butting up to the "J" Channel. Try to disrupt old flashing as little as possible. Remove all the siding pieces from around the window as cleanly as possible- trying to preserve any flashing. The cleaner the cutaway, the easier and better the finished replacement will be.

Step 2:

Cut-back the siding with circular saw or Oscillating Tool sufficient width (approximately 1/2" to 2") to expose the old window's mounting fin.

Take care not to cut too deep.





Nailing Fin Frame-Out- Removal Sequence 2

Step 1:

Many original windows with a fin have been trimmed over with applied exterior wood trim or casing to cover the mounting fin and abut the siding.

Carefully break any sealed joints between the casing, the siding and the window.

If there is no casing and the siding butts to window frame using a "J" Channel, cut-back the siding with circular saw or Fein Tool to expose the old window's fin, and proceed the same from there.



At the finish, use "J" Channel or extended leg "C" Channel to "cap" the siding's cut ends and form a joint with the new casing trim.



Step 3:

Removed the nails carefully from the old window's fin.



Try to disrupt old flashing as little as possible.



Step 4: Create Sill Flashing using adhesive-backed

flashing, and/or liquid applied flashing to cover the old sill and extend up the jambs about 6 inches.

Cut new casing and drip cap to use over new fin mounted window when installed.





Removing Old Windows from CBS Construction

Replacement applications in Coastal Regions often are for windows installed in Concrete Block with Stucco finish (CBS).

For Stucco applications, there are unique conditions for stucco over wood frame and stucco over concrete block construction. Some conditions of stucco finish on wood frame are covered elsewhere such as "Jump Frame" and applications where the stucco is cut back removing a window with brick mould and the new product is installed with a wood block installed over the mounting fin of the new window and the resulting assembly is installed in the opening and sealed to the remaining stucco finish.

The conditions and instructions covered here will apply primarily to building constructions considered CBS and wood frame with similar stucco finish.

Stucco covers the edge of the Old Window

Because the original construction had the stucco finish applied after the window or door was installed, the stucco often will partially cover the flange of the old window. This creates problems that must be dealt with: Measurement, Removal of the Old Window, and Finish of the New Window.

1. Measure- It is difficult to measure for the new window because so much of the old window can be hidden behind the exterior stucco finish and the interior wallboard and/or sill finish. The new window cannot be too large or too

small, for obvious reasons. The success of the job can be made or broken with proper measure or improper measurement.

2. Removal of Old Window- When removing the old window, it is problematic because the stucco needs to be kept out of the way of the removal, but damaging the stucco can require costly and difficult stucco repair, which almost never can be matched to the old finish – making for an unsightly exterior finish.

The interior wallboard and sill, if damaged, can also require difficult and costly repair and/or replacement of components.

How to Remove the Old Window

Remove any of the operating panels or sash. The exterior stucco finish must be cut back to the edge of the flange. This is possible to do with a Fein oscillating tool and a masonry blade. Carefully determine where the flange edge is on all 4 sides. Using a framing square or other straight edge, cut the stucco to the flange tips on the top, bottom and sides. You should be able to get a clean cut with no damage.

Next, using the Fein oscillating tool and a sealant blade, free the window on the inside from any caulked or sealed joints on the sides, top or bottom.

Remove any of the operating panels or sash.



Tape any remaining glass panes, and using the Fein oscillating tool, remove the glazing beads, glazing compound, and glazing adhesive and carefully remove the stationary glass pane(s).

If there is a mullion or other separating piece, if possible use the Fein oscillating tool to cut it free

from the window frame.

Remove the inside sill (if any).

Remove all mounting screws from the window frame.

If possible, cut the side frame pieces through to release the frame from the opening.

If unable to cut the frame, you can collapse the window frame, carefully as shown. The old window should be out with minimum damage to the opening.

How to Prepare the New Opening

Clean any debris from the opening, including old shims, wood mounting materials and mounting screws.

Measure the Height to determine if the old sill is at its proper height, or if the old window "floated above".



The sill needs to be established at the proper dimension, and it needs to be flat and level the full width of the underlying framing.

Thinset, or similar, can be mixed and poured into the space to create the proper sill width, level and create the proper height dimension.

If possible, a properly sized wood framing member or MDS pre-formed pvc board



can be inserted to create the flat, level sill in its proper position. This will eliminate practice of removing flange to get new window into opening.



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Enlarging an Opening

The opportunity to add more glass area in any home is an opportunity to let in more light and ventilation and improve the view. Adding more glass area can be done by removing a single window and adding a bay or bow window, or even a wider combination window.

Considerations when Removing a Window and making the Opening Larger

1. There must be room for the new window or door.

Beyond measuring for the width and height of the new window or door, it is important to consider the need for a header above the new window, and to be sure electrical and heat wires, pipes and ducts are not in the way or are properly moved or repositioned to accommodate the new unit.

2. The ceiling beams above must be supported during the construction.

Proper installation of all windows and doors includes a header and jack studs on either side. This assembly transfers the weight from the structure above, sort of around the window, and transfers the weight to the floor below.

When you make the opening larger, the existing header must be removed, and a new header inserted

between the studs in the outer wall, and new jack studs inserted to transfer the weight supported by the longer header, again to the floor.

While you are removing the old header and installing the new one, the beams in the ceiling above need to be supported. You can do this with a 2x4minimum, spanning a greater width than the new window or door, held up snug by 2x4's as shown. Do this as close to the outside wall as is practical.





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3. Carefully re-establish the water management system in the wall.

The new window or door will be exposed to more outside weather, and if it is a door, then the sill will be subject to water intrusion if it is not properly crafted.

Study the installation procedures for Bay, Bow and Garden windows and entry and patio doors for the steps needed to create a proper water



management system for the newly added unit. Once you are adding a new header and support framing, the techniques for new construction will apply.

The good news is that when making the opening bigger, finishing the exterior siding and trim and the interior wallboard and molding is simpler because the pieces you might remove are not destroyed and should be able to be trimmed to size and reused.









Window Fitters Guide to Window Installation