

SIMPLE SOLUTIONS FOR LEAKING WINDOWS



By Charles Antis



Picture frame

Let's examine the components of an aluminum sliding-frame window. The best way to conceptualize the window frame is to compare it to a picture frame, like the one hanging on your living room wall. Notice the corners are cut at an angle and fastened and/or glued together. The aluminum frame on your window or



Window frame



When it rains, roofing contractors are flooded with complaint phone calls regarding leaky roofs. But while it seems that the leaking originates from the roof, this is not always the case. More than 20 percent of all leaks originate from poorly installed aluminum-framed windows and doors.



Mitered corner screwed together

sliding door is built the same way. A mitered corner is screwed together and then glued with butyl rubber. The design of this window or door allows water to enter the inside of the mitered corner joint, causing many aluminum-framed windows and doors to leak.



Typical staining

window. Another exacerbating factor occurs when weep holes are clogged or poorly positioned. Weep channels or holes are the little cutouts in the frame that allow the trapped moisture to “weep” back out onto the exterior wall or patio deck.



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Failing corner joint

Sealant failure is exacerbated by the fact that windows and doors are seldom truly level. They are either bowed from the middle to the corners or one corner is lower than the other. This happens due to poor installation, house settlement or sagging in load-bearing walls. When a corner sits lower than the rest of the frame, it causes the rainwater to pool at the lower ends and leak into the wall cavity from the tiniest imperfections in the frame. Water damage usually shows up on the sill plate, on the carpet or in the wall of the ceiling directly below the leaking



Weep holes

SLIDING WINDOW AND DOOR FAILURE SOLUTIONS

Option 1: Replacement

Window replacement requires removal of the wall siding system in order to correctly overlap the window flashing flanges within the wall flashing system. Due to the amount of labor necessary, plus the cost for replacement windows, this option is recommend-

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ed when aesthetics and window functionality is the major concern.

Option 2: Rehabilitation

Window rehabilitation can be a cost-effective repair option. Sliding aluminum window rehabilitation is successful in alleviating moisture intrusion more than 90 percent of the time. Proper window repair incorporates the following procedures:

1. New weep channels must be installed in window frame corners.

Factory-installed weep channels are often inadequate in size or they are positioned away from the corners where leaking occurs. By installing new quarter-inch weep channels a half inch from the corners, proper drainage is facilitated.

2. All debris must be removed from the window track.



Debris in the window track

Debris caused by corrosion, dust, silt from stucco, bugs and dilapidated sealants often impede water flow within the tracks and blocks the factory-installed weep channels. The simple act of vacuuming out the tracks can help facilitate better window drainage.

3. Mitered corner joints at track transitions are altered and resealed.

Since most window leaking is traced to failure at this location, it is critical that a reliable seal is facilitated. Factory sealants often consist of butyl rubber, which can eventually delaminate and

fail. In order to allow for a complete mitered corner seal, it is critical that the window be disassembled and all unnecessary extruded metal be removed from the corner on the jamb and sill plates. The entire corner is then wire-brushed and resealed using low-module urethane rubber.

4. The dam bar must be thoroughly sealed.



Dam bar

When window rehabilitation fails in eliminating leaking, it is often because the dam bar is not properly sealed to the jamb plate. This vertically extruded, 1-inch-high section of the sill plate on the window frame creates the dam that keeps the rain water within the frame from dripping onto your sill. It is critical that both ends of this frame be properly cleaned and sealed to the vertical sections of the window frame.

5. Mounting bolt penetrations and frame alterations must be properly sealed.



Mounting bolt

When the sliding window section is removed, mounting bolt penetrations or alarm installation penetrations are often visible within the bottom of the window frame. All penetrations must be completely sealed or leaking will occur.

6. Frame openings surrounding window must be properly sealed.

Although most window leaks originate from frame failure, installation failure is also a common source. By eliminating large gaps between the window frame and adjacent siding system using urethane injection, flashing installation failure can be discouraged.

The average cost for the procedures listed above is usually between \$250-\$450, and it often takes properly trained technicians several hours to complete. In some instances, a more brief specification can eliminate most window leaking, which includes only installing new weep channels in window corners and injecting frame openings with urethane.

During the next rainy season, remember that the leaks that show up on floors, lower-level ceilings, walls and window sills may not be coming from the roof, as is typically assumed. When window leaks occur, make sure that you contact an experienced vendor who is qualified to facilitate the repair of window flashing failure.

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