

# CONSTRUCTION WINDOW CLEANING

## *A Primer*

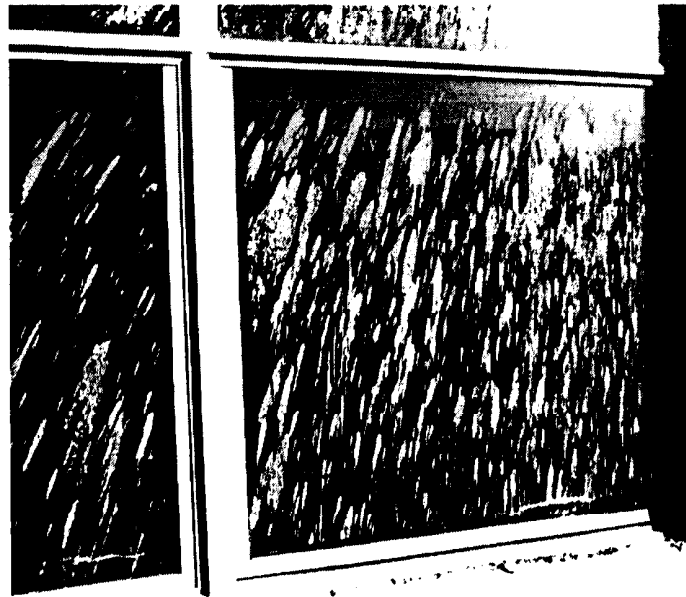
by Daniel A. Fields

**M**uch has been written and discussed on post-construction clean-up and window cleaning, a portion of which has been over simplified. There is nothing simple about construction window cleaning - I know. I have been in this business for over 30 years, having learned the trade from my father, who learned from his. I have seen many changes in the industry, good and bad, have seen innovations come and go, and I have survived, profitably.

The purpose of this article is to help enlighten general contractors, window cleaners, and other responsible parties in the residential construction industry on how to identify some of the numerous causes of scratched glass. This article will discuss the responsibilities of the construction window cleaner, other subcontractors and the general contractor, the three major causes of scratched glass, and the best solutions to this widespread problem.

### **THE PROBLEM**

It is widely accepted that the window cleaner is solely responsible for the condition of the windows after he has cleaned them. Current reasoning is that, "if there are scratches, then they must have been caused by, and only by, the window cleaner". However, the reality is that precautions can and should be taken by all trades before, during, and after the window cleaning is done to ensure a scratch-free window. It is the rule rather than the exception that the construction window cleaner will encounter excessive plaster, paint and texture overspray, splashed concrete, mortar and mud, and smeared silicone and grout on the windows. Although a moderate amount of these items can be expected on the window, the current practice of an



*This is an example of the condition a cleaner can expect to find on a window "ready" for cleaning.*

accelerated building schedule, coupled with the declining level of competence and capability of other trades, has resulted in an irresponsible attitude towards protecting glass and frames. It then becomes the responsibility of the construction window cleaner to remove all such debris from the windows without damaging the frames, glass or sealants. The window cleaner should be knowledgeable enough to make a determination **PRIOR** to commencement of work that this cleaning can be done safely, without risk of damage to the windows and subsequent liability for such damage. Unfortunately, many window cleaners are not properly trained to clean windows safely, to determine the cause of existing scratches, or to even "notice" that there are potential hazards on the glass.

### **THE CAUSES**

There are three prevailing causes of scratches on glass: First, there is the damage caused by subcontractors during the construction of the house such as,

- workers putting ladders and equipment against windows;
- lathers dragging wire lath across glass;
- plasters wiping plaster off glass;
- painters dry razor blading paint off glass and sanding perimeter of wood doors;
- welders grinding steel rails in area of glass;
- mason smearing mortar off glass;
- tile contractor wiping tile grout off glass; and
- interior texture contractor scraping excess texture off a dry window and letting sanding pad ride on glass when sanding texture, prior to painting.

It cannot be overstressed that the competent window cleaner MUST know how to identify these factors PRIOR to cleaning the window.

A second source of scratches, (and the most common), is the technique which the window cleaner chooses to clean the windows. The tools and method used, and the preparation taken prior to cleaning the window are all significant factors. For example, the glass must be kept wet during the cleaning process. Razor blades or broad knives should never be moved backwards on glass. This will trap debris under the blade and cause scratches on glass. Excessive plaster, cement and grout must be chemically loosened from the window (i.e., dissolved off the surface) before any window cleaning takes place.

The third cause of scratched glass, rare in the past but becoming more common, is limited to scratches found on tempered glass. "Some" tempered glass being used in new residential construction has a blemished surface, usually, but not always, found on the side of the glass with the identifying safety engraving. This blemished surface consists of small pimples on the surface of the glass not visible to the casual eye, but which cause a "tinkling" sound when scraped off the surface. These pimples, which are caused during the tempering process, are scraped off during normal construction window cleaning and then dragged across the surface of the glass causing numerous scratches.

This condition has been confirmed by several experts and consultants in the glass and tempering industry. Although there is no universal agreement on the technical "terms" or the "causes" of this condition, the resultant scratched glass is undeniable. The "terms" being used to describe this surface condition range from "Heat Prickling",

"Orange Peel", "Roll Pick", "Heat Scorch", "Pitting", "Seeds", "Kink", "Checks", pimples, bubbles and blisters, to just plain "garbage" that was not washed off prior to the glass entering the tempering furnace. The "causes" being blamed for this condition are: dirty furnace rollers, dirty filters, dirty furnace conditions, location of furnace in factory (approximate to other equipment), over heating of the glass, and not cleaning glass prior to entering tempering furnace. Although this type of blemished surface found on tempered glass has become commonplace in residential construction, it should be unacceptable to reputable developers.

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### **THE SOLUTION**

Having recognized the major causes of scratched glass, all parties must work together to prevent the problem from occurring. Care must be taken by the general contractor as early as the bidding process to ensure that hired subcontractors are careful and qualified. In the short term, the acceptance of a subcontractor's appealing low bid may lead to expensive problems down the road.

Subcontractors should be required to protect all the windows in the area where they are working to prevent any damage that may be caused as a result of their work. In the large scheme of things, tape and plastic can do much to protect the glass, and the exposure of the subcontractor.

Any window cleaner hired for the project must have the knowledge required to clean windows in a construction environment without causing damage, and should also know the limits of his ability. Once again, a low bid may indicate a lack of experience necessary for safe and effective cleaning. Excessive amounts of debris on glass (e.g., texture, paint, plaster, concrete, etc.) should be brought to the attention of

the job superintendent PRIOR to cleaning. Any person cleaning heavily soiled windows without the proper tools or technique should be stopped by the project superintendent. This pertains not only to the contracted window cleaner, but to any subcontractor trying to clean overspray or other debris from the window.

With respect to the scratches caused by cleaning blemished surfaces on tempered glass, it is the sole responsibility of the tempering company and the window manufacturer to ensure that all windows constructed with tempered glass have a blemish-free surface. This will enable the construction cleaner to clean minor debris from the glass without scratching it. General contractors should only purchase windows from reputable window manufacturers with a proven track record. When windows are delivered to the jobsite, especially during the model stage or if there is a new window supplier, the superintendent should wet a section of the stamped side of the window, then take a razor blade and run it over the wet surface of the glass on the stamped side. If he hears a "tinkling" sound, he knows that this glass is flawed, and he should not accept it from the manufacturer. It is much less costly to ensure, prior to installation, that all windows are free of this blemished surface.

Ultimately it is the responsibility of the general contractor to see that all subcontractors and suppliers perform and supply a quality product. Regardless of the position taken by any subcontractor or supplier on this issue, the homebuyer has paid for, and deserves, scratch-free glass. It is to this end that we should all strive.

Dan Fields is the owner of Fields Window Cleaning, a construction cleaning company in the San Francisco Bay Area. In 1995, our company cleaned more than 1500 homes for major home developers. Our goal is to complete 2000 homes in 1996.

