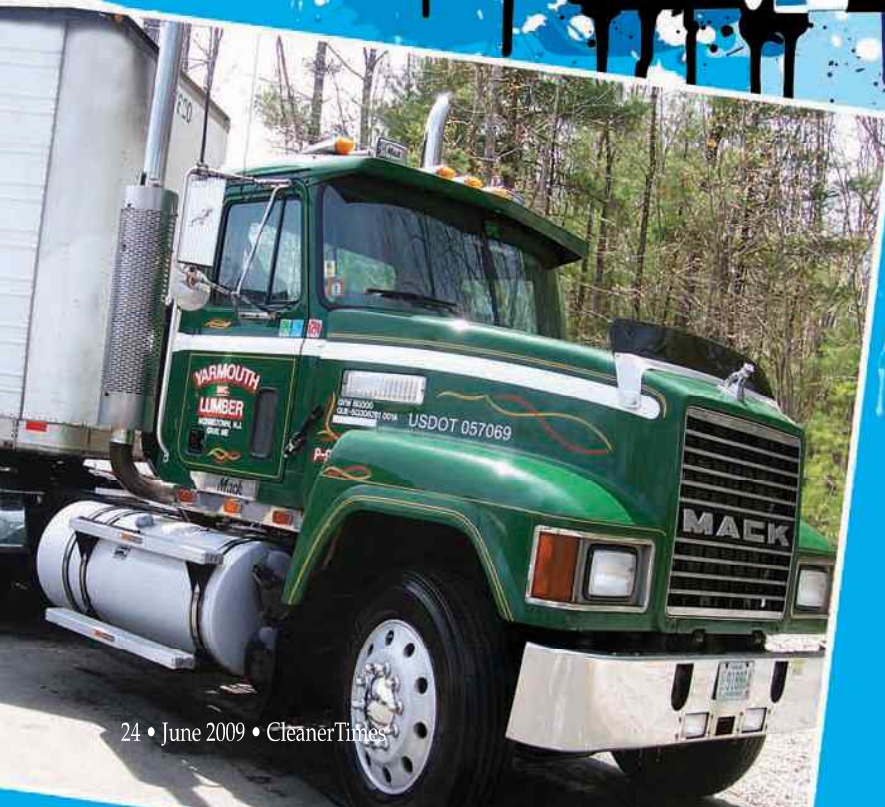


the Two-Step System for Mobile Fleet Washing

by Eric Clark



Washing fleets can be very challenging, especially when you're not equipped with the important knowledge about detergents used in this industry. As we all know, time is money, and in the pressure wash industry labor is the largest expense. When washing fleets, the better the detergents used, the faster the job is completed. The less time the brush is in your hand, the more time the wand is, resulting in an overall lessening of time for the per unit wash average.

Causes of Road Film

Road film is a thin layer of dirt and pollutants held to the surface by an electrostatic bond. This film results from the buildup of road dirt, diesel smoke, and other foreign contaminants emitted from the vehicle engine or picked up in the atmosphere. It is created as a high-speed moving vehicle generates air friction and static electricity, forming an electrostatic bond to the pollutants. Road film consists of pollutants which freeze on the vehicle surface like steel shavings to a magnet. These vehicle pollutants can be removed by neutralizing the magnetic bond, which allows the dirt to fall off. This is where the two-step wash method comes into play.

The Two-Step Wash System

In this method of washing, the dirt should be 100 percent defeated chemically, and the high-pressure rinse should only serve to expedite the rinsing process.

The Principal Components

In the two-step wash system, the two principal components are an acid-based cleaning solution (step 1) and an alkaline solution (step 2). The two main chemicals generally involved in the chemical reaction at the heart of the two-step truck wash system are hydrofluoric acid and sodium hydroxide (caustic soda). The step-1 solution will usually contain a hydrofluoric acid, or a sulfuric acid to help maintain the low pH necessary for the chemical reaction. Higher quality products also contain phosphoric, and or citric acid for a less dulling effect on the vehicle's aluminum surfaces.

The Chemical Emphasis

The "touchless" system relies on a chemical emphasis to clean the vehicle; a two-step procedure that can be designated as the chemical "shock". The first step employs the use of the low pH "acidic" product, which is applied to the entire vehicle surface. After the first step, or low pH application takes place, the second step, or high pH application takes place. Here the alkaline product is applied to neutralize the low pH

that was applied at the first step. The rapid neutralization upon the second step being applied is the chemical "shock" result. The chemical reaction at this point releases the statically held road film and dirt from the surface of the truck or trailer being washed. Conventional cleaning methods cannot produce this phenomenon. The surfactants and wetting agents contained in the alkaline product not only assist in neutralizing the first step product (resulting in a near neutral pH—a slightly alkaline solution), but also release the static road film, exhaust soot, oils, and surface dirt. The released soils and spent cleaning solution are then ready to be flushed from the vehicle's surface with a fresh-water rinse.

What Are the Merits of Two-Step Vehicle Cleaning Methodology?

- It requires less physical agitation (labor/equipment).
- It's more cost effective than any other vehicle cleaning system.
- It results in a cleaner vehicle surface.
- It's environmentally friendly. Resultant run-off is a near neutral pH waste water stream.
- It cleans vehicle areas that generic soaps can't clean without brushes and hand labor, such as wheels, hubs, and frames.
- It cleans irregular surfaces such as tankers, livestock haulers, gravel trains, and the huge trash hauling vehicle wash market.

As entrepreneurs, we all recognize that a profitable business is based on staying up-to-date on the latest, most effective and efficient wash methods. In doing so, we can also provide our customers with superior service and quality control. By staying current with industry trends, we are able to better preserve our business, and, therefore, live the dream for years to come!

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