

## Vacuuming

The primary objective of carpet cleaning is appearance restoration and hygiene. This is accomplished by the removal of dirt, pollutants, and contaminants, including biopollutants. The E.P.A makes a very persuasive argument that our first objective when cleaning carpet should be for health. Decomposing dust mite bodies, dust mite feces, and human and animal dander are major sources of allergens found in soiled carpet and pose a health concern for everyone.

Tracked on soils account for up to eighty percent of all soil on carpet. Many of these soils contain abrasive grit (e.g.; sand, gravel and concrete dust) that may not always be visible but will do significant damage to the carpet. This damage

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includes tearing fibers, wearing away surfaces, opening up new soil collector sites, and effecting the carpets ability to project prismatic colors. Airborne contaminants are usually oily soils from volatilized cooking oils, furnace exhausts, and other combustion emissions. These soils, which account for approximately twenty percent of the soil on carpet, have a natural affinity to dust and other tracked on dry particulate soils and oils, making vacuuming less effective. Considering these facts, all soil management programs should start with a preventative procedure known as vacuuming. Vacuuming is a fundamental cleaning principle that reduces harm to human health and prolongs the useful life of a carpet. No other factor so effectively controls the amount of soil deposited on carpet.

There are essentially two main forms of vacuum cleaners, uprights and canisters. Although both models have their place, uprights are easier to use and are more effective because their revolving brushes help whisk up soils deeply embedded in the carpet's pile. Canister models offer various tools such as a dusting brush, a crevice tool, and an upholstery nozzle; however, more and more uprights are equipped with similar accessory attachments that are easy to uncouple for storage.

While canister models are superior for such chores as dusting baseboards, window sills, and moldings, upright models equipped with an adjustable height setting and a power driven brush are recommended for carpet. Self propelled models equipped with beater bar brushes are not required but in some cases assist in ease of operation and removal of embedded dirt. Although almost any vacuum cleaner is apt to provide satisfactory cleaning on low pile, light weight carpet, medium pile height (5/16 inch and greater), requires a significant difference in vacuum performance. In some cases the vacuum manufacturer will provide information pertaining to the effectiveness of

their models based on tests such as the ASTM F608-89 (Evaluation of Carpet Embedded Dirt Removal Effectiveness of Household Vacuum Cleaners). Other information such as agitator (brush) speed and air velocity should be evaluated since better models reportedly pick up soils six times faster than weaker models. Additionally, pile lifter models should be considered for nap restoration in commercial installations. Ultimately, the vacuum selected must be capable of removing both loose, dry soil and as many small particles and biopollutants as possible (the smaller the particle the more likely it can penetrate into the lung). Because of this it is very important that the vacuum is equipped with an efficient filtering system. To assure for maximum operation, users should be alert for loss of performance or a change in motor noise, both of which generally indicate that a bag change is necessary (bagless models are not recommended due to the potential for raising debris when emptying the dust bin). Brushes and belts should be checked periodically for wear.

A regularly scheduled vacuuming program will vary from one carpet installation to another depending on traffic conditions. The most important factor is to apply adequate vacuuming where it is needed. After a time, traffic patterns may develop on the carpet in areas subjected to continuous foot traffic such as hallways, stairs, and areas in front of chairs due to soil build-up. These areas should receive special attention. Altering traffic patterns by simply rearranging furniture will help reduce soil accumulation.

Finally, ambient relative humidity is typically lower in the cooler months, which results in static accumulation. Because dirt and litter are attracted to static generating surfaces, including carpet, thorough vacuuming may be more difficult to obtain during this time.