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Study by The University of Texas at Arlington

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Research Study Shows That Hand Washing of Cars at Home is Harmful to Automobile Finishes

The [International Carwash Association](#) working through a special Carwash Research Foundation Grant to the University of [Texas at Arlington, Texas](#), has conducted extensive car washing tests this past year to determine the effect on car finishes by comparing various car washing techniques ranging from professional car washing to the bucket and sponge used by many auto owners.

Hand wash jobs are extremely harmful to automobile finishes - Tests conducted by the University of Texas to compare surface disturbances showed that a single home hand wash on an automobile can produce scratches that penetrate as deep as 1/10 of the total thickness of the automobile's paint.

These test findings at the University of Texas substantiated tests done over ten years ago by the Technical University of Munich, Germany, in association with Mercedes-Benz, which at that time showed that similar damage was done to an automobile when using detergent, low water volume commonly found in hose nozzles at home, buckets of water, sponges and towels used in the average home car washing.

Specific scientific tests at the University of Texas further showed that hand car washing can produce so many marks on a car's finish that they cannot even be counted. The tests showed that in all hand washing temperatures, surface reflectance readings steadily declined, with some hand washing techniques being considerably worse than others. By contrast, when cars were washed by professional full service car washes, there was virtually no change in the surface reflectance or shine readings.

The tests showed that the average backyard hose is not able to supply enough water along with the detergent action to avoid damaging the car's finish. The most harmful method of washing cars was found to be the special "car wash" brushes that hook on to a garden hose and are purchased from local hardware stores or automotive supply dealers. The use of this type of brush with the low water pressure that comes out of the garden hose is the most destructive on the finish of an automobile. The tests also showed that techniques used at professional car washes are virtually harmless to automobile finishes. Findings from the University of Texas research study indicate that with the large amounts of water and specialized detergents used in professional car washes, sophisticated gloss and reflectance meter readings from new finishes used on automobiles were virtually the same before and after the equivalent of several months of normal washings in a professional car wash.

The professional car wash is able to provide and use tremendous amounts of water along with specialized detergents and appropriate mechanical action from cloth pads and curtains which the backyard hose and bucket hand car wash is not able to supply. This important and interesting research study performed by the University of Texas found that today's automobile owner is much wiser to have their car washed by a professional car wash, rather than washing it at home in their own backyard.