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WATER TREATMENT SERIES | Water Softener December 2011

Water is the single most important component in your car wash and is the base of all your soaps and waxes. It is the medium in which the dirt is trapped and removed from the surface of the car. In its spot free form it is what guarantees a perfect blemish free finish to the surface of the vehicle. The main forms of water treatment encountered on most washes are softening, de-chlorination and Reverse Osmosis (R/O). In this issue we will cover water softeners.

All fresh water entering the site should first be softened by passing through a water softener. Water softening essentially is the removal of calcium carbonate and other mineral ions, such as magnesium which are the primary component of water hardness (measured in grains per gallon).

The main reasons for the removal of these are to improve the effectiveness of your soaps and to prevent scaling in your equipment, including the membranes of your RO system, which greatly reduces their capacity. In hard water situations, the mineral salts in the water react with the soap to form an insoluble precipitate we call soap scum. This is difficult to rinse away and also effectively reduces the amount of soap available to do the cleaning. If your water is hard you will be using more soap to achieve the same result as soft water.

Hard water generally does not clean well, especially in touch free situations. Therefore, softening your water ensures reduced soap costs and increased efficiency as well as happier customers and repeat business. Water softeners on your car wash work by a process of ion exchange. Basically the positively charged mineral ions are attracted to the negatively charged resin beads in the softener. Eventually the resin beads will have attracted all the mineral ions they are capable of, and will have to be regenerated. This is done firstly by backwashing down the drain, then recharging the resin with a brine (salt) solution.

During this process the sodium ions in the brine solution attach themselves to the resin beads, and the softener is ready to process another batch of water. All washes should have at hand a water hardness test kit and should regularly check the hardness of the water before and after the softeners. Typically you are looking for less than 1 grain per gallon after the softener. If your water is hard, ask yourself why. Is the softener working correctly? Does it regenerate frequently enough? Is there salt in the brine tank and are you using it on a regular basis?

If you haven't got a hardness test kit contact Prowash on (03) 8340 3200.

Hach 5B Test Kit – Part # DH62819