
TOUCHLESS CARWASH



FACTORS IN TOUCHLESS CARWASHING

- Water Quality – Hardness & TDS
- Water Temperature
- Pressure
- Presoak Dwell Time
- Chemistry

WATER QUALITY - HARDNESS

- Water quality is extremely important and small changes can make a huge differences in performance.
- Hardness is the amount of calcium and magnesium in the water.
- Water Hardness affects performance. For every gram per gallon (GPG) above 3 reduces pre-soak performance.
- A hardness of 10GPG can reduce performance by 50%.

WATER QUALITY - HARDNESS

Soaps contain water softening agents in them. Soft water aids infoam generation which enhances show & captures dirt

HP-83

- Medium Chelates
- Good for slightly hard water <5 Gains

HP-85

- High in Chelates
- Good for hard water conditions >5-10 Grains

PL 1200C – Chelate Boost

Enquire to find our more about these products.

WATER QUALITY - TDS

Measurement of dissolved solids suspended in water in PPM (parts per million).

Ideal measurement = <20 PPM.

Total Dissolved Solids – For every rise in TDS by 250 ppm affects the amount of activity in a pre soak, and adjustments may be required.

WATER TEMPERATURE

- For every 17 degrees below 120 F, reduces pre-soak activity by 50%.
- For every 10 degrees of temperature increases activity by 10X.
- Above 120 degrees causes cloud point / falls out / point of diminishing returns.

VEHICLE TEMPERATURE

- Temperature in the presoak tank is not the same temperature on the car surface. Especially on a hot summers day.
- Pick-up a infrared thermometer to read temperature of presoak on car.
- Usually 90-115 F for an In Bay.

HIGH PRESSURE RINSE

High pressure rinse is vital to soil removal

- Nozzle spray pattern
- Distance to vehicle
- Appropriate PSI

IMPINGEMENT (WASH PRESSURE)

Impingement = How much pressure is applied to the surface of the vehicle during the wash cycle

- The more impingement we have, the more soil will be suspended and removed

FACTORS THAT AFFECT IMPINGEMENT

- Low pump pressure (1000 to 1200 PSI optimum)
- Pulsating pump pressure, a leaking high pressure valve can cause a pulsation in the pump and reduces the cleaning performance
- Distance from the surface, the farther away the lower the wash pressure
- Spray Nozzle Pattern
When the nozzle patterns intercept each other they reduce the pressure at the point of intersection

IMPINGEMENT TECH TIPS

- Turn every nozzle 1 to 2 degrees from each other will help prevent the nozzles from intercepting and still provide proper overlap
- Nozzles that are worn out may look like they are spraying correctly but the center contact point has reduced washing pressure
- Most equipment manufacturer's suggest changing high pressure nozzles every year to maintain proper patterns and pressures
- Slower wash speeds improve cleaning with more pressure

DWELL TIME

Dwell time = how long the presoak has contact with the surface of the vehicle

- As soon as the chemical is sprayed onto the vehicle surface is when the Dwell count begins
- Required dwell times can change from season to season and from region to region depending on soil loads
 - Normal heat, 1-25 seconds
 - In extreme heat, 1-15 seconds

DWELL TIME

- Soap is like a giant sponge and starts to absorb dirt and grime as soon it makes contact with the surface
- Eventually it fills up and can no longer hold on to the soil it picked up
- When that happens it gets tired and sets the soil back onto the vehicle (a term we call 'redposition')

DWELL TIME TECH TIPS

- It is very important that we get the presoak and soils off the vehicle before redeposition
- Soap can also dry on the car which is very hard to remove
- Alkaline based presoaks require more dwell time then acid based presoaks

TOUCHLESS PRESOAKS

Types of Presoaks

Alkaline- Hi Ph (10-14)	Acidic- Lo Ph- (0-4)
Organic	Inorganic or Man-Made Soils
Bugs	Brake Dust
Pollen	Salt
Bird Droppings	Asphalt Road Film
Dirt	Magnesium Chloride
	Windshield & Chrome

AFFECTS OF WEATHER

- Ambient and vehicle surface temps
- Humidity levels can impact soil lifting
- Rain will release oils back onto the road surface
- Sun UV's will help lock in soil loads
- Weather conditions impact vehicle soil loads