September 2012 | issue 08

VEHICLE WASH NEWS FROM AUTOAUTO WASH

WELCOME TO OUR SEPTEMBER NEWSLETTER!

Welcome to this issue of AutoAuto Wash News; a periodic newsletter designed specifically for the car wash owner and operator. Our goal is to provide you with timely information that can save you money and help increase your business. If you ever have any suggestions, please give us a call and we'll do our best to address your concerns. We view the relationship as a partnership. Our success can only be measured by your success.

Within this newsletter, it is our intent to HIGHLIGHT/SHOWCASE a specific product or manufacturer in each edition. In this edition our product showcase is PDQ's gatling guns. This is a relatively inexpensive option that really makes an impact on cleaning and a positive customer experience.

We also want to focus on preparing your wash for the winter season. This is the most critical time to ensure your washes are operating at the optimal level. Within this newsletter we touched on the importance of winterizing your wash for the cold weather. Fall is in the air!

Our Mission:

"PROVIDE THE BEST POSSIBLE SOLUTIONS FOR THE CUSTOMER. DELIVER EQUIPMENT, SERVICES, PARTS AND CHEMICALS AT FAIR PRICES, WITH EXCEPTIONAL FOCUS ON INTEGRITY, HONESTY AND PRIDE IN EXECUTION…DO THE RIGHT THING!"

Loran Bourdo
President

PRODUCT SPOTLIGHT - PDQ GATLING GUNS

Operators are all looking to increase car counts, increase revenue per car and lower expenses. It is often difficult to justify to the customer an increase in package pricing… here is a relatively inexpensive investment with maximum impact to the cleaning and perception of the customer.

You can add the gatling guns to your in bay automatic wash and increase your top wash price. 8 zero degree nozzles spin and literally blast the dirt and mud off of the rocker panels, tires and wheels. The visual and audio experience adds value to the customer. The visual impact is impressive for the customer in line waiting for the wash. You couldn't buy a more effective advertising program than the gatling guns running! They see the added value real time! The customer in the wash hears the gatling guns as they clean the rocker panels, wheels and tires confirming the upcharge they paid was a good investment.

Features

- Two Gatling gun assemblies
- SST construction
- Fiberglass control box and controls
- Designed to work with your existing underbody manifold
- Optional changeover kit

Benefits

- Improved wash quality
- Fully integrated with your LaserWash, LW4000, G5 or M5
- Direct-drive electric motor eliminates hydraulics and nearly eliminates maintenance
- Can allow you to differentiate between your wash packages (with optional changeover kit)
- Can fit into narrow bays (14'-4" minimum)
- Visual and audio experience that adds values to the customer.

PREPARING YOUR WASH FOR WINTER OPERATIONS

As an operator of a car wash, planning for winter can be overwhelming because of the many issues that need to be addressed. The best way to tackle all the items is to develop a plan of attack. Many operators "claim" they have a winter preparations plan but many times it's "all up in their head". As a good owner/operator once told me if you don't have it written down, it's not a plan. With that in mind, one should take the time now and write down a list of items needing to be addressed; consider it a brainstorm session. Include categories: building maintenance, equipment preventative maintenance, back up supplies and lot maintenance. The following are some common equipment items that one should consider when developing one's plan.

Equipment Preventative Maintenance

Weep System

o Weep sensors need to be cross checked to verify they are reading the correct temperature. Using a handheld temperature gauge, the displayed temperatures in your vehicle and/or the local weather forecast to verify your sensor is within three degrees plus or minus. If your sensor is outside of this range a good investment may be to have it serviced and/or replaced. Keep in mind if your sensor is in direct sunlight this will affect the reading.

o Weep control solenoids need to be checked for proper operation. Since weep systems operate using normally open solenoids operators tend to unplug their control systems in the summer and shut the water supply off to the solenoid. Periodically, check to make sure the solenoid is opening and closing properly. By shutting off the water supply for long periods of time, this creates a place for any loose debris

PREPARING YOUR WASH FOR WINTER OPERATIONS - cont...

to build up. The resulting debris (line oxidation and/or contamination) can plug up the solenoid and create major issues when the first freeze hits. Water flow will be restricted causing unnecessary freeze ups.

Floor Heat System

o Recirculation pumps should be jogged throughout the summer to keep the impellors and seals lubricated. If the pump will not turn over, shut it off and disconnect the power at the main breaker. Using a pair of pliers, grip and rotate the shaft. Once the impeller is loose, turn the power back on and jog the pump.

o Run the entire system for 30 minutes once per month – check for any leaks in the associated plumbing and proper anti-freeze level. Check intake and discharge venting for obstructions.

o If your roof trough heat system is integrated into the floor heat system make sure to cycle it and check for leaks or suspect lines, changing where appropriate.

Boilers

o If you heat water year round this is a non-issue. If you do not, follow the same plan as the floor heat system. Run the boiler for 30 minutes once a month. Look for leaks, check intake and discharge venting for obstructions.

Pumps

o Depending on what make and model of high pressure pumps you have follow the manufactures guidelines for changing oil, inspecting high and low pressure seals and greasing (if required) the electric motors. Make sure to follow the manufactures guidelines. Over and/or under lubrication can cause severe damage to pumps and motors.

After reviewing some of the basic winter preparation items, one must keep in mind that all car washes are different. Each wash has its own special nuances which must be accounted for. Make documented plans accordingly. Engage the plan by assigning responsibility to individual(s) and document when the task was completed. Post your customized plan in the pump room or most visible location.

SPOT FREE WATER - REVERSE OSMOSIS 101

The separation of dissolved solids and water using Reverse Osmosis membranes is a pressure driven temperature dependent process. The membrane material is designed to be as permeable to water as possible, while maintaining the ability to reject dissolved solids.

Reverse Osmosis systems utilize semi-permeable membrane elements to separate the feed water into two streams. The pressurized feed water is separated into purified (product) water and concentrate (reject) water. The impurities contained in the feed water are carried to drain by the reject water. It is critical to maintain adequate reject flow in order to prevent membrane scaling and/or fouling.

Reverse Osmosis refers to a process of water purification that has been used primarily for the desalination of seawater. To understand RO, it is first necessary to understand osmosis. Osmosis is the term for the phenomenon whereby if a semi-permeable membrane separates two salt solutions of different concentration, water will migrate from the weaker solution through the membrane to the stronger solution, until the solutions are of the same salt concentration. Reverse Osmosis subverts this process. It involves applying pressure to reverse the natural flow of water, forcing the water to move from the more concentrated solution to the weaker. The semi-permeable membrane is porous, allowing water to pass through, but blocking the passage of the bulkier salt .

The main system design parameters require the following:

- Internal flows across the membrane surface must be high enough to prevent settling of fine suspended solids on the membrane surface.
- The concentration of each dissolved ionic species must not exceed the limits of solubility anywhere in the system.
- Pre-treatment must be sufficient to eliminate chemicals that would attack the membrane materials.

Reverse osmosis has been used as a method of purification for ground and surface fresh water, in addition to its role as a desalinating agent. Working with such water sources creates some problems for the reverse osmosis system. Because of the very small pore sizes involved in the membrane, it is vital that ground and surface water is adequately pre-treated prior to the reverse osmosis process. Depending upon the hardness of the water involved, scaling of the membrane is likely to occur. If the concentration of the calcium or magnesium in the water (the chemicals that determine water's hardness) is at a high enough level where the chemicals are insoluble, it will create a hard mineral on the inside of the membrane, rendering it impotent.

SPOT FREE WATER - REVERSE OSMOSIS 101 - cont...

Pre-Treatment

The RO feed water must be pretreated in order to prevent membrane damage and/or fouling. Proper pretreatment is essential for reliable operation of any RO system.

Pretreatment requirements vary depending on the nature of the feed water. Pretreatment equipment is sold separately. The most common forms of pretreatment are described below.

Media Filter: Used to remove large suspended solids (sediment) from the feed water.

Backwashing the media removes the trapped particles. Backwash can be initiated by time or differential pressure.

Water Softener: Used to remove calcium and magnesium hardness from the feed water in order to prevent hardness scaling. Can also remove a small amount of iron.

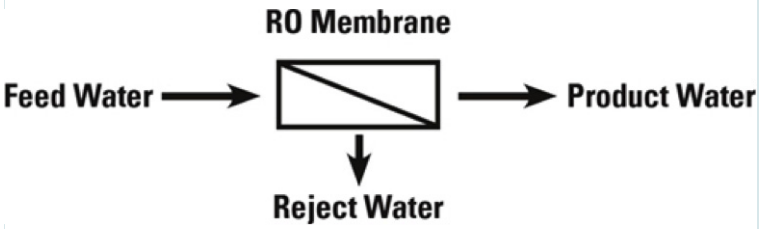
Carbon Filter: Used to remove chlorine and organics from the feed water. Free chlorine will cause rapid irreversible damage to the membranes. The residual free chlorine present in most municipal water supplies will damage the thin film composite structure of the membranes used in this unit. Carbon filtration or sodium bisulfate injection should be used to completely remove the free chlorine residual.

Physical Conditioner: Under most conditioners in carwash feed water scale can be controlled through a physical conditioner.

Prefilter Cartridge: Used to remove smaller suspended solids and trap any particles that may be generated by the other pretreatment. The cartridge(s) should be replaced when the pressure drop across the housing increases 5-10 psig over the clean cartridge pressure drop. Typically installed on the Feed water side of the RO and not considered the primary pretreatment.

Iron and Manganese: These foulants should be removed to less than 0.3 ppm. Special media filters and/or chemical treatment is commonly used.

Silica: Reported on the analysis as SiO2. Silica forms a coating on membrane surfaces when the concentration exceeds its solubility. Additionally, the solubility is highly pH and temperature dependent. Silica fouling can be prevented with chemical injection and/or reduction in recovery. Providing the proper pre-treatment will extend the life of the membrane(s).



Reverse Osmosis in the carwashing industry

We are all aware of the value of RO product water in the carwashing industry. Rinsing with RO water, due to its lower mineral content, will reduce spotting on the vehicle. Reverse osmosis water displaces the mineral-heavy reclamation water or municipal water. This is especially true if the wash is located near a salt water area. RO water also enables a carwash operator to reduce the demands on the vehicle drying equipment such as air blowers. There are also other benefits to the use of RO water, such as lessening the need for towel drying after the vehicle has finished the wash process. By using RO water to mix soap, you also reduce the amount of soap used due to the fact that the RO water has fewer minerals and total dissolved solids (TDS) which will allow the soap to be more effective. Using RO water in express tunnel operations where no attendant is available will produce a better finished product than rinsing with well water or a municipal water source.

The water discussed in the above paragraph is known as the permeate water. This is the water which has passed through the membrane which in most cases will reduce the TDS by 98 percent. The other source of water produced from the RO process is called the concentrate or reject water. This is the water that has been rejected or did not pass through the membrane(s) of the system. This water will contain the minerals and TDS that was in the original source water.

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