



CARWASH GLOSSARY

Abrasion: A general wearing away of a surface by constant scratching, usually due to the presence of foreign matter such as dirt, grit, or metallic particles in the lubricant. Lack of proper lubrication may result in abrasion.

Absorbent filter: A filter medium primarily intended to hold soluble and insoluble contaminants on its surface by molecular adhesion.

Above ground storage tanks: Storage tanks for spot free water.

Acid: Often represented by the generic formula HA (H+A-) is traditionally considered any chemical compound that, when dissolved in water, gives a solution with a pH less than 7.0.

Adhesive wear: Often referred to as galling, scuffing, scoring, or seizing. It happens when sliding surfaces contact one another, causing fragments to be pulled from one surface and to adhere to the other.

Adjustments: Regulating, adapting, fine tuning sequence, and timing of equipment to maintain optimum capability.

Air blowers: Device which pushes air (blows) over a vehicle to remove water and help drying process (AKA blowers, dryers).

Air cylinders: Pneumatic linear actuators that are driven by a pressure differential in the cylinder's chambers. They may be single-acting (with a spring return) or double-acting.

Air compressor: Provides compressed air to pneumatic pumps and all air controls (cylinders, roller up, flips, retracts, etc.). Air compressors are machines that compress air to higher than atmospheric pressures for delivery to pneumatic or robotic tools, industrial equipment, or direct-use applications.

Air driven pumps: Used to deliver solution to applicator or arch, by moving liquids from lower pressure to higher pressure.

Air manifold: A pipe or chamber with multiple apertures for making connections.

Air-over hydraulic cylinder: Cylinder on the tire shiner used to extend and retract the assembly for vehicles. Also found on the Omni.

Alkali: Chemical substance (such as hydroxide or carbonate of sodium or potassium) which reacts and neutralizes an acid and has a pH above 7.

Alkalinity: Property of water soluble substances (or mixtures) causing the concentration of hydroxyl ions (OH-) in water solutions to be higher than the concentration of hydrogen ions (H+).



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Amp/amperage: The strength of an electric current measured in amperes.

Anti-collision control: Detects vehicles at end of conveyor and automatically stops and starts conveyor, preventing collisions.

Anti-jam switch: Prevents roller-up from activating if roller is in jam position (AKA roller locator switch).

Anti-seize: A lubricant that prevents seizing, galling, rust and corrosion.

Application/applicator arch: Applies detergents to entire vehicle surface (AKA pre-soak arch, foaming applicator arch).

Applicator pump stations: Properly mixes and dispenses detergents and waxes to the tunnel equipment (AKA G57 pump station, Dosatron pump station, blue white station, etc).

Apron: The paved strip in front of, behind, and around car wash tunnels.

Arch: A device that sprays water and cleaning chemicals onto the top and both sides of a vehicle as it passes through a carwash.

Automated pay stations: Pay stations that allow a customer to choose a wash from the menu and pay using a credit/debit card, cash, or gift card.

Back flushing head: An automatic device in the spot free water system that keeps carbon clean to increase effectiveness of the carbon tank. Without this automatic part, the tank must be back flushed every 2-3 months depending on volume at the car wash.

Back room: Area of the car wash where the support equipment (pumps and motors) of their peripheral systems, water, chemical, air, electrical and gas are maintained which run the tunnel equipment.

Backwash: Phase that reverses water flow to flush dirt out of the tank in the normal operation of a water softener and other filter systems.

Ball valve: Valve that acts as an on/off switch for liquid or air. It can also be used for flow regulation.

Bearing: A rotating support placed between moving parts to allow them to move easily.

Belts: Used in conjunction with a pulley, this coupler is probably the most common in a car wash and is used on high pressure water pumps and air compressors.

Biodegradability: capability of organic matter to be decomposed by biological processes.

Blowers: Equipment that moves water off vehicles (also referred to as dryers).



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Boom: In a self-service wash, the arm extension that holds a hose and nozzle for washing the vehicle. The boom can be wall-mounted for 180° movement or ceiling mounted for 360° movement.

Bottom motor side washers: a rotating brush utilizing cloth to clean the side of a vehicle. The motor is placed on the bottom side of the unit allowing placement under mitts.

Brine tank: A free standing tank that collects the salt solution and then disperses it to the mineral tank where the brine (salt) is flushed out.

Bristle: polyethylene or nylon. Commonly used on tire brush and rocker brush.

Bug removal arch: Chemical arch used to aide in the removal of bugs, often placed before tunnel entrance to allow extended working time. Can be activated manually with a floor switch to prep a vehicle during heavy bug season.

Bumper applicator: Applies additional detergent to front and rear bumpers, specially at higher chain speeds. (Single; Front, Dual; Front & Rear)

Bumper blaster: Equipment piece that uses high pressure water to clean bumpers without the use of friction materials.

Bushings: Fixed or removable cylindrical lining used to reduce friction between mechanical parts.

Bypass filtration: A system of filtration in which only a portion of the total flow of a circulating fluid system passes through a filter at any instant or in which a filter having its own circulating pump operates in parallel to the main flow.

Bypass valve: A valve mechanism that assures system fluid flow when a pre-selected differential pressure across the filter element is exceeded; the valve allows all or part of the flow to bypass the filter element (AKA relief valve).

C-Channel: Named for the shape of the channels that most cloth, Neoglide and Microclean slide into on side washers, wraps and rocker brushes.

Cable puller: Two-ton tool used to pull cables.

Carbon tanks: tank in the spot free rinse free system that neutralizes the chlorine and organic compounds in the water supply.

Car wash: A facility used to clean the exterior, and sometimes the interior, of vehicles.

Central vac bags: Nylon dust collectors inside the separator that prevent particles from entering the turbine.



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Central vac/water separator: A metal canister used to remove water from the vacuum pipes prior to the separator - commonly used in detail centers.

Central vac/vacuum system: collects dirt and debris from vacuum lines.

CFM: Cubic feet per minute.

Chain guide: Reduces chain wear and misalignment.

Chains: Most important coupler in a car wash used to connect the conveyor system to the vehicle.

Chain speed: To determine chain speed-measure the length in inches a roller travels in 15 seconds. Resulting number will be the same as the number of cars per hour the conveyor is set for.

Chamois: Cloths made from animal skins or can be synthetically produced. Cloths are soft and stretch with close pores for strong absorption. Used to wipe down cars in full service car washes. (Pronounced "shammy.")

Check valve: A valve that allows the flow of water, chemical or air in one direction only.

Chemical metering and feed system: Apparatus for delivering chemicals from the equipment room to the application in the wash tunnel.

Chemical tire application (CTA): Foaming & non-foaming. Applies tire and/or wheel cleaner to wheels and tires (AKA white wall applicator, mag wheel applicator).

Chlorination: Process of adding chlorine to water to inhibit bacterial growth.

Circuit breaker: An electromechanical device designed to quickly break its electrical connection should a short circuit or voltage overload occur. A circuit breaker is similar to a fuse, except the breaker can be manually reset and used over and over again, where a fuse needs be replaced.

Circuit breaker panel: Panel of several circuit breakers which is the hub that provides 110V/Single & Three Phase Power to lighting, computers, signs, reclaim, spot free compressors, etc.

Clevis: A coupler shaped like the letter U with holes through each end so a bolt or pin can pass through the holes to complete the coupling.

Closing checks: Series of operational observations handled at the close of business to confirm equipment operations are in tact. Equipment adjustments or repairs are often handled during closing checks to prepare the wash for the next day's business.



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Cloth: Tightly woven material commonly used on mitters and side brushes that can be cut to any length. (AKA Permacolor, No-Fade, Felt).

Cloth friction wash: Using wash material against the vehicle's surface to remove dirt.

Cloth hub: Six feet, 10" and 12" diameter aluminum hub, mounted to brush shaft that cloth mounts on.

Coin vac: Coin operated vacuums, can be purchased with or without bill acceptors. Customers vacuum, shampoo, and spray scent in their own vehicles (AKA Coin Vacuum, Shampoo Stations).

Compressed air dryers: An air dryer is a device that is mounted directly after an air compressor and dries the air. 2) Most air powered equipment failure is due to moisture in the compressed air, so the more that can be eliminated, the lower the repair costs.

Compressed gas shock absorber: Gas-filled shock absorbers use nitrogen gas at 25 times the atmospheric pressure to pressurize the fluid in the shock to reduce or prevent aeration or foaming.

Consumables: Items such as oils, grease, paint, adhesives, cleaning materials, bulk rags, etc. By definition, consumables are supplies that will be used and will need to be replenished.

Contaminated: Something that is impure or unclean by contact or mixture.

Conveyor: Motor-driven mechanism driven by belts, pulleys and rollers that transports vehicles through a car wash tunnel. Conveyors are mounted in the trench. Over-Under conveyors are built into the trench whereas surface mounted conveyors are in a much shallower pit and the chains and rollers returning to the entrance travel beside the rollers not over and under. There are two types: FWP-Front wheel pull and RWP- Rear Wheel push (please see definitions). The conveyor is made up of three sections: take-up section, drive section and multiple center sections.

Conveyor car wash: Refers to any car wash where the vehicle is placed on a conveyor system. Can utilize equipment in the process or may use people in place of the equipment.

Conveyorized hand wash: Conveyor wash, in which workers wash the vehicle as it passes through the tunnel with large mitts in place of mechanical mitters and side washers.

Conveyor speed: The speed at which the chain is travelling, determined: one foot of conveyor for every car per hour washed.



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Correlator: In-ground device, which is a series of tubes/rollers that spin on UHMW bushings, found at the conveyor entrance that aligns the vehicle wheels with a wash conveyor by providing a mechanism for the vehicle to slide laterally.

Corrosion: Break down or deterioration of materials or properties with the material composition due to reactions. i.e. water, chemicals, heat.

Cotter Pin: A cotter consisting of a split pin that is secured (after passing through a hole) by splitting the ends apart (AKA cotter key or a split pin).

Counter weight: An equivalent counterbalancing weight that balances a load.

Coupler: A part which connects two moving parts to relay the motion.

CPH: Cars per hour. Chain Speed Formula: Inches of Travel in 15 sec. = Cars Per Hour

CTA: See Chemical Tire Applicator.

D88K: A steel pintle chain used on the conveyor to push or pull the car through the wash process. It is a less expensive chain because there is no welding in the manufacturing process. It is the second most used chain in the car wash industry at this time.

Delivery pump: Delivery pump is used to pressurize the water held in the tanks to be used by the tunnel equipment. If waste water is stored, it would also require a delivery pump.

Delrin: A brand name for an engineered thermoplastic coupler invented and sold by DuPont. Commonly used as a metal substitute because of their high mechanical strength, rigidity and resistance to moisture, gasoline and solvents.

Dema solenoids: Stainless steel valves used for soap, wax, tire cleaner or pre-soak systems (see solenoid.)

De-programmable & de-selective: Refers to a setting in the tunnel controller that will turn off a device during the wash, such as a retract function.

Diluted: To reduce the amount of solvent.

Dispensing stations: Systems that release fluids and solvents.

Dog bone chain: An old chain design used in a conveyor, that is easier to work with because it snaps apart and does not use cotters (AKA X458).

Door jet heaters: Prevents cold air from entering car wash tunnel by creating a heat wall at each end (AKA Draft Blasters, Aero Vents, Air Doors).

Drain plug: A plug securing the drain hole.



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Drive section: section of the conveyor found at the exit end of the tunnel that has a trap door which rises, to allow the roller to return to the lower level and transit to the entrance end of the tunnel.

Drums: guides conveyor chain through conveyor in place of sprocket at take-up end.

Dry checks: is an observation process conducted first thing each morning to observe and note any hydraulic fluid leaks or low oil levels which might affect operations. No water is run during this procedure.

Dry foam: Term used to describe consistency-dry foam sticks.

Drying agent: Usually a petroleum-based product used to promote water beading and aid in the drying process.

Drying agent arch: Rinses and applies a wax type product that promotes water beading for better drying (AKA cheater wax).

Duraflex couplers: A brand name for a material that is designed to maintain steady motion and reduce vibrations. Dura-Flex® couplers are used to join two solid shafts end to end, for example can be found on central vacuum systems to connect the motor to the turbine.

Eductor: The part of a hydrominder that regulates the flow rate through the Venturi. The eductor Venturi is the part that the metering tips screw or plug into. Eductors also vary in size and are color-coded.

Electric motors: A machine part that converts electric energy into mechanical energy. Most electric motors have sealed bearings that need to be checked frequently for corrosion and water intrusion.

Entrance photo eye: Measures vehicle's length and communicates with tunnel controller to turn equipment on/off (AKA entrance loop, gate switch).

Exterior wash: Car wash service that includes only a cleaning of the outside of the car. Often this refers to a traditional style where customers are greeted by a person, where no detailing services are offered.

Extractor: Pulls, draws out.

Express exterior wash: Car wash service that includes only a cleaning of the outside of the car. Often this refers to a wash where customers are greeted by an auto teller, where no detailing services are offered.



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Filter: Any device or porous substance used as a strainer for cleaning fluids by removing suspended matter.

Filter efficiency: Method of expressing a filter's ability to trap and retain contaminants of a given size.

Filter element: A porous cartridge which performs the actual process of filtration.

Filter housing: A ported enclosure that directs the flow of fluid through the filter element.

Final rinse: Term used for a high pressure rinse or low pressure rinse before drying process.

Fitting: Components used to connect hoses and tubes.

Flex service washing: Is the combination of Express Exterior and Full Service, attracting a broad customer base due to range of pricing. Typically customers stay in the car during the wash. Express customers directly exit the wash, whereas full service customers pull into an aftercare area, exit the vehicle, and wait while attendants vacuum the car, clean the windows, and perform any other service.

Float sensors: Used to detect levels in water tanks and oil reservoirs.

Flojet pumps: Brand of dispensing pumps found in the backroom of wash. Typically made with Santoprene or Viton seals and are air driven (AKA G57).

Floor switches: Commonly used as the entrance management switch or tire locator. They are activated when they have 10-15 pounds of force applied and send a signal to the tunnel controller (AKA tape switch).

Flow rate: The volume, mass, or weight of a fluid passing through any conductor per unit of time.

Foam: The term used to describe the consistency of chemical application. The foam is created when air is introduced into the chemical.

Foam cloth/sponge: Closed cell foam, light weight, does not absorb water. Commonly used on wrap around, side and top brushes (AKA Neoglide).

Foam applicator: Used to deliver the foaming chemical onto the vehicle during the wash process.

Foam/cleaner pump stations: Backroom equipment that feeds foam applicators and arches.



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Foaming applicator arch: Covers vehicle with foaming presoak before entering the wash cycle.

Foot valve: A valve that attaches to the bottom of the hose in a drum of chemical and allows the flow of chemical in one direction only. It aids in keeping the hose charged with chemical to ensure consistent dilution.

Forced air heater: Provides heat for equipment room and tunnel area to prevent freezing (AKA modine heater).

Fresh water bypass: Protects the delivery pump and delivers fresh water to the pump in the event the RO system is not producing enough water to meet demand.

Friction side washer: Rotating brushes that clean the sides of cars. Various heights and angles are available to provide concentration to different side surfaces. Shorter units will often focus on lower rocker panels while taller units can reach the tops of the highest SUVs.

FRL: Filter, regulator, lubricator.

Front grill washers: Washes front grill and side of vehicle with opposite rotation of wrap around (AKA grill brush).

Front-to-back mitter: Cleans all horizontal surfaces of the vehicle with entrance to exit motion.

Full service: Conveyorized or tunnel wash that provides a complete wash, vacuuming and drying, (usually by hand) and usually generates a higher revenue per car. Greeted by an attendant, the customer selects their wash level/extra services before exiting the vehicle to a retail waiting area or convenience store. While the customer waits, attendants take the vehicle through the wash, vacuum, clean windows, and perform other detailing services (AKA full-service wash).

Function: Every component of the car wash that gets turned on/off during the wash process is controlled by a function or device (AKA Device).

FWP/Front wheel pull: Roller comes up behind the left front wheel, engaging the wheel, and pulls the car through the tunnel.

Gate switch: Often the photo eye that marks the start of counting pulses to determine vehicle length.

Gear box: Transfers motion from electric and hydraulic motors to output shafts that drive conveyor mitters and brushes.



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Gear reducers: This mechanical part slows down the shaft speed to transfer the rotational speed into power for the equipment (AKA speed reducers).

GPM: Gallons per minute

Graco pumps: Brand name of a high-pressure pumps and systems used for transferring and circulating applications from the backroom pump stations. Typically made from Teflon or Santoprene to deliver up to 15 GPM for high volume tunnels.

Greaseless: Not requiring lubrication.

Halo rinse: Thoroughly removes all soap and three color foam from vehicle prior to final rinse (AKA high pressure rinse, high volume rinse, booster rinse, medium pressure rinse).

Hand drying: Vehicle is wiped down with towels chamois cloths by attendants.

Hand wash (conveyorized): Conveyor wash with workers wearing large mitts that wash the vehicle, rather than using mechanical mitters and side washers.

HAZCOM: Acronym for hazard communication training sponsored by OSHA and U.S. Department of Labor.

Heco gear box: Transfers motion from hydraulic motor to conveyor chain sprocket and is typically found in the drive section of the conveyor.

High pressure: Pressurized washing equipment that is able to flush dirt out of areas where friction wash materials can not reach. Optimum results are achieved when both friction and high pressure wash technologies are present in a tunnel wash.

High pressure lines: Hose lines that connect pumps and equipment, directing air or water through the systems. Often times the flexible hose is covered with a mesh type braided wire to provide extra strength.

High pressure pump stations: Delivers high pressure water to the high pressure cleaning components (AKA Cat pumps, Wanner pumps, Hydracells).

High pressure wash/washers: System of rotating water jets, arranged like a pinwheel, that spray concentrated streams of water onto the car. Often used on the lower portion of the vehicle to remove mud, dirt and salt. Typically the 3rd step in the car wash process.

High pressure side washers: Washers that blast high pressure streams of water at side surfaces and wheels.



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High pressure top washers: Often mounted to an overhead arch, these washers feature various numbers and types of moving nozzles that blast high pressure streams of water at top surfaces.

Hoses: another word for lines.

HP (Horsepower): Term which identifies engine performance.

Hydraulic(s): An application of mechanical properties of water and other liquids in engineering.

Hydraulic fluid: Typically mineral oil, water or water based fluids used in hydraulic equipment. Often fluid is dyed to quickly identify a hydraulic leak from a water leak.

Hydraulic hoses: Are used to deliver the pressurized oil from power packs to the hydraulic motors in the tunnel.

Hydraulic motor: Drives equipment (wraps, brushes, mitters, conveyors, oscillators, Omni's) by converting pressurized oil provided by the power packs into rotational motion. Hydraulic motors use internal gear motors to produce pressurized hydraulic fluid which transfers rotational energy to mechanical devices.

Hydraulic power packs: Units that provide power in the form of pressurized oil to the various pieces of hydraulic motors that turn the conveyor, brushes and oscillate the high pressure components (AKA power units).

Hydrominder: Device used to mix chemical and water that uses a float assembly to control level in solution tank. An eductor draws chemical from the barrel and mixes with water using a Venturi valve.

Hydronic boiler: Heats and circulates anti freeze/water mixture through tubes in concrete, aprons and side walks to prevent ice build-up (see Apron, AKA floor heat boiler).

ICA - International Carwash Association: Industry association that supports its members and promotes the professional car care industry by collecting and disseminating information.

In-bay automatic car wash: Type of car wash that is self contained in a small bay and cycles over or around the vehicle while it is placed in park. Often found at gas stations and convenience stores (AKA rollover).

Induction loops: Pads or stands, can be either underground or surface mounted, and are used to detect a vehicle passing over it by measuring a change in the magnetic pressure.



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This sensor also signals when a vehicle has left the wash. An inductive loop is the antenna of an active circuit.

Infrared beam: Light emitted by photo eye that sends a signal to the computer system which identifies vehicle dimensions.

In-line filter: A filter assembly in which the inlet, outlet, and filter element axis' are in a straight line.

KWH: Kilowatt per hour

Kick off plate: Required for surface conveyors to cause vehicle to roll forward at end of conveyor to prevent roller jamming.

Light beam: Used to measure vehicle length, one of the most common is the photo eye, used at the entrance (AKA light beam sensors, entrance loop, gate switch).

Light touch friction: Part of wash cycle that used brushes with light pressure to clean.

Lines: Another term for hoses and/or pipes.

Liquid applicator arch/Liquid dual applicator arch: Provides complete coverage of the vehicle with liquid presoak solution before entering wash cycle.

Loop detector: a system that senses a vehicle, consisting of an inductive loop and a detector module which includes a signal control and vehicle count.

Low pressure hoses: often flexible lines, such as those found in the foaming arch, and are used to dispense fluids at a steady even flow.

Low-profile roller: used to push or pull the vehicle while on the conveyor this style provides more clearance for low-profile vehicles and gives easily when pressure is applied.

Lubricant: a substance (often a liquid) introduced between two moving surfaces to reduce the friction and wear between them. A lubricant provides a protective film which allows for two touching surfaces to be separated, thus lessening the friction between them (colloquially, lube).

Lubricity: the measure of resistance to friction on a surface.

Magnetic Switches: a sensor that detects roller position or conveyor speed, and used for collision avoidance.

Manifold: a pipe or chamber having multiple apertures for making connections.



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Metal flange bearings: flange mounted bearings are used when a shaft axis is perpendicular to the bearing mounting surface. Usually used on rotational bearings but can also be used on pivoting bearings.

Metal pillow block bearings: housing with an offset flat mounting surface that serves as the opening to connect a shaft, (revolving rod or pole) that transmits power or motion (see pillow block bearings).

Metering tips: plug-in or screw-in tips used to regulate the ratio of a non diluted chemical to a hydrominder mixing tank or other pump assembly. Tips vary in size signified by different colors. Different applications require different tip sizes. The smallest tip (plug) is clear and the largest tip (plug) is grey.

Microclean: twisted fiber material with ¼' loft, best when used in mitters, side brushes and wrap around's.

Micron: one millionth of a meter.

Mid profile roller: used to push or pull the vehicle while on the conveyor and provides a tall enough profile to push most vehicles and provide sufficient clearance for most vehicles (standard).

Mirror blasters: rinses soap, wax and reclaim water out of side view mirror using high pressure.

Mirror rinse: applies spot free water to side view mirrors to prevent spotting or fresh water to help remove soap, wax and reclaim water.

Mitter: Machine that suspends and oscillates wash material on the horizontal surfaces of a vehicle to effect cleaning of the top surfaces of an automobile.

Motor: Electric or hydraulic. Creates energy and motion to pumps, brushes and gear boxes.

Motor control center (MCC): "Brain" of the car wash operation, and considered "finger safe" the system controls the car wash equipment to maximize cleaning performance at optimum chemical consumption. The MCC houses the starters, switching, and overload protection devices for electric motors that are used in the carwash system. The MCC operates a variety of motors on different devices and machines. It contains motor starters, circuit breakers and manual on/off controls for all three-phase motors on equipment without automatic controls.



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Motor shafts: A rotating or oscillating round, straight bar for transmitting motion and torque, usually supported on bearings and carrying gears, wheels, or wheels, i.e. ship propeller shaft, or engine drive shaft.

Needle valve: A type of valve with a small opening and a threaded, needle-like plunger that allows precise regulation of flow for metering applications when constant flow must be maintained.

Neo Glide/Neoglide: Soft, durable closed cell foam doesn't absorb water and requires lubrication so it won't drag on vehicle surfaces.

Nozzle: A precision component whose spray pattern indicates if the equipment is in top working order. A clogged nozzle or weak spray pattern will not provide full coverage and can immediately affect the cleaning ability of the wash.

Oscillate: Swing back and forth with a steady, uninterrupted rhythm, like a pendulum.

Omni arches: Brand name high pressure systems manufactured by SONNY'S, The Car Wash Factory. Types include: Omni I, Omni II, Omni III.

Omni High Pressure Washers: cleans all vehicle surfaces, including wheels with high-pressure water, mostly oscillating and rotating while it tracks the vehicle (AKA high pressure washers, wheel blasters, tire blasters, rocker blaster).

Opaque: Does not let light pass through; not transparent or translucent.

Operational checks: Equipment checks done by observation and listening to equipment for unusual noises while the car wash operations are open. Operational checks identify equipment process such as nozzle strengths, direction, etc.

OSHA (Occupational Safety and Health Administration): Bureau which mandates safety requirement for car wash businesses.

Over-under conveyor: Type of conveyor that has hidden pushers continuously traveling on a level under the surface. Only when a pusher is needed to push a car is one lifted into the working position. (AKA RCV conveyor, automatic roller up conveyor)

Ozonation: Process of injecting ozone into water to inhibit bacterial growth.

Parallel: Items are pointed/moving/facing same direction. i.e. when the shaft and the mounting bolts are mounted in the same direction.

Pendulum: High pressure wheel cleaner that mechanically follows the wheel and doesn't need adjusting to accommodate different chain speeds.



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Perpendicular: Items are at right angle (90°), for example when the shaft and mounting bolts are mounted at a right angle.

pH: Measure of hydrogen ions in a solution and therefore its acidity or alkalinity. The pH scale ranges from 0-14 with 0 being low or acidic, 7 for neutral solutions and above 7 is considered alkaline or basic.

Photo eye: Infrared sensors with a beam between them that activates the car-washing system when a vehicle enters and measure the length and width of the vehicle (AKA eyes, photo electric eye).

Pillow block bearings: Mount with the shaft perpendicular to the mounting bolts and used to support hinge points or rotational points on universal joints, which absorbs constant wear.

PLC (programmable logic control): Term relating to knowledge base to adjust and or repair MCC.

POS: Point of sale.

Poly flow hose: Hard plastic tubing used to carry diluted chemical and air from the equipment room out to the tunnel.

Poodle brush: See tire brush.

Prep gun pump: High pressure pump and gun assembly used for tunnel equipment cleaning as well as prepping hard-to-clean vehicles (AKA pressure washer).

Pre-soak: Automated nozzle or hand held applicator that sprays water/solution over the car in the initial wash stage to wet the vehicle before detergents are added and to loosen dirt and oil.

Pre-soak application: First step in the car wash. The act of applying a solution/water to a vehicle prior to the wash.

Pressure pad: sensors which locate the position of the tire to let the wash know where, and how far apart the wheels are (AKA pressure pad sensors, tire switches, floor switches, tire pads or tape switches).

Pressure washer: a mechanical device that uses high-pressure water to remove mould, grime, dust mud and dirt from surfaces and objects such as buildings, vehicles and concrete road surfaces



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Programmable: refers to a setting in the tunnel controller that will turn on extra devices not included in the base wash for the car wash.

PSI: per square inch of air pressure.

Pulley: a wheel with groove(s) on to secure a rope or belt that is used to change the direction and/or create rotational movement.

Pulse switch: a switch that measures the chain travel & communicates with the tunnel controller to turn equipment on/off. This key sensor alerts car wash managers and operators if equipment is activating too quickly, or shutting off early. May be located in the backroom or in the drive section of the conveyor (AKA pulse generator, remote pulse).

Pumps: term used to identify the number of squirts from a grease gun. i.e. grease bearing with three (3) pumps (three squirts).

PVDF nozzle: (Polyvinylidene-fluoride) type of nozzle used in cleaning operations. Rotary or multi-nozzle configuration common.

Radiant heat: heat that is delivered through manifolds throughout the tunnel and equipment room utilizing hot water.

Rain arch: arch that completely rinses the hood, trunk, grooves and sides of a vehicle and eliminates fan-nozzle mist in the drying room.

Rear wheel push (RWP): a type of conveyor where the roller comes up behind the rear wheel and the car is pushed through the tunnel.

Reclaim and odor control system: equipment system that uses filters to process reclaimed water and reduces fresh water usage by 70% or more and control odors by producing ozone.

Reclaim water: reclaim water in the wash creates a cleaner wash and will actually help provide very clean cars. Consider the fact that because you are re-using "Free" reclaim water, you can use as much as you want. There is no longer a need to reduce water flows to the wash cycles reducing water usage. In fact, you can increase the flow to provide optimum washing (AKA wastewater recycling).

Relay stations: A device that responds to a small current or voltage change by activating switches or other devices in an electric circuit.

Retract stop position: Adjustment found on the driver's side of the vehicle of the tire brush that stops the tire brush ¼" before the guide rail of the conveyor.



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Reverse osmosis (RO systems): Removal of organic and suspended impurities from water by the use of one or more semi-permeable membranes.

Rinse aid: Water-like chemical applied to the vehicle surface after the final rinse for easier water removal during the drying process.

Rinse arch: An arch with nozzles that spray clean water on the vehicle to remove whatever residue is left after the wash.

Rocker brushes: Wash rocker panel's lower side up to bottom of vehicle's side windows (up to 28" tall). (AKA side rockers, baby rockers, rocker washers).

Rocker panel/undercarriage: Portion of a vehicle's side that is below a straight line between the tops of both tires. This is washed by brushes or high pressure spray on the sides and bottom of the vehicle.

Roll bar assembly: Rotating device that spans the correlator and directs a vehicle's tires onto the wash conveyor.

Roller-on-demand: Conveyor operational feature that moves a pusher into working position on the conveyor track to move a car through the carwash.

Rollover wash: Type of wash where the customer drives into position and sits stationary while the equipment moves over and around the car. Typically found at gas/service stations.

Roller up: Lifts roller in position to pull or push vehicle (AKA roller raiser, dolly up raiser forks).

Rotating tire brush: A 96" pencil brush that rotates down toward the floor to scrub the tire and is used in conjunction with the chemical tire applicator.

Rotation Speed: how many rotations/revolutions around a center.

RPM (revolutions per minute): The amount of rotations a given object makes in one minutes time. Used to gage the speed on various pieces of equipment. To determine RPM, you count how many times the object moves in 10 seconds time and multiply by six.

Rust inhibitor: Chemical application applied to the under side of the vehicle in the wash process that prevents/reduces rust formation.

RWP (rear wheel push): Refers to the type of conveyor used to push the vehicle from the rear tire.



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Sealer wax: Usually a petroleum-based product used to bond to the vehicle's clear coat surface for added protection from contaminants and the sun's ultra-violet rays (AKA clear coat protectant). Typically, an extra service purchased.

Sensors: Type of transducer, i.e.: light beam, pressure pads, induction loops, float sensors, magnetic switches.

Self-lubricating: Pre-lubricated and not requiring additional oils/lubrication.

Self-service wash: Wash where the customer performs all the labor. Generally, the customer drives into a bay (coin operated business) and washes the car by means of a high pressure hose and a foaming brush connected to a central pump. Most self-service car washes are coin-operated brush-and-hose combinations that the driver uses to dispense soap, wash the car and rinse it off.

Service: A correction of a situation, i.e. leak, crack, equipment repair in the wash.

Setting arch: Assists in beading and shedding the drying agent and excess water from all vehicle surfaces making it ready for the dryers (AKA plating arch, final rinse rain arch).

Shaft: A cylindrical bar that rotates and transmits power, or motion. i.e. the drive shaft of a motor.

Shim plate: A tool used to set the distance between objects.

Shocks: Part which controls the impact of motions (AKA shock absorber - also see spring loaded, compressed air shock, gas shocks).

Shower head/Shower head foaming applicator: A device, which can be used as a soap applicator. Typically has an adjustable socket to adjust for consistency based on the air and solution.

Side brush: Cleans side surfaces of vehicle (from 35" to 63" tall). (AKA side washers, van brush).

Side-to-side mitter: Cleans horizontal surfaces of the car with side to side motion, and is normally placed after the triple foam applicator (AKA wash across).

Signal strength: The strength of the beam on the photo electric eye which should be set between 7 and 9 to clearly transmit a signal for the tunnel controller to calculate vehicle length (AKA gate switch).

Silencer: Pan-like dryer attachment filled with acoustical foam that cover the dryer producer inlets to reduce noise levels.



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Silicone: Sealing compound with a wide range of resistance to heat and is extremely water repellent.

Tire shiner: A unit that applies tire dressing to tires automatically in the wash process.

Solenoid: Control mechanism energized by a device such as a switch or a relay. Solenoids control the movement of water, air and or chemical to the tunnel equipment from the back room control system. Back room pump stations use solenoid valves. i.e. CTA's, tire shiners, reclaim odor control system and the spot-free rinse system.

Solution: Mixture, formed by dissolving one or more substances.

Solvent: Liquid that dissolves solids, liquids, and produces a solution.

Split collars: Used to join a hollow shaft to a solid shaft, securing the yoke with two (2) screws. i.e. the brush spindle with the hydraulic pump. (AKA split collar couplers, split couplers).

Spot-free: Industry term synonymous with reverse osmosis.

Spot free systems: Processes city water into spot free water (AKA RO Systems, reverse osmosis systems).

Spot free rinse arch: Applies spot free water to entire vehicle to prevent spotting (AKA spot free rinse system).

Spring loaded shock: Mechanical device which uses a coil spring to absorb pressure and create a smooth linear motion (AKA spring loaded shock absorber).

Sprockets: Pulls or guides chain through conveyor (12 & 14 tooth are standard). (AKA drive sprocket, take-up sprocket).

Stand alone odor control system: A component added to an existing reclaim system to reduce bacteria and smells.

Steel block chain: Solid links connected by flat bar of steel which uses pin's and cotter pin's. Easy to replace/repair. (AKA C-188).

Surface conveyor: Mounts on floor surface, no center trench is required. A conveyor in which the rollers ride completely on the surface. The advantage of this conveyor rather than the over-under conveyor is that a surface conveyor does not require a conveyor pit.

Swaging tool: A tool that uses a pusher and die to compress fittings onto a hose.



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Take up section: Section of the conveyor located at the entrance of the tunnel which “takes-up” the slack in a chain, having spring or air-shocks, and which keeps the chain at the proper tension and protects it from sudden stops.

Tall-profile roller: Used to push larger vehicles with larger diameter tires.

Temperature gauge: A device used to indicate the temperature of the item being monitored. Hydraulic power packs have a temperature gauge to monitor the heat generated.

Three-color foamer: Applies three color foam wax or polish/conditioner to vehicle (AKA triple foam, shower head triple foam).

Tire applicators: Nozzles, near the ground, which spray the tires with a solution designed to remove brake dust and brighten the black rubber of the tire.

Tire dressing: Used to add shine and protect tires from uv rays, there are three (3) types of product typically used to dress tires. A water-based product is used often in this application and has a creamy white quality. A solvent-based product is sometimes used and has a clear, shiny quality. The product used with the most frequency nowadays is a silicon product, which is a clear, blue, shiny, viscous quality. The silicon product has the highest gloss and lasts the longest.

Tire brushes: Cleans white & black tire walls. (also see Poodle brush-wheels & rims with the Poodle brush).

Tire switch: Locates position of tires and communicates with tunnel controller to turn equipment on/off (AKA tire pad, tape switch).

Titration: Quantitative/chemical analysis used to determine the concentration of a chemical when another chemical is introduced to the solution inside a flask or beaker.

Top brush: A piece of equipment used to clean the horizontal surfaces of vehicles, features a counter weight to achieve the perfect balance while cleaning the vehicle.

Top motor side washers: Used to clean side surfaces from the rocker panels to the body moldings.

Torque: Force that rotates or turn things. (AKA torque plate).

Tracking bars: Placed along passenger side of vehicle to guide vehicle to inside rail and not outside. Also to make sure tires do not grip on concrete.

Transducer: An electronic device that converts energy from one form to another.



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Translucent: Light passes through while diffusing it.

Triple foam: Three different colored foam chemicals applied to vehicle as it passes through the wash tunnel. Extra service that generates additional revenue and is eye pleasing to the customer.

Tuffy pad: A brillo-type material inside of a foamer which aids in foaming.

Tunnel: Where the conveyor/ washing equipment is located.

Tunnel checks: A walk-through of the tunnel while a wash is occurring that consists of all the extras. We are checking overall performance and checking specific indicators of adjustment.

Tunnel controllers: Communicates between car wash equipment and motor control center measuring vehicles and turning equipment on/off in accordance to wash type.

Tunnel Master Jr.: Manufactured by ICS (Innovative Control Systems) POS system that selects wash package, prints receipt and end of day reports.

Tunnel Master Sr.: Manufactured by ICS (Innovative Control Systems) POS system that includes time clock, customer tracking, credit card clearing as well as wash package, receipts and end of day reports.

Tunnel washes: Use conveyors to push or pull the vehicle through a series of fixed cleaning mechanisms.

Turbo nozzle: A nozzle that creates high pressure streams.

Ultra-high molecular weight (UHMW): It is the material composition that makes these parts unique. Impact strength is high and chemical resistance is excellent (commonly referred to as "plastic bearings" and "greaseless" bearings).

Underbody/undercarriage: Bottom structure of vehicle.

Undercarriage wash/applicator: Rinses undercarriage of vehicle. Device delivers high volumes of wash water to the underside of vehicles to remove mud and salt. Can also be used as a rust inhibitor applicator.

Universal joint: Joint between two shafts that aren't in a straight line that transmits rotary motion.

UV lamp: Ultraviolet lamp.

Venturi: A fitting or device that consists of a tube constricted in the middle and flared on both ends. A fluid's velocity will increase and a fluid's pressure will decrease while passing



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through the constriction. Placing a tube or pipe at the constriction point creates a vacuum. Fluid or air can then be drawn in through the tube. The system is named after Italian scientist Venturi.

VFD (variable frequency drive): Control device which regulates the speed of the dryer motors, reduces operating costs and prolongs motor life (AKA variable frequency drive control center).

Wash: Term refers to high pressure spray or brushes using detergent solutions on the vehicle.

Washer extractor: Industrial grade equipment to wash and dry towels that are used by attendants to dry vehicles at full service tunnels.

Wash machine: Washes towels used in the car wash (AKA Unimac, front loader washer, washing pressure).

Wash retract: Retracts brushes to rest position and is programmable to retract brushes around damaged or delicate vehicles.

Water hardness: Soluble metal salts, (principally those of calcium and magnesium, and sometimes iron and manganese) that when present in water in sufficient amounts create cleaning problems. These metal salts remain on a vehicle after the water evaporates leaving white spots.

Water heater: Heats water in cold climates and winter used primarily for detergents, final rinsing and RO.

Water manifold: Pre-plumbs solenoid valves for low cost.

Water softener: Removes minerals, solids and chlorine from hard water. Primarily used for detergents and spot free systems.

Water softener system: Softens the water used in the tunnel for cleaning. Softened water does a much better job cleaning in all detergent applicator systems. Softened water is not needed for the high pressure nozzles and for the rinse/wax/sealer applicators, as harder water actually works better. System should be sized for maximum number of cars ever expected.

Water stabilizer: A five metal alloy primarily nickel designed to prevent scaling of the RO membrane.



CARWASH GLOSSARY

Wax: An optional sealer applied on a vehicle which adds additional sheen and protection to the surface. Usually applied by an arch, forms water resistant coating on vehicle for shine, polishing and protection. Applied in foam form or liquid.

Welded steel chain: Considered the best chain in the industry for use on over under conveyors and has welded sections. SC78 Welded Steel Chain is recognized by top operators as the best style chain in the industry. It is the number one most used chain.

Wetting agent: Substance that reduces the surface tension of a liquid, causing the liquid to spread across or penetrate more easily the surface of a solid.

Wet checks 1: A procedure that takes place turning all the equipment online and ready to wash vehicles before the car wash is open. This process allows operators to observe the equipment in motion, and confirm the cloths have been soaked, the foam tubes charged and the pads saturated on the tire shiner.

Wet checks 2: Visual check of the chemical barrel levels in the equipment room. Barrels should be filled/changed when the contents are about 10% of full (AKA chemical checks).

Wipe-O-Matic: Equipment placed after a blower system that has overlapping manmade synthetic chamois cloths to wipe and absorb water from the surface across the vehicle.

Wheel and tire chemical applicator: Device for spraying cleaning solution onto wheels and tires.

Wrap around brushes/washers: Rotating brushes attached to knuckling arms for cleaning all vertical surfaces: front, sides and rear of vehicles. This piece of equipment features a restricted universal joint and dampening shock system to safely navigate around mirrors, antennas and rear wiper blades. (Types: reverse & straight, jog and double jog, spyder).

Wrap foamer: Applies lubricating detergent to a vehicle prior to the wrap-around brush to promote safe, smooth operation.

Wrap retract: Retracts brushes to the rest position and is programmable to retract brushes around damaged or delicate vehicles.