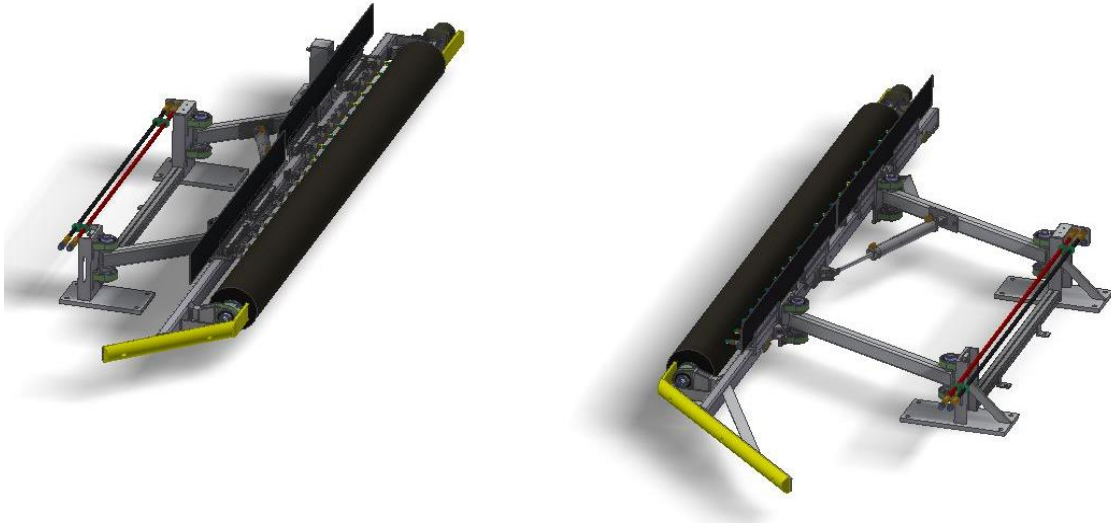




Tire Seal Machine™

Hydraulic & Electric



Owner's Manual

Sonny's Enterprises LLC
5605 Hiatus Road
Tamarac, Florida 33321



Owner's Manual Tire Seal Machine™ Hydraulic & Electric

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WARNING *SAFETY REQUIREMENTS* WARNING

1. All employees must be thoroughly trained in safe operation and standard maintenance practices. All employees must review this entire manual monthly.
2. Do not enter the wash tunnel when the equipment is operating. Death or dismemberment may occur.
3. Do not wear loose fitting clothing or jewelry around moving equipment. Do not allow any part of your body or other objects (including ladders, hoses, or tools) to come in contact with moving equipment. Entanglement may result causing death or dismemberment.
4. Do not leave a ladder or any other items such as wash down hoses or tools in the wash tunnel while equipment is running. Vehicle damage and injury, including death, can occur.
5. Always exercise caution when walking (never run) through the wash tunnel as there may be slippery conditions. Be careful so you do not bump into or trip over equipment.
6. Only those employees specifically instructed and trained by the location management are permitted to enter the wash tunnel to perform inspections or maintenance. At least two qualified maintenance people must be present when performing equipment repairs or preventive maintenance.
7. Do not perform any maintenance or work on equipment unless you first perform Lock-Out Safety Precautions. All electrically powered equipment must have manually operated disconnects capable of being locked in the "OFF" position. Equipment that has been "locked out" for any reason must be restarted only by the person who performed the "lock out" operation..
8. When working on any equipment that is higher than your shoulders, always use a fiberglass ladder that is in good condition.
9. Do not attempt to repair or adjust any pressurized liquid or pneumatic part, hose, pipe or fitting while that equipment is in operation.
10. Electrical connections and repairs must be performed by a Licensed Electrician Only.
11. Emergency "STOP" buttons must be well marked and their location and proper use reviewed with all personnel. Any activated "STOP" button must be reset only by the person who activated it. Clear the wash tunnel of any people, ladders, hoses, tools, and other loose items before restarting the equipment. An audible device must sound to warn people that the equipment is starting.
12. Do not operate any piece of equipment that requires safety covers with those covers removed or improperly installed. Do not operate any piece of equipment if any component of that piece is suspected to be defective or malfunctioning.



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13. Store all cleaning and washing solutions and oils in a well-ventilated area. Clean up fluid spills immediately to prevent hazardous safety conditions. Be certain to follow all safety procedures on SDS Sheets for each chemical product used.
14. All hydraulic and electric systems in the wash tunnel equipped with a torque relief or overload should be checked and set at the minimum amount that will allow for proper functionality under normal washing conditions.
15. No unauthorized people should ever be permitted in the wash tunnel or near the equipment at any time.

* * *

!! CAUTION !!

When a piece of equipment must be in operation during inspection or maintenance, one qualified technician must stay at the power disconnect switch while another qualified technician performs the inspection or maintenance.



Owner's Manual Tire Seal Machine™ Hydraulic & Electric

INTRODUCTION

This Manual contains information that is vital to the successful installation, operation and maintenance of your SONNY'S vehicle washing equipment.

Please read, and understand, the full contents of this manual before installation and operation of the equipment. Keep this booklet in a location where it may be used for ongoing reference.

Should you have any questions on the operation or servicing of this equipment please contact

TECHNICAL SERVICES DEPT.

SONNY'S ENTERPRISES INC.

5605 Hiatus Road

TAMARAC, FLORIDA 33321

TELEPHONE: 800-327-8723 FAX: 800-495-4049

THANK YOU FOR YOUR CONFIDENCE IN SONNY'S !!!!!





Product Specifications

- Automatic operation triggered by the car wash equipment controller
- Aluminum frame and hangers
- Designed to operate in the drip space of conveyor car washes
- Bristle Brush application with 108" (9') brushes
- Bristle Brush application with 96" (8') brushes
- Control panel complete with 2 air driven solution pumps
- Each side has split solution delivery manifolds for solution delivery savings
- 3 inch half round plastic entrance guides are standard on both sides
- Air over oil control for retract and extend functions
- 4 bolt spindle type brush mounting
- Grease-able bearings throughout
- 14 ft. 2 in. (170") of tunnel length required for passenger side brush 8' unit
- 12 ft. (144") of tunnel length required for driver side brush 8' unit
- 15 ft. 2 in. (182") of tunnel length required for passenger side brush 9' unit
- 13 ft. (156") of tunnel length required for driver side brush 9' unit
- 17 ft. (204") of length is required for In-Bay units

For Parts/Accessories Information Please Reference our Catalog or Website.



Best Selling Tire Dressing Applicator Ever!

Problem:
Our clients asked us to reduce chemical consumption and maintenance expense associated with online tire-dressing application.

Solved:
SONNY'S new Tire Seal Machine™ features a long-lasting feather-tip design that delivers full application on both large and small tires while consuming up to 40% less tire dressing. There's no wasted product to run-up your chemical costs or run out on your driveway. The perfect choice for high-volume washes!



Unique feather-tip design.



Laser drilled stainless steel manifold



Hinged doors allow for easy maintenance.



Electric or Hydraulic
Drive to Meet Your
Requirements



LifeTime Limited Weldment
Warranty for Generations
to Come

Specifications

Tire Brush	Inches	Metric
Footprint Length	173in	4.39m
Hydraulic	6GPM @ 800PSI	.4 ltrs/sec @ 56 kgs/sq cm
RPM	250 to 400RPM	
Optional Electric Frame	1 HP 208- 430V each side	

- Eliminates manual labor
- Unique feather-tip design delivers full application on both large and small tires
- Controls tire dressing usage and expense
- Eliminates dangerous & messy driveway run-off
- Can mount directly to SONNY'S Buff-n-Dry
- Can be installed in the drip area
- Fixed position Stainless manifold
- Hinged doors allow for easy maintenance
- Allows exterior-only car washes to participate in the highly profitable tire dressing business



INSTALLATION

Utilities Requirements

UTILITIES INTERCONNECTION AND THE MATERIALS REQUIRED FOR INTERCONNECTION TO SONNY'S EQUIPMENT ARE THE RESPONSIBILITY OF THE CUSTOMER !

PERFORM ALL TRADES WORK TO ALL APPLICABLE LOCAL AND NATIONAL CODES !

Electrical

- The Customer's Electrician is to provide and install control wiring from the tunnel equipment controller for one programmable function to the junction box on the tire shiner control panel. See Figure #5 in Dimensions Section. The function is to provide for applicators retract through the four way solenoid valves on the control panel and power to the timer. The timer will power three way solenoid valve on the control panel for solution pumps for the number of seconds set on the timer.
- Where applicable, The Customer's Electrician is to provide materials and install 208VAC or 230VAC or 460VAC, 3-phase, 60Hz power to the electric motor on the hydraulic power pack or VFD panel from a properly sized three pole circuit breaker and motor starter with three thermal overloads.

Be certain that the solenoid coil voltage (24VAC OR 110VAC) on the three solenoid valves as ordered from Sonny's is compatible with the tunnel equipment controller output voltage !!!

Pneumatic

- The Customer's Plumber is to provide and install a ½ inch compressed air line (approximately 6 cfm at maximum load) from the air compressor to the ½ inch FPT inlet port on the main inlet air manifold on the tire shiner control panel. See Figure #3 in Dimensions Section.

Technical Disclaimer

- Although building codes have been considered in developing all drawings, verification of site-specific conditions and compliance with federal, state, and local building codes is the exclusive responsibility of the customer and/or architect and engineer.

Dimensions

Brush height from finished floor – 6.5 Inches to the Center of the Brush.

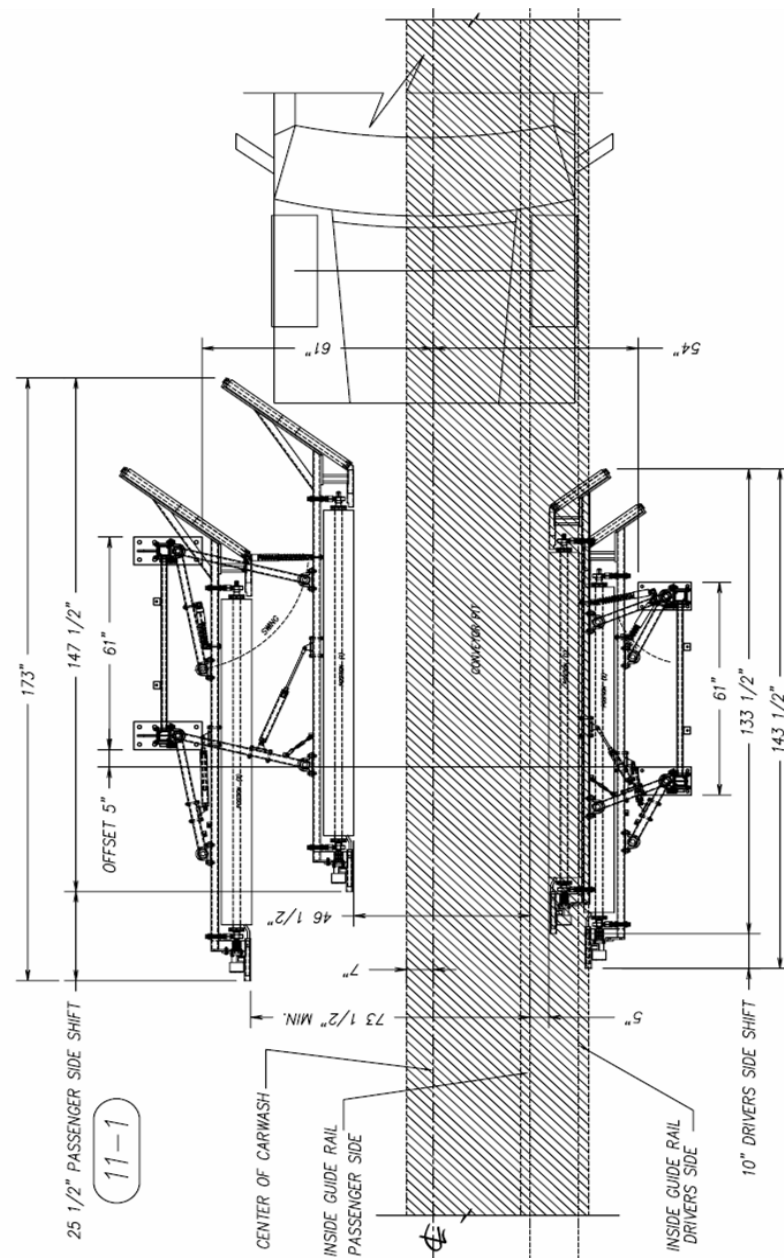


Figure #1

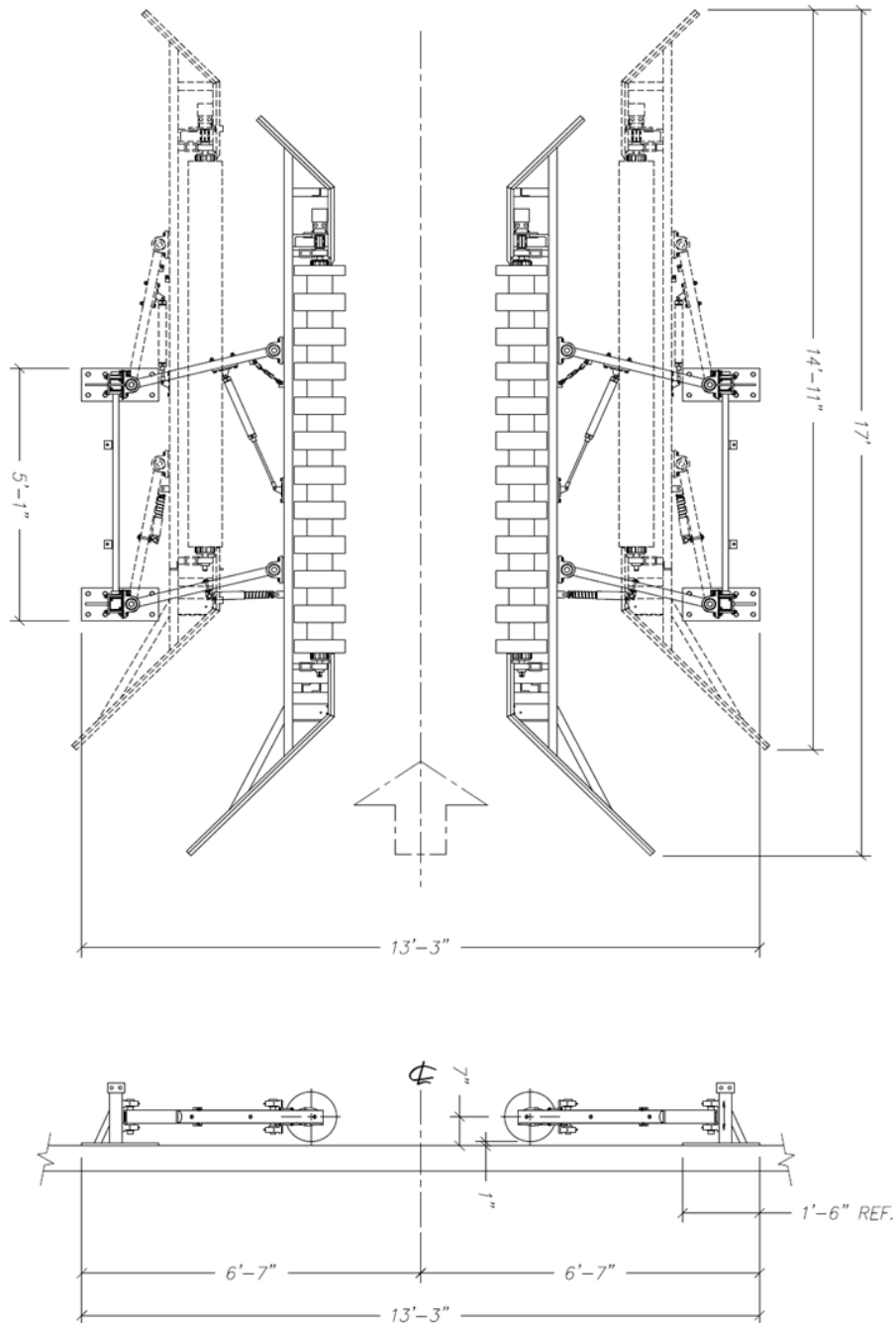


Figure #2

Tire Shine Panel PLEASE SEE FOLLOWING PAGE AND LET ME KNOW WHICH TO KEEP

Included with purchase of Tire Shine Applicator. Can order separately, in 24 or 110 voltage.

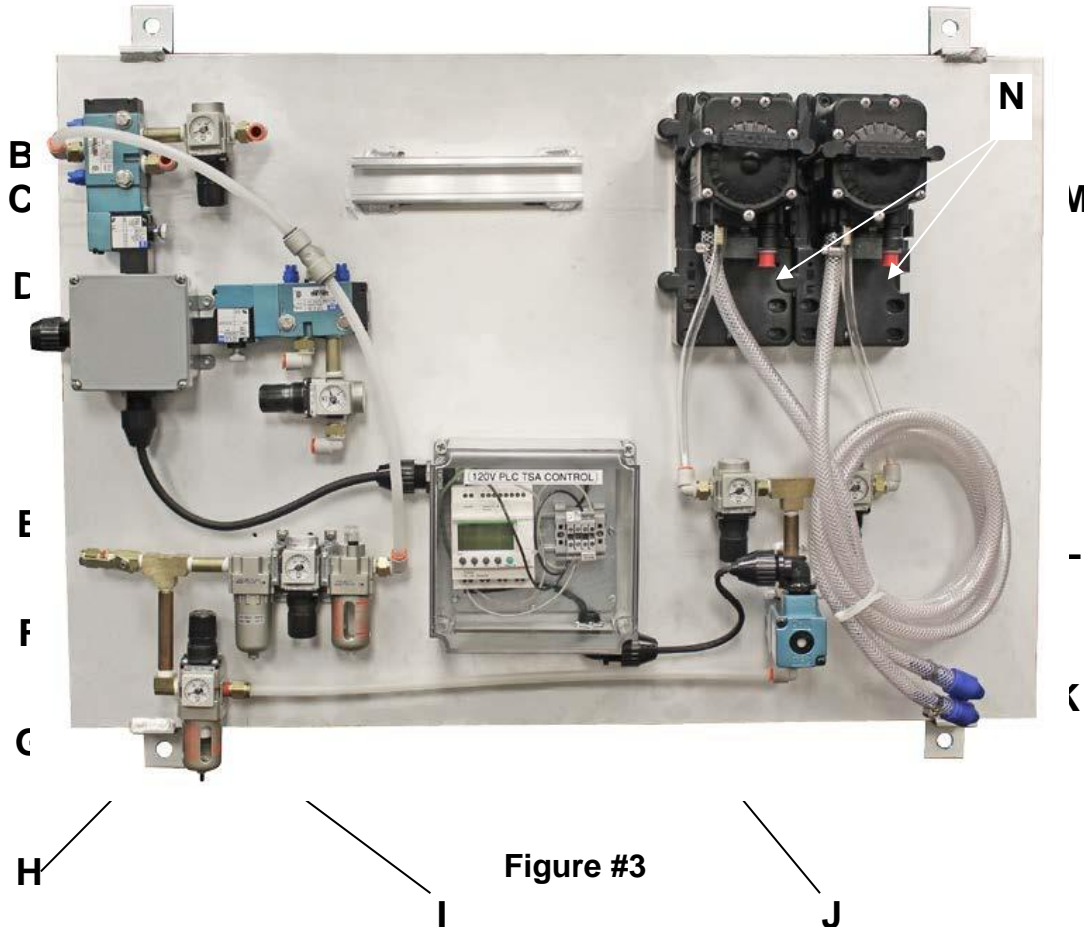
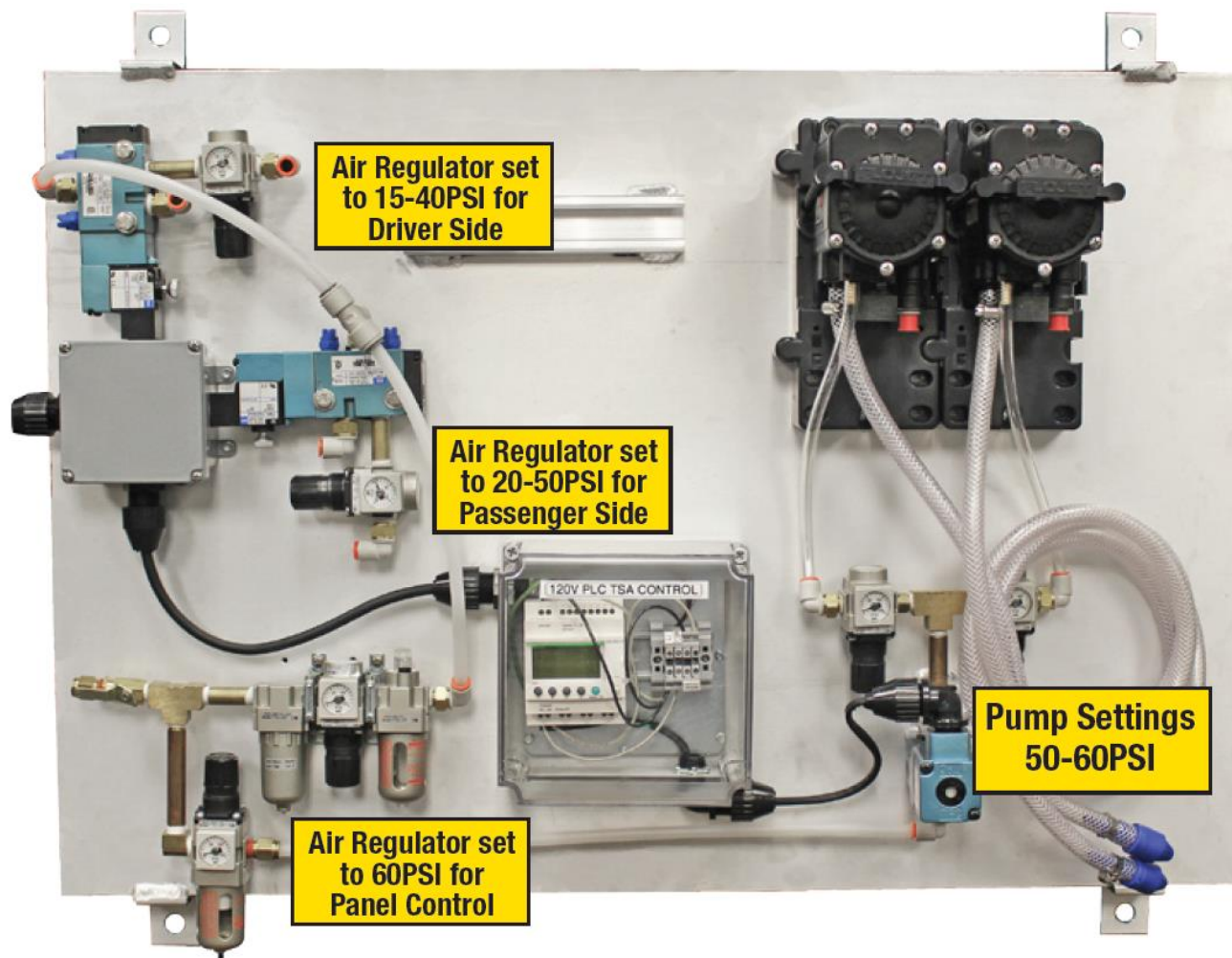


Figure #3

A Mac Valve 10006350 24volt / 10006351 110volt	I 10005219 – Air regulator, set to 60PSI
B Connection for oil bottle tops DS	J 10007192 Chemical timer, Setting of 1-5 seconds
C Connection for front of cylinder DS	K 10006088 or 110 – 3-way MAC valve
D Retract solenoid DS	L 10006016 Air regulator, Set to 50-60PSI to G-57
E Retract solenoid PS	M Chemical pump feed lines
F Connection for front of cylinder PS	N Chemical pump discharge lines
G Connection for oil bottle tops PS	O G-57V chemical pumps
H AC20-E3J07 FRL – Set to 60PSI for retract	P 10006016 Air regulator for in-pressure. Set to 15-40PSI Driver and 20-5-PSI Passenger



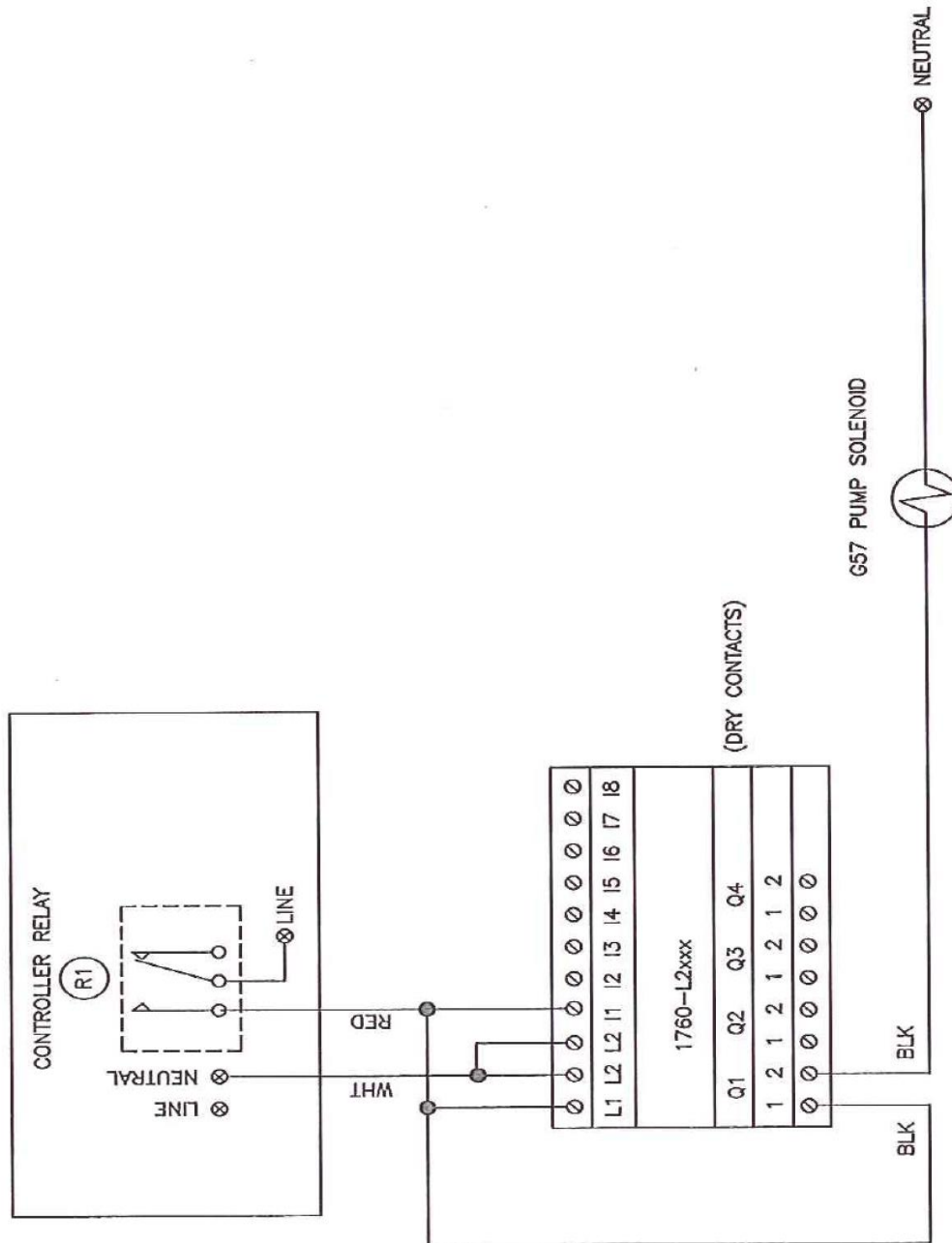


Figure #4

Zelio Chemical Timer Application

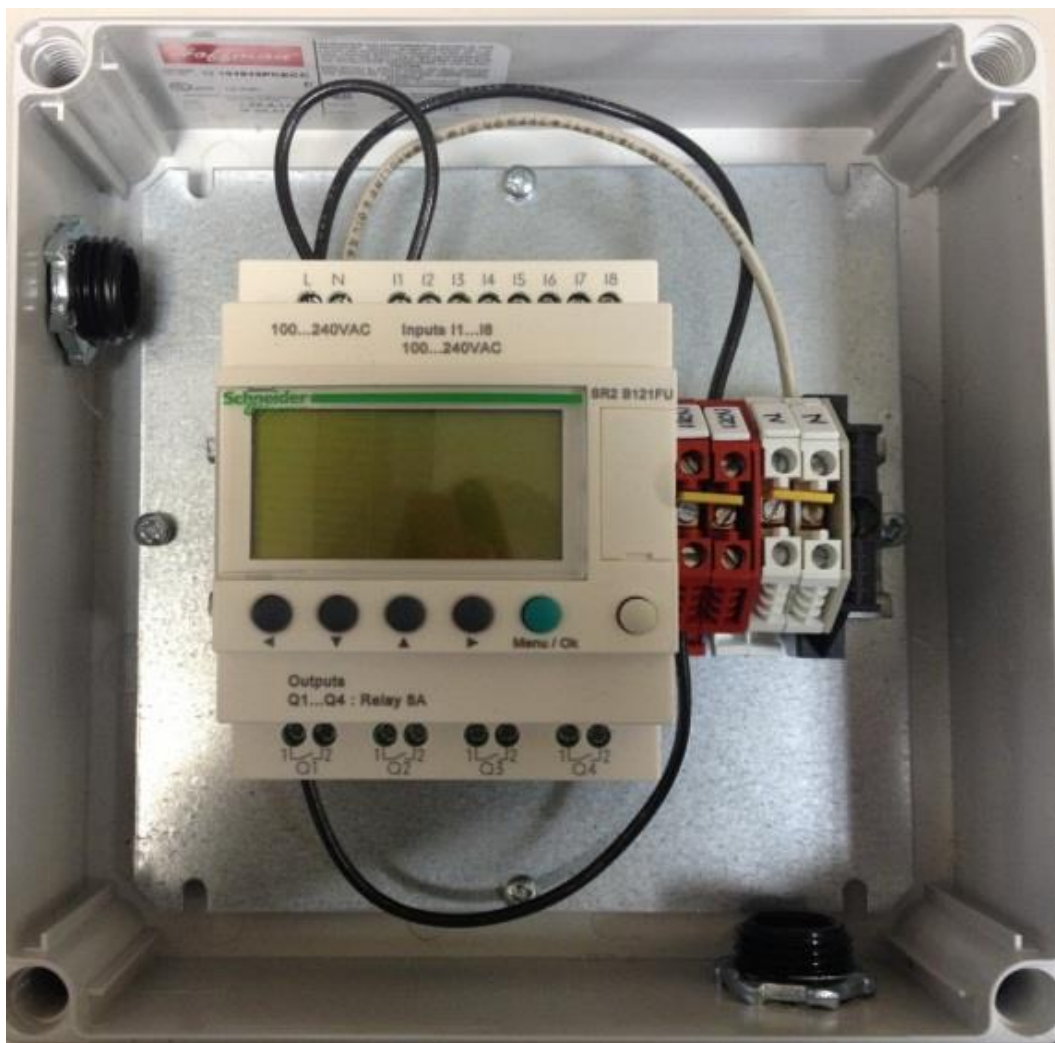


Figure #5



Equipment Installation

Rotational Tire Shiner – Mechanical Installation

Tools

1. Safety Glasses and Gloves
2. ½" Drive Ratchet
3. ½" Drive Sockets
4. Combo Wrenches
5. Large Standard Screwdriver
6. 1" Hammer Drill
7. 3 lb. Sledgehammer
8. Tape Measure

Consumables

1. Stainless Shims
2. PTFE Tape
3. PTFE Paste
4. Nylon Cord

Work Force

Two (2) persons

Time (assuming no problems)

2.00 – 3.00 hours

Installation Steps

1. Determine where the Brushes are to be installed.
2. Sweep any debris from where the Brushes will sit.
3. Set the Brushes in place.
4. Tie the Passenger side unit temporarily in its full retracted position. See figure #2 for In-Bay units. passenger side measure 74" inches from the outer edge of the plastic angle that protects the hydraulic brush drive motor to the inside of the conveyor inside guide rail.
5. Secure the passenger side exit base plate with one floor anchor.
6. Square the frame by using the pillow block bearing mounting channels that are welded to the base plates as the reference.
7. When the unit is square complete the base plates anchoring.
8. Untie the cord and allow the passenger side unit to extend toward the center of the wash tunnel.
9. Adjust the hanger heights equally so that the center of the brush is 6.5" from the floor.
10. The Driver side unit entrance base plate is to be placed 13 inches closer to the exit of the car wash than the passenger side entrance base plate.



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11. With the brush hangers fully extended measure 5 inches from the entrance and exit tips of the brush to the inside of the conveyor inside guide rail.
12. Square the driver side unit in the same manner as that used for the passenger side unit. Mark the floor for proper base plate placement.
13. Mark the conveyor outside guide rail for cutting with the driver side unit fully extended and full retracted.
14. Remove the driver side unit and cut the conveyor outside guide rail where it was previously marked and anchor the driver side unit in the marked floor position.
15. Adjust the driver side brush height so that the rotating brush will have minimal contact with conveyor pusher rollers and no contact with vehicle wheel covers.
16. Run and connect the 1/2 inch PRESSURE line from the Hydraulic Power Pack to the 1/2 inch male pipe thread fitting on the BLACK high pressure hose on the bulkhead fitting of the tire shiner.
17. Run and connect the 1/2 inch RETURN line to the Hydraulic Power Pack to the 1/2 inch male pipe thread fitting on the ORANGE high pressure hose on the bulkhead fitting of the tire shiner.
18. Rotation of the Brushes is toward the tire and downward.
19. Mount the panel on the equipment room wall that faces the wash tunnel at a point as close as possible to the in-tunnel tire shine applicators.
20. Run and connect the solution feed lines to the tire shiners on both sides.
21. Run and connect the air feed lines to the retract cylinder and reservoirs on both sides. Normally open port on Mac valve to the front (rod end) of air cylinder. Normally closed side of Mac valve to the top of oil bottle, bottom of oil bottle to back of air cylinder.



Adjustments and Testing

Prepare New Brush for On-Line Operation

Manually override the FloJet pumps on the control panel by energizing the 3-way air solenoid valve on the control panel. Allow the pumps to run until 1 to 2 gallons of Tire Shine product have been delivered to each applicator unit (Driver Side and Passenger Side) in the wash tunnel.

Adjust the equipment programmer functions for the Tire Shiner to sequential operation and allow product to be delivered to approximately 20 consecutive vehicle washes. Fine tune the extend air regulator pressure settings on the driver side and passenger side until the brush compress to surround each tire.

With the tire shiner in the fully extended position adjust the hanger height so that the vertical center of the brush is 6.5 inches above the floor.

Normal On-line Adjustments

Ensure rubber bumper on the driver side is adjusted so the plastic guide on the brush lines up with the plastic guide on the conveyor.

Set-up air regulator settings on the tire shiner control panel should be 80PSI for the main regulator, 40 to 70PSI for the solution pumps air regulators, 15-40PSI on the driver side wash pressure air regulator, 20-50PSI on the passenger side wash pressure air regulator. 60PSI on the retract air regulator. These settings may be adjusted for "fine tuning" of the equipment operation.

Both brushes should rotate downward on the vehicle tires at 40-60RPM.

The solution pump solenoid valve should be set to operate for 1 to 4 seconds. This setting will be made at the timer mounted in the timer box. The Tire Shiner equipment is volume sensitive. That is, when more vehicles purchase the service the solution requirement per vehicle is less in a day's car washing volume.

Chemical timer comes preset as a starting point. Actual settings may vary. The desired chemical usage is between 2-5 oz. per car. To increase or decrease chemical, press the + or the - button to increase seconds (above and below the 4 column). The higher the percentage of sales the less chemical is needed. See Figure #5 in Dimensions Section.

Speed and Torque Adjustment

1. Hydraulic
 - a. The speed can be adjusted on the flow control for the power pack.
 - b. To increase the speed move the handle on the flow control closer to the number 10.



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- c. To decrease the speed move the handle on the flow control closer to the number 1.
 - d. The torque must be set prior to operation and should be set between 600 and 900 PSI. For information on how to set the torque please refer to the Hydraulic Power Pack Manual.
2. Electric
- a. The speed can be adjusted on the Variable Frequency Drive (VFD).
 - b. To increase the speed adjust the Hertz on the VFD to a higher number.
 - c. To decrease the speed adjust the Hertz on the VFD to a lower number.
 - d. The Overload on the Motor Starter protector(s) must be set at the lowest level to allow for operation. Adjust the amps in accordance with motor(s) name plate.

1. Switch on the 24 VAC power from the controller to turn on the PLC.
2. PLC needs to be in the Main Screen A.

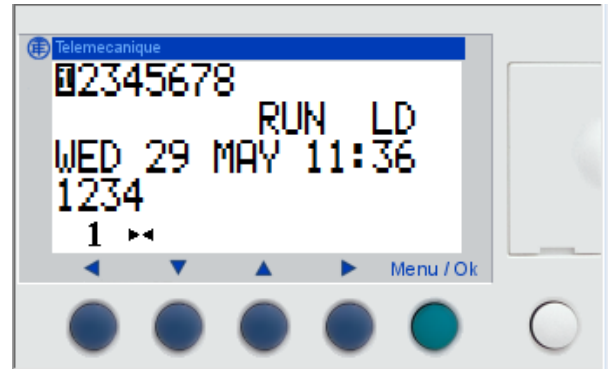


Figure 1. Main Screen A

3. Press **Menu/Ok** (green button) to go to Screen B:

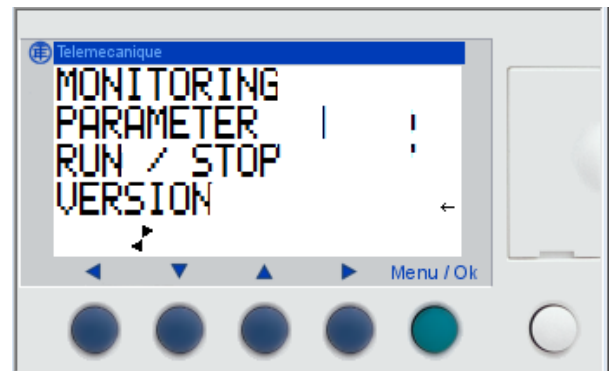


Figure 2. Screen B

4. Press the Arrow Down until **PARAMETER** flashes then press **OK** to go to the next Screen C:

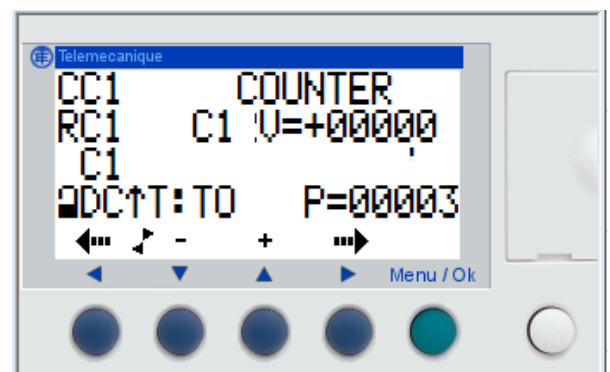
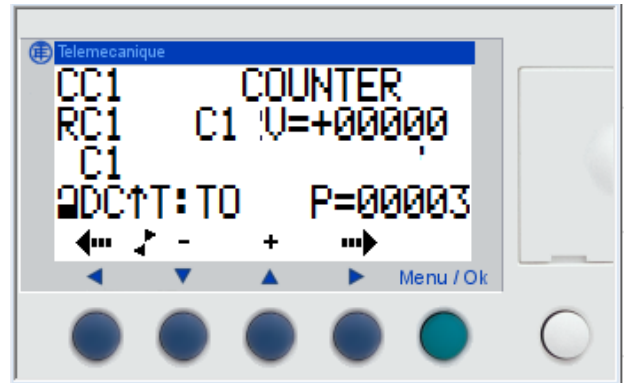


Figure 3. Screen C

5. To change the value of one of these parameters. Press the DOWN or UP Arrow key to get to the next parameter.
6. Using the LEFT or RIGHT Arrow keys, you can move the cursor to the parameter value and edit it.
7. Once Edited, press the Menu/Ok button. Then, the following screen will show up asking to confirm the changes.



PARAMETERS

(t) is the Parameter value to be changed

TT1 - Debounce the input signal from the controller (default value is 2 seconds)

TT2 – Set the time that the G57 pump solenoid is turned on (default value is 2 seconds)

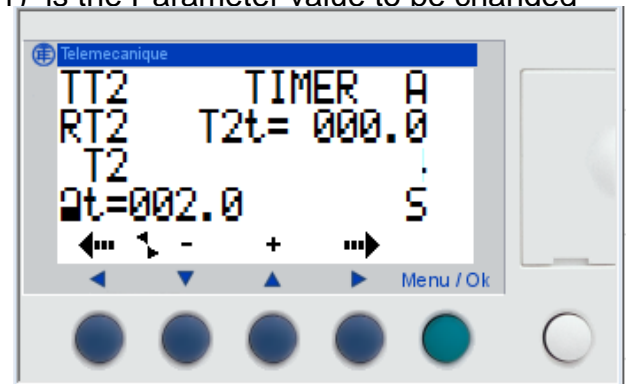
CC1 - Set how many cars need to be counted in order for the G57 pump solenoid to be energized (default value is every 3 cars)

TT1- Debounce the input signal from the controller (default value is 2 seconds). This parameter must not be changed. It is configured to allow the PLC to reboot when power is applied before starts counting.

Note: t is the parameter value to be changed. E.g. 002.5 = 2.5 seconds. None of the other values are changed.

TT2 - Set the time that the G57 pump solenoid is turned on (default value is 2 seconds)

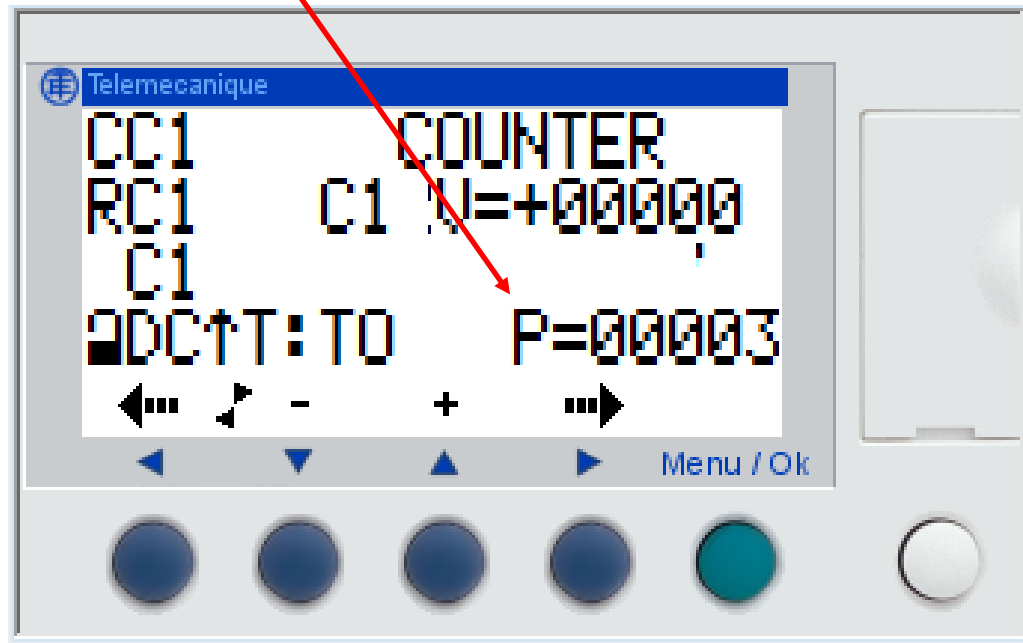
(t) is the Parameter value to be changed



Note: t is the parameter value to be changed. E.g. 002.5 = 2.5 seconds. None of the other values are changed.

CC1 - Set how many cars need to be counted in order for the G57 pump solenoid to be energized (default value is every 3 cars)

(P) is the Parameter value to be changed



Note: **P** is the parameter value to be changed. E.g. 00003 = 3 counts. None of the other values are changed.



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GENERAL OPERATION

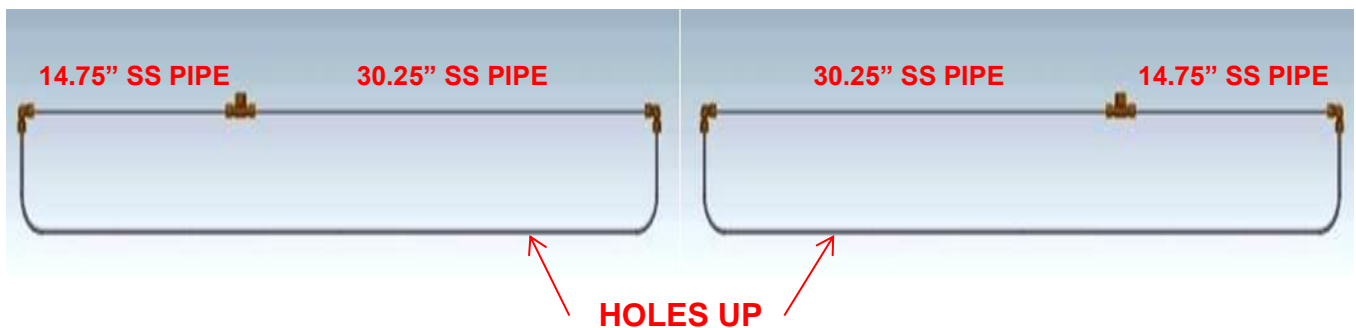
The Tire Shine applicator system is intended to provide programmable on-line, automatic, delivery of Tire Shine product to the four tires of passenger vehicles.

When the Tire Shiner equipment is at rest with the conveyor stopped or no vehicle has been programmed to accept this service with the conveyor running, the driver side and passenger side units are both retracted away from the center of the wash tunnel and the pumping system is off.

When the Tire Shiner equipment has been programmed to provide the tire shine service the driver side and passenger side units extend to the center of the wash tunnel at the chosen time and Tire Shine solution is delivered to the brush on the units to wipe the product on to the passing tires of the vehicle. If the next vehicle in line has also purchased the Tire Shine service the equipment will remain extended and ready to deliver the application process. If the next vehicle in line has not purchased the Tire Shine service the equipment will retract from the center of the wash tunnel and the solution pumping system will turn off.

Timer will be set for 1-4 seconds.

Replacement Manifold: TSA SS Manifold Assembly





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PREVENTIVE MAINTENANCE

DAILY

1. Prep the brush for use, by overriding the solution timer and applying excess chemical to brush.
2. Check all lines and fittings for leaks. Repair, or replace, as needed.
3. Check the brush for tears, damage, grease, oil, or foreign objects and clean the brush if necessary using high pressure water only, no chemicals.
4. Check retract/extend for proper operation, check for smoothness, and correct application pressure.
5. Check for sufficient chemical for the day's use.

WEEKLY

1. Grease all rotational bearings on the brush.
2. Spray lubricant on the clevis pins on both ends of the retract cylinders.
3. Check fluid in reservoir(s) and fill to $\frac{3}{4}$ when retracted, as necessary.

FOR THE FIRST MONTH OF OPERATION CHECK ALL HYDRAULIC FITTINGS FOR TIGHTNESS EACH WEEK. PERFORM THIS INSPECTION TO THE SCHEDULE SHOWN BELOW AFTER THE FIRST MONTH OF OPERATION.

MONTHLY

1. Grease all pivotal bearings on the hanger framework, 16 bearings total.
2. Inspecting all hardware and fittings for tightness.

SEMI-ANNUALLY

1. Check nozzles for clogging and brush for wear. Brush may be flipped to extend usable lifespan.
2. If fluid in reservoir(s) is contaminated drain, purge, and refill.



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WARRANTY

SONNY'S ENTERPRISES, INC. FACTORY LIMITED LIFETIME WARRANTY

Equipment manufactured by SONNY'S ENTERPRISES, INC. is warranted to be free from defect in material and workmanship. Welded metal framework and other non-moving, non-wearable fabricated metal components manufactured by SONNY'S are warranted for the life of the equipment to the original purchaser. Fabricated metal wearable surface and moving components manufactured by SONNY'S are warranted for a period of one (1) year to the original purchaser of the equipment.

All components assembled to SONNY'S equipment that are manufactured by others are warranted by the appropriate manufacturer and subject to that manufacturer's limited warranty. Contact SONNY'S for the specific information on other component manufacturer's warranty terms. All new cloth shipped with new SONNY'S equipment is warranted for a period of one (1) year or 80,000, whichever occurs first.

This warranty is not assignable or transferable. The warranty period begins the first day following installation or 30 days from the original invoice date, whichever occurs first. The Seller's liability shall be limited to repair or replacement of materials found to be defective within the warranty period. In the event of repair or replacement this limited warranty is noncumulative. The Purchaser must supply the Seller with immediate written notice when any defects are found. The Seller shall have the option of requiring the return of defective material to establish the Purchaser's claim. Neither labor nor transportation charges are included in this warranty. Transportation damage claims are to be submitted to the carrier of the damaged materials.

This warranty is based upon the Purchaser's reasonable care and maintenance of the warranted equipment. It does not apply to any equipment which has been subject to misuse, including neglect, accident or exposure to harsh chemicals or chemicals that react violently with water, organic acids (e.g. acetic acid), inorganic acids (e.g. hydrofluoric acid), oxidizing agents (e.g. peroxides), and metals (e.g. aluminum). Chemicals corrosive to aluminum alloys, carbon steel, and other metals. Nor does it apply to any equipment which has been repaired or altered by anyone not so authorized by SONNY'S. Further, the equipment must be properly installed with proper accuracy of all specified plumbing, electrical, and mechanical requirements. This warranty does not apply to normal wear and tear or routine maintenance components.

EXCEPT AS EXPRESSLY STATED HEREIN, SONNY'S SHALL NOT BE LIABLE FOR DAMAGES OF ANY KIND IN CONNECTION WITH THE PURCHASE, MAINTENANCE, OR USE OF THIS EQUIPMENT INCLUDING LOSS OF PROFITS AND ALL CLAIMS FOR CONSEQUENTIAL DAMAGES. THE LIMITED WARRANTY EXPRESSED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. SONNY'S NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION HERewith.



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CUSTOMER SERVICE

Please contact SONNY'S Equipment Department for installation and/or operational questions regarding this piece of equipment.

Please refer to the Parts Catalog and contact SONNY'S Customer Service Order Entry Department for any replacement parts for this piece of equipment.

You can also visit the web at www.SonnysDirect.com.

DEPARTMENT

Toll Free Main Line
Equipment Department

PHONE NUMBERS

800-327-8723
954-720-4100

FAX NUMBERS

800-495-4049
954-720-9292

Or you can email Sales at sales@SonnysDirect.com

Thank you for being a SONNY'S car wash equipment owner!

From all of us here at

