



Simoniz® Tire Shine

TSA 101



Owner's Manual

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



Table of Contents

WARNING *SAFETY REQUIREMENTS* WARNING	3
INTRODUCTION	5
Product Specifications	6
INSTALLATION	8
Utilities Requirements	8
Dimensions	9
Equipment Installation	17
Tire Shiner Installation	17
Adjustments and Testing	20
GENERAL OPERATION	26
PREVENTIVE MAINTENANCE	27
EXPLODED VIEWS	28
WARRANTY	30
CUSTOMER SERVICE	31

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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.



Owner's Manual Simoniz® Tire Shine TSA 101

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.



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

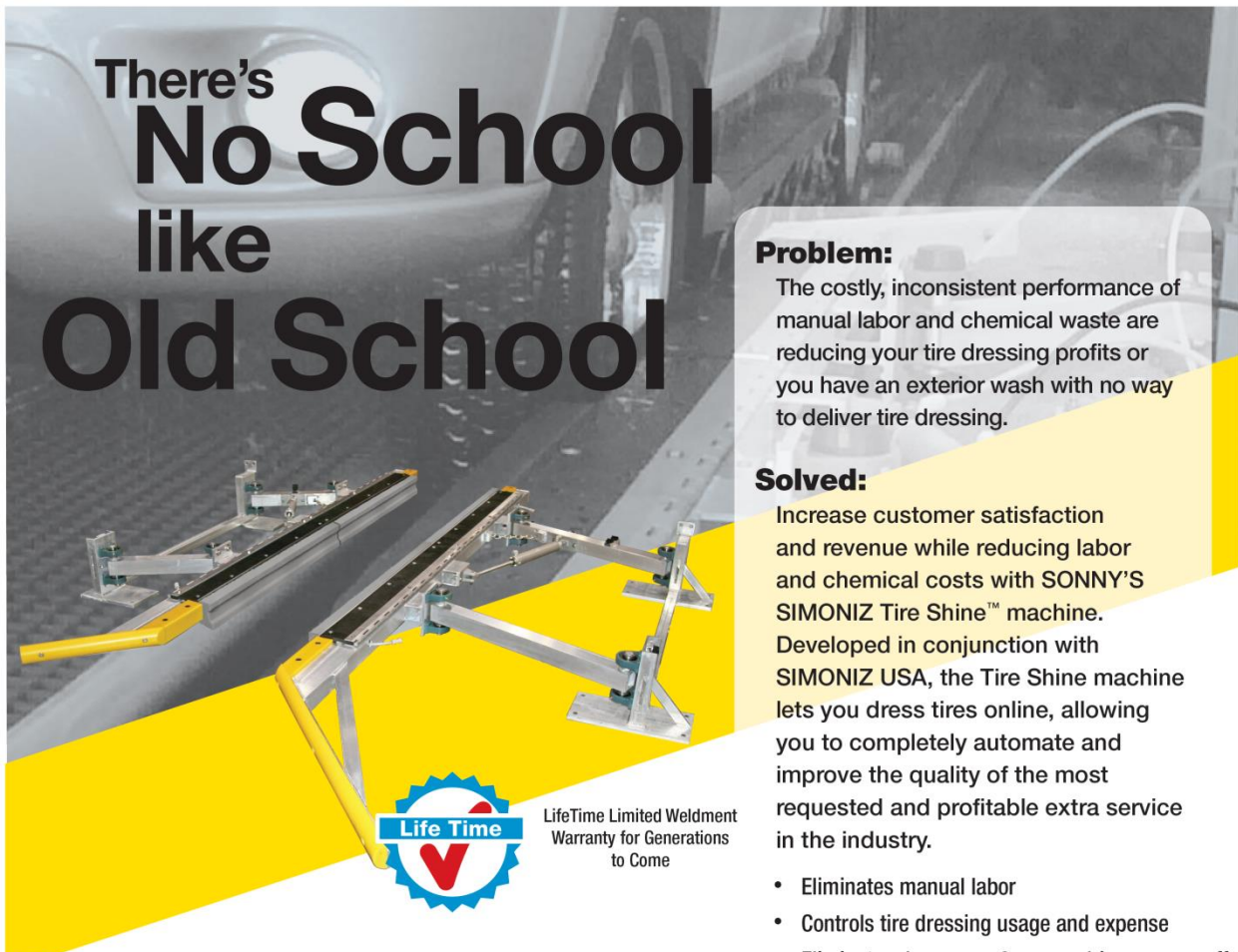
THANK YOU FOR YOUR CONFIDENCE IN SONNY'S !!!!





Product Specifications

- Automatic operation triggered by the car wash equipment controller
- Aluminum frame and hangers. Also available in stainless steel
- Designed to operate in the drip space of conveyor car washes
- 2 foam applicators on each side total 96 inches in length
- Control panel complete with 2 air driven solution pumps
- Each side has split solution delivery manifolds for solution delivery savings
- 3 inch half round UHMW plastic entrance guides are standard on both sides
- Hangers and foam applicator assemblies are height adjustable on both sides
- Air over oil control for retract and extend functions
- Heavy duty grease-able bearings are easily accessible
- 14 ft. 5 in. of tunnel length is required for the passenger side applicator unit
- 12 ft. of tunnel length is required for the driver side unit



There's
No School
like
Old School

Problem:

The costly, inconsistent performance of manual labor and chemical waste are reducing your tire dressing profits or you have an exterior wash with no way to deliver tire dressing.

Solved:

Increase customer satisfaction and revenue while reducing labor and chemical costs with SONNY'S SIMONIZ Tire Shine™ machine. Developed in conjunction with SIMONIZ USA, the Tire Shine machine lets you dress tires online, allowing you to completely automate and improve the quality of the most requested and profitable extra service in the industry.

- Eliminates manual labor
- Controls tire dressing usage and expense
- Eliminates dangerous & messy driveway run-off
- Can be installed in the drip area
- Separating the sponge into (2) 48in sections reduces surface tension to prevent tearing.
- Hinged doors allow for easy maintenance
- Allows exterior-only and in-bay automatic car washes to participate in the highly profitable tire dressing business



LifeTime Limited Weldment
Warranty for Generations
to Come

SONNY'S® Simoniz® Tire Shine Machine

Includes:

- Foam pads
- Oil Reservoir
- 30-gallon drum of Simoniz® dressing and lighted sign
- DS Mounted Stop

Requires:

- Tire Shine control panel

Optional:

- Crossover plumbing arch
- Powder Coating



Protect & beautify your equipment with optional powder coating. Call for pricing.

Specifications

	Tunnel Tire Shine		Crossover Arch		Control Panel
	Inches	Metric	Inches	Metric	
Footprint Length	161in	4.08m	10in	0.25m	Dimensions: 34in L x 29in H
Footprint Width	144in	3.65m	144in	3.65m	Air: 2CFM @ 50PSI
Unit Height	---	---	102in	2.59m	Control Voltage: 24V or 120V
Vehicle Clearance	---	---	90in	2.28m	Tunnel Functions: (1) For panel control (1) Optional Sign
Air	40PSI		---		



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.

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 6CFM 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.

Dimensions

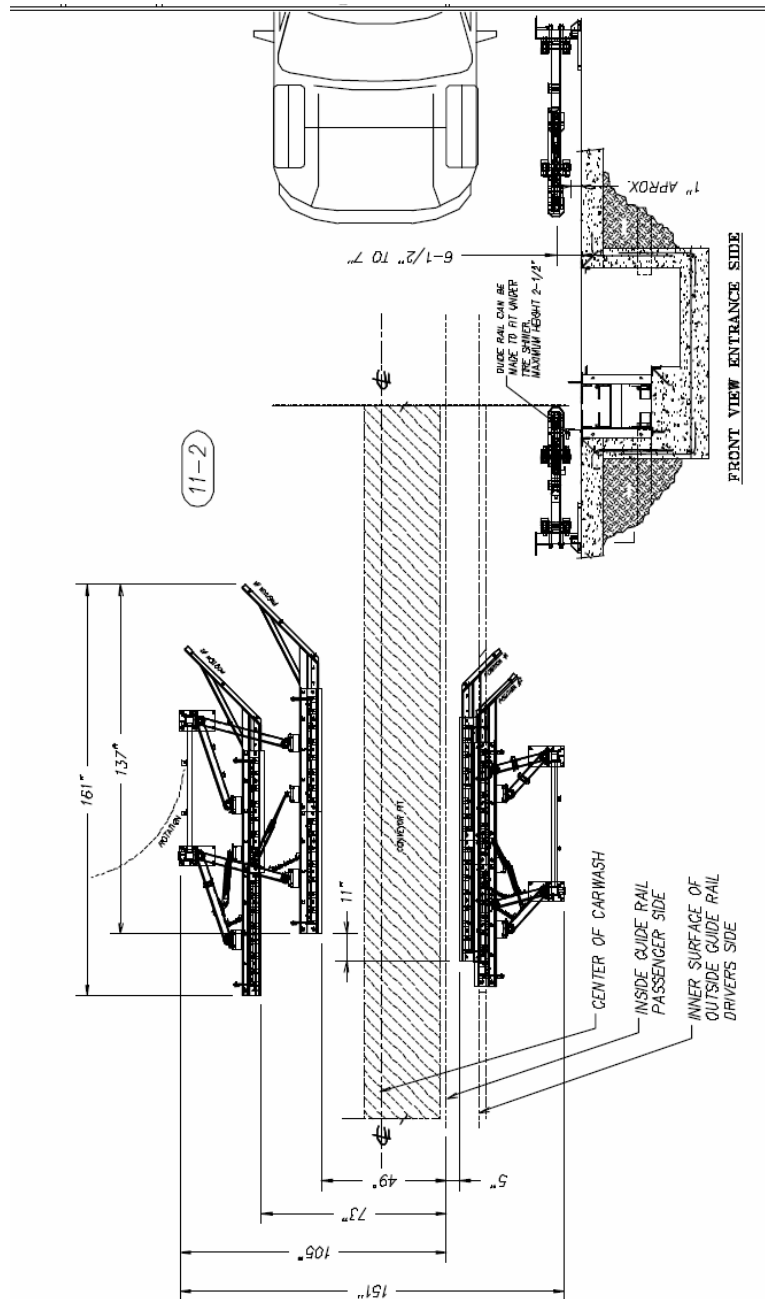


Figure #1

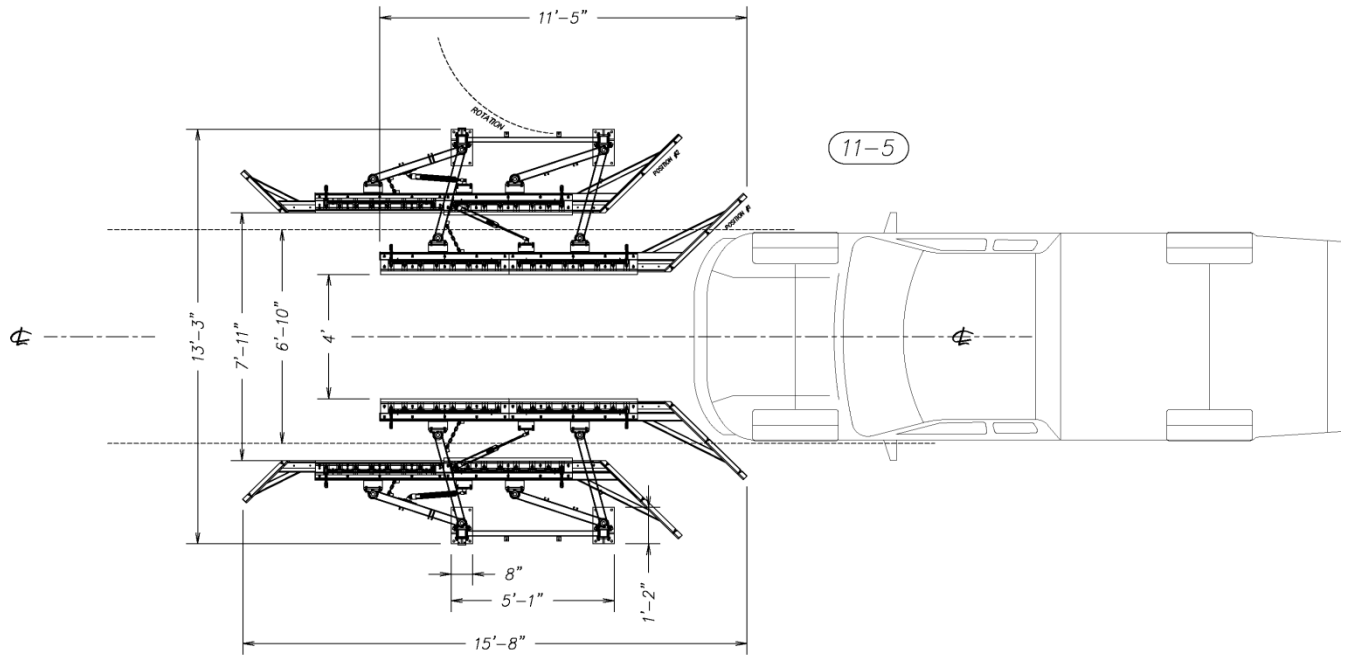
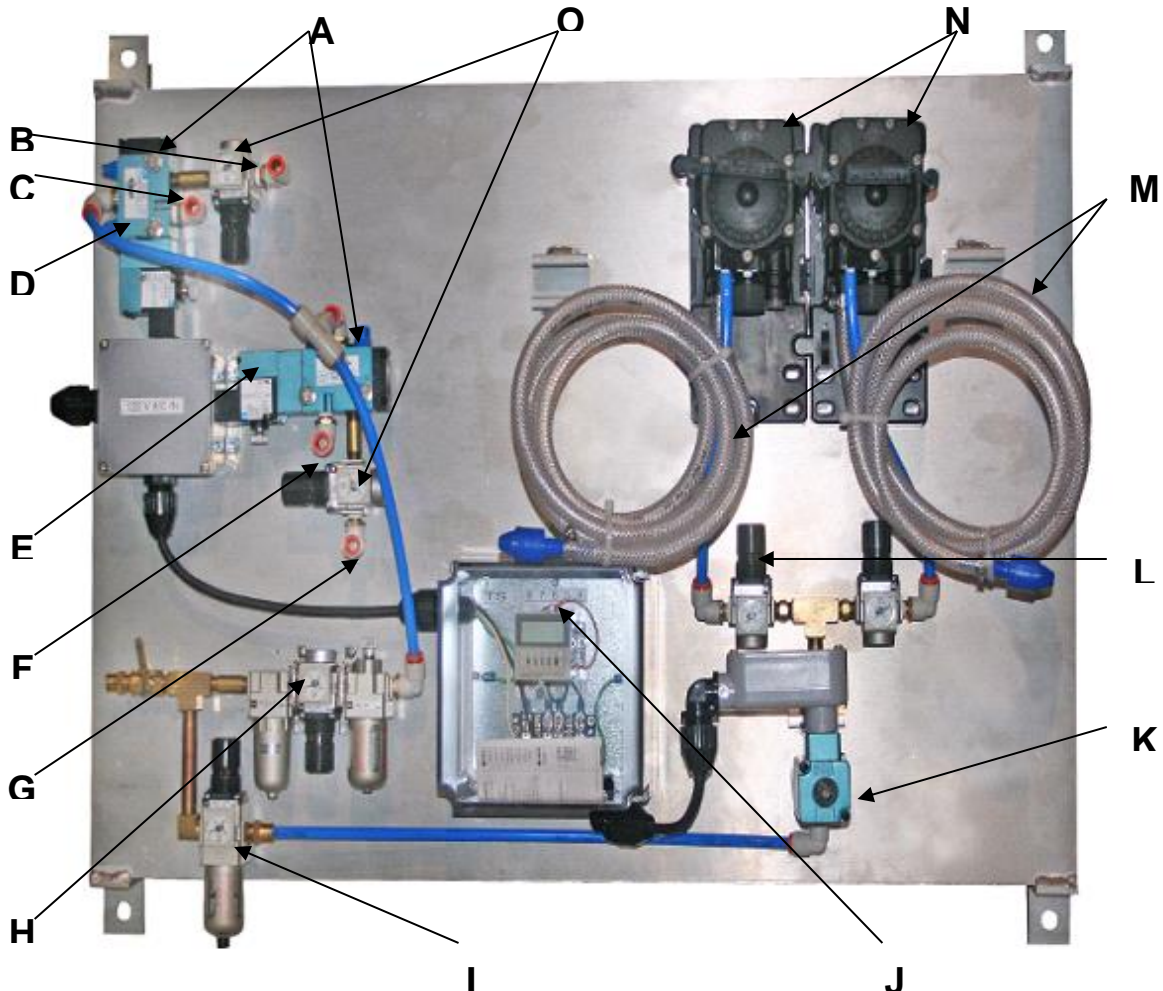


Figure #2 – In-Bay Automatic

TSA



- | | | | |
|---|-------------------------------------|---|---|
| A | MAC811C24 or 110 | H | AC20-E3J07 FRL – Set to 60PSI for retract |
| B | Connection for oil bottle tops DS | I | AW20-N0ZE-CZ – Air regulator, set to 80PSI |
| C | Connection for front of cylinder DS | J | H3CAA Chemical Timer, Setting of 1-5 seconds |
| D | Retract solenoid DS | K | MAC225B221CA or 110 – 3-way MAC valve |
| E | Retract solenoid PS | L | A220-NO2E-Z Air regulator, Set to 40-70PSI to G-57 |
| F | Connection for front of cylinder PS | M | Chemical feed lines |
| G | Connection for oil bottle tops PS | N | G-57V Chemical Pumps |
| | | O | A220-N02E-Z Air regulator for in-pressure – set to 15-40PSI Driver and 20-50PSI Passenger |

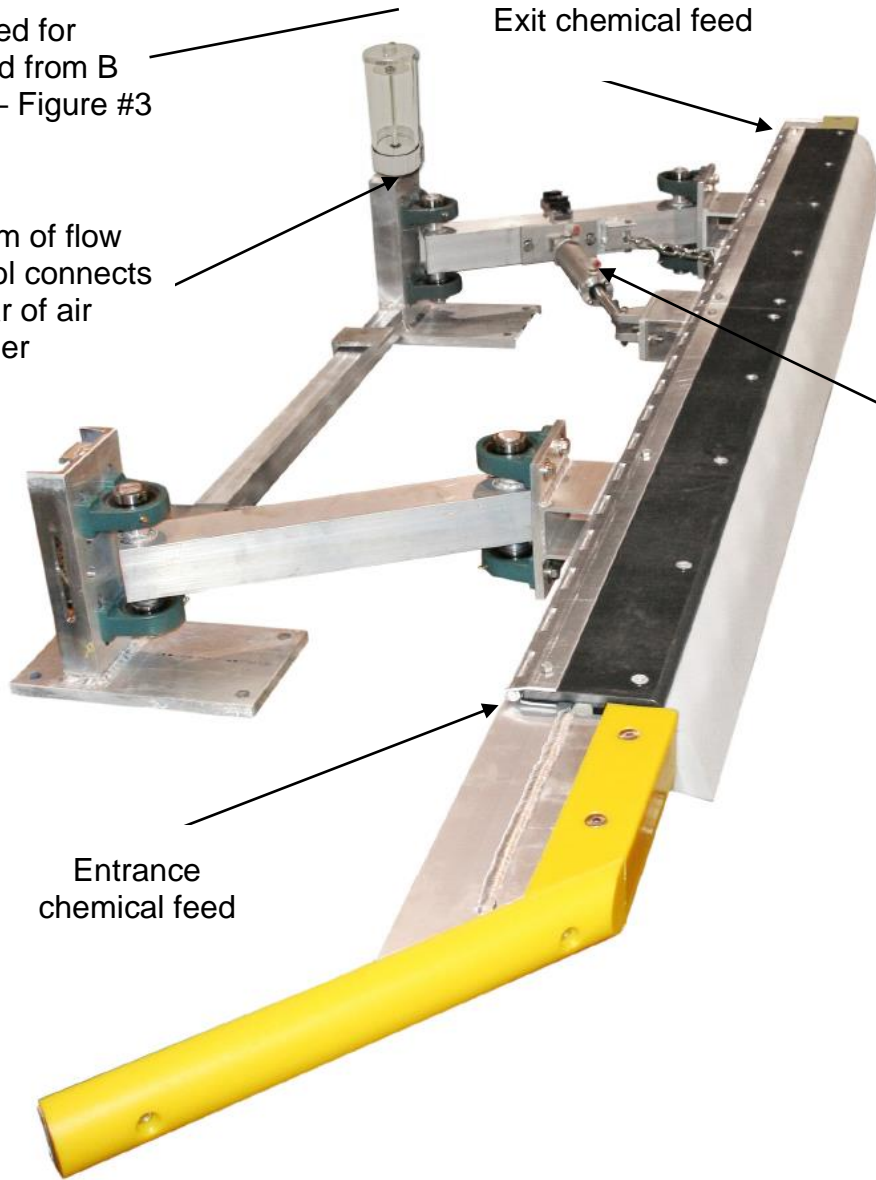
Figure #3

Air feed for
extend from B
or G – Figure #3

Exit chemical feed

Bottom of flow
control connects
to rear of air
cylinder

Air feed for
retract from C or
F – Figure #3



Entrance
chemical feed

Figure #4

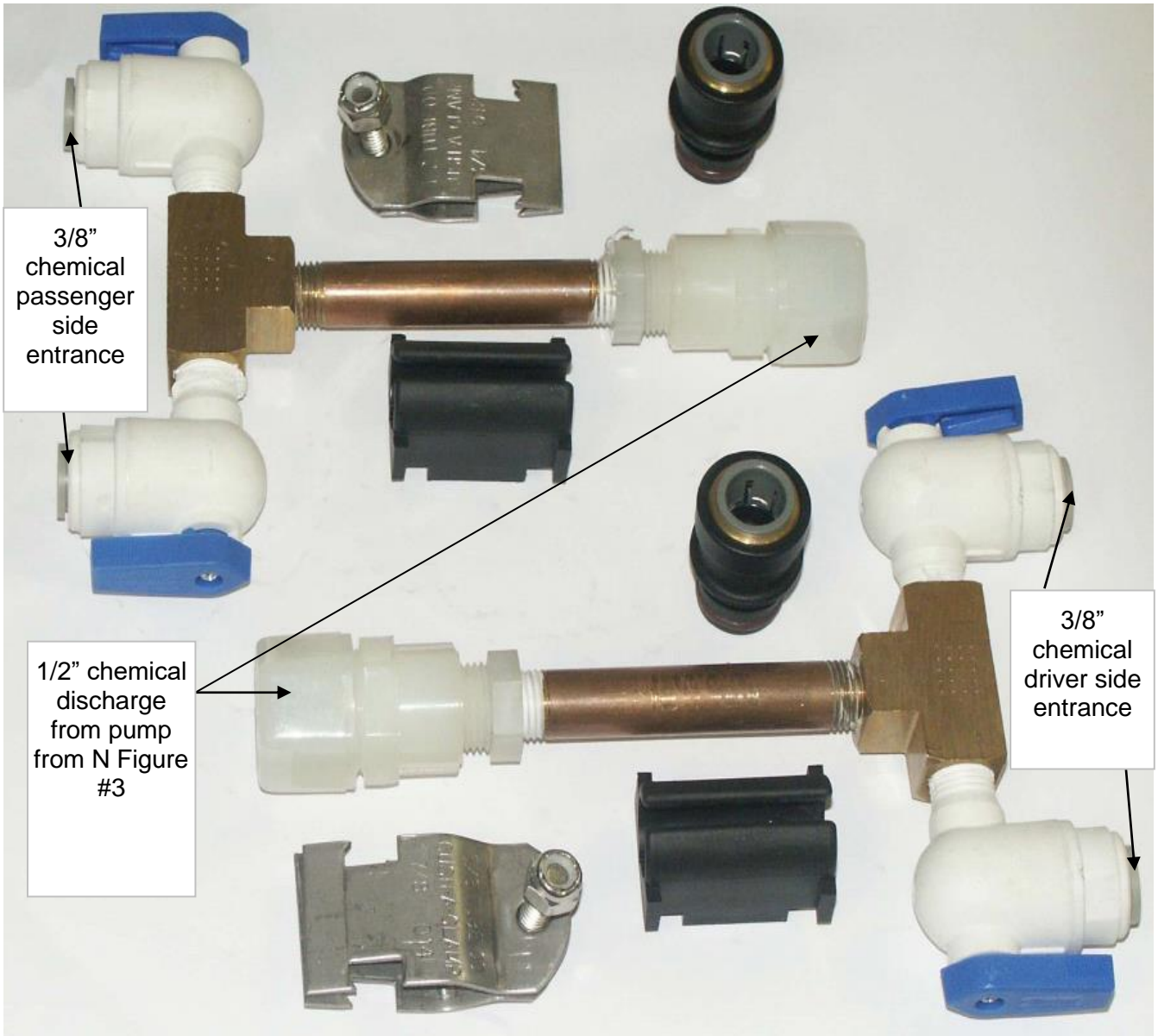


Figure #5

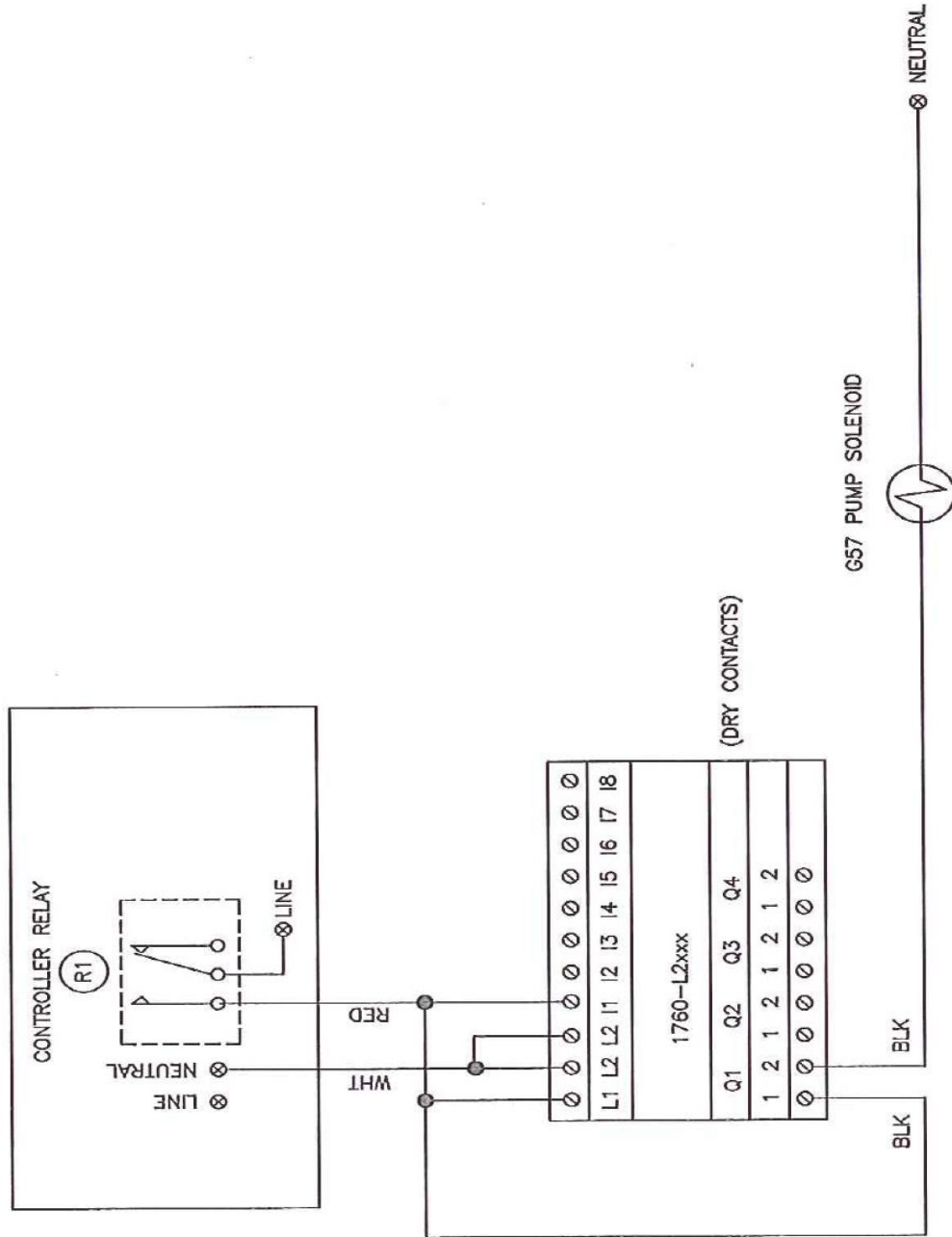


Figure #6

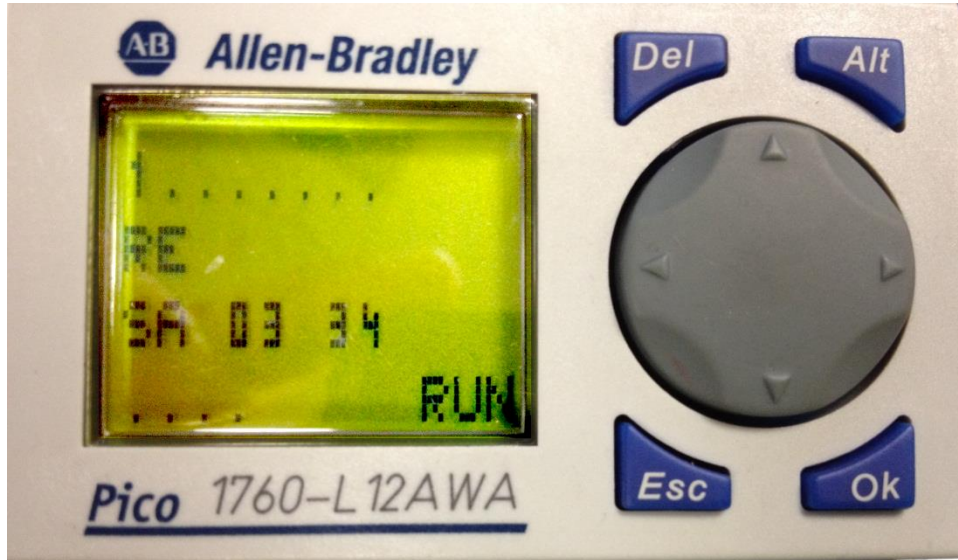


Figure #7

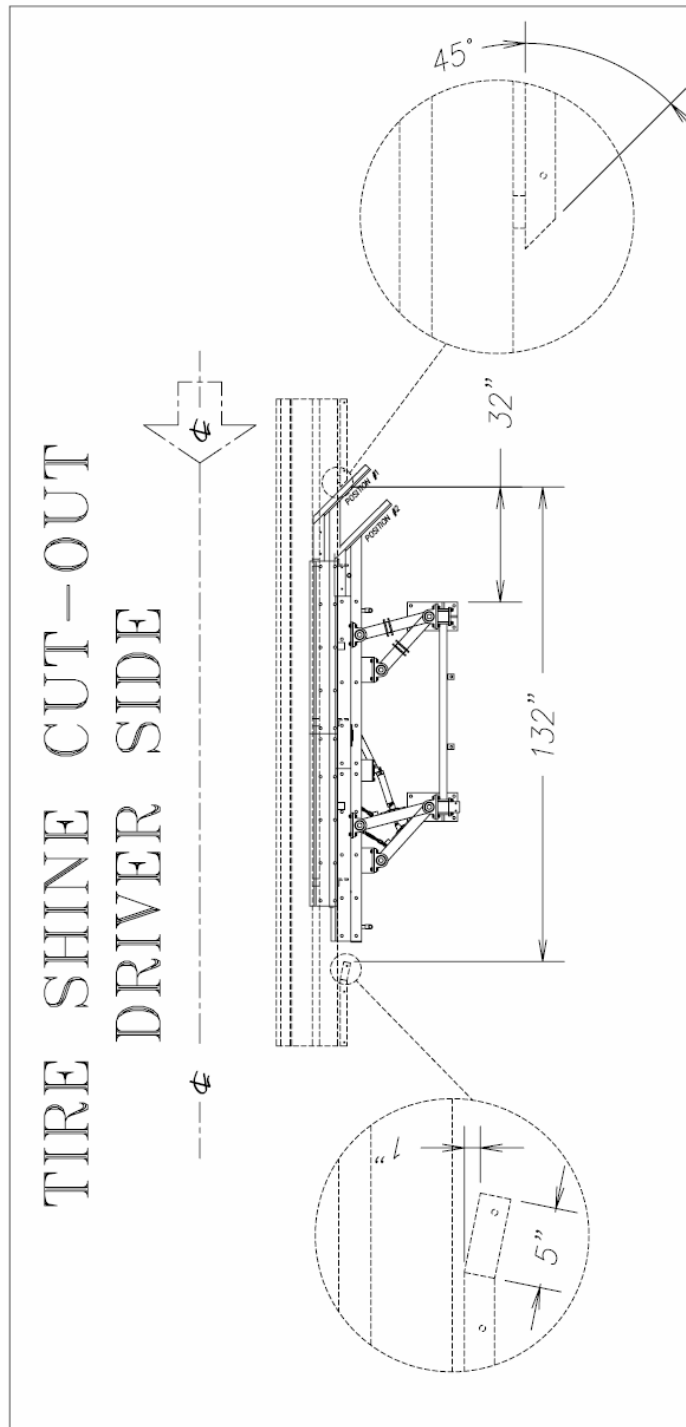


Figure #8



Equipment Installation

Tire Shiner Installation

Tools

1. Safety Glasses
2. ½ " Drive Ratchet Set
3. Standard Combo Wrenches
4. Standard Screwdriver
5. 1" Hammer Drill
6. Sledgehammer
7. Tape Measure

Consumables

1. Stainless Shims
2. PTFE Tape

Work Force

Two (2) persons

Time (assuming no problems)

2.00 - 3.00 hours

Installation Steps

1. Determine where the Tire Shiner is to be installed.
2. Sweep any debris from the area where the Tire Shiner will sit.
3. Tie both driver side and passenger side units temporarily in their full retracted positions.
4. Position the driver side and passenger side units in the general area where they will be installed according to figure 1, but **do NOT anchor at this time!**
5. Measure 73" from the inside of guide rail (passenger side) to plastic angle on the entrance end of the passenger side assembly. Check to ensure the outer edge of the exit base plate is approximately 105" from the inside of guide rail.
6. Carefully secure the exit base plate with one floor anchor.
7. Position the frame so the measurement between the inside of guide rail to each base plate is equal.
8. Carefully secure the entrance base plate with one floor anchor.

Note: If the floor is not level where the base plates are being mounted it may be necessary to shim the base plates so the assembly hangs with the arms level for side to side.



9. Double check the dimensions, and then finish anchoring the base plates for the passenger side assembly to the floor.
10. Allow the assembly to extend toward the center of the wash tunnel, should measure approximately 49" from the inside of guide rail (passenger side) to plastic angle on the entrance end of the passenger side assembly.

Note: If the floor is not level where the base plates are being mounted it may be necessary to shim the base plates, so the vertical center of the foam pad is the same in the extended and retracted positions.

11. Adjust the hanger height so that the vertical center of the foam is 6.5 inches above the floor.
12. Place the driver side entrance base plate so it is approximately 14 inches closer to the exit of the tunnel than the passenger side entrance base plate (refer to tunnel drawings for exact measurements).
13. Allow the driver side unit to extend toward the center of the wash tunnel.
14. With the hangers fully extended measure 5 inches from the entrance and exit foam edge to the inside guide rail (passenger side). **Do NOT anchor at this time!**
15. Square the driver side unit in the same manner as the passenger side unit. Mark the floor for proper base plate placement and mark the outside guide rail where the entrance end of the tire guide will clear (refer to Figure 8 and tunnel drawings).
16. Fully retract the applicator then mark the exit end of the outside guide rail to clear the applicator (refer to Figure 8 and tunnel drawings).
17. Set the applicator out of the way while cutting the guide rail and removing the section to allow full swing of the driver side unit.
18. Place the driver side unit base plates on the previously made marks and install one anchor in each base plate.
19. Check the measurements to ensure the assembly is square with the conveyor and that the assembly will properly clear the guide rail in the fully extended and retracted positions.
20. Double check the dimensions, and then finish anchoring the base plates for the driver side assembly to the floor.

Note: If the floor is not level where the base plates are being mounted it may be necessary to shim the base plates, so the vertical center of the foam pad is the same in the extended and retracted positions.

21. Adjust the hanger height so that the vertical center of the foam is 6.5 inches above the floor of the conveyor in retracted and extended positions.



Owner's Manual Simoniz® Tire Shine TSA 101

22. Mount the control panel on the equipment room wall as close as feasible to the tire shine applicators.
23. Run the ½" feed lines to the chemical manifolds, connect the manifold solution feed lines to the tire shiners (refer to Figure 5).
24. Run and connect the air feed lines to the retract cylinder and reservoirs on both sides (refer to Figures 3 and 4).



Adjustments and Testing

Prepare New Foam Pads for On-Line Operation

Manually override the FloJet pumps on the control panel by setting the chemical timer to E000S. Manually override the function for the tire shiner on your tunnel controller. 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. Once primed, return timer to proper setting E004S.

With a water hose, saturate the foam on both units with water. Squeeze each foam section to be certain the foam pads have completely absorbed the water.

Adjust the equipment programmer functions for the Tire Shiner to 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 foam pads 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 foam is 6.5 inches above the floor.

Normal On-line Adjustments

Ensure rubber bumper on the driver's side is adjusted so the plastic guide on the tire shiner lines up with the plastic guide on the conveyor.

Set-up air regulator settings see Figure # 3.

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.

PLC Adjustment

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.

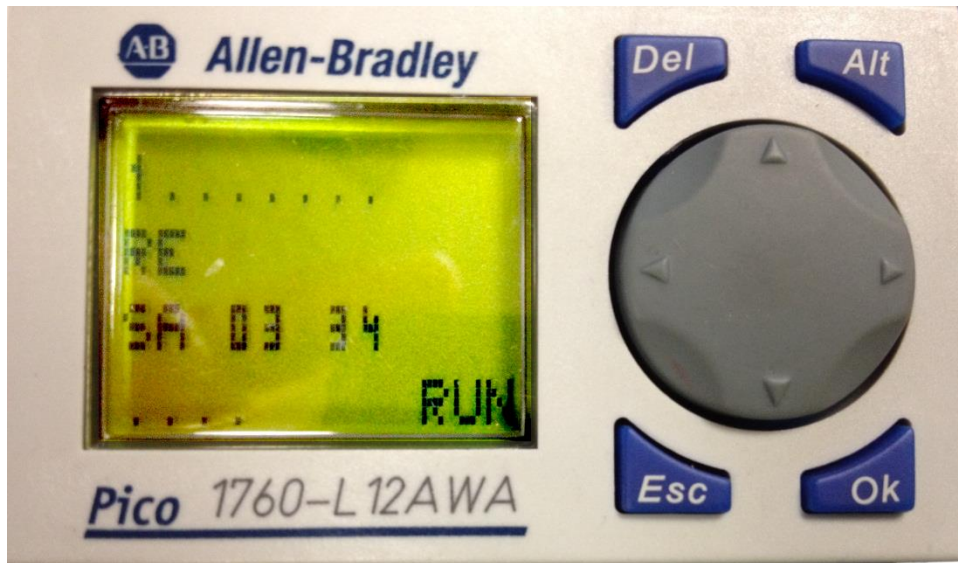


Figure 1. Main Screen A

3. Press **OK** (blue button) to go to Screen B:

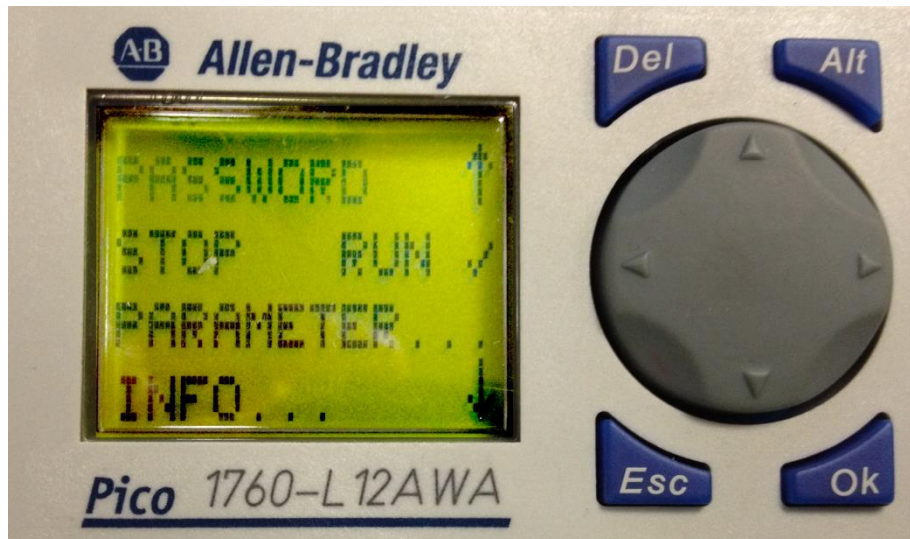


Figure 2. Screen B

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

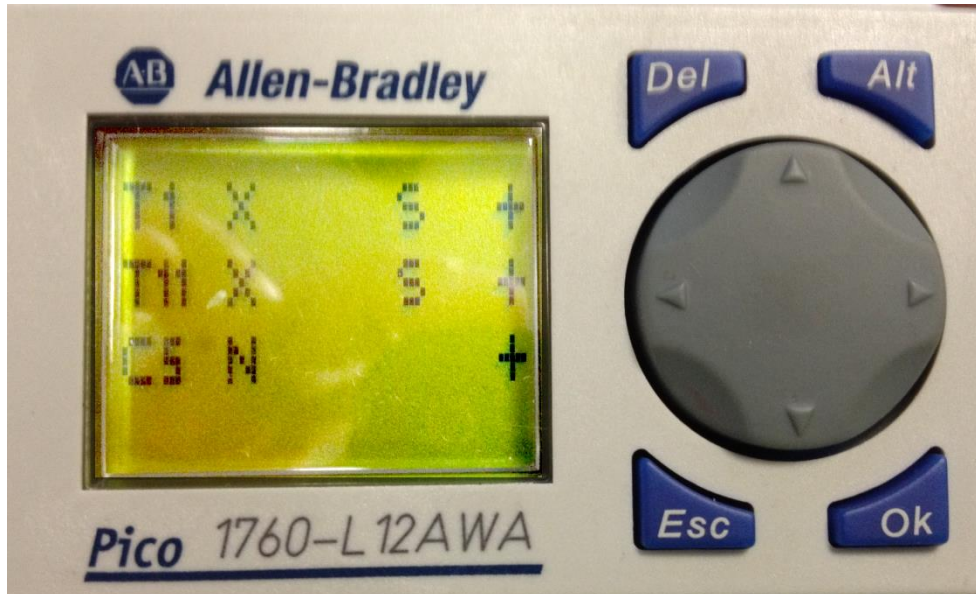


Figure 3. Screen C

5. To change the value of one of these parameters. Press the Arrow down key to get to the parameter and press **OK**.
6. Once in the parameter screen using the arrow keys and the **OK** button, the parameter values can be changed.

PARAMETERS

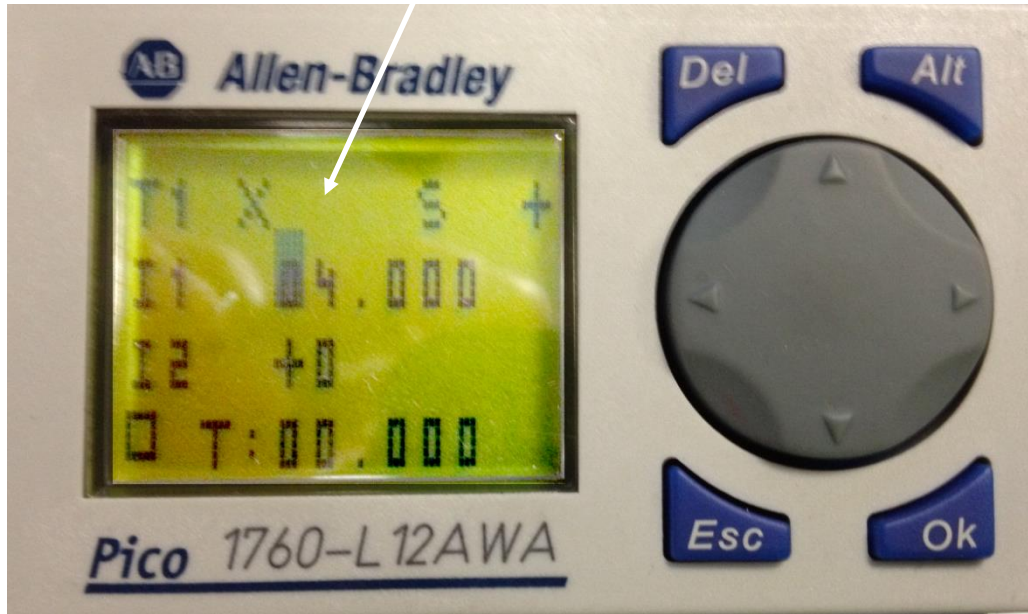
T1 – Set the time that the G57 pump solenoid is turned on (default value is 4 seconds).

T11 - Debounce the input signal from the controller (default value is 2 seconds).

C5 - Set the number of cars needed to be counted in order for the G57 pump solenoid to be energized (default value is every 3 cars).

T1 – Set the time that the G57 pump solenoid is turned on (default value is 4 seconds).

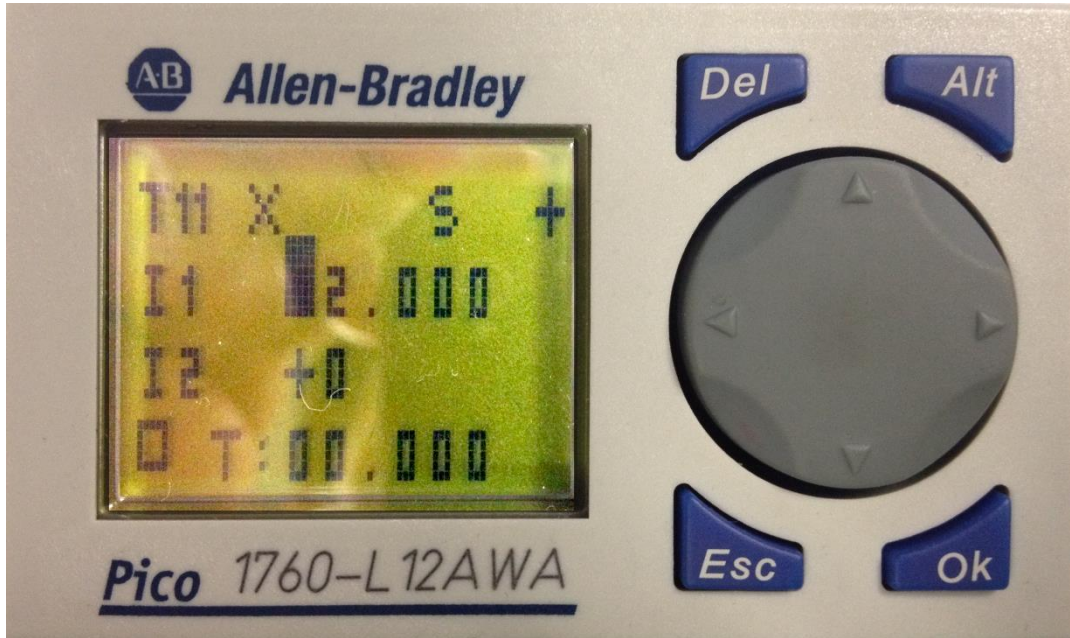
(I1) is the Parameter value to be changed



Note: I1 is the parameter value to be changed. E.g. 02.500 = 2.5 seconds. None of the other values are changed.

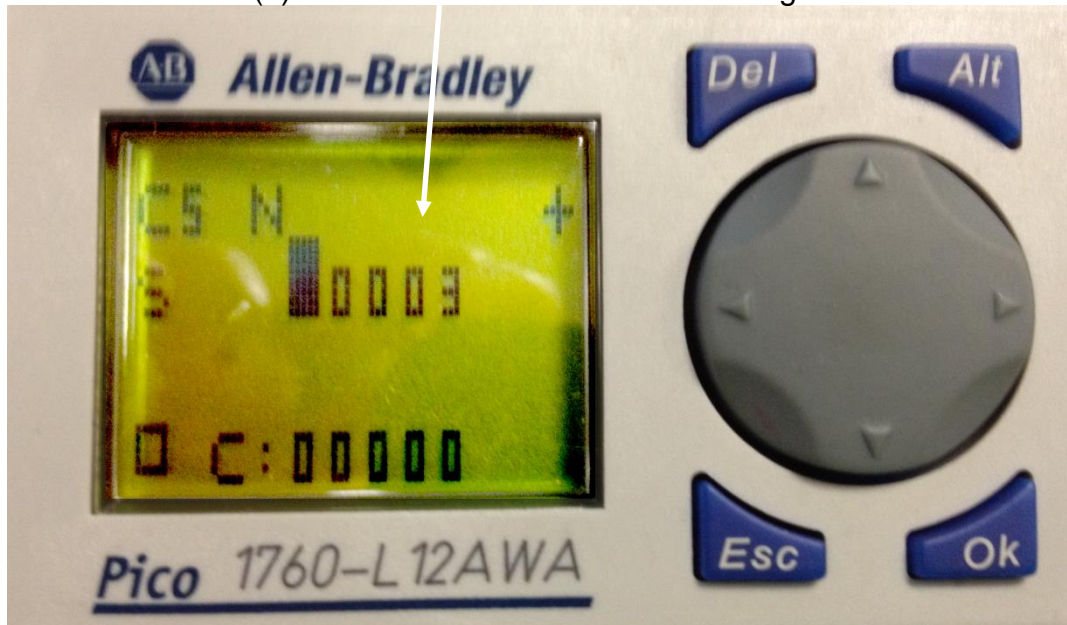


T11 - Debounce the input signal from the controller (default value is 2 seconds). This parameter **must not be changed**. It is configured to allow the PLC to reboot when power is applied before starts counting.



C5 - Set the number of cars needed to be counted in order for the G57 pump solenoid to be energized (default value is every 3 cars).

(S) is the Parameter value to be changed



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



GENERAL OPERATION

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

SPECIAL NOTE: Sonny's Model #TSA 100 has been satisfactorily tested in day-to-day car wash operations using the Simoniz Tire Shine product. Sonny's cannot guarantee the successful operation of the Tire Shiner equipment when other brands of tire brightening chemical products are used in this equipment.

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 foam pads 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 is off.



Note: With the 12" pads under normal operation you may begin to notice warping of the pads as seen in this picture. This is fine and actually causes the machine to work better.



PREVENTIVE MAINTENANCE

DAILY

1. Prep the foam pads for use, by overriding the solution timer and applying excess chemical to pads.
2. Check all lines and fittings for leaks. Repair, or replace, as needed.
3. Check the pads for tears, damage, grease, oil, or foreign objects and clean the face of the pads 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. Spray lubricant on the clevis pins on both ends of the retract cylinders.
2. Check fluid in reservoir and fill to $\frac{3}{4}$ when retracted if 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.

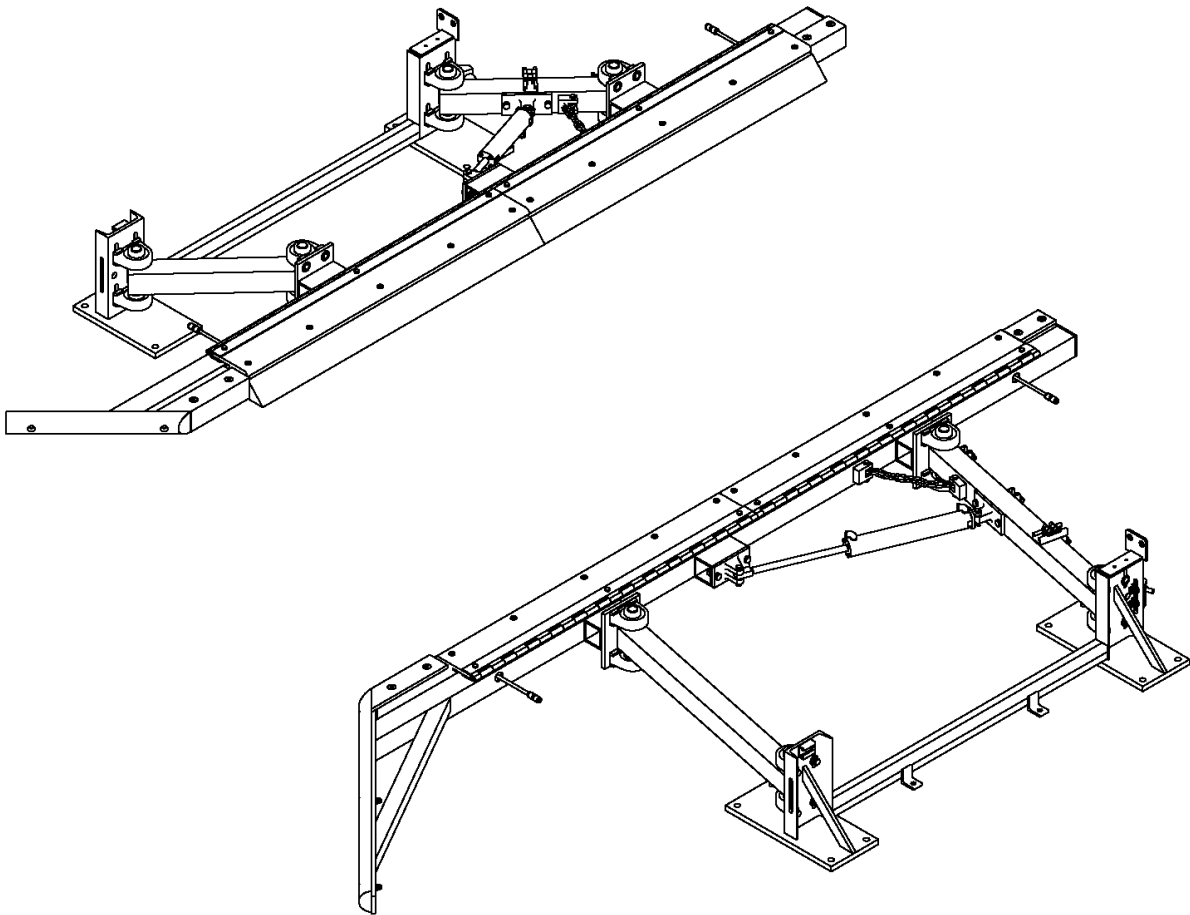
MONTHLY

1. Grease all pivotal bearings on the hanger framework, 16 bearings total.
2. Inspecting all hardware and fittings for tightness.
3. Inspect each pads for wear if the pad is worn it may be inverted to extend its usable lifespan.
4. Remove chemical lines from the drum and insert in 5 gallons of hot water. Run the water through the system, clean the nozzles afterwards.

SEMI-ANNUALLY

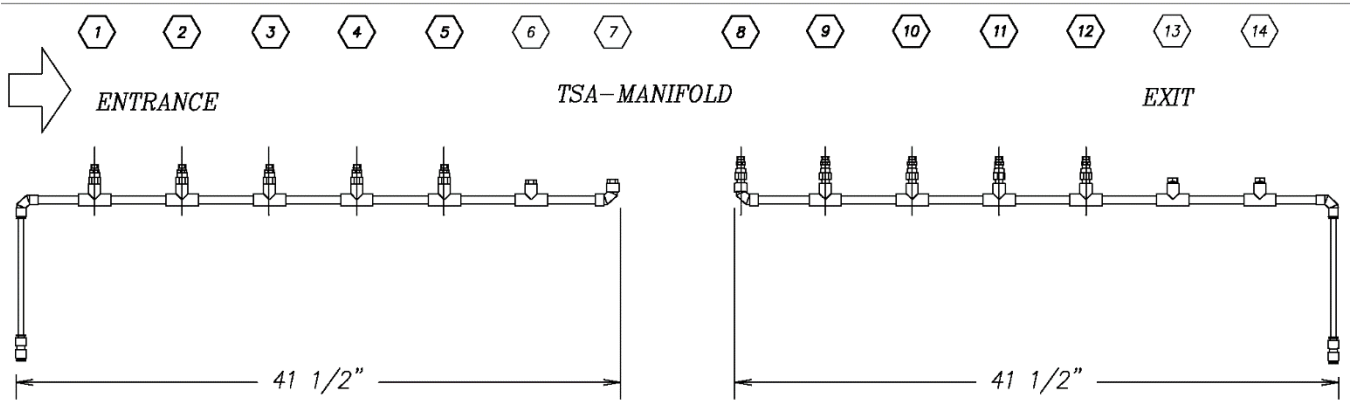
1. Remove pads, check nozzles for clogging, and install new pads if necessary. Pads may be flipped to extend usable lifespan.
2. If fluid in reservoirs is contaminated drain, purge, and refill.

EXPLODED VIEWS





Owner's Manual Simoniz® Tire Shine TSA 101



NOZZLE: # 1; 2; 4; 5; 8; 9; 10; 11 & 12

PLUG: # 6; 7; 13 & 14



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.



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

