



# Rotational Tire Shiner



## Owners Manual

Sonny's Enterprises, Inc.  
5605 Hiatus Road  
Tamarac, Florida 33321

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## **\*INTRODUCTION\***

This Owner's 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.
- Cloth 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 plastic entrance guides are standard on both sides.
- Air over oil control for retract and extend functions.
- 4 bolt spindle type brush mounting.
- Economical and reliable aluminum motor coupler.
- Grease-able bearings throughout.
- 14 ft. 2 in. (170") of tunnel length required for passenger side brush unit.
- 12 ft. (144") of tunnel length required for driver side brush unit.

## **\*SAFETY REQUIREMENTS\***

1. Only those employees specifically instructed by the location manager will be permitted to enter the wash tunnel to perform inspections or maintenance.
2. Do not enter the wash tunnel when the equipment is operating.
3. Always exercise caution when walking through the wash area, may be slippery conditions.
4. Be cautious when walking through the tunnel to avoid running into or tripping over equipment.
5. Do not ever run through the wash area.
6. Do not perform any work on equipment unless you performed Lock-Out Safety Precautions.
7. When maintenance requires that a piece of equipment be in operation, one qualified maintenance person must stay at the power disconnect switch while that equipment is operating.
8. 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 can only be restarted by the person who performed the "lock out" operation.
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. Any "Stop" switch activated must be reset only by the person who initiated the operation.
11. Electrical connections and repairs are to be performed only by a Licensed Electrician Only.
12. Store all cleaning and washing solutions and oils in a well ventilated area.
13. Clean up fluid spills immediately to prevent hazardous safety conditions.
14. Be certain to follow all safety procedures on MSDS Sheets for each chemical product used.
15. All new employees must be thoroughly trained in safe operating and maintenance practices.
16. All employees must attend periodically scheduled safety procedure sessions.
17. Do not operate any piece of equipment that requires safety covers with those covers removed or improperly installed.
18. Do not allow any part of your body or other object to come in contact with moving machinery.
19. Do not wear loose fitting clothing around moving machinery.
20. At least two qualified maintenance people must be present when performing equipment repairs or preventative maintenance.
21. When working on any equipment that is higher than a person's shoulders always use a fiberglass ladder that is in good condition.

# **\*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**

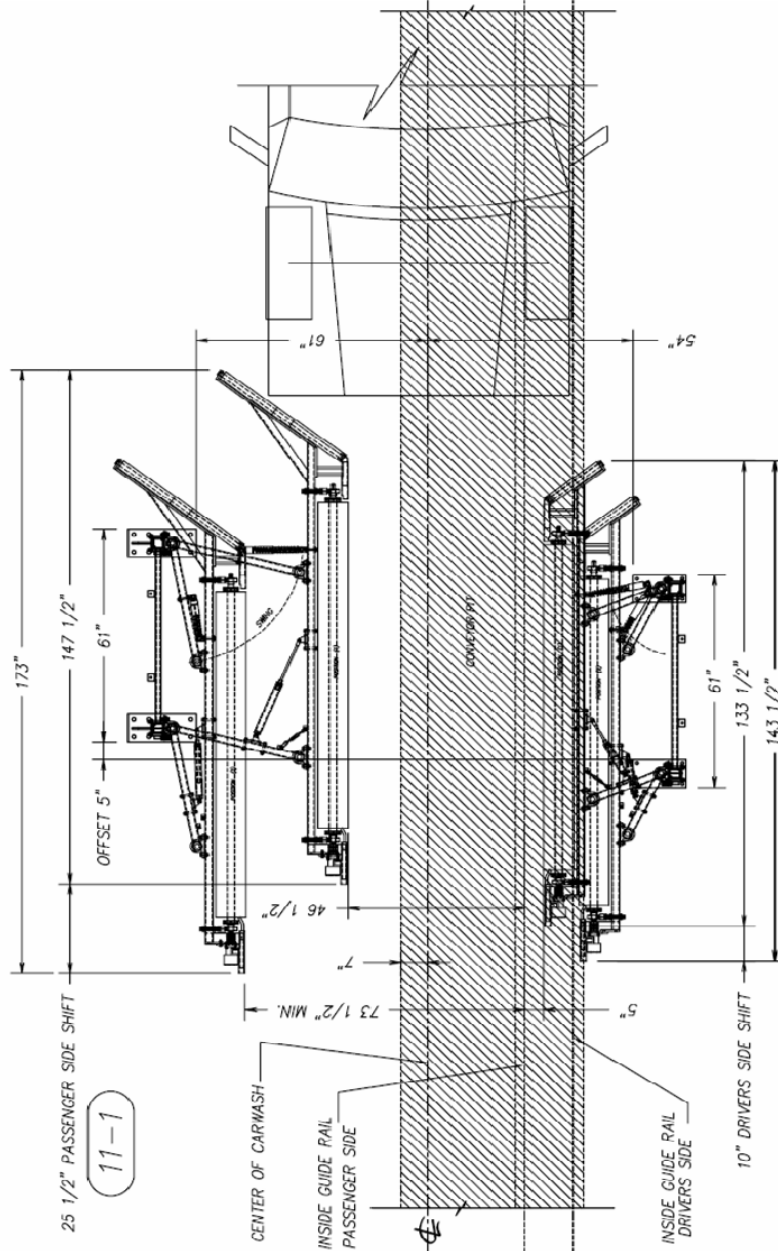
- The Customer's Electrician is to provide and install control wiring from the tunnel equipment controller for one programmable function to the junction box on the tire shiner control panel. See Figure #5 in Dimensions Section. The function is to provide for applicators retract through the four way solenoid 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 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.

# Dimensions

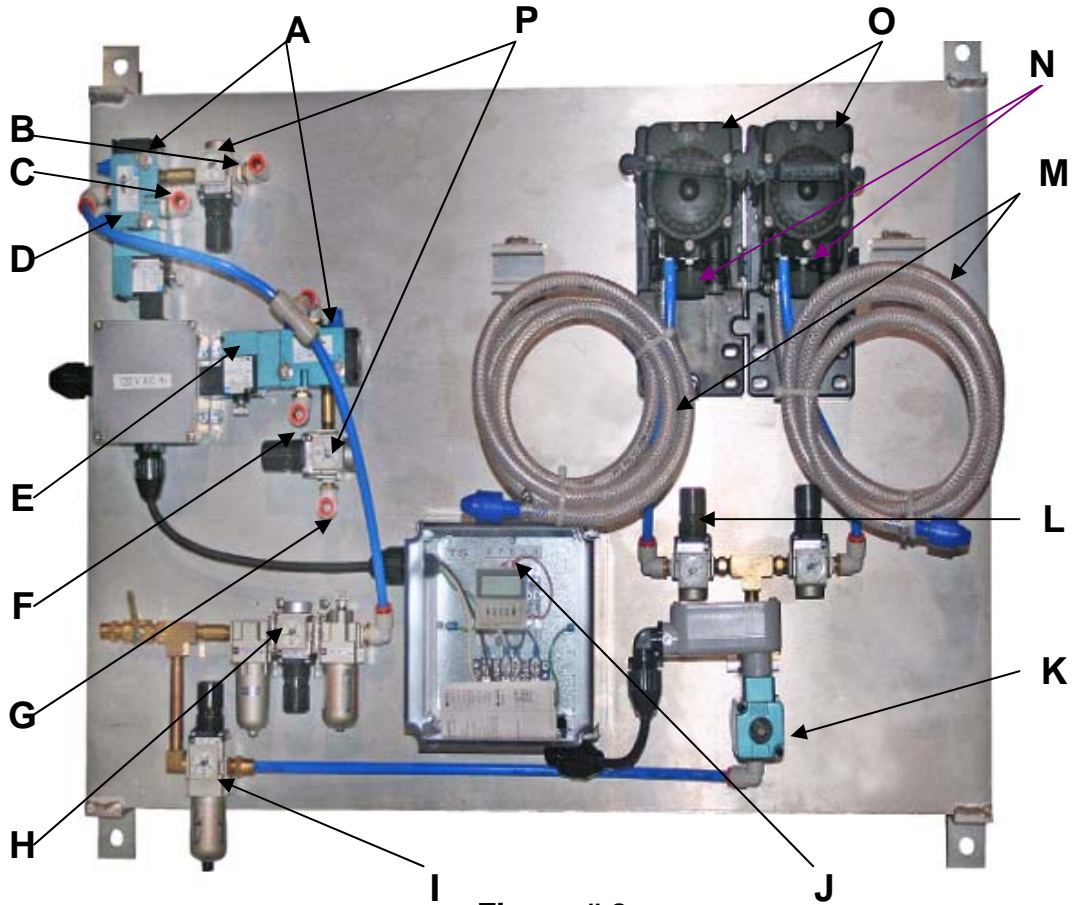


**BRUSH HEIGHT FROM  
 FINISHED FLOOR  
 6.5 IN to the  
 Center of the Brush**

Figure # 1

**Tire Shine Panel**

Included with purchase of Tire Shine Applicator. If ordered separately Item # TSA101/PANEL/24 or 110 depending on voltage.



**Figure # 2**

A	MAC811C24 or 110	I	AW20-N0ZE-CZ – Air regulator, set to 80PSI
B	Connection for oil bottle tops DS	J	H3CAA Chemical timer, Setting of 1-5 seconds
C	Connection for front of cylinder DS	K	MAC225B221CA or 110 – 3-way MAC valve
D	Retract solenoid DS	L	A220-NO2E-Z Air regulator, Set to 40-70PSI 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	A220-N02E-Z Air regulator for in-pressure. Set to 15-40PSI Driver and 20-5-PSI Passenger



Figure # 3

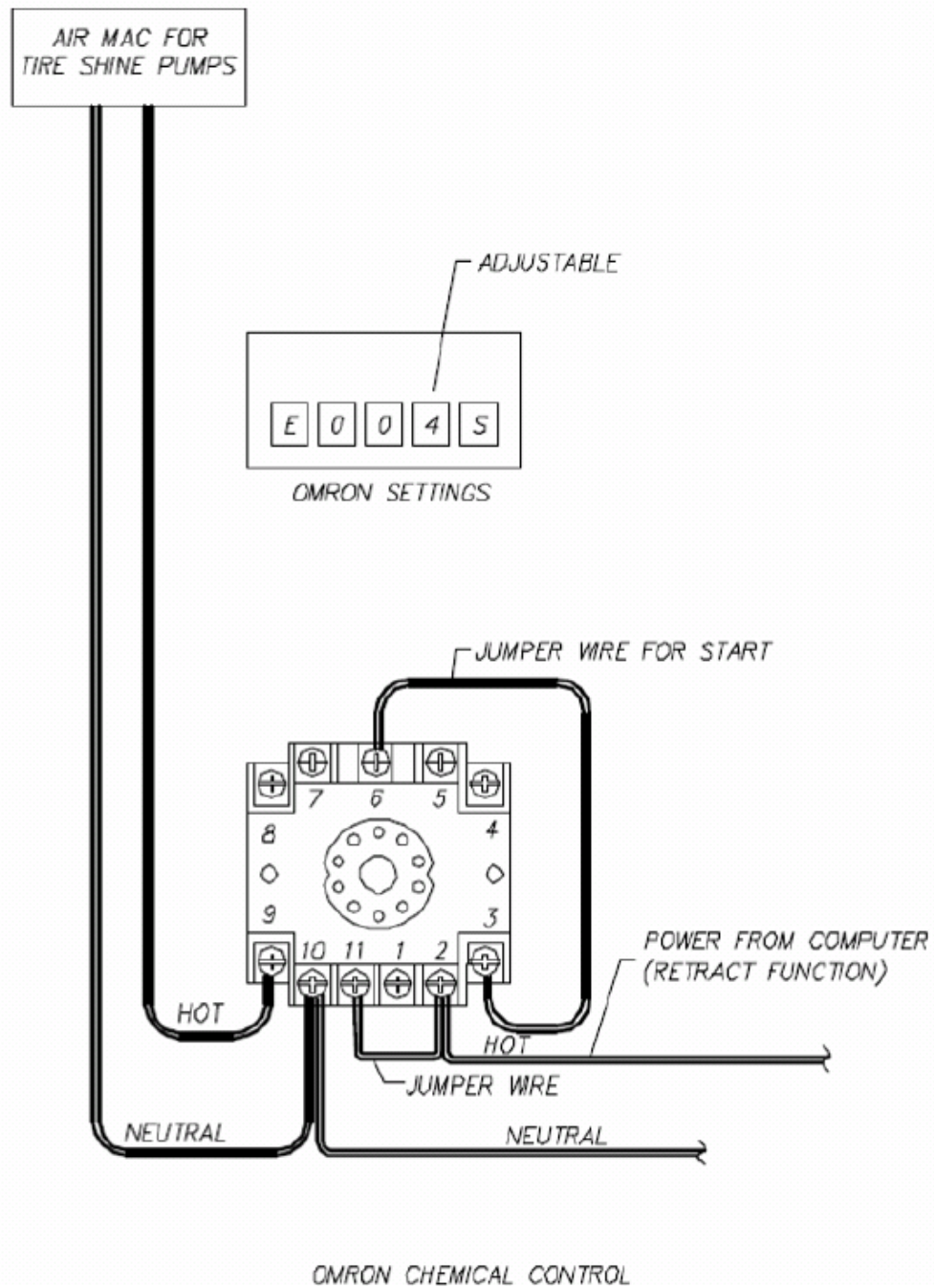


Figure # 4

Chemical Timer Application  
Item # H3CAA



Figure # 5

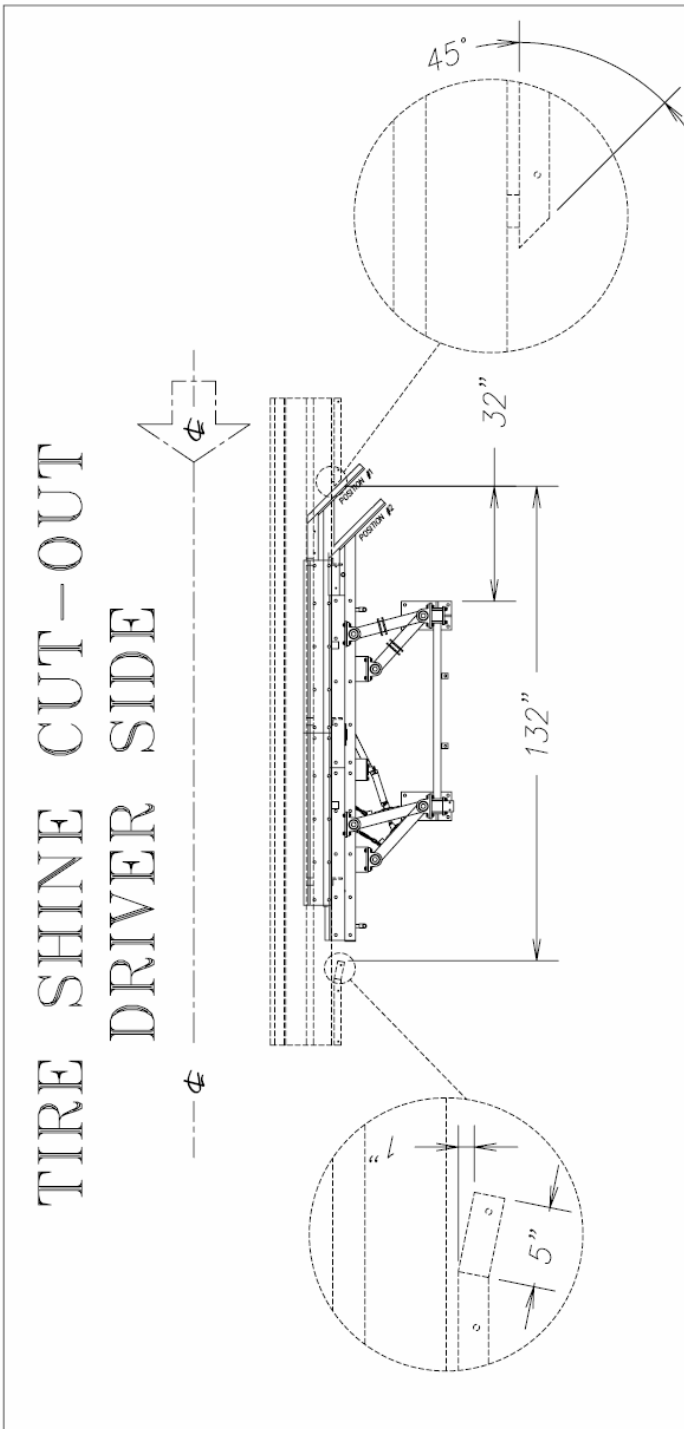


Figure # 6

# Equipment Installation

## Rotational Tire Shiner – Mechanical Installation

### Installation Tools

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

### Consumables

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

### Manpower Required for Repair

Two (2) men

### Time Required for Repair

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.
5. On the 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.
6. Secure the passenger side exit base plate with one floor anchor.
7. Square the frame by using the pillow block bearing mounting channels that are welded to the base plates as the reference.
8. When the unit is square complete the base plates anchoring.
9. Untie the cord and allow the passenger side unit to extend toward the center of the wash tunnel.
10. Adjust the hanger heights equally so that the center of the brush is 6.5" from the floor.
11. 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.
12. 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.

13. 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.
14. Mark the conveyor outside guide rail for cutting with the driver side unit fully extended and full retracted.
15. 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.
16. 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.
17. 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.
18. 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.
19. Rotation of the Brushes is toward the tire and downward.
20. 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.
21. Run and connect the solution feed lines to the tire shiners on both sides.
22. 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.

Using a water hose, saturate the cloth on both units with water.

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 drivers 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 for each service sold. 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 should be set to "E 0 0 2 s" 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.

## **\*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.

## **\*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**

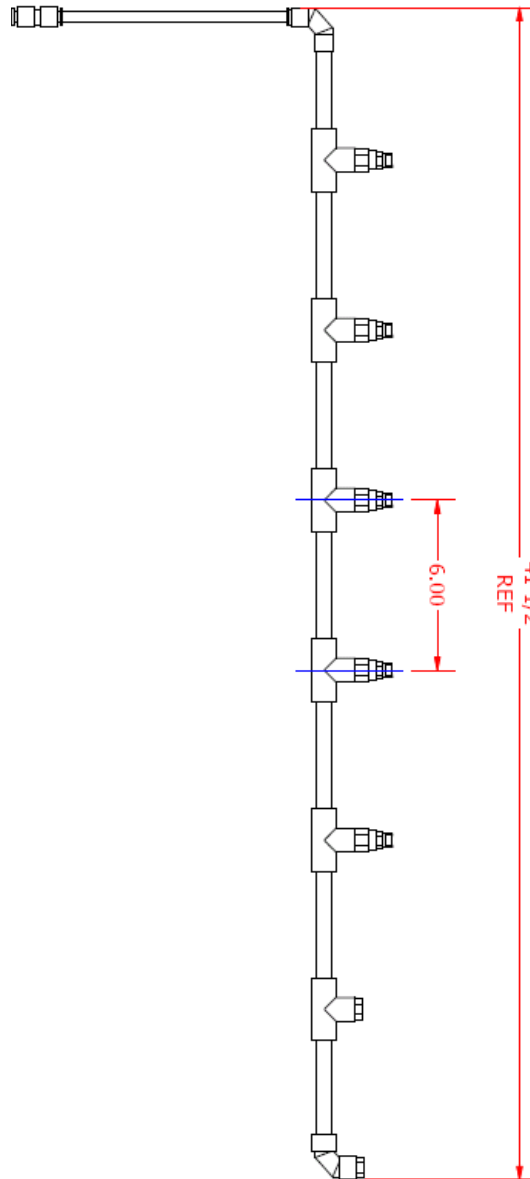
1. Grease all pivotal bearings on the hanger frame work, 16 bearings total.
2. Inspecting all hardware and fittings for tightness.

### **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.

Timer will be set for 1-4 seconds.

Replacement Parts: Manifold/16-16 Nozzles Part # 901/4CFM01F40



# \*PARTS LIST\*



## REPLACEMENT

SONNY'S® Replacement Parts for Tire Shiner

We make car washing easy!



### FloJet Pumps and Accessories FLOJET

- Duplex diaphragm design with automatic demand control
- Max flow rate – 7 GPM / Max 100 PSI working pressure
- Patented shuttle valve eliminates stalling
- Air inlet / outlet – 1/4in
- Product inlet / outlet – 1/2in or 3/8in (both included)

Item #	Description	Price
G-57V	Pump, Viton 3/8in Hoose Barb: 5 GPM	\$93.00
20730-00A	Pump, Diaphragm Kit G-57 Santoprene	12.99
20740-05CA	Pump, Check Valve Assy Kit G-57 Santo	8.39



### Oil Reservoir & Flow Control



Item #	Description	Price
EF25B	Flow Control 3/8in Brass	\$28.69
A/OR2053-3	Reservoir, Oil 80PSI Max	70.30



### 2-Bolt Tapped Bearing



Item #	Description	"E"	Price
BTB20C	Bearing, 2 Bolt Tapped 1 1/4in	3 1/4in	\$30.99



### MAC 3 and 4-way Pneumatic Valves



- Unique patented MACSOLENOID® valves for fastest possible response time with non burn-out feature on AC service



Item #	Description	Price
MAC225B111CA	Valve, Solenoid, 3 Way, 110V	\$57.50
MAC225B221CA	Valve, Solenoid, 3 Way, 24V	57.50
MAC811C24	Valve, Solenoid, 4 Way, 24V	65.00
MAC225B111CA	MAC811C110 Valve, Solenoid, 4 Way, 110V	58.95



### Air FRL's

- Mini regulator used for individual feeds to each manifold set
- 1/2in regulator used for main air feed to unit

Item #	Description	Price
127122-900	Regulator, Mini w/Gauge 1/4in	\$19.95
128121-900	FRL, Mini, 1/4in, SMC w/Steel Bowls	79.40



### Timers



Item #	Description	Price
H3CRF	Timer, Omron Dual Time Delay	\$119.60
H3CAA	Timer, Omron Universal	124.95



HF400

HF400



HC100

HC100-KS	Keystock, 1/4in x 1 1/4in Standard	1.49
HC100	Coupler, Split 1in x 1in Aluminum	10.95



TBG200/TP



TBGTORQBSHC

Used on:  
 - Bison  
 - Ninja  
 - Poodle Brush

TBG200/TP	Torque Plate, Poodle Brush, TWB 7in	23.70
TBGTORQBSHC	Torque Bushing, Complete w/ Hardware	7.25

## **\*CUSTOMER SERVICE\***

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

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

For Equipment Repairs please visit the web at [www.sonnysdirect.com/manuals](http://www.sonnysdirect.com/manuals).

**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](mailto:sales@sonnysdirect.com)

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

*From all of us here at*

