

Go Direct

SONNY'S[®]

THE CAR WASH FACTORY

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Buff-n-Dry™



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



Product Specifications

- 4" x 4" aluminum frame and legs for stability and durability.
- Pivot bearing is solid UHMW and with a grease fitting to increase smoothness of operation.
- Double Roller bearings on shaft.
- Hydraulic brush drive motors use 6GPM @ 800PSI.
- Pivot shaft constructed of 1½" stainless steel.
- Hub that doesn't absorb water with Drytex™.
- New 45 Degree flex coupling for smooth operation.
- Pneumatic retract controls standard.
- Stainless steel brush hangers.
- Brush tracks the contour of the vehicle using only a counterweight.
- 1/2 inch city water connection.

Optional Related Equipment



Tunnel Equipment

Foam, Rinse & Wax / Tire Shine Machine

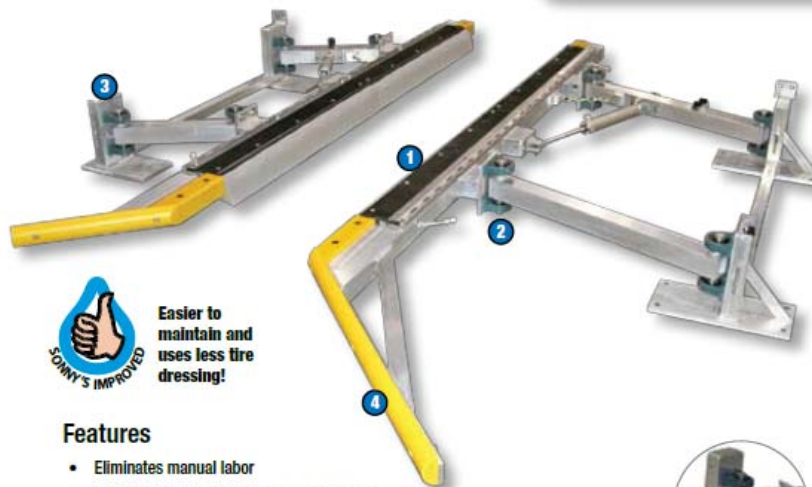
SONNY'S SIMONIZ® Tire Shine Machine



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.



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. The system includes the Tire Shiner, control panel, a set of replaceable pads, and PVDF non-corrosive nozzles with diaphragm check valves.

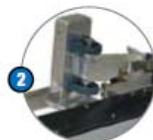


Features

- Eliminates manual labor
- Controls tire dressing usage and expense
- Eliminates dangerous & messy driveway run-off
- Can be installed in the drip area
- Hinged doors allow for easy maintenance
- *Allows exterior-only and in-bay automatic car washes to participate in the highly profitable tire dressing business*



Hinged doors allow easy access to manifold compartments for maintenance, and nozzle or pad replacement when needed.



Dual bearings at each pivot point for reliable performance.



Slotted bearing mounts for adjustable height.



UHMW guide rails for safe operation.

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 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 or jewelry 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 !**

Water

- The Customer's Plumber is to provide and install a 1/2 inch city water line @60PSI (nominal) to the solenoid valve on the chemical distribution system for the Washer.

Electrical

- The Customer's Electrician is to provide and install single phase power from the (24 or 110 VAC as determined at time of order) from the Customer's Controller system to the motor starter coil for the hydraulic power pack or VFD feeding the brush.
- The Customer's Electrician is to provide and install single phase power from the remote push-button station through the tunnel equipment programmer to the supplied air solenoid valve on the Air Distribution Manifold for retract of both washers upon selective signal.

Compressed Air

- The Customer's Plumber is to provide and install a 1/2 inch compressed air line from the Air Compressor to the Air Distribution Manifold for the Retract functions.

Dimensions

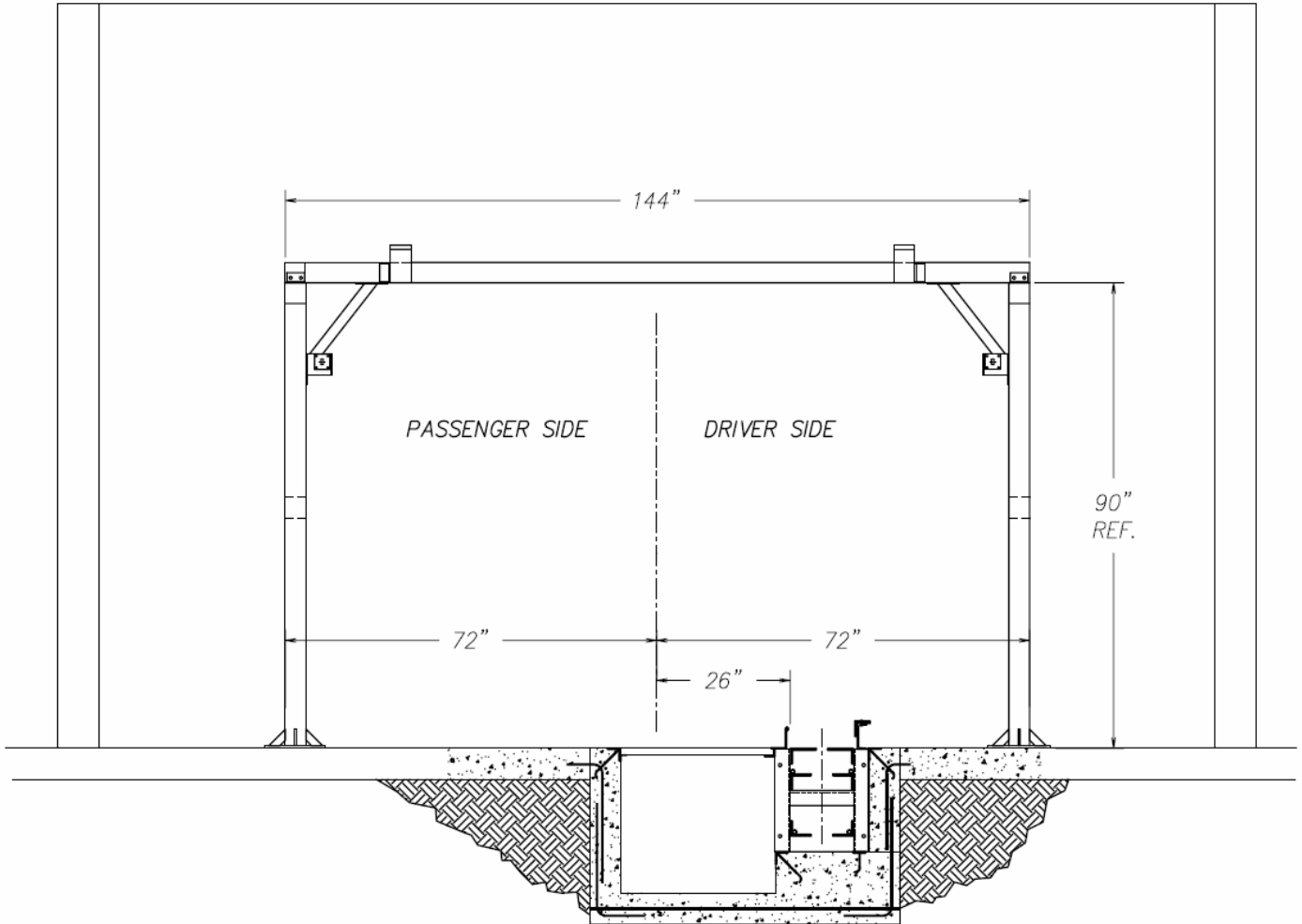


Figure # 1

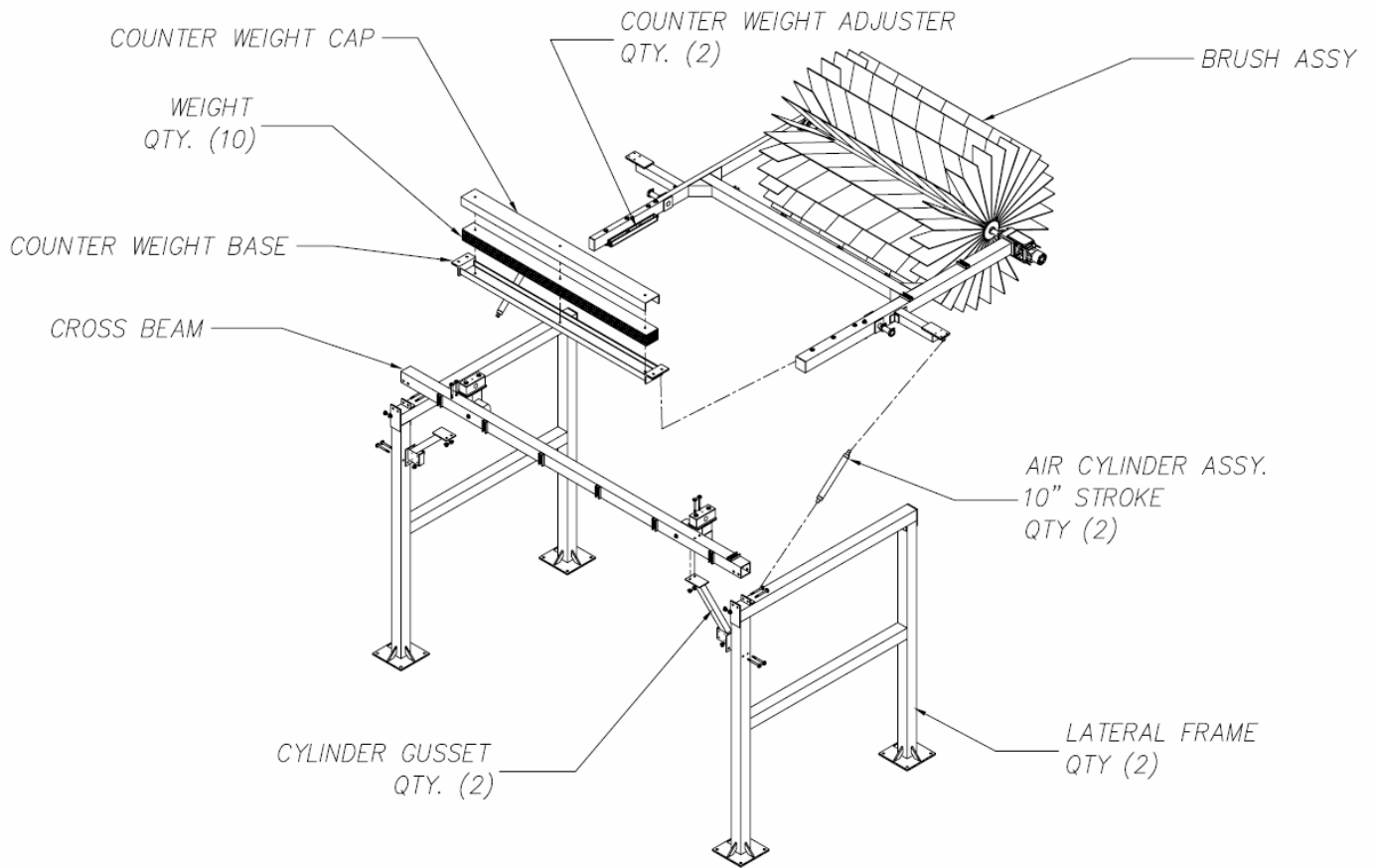


Figure # 2

TOP BRUSH PNEUMATIC DIAGRAM
TYPICAL EACH CYLINDER

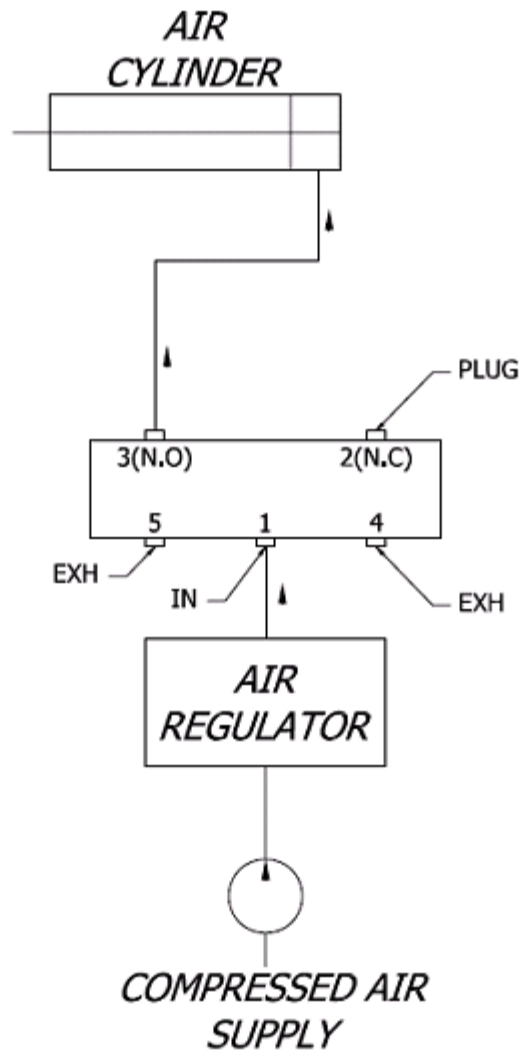
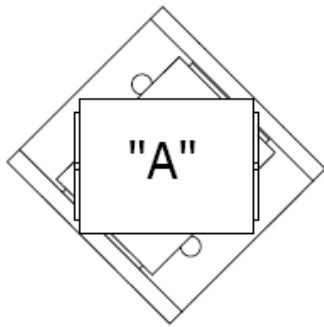


Figure # 3

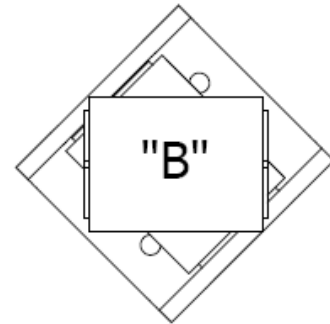


Equipment Program - Manuals Buff-n-Dry™ Manual TOP Series

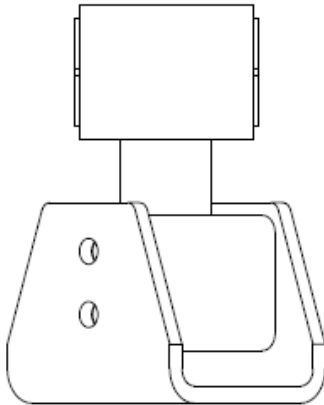


TOP VIEW

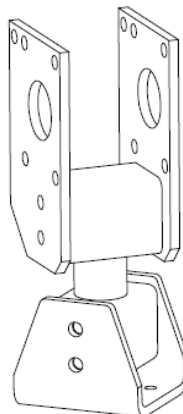
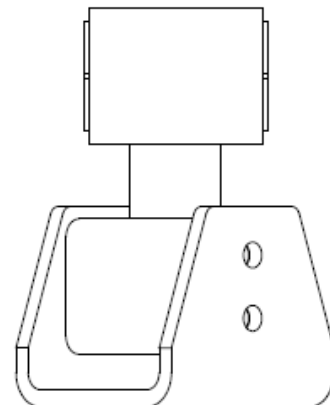
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 ENTRANCE / EXIT

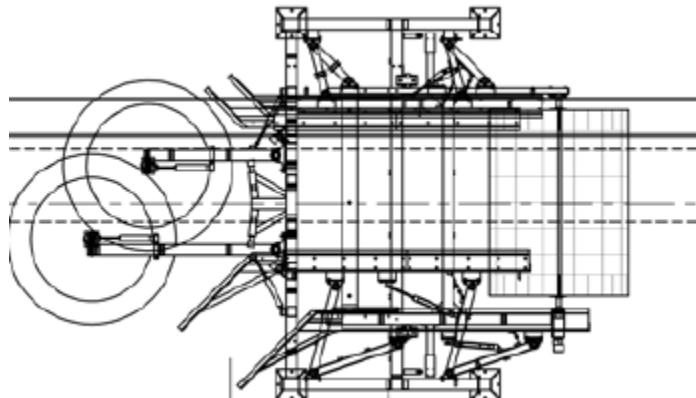
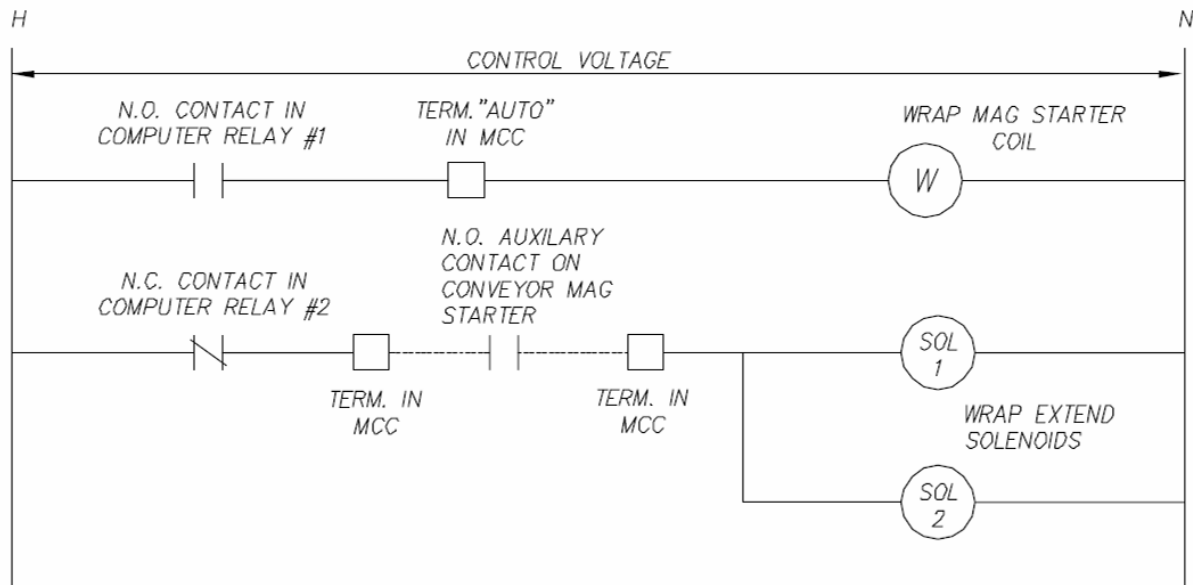


"PS"
 ENTRANCE / EXIT



SIDE VIEW





Equipment Installation

Buff-n-Dry™ Installation

Tools

1. Safety Glasses
2. 1/2" Drive Ratchet Set
3. Standard Combo Wrenches
4. 4' Level
5. Electric Impact Wrench
6. 1" Hammer Drill
7. Tape Measure
8. Sledge Hammer

Manpower

Two (2) men

Consumables

1. Anti-Seize Compound
2. Marine Grease

Time (assuming no problems)

2.00 – 4.00 hours

Installation Steps

1. Determine where the Buff-n-Dry is to be installed (See Figure #1 in the Dimensions Section and the tunnel layout drawings for your location).
2. Sweep any debris from where the unit will stand.
3. Check all hardware and place a small amount of Anti-Seize Compound on each bolt.
4. Place the assembled frame side legs, cross beams and gussets in the area where the unit will be permanently located (with the brush counterweight toward the entrance of the car wash).
5. With the interconnection hardware provided by SONNY'S (boxed and attached to the assembly frame) join the legs, cross beams and gussets to the frame "finger tight".
6. Place and anchor the unit per the dimensions shown in Figure #1. Be certain that the entrance and exit cross beams are level (shim mounting feet, if necessary) and that each of the 4 vertical legs are plumb.

7. Level and square the frame with the centerline of the equipment (see Figure #1 in the Dimensions Section and the tunnel layout drawings for your location).

Note: Ensure the frame is correctly located before installing any lag bolts. Before lagging the frame into position have a second person double check all measurements against your tunnel equipment layout drawings to ensure all measurements were performed correctly.

8. Place an anchor bolt in each corner. Tighten all hardware.
9. Check each leg for plum and the frame for level, and then install the rest of the anchor bolts in each leg of the frame.
10. Install brush and counterweight assembly on the frame.
11. Place the Sonny's lift-a-ma-jig onto the frame of the Wrap and bolt into place. Bring the forklift into the lift-a-ma-jig.
12. Bring the frame into the building as close to its final position as is practical. Lift the frame into place.
13. Check that the Passenger Side Brush hanger arm is longer than the Driver Side, if not the frame is not positioned correctly.
14. Check that the shock absorbers on each Brush Hanger do not "bottom out" in their fully extended position. If this occurs move the shock mounting position to a different hole on the mounting bracket to prevent a fully extended condition.
15. Move each brush hanger from the center of the wash tunnel so that it is parallel to vehicle travel. With each brush hanger in this position check that the hanger is level. Up or down adjustment of the brush hanger can be achieved by placing shim material under the brush hanger pillow block bearings.
16. Double check that the bottom pillow block bearing for each brush hanger is EXACTLY below the top pillow block bearing. This is necessary to provide light brush pressure against the side of the vehicle.
17. Mount the Brush Head, Shaft and Core assembly to each Hanger Arm. Connect the pre-plumbed hydraulic lines.
18. Orientation of the Brushes is with vehicle travel. As viewed from the top of each Brush the DRIVER side turns COUNTERCLOCKWISE and the PASSENGER side turns CLOCKWISE. Rotation speed of each Brush should be according to the Operating Speeds Chart in the Adjustments and Testing Section.
19. Install the air retract cylinder and run the air lines to the manifold for the retract operation.
20. If electric run and install the power to each brush.

21. If hydraulic run and connect a 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 frame.
22. 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/RED high pressure hose on the frame.
23. Rotation of the top brush is against vehicle travel. As viewed from the driver side the brush turns COUNTERCLOCKWISE.

Adjustments and Testing

Adjust the Cleaning Pressure of the Top Brush

Ensure the air solenoid is manually put in the wash position so there is no air pressure applied to the retract cylinder. Adjust the position of the counterweight so that when the counterweight is released the brush slowly moves downward. After initial adjustment manually activate and deactivate the air retract. When deactivated the brush should fall smoothly to the down position. Final adjustment of the counterweight can be accomplished while running test vehicles. Once adjusted properly the cloth penetration should be about three to four inches across the entire vehicle. If brush bounces too much the counterweight has been adjusted to far out. Adjustment is easiest if made in small amounts, approximately ¼" to ½" at a time.

Adjust Top Brush for Smooth Retract Operation

To adjust the retract operation the air pressure regulator should be adjusted for approximately 30PSI in the retract position. The tunnel controller should be adjusted so that the brush is put into the wash position prior to the front of the car arriving at the brush. This will entail deactivating the retracts before the vehicle reaches the brush and setting the look ahead to check for the proximity of the next car.

Mechanical Adjustment of the Wrap Hanger Arms

1. Install the unit so that the legs are plumb, the hanger arms are level when at the rest position and the mounting bearings are positioned perpendicular to floor (no pitch).
2. The rest position will vary with operator preference and region. If front license plates are present the brushes should be open slightly to clear the plate, approximately one inch between when spinning. If there are no front plates then when spinning the tips of the cloth should be penetrating about one inch.
3. The two brushes should return to the rest position (middle of the tunnel) with no air pressure and no pitch to the bearings.

Operating Speeds Chart

Chain Speed	Wrap Speed	Top Speed	Wrap Air Pressure Driver	Wrap Air Pressure Pass
50-70CPH	70-75RPM	75-85	0PSI	0PSI
70-80CPH	80-85RPM	75-85	0-5PSI	0-5PSI
80-90CPH	85-90RPM	75-85	5-10PSI	5-15PSI
90-125CPH	90-95RPM	85-95	10-15PSI	15-25PSI

Two Solenoid valves, one for each retract, are recommended for 80 or more cars per hour.

To adjust the operation of the brushes without air pressure you may adjust the position of the pillow block bearings.

1. TO INCREASE THE PRESSURE ON THE SIDE AND BACK OF THE VEHICLE: Adjust the bottom pillow block bearing away from the center of the tunnel. Move in 1/8 inch increments at a time.
2. TO DECREASE THE PRESSURE ON THE SIDE AND BACK OF THE VEHICLE: Adjust the bottom pillow block bearing towards the center of the tunnel. Move in 1/8 inch increments at a time.

Cloth penetration should be about three to four inches on the flat surface of the car. Each of the brushes should cover about two thirds of the back of the vehicle, overlapping in the center.

GENERAL OPERATION

The brushes on the unit need to spin any time the conveyor is in operation.

Top Brush Operation

Brush rotation starts and stops with a signal from the Customer supplied Controller system to the Customer's hydraulic power pack which drives the hydraulic motors on the brushes. This Controller Start-Stop signal should also control soap solution delivery to the spray bar on the brush.

BE CERTAIN THAT THE BRUSHES ROTATE AGAINST VEHICLE TRAVEL

With the brush rotating (against the direction of vehicle travel and at proper RPM) the vehicle's front hood contacts the brush and brush travels across the vehicle maintaining steady contact while cleaning the hood, roof and trunk of the vehicle.

Proper cloth penetration on flat vehicle surfaces should be 3 to 4 inches. As the brush rounds corners, such as on windshields, the cloth penetration may be greater, but not deeper than half the distance to the aluminum brush core.

Retract Operation

When there is no vehicle approaching the brush the tunnel controller will retract the brush from the wash position, toward the ceiling. This can also be set up in the controller to retract for the beds of trucks to avoid problems.

It is recommended that the brush be retracted for:

1. Sun visors mounted over the windshield.
2. Any racks mounted on the roof.
3. Rear wipers on Acura Integra's and Mazda RX-7's unless they are taped down.
4. Open bed pickup trucks.

Wrap Around Washer Operation

With the brushes rotating (with the direction of vehicle travel and at proper RPM) the vehicle front bumper contacts the driver side brush first and then the passenger side brush. The brushes move evenly across the front of the vehicle, each drying one half of the front, and gear around the front fenders to maintain steady contact while drying the sides of the vehicle.

As the rear of the vehicle approaches the brushes they individually gear themselves around the rear fenders so that each brush dries one half of the vehicle rear vertical

surfaces. As the vehicle departs the wraparound brush area the brushes are fully extended toward the center of the wash tunnel ready to accept another vehicle.

NOTE: Proper cloth penetration on flat vehicle surfaces should be 3 to 4 inches. As the wraparounds gear around corners, such as fenders, cloth penetration may be greater, but not deeper than half the distance to the aluminum brush core.

Wrap Retract Operation

When selected by the Operator's remote Programmer push button station the wraparound brushes will retract from the center of the wash tunnel toward the tunnel outer walls. This can be done individually if one solenoid is used for each arm.

This is accomplished, when the push button is pressed, by completing an electrical circuit through the equipment Programmer to pass single phase power at the preset pulse count of the Programmer to the retract air solenoid valve. The air solenoid valve now opens and allows compressed air to pass through to the rod end port of each air cylinder causing the brush hangers to retract.

PREVENTIVE MAINTENANCE

DAILY

1. Check all hydraulic, air fittings for leaks. Repair, or replace, as needed.
2. Check brush for proper operation, listening for any unusual noises from the equipment.
3. Inspect brush cloth for cuts, grease, or oil. Remove and repair, or replace, any cloth panel if any of these conditions are found.
4. Check retract and extend for proper operation, smoothness and correct application pressure.

WEEKLY

1. Spray lubricant on the clevis pins on both ends of the retract cylinders.
2. Grease the brush shaft bearings. Do not allow grease to come in contact with brush cloth.
3. Drain water from FRL and check lubricant level in FRL.

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

MONTHLY

1. Inspecting all hardware and fittings for tightness.
2. Grease the UHMW pivot bearings. Do not allow grease to come in contact with brush cloth.
3. Inspect the bumper stops for wear to ensure the air cylinders have not reached the end of their travel. If bumper stops are worn they can be flipped to extend life.
4. Thoroughly clean the equipment and framework.

SEMI-ANNUALLY

1. Carefully inspect brush equipment cloth for wear and damage. Replace as necessary.
2. If fluid in reservoirs is contaminated drain, purge, and refill.

PARTS LIST



Item #	Description	Price
TOP100BP	Bearing, Plate Top Brush 8in x 3in SS	\$29.00
TOP100BS	Bearing, Block 8 x 3 1/4 x 1 1/2in Bore	24.00



Item #	Description	Price
SSTB87H	Shaft, Top Brush 1 1/2in x 93in	\$132.90
BB251C/S	Collar, 2pc Clamp 1 3/8in w/Set Screw	6.95



Item #	Description	Price
FOMRS	Fleet-O-Matic, Rubber Bumper	\$22.70
SF77RS	Rubber Stop, 3in OD x 2 1/4in ID	25.00



Item #	Description	Price
N402275N	Check Valve, Diaphragm 7lb Red Cap	\$3.32
470111-04	Nozzle, Air Foaming Size 04 110deg	10.90



Item #	Description	Price
MF120910AAAC	Motor, Hydraulic TRW Ross Parker	\$250.43
T1085SW	Torque Channel w/Plastic Knobs SF-Series	31.00



Item #	Description	Price
A11210-2	Cylinder, 2in Bore x 10in Stroke SMC	\$115.00
RRCL122	Rear Clevis, 1/2in x 2in w/Hardware	24.99
RREYCLMTTB	Rear Eye Mount TB, 1/2in w/Hardware	19.99
RDEY3825	Rod Eye, 3/8in X 2 1/2in Bolt No Spacers	21.99
KQ2L11-35S	Elbow, Swivel 3/8in Tube x 1/4in NPT SMC	2.55



Item #	Description	"E"	Price
BSFT24C	Bearing, 2-Bolt Flange 1 1/2in AMI	5 21/32in	\$25.00
BF4150	Bearing, 4-Bolt Flange 1 1/2in	4 1/64in	26.30



Item #	Description	Price
TB2443	Plastic Disk, Top Brush Hub End 6in	\$10.30
24S	Collar, Single Split 1 1/2in Zc Plated	5.25

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.

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

