

*Go Direct*

**SONNY'S<sup>®</sup>**

**THE CAR WASH FACTORY**

**SonnysDirect.com/go-direct/**

# Top Motor Side Washer



## 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

- Frame and legs constructed from aluminum or stainless steel.
- Available in these cleaning heights: 28, 50 or 63 inch.
- Double Roller Bearings.
- Hydraulic brush drive motors use 6GPM @ 800PSI.
- Shock absorber control.
- Vehicle contour brush tracking.
- 1/2 inch city water connection.

# Optional Related Equipment

## Ordering Information

Foundation Frame™ Attachments:  
Mount to a Mitter or Top Brush

Description	Hydraulic Free Standing Side Washers		Electric Free Standing Side Washers		Hydraulic Foundation Frame™ Attachments		Electric Foundation Frame™ Attachments		Optional Pre-Plumbed Cross Over Arch	
	Item #	Price	Item #	Price	Item #	Price	Item #	Price	Item #	Price
28In Side Washers, Set	SF1	\$3440.00	SF1E	\$4540.00	SF1A	\$3440.00	SF1AE	\$4540.00	SF1CROSS	\$745.00
Dual 28In Side Washers, Set	SF2	6875.00	SF2E	9075.00	---	---	---	---	---	---
50In Side Washers, Set	SF50	5995.00	SF50E	7095.00	SF50A	5995.00	SF50AE	7095.00	SF50CROSS	745.00
63In Side Washers, Set	SF63	6875.00	SF63E	7825.00	SF63A	6875.00	---	---	SF63CROSS	745.00

## Recommended Upgrades

### NeoGlide Upgrades

- Replaces Included PermaColor with NEOGLIDE Cloth on new SF1, SF2, and SF63 Side Washer Orders
- Replaces Included BOTTOM PermaColor with NEOGLIDE Cloth on new SF50 Side Washer Orders

NEOGLIDE



Closed Cell Foam Wash Material

Item #	Description	Price
NGSF1UG	Neoglide, C Channel SF1 Upgrade	\$515.00
NGSF2UG	Neoglide, C Channel SF2, Upgrade	1030.00
NGSF50UG	Neoglide, SF50 Complete, Upgrade	720.00
NGSF63UG	Neoglide, SFB63 Upgrade Only	905.28

## Specifications

	SF1		SF50		SF63	
	Inch	Metric	Inch	Metric	Inch	Metric
Tunnel Length	74in	1.879m	74in	1.879m	74in	1.879m
Bottom Pass Hub	12in	305mm	10in	254mm	10in	254mm
Bottom Drv Hub	6in	152mm	10in	254mm	10in	254mm
Top Pass Hub	-	-	6in	152mm	6in	152mm
Top Driver Hub	-	-	6in	152mm	6in	152mm
Driver Side Slots	28 slots		28 top / 36 bottom		28 top / 36 bottom	
Pass Side Slots	44 slots		28 top / 36 bottom		28 top / 36 bottom	
Vehicle Clearance	90in	2.304m	90in	2.304m	90in	2.304m
Hydraulic	3gpm	.19 ltr/s	3gpm	.19ltr/s	6gpm	.38ltr/s
Water Inlet	1/2in	13mm	1/2in	13mm	1/2in	13mm
Included Wash Material	PermaColor		Top NeoGlide / Bottom PermaColor		PermaColor	
Optional Electric	1HP per side					

## Related Support Equipment

### 5HP Power Packs

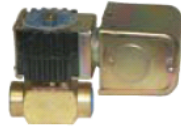
- 5HP / 208V / 230V / 460V
- 25 gallon reservoir
- 3 Phase / 60 Hz with "C" face coupling & adapter
- Vickers vane pump
- SF2 requires 2-flow power pack



Item #	Description	Price
HY575	Power Pack, 5HP 7.5GPM 1 Flow	\$1640.00
HY5752F	Power Pack, 5HP 7.5GPM 2 Flow	1805.00

### Solenoid Valve – NORMALLY-CLOSED/ 24V & 110V Brass Body

- Max. 150PSI / Max. 200°F
- Standard w/molded waterproof coil
- Mount in any position (except with coil down)
- Electrical junction box



Item #	Description	Port	Body	Price
SA414P24	Valve, Norm Closed 24V 1/2In FPT	1/2In	Forged	\$53.36
SA414P110	Valve, Norm Closed 110V 1/2In FPT	1/2In	Forged	53.35
SA416P24	Valve, Norm Closed 24V 3/4In FPT	3/4In	Forged	73.46
SA416P110	Valve, Norm Closed 110V 3/4In FPT	3/4In	Forged	73.46

## Quick Replacement Reference



Item #	Description	Price
BFL100	Shock and Spring	\$34.99
BFL100PC	Pin & Cotter, SS 2 1/2In x 5/8In	9.50
BF4100	Bearing, 4-Bolt Flange 1In	15.25
BF4150	Bearing, 4-Bolt Flange 1 1/2In	26.30
MF060910AAAC	Motor, Hydraulic TRW Ross Parker	231.69
MF120910AAAC	Motor, Hydraulic TRW Ross Parker	250.43
SSF1	Shaft, 40In SF1 & SF2 Side Washer	91.70
SSFWRAP	Shaft, 72In Replacement for Wrap & Van	122.00
SSF63	Shaft, 62In SFB63 SF50 Side Washer	112.00
BAH2812	Hub, 28In x 12In Spider Mount 44 Slots	184.40
BAH286	Hub, 28In x 6In Spider Mount 28 Slots	91.70
T1085SW	Torque Channel w/Plastic Knobs SF-Series	31.00
BB251C	Collar, 2pc Clamp 1 3/8In Zinc Plated	6.75
HS14193	Key, Woodruff 1In Half Moon	1.05

## **\*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 liquid solenoid valve for the brush spray bars and, if required, the motor starter coil for the hydraulic power pack feeding the two brushes and any pump motor for the chemical distribution system.

### **Optional Retract Kit Requirements**

#### **Electrical**

- 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 (see Figure #6 in Dimensions Section).

#### **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

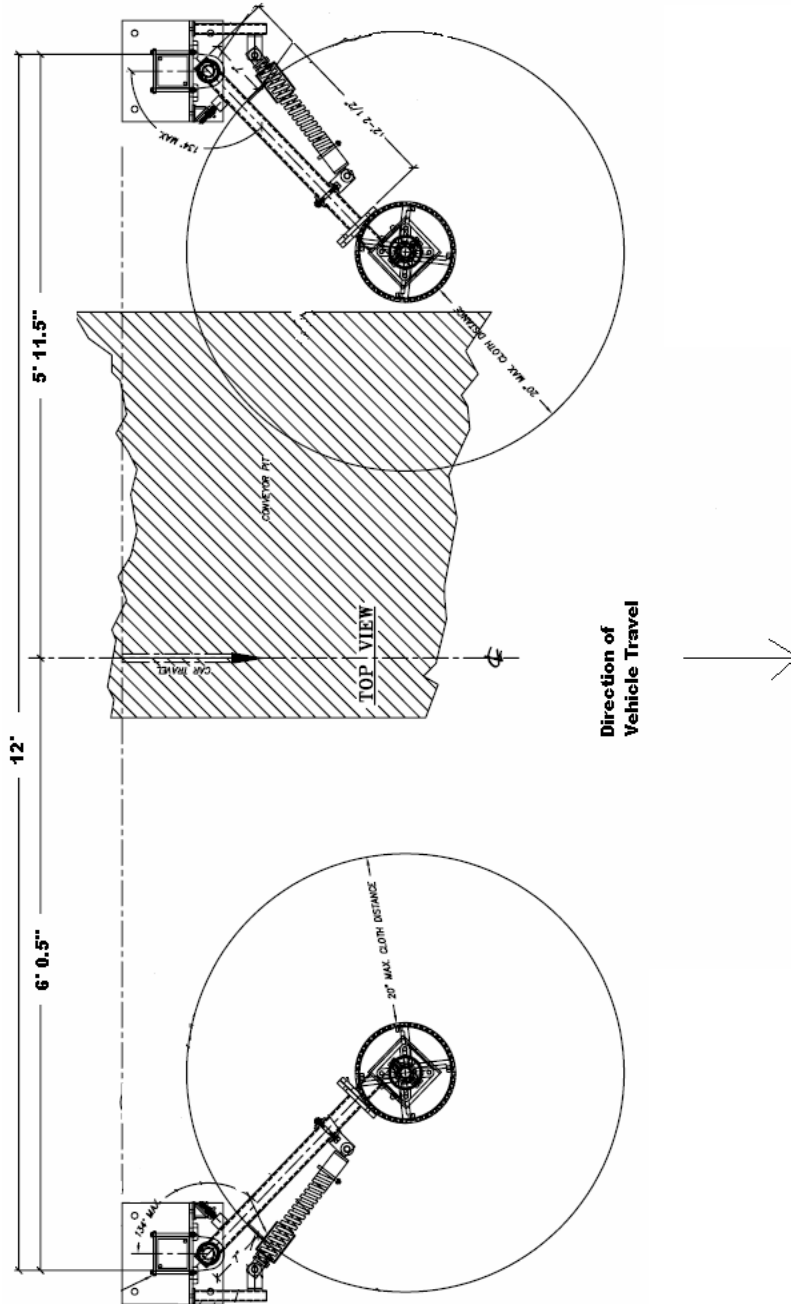
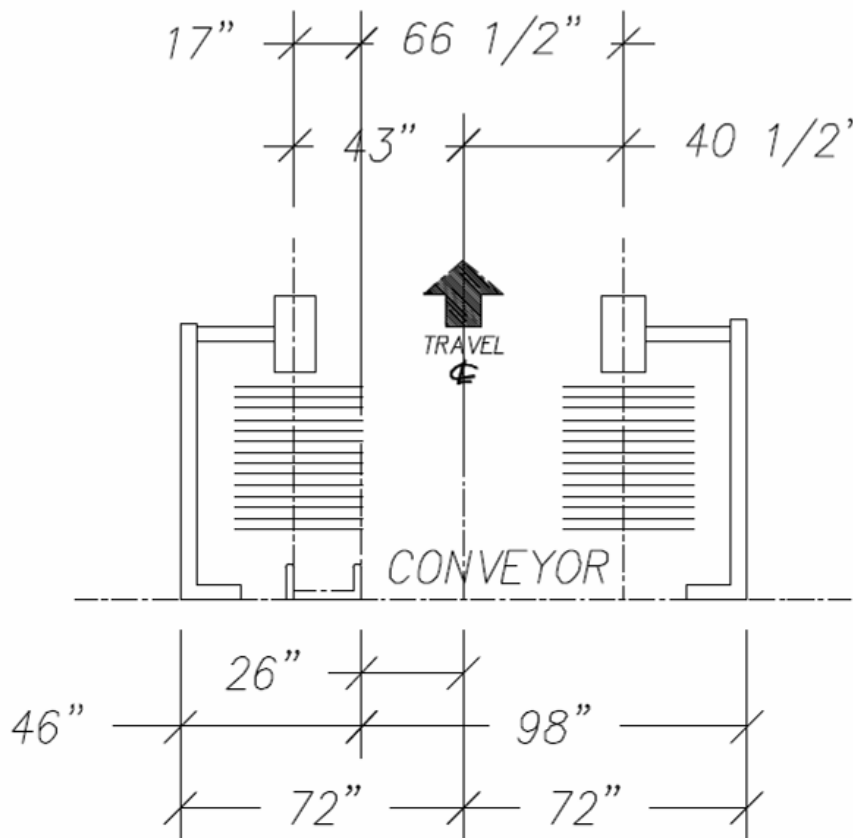


Figure # 1

SONNY'S MODEL #SF50 & SFB50  
 "SUV" SIDE WASHERS

INSTALLATION DIMENSIONS



**Figure # 2**

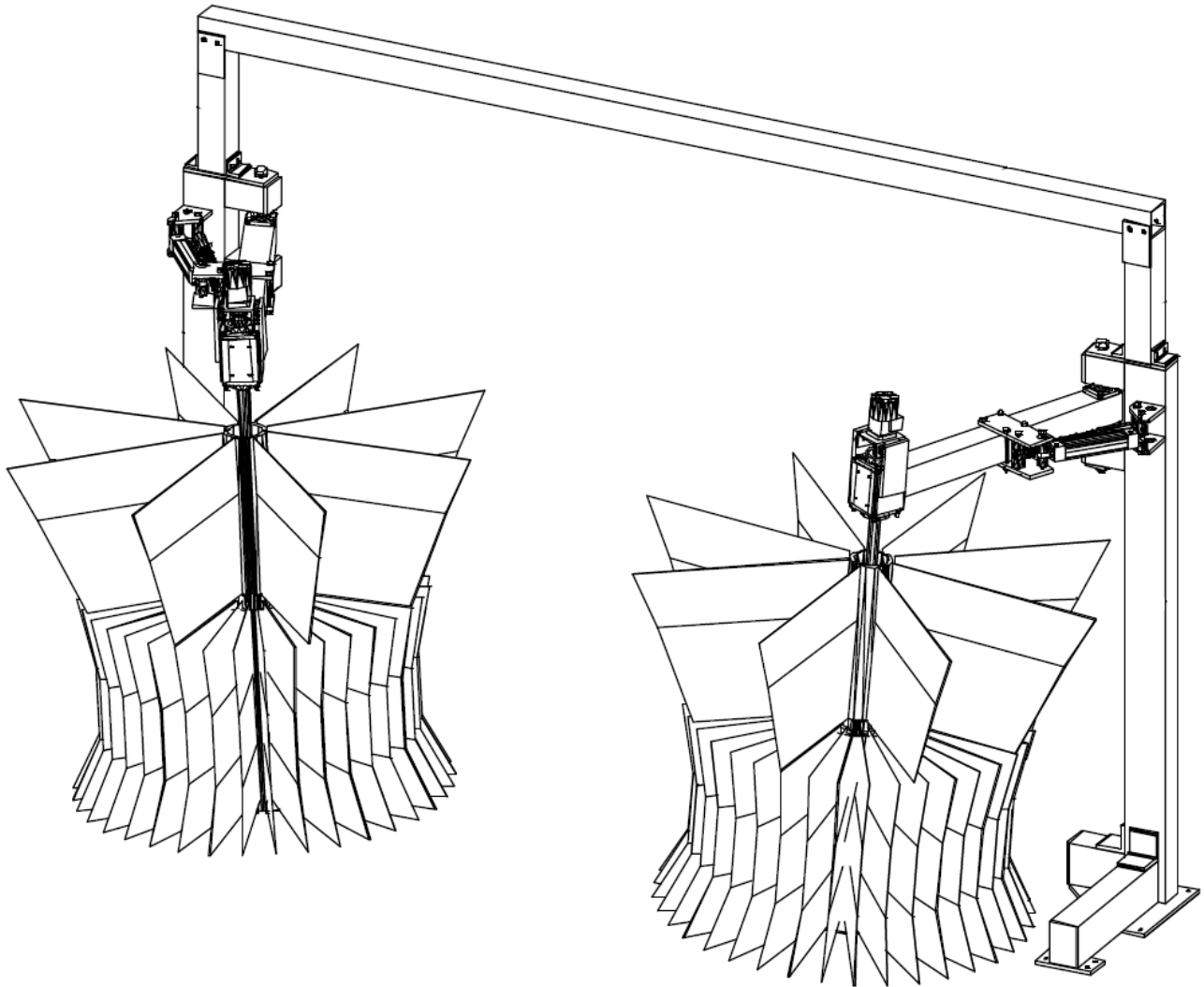


Figure # 3

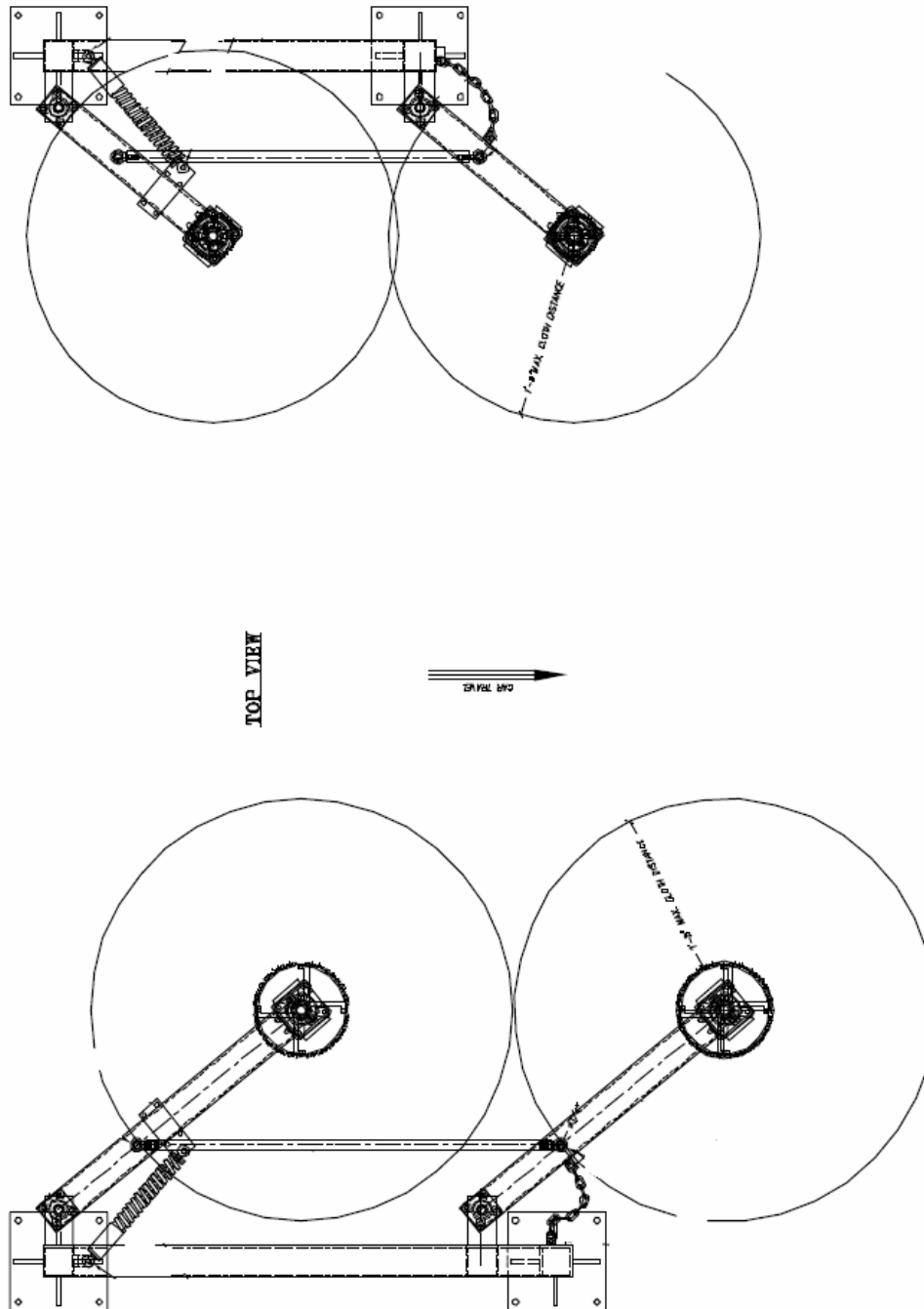
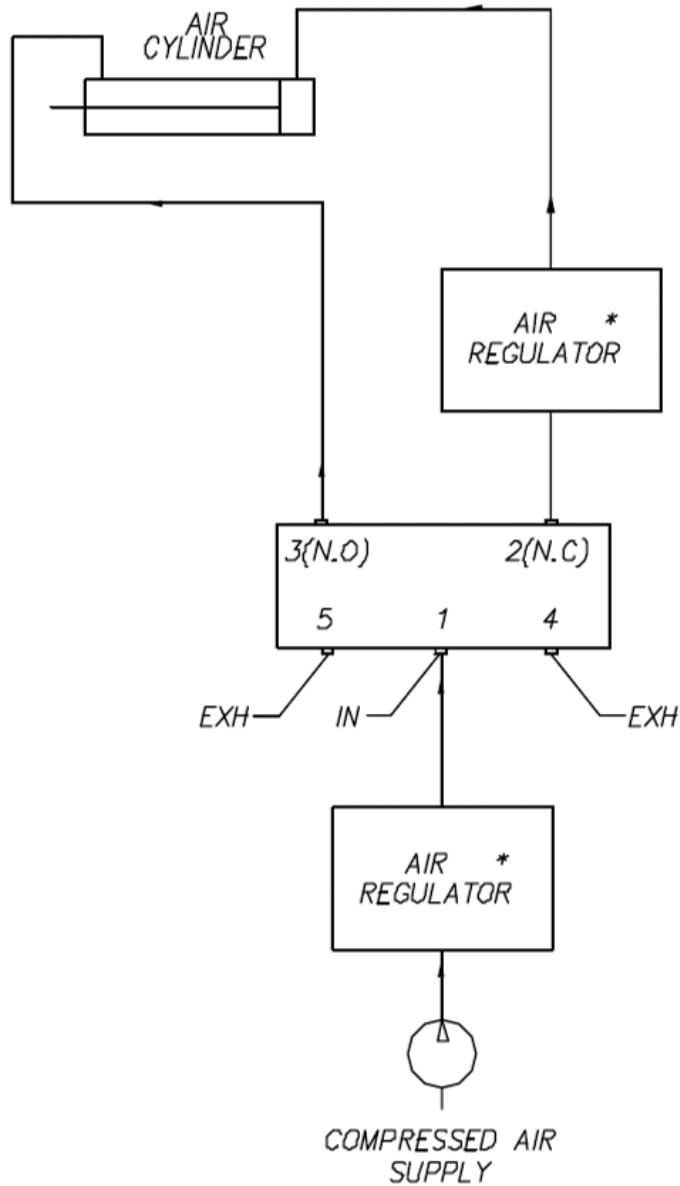


Figure # 4

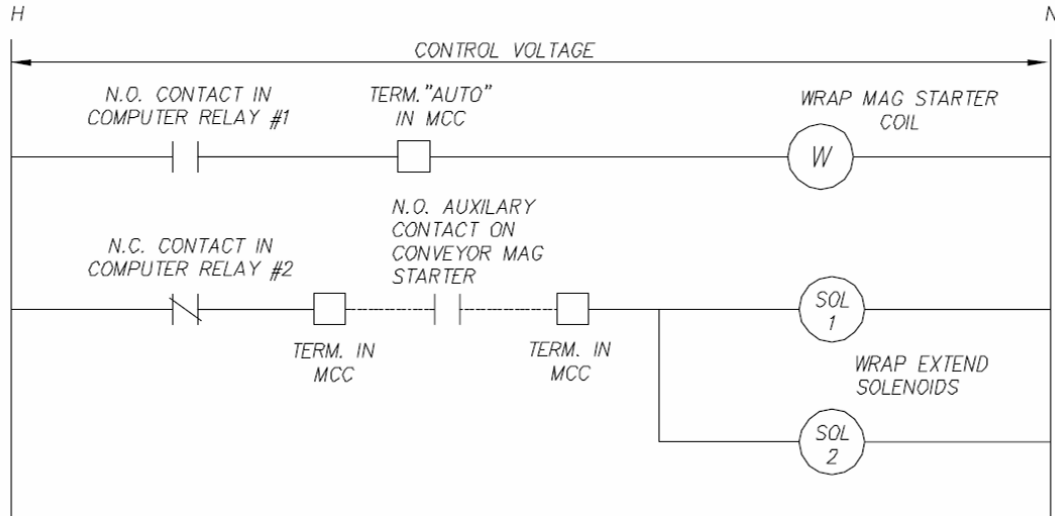
SONNY'S MODEL #SF68 FLEX SHAFT WRAPAROUND WASHERS

PROGRAMMABLE EXTEND INTERCONNECTION DIAGRAM

TYPICAL EACH CYLINDER



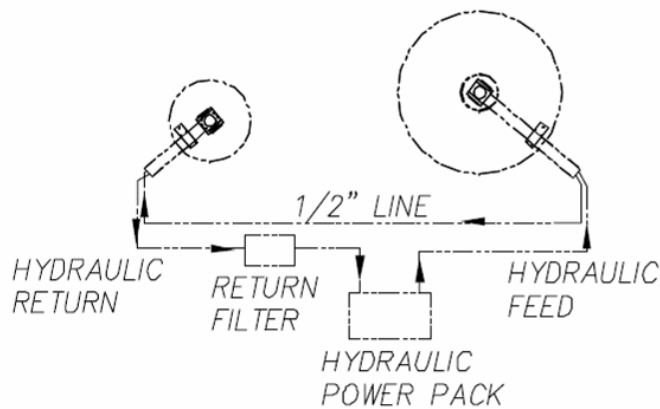
**Figure # 5**



**Figure # 6**

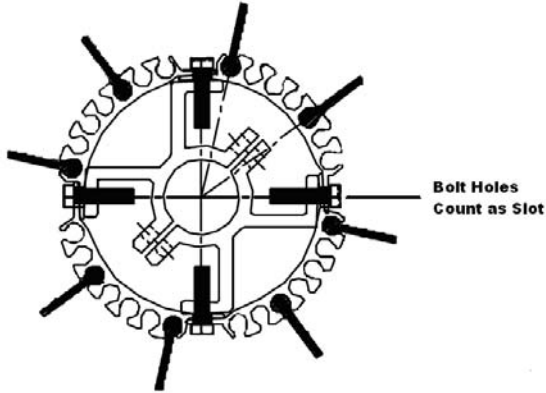
SONNY'S MODEL #SF50 & SFB50  
 "SUV" SIDE WASHERS

HYDRAULIC INTERCONNECTION

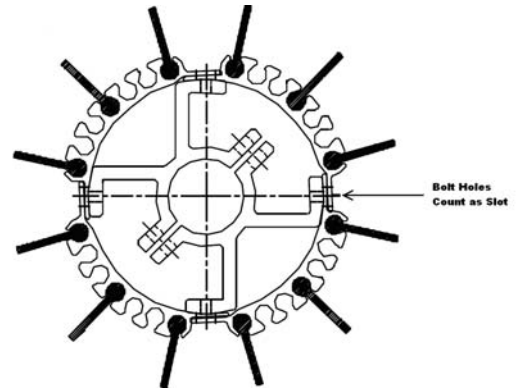


**Figure # 7**

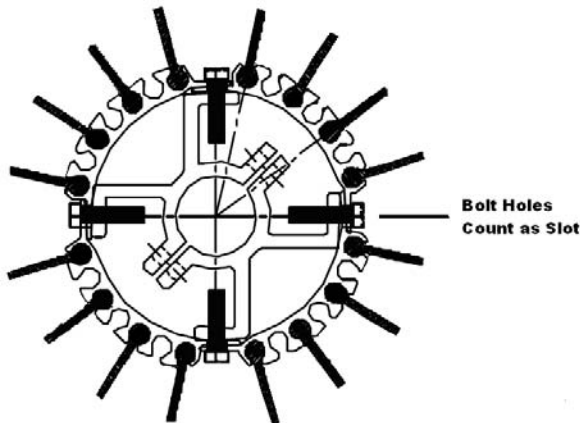
**Insert Patterns 28 Slot Hub 6" Diameter**



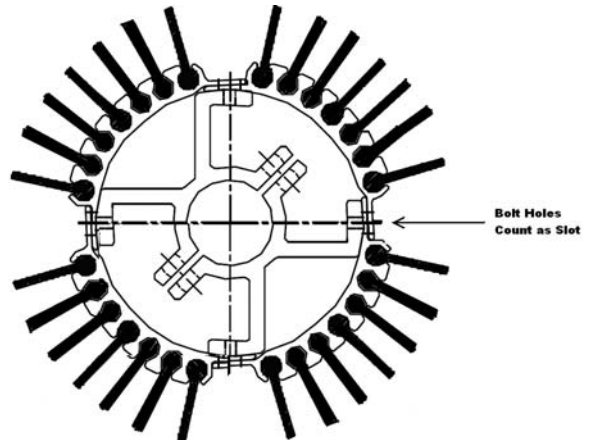
8 Position Material



12 Position Material

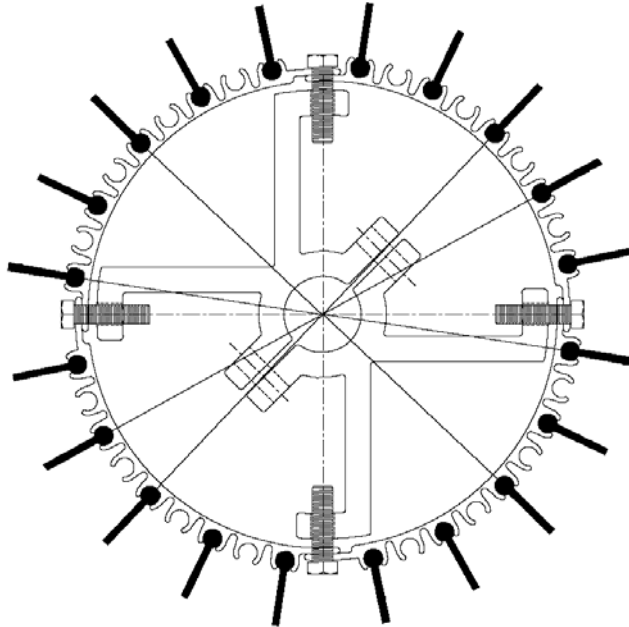


16 Position Material

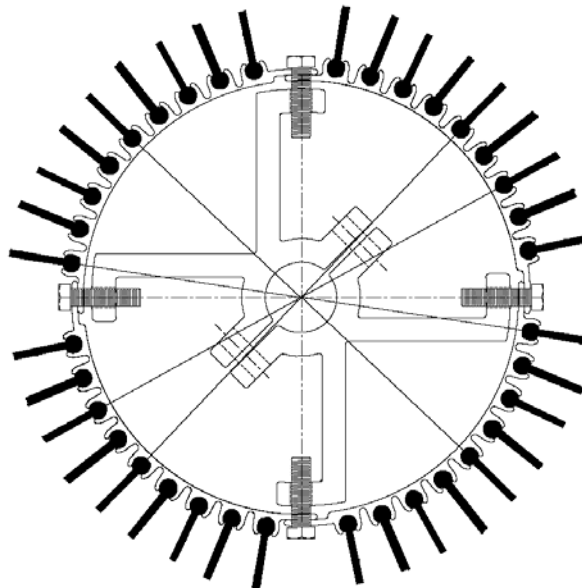


28 Position Material

### Insert Patterns 36 Slot Hub 10" Diameter

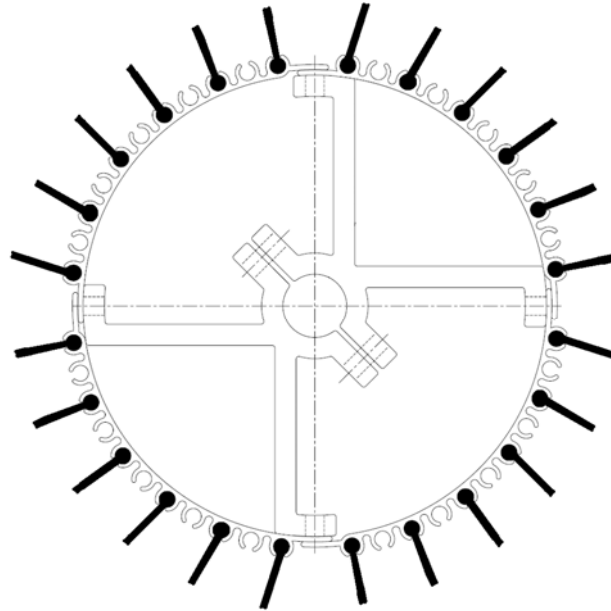


20 Position Material

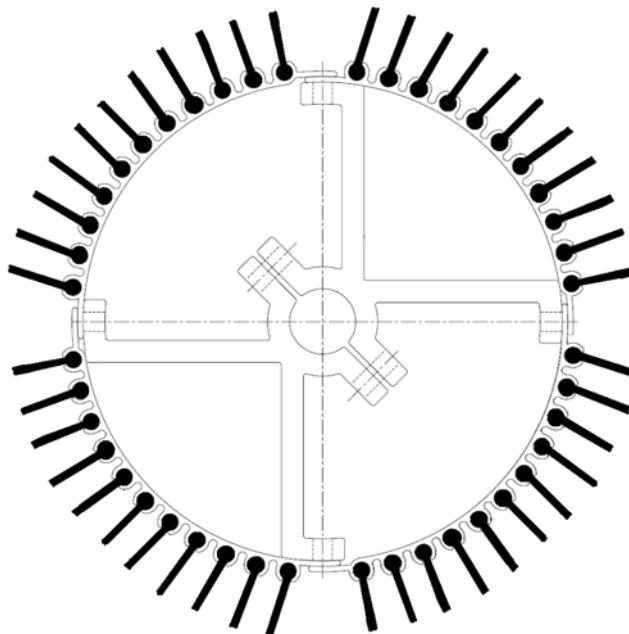


36 Position Material

## Insert Patterns 44 Slot Hub 12" Diameter



24 Position Material



44 Position Material

# Equipment Installation

## Side Washers Installation

### Installation Tools

1. Safety Glasses
2. 1/2" Drive Ratchet Set
3. Standard Combo Wrenches
4. Tape Measure
5. Permanent Marker
6. 4' Level
7. Electric Impact Wrench
8. 5' Pry Bar
9. 1" Hammer Drill
10. Sledge Hammer

### Consumables

1. Teflon Paste
2. Teflon Tape

### Manpower

One (1) man

### Time (assuming no problems)

1.00 - 2.00 hours

### Installation Steps

1. Determine where the Washer Frame is to be installed. Refer to tunnel layout diagram.
2. Sweep any debris from where the Washer will stand.

**Note:** Ensure the Washer 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.

3. Bring the washer frame into the building using the lift-a-ma-jig. Do not cut the brush arms free.
4. Place the frame 46" from the inside of the passenger guide rail and the correct distance from the entrance for your tunnel layout.
5. Square the washer frame to the conveyor. Plumb the legs and level the hanger arms. Shim the base as needed.
6. Lag one corner of the driver's side base and recheck all measurements. Once confirmed, lag the opposite corner on the passenger's side then finish lagging the brush in place.
7. Check that the shock on each brush hanger does not "bottom out" in their fully extended positions. If this occurs, move the shock mounting position to a different hole on the mounting bracket to prevent a fully extended condition.

**Note:** The SONNY'S supplied BLACK high pressure hose on the washer unit is for the hydraulic PRESSURE connection...The SONNY'S supplied ORANGE OR RED high pressure hose on the washer unit is for the hydraulic RETURN connection.

8. 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 leg of the Washer.
9. 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 OR RED high pressure hose on the leg of the Washer.
10. Run and connect the chemical lines from the Chemical Distribution Manifold to the chemical line on the Wrap frame for the application nozzles.
11. Rotation of the Brushes is against vehicle travel. As viewed from the top of each Brush the DRIVER side turns CLOCKWISE and the PASSENGER side turns COUNTERCLOCKWISE.
12. Run and connect the air lines from the Air Distribution Manifold to the air cylinder for each retract (see Figure #5 in the Dimensions Section).
13. Install cloth on the Brush Cores according to the type of material being used (see Figure #8 thru #11 in the Dimensions Section).

# Adjustments and Testing

## Adjust the Cleaning Pressure of the Washer

To adjust the pressure applied to the vehicle the mounting position and the spring position of the shocks can be changed. Cloth penetration should be about three to four inches.

## \*GENERAL OPERATION\*

### Side Washer 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 each brush.

**BE CERTAIN THAT THE BRUSHES ROTATE AGAINST VEHICLE TRAVEL**

With the brushes rotating (against the direction of vehicle travel and at proper RPM) the vehicles front fender contacts the washers travel across the side of the vehicle maintaining steady contact while cleaning the sides of the vehicle.

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

### Optional Retract Operation

When selected by the Operator's remote Programmer push button station, the side washer 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 and chemical lines and fittings for leaks. Repair, or replace, as needed.
2. Check both brush units for proper operation and retract 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 for proper chemical solution delivery.

### **WEEKLY**

1. Grease the brush shaft four bolt flange bearings. Do not allow grease to come in contact with brush cloth.

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. Inspect all hardware and fittings for tightness.
2. Grease the brush hanger pillow block bearings. Do not allow grease to come in contact with brush cloth.
3. Inspect soap solution spray nozzles for wear. Replace as necessary.
4. Thoroughly clean the equipment and framework.

### **SEMI-ANNUALLY**

1. Carefully inspect brush equipment cloth for wear and damage. Replace as necessary.

# \*PARTS LIST\*



BFL100

### Shock



BFL100PC

#### For use on:

- SF1 Single Side Unit
- SF2 Dual Side Unit
- SF50 Side Unit
- SF35 Van Unit

Item #	Description	Price
BFL100	Shock and Spring	\$34.99
BFL100PC	Pin & Cotter, SS 2 1/2in x 5/8in	9.50

### 4-Bolt Bearing – With Contact Seal

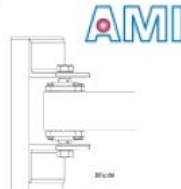
4-bolt for 1in Brush Arm Mount



E

#### For use on:

- SF1 Single Side Unit
- SF2 Dual Side Unit
- SF50 Side Unit
- SF35 Van Unit



Item #	Description	"E"	Price
BF4100	Bearing, 4-Bolt Flange 1in	2 3/4in	\$15.25

### Hydraulic Motors



#### For use on:

- SF1 Single Side Unit - MF06
- SF2 Dual Side Unit - MF06
- SF50 Side Unit - MF12
- SF35 Van Unit - MF12
- SF68 and SF77 Wrap-Around - MF12



Item #	Description	Price
MF060910AAAC	Motor, Hydraulic TRW Ross Parker	\$231.69
MF120910AAAC	Motor, Hydraulic TRW Ross Parker	250.43
CL103-1003-012	Motor, Char-Lynn S-Plus, 1/2in Ring	256.45
CL103-1005-012	Motor, Char-Lynn S-Plus, 1in Ring	279.35



### Shaft – Stress-proof Steel

#### For use on:

- SF1 Single Side Unit - 40in
- SF2 Dual Side Unit - 40in
- SF35 Van Unit - 76in
- SF50 Side Unit - 62in

All shafts are 1 1/2in diameter

Item #	Description	Price
SSF1	Shaft, 40in SF1 & SF2 Side Washer	\$91.70
SSFBX62	Shaft, 62in SFB63 SF50 Side Washer	112.00
SSFBX72	Shaft, 72in SF35 SF63 & Wraps	122.00



### 12in & 6in Hubs

#### For use on:

- SF1 Single Side Unit
- SF2 Dual Side Unit



Item #	Description	Price
BAH2812	Hub, 28in x 12in Spider Mount 44 Slots	\$184.40
BAH286	Hub, 28in x 6in Spider Mount 28 Slots	91.70



### 4-Bolt Bearing With Contact Seal

1 1/2in for use on all brush shafts:

- SF1 and SF2 Single Side Unit
- SF50 Side Unit
- SF35 Van Unit



Item #	Description	"E"	Price
BF4150	Bearing, 4-Bolt Flange 1 1/2in	4 1/64in	\$26.30



### Torque Channel

1 1/2in for use on all brush shafts:

- SF1 Single Side Washer
- SF2 Dual Side Washer
- SF35 Van Washer
- SF50 Side Washer



Item #	Description	Price
T1085SW	Torque Channel w/Plastic Knobs SF-Series	\$31.00



### 1 3/8in Split Collar/ Woodruff Key

#### For use on:

- Shafts
- Hydraulic motors

Item #	Description	Price
BB251C/S	Collar, 2pc Clamp 1 3/8in w/Set Screw	\$6.95
HS14193	Key, Woodruff 1in Half Moon	1.05



### Tie Rods

#### For use on:

- Double side washer
- Aluminum



Item #	Description	Price
SF2PSRODC	Tie Rod, PS SF2 49in Complete w/ Bearing	\$102.00
SF2DSRODC	Tie Rod, DS SF2 40.5in Complete w/Bearin	102.00

## \*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*

