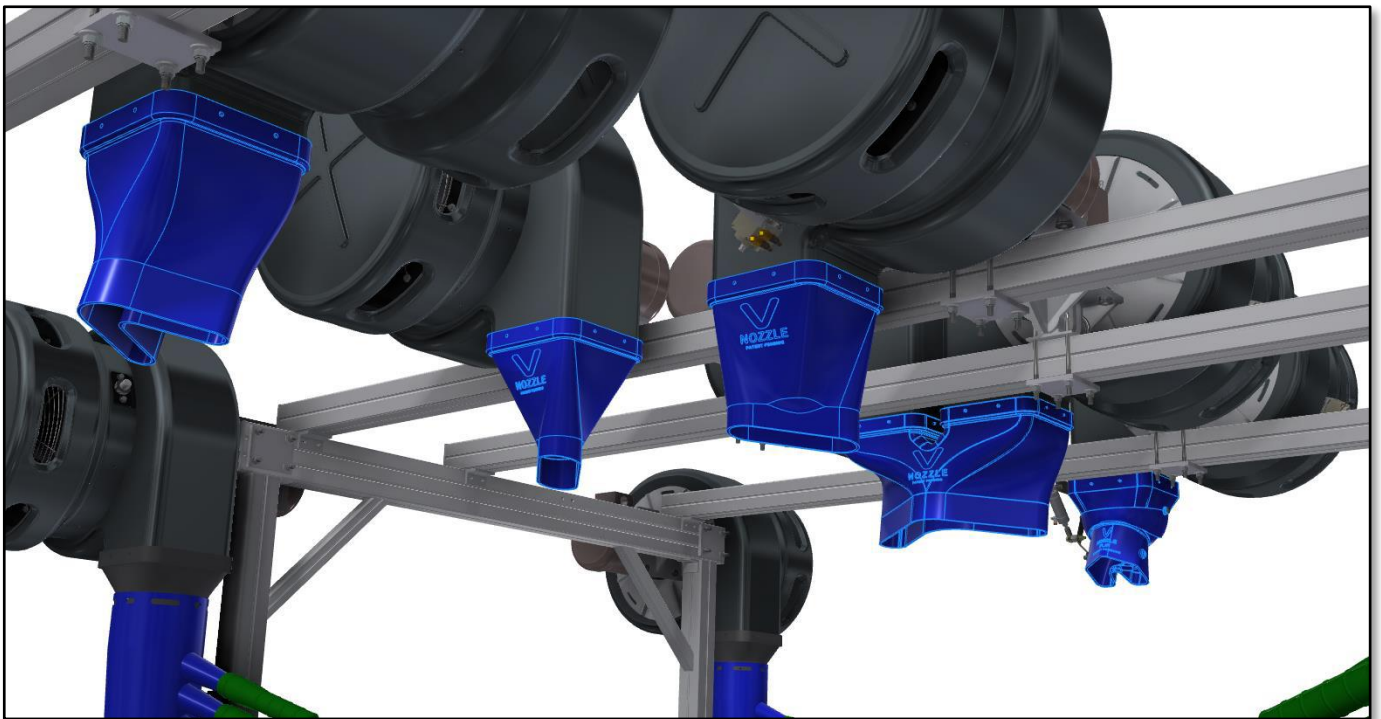




V-Nozzles



Owner's Manual

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

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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.
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 Features

- Sonny's **V-Nozzles** are designed to maximize the flow of water away from the car in a consistent direction.
 - The **Single V-Nozzle** starts the process of pushing the water from the center out and towards the back of the car.
 - The **Half V-Nozzles** continue to push water from the car with a wider coverage than the Single-V-Nozzle.
 - The **Double V-Nozzle** cleans up any water left in the center of the windshield.
 - The **Flip V-Nozzle** acts as a second V-Nozzle until the car passes under it. It then flips to push the water from the back of the car.

- All of the above V-Nozzles are designed to fit to Sonny's blower housings.

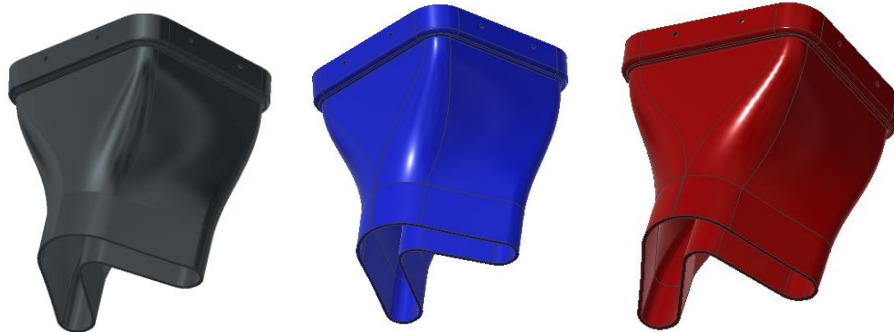
- All V-Nozzle models are available with color options: **blue**, **red** or **black**.



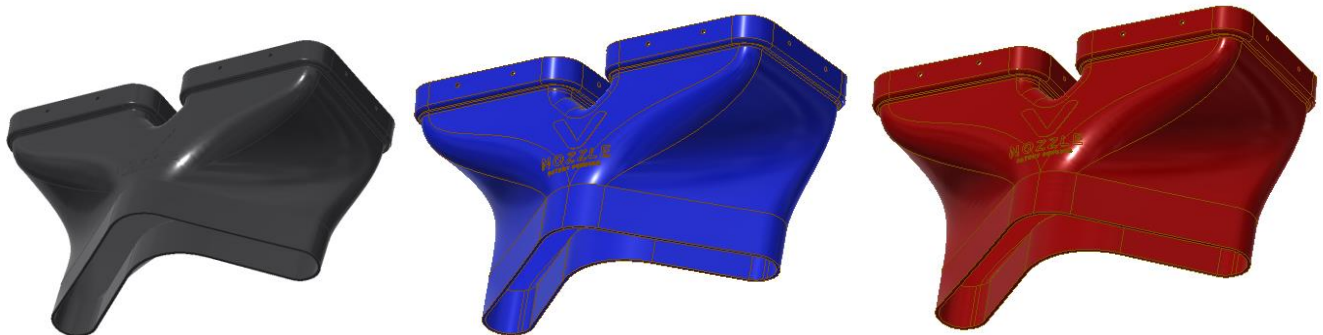
V-Nozzles

There are **five** different models of V-Nozzles:

- **Single V Nozzle** - #20018897 (Black), #20018898 (Blue), #20018899 (Red)

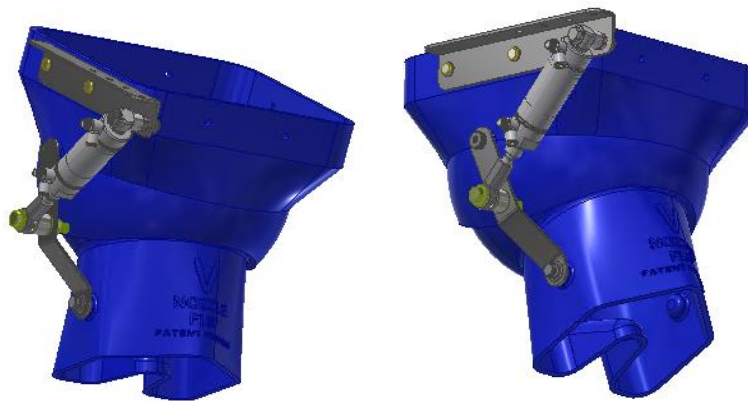


- **Double V-Nozzle** - #20018894 (Black), #20018895 (Blue), #20018896 (Red)
Focuses one clockwise and counterclockwise blower into one v-channel, for extra drying power (see the illustration in the **Double V-Nozzle Setup** section on page 15).



➤ **Flip V-Nozzle** - # 20018913 (Black), #20018914 (Blue), #20018915 (Red)

Nozzle pivots to dry both the front and back of cars. The pivot action is controlled by an air actuator connected to your tunnel's pneumatic controls.



➤ **Half V-Nozzle – Driver Side** - #20018839 (Black), #20018840 (Blue), 20018841 (Red)



- **Half V-Nozzle – Passenger Side** - #20018836 (Black), #20018837 (Blue), #20018838 (Red)

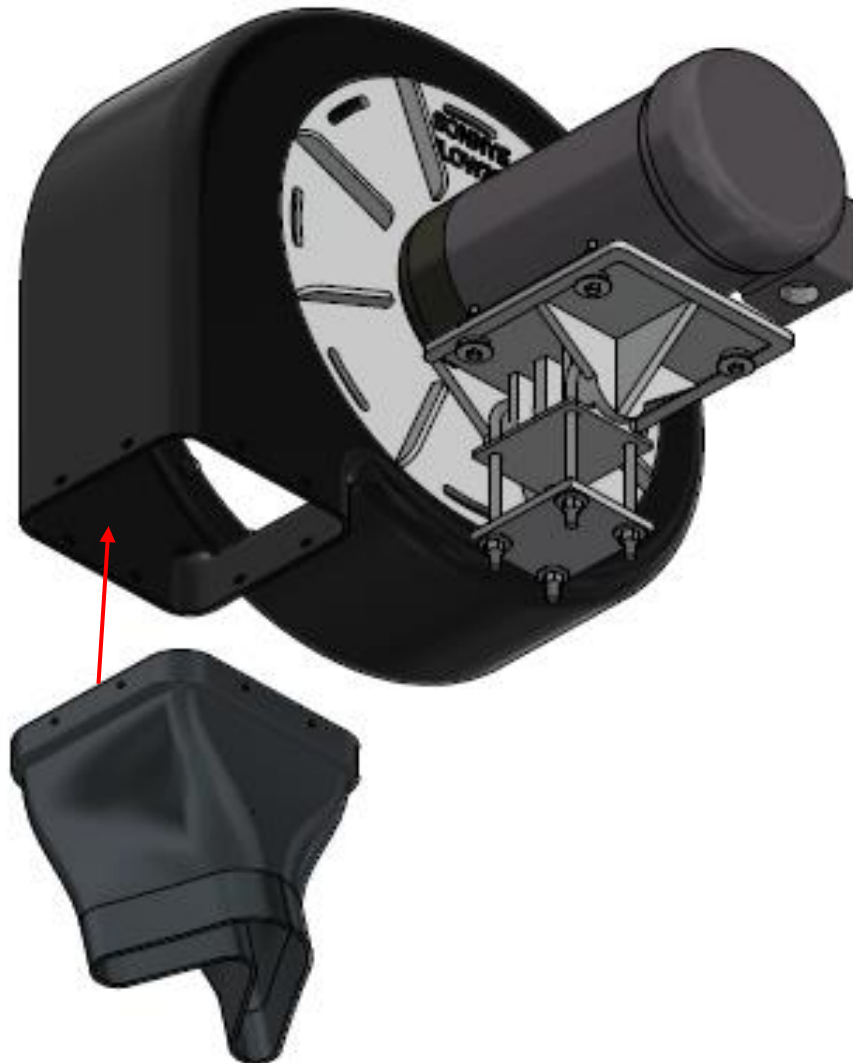


- **Bolt Kit – #10002227** - Each kit contains **8 bolts, 8 nuts** and **16 washers**. One kit needed per V-Nozzle (Double-V-Nozzle requires 2 bolt kits for each).

INSTALLATION

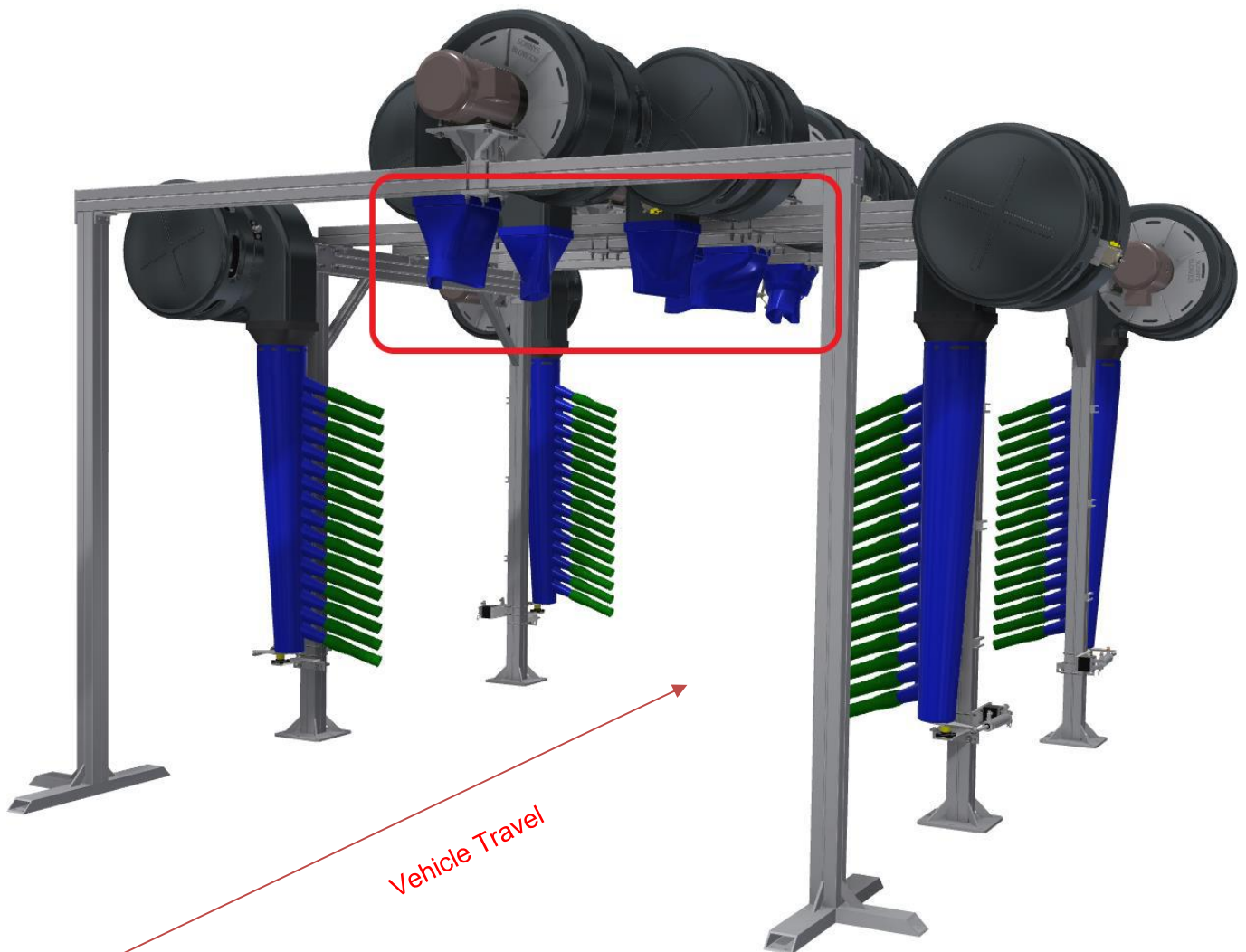
If you are installing a V-Nozzle onto an existing blower (Sonny's Blower, with one-piece molded housing) you can remove the old nozzle off the housing and install the new V-Nozzle in its place.

The V-Nozzles are designed to fit on the blower housing.



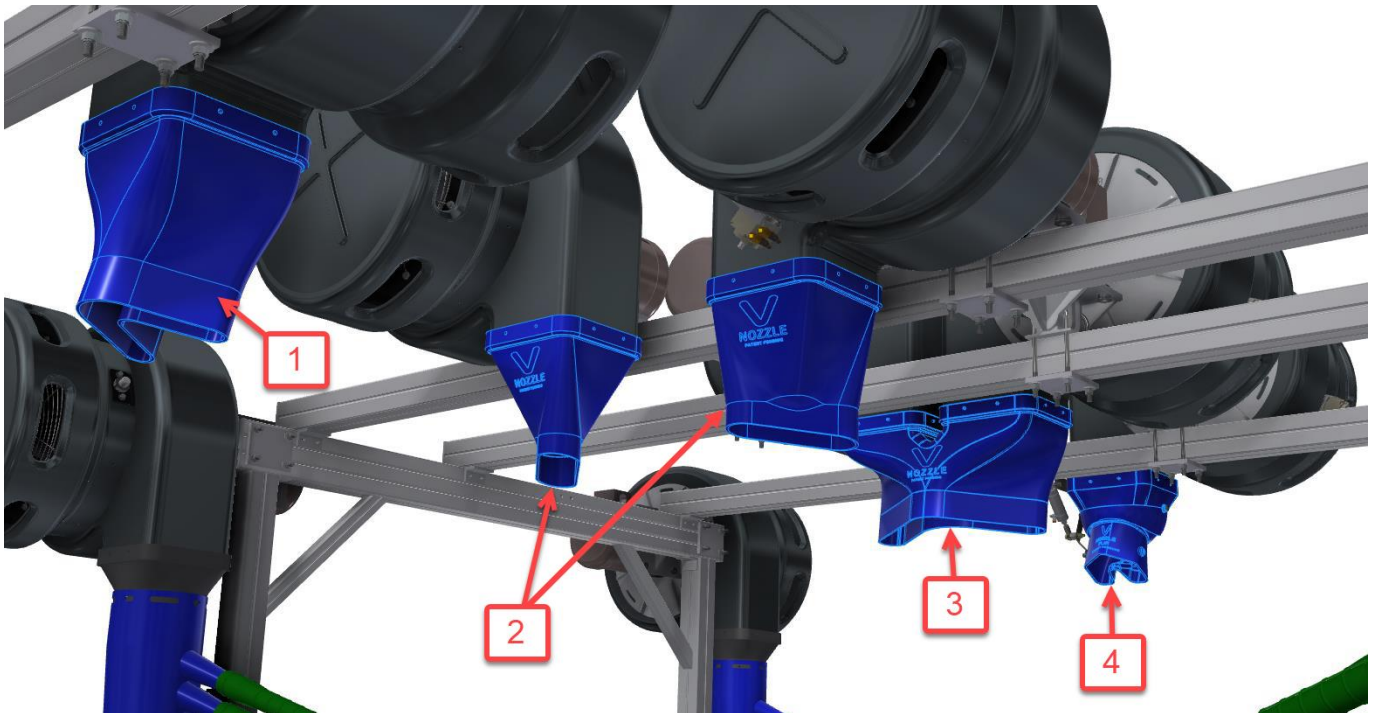
Blower and V-Nozzle Configuration in Tunnel

The blower and V-Nozzle configuration in your tunnel should be setup to optimize the different types of V-Nozzles.

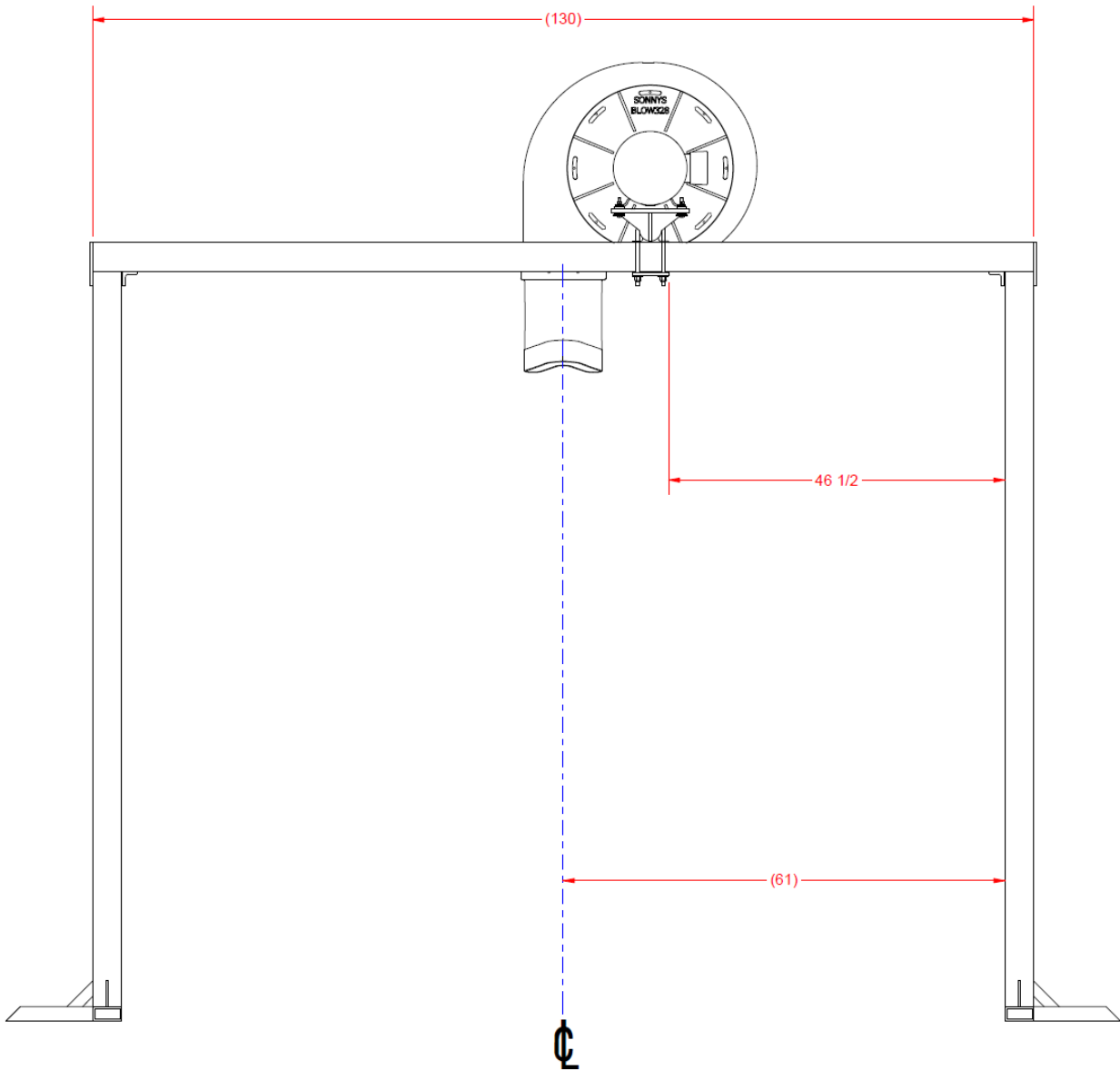


The close-up illustration below displays Sonny's recommended configuration for V-Nozzles in your tunnel:

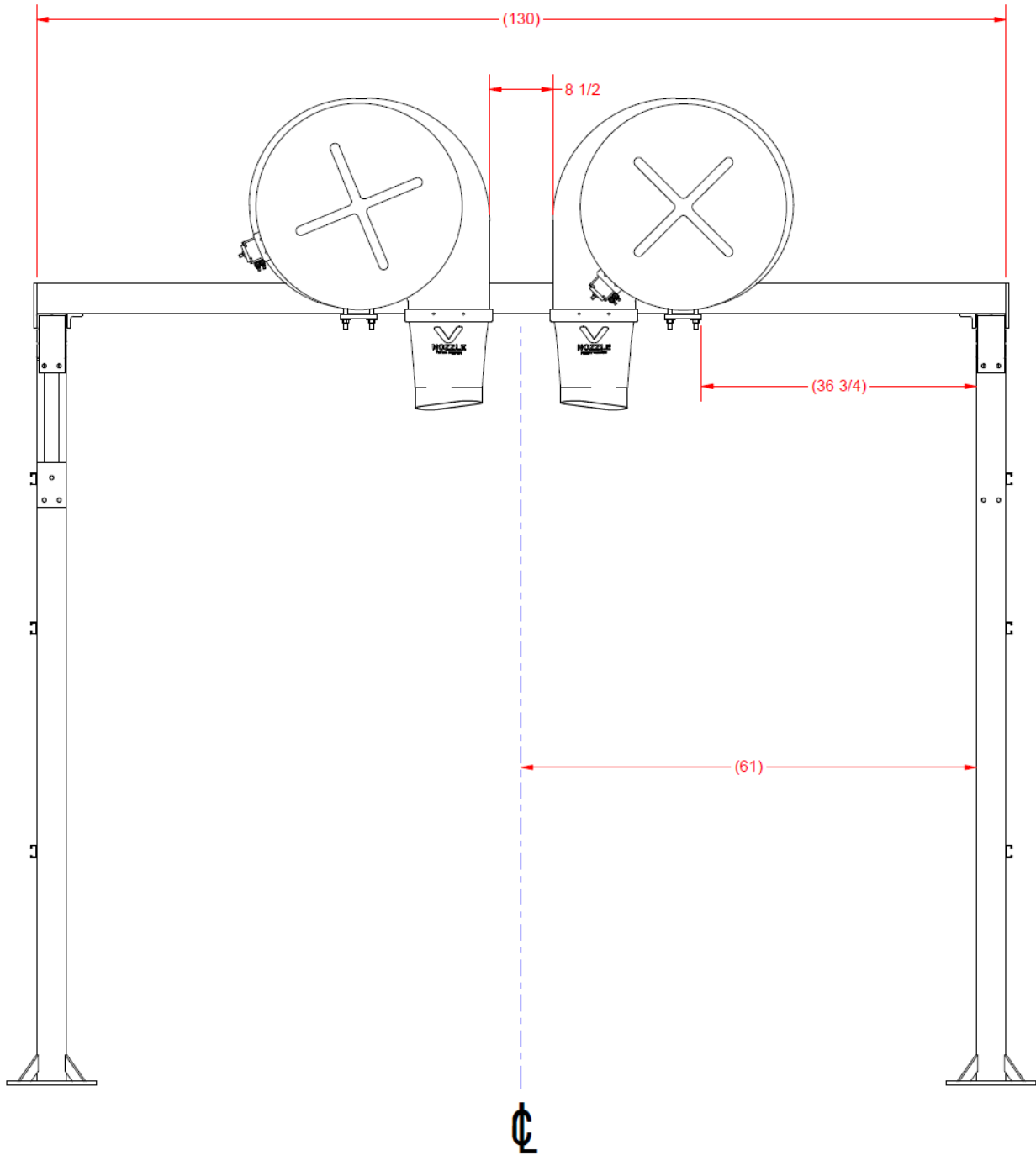
1. The **Single V-Nozzle** is used as a flash drier to begin the drying process, moving the water from the center out and towards the back of the car.
2. The **Half V-Nozzles** are two separate nozzles, one on the driver side of the vehicle and one on the passenger side. When combined, they increase the width of coverage, completely covering the width of the car while maintaining the motion of the water droplets in a diagonal direction.
3. The **Double V-Nozzle** cleans up any water left in the center of the windshield and again continues to push water in the same direction.
4. The **Flip V-Nozzle** brings this same principle to the back of the car. Moving the water from the center out, this shape was designed to maximize impact force on the back of vehicles.



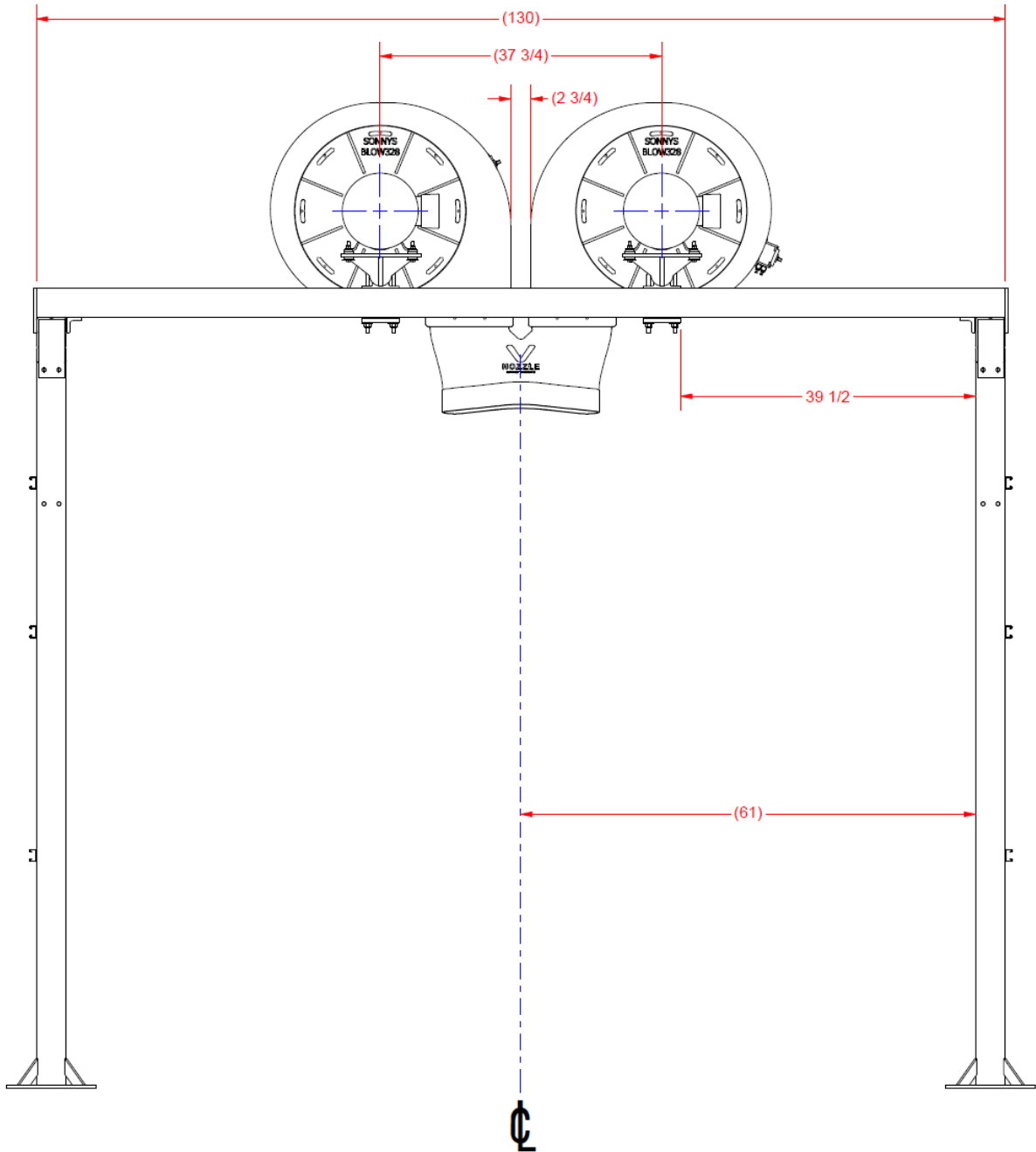
Single V-Nozzle – Mounting Specifications



Half V-Nozzle – Mounting Specifications



Double V-Nozzle (Continued)



Double V-Nozzle – Mounting Specifications

The Double V-Nozzle attaches to two blowers, as in the following illustration. The motor for the blower on the left (Driver Side) runs clockwise, while the motor for the blower on the right (Passenger Side) runs counterclockwise.

Only recommended with 15 HP Impeller Wheels.

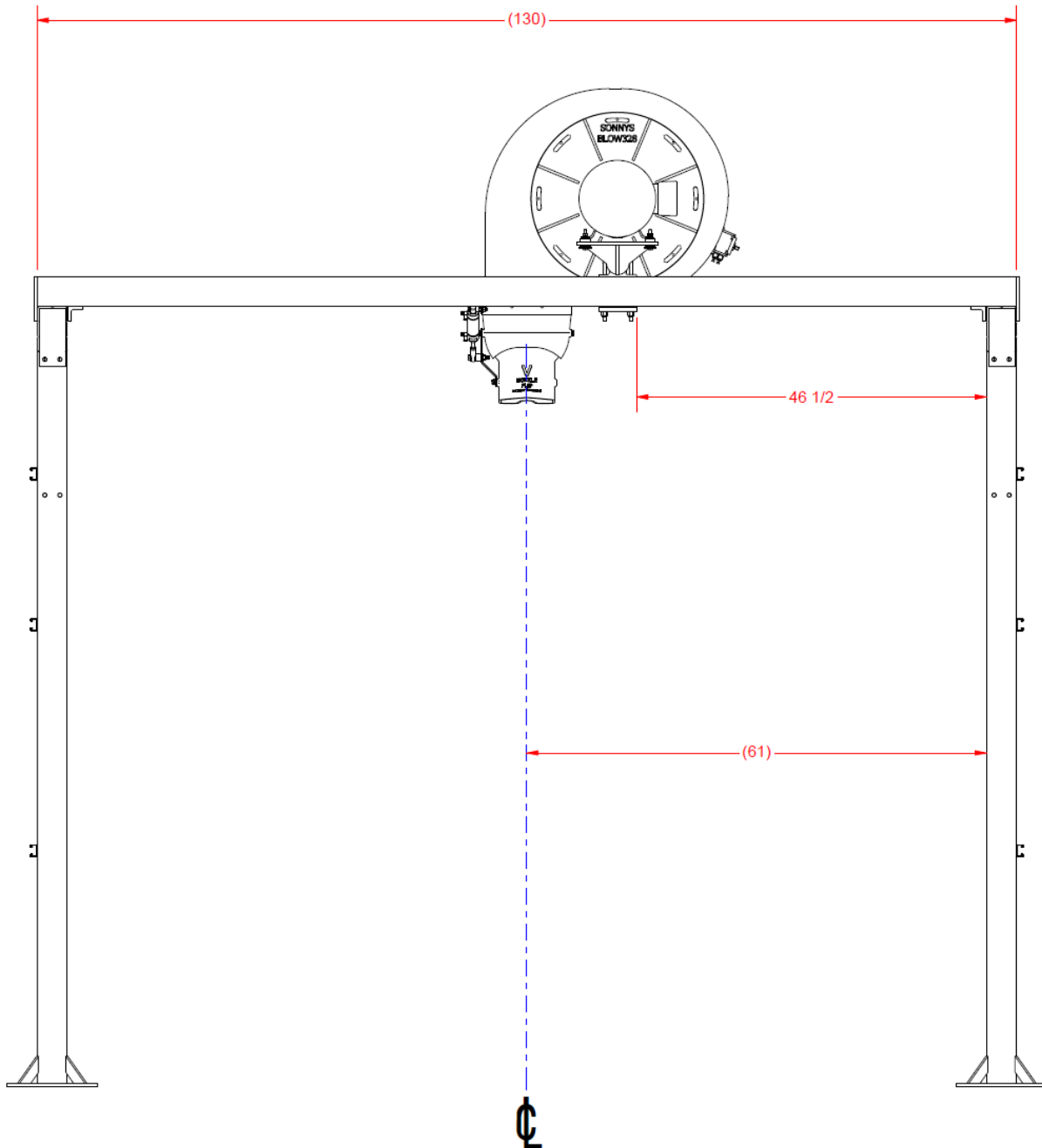
- 15 HP Standard Impeller Clockwise: 10008893
- 15 HP Standard Impeller Counter-Clockwise: 10008892

Driver Side (Clockwise)

Passenger Side (Counterclockwise)

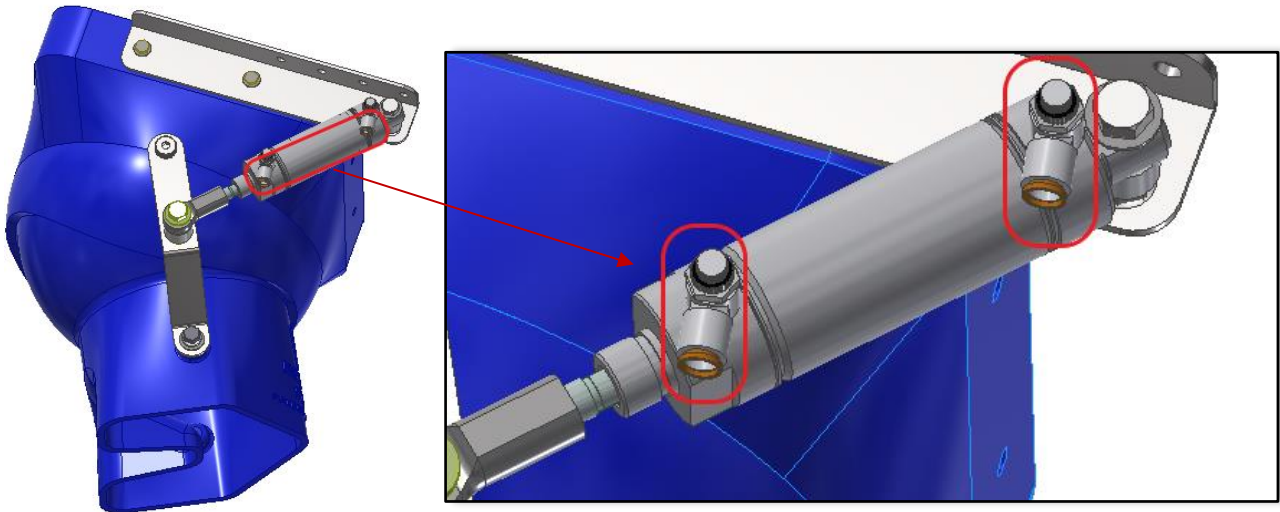


Flip V-Nozzle – Mounting Specifications



Flip V-Nozzle (Continued)

After you finish attaching a **Flip V-Nozzle** to the blower, attach the flip nozzle's air actuator to your Solenoid valve system.



The **Pressure Driver** for the Flip V-Nozzle should be set to **20-30 PSI**. Use flow control regulator valves on the air cylinders to control the flip speed.

Flip action should be activated about **1 ft** before the back of the vehicle, adjust speed to match conveyor speed. The flip action should smooth and follow the vehicle travel.

Do's and Don'ts

When installing your V-Nozzles:

DO

- Ensure the Vs of the V-Nozzles are pointing towards the tunnel entrance.
- Ensure the V-Nozzles are mounted securely to the blower housings.

DON'T

- Don't mount the V-Nozzles pointing towards the tunnel exit or to either side of the tunnel.
- Don't forget to adjust the Flip V-Nozzle Rotation to match conveyor speed.
- Don't forget to double check orientation of Half V-Nozzles. DS and PS are different parts.

MAINTENANCE

DAILY

- Wipe/wash down nozzles and blower housings.

WEEKLY

- Check nozzle outlets for debris.

MONTHLY

- Check bolted connections to ensure they are tight.

CUSTOMER SERVICE

Need more help?

For questions regarding **installation and/or operational issues and settings**, please contact Sonny's Tech Support at extension 234 or email at Sonnys-Support@SonnysDirect.com.

To order **replacement parts**, contact Customer Service at ext. 200, email us at CustomerService@SonnysDirect.com or visit us on the web at www.SonnysDirect.com.

Toll Free Main Line	800-327-8723
Local Number	954-720-4100
Customer Service	Option 3
Equipment Sales	Option 4
Technical Support	Option 5

Thank you for being a Sonny's car wash equipment owner!

From all of us here at



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.