

# **Central Vacuum Systems**



# **Owner's Manual**

#### Sonny's Enterprises, Inc.

5605 Hiatus Road Tamarac, Florida 33321 16v1



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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.

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- 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 !!!!!



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## **Product Specifications**

- > 10HP assembly capable of handling up to 4 vacuum hose drops
- > 15HP assembly capable of handling up to 6 vacuum hose drops
- > 20HP assembly capable of handling up to 8 vacuum hose drops
- > 25HP assembly capable of handling up to 10 vacuum hose drops
- > 30HP assembly capable of handling up to 14 vacuum hose drops
- > Producer shaft bearings easily accessible for routine maintenance
- > Snap-in filter bags have positive connections to the separator tank
- > Filter bags will not mildew or rot
- > Oversized dirt bucket is easy to remove, empty, and replace
- > Electric motor and vacuum producer are direct coupled for efficient operation
- > 15HP and 20HP versions are ideal for high altitude or 50Hz electric operation
- Shaft rotation arrows are part of the producer housing casting, not removable decals
- > Precision factory impeller balancing and assembly assures efficient operation
- 9000 square inches of filter area through 10 bags in 10HP, 15HP, 20HP, & 25HP units
- 10HP, 15HP, 20HP, 25HP units 34 inches wide, 91 inches long, 76 inches high at the separator tank. Width of tank is 29 ½".
- Stainless steel doors with adjustable hinge and rubber gasket for tight seal
- 6 inch standard inlet and outlet connections reducers needed for less than 30HP
- Wet separator tank available
- > Exhaust muffler available to help reduce noise



#### For Parts/Accessories Information Please Reference our Catalog or Website.

Our Central Vacuum Systems will never



You need to provide your customers with convenient, powerful vacuum stations through a centralized system that is reliable and easy to maintain.

#### Solved:

SONNY'S Central Vacuum Systems come in all different sizes from 7.5HP up to 25HP and can support up to 10 drops on one single system. Our vacuum systems are completely built in-house and all impellers are high-speed balanced for total quality control. We never want you to be down, so in the rare event that something should go wrong with your central vacuum turbine, SONNYS offers the only turbine swap program in the industry to keep you running while yours is being serviced.

#### **Quiet and Efficient**

- Turbine aluminum casting 1/2in thick for strength, and heat displacement
- Heavy-duty cast iron motor TEFC 208V / 230V / 460V
- 2-year warranty on high-efficiency motor
- Turbine impeller-rotating assembly supported by (2) precision 4-bolt SealMaster<sup>®</sup> flanged bearings with zircon fittings for lubrication
- Backward curve impeller design for greater efficiency
- Vacuum separator 12-gauge steel
- · Automotive-type paint finish inside & out
- Polypropylene, corrosion-resistant, 11gal waste bucket
- · High-altitude units available on request

n connection points inlet / utlet for vacuum separator.



ackward curve impeller sign for greater efficiency.



Exclusive double latching door provides positive seal for improved performance.



Polypropylene, corrosionresistant, 11gal waste bucket.



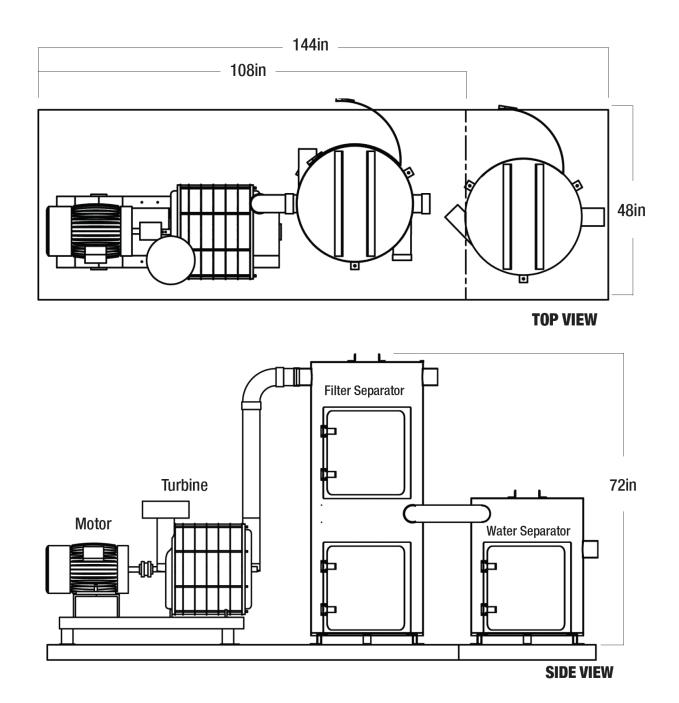
Included coupler guard provides effective safety barrier that is quick to remove when necessary.



New and improved composite metal bag holder

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#### **Optional Silencer**



For quiet operation of your SONNY'S vacuum system. Silencer's 4in outside diameter allows for an easy attachment to the exhaust of your turbine using a no hub coupler. The exhaust hood prevents rain from getting into exhaust muffler and turbine.

#### **Optional Water Separation Tank**



It's like buying insurance for your central vacuum system. Ideal for snow or other wet conditions and underground piping. Keeps filter in driest condition and prevents bags from clogging.



The Lift Kit raises the motor and turbine pedestal an additional 15in off the ground, ideal for areas with high water or snow.



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## \*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!

#### Electric

- The Customer's Electrician is responsible for:
- Providing materials and installing single phase vacuum start-stop stations as required by the Customer that will provide power to the vacuum motor starter coil.
- Providing materials and installing single phase power through the Customer supplied Start/Stop stations to the vacuum motor starter coil.
- Properly sized interconnecting wiring from the 3-phase circuit breaker and motor starter to the 10HP, 15HP, 20HP or 25HP, vacuum motor for 208V, or 230V, or 460V power source.
- The Customer's Electrician is to provide materials and install 3-phase power (208V or 230V or 460V) to the 10HP or 15HP or 20HP or 25HP electric motor on the vacuum assembly through a properly sized 3-pole circuit breaker and motor starter with 3 thermal overloads. The use of copper wire is recommended. Earth grounding of the vacuum assembly is required.

**NOTE:** Be certain the electric motor is properly wired for the supply voltage! After wiring the motor check for proper rotation as stamped on the vacuum producer end castings.

#### **Technical Disclaimer**

 Although building codes have been considered in developing all drawings, verification of sitespecific conditions and compliance with federal, state and local building codes is the exclusive responsibility of the customer and/or architect and engineer.



#### SPECIAL NOTE:

DO NOT USE WIRE NUTS TO CONNECT 3 PHASE WIRING AT THE ELECTRIC MOTOR TERMINAL BOX!!! ONLY USE SPLIT BOLT TYPE CONNECTORS WITH ELECTRICAL INSULATION TAPE AND RUBBER INSULATOR BOOTS!!!

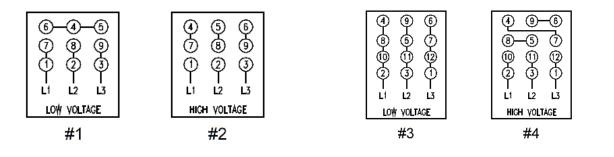


Pictured is a split bolt connector available from Grainger.

### **Electrical Specifications – Vacuum Motors**

Baldor 30HP Electric Motor –All are 3600RPM					
230V – Amp Draw 68	460V Amp Draw 34	Usable at 208V but not recommended			
Baldor 25HP Electric Mot	or – All are 3600RPM				
208V, Amp Draw 62	230V, Amp Draw 56	460V, Amp Draw 28			
Sterling 10, 15 & 20HP E	lectric Motors – All are 3600	ORPM			
10HP					
208V, Amp Draw 26.6	230V, Amp Draw 24	460V, Amp Draw 12			
15HP					
208V, Amp Draw 38,9	230V, Amp Draw 35.2	460V, Amp Draw 17.6			
20HP					
208V, Amp Draw 52	230V, Amp Draw 47	460V, Amp Draw 23.5			

**NOTE:** Drawings below are for illustrative purposes only. Always wire to the instructions shown on equipment name plate.



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### Plumbing

- For the 10HP, 15HP, 20HP & 25HP assemblies the Customer's Plumber is responsible to provide materials and installing the following;
- Interconnect from the suction connection on the separator tank to the vacuum hose drop lines. The following pipe sizes should be used for vacuum main suction lines;
- Hose drops short runs 4 inch.
- Hose drops long runs over 150 feet 6 inch for first 75 feet then drop to 4 inch.
- All piping turns should be with long sweep elbows NOT 90 degree elbows. Minimize the number of turns from the main line to the separator tank.
- All turn down piping from the main line to the vacuum hose drops should be with Tee-Y's and the hose fitting connection point on the "Y" shall be 2 inch for each drop.
- Vacuum producer exhaust piping should go to atmosphere when the vacuum assembly is located in an enclosed area not subject to cool free airflow. If exhaust piping to atmosphere is required it should be 4 inch in diameter and heat resistant for at least the first ten feet. Exhaust piping must be weather protected at its exit point.



## **Equipment Installation**

## 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!

#### Mechanical

- Place the assembled frame in the area planned for final connections. For the 10HP, 15HP, 20HP & 25HP assemblies the inlet fitting from the vacuum hose drops should face the direction of the hose drops.
- We do not recommend anchoring the frame to the floor because the vacuum producer and motor are factory mounted with rubber isolator pads. If local codes require mounting the frame to the floor we recommend that ½ inch thick rubber isolator pads be placed under each frame mounting foot and that the anchor bolts not be fully tightened to allow for some free movement.
- Be certain there is sufficient clear space around the vacuum assembly to allow free air flow and maintenance access. Do not locate the vacuum assembly in an area where customers may have direct access.
- For best results the 10HP, 15HP, 20HP & 25HP vacuum assemblies should be installed as close as possible to the vacuum hose drops.
- The OPTIONAL exhaust muffler is to be installed with the connectors provided on the producer exhaust pipe located on the producer toward the electric motor.



## Vacuum Tank for 10HP, 15HP, 20HP, 25HP & 30HP



VAC/STRIKE



## **Adjustments and Testing**

• Test for proper rotation and vac.

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## \*GENERAL OPERATION\*

- When the Start/Stop control is activated the producer motor starts and reaches full speed in approximately 3 seconds.
- When the producer motor is at full speed all vacuum hose drops may be used.
- De-activating the Start/Stop control will stop the producer motor and cause vacuum operation to cease.
- Before beginning daily operation be certain that the dirt canister is empty.
- Double check that the dirt canister door and the filter bag access door are firmly secured before starting the vacuum.
- If air leaks are heard around the vacuum assembly when the vacuum reaches full speed, turn the vacuum off and adjust the dirt canister door and filter bag access door for proper fit against the rubber seals.
- Continuous vacuuming of wet substances without the optional wet separator tank may cause permanent damage to the vacuum filter bags, impellers, and electric motor. NEVER WASH THE FILTER BAGS !!!
- Unused vacuum hose drops must be firmly closed off at the vacuum tool mouth in order that in-use vacuum hose drops operate efficiently.
- Do not operate the vacuum with the dirt canister door or the filter bag access door open or not firmly sealed and closed !!!



## \*PREVENTIVE MAINTENANCE\*

#### FOR THE FIRST MONTH OF OPERATION CHECK ALL HARDWARE AND FITTINGS FOR TIGHTNESS EACH WEEK!

#### DAILY

- 1. Empty collected trash from the dirt canister.
  - a. Turn power off to the vacuum. Open the door latches. Use care when opening or closing the door. A damaged door may cause damaging leaks to the vacuum.
  - b. Remove and empty the dirt canister. Clean the compartment around the canister. Replace the empty canister in the storage compartment against the alignment flange.
  - c. Close the access door. Press the center of the door before fastening the latches to assure a proper door gasket seal.
  - d. Turn on the vacuum. Listen for any leaks around the door gasket. Re-seal if necessary.
- 2. Clean the filter bag.
  - a. Turn power off to the vacuum. Open the door latches. Use care when opening or closing the door. A damaged door may cause damaging leaks to the vacuum.
  - b. If you have the Uni-Mount style frame, shake the filter bags with the handle on the side of the separator tank. If you have the Separate Mount style frame, manually shake the filter bags behind the upper door on the separator tank.
  - c. Inspect filter bags for damage, wetness and proper seating, replacing damaged bags.
  - d. Return filter bags to vacuum.
  - e. Close the access door. Press the center of the door before fastening the latches to assure a proper door gasket seal.
  - f. Turn on the vacuum. Listen for any leaks around the door gasket. Re-seal if necessary.
  - g. Inspect vacuum hoses and tools for cuts, excessive wear, or trash blockage. Replace as necessary.
  - h. Turn the vacuum on and check all hose drops for proper operation.



## \*PREVENTIVE MAINTENANCE\*

#### FOR THE FIRST MONTH OF OPERATION CHECK ALL HARDWARE AND FITTINGS FOR TIGHTNESS EACH WEEK!

#### WEEKLY

- 1. Inspect all filter bags for wetness or tears. Replace as necessary.
- 2. Check vacuum piping for pinhole leaks, cracks, or loose fittings.
- 3. Inspect dirt canister and filter access door gaskets for cuts, excessive wear, or leaks. Replace as necessary.
- 4. Clean the separator tank and producer housings.
- 5. Grease impeller shaft bearings weekly. DO NOT OVER GREASE!

Note: USE A HIGH TEMPERATURE GREASE TO GREASE THE TURBINE BEARINGS



#### **Motor Maintenance**

- 1. Inspection: Inspect motor at regular intervals. Keep motor clean and ventilating openings clear of any obstructions.
- 2. Lubrication: Pre-lubricated double sealed bearings do not need to be re-lubricated. We recommend changing bearings at times shown, but if not changeable, you can re-lubricate by removing seal plate, cleaning and refilling the bearing and bracket cavity with the recommended grease. Motors having pipe plugs or grease fittings are shipped with sufficient grease for a long operation period. It is necessary to re-lubricate ball bearing motors periodically, depending upon size of bearings and type of service. For easy service (1-hour per day) multiply table value by two (2). For severe service (shock, high vibration, moisture, corrosives) use 1/3 of table value.

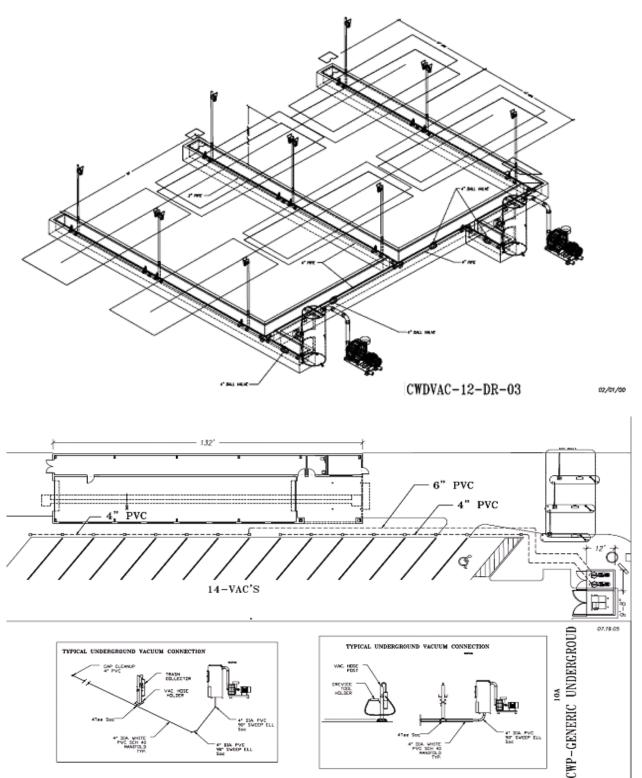
Motor RPM	Frame vs. HP	Type of Service	
		Standard Duty	Heavy Duty
		8 Hour/Day	24 Hour/Day
3600	143T – 286TS	2 Years	6 Months
	1.5 – 3.0		
	324TS – 445TS	6 Months	90 Days
	40 – 150		
1800	143T – 256T	2 Years	1 Year
	1 – 20		
	284T – 326T	1 Year	6 Months
	25 – 50		
	364T – 445T	6 Months	90 Days
	60 – 150		
1200	143T – 256T	3 Years	2 Years
	.75 – 10		
	284T – 326T	2 Years	1 Year
	15 – 30		
	364T – 445T	1 Year	6 Months
	40 - 125		

#### **Frequency of Lubrication**

- Instructions for Lubricating: Replace one pipe plug on each motor end bracket with a grease fitting. Remove the other plug for grease relief. Be sure fittings are clan and free from dirt. Using a low pressure grease gun, pump in the recommended grease until new grease appears at the grease relief hole After re-lubricating, allow motor to run for 10 minutes before replacing pipe plugs in end bracket.
- 2. Recommended Grease: Use the following greases, or some equivalent lithium based grease, unless a special grease is specified on the motor nameplate:
  - 1) Chevron SERI #2
  - 2) Shell Oil Dolium R
  - 3) Rykon Premium #2
  - 4) Texaco Polystar RB

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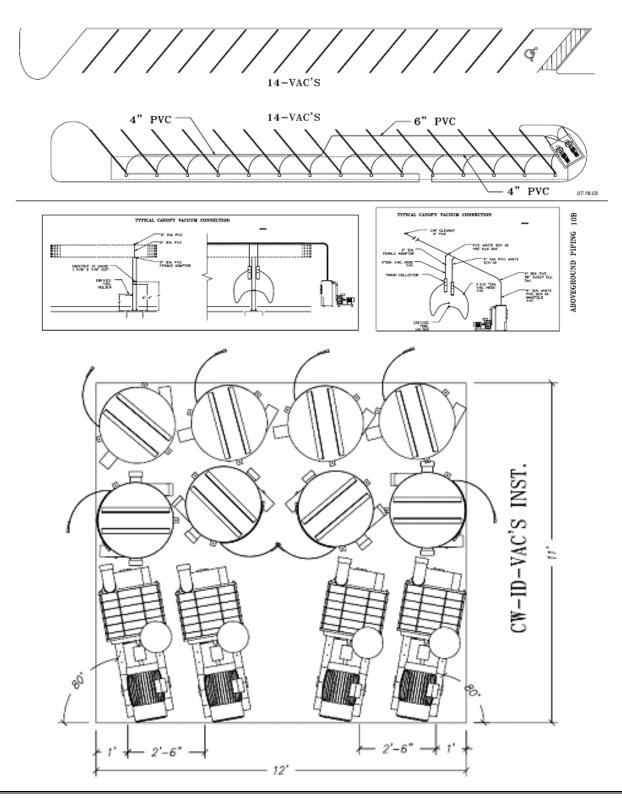


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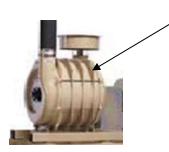
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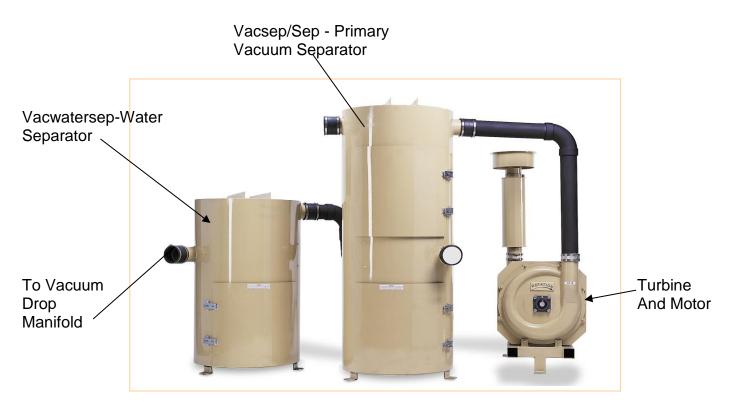
## **\*VACUUM COMPONENTS\***

To determine the HP of the turbine, count the diffuser plates (they protrude). 15HP is shown.

- 7 = 30HP VAC
- 6 = 25HP VAC
- 5 = 20HP VAC
- 4 = 15HP VAC
- 3 = 10HP VAC



### Installing A Water Separator To Your Vacuum



When using the stainless steel water separator, install inline between the primary separator and the vacuum drop manifold.

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#### **Dura-Flex Coupling Installation Instructions**

**AWARNING** Lock out / tag out the power source before proceeding to avoid unexpected starts. Failure to observe these precautions could result in bodily injury.

**AWARNING** Coupling element may be thrown from the assembly with substantial force if subjected to a severe shock load.

**ACAUTION** Check operating speed against Maximum RPM value in Table 1.

For a basic installation overview, scan the QR code below:



Scan to Watch Installation Video or visit our Dura-Flex product page at www.TBWoods.com

Further component information available:

Specification sheets, 3D models ecatalog.TBWoods.com

Coupling Selection Program www.TBWoods.com/Select

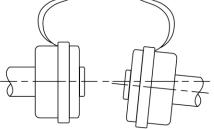
#### **Installation / Alignment**

Installation / Alignment Tools

- Hex key set
- Socket set
- Torque wrench
- Straight-edge
- Caliper
- Feeler gauge set
- Inspect all coupling components and remove any protective coatings, lubricants, paint or rust from bores, mating surfaces and fasteners. Remove any existing burrs, etc. from the shafts.
- 2. Slide one hub onto each shaft using keys where required. (When using QD or Taper-Lock hubs, follow the instructions furnished with the Sure-Grip or Taper-Lock bushings.)
- When high speed rings are to be used for spacer couplings, loosely install one ring on each half element.

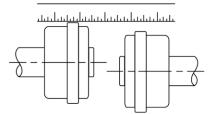
- 4. Hold one half element on the hubs to determine the appropriate hub spacing. If using spacer elements with high speed rings, hold both half elements on hubs to make sure that the hubs do not interfere with the rings. The hub may be installed with the hub extension facing in or out. Make sure that the shaft extends into the hubs at least .8 times the shaft diameter.
- 5. Lightly fasten hubs to shafts to prevent them from moving during alignment.

## Angular Alignment



6. Angular Alignment: Without rotating the coupling, run a caliper around the hub and set the caliper to the widest point. Find the narrowest point with the caliper and feeler gauges. Reposition equipment until this value is as small as possible; reference Table 2 for maximum value/degree.

#### Parallel Alignment



7. Parallel Alignment: Using the misalignment value from the previous step, look up the maximum allowable parallel misalignment using Table 2 and Figure 1. Without rotating the shafts, run a straight-edge around the hub and find the maximum offset with feeler gauges. If necessary, realign the shafts. Recheck parallel alignment.

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- 8. Tighten motor and driven equipment fasteners to manufacturer specifications; recheck parallel and angular alignment.
- When parallel and angular alignment values are within service ratings, verify that all set screws, cap screws and other fasteners are tightened to values in Table 1. Recheck parallel and angular alignment after tightening.
- 10. Install coupling guard per applicable safety regulations.
- 11. Periodically check alignment, as settling will often change equipment position.

	Maximum RPM		Element & Ring Cap Screws			BTS Hubs Set Screws				
Coupling Size			Imperial Elen	nents	Metric Eleme	ents**	Imperial	Hubs	Metric Hu	ubs**
	Standard	Spacer* (HS Rings)	Screw Size	ft-lb	Screw Size	Nm	Screw Size	ft-lb	Scew Size	Nm
WE2/WES2							1/4-20	7	M6-1	6
WE3/WES3	7500 7						1/4-20		1010-1	0
WE4/WES4		7500 7500	1/4-20	17	M6-1	23	5/16-18	14		
WE5/WES5								3/8-16	23	M8-1.25
WE10/WES10							3/8-10	20		
WE20/WES20	6600	4800(6600)					1/2-13	50		
WE30/WES30	5800	4200(5800)	3/8-16	30	M10-1.5	40	1/2-13	50	M10-1.5	32
WE40/WES40	5000	3600(5000)		3/6-16 30	30 1010-1.5	40	5/8-11	100	WITO-1.5	32
WE50/WES50	4200	3100(4200)					5/6-11	100		
WE60/WES60	3800	2800(3800)	1/2-13	75	75 M12-1.75	100	3/4-10	167	M12-1.75	54
WE70/WES70	3600	2600(3600)								
WE80/WES80	2000	1800(2000)								

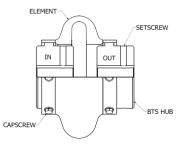
#### Table 1 - Maximum RPM and Fastener Torque Values

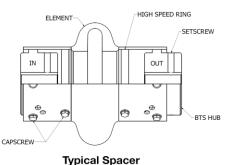
\*Maximum spacer element RPM = Maximum standard element RPM if using high speed rings. HS rings come standard with sizes 2-10 and are available as an option for sizes 20-80.

\*\*Metric elements and hubs use metric hardware and are denoted by "M" in the part number, e.g. WE2M, WES2M, WE2HM28MM.

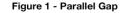
Table 2 - Angular Inch Gap						
Hub Size		Degrees				
		1°	2°	3°	4°	
WE2	in	0.03	0.07	0.10	0.13	
VVEZ	mm	0.8	1.7	2.5	3.3	
WE3	in	0.04	0.08	0.12	0.16	
VVLO	mm	1.0	2.1	3.1	4.1	
WE4	in	0.05	0.09	0.14	0.18	
VVE4	mm	1.1	2.3	3.5	4.6	
WE5	in	0.06	0.11	0.16	0.22	
VVES	mm	1.4	2.8	4.2	5.5	
WE10	in	0.06	0.13	0.19	0.22	
VVEIO	mm	1.6	3.2	4.9	5.5	
WE20	in	0.08	0.16	0.23		
VVE20	mm	2.0	4.0	5.9		
WE30	in	0.10	0.19	0.28		
VVE30	mm	2.4	4.8	7.2		
WE40	in	0.12	0.23	0.35		
VVE40	mm	2.9	5.9	8.8		
WE50	in	0.14	0.28	0.43		
VVE50	mm	3.6	7.2	10.8		
WE60	in	0.15	0.31			
VVE60	mm	3.9	7.7			
WE70	in	0.16	0.32			
	mm	4.1	8.2			
WE80	in	0.20	0.39			
VVE80	mm	5.0	10.0			

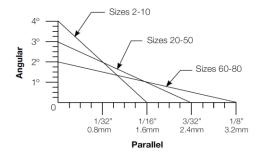
Table 2 - Angular Inch Gap





Typical Standard





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#### Can't live without your Vacuum? Of course not!

SONNY'S® Turbine Swap program keeps you running, and it's quick & easy!

· Disconnect and reinstall your turbine only once

Reduce downtime – no waiting for repair

#### How does it work?

We will send you a factory reconditioned turbine that matches your existing turbine's horsepower. Turbines are in stock and ready to go. Upon shipment, you will be charged for the amount of the replacement unit.

Within fourteen (14) days of receiving your Swap-Out replacement turbine contact Sonny's for your RMA number and to arrange pickup of your unit. Upon receipt of your unit, we will evaluate and complete the necessary repairs and provide you with a report with pictures of the necessary repairs. We will issue a credit against the original charge and you will be invoiced for the parts and labor to repair your unit. You only pay for the necessary repair of your unit. All freight charges are the responsibility of the customer. Contact SONNY'S Customer Service at 1-800-327-8723 X 200 or visit SonnysDirect.com for more information.

To determine turbine horsepower, count the number of diffuser plates (DP).

2 DP = 7-1/2HP Mini Vacuum

3 DP = 10HP Vacuum

4 DP = 15HP Vacuum

5 DP = 20HP Vacuum

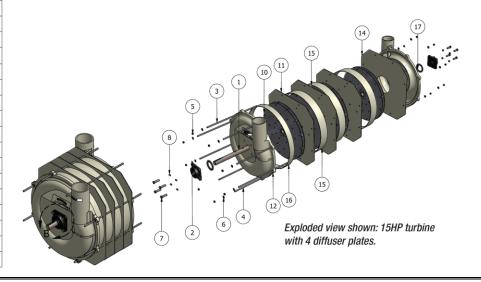
6 DP = 25HP Vacuum

Item #	Description	Price
20010238	Vacuum, 10HP Turbine Painted	CALL
20000393	Vacuum, 15HP Turbine Painted	CALL
20000394	Vacuum, 20HP Turbine Painted	CALL
20003571	Vacuum, 25HP Turbine Painted	CALL

#	QTY	Description
1.	1	Shaft Vacuum
2.	1	SCREW, 5/16-24 X 7/8in, SOC SET ALLOY CUP
3.	6	STUD, 3/8-16 X 20-1/4 FULL THREAD Zc
4.	2	STUD, 3/8-16 X 21-1/4 FULL THREAD Zc
5.	16	NUT, STOVER 3/8-16 LOCK Gr STL Zc
6.	16	FLAT WASHER 3/8 SAE ZC
7.	8	SCREW, HEX 1/2-20 X 1-3/4in GR 5 Zc
8.	8	WASHER, 1/2in SPLIT LOCK STL Zc
9.	2	BEARING, FOUR BOLT FLANGE 1-3/8in
10.	4	IMPELLER, SONNYS 1 in WIDE X 21 in DIA.
11.	3	VACUUM, DIFFUSER PLATE ASSEMBLY
12.	2	HOUSING, VACUUM BLOWER
13.	1	VACUUM DECAL, AIR IN-AIR OUT
14.	1	PLATE 5, SQUARE NO VEIN LARGE HOLE
15.	3	VACUUM RING, 3in
16.	1	VACUUM RING, 2in
17.	2	0-RING, SEALMASTER 10006187 BEARING



Photo shown: 15HP turbine with 4 diffuser plates.



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## \*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.

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## \*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 <u>www.SonnysDirect.com</u>.

**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



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