

AMERIC AXIAL FAN TROUBLESHOOTING

CAUTION: All service procedures should be executed with the unit unplugged.

PROBLEM	CAUSE	SOLUTION
Unit will not run.	1) No power to unit. 2) Switch not on. 3) Switch is faulty. 4) Faulty / Broken cord or motor wire.	1) Plug unit in. Check circuit breaker. 2) Place in "ON" position. 3) Replace switch. 4) Perform continuity check, using volt/amp meter, Repair/replace faulty/broken wire.
Unit runs but fan makes loud scraping noise.	1) Unit has been severely jolted causing fan to rub against housing. 2) Unit has been severely jolted causing housing to deform.	1) Remove motor and replace damaged motor mounts. 2) Replace housing/unit as necessary.
Unit runs but vibrates excessively.	1) Severe jolt has bent motor shaft causing unit to be out of balance. 2) Fan blade damaged. 3) Dirt build up on one side of fan blade.	1) Remove and replace motor. Replace fan blade if necessary. 2) Replace fan blade. 3) Clean fan blade.
Unit runs but fan does not turn.	1) Fan is jammed against housing. 2) Capacitor wire has broken/come loose, capacitor has failed. 3) Housing has been damaged such that it presses on the fan blade.	1) Remove motor and replace damaged motor mounts. Replace fan blade if necessary. 2) Repair/replace wires/capacitor as necessary. 3) Replace housing/unit as necessary.
Unit runs briefly, then shuts off on overload.	1) Motor bearings are failing, or motor has developed an internal electric fault. 2) Intake grill and/or exhaust grill is obstructed. 3) Excessive duct length.	1) Replace motor. 2) Remove obstruction. 3) Reduce duct length to recommended maximum.

Item	Part#	Each	Description	Item	Part#	Each	Description
1	RING-VAF8000	2	Duct Ring 20" ABS	21	SHACKLE58-6500G	1	Shackle 5/8" Screw Pin
2	Guard-VAF8000	2	Wire Guard 20"	22	OWNJ1420R	4	Well Nut J1420 Rubber
4	HSG-VAF8000	1	Housing Blue VAF8000	23	ONY51624Z	12	Nylock 5/16"-24 Zinc
5	CS253	1	Motor 5HP 3Ph	24	MSBOX-VAF8000	1	Motor Starter Box
	CS251	1	Motor 5HP 1Ph	25	0B1420X112HZ	12	Bolt 1/4"-20x1-1/2" Hex Zinc
6	BLD-VAF8000-60	1	60 Hz Fan Blade Assembly	26	DINRAIL-3	1	DIN Rail 35mm x7.5mm Zinc
	BLD-VAF8000-50	1	50 Hz Fan Blade Assembly	27	ONY1420Z	32	Nylock 1/4"-20 Zinc
7	MTRVN-VAF8000	2	Motor Mount Primary Vane	28	0W14STDZ	48	Washer 1/4" USS
8	SECVN-VAF8000	4	Secondary Vane	29	0W14SAE	40	Washer 1/4" SAE
9	0B51624X1HZ	12	Bolt 5/16"-24 x 1" Hex Zinc	30	0CFLT12	2	Conduit Fitting 1/2" Snap In
10	0B1420X114HZ	24	Bolt 1/4"-20x1-1/4" Hex Zinc	31	CONNECTOR34	1	Cordgrip Liq. Tight 3/4" NPT
11	SWPNL-VAF8000	1	Switch Mount Panel		0LNROMEX34	1	Lock Nut for 3/4" Cord Grip
12	0RF2120D	4	Rubber Foot		0ORING214SQ	1	O-Ring 214 Square
13	0RIVET6-8A-B	20	Rivet 3/16"x1/2"G ABA	32	0WIL10STDZ	2	Washer Internal Lock #10 Z
14	CORD-12/4-20	1	Power Cord Black 20'		0RGTERM1210-10	1	Ring Terminal #10 12-10 AWG
15	0MS-KTA725S10A	1	Motor Starter 440V 10A 3Ph	33	0B1032X58PHRHZ	4	Bolt 10-32x5/8" Rnd Head Z
	0MS-KTA725S16A	1	Motor Starter 220V 16A 3Ph		0B1032X12SCS	2	Bolt 10-32x1/2" SC Screw Z
	0MS-KTA725S25A	1	Motor Starter 220V 25A 1Ph		0W10X58SS	2	Washer Fender #10
16	0W1132X114Z	6	Washer 11/32"x1-1/4"x1/8" Z		ONY1032Z	3	Nylock 10-32 Zinc
17	0W14X1Z	4	Washer 1/4" x 1" Zinc		LABELVAF8000440	1	Label VAF8000 440V
18	0GSKT-8000KTA7	1	Gasket Power Panel				
19	0S-KT7AYTG2	1	Operator Switch				
20	0FLEXPVC12	3	1/2" Flexible PVCConduit				



Confined Space Ventilators

**OWNER'S MANUAL
SAFETY INSTRUCTIONS**

Pleas

the fan.



MODEL: VAF8000A/A-3/B-3

For use in Non-Explosive/Non-Flammable environments only.

Purchase Date: _____ Serial No. _____

Dealer: _____

[Schaefer Americ VAF8000B-3 Confined Space Ventilator](#)
[Schaefer Americ VAF8000A-3 Confined Space Ventilator](#)

SCHAEFER LIMITED WARRANTY

If you are the original purchaser of a new Americ Vane Axial Fan from Schaefer, then you are entitled to a limited warranty subject to the terms and conditions set forth herein. To qualify for the limited warranty you must complete the enclosed registration card and mail it to Schaefer within (30) days of the purchase, so that there is a record of your purchase. Schaefer's limited warranty is for the replacement or repair of any part that proves to be defective in workmanship or materials for a period of one (1) year from the date of purchase by the original purchaser. During the first year, Schaefer will provide all parts necessary to correct any defects, free of charge. This limited warranty extends only to the original purchaser who retains ownership of the Fan. This limited warranty is not transferable to any subsequent purchaser or second-hand user.

The limited warranty extends only to the repair or replacement of parts found upon Schaefer's examination to be defective. Unless any part or assembled unit replaced hereunder is returned, freight pre-paid, together with a letter describing the problem to Schaefer or an authorized Schaefer dealer, this limited warranty will be void and of no effect.

This warranty is limited to ninety (90) days for labor from the date of the purchase. Thereafter, any labor costs incurred will be charged to the customer at the prevailing hourly rate.

This limited warranty shall not extend to a product that has been used in an improper manner, or that has been disassembled, altered or improperly maintained. Nor shall this limited warranty apply if the Fan has been subjected to corrosive chemicals, improper voltage, unauthorized repairs, fire, flood, abnormal wear or any causes beyond Schaefer's control.

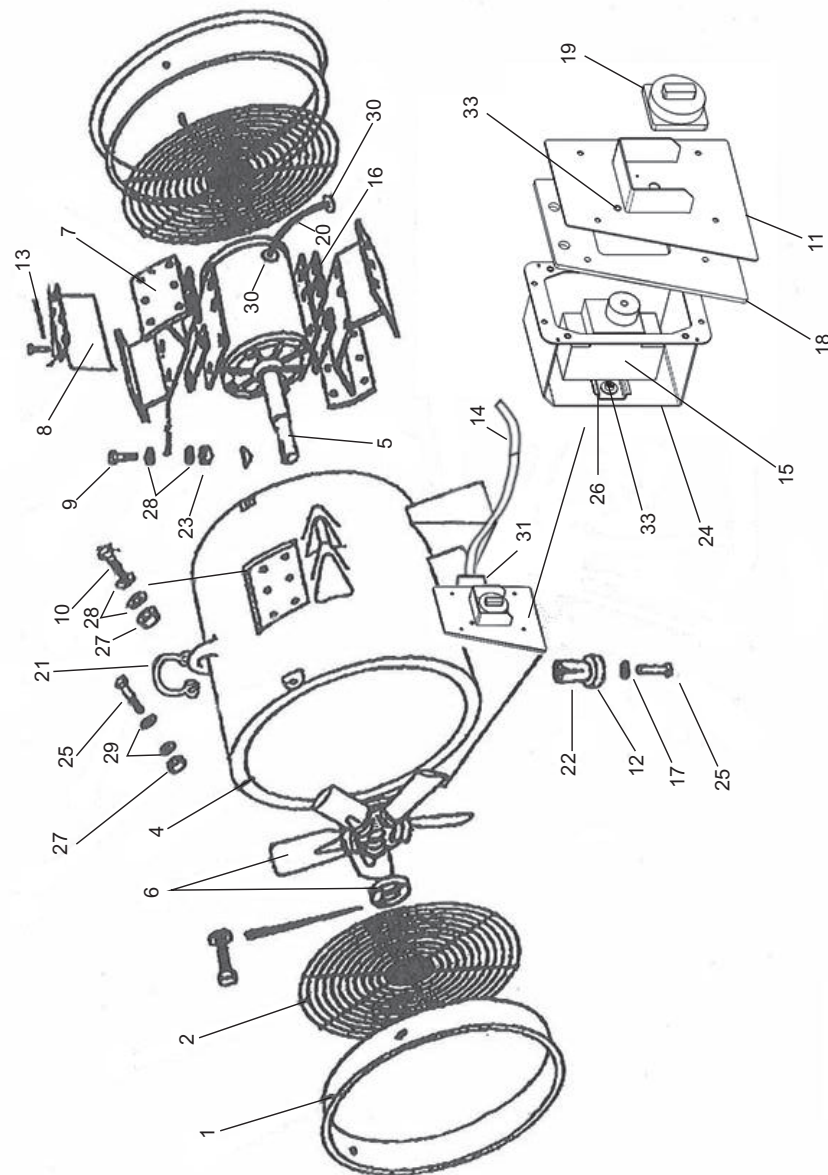
This limited warranty does not apply if the serial number has been removed, obliterated or defaced.

Schaefer Ventilation reserves the right to make changes to the Vane Axial Fan in design, materials or specifications as necessary and without prior notice. Schaefer shall not be obliged to make alterations or modifications to existing products previously manufactured.

To obtain replacement parts pursuant to this limited warranty, you must write to Schaefer or call (320) 251-8696 to receive an authorization number. Replacement parts will not be provided unless the customer first provides the serial number of the Fan and also receives an authorization number from Schaefer.

OTHER THAN THE FOREGOING LIMITED WARRANTY, THERE ARE NO FURTHER WARRANTIES OR ANY AFFIRMATIONS OF FACT OR PROMISES BY SCHAEFER WITH RESPECT TO THE VANE AXIAL FAN. THE DURATION OF ANY IMPLIED WARRANTIES ARE LIMITED TO THE TERMS OF THE ABOVE LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY MAY LAST, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, SCHAEFER EXPRESSLY DISCLAIMS ANY INFRINGEMENT OR ANY AFFIRMATIONS OF FACT OR QUALITY NOT EXPRESSLY CONTAINED HEREIN. SCHAEFER VENTILATION AND ITS AFFILIATES NEITHER ASSUME NOR AUTHORIZE ANY PERSON TO ASSUME FOR THEM ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. THERE ARE NO OTHER WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT SHALL SCHAEFER VENTILATION BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR LOSS OF PROFITS OF ITS CUSTOMERS OR USERS OF PRODUCT. SOME STATES/JURISDICTIONS DO NOT ALLOW THE EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

VAF8000 PICTORIAL BREAKDOWN



MAINTENANCE



DANGER

ALWAYS SHUT OFF THE FAN AND UNPLUG IT FROM ITS POWER SOURCE TO PREVENT ACCIDENTAL STARTING AND THE POSSIBILITY OF ELECTRICAL SHOCK AND/OR ELECTROCUTION. BE SURE THE FAN BLADE HAS STOPPED ROTATING BEFORE PLACING ANY OBJECTS OR FINGERS NEAR THE FAN GRILL.

1. Visually check all fasteners and individual components for loose or broken parts. Tighten or replace items as required, with genuine, factory approved replacement parts only.
2. Keep the Fan blade clean from debris. Accumulation of dust, dirt, paint, etc. on the Fan blade will throw the blade rotation out of balance, resulting in damage. To clean the Fan blade, be sure the plug is disconnected and the blade has stopped rotating. Remove one grill and wipe blade and interior shell housing clean of debris with a damp cloth and mild liquid soap. Dry all parts thoroughly. **DO NOT PRESSURE WASH THE FAN.** Replace grill prior to next operation.



DANGER

DO NOT OPERATE THE FAN WITHOUT THE INLET AND OUTLET GRILL PROPERLY IN PLACE.

SERVICE

- 1) Refer to the TROUBLESHOOTING GUIDE in this Manual.

MOTOR SPECIFICATIONS

	(A)	(A-3)	(B-3)
Voltage	230V AC~	230V AC~	440V AC~
Frequency	60/50 Hz	60/50 Hz	60/50 Hz
Phase	Single	Three	Three
Electric Motor	5 HP	5 HP	5 HP (.75kw)
Current (amps)	21.2	13.0	6.5
R.P.M	3250	3450	3450
Free Air (cfm)	N/A	9968	9968 (282.3 M ³)
Max S.P.	6.1"	6.1"	6.1" (68mm)laq

GENERAL INFORMATION & DIMENSIONS

Type	Axial	
Duct adapter	20.5" dia.	(52 cm)
Height	27.5"	(69.8 cm)
Width	25.5"	(64.7 cm)
Length	27.5"	(69.8 cm)
Weight	119 lbs	(53.97 kg)

AIR FLOW RATES

Feet	Description	(A-3)		(B-3)	
		CFM	M ³ /Min	CFM	M ³ /Min
	Free Air	9968	282.3	9968	282.3
25' duct	Straight	9379	265.6	9379	265.6
25' duct	1-90° bend	7193	203.7	7193	203.7
25' duct	2-90° bends	6726	190.5	6726	190.5
50' duct	Straight	8664	245.3	8664	245.3
75' duct	Straight	8313	235.4	8313	235.4

The published flow rates are intended to serve only as a reference. Manufacturing tolerances, duct type and specific operating parameters will affect the overall flow rate(s) for each particular Fan.



CAUTION

THE AIR FLOW RATE DECREASES AS THE LENGTH OF DUCT INCREASES FOR BOTH BLOWING AND SUCTION APPLICATIONS. AIR FLOW RATES WILL VARY WITH SPECIFIC DUCT TYPES AND MANUFACTURES.

INTRODUCTION

Congratulations...on your selection of a new Vane Axial Fan from Schaefer Ventilation. Our goal is to provide you with the very best in high performance air ventilators. Reading this Owner's Manual will help you achieve the maximum benefit from your portable air ventilator. If you do not understand any portion of this Manual please contact Schaefer or your authorized Schaefer dealer for proper assistance prior to operating this Fan.

Do not allow anyone to operate the Vane Axial Fan without first reading the Operator's Manual and becoming familiar with its operation. Schaefer has endeavored to provide you with the finest equipment available for providing air for portable ventilation purposes. The possibility does exist, however, that the Vane Axial Fan can be subjected to applications not intended by Schaefer. **Misuse and/or misapplication of the Vane Axial Fan can lead to the possibility of serious damage, injury or even death.** Anyone operating the Vane Axial Fan should refer to current OSHA job safety and health rules and regulations pertaining to the construction industry, with a particular emphasis on 29 CFR 1910, which contains rules governing Permit-Required Confined Spaces for General Industry.

Record the Vane Axial Fan model and serial number in the space provided below.

Model No. _____ **Serial No.** _____ **Date Purchased** _____

All specifications are general in nature and are not intended for specific application purposes. Schaefer accepts no responsibility for variations which may be evident in actual products, specifications, pictures and descriptions contained in this publication.



SAFETY PRECAUTIONS**DANGER**

THE FAN IS DESIGNED FOR PORTABLE AIR VENTILATION PURPOSES ONLY. THE FAN IS NOT DESIGNED FOR TRANSPORTING LIQUID OR SEMI-SOLID MATERIALS. **THE ELECTRIC MOTOR AND FAN HOUSING ARE NOT DESIGNED FOR OPERATION IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE. OPERATION OF THE FAN IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY OR EVEN DEATH.** INCORRECT USE OF THE FAN CAN RESULT IN AN ELECTRICAL SHOCK AND/OR ELECTROCUTION. ALWAYS OPERATE THE FAN IN COMPLIANCE WITH CURRENT OSHA AND NATIONAL ELECTRIC CODE REGULATIONS.

**DANGER**

INCORRECT USE OF THE FAN CAN RESULT IN PROPERTY DAMAGE, PERSONAL INJURY OR EVEN DEATH. TO REDUCE THIS RISK, GIVE COMPLETE AND UNDIVIDED ATTENTION TO THE JOB AT HAND. AN ENVIRONMENT ATMOSPHERE CONSTANTLY CHANGES; THEREFORE, IT'S RECOMMENDED THAT AIR MONITORING/ GAS DETECTION EQUIPMENT BE USED FREQUENTLY. IF TESTS SHOW THAT THE ATMOSPHERE QUALIFIES AS A **HAZARDOUS LOCATION** (AN AREA WHERE THE POSSIBILITY OF EXPLOSION AND FIRE IS CREATED BY THE PRESENCE OF COMBUSTIBLE LIQUIDS, FLAMMABLE GASES, VAPORS, DUST, FIBERS, FLAMES OR FILINGS.) **DO NOT USE THIS FAN.** READ AND UNDERSTAND THE FOLLOWING PREPARATION ITEMS AND GENERAL SAFETY INFORMATION.

PREPARATION

- 1) Become familiar with the Fan operations before utilizing this Fan. Read and understand all Cautions and Warnings in this Manual. Refer to current OSHA publications for complete job safety and health rules and regulations (CFR 1926 and 1910).
- 2) Confirm that the Fan is in its original, factory configuration and has not been modified in any manner.
- 3) Minors should not be allowed to operate the Fan. Close attention is necessary when used, especially when used near children or animals.
- 4) Guard against the possibility of back-related injuries. Always lift the Fan with leg muscles and not with the back.
- 5) Periodically inspect the Fan visually for damaged or worn parts. Check for loose and/or broken parts. Be sure that the Fan and accessories are in good working condition before operating.
- 6) Know how to stop the Fan quickly in an emergency. Turn unit off at (on/off) switch located on side of unit or unplug Fan from power supply.
- 7) Based upon customer country standards, customer to supply suitable plug to conform to their specific country's requirement.

GENERAL SAFETY INFORMATION

- 1) Never place the Fan in standing water because of extreme shock hazard.
- 2) Never allow air intake grill to become blocked.
- 3) Never discharge flammable solvents or kerosene based chemicals through the Fan air intake grill.
- 4) **Do not use the Fan in areas where flammable or combustible liquids, gases, vapors, dust, fibers or filings may be present.**
- 5) Never put any object in the air intake grill.
- 6) Never run the Fan outside when it is raining. Never store the Fan outdoors.
- 7) Do not use the Fan as a toy.
- 8) Use the Fan only with a properly grounded outlet.
- 9) Unplug the Fan from outlet when not in use and before servicing.

WARNING: To reduce the risk of fire or electric shock, do not use this fan with any solid state speed control device.

10) Do not use the Fan with a damaged cord or plug. Do not pull or carry the Fan by its cord, do not use cord as a handle, do not close a door on the cord and do not pull cord around sharp edges or corners. Keep cord away from heated surfaces. Do not unplug the Fan by pulling on cord, grasp the plug and not the cord. Do not handle the plug or cord with wet hands.

11) Keep hair, loose clothing, fingers and all parts of the body away from the air intake grill.

12) Do not allow water inside the motor. If the motor becomes wet for any reason, unplug the Fan and thoroughly dry it before using again.

13) Never remove the ground from the power cord or plug, as this may result in electrical shock or electrocution. Removing the ground would void the warranty.



14) If the Fan has been dropped, left outdoors, dropped into water, etc....please thoroughly inspect it prior to use.

OPERATION

- 1) Your new Fan comes to you completely assembled and ready to operate. Upon removing the Fan from its carton, inspect it for any possible damage in transit.
- 2) Before operating the Fan, please read all the safety Precautions and General Safety Information about the proper and safe use of the Fan.
- 3) Assess your job site. Certain job site locations are classified as being hazardous because the atmosphere may contain gas vapor or dust in explosive quantities.

**DANGER**

THE ELECTRIC MOTOR AND FAN HOUSING ARE NOT DESIGNED FOR OPERATION IN AN EXPLOSIVE AND/OR FLAMMABLE ATMOSPHERE OF ANY CLASS OR GROUP. OPERATION OF THE FAN IN AN EXPLOSIVE OR FLAMMABLE ATMOSPHERE MAY RESULT IN PERSONAL INJURY OR DEATH.

- 4) Locate a properly grounded outlet.
- 5) Prior to plugging the Fan into a grounded outlet, inspect the inlet and outlet grills and remove debris which may restrict airflow movement. Never operate the Fan without the inlet and outlet grills properly secured and in place. Never replace the grills with other than factory supplied replacement units.
- 6) Note the directional airflow indicator on the external shell. This is the way the air moves. 
- 7) Place the Fan on secure footing to prevent it from shifting while in use.
- 8)) Do not stand directly in front of and/or face the Fan outlet. Personal injury can result from being struck by debris thrown at a relatively high velocity from the Fan blade. 
- 9) When ducting is required, do not install duct while Fan is in operation. Place duct lip over the Fan duct adapter, secure firmly, and note direction of the airflow.
- 10) When duct is used, be aware that the airflow rate decreases as the length of duct increases. Airflow rates will vary with specific duct types and manufactures.
- 11)) Position Fan air inlet away from walls and other obstructions to allow for maximum air intake.
- 12) **For safe operation, use the Fan only in combination with thorough gas detection tests and continual retesting.**

**DANGER**

ALWAYS ASSUME A CONFINED SPACE WORK AREA IS CONTAMINATED UNTIL IT HAS BEEN PROVEN SAFE FOR WORK PERSONNEL. NEVER ENTER A CONFINED SPACE WORK AREA UNTIL IT HAS BEEN THOROUGHLY TESTED WITH APPROPRIATE GAS DETECTION EQUIPMENT AND PROVEN SAFE FOR WORK PERSONNEL.