



## **OPERATING MANUAL**

### **MODELS:**

<b>SVB-E8</b>	<b>SVB-A8</b>
<b>SVB-E8-2</b>	<b>SVB-G8</b>
<b>SVB-E8EC</b>	<b>SVB-G8P</b>
<b>SVB-E8EXP</b>	



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 **SAFETY PRECAUTIONS**   
**READ AND FOLLOW ALL INSTRUCTIONS BELOW**

All ventilation procedures should comply with federal, state, and local regulations. Air quality should be tested prior to ventilating a confined space. A purge chart is provided in this manual help assist in estimating the approximate time needed to ventilate confined spaces. Air quality should be tested continuously during confined space occupancy to ensure a stable atmosphere and worker safety as atmospheric conditions can change rapidly. Additional procedures and recommendations are available from federal, state, and local agencies. **DO NOT** operate these fan units in a vertical position or with the flange or guards removed.

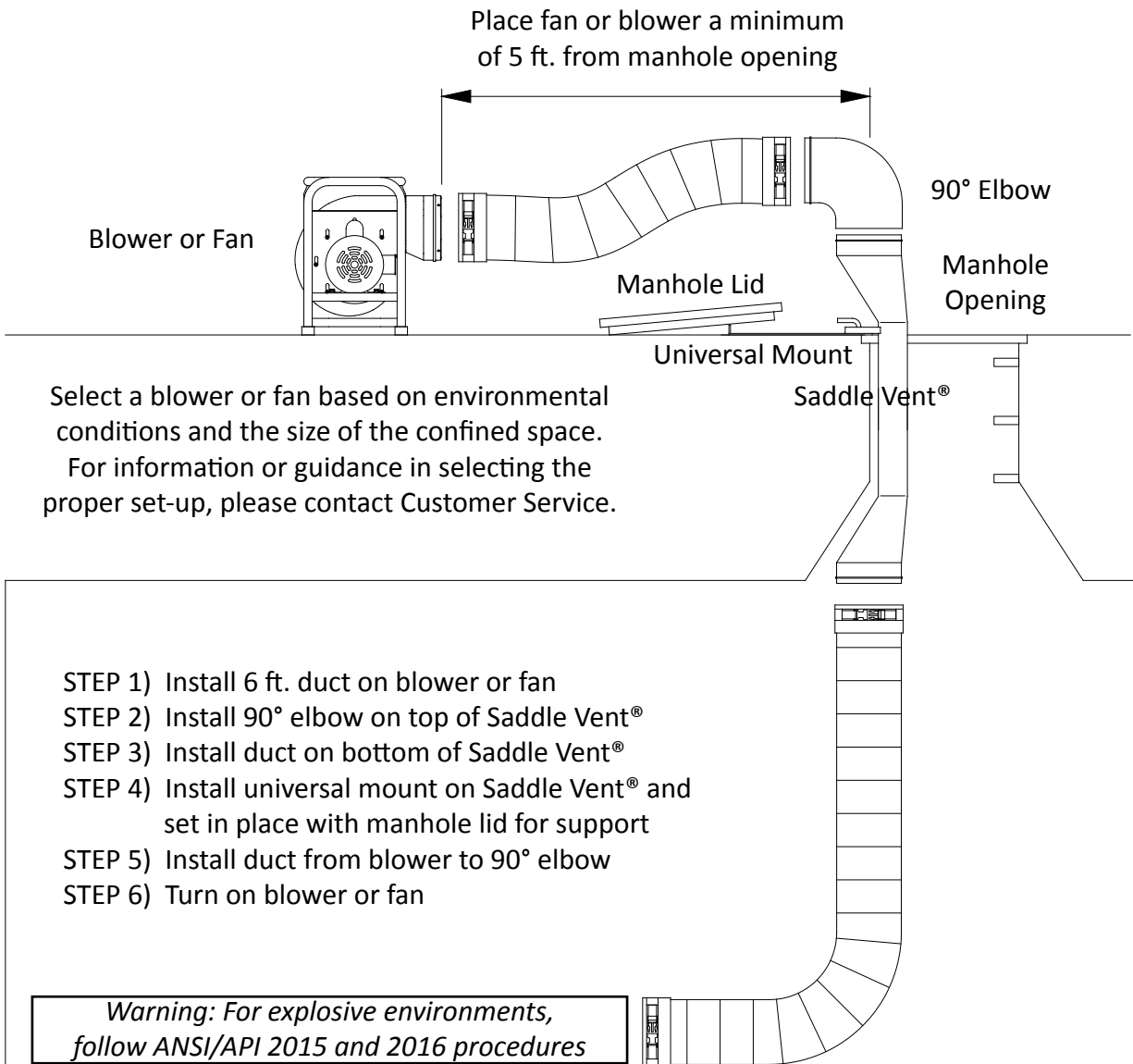
 **WARNING**   
Fan and blower models with the “EX” or “X” designation are the only models approved for use in hazardous locations.

If volatile or explosive vapors are suspected, use Air Systems’ explosion proof electric blower, Model SVB-E8EXP, explosion proof in-line fan, Model SVF-10EXP, explosion proof contractors fan, Model CVF-8EXP or Air Systems’ intrinsically safe pneumatic blower, Model SVB-A8.

**Note:** For confined space ventilation in non-hazardous locations, use Air Systems’ confined space ventilation kit, Model SV-CUP. For hazardous locations use ventilation kit, Model SV-CUPCND along with one of the above explosion proof blowers or fans.

# The Saddle Vent® Ventilation System

## Typical Saddle Vent® Setup Procedure

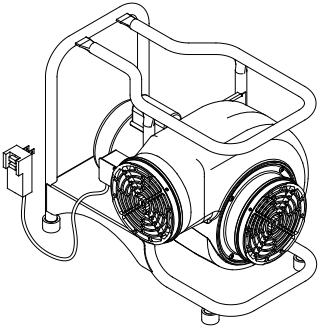


### **WARNING: HAZARDOUS LOCATION OPERATIONS**

Use an explosion-proof or intrinsically safe blower or fan, conductive ducting, and the conductive Saddle Vent® system. Attach all grounding wires and assure a complete circuit to the blower or fan in order to remove static charges.

## GENERAL SETUP & OPERATION

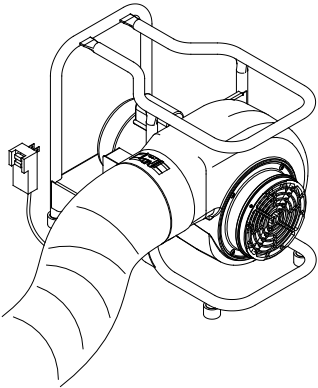
### MODELS SVB-E8EC, SVB-E8, & SVB-E8-2



#### STEP 1)

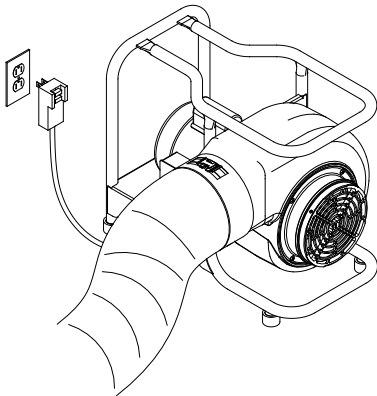
Place blower in a clean fresh air environment. Set blower a minimum of 5 ft. from the manhole opening. **Note: Inspect blower for damaged or worn parts. Inspect all ducting and couplings for possible air leaks prior to blower operation.**

**Note: Air quality of the confined space should be tested prior to ventilation. If air quality of the confined space is unacceptable, consult a trained professional.**



#### STEP 2)

Install duct cuff to exhaust flange and tighten cinch strap. Keep bends and kinks in ducting to a minimum to maximize air flow.



#### STEP 3)

Connect to 120 VAC/60 Hz/15 amp service. All standard electric blowers listed are supplied with a GFI (Ground Fault Interrupter) plug per the 1996 NEC code requirement: Section 305-6.

**Note: If an extension cord is required, the minimum recommended size is 12 AWG (maximum 100 ft.). For further information; refer to the National Electric Code Tables, Article 400. The use of generators is not recommended unless they are of sufficient output capacity. Some generator's output current will not allow the use of GFI plugs. A standard 3 prong plug would need to be installed instead of the GFI.**

#### STEP 4)

Push the "ON/OFF" switch, located on the GFI plug, to the "ON" position. The unit is now operational.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Excessive vibration	Air intake blocked	Turn blower off and clear debris from intake.
	Possible internal damage	Turn blower off and inspect fan blades, shaft, and housing for debris, damage, and loose screws.
	Possible external damage	Turn blower off and inspect blower housing and frame.
Blower will not start	Circuit breaker trips	Wattage output of power source insufficient*
		Extension cord improperly sized
	Faulty wall outlet	Test voltage with meter.
<b>* Note: The use of generators is not recommended unless they are of sufficient output capacity.</b>		

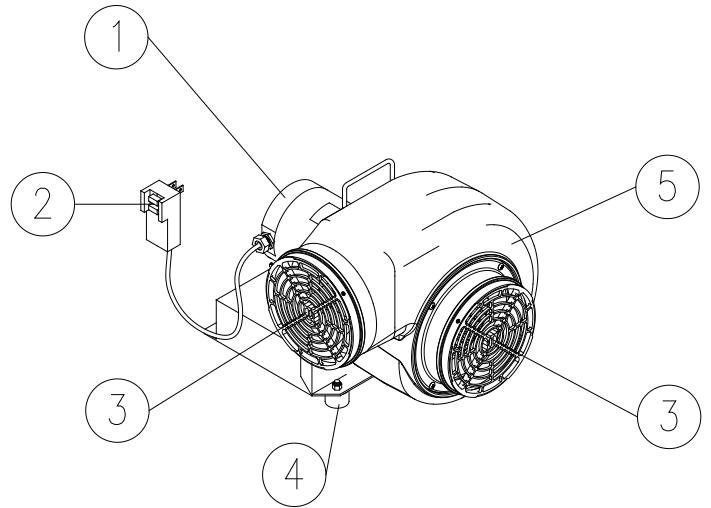
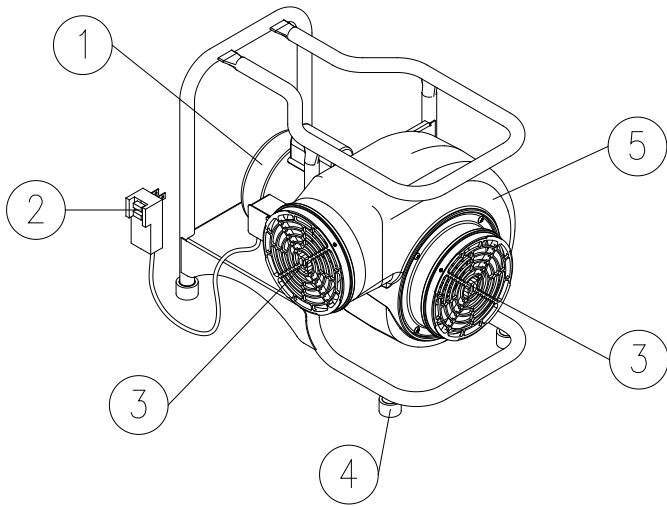
## SPECIFICATIONS

Model	SVB-E8EC	SVB-E8	SVB-E8-E2
Motor	1/2 HP (.37 kw) Electric, 115 VAC/60 Hz, Single Speed, GFI cord installed	3/4 HP (.56 kw) Electric, 115 VAC/60 Hz, Single Speed, GFI cord installed	1/2 HP (.37 kw) Electric, 115 VAC/60 Hz, Two Speed, GFI cord installed
Full Load Amperage	7.9 amps	11.2 amps	11.5 amps
Flow Rates	Free Air: 1390 cfm  25 ft. duct with one 90° bend: 973 cfm	Free Air: 1570 cfm  25 ft. duct with one 90° bend: 1047 cfm	Free Air: 750 cfm Low/1570 cfm High  25 ft. duct with one 90° bend: 490 cfm Low/ 1047 cfm High
Inlet/Outlet Size	8" Diameter	8" Diameter	8" Diameter
Noise Level	76 dba @ 3 ft.	76 dba @ 3 ft.	76 dba @ 3 ft.
Weight	37 lbs.	53 lbs.	58 lbs.

## REPLACEMENT PARTS

### SVB-E8 AND SVB-E8-2

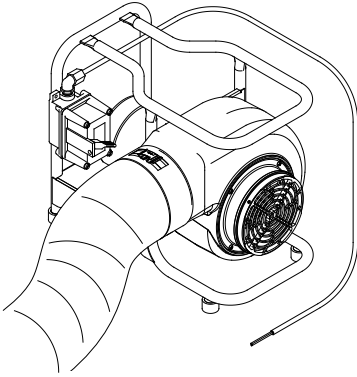
### SVB-E8EC



ITEM #	DESCRIPTION	SVB-E8	SVB-E8-2	SVB-E8EC
1	MOTOR	MTR002	MTR021	MTR040
2	GFI POWER CORD	ELCB013	ELCB013	ELCB013
3	INTAKE/DISCHARGE GUARD	SVB-GRD	SVB-GRD	SVB-GRD
4	RUBBER FOOT	HDWR025	HDWR025	HDWR025
5	WHEEL HOUSING	SVB-WH	SVB-WH	SVB-WH

## GENERAL SETUP & OPERATION

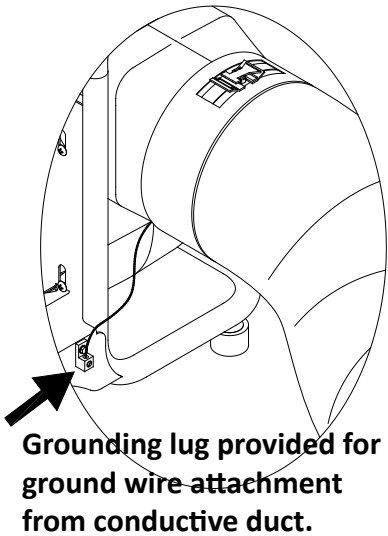
### MODEL SVB-E8EXP



#### STEP 1)

Place blower in a clean fresh air environment. Set blower a minimum of 5 ft. from the manhole opening. **Note: Inspect blower for damaged or worn parts. Inspect all ducting and couplings for possible air leaks prior to blower operation.**

**Note: Air quality of the confined space should be tested prior to ventilation. If air quality of the confined space is unacceptable, consult a trained professional.**



Grounding lug provided for ground wire attachment from conductive duct.

#### STEP 2)

Install duct cuff to exhaust flange and tighten cinch strap. Keep bends and kinks in ducting to a minimum to maximize air flow.

**NOTE: The use of conductive ducting is recommended when operating in potentially explosive environments. Assure that the blower is properly grounded before operating and the ground wire in the conductive ducting is attached to the blower and Saddle Vent®, if used.**

#### CAUTION:

If explosive or volatile vapors are suspected or present, follow ANSI/API procedure 2015 and 2016 for proper grounding of the blower. All static electricity must be removed from the blower and attached ducting prior to energizing the blower. Conductive ducting should be tested semi-annually to assure resistance (ohms) does not exceed 300k. If sufficient resistance is not achieved, the duct should be removed from service.

#### STEP 3)

Explosion-proof models should be fitted with an approved explosion-proof plug to meet Class 1, Div. 1, Groups C and D, Class II, Div. I, Groups E, F, G specifications. The plug should not be disconnected or connected in an explosive environment when the blower is energized.

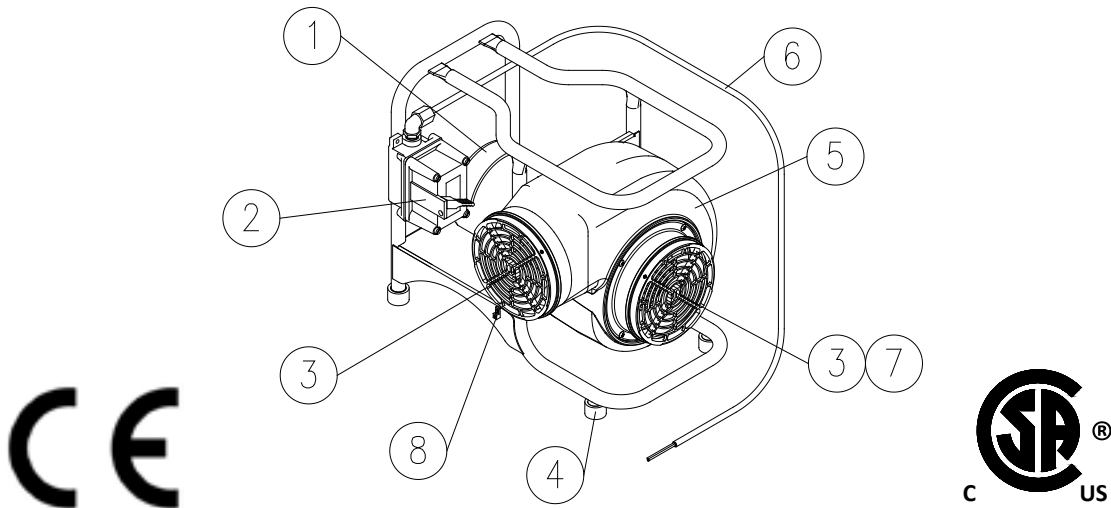
#### STEP 4)

Switch the explosion-proof "ON/OFF" switch to the "ON" position. The unit is now operational.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Excessive vibration	Air intake blocked	Turn blower off and clear debris from intake.
	Possible internal damage	Turn blower off and inspect fan blades, shaft, and housing for debris, damage, and loose screws.
	Possible external damage	Turn blower off and inspect blower housing and frame.
Blower will not start	Circuit breaker trips	Wattage output of power source insufficient*
		Extension cord improperly sized
	Faulty wall outlet	Test voltage with meter.

## REPLACEMENT PARTS SVB-E8EXP



ITEM #	DESCRIPTION	SVB-E8EXP
1	EXPLOSION PROOF MOTOR	MTR003
2	EXPLOSION PROOF ON/OFF SWITCH	ELSW028
3	INTAKE/DISCHARGE GUARD	SVB-GRDCND
4	RUBBER FOOT	HDWR025
5	WHEEL HOUSING	SVB-WH-CND
6	POWER CORD (SOLD BY THE FOOT)	ELCB011
7	BLOWER WHEEL (SET SCREWS - FS5/16X038)	METL039
8	GROUND LUG	ELA051

## SPECIFICATIONS

Model #	SVB-E8EXP
Motor	3/4 HP Electric, 115/208-230 VAC/60Hz , Single Speed, Factory Wired with 25 ft. Power Cord, No Plug, Explosion Proof Class I, Div. I, Groups C, and D, Class II, Div. I, Groups E, F, G
Full Load Amperage	12.6 Amps @ 115 VAC 6.3 Amps @ 208-230 VAC
Switch Type	Explosion-Proof
Inlet/Outlet Size	8" Diameter
Flow Rate	Free Air: 1570 CFM 25' Duct w/one 90° Bend: 1047 CFM
Weight	68 LBS.
Noise Level	76 dbA @ 3 ft.

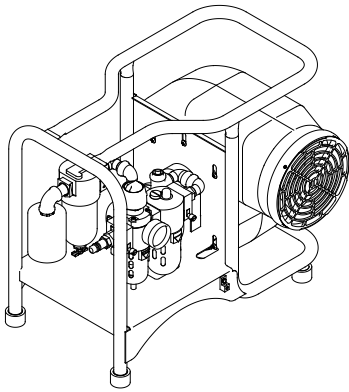
### WARNING

FOR HAZARDOUS ENVIRONMENTS, ALWAYS USE AIR SYSTEMS' MODEL SV-CUPCND, CONDUCTIVE SADDLE VENT® VENTILATION KIT, WITH AN EXPLOSION-PROOF BLOWER



## GENERAL SETUP & OPERATION

### MODEL SVB-A8

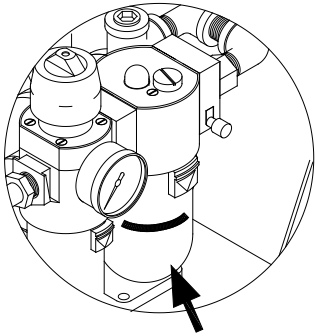


#### STEP 1)

Operate blower in shown position only. Place in a clean fresh air environment away from toxic gases and dust. Set blower a minimum of 5 ft. from the manhole opening.

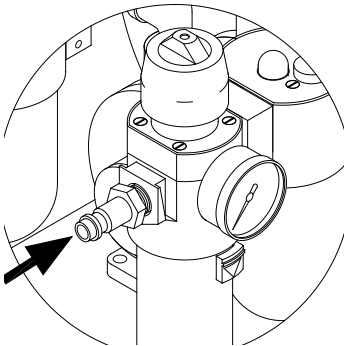
**Note: Inspect blower for damaged or worn parts. Inspect all ducting and couplings for possible air leaks prior to blower operation.**

**Note: Air quality of the confined space should be tested prior to ventilation. If air quality of the confined space is unacceptable, consult a trained professional.**



#### STEP 2)

Attach and tighten the filter/regulator and lubricator assembly. Make sure oil level in the lubricator is at the full mark (approximately 3/4 of bowl height); add additional oil if necessary. Factory recommended oil is SAE #10 non-detergent automotive engine oil or lighter. (Petroleum based only, do not use synthetic oils.)

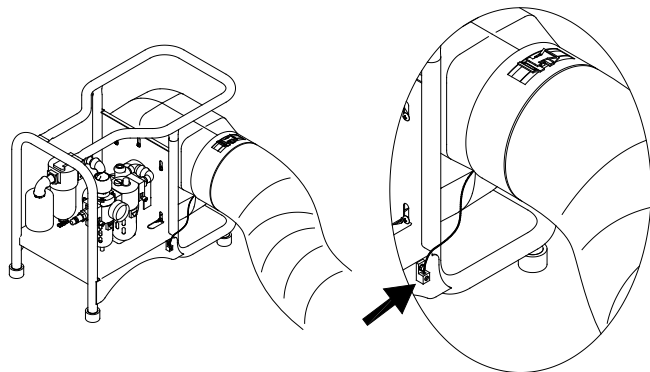


#### STEP 3)

Secure a primary air source with a flow capacity of 10 - 100cfm and a pressure range of 10 - 100psi. Attach a minimum 1/2" I.D hose to the inlet fitting. Note: Maximum inlet pressure should not exceed 150psi (10 bar).

#### STEP 4)

Install duct cuff to exhaust flange and tighten cinch strap. Keep bends and kinks in ducting to a minimum to maximize air flow. **The use of conductive ducting is recommended when operating in potentially explosive environments. Assure that the blower is properly grounded before operating and that the ground wires from the conductive ducting and Saddle Vent®, if used, are securely attached to the blower's grounding wire.**

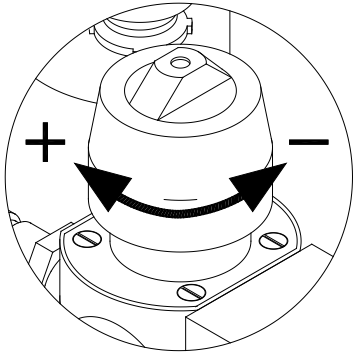


### CAUTION:

If explosive or volatile vapors are suspected or present, follow ANSI/API procedure 2015 and 2016 for proper grounding of the blower. All static electricity must be removed from the blower and attached ducting prior to energizing the blower. Conductive ducting should be tested semi-annually to assure resistance (ohms) does not exceed 300k. If sufficient resistance is not achieved, the duct should be removed from service.

## GENERAL SETUP & OPERATION

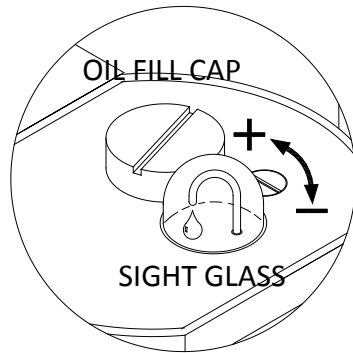
### MODEL SVB-A8



#### STEP 5)

Adjust pressure regulator clockwise to increase, counterclockwise to decrease motor speed. This adjustment will increase or decrease the air flow.

**Note: Available air pressure (psi) and volume (cfm) will determine blower performance.**



#### STEP 6)

The proper amount of oil mist has already been factory preset. However, depending on the viscosity of the oil being used, slight adjustments may be necessary. With the blower running, the proper oil mist should be one drop/min. The oil mist adjustment screw is located next to the oil fill cap. Turn this screw clockwise to decrease or counterclockwise to increase oil flow.

**Note: Approximately 1 drop per minute can be achieved by turning the adjustment screw fully clockwise, then counterclockwise 1 1/2 turns.**

## MAINTENANCE

Keep blower motor dry and free from contaminants and dust.

Check periodically to ensure moving parts are free from obstructions.

Change filter (Part# WL040B) located in regulator after approximately 300 - 500 hours.

Factory recommended oil is SAE #10 non-detergent automotive engine oil or lighter. (Petroleum based only, do not use synthetic oils)

Clean muffler assembly every 100-300 hours with safety solvent (Part #BAC-1001).

Flush air motor every 100 hours with safety solvent (#BAC-1001) through maintenance port (see below).

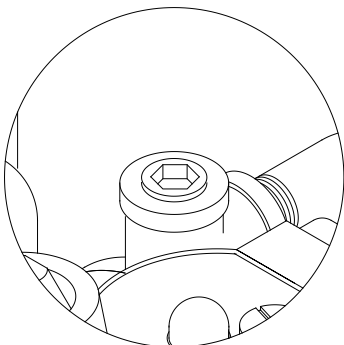
Remove air exhaust filter before flushing and reinstall after several minutes of running unit. Flush unit after every 200 hours or after storing for long periods.

## AIR MOTOR FLUSHING PROCEDURE

Use Air Systems' Part #BAC-1001 safety solvent.

Do not use a flammable solvent or a solvent with a toxicity rating of 500ppm or greater to flush the unit.

**Note: Eye protection should be worn when flushing the unit.**



#### STEP 1)

To flush the motor, turn blower off and remove exhaust filter element.

#### STEP 2)

Open the maintenance port. Spray 1-2 ounces of safety solvent into the maintenance port. Close the maintenance port. Run the blower in an open area away from sparks and flames for a minimum of five minutes before reinstalling the exhaust filter.

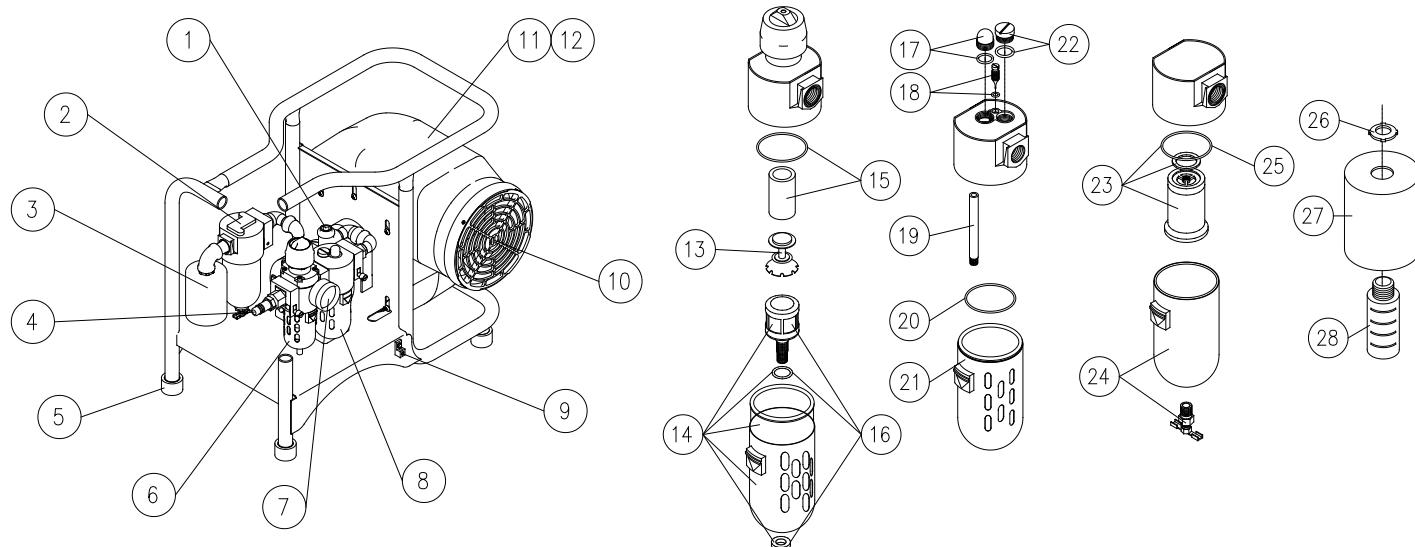
## TROUBLESHOOTING MODEL SVB-A8

PROBLEM	POSSIBLE CAUSE	SOLUTION
Blower will not start	Insufficient Pressure	Check pressure gauge on compressed air source to ensure proper supply pressure. Turn regulator knob clockwise to increase air pressure to air motor and note the gauge pressure on the regulator
Excessive vibration	Possible internal damage	Turn blower off and inspect fan blades, shaft, and housing for debris, damage, and loose screws. Note: Never run blower for extended periods without ducting installed on the exhaust flange
	Possible external damage	Turn blower off and inspect housing and frame for cracks or loose screws.
Blower loses pressure	Insufficient air flow or pressure	Check for kinked supply hose or damaged duct.
Motor icing (interior)	High humidity	Install moisture separator filter before blower (order Model # PF-240). Remove muffler and clean out ice blockage and reassemble.

## SPECIFICATIONS

Model #	SVB-A8
Motor	4 HP Pneumatic (Intrinsically Safe)
Pressure Required	10 - 100 PSI
Air Consumption	10 - 100 CFM
Inlet/Outlet Size	8" Diameter
Flow Rate	Free Air: 1500 CFM at minimum PSI and CFM / 3000 CFM at maximum PSI and CFM 25' Duct w/one 90° Bend: 1040 CFM at minimum PSI and CFM / 1725 at maximum PSI and CFM
Noise Level	82 dbA @ 3 ft. @ 80 PSI inlet pressure

## REPLACEMENT PARTS - SVB-A8



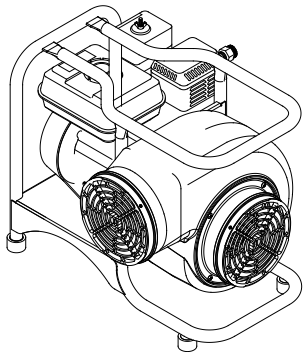
ITEM #	DESCRIPTION	PART #
1	MAINTENANCE PORT	ST8PLA
2	EXHAUST FILTER	WL008A
3	MUFFLER ASSEMBLY (INCL. ITEMS 26, 27, AND 28))	SVB-A8MFLR
4	INLET FITTING	QDH5PL8M
5	RUBBER FOOT	HDWR025
6	FILTER / REGULATOR ASSEMBLY	WL040
7	PRESSURE GAUGE	GA20160S
8	LUBRICATOR	WL020
9	GROUND LUG	ELA051
10	INTAKE / DISCHARGE GUARD - CONDUCTIVE	SVB-GRDCND
11	WHEEL HOUSING - CONDUCTIVE	SVB-WH-CND
12	BLOWER WHEEL (SET SCREWS - FS5/16X038)	METL039
13	FILTER HOLDER	WL040C
14	PLASTIC BOWL, BOWL GUARD, AND AUTO-DRAIN ASSEMBLY	WL040A
15	FILTER ELEMENT AND O-RING	WL040B
16	AUTO-DRAIN ASSEMBLY	WL024
17	SIGHT GLASS AND O-RING	WL020SD
18	LUBRICATOR ADJUSTMENT SCREW AND O-RING	WL020A
19	SIPHON TUBE	WL020BF
20	BOWL O-RING	WL020OR
21	PLASTIC BOWL AND BOWL GUARD	WL020BA
22	OIL FILL CAP AND O-RING	WL057
23	FILTER ELEMENT AND O-RING	BB50-C
24	METAL BOWL AND PET COCK	WL008MB
25	BOWL O-RING	WL091
26	LOCK NUT WITH O-RING	ELA007WOR
27	MUFFLER COVER	METL046AK
28	MUFFLER	COMPA001

## GENERAL SETUP & OPERATION

### MODELS: SVB-G8 AND SVB-G8P

#### CAUTION!

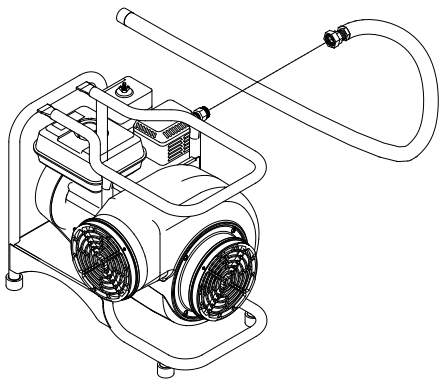
Gasoline engines produce carbon monoxide. The exhaust snorkel **MUST** be used while operating these blowers. Do not operate gas or propane blowers in explosive or potentially hazardous environments. All new gasoline and propane blowers must be run for 30 minutes to burn off residual oils and paint residue before putting them in service.



#### STEP 1)

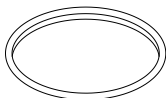
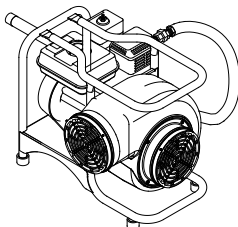
Place blower in a clean fresh air environment. Set blower a minimum of 5 ft. from the manhole opening. **Note: Inspect blower for damaged or worn parts. Inspect all ducting and couplings for possible air leaks prior to blower operation.**

**Note: Air quality of the confined space should be tested prior to ventilation. If air quality of the confined space is unacceptable, consult a trained profession-**

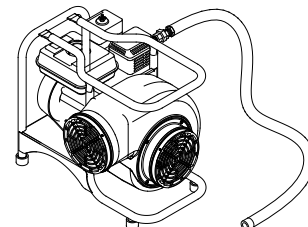


#### STEP 2)

Install exhaust hose assembly securely to pipe union on the engine muffler. Locate end of exhaust snorkel down wind and away from blower intake and manhole area as shown below. Periodically check muffler union to assure a tight connection. **DO NOT PICK UP BLOWER USING MUFFLER ASSEMBLY AS A HANDLE! SEVERE BURNS MAY RESULT!**



**CORRECT**

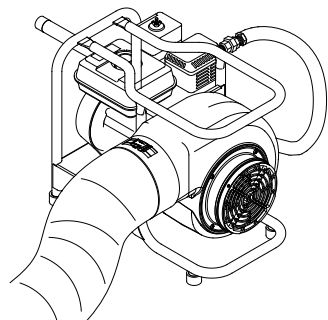


**INCORRECT**

#### STEP 3)

Install duct cuff to exhaust flange and tighten cinch strap. Keep bends and kinks in ducting to a minimum to maximize air flow.

**NOTE: Do not run gasoline or propane blowers without first attaching duct as excessive vibration may cause damage to blower.**

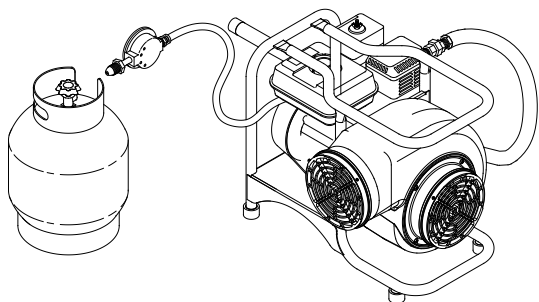


#### STEP 4)

Check engine oil level prior to operation. **DO NOT OVERFILL!**

#### STEP 5)

For propane models, connect regulator to propane tank as shown at left. Propane gas models are supplied with a liquid propane conversion kit. **DO NOT** substitute components or regulation device.



**For Gasoline Models, check fuel level and fill with unleaded gasoline. Note: Allow engine to cool before refueling.**

**STEP 6)**

Check engine intake filter periodically and replace if necessary.

**STEP 7)**

Review and follow ALL safety precautions and run procedures found in the enclosed Briggs and Stratton/Honda manual prior to starting. (Some gasoline units are supplied with Honda engines as an option, Model SVB-G8H.)

**STEP 8)**

Start engine by placing the throttle adjustment to idle and choke adjustment to "START" position. Pull start cord. Once started, return choke to "RUN" position. Caution: Do not exceed throttle "STOP" setting at maximum adjustment as serious blower wheel and engine damage could result.

**SHUTDOWN****CAUTION:**

Allow exhaust snorkel pipe to cool before removing from engine.  
Heat resistant gloves are recommended when handling the exhaust hose.

Insure that all workers have egressed the confined space.

Shut off blower. Do not move choke control to CHOKE to stop engine; backfire or engine damage may occur. Move throttle control to "SLOW" position; then move stop control to "STOP" position.

**MAINTENANCE**

**NOTE: All maintenance should be completed with unit turned off and cooled down.**

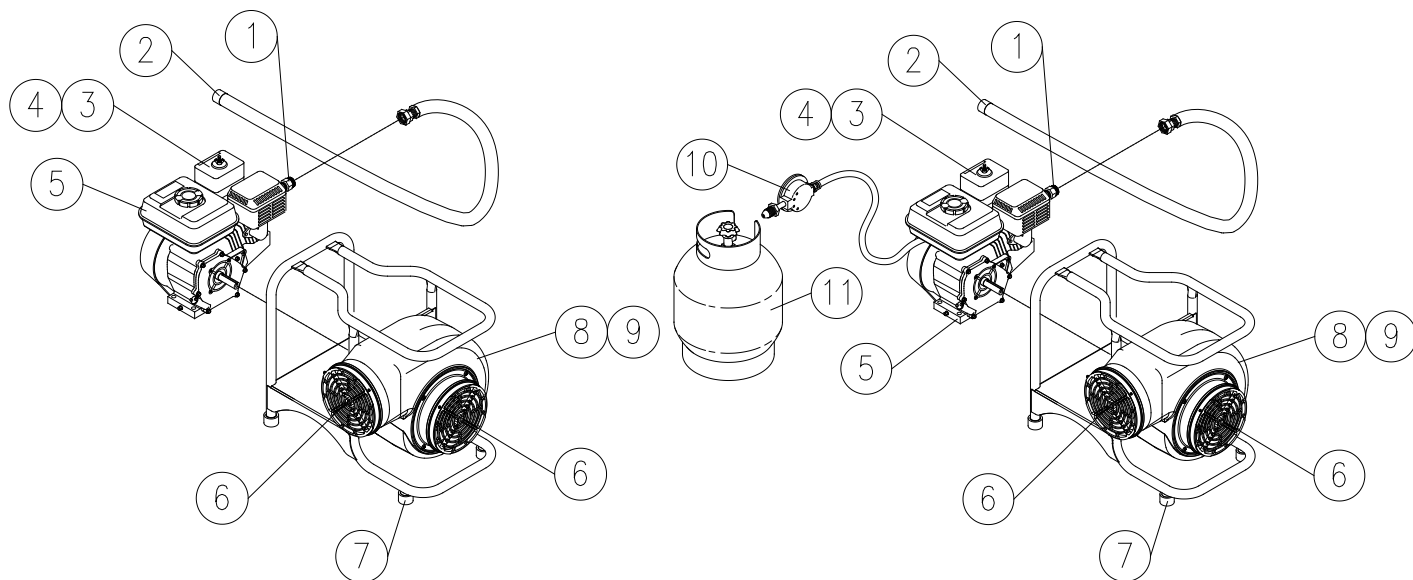
Keep blower motor dry and free from contaminants and dust. Engines stored over 30 days need to be protected or drained of fuel to prevent gum from forming in fuel system.

Check oil level and intake filters regularly. Be sure oil level is full and filters are well maintained. Check oil level every 5 hours or daily before starting engine.

**TROUBLESHOOTING**

PROBLEM	POSSIBLE CAUSE	SOLUTION
Excessive Vibration	Air intake blocked	Turn blower off and clear debris from intake
	Possible internal damage	Turn blower off and inspect fan blades, housing, and shaft for debris, damage, and loose screws. <b>NOTE: Never run blower without installing duct on exhaust flange.</b>
	Possible external damage	Turn fan off and inspect housing and frame for cracks or loose screws.
Engine will not start	No fuel	Refuel Check propane hose connection.
	Fouled or faulty spark plug	Remove, clean, re-gap, or replace spark plug.

## REPLACEMENT PARTS MODELS: SVB-G8 AND SVB-G8P



ITEM #	DESCRIPTION	SVB-G8	SVB-G8P
1	MUFFLER ASSEMBLY	SVB-G8MNS	SVB-G8MNS
2	MUFFLER HOSE	SVB-G8MHNS	SVB-G8MHNS
3	INTAKE FILTER	MTRA002	MTRA002
4	INTAKE PRE-FILTER	MTRA001	MTRA001
5	MOTOR	MTR011	MTR011
6	INTAKE / DISCHARGE GUARD	SVB-GRD	SVB-GRD
7	RUBBER FOOT	HDWR025	HDWR025
8	WHEEL HOUSING	SVB-WH	SVB-WH
9	BLOWER WHEEL (SET SCREWS - FS5/16X038)	METL039A	METL039A
10	PROPANE ADAPTER KIT	N/A	MTR012
11	PROPANE TANK	N/A	SVB-PT

## SPECIFICATIONS

Model #	SVB-G8	SVB-G8P
Motor Type	Briggs & Stratton	Briggs & Stratton
Fuel	Unleaded Gasoline	Liquid Propane
Fuel Capacity Run Time at Idle	2.5 Hours	4.2 Hours
Inlet / Outlet Size	8" Diameter	8" Diameter
Flow Rates	Free Air: 1500 CFM Low/ 3000 CFM High 25' Duct w/one 90° bend: 1040 CFM Low/ 1750 CFM High	Free Air: 1500 CFM Low/ 3000 CFM High 25' Duct w/one 90° bend: 1040 CFM Low/ 1750 CFM High
Weight	47 LBS.	47 LBS.
Noise Level	92.5 dbA @ 3 ft.	92.5 dbA @ 3 ft.

## **WARRANTY DISCLAIMER**

Air Systems' manufactured equipment is warranted to the original user against defects in workmanship or materials under normal use for one year from the date of purchase. Any part which is determined by Air Systems to be defective in material or workmanship will be, as the exclusive remedy, repaired or replaced at Air Systems' option. This warranty does not apply to electrical systems or electronic components. Electrical parts are warranted, to the original user, for 90 days from the date of sale. During the warranty period, electrical components will be repaired or replaced at Air Systems' option.

**NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER IS GIVEN BY AIR SYSTEMS IN CONNECTION HERewith. UNDER NO CIRCUMSTANCES SHALL THE SELLER BE LIABLE FOR LOSS OF PROFITS, ANY OTHER DIRECT OR INDIRECT COSTS, EXPENSES, LOSSES, OR DAMAGES ARISING OUT OF DEFECTS IN, OR FAILURE OF THE PRODUCT OR ANY PART THEREOF.**

The purchaser shall be solely responsible for compliance with all applicable Federal, State and Local OSHA and/or MSHA requirements. Although Air Systems International believes that its products, if operated and maintained as shipped from the factory and in accordance with our "operations manual", conform to OSHA and/or MSHA requirements, there are no implied or expressed warranties of such compliance extending beyond the limited warranty described herein. Product designs and specifications are subject to change without notice. **Rev. 2, 12/98**

Air leaks are not covered under warranty except when they result from a defective system component, i.e. an on/off valve or regulator or upon initial delivery due to poor workmanship. Air leaks due to poor delivery or damage will be covered under delivery claims. Minor air leaks are part of routine service and maintenance and are the responsibility of the customer just as are filters and oil changes.