



# TECH TIPS

a technical bulletin by the experts at Gaco Western

## 22 Frequently Asked Questions on Ambient Air Pumps

Gaco Western supports fresh air on job sites. We have purchased Allegro fresh air systems from Spray Foam Systems for our Sales and Tech Team to use in the field. Below are the best practice and most common use questions about the systems we will be using (courtesy of [www.allegrosafety.com](http://www.allegrosafety.com)).



**Q: What is the first thing I should do before operating my ambient air pump?**

A: Plug in air hose and mask before running the air pump. If you run the air pump, even momentarily, without air hose or respirator being connected, this will result in a backpressure of the pump and possible damage to the pump.

**Q: What's the total length of hose that I can have on an ambient air pump?**

A: 100 ft. per worker.

**Q: Can I extend the inlet filter to reach breathable air?**

A: Yes, you can use an inlet extension hose to place the inlet filter in clean air environment, up to 250 ft.

**Q: How long can my total system length be?**

A: 350 ft. with a maximum of 100 ft. from pump to respirator and 250 ft. from pump to inlet filter.

**Q: How do you read the gauge on the ambient air pump, and what should the settings be?**

A: The gauge gives a reading of static pressure (or backpressure) at the pump, and will vary depending upon length of

hose, type of pump, and the number of workers. To test for airflow (CFM) at respirator, use a flow meter kit at the end of breathing air hose.

**Q: What does a rise on the pressure gauge mean?**

A: It may indicate a clogged exhaust filter or a restriction in the air hose. Make sure only an approved air supply hose is being used. Also check relief valve adjustment.

**Q: What should I do if the ambient air pump is running hot?**

A: Outlet pressure may be too high (above 11 psi). Adjust pressure relief valve. Intake and/or exhaust filter may be dirty; replace if necessary.

**Q: Should I lubricate my pump?**

A: No, pumps are oil-less and require no lubrication. Pumps may be flushed periodically with non-oil based pump flushing liquid.

**Q: Can I use two different hose lengths from the pump to the respirator(s)?**

A: This is not advisable because air will take the path of least resistance and may divert airflow from longer hose to shorter hose. Also – combinations of hoods and masks may divert airflow to the hood.

**Q: How often should I change my filters?**

A: Filters should be changed approximately every 200 working hours. Filters may require changing more often depending upon working environment.

**Q: How often should I replace the carbon vanes?**

A: Carbon vanes should be replaced approximately every 4000-5000 running hours.

**Having trouble with foam? Just pick up the phone!**

Gaco Western's Tech Hotline:  
**855 639 4649**

8am - 8pm CST, Mon-Sun

**Ideas, suggestions or questions?**

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(Continued)

**Q: What kind of couplers must I use with the pump?**

A: Couplers must mate with the air hose and respirator in use. (Refer to the respirator's manufacturer's manual.)

**Q: Can I use a Vortex cooler with my respirator and pump?**

A: No, ambient air pumps do not supply the required psi or CFM necessary to run these devices. Some cooling can be attained by running the pump at a lower psi, if possible, or by placing a few loose coils of air hose in an ice chest or bucket of cold water by the AllegroAir Airline Cooling System.

**Q: Will my ambient air pump work with a pressure demand respirator?**

A: No, the ambient air pump is only designed for use with constant flow respirators and does not have the psi or CFM capabilities to run a pressure demand respirator, nor is it approved for use in an IDLH (Immediate Danger to Life and Health) application.

**Q: Where can I place my ambient air pump?**

A: Pump and/or inlet filter for the ambient air pump must be placed in a fresh air environment where people are working normally without respiratory protection.

**Q: What kind of application can I use an ambient air pump in?**

A: Only those environments approved for use of a constant flow respirator (non-IDLH).

**Q: What do I do if there is a drop in outlet pressure?**

A: Ensure outlet filter is not cross-threaded and is seated firmly onto housing gasket. Check for dirty inlet filter or exhaust filter and replace if necessary. Ensure vanes are not sticking. Check for worn vanes and replace if necessary.

**Q: What if I have a noisy pump?**

A: If vanes are sticking, clean or use recommended solvent for flushing. Check for broken vanes; replace all four vanes if necessary.

**Q: What do I do if motor fails to start or hums?**

A: Turn switch off. Thermal overload mechanism inside motor turns current off automatically when the motor heats up, due to mechanical or electrical overload. Allow the pump to cool for 5 to 15 minutes and try to start again. If pump is extremely cold, bring to room temperature before starting. To check vanes and rotor, loosen all 6 pump face plate bolts slightly and remove face plate. Check vanes and rotor for free movement. Do not attempt to force movement of the rotor. Retighten bolts in crisscross sequence, turn pump on to test. Clean pump with approved solvents if necessary.


**Q: Is it normal for my ambient air pump to get warm?**

A: Yes, ambient air pumps are oil-less and therefore have no type of lubrication to cool the motor. The pumps have a rotary vane design which causes constant friction between the rotor and chamber and may increase the ambient air temperature by up to 10-15° F.

**Q: Do I need a CO Monitor for my ambient air pump?**

A: Ambient air pumps are oil-less producing no carbon monoxide, oil vapor or oil mist, thus eliminating the need for a carbon monoxide monitor and or alarm system. *Note:* CO can come from an outside source or drawn in through the inlet. Locate pump in clean air environment.

**Q: Where can I store my ambient air pump?**

A: Ambient air pumps should be stored in a cool dry place. Never allow moisture to be exposed to the pump. Moisture exposure will cause the pump to build up rust and or damage the electrical components in the motor. 

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Page 2 of 2