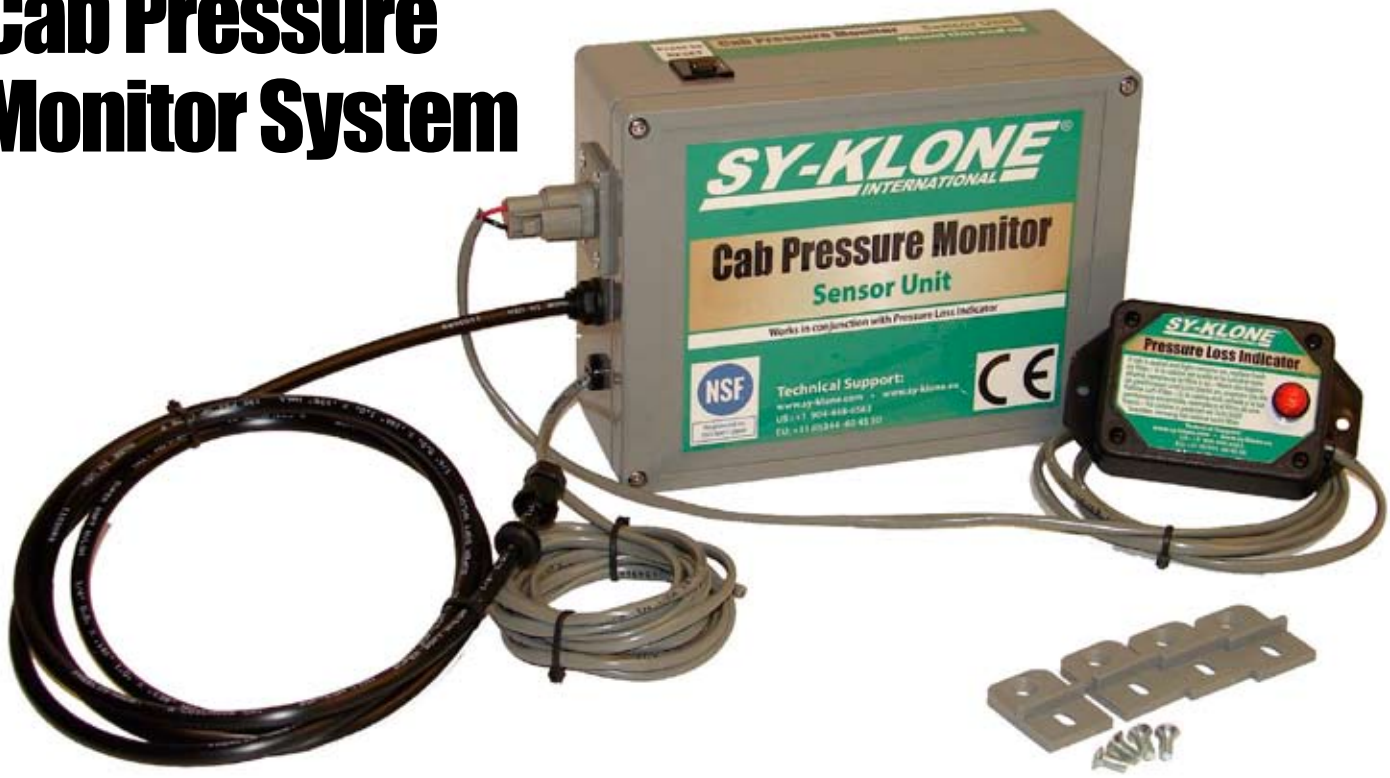
SY-KLONE® INTERNATIONAL

INSTALLATION GUIDELINES

Cab Pressure Monitor System



IN THIS MANUAL:

IN THE BOX:

- Sensor Unit
- Pressure Loss Indicator Unit with attached 3-pronged connector wire
- Mounting Brackets (4)
- Screws (4)
- External Air Tube with Grommet and 10-24 to ¼" Tube Connector
- 7 feet *(2.13 meters)* Supply Cable

Introduction

Thank you for purchasing the Sy-Klone Cab Pressure Monitor System.

This product will alert whenever the enclosed cab's air pressure drops below 0.2 inches of water column *(50 pascal)*. If the indicator alerts when the doors and windows are closed, you should check for breaches in the cab's seals. If the cab is properly sealed and the indicator still alerts, it is time to replace the filter. Recommended for use with Sy-Klone's RESPA-SD and RESPA-SDX cab air quality systems.

Cab Pressure Monitor Installation Guidelines

PRESSURE SENSOR UNIT

Please read all items before installation.

MOUNTING:

The sensor unit can be mounted at any location INSIDE the operator cab.

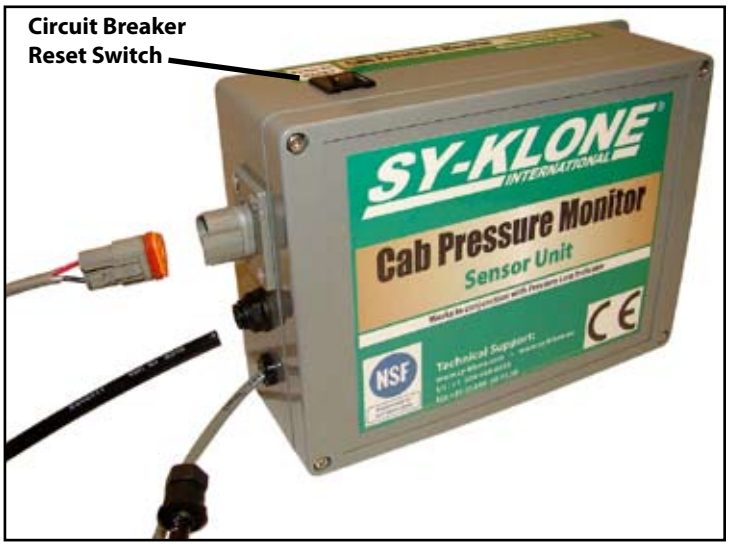
Normally the unit would be mounted in an out-of-the-way location which minimizes is exposure to abuse and does not affect the operation of the machine.

1. The box must be oriented properly with the side labeled "this end up" within 10° of perpendicular to the floor of the cab
2. If the box is mounted near the seat, make sure the seat does not hit the box at any point in the seat's range of adjustments and positions.
3. Make sure the Circuit Breaker Reset Switch on top of the unit is accessible.
4. When deciding on the location, you will need to take into consideration connecting to the machine electrical system, running an air line outside the cab and connecting the sensor unit to the display unit.
5. The box comes with mounting tabs; these can be screwed onto the rear of the box with the supplied screws. The goal is to secure the box in such a way that is does not move and is resting on a flat surface.

CONNECTIONS: Wiring to Power

The sensor unit needs power; it comes with a 7 feet (2.13 meters) of supply cable.

1. Connect the red wire to + positive *(24 VDC on 24 Volt system or 12 Volt VDC on 12 volt system)* and the black wire to system ground.
2. The wire can be shortened in by the installer as needed
3. Route and secure the wire so that it is protected. This wire can be run behind the cab panels as desired.



CONNECTIONS: External air tube

Use the 10-24 to ¼" tube connector **OR** the grommet to allow the tube to pass outside the cab without causing a break in the cab's seal. Discard unused items.

The system comes with 7 feet (2.13 meters) of ¼" nylon tube. This tube must be connected to the sensor unit at one end and the other end must lead to a point **outside the cab**. The tube should extend at least 1 inch (2.54 cm) past the outer wall of the cab.

There are three suggested installation methods:

1. Drill a ¼" hole through the cab, push the tube through the hole at least 1 inch (2.54 cm) and seal with RTV
2. Drill a 15/32" hole through the cab, install the provided grommet, then push the tube through the grommet so it extends 1 inch (2.54 cm).
3. Drill and tap a 10-24 threaded hole through the cab. Install the provided 10-24 to ¼" tube connector and attach the tube. The locking slide portion of the connector must be engaged.

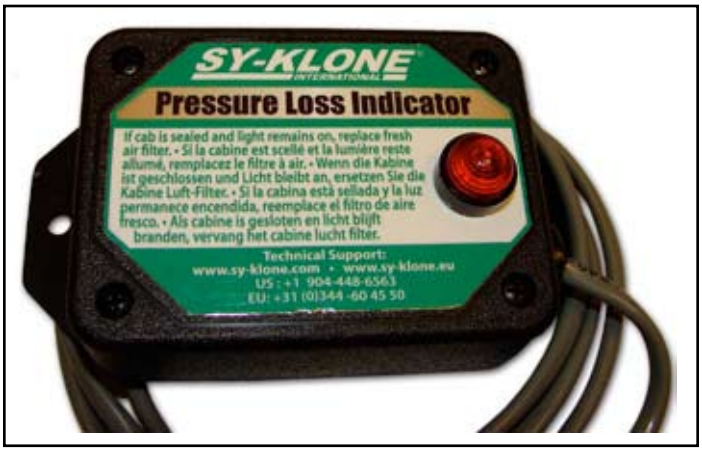
General Installation notes:

- The air tube can be cut to any desired length
- Be careful to not kink, pinch or otherwise obstruct the tube air passage
- The outer end of the tube should be in an area where it will not collect mud or debris.

PRESSURE LOSS INDICATOR UNIT

MOUNTING:

- The display unit should be mounted in location which is visible to the operator. The dashboard is recommended.
- In choosing a location, remember there will be a wire leading from one side, which may affect the choice of mounting location.
- The display unit comes with attached mounting brackets with screw holes.
- Foam mounting tape or Velcro tape could also be an option if it is secured to a smooth surface or glass.



CONNECTIONS: Wiring to Power

1. Plug the 3-pronged connector wire coming from the Indicator Unit into the receptacle on the Sensor Unit.
2. To reduce the potential for damaging the unit, route the wire behind panels and secure as necessary.

Operation and Troubleshooting

Frequently Asked Questions

Q: How do I know if the device is operating correctly?

A: In a cab that is not equipped with a Sy-Klone RESPA-SD or RESPA-SDX, when the electrical system is engaged (key is turned to the run position) the pressure loss indicator light will go on. The light will only turn off when the cab is pressurized. Pressurization takes place after the door and windows are shut, (assuming all other cab penetrations are sealed) and the HVAC fan motor is turned on. The Pressures Loss Indicator light will stay off until there is a loss of cab seal; i.e. a door or window is opened or a door or window seal is torn or no longer fitting properly.

Q: The Pressure Loss Indicator Light goes turns off as soon as I turn the Key to the "On Position"

A: If you are operating the Pressure Sensor in a cab that is equipped with the Sy-Klone RESPA-SD or RESPA-SDX, the the light will go off right after the key is turned to the "On Position" and cab is sealed. This is because the RESPA-SD and RESPA-SDX have a pressurizer fan in them which is engaged as soon as power is activated in the cab. They do not need the HVAC Blower Motor to be on to create cab pressurization.

Q: I can't get the Pressure Loss Indicator Light to go off.

A: If you have just installed the Pressure Sensor and you have replaced the recirculation and fresh air filters and the light will not go off, then your cab is not properly sealed. If you have been running the Pressure Sensor successfully and the light has recently come on and is staying on replace the filters. If the light remains on check all door and window seals for cracks, gaps, improper fit etc. Check for broken, chipped or missing glass. Caulk with RTV sealant or its equivalent all other penetrations in the cab which go to the outside. Replace grommets and seals around any opening into the cab. Foot pedals and hand controls often have rubber boots and seals that wear out over time.

Q: I can't get the cab to seal properly; do you have any suggestions?

A: Patience, we have never found a cab that could not be sealed when the appropriate amount of time was spent to identify where the cab was leaking. The cab seal will never be 100%, even the best cabs leak air; after all they are machine cabs, not submarines or space capsules. (Continued on next page)

Operation and Troubleshooting, continued

Therefore, the object is to reduce the amount of leakage so that the pressure being provided by the RESPA-SD or RESPA-SDX in conjunction with the HVAC Blower fan is greater by 0.2" W.C. (inches of water column pressure) *(50 pascal)* than the amount of air leaking out of the cab. Use RTV Sealant or an equivalent elastomeric sealant, remove the floor cover and address the metal sheet work in the cab. There are many penetrations in the dash area and around hand controls. Older cabs can be more challenging than newer cabs, however, in almost all cases the cab can be adequately sealed.

Q: How do I know if the cab is getting enough pressure?

A: If the Pressure Loss Indicator Light turns off there is adequate pressure in the cab.

Q: I have a new cab with a large Filter Box and Pressurizer blower (*NOT a Sy-Klone RESPA-SD or RESPA-SDX*), which we added to enhance cab pressurization. I don't spend much time in this cab before my ears hurt and I get a headache. The Pressure Loss Indicator light only goes on when I open the door and everything appears to be working properly. What is the problem?

A: Pressurizer blowers added to a tight new cab can over pressurize the cab, creating operator discomfort. There are no pressure regulation mechanisms to release pressure on these systems. We recommend the Sy-Klone RESPA-SD and RESPA-SDX systems because they do not add excess pressure to the system.

Q: The ignition is on, but the pressure monitor does not alert as it should when I open the door. What should I do?

A: Check to see if the circuit breaker has tripped. The reset switch is located on the top of the Pressure Sensor Unit. If the switch is raised, it means the circuit breaker has tripped. Press the switch down to reset. If the circuit breaker will not remain latched after re-setting, contact your Sy-Klone representative

Q: How often should I change the Fresh Air and Recirculation Filters?

A: The frequency will depend on the debris field in which the machine is operating. Each cab and HVAC system has its own unique filtration system. It is impossible to know how often the filters will need replacing. We strongly recommend the RESPA-SD or RESPA-SDX for maximum filter life extension. The REPSA-SD and RESPA-SDX are fresh air precleaning/filtration systems that provide very high quality air into the cab; therefore the recirculation filter does not have as much dirt or debris to filter out, resulting in much longer service intervals.

Q: How long do I have after the Pressure Loss Indicator light goes on before I have to change the filter?

A: If it is determined that the cab is otherwise sealed and dirty filters are the cause of the pressure loss, then you should replace the filters at the earliest possible time. Filters that are dirty enough to cause loss of pressure will rapidly become even more restrictive, until pressure drops so low that it becomes negative pressure and the cab actually draws dirt in through the seals instead of pushing it out.

Q: I operate my Machine on heavy inclines and I notice the light flickers on an off occasionally while I am on an incline, what is the problem?

A: The Pressure Sensor is sensitive to the orientation of the machine. It is possible for the Pressure Loss Indicator light to go on temporarily or to flicker when a machine operates on a incline. There is nothing wrong with the Pressure Sensor or your cab. Once the machine is returned to a horizontal position the light will go off. If the light does not go off then you need to replace the filter or seal the cab.

Q: Where can I find out more about the RESPA-SD and RESPA-SDX cab air quality systems?

A: At **www.sy-klone.com**. Training videos, testimonials, how it works diagrams, case studies and more are available on our web site.

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