OXYGEN GENERATOR
SYSTEM START-UP
STEP 1

Walk around the skid and inspect for damage.

Then check that all electrical and hose connections are secure.
STEP 2

Verify that all ball valves are in the closed position.
STEP 3

Verify that all valves on the cylinder filling manifold are closed.
STEP 4

Using a ladder, check the molecular sieve for settling.
STEP 5

The molecular sieve should be in the neck of the viewpoint.

If it is below the viewpoint, top off with molecular sieve.
The sieve is very sensitive to moisture in the air and will become contaminated if left open for more than a few minutes.
STEP 6

Open the electrical distribution panel, and verify that all breakers are turned off.
All breakers are identified on the inside of the panel door.
STEP 7

Remove the distribution panel cover by loosening the screw, and lifting the cover as one off the box.
STEP 8

From the input side of the main circuit breaker, verify incoming power using a multi-meter.

CAUTION - DO NOT TOUCH EXPOSED WIRES.
STEP 9

Once the power to the distribution panel is verified, turn the main breaker switch ON.

Leave the cover off until compressor motor rotation is verified.
STEP 10

Open all of the air compressor’s panels using the keys provided.
STEP 11

Remove the packing material.
STEP 12

Remove the red shipping brackets.
STEP 13

Check the oil level. When the compressor is cold the oil level is high. Once the compressor starts it will lower to its normal level (green zone).
If oil is required, it should be added using the fill port.
STEP 15

Turn the circuit breaker for the air compressor ON.
STEP 16

The rotation of the air compressor’s motor must be verified. There is a sticker showing the proper direction of the motor with an arrow.

Two people will be needed to perform this test.
STEP 16 (continued)

One person will “bump” the motor by turning the air compressor ON and OFF quickly.

The other person, using a flashlight, will position himself on the vent side of the motor. Once they have a view of the belt, the other person can “bump” the motor. This may require a couple of attempts.
If the motor rotation is incorrect, turn OFF the air compressor’s circuit breaker and the main power to the panel.

Once power is disconnected . . .
Switch the position of only (2) of the (3) wires. Now all components will be in phase and the distribution panel can be put back together.

Confirm proper air compressor rotation.
STEP 18

Turn the Main breaker on, the air compressor breaker ON, and open the ball valve between the air compressor and air storage tank.

Turn the air compressor on and allow it to fill the Air Surge Tank (AST) while you prepare to turn on the Oxygen Generator.

Turn on all the circuit breakers to the on position.
STEP 19

Open the door to the Oxygen Generator. Visually inspect that nothing has come loose during shipping. Once that is done, slowly open the ball valve that connects the AST to the Oxygen Generator.
STEP 20

Once the AST reaches 100 psi, turn the power switch of the Oxygen Generator to the “Continuous” position. Let the machine cycle a few times and then verify the feed air pressure is 70 psi.
STEP 20 (continued)
STEP 21

If the feed air pressure needs to be adjusted, the regulator is located to the right of the feed air filter. Pull up on the knob to unlock. Turn clockwise to increase pressure, or counter-clockwise to decrease the pressure. Snap down the knob to lock it.

NOTE: pre-set at factory, request assistance from OGSİ before making any adjustments.
Equalization valves and check valves.
Exhaust valves and muffler.
STEP 22

High Purity Valve and Back Pressure Regulator (pre-set at factory) activates after machine has run (3) complete cycles.
STEP 22 (continued)

Open the Ball Valve located at the discharge of the Oxygen Generator leading to the Oxygen Surge Tank (OST).
STEP 23

Allow the Oxygen Surge Tank (OST) to build up to 60 psi, and then purge the OST down to 20 psi. Allow the pressure to build to 60 psi and purge to 20 psi one more time.
STEP 24

On the Conspec sample tap turn the ball valve to the OGSI oxygen position. The pressure should be 1 psi, flow 1 lpm (Pre-set at factory. May need adjustment after shipping.)

On the display the arrows are pointing to #1 VIEW DATA (ALL) and press ENTER/YES.
STEP 24 (continued)

Conspec Menu
STEP 25

Press NO for display as bar graph.
FAIL
Indicates that the sensor needs calibration or replacement.

<table>
<thead>
<tr>
<th></th>
<th>CO</th>
<th>O₂</th>
<th>CO₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm (1st level)</td>
<td>7 ppm</td>
<td>90%</td>
<td>250 ppm</td>
</tr>
<tr>
<td>Alert (2nd level)</td>
<td>10 ppm</td>
<td>85%</td>
<td>300 ppm</td>
</tr>
</tbody>
</table>
Step 26 (continued)
STEP 27

Only the oxygen sensor requires a jumper to be moved to activate the sensor.

Move jumper into position.
Once the OST pressure reaches 60 psi, open the oxygen regulator.
STEP 29

Check the RIX oxygen compressor’s oil level. It should be ¾ up the sight glass.
STEP 30

Turn the oxygen compressor’s ball valve open.

Turn the switch to “automatic”.

Press the start button.
STEP 31

Suction pressure needs to be 40 psi in order for the compressor to start.

It may be necessary to increase the oxygen regulator pressure to above 40 psi to get the oxygen compressor to start.

The oxygen regulator can be turned back down to 40 psi.
STEP 32

Slowly open each cylinder valve and corresponding manifold valve to begin filling cylinders.
OXYGEN GENERATOR MAINTENANCE
To depressurize the oxygen generator, keep the generator running. Close the feed and oxygen ball valves.
CONFIRM POWER IS OFF

Once the pressure reaches zero (0), turn the unit off and pull the fuse to confirm the power is off to the oxygen generator.
FILTER REPLACEMENT

At least every 6 months . . .
FILTER REPLACEMENT

Remove the electrical wire harness.
FILTER REPLACEMENT

Using a strap wrench remove the filter bowl.
FILTER REPLACEMENT

Remove the filter.
FILTER REPLACEMENT

Inspect and clean the filter bowl.
FILTER REPLACEMENT

Insert the new filter with the small tab in front.

The wide tabs fit the slots on the side of the bowl.
FILTER REPLACEMENT

Tighten filter bowl so that the markings line-up.

Reconnect the electrical harness.
SOLENOID VALVE REPLACEMENT
Normally After 2 Years and Replace in Pairs...
Solenoid Valve Replacement

Remove electrical din harness from solenoid coil.
SOLENOID VALVE REPLACEMENT

Remove clip From the top of the coil and remove the coil.
SOLENOID VALVE REPLACEMENT

Loosen the bolts using a star pattern.
Loosen all (4) evenly so as not to put undue pressure on the last bolt removed.
Solenoid Valve Replacement

Remove the top half of the valve and replace the large o-ring.

Clean valve body.
SOLENOID VALVE REPLACEMENT

Remove plunger from the top, clean the top half, and replace the old plunger with one from the kit.
Align the carbon ring split, opposite of the steel ring split.
Replace the top half of the o-ring for the stem.

Make sure the orifice is not clogged.
SOLENOID VALVE REPLACEMENT

When re-installing the plunger and the top half, make sure to keep the plunger inserted into the top.

Align the valve stem ports.

Retighten bolts using the same pattern when removing the valve.
Loosen tube clamp from standoff block.
Release tubing from the “push to connect” fitting by pressing down the outer ring and pulling the fitting away from the tubing.

Repeat on the other side of manifold to release the tubing from the tee fitting.
CHECK VALVE CLEANING

Using a #2 Phillip’s screwdriver, separate the check valve top from the bottom.
CHECK VALVE CLEANING

Remove the rubber disk.

NOTE: Rubber Disk Assembly
CHECK VALVE CLEANING

Pull out plastic sleeve.
CHECK VALVE CLEANING

Clean all parts with a lint free, dry rag and reassemble.

Repeat all steps for 2\textsuperscript{nd} check valve.
PARTICULATE AIR COMPRESSORS AND AIR SURGE TANK FILTER

Replace Annually
PARTICULATE/COALESCING FILTERS

Filter bowls remove the same way as the oxygen generator’s feed air filter.
CARBON FILTER
SAMPLE TAP SENSOR CALIBRATION
SAMPLE TAP SENSOR CALIBRATION

Calibration gas for zero (0) and span values is required.
Remove the plug with green tubing and replace with the calibration plug with the cylinder of zero (0) gas attached.
On the right side of the sensor is the button to press to start calibration. Press the button for 3 seconds and release. The LED will turn a solid green.
On the display, CAL ZERO will be displayed for the sensor being calibrated. At this time, the zero gas cylinder should be open.
SAMPLE TAP SENSOR CALIBRATION

After 120-180 seconds the display will change to CAL SPAN, the LED will turn from green to red. The span gas cylinder should be attached to the tubing and opened.
SAMPLE TAP SENSOR CALIBRATION

After 120-180 seconds the display will show CAL DONE.

Repeat for any sensor that requires calibration.
Once all sensors have been calibrated the new settings need to be saved. Press the MENU button and arrow down.

#4 Save to EEPROM, press ENTER.
The password is the number (1).

Press (1) and then press ENTER.
SAMPLE TAP SENSOR CALIBRATION

Press YES.

When the save is finished, PASSED is shown.

Follow on-screen directions.

Return to MAIN MENU and display the sensor readings.
SENSOR REPLACEMENT

The CO2 Sensor cannot be replaced. The entire unit needs to be replaced.

Sensors cannot be stocked on the shelf due to their nature to deplete.
SENSOR REPLACEMENT

Remove plug with green tubing from the bottom of the sensor being replaced.
SENSOR REPLACEMENT

Disconnect the white plug from the left and right side of the electronic board.
SENSOR REPLACEMENT

Loosen the lock nut and spin the sensor out of the box.

Install the new sensor, making sure the LED faces the front and the calibration button is accessible on the right.
If you require technical assistance, OGSI personnel are available between 8:00 am and 5:00 pm US Eastern Standard Time (GMT-5), Monday through Friday.

**Telephone:** (716) 564-5165  
**Toll Free:** (800) 414-6474 in US and Canada  
**Fax:** (716) 564-5173  
**Service Email:** mgkeenan@ogsi.com

For other ways to contact OGSI, please refer to page 1 of your service manual.