PREVENTATIVE MAINTENANCE GUIDE: 17651 1100

User Guide: 17 651 1000

NITROGEN GAS GENERATOR

NITROSource Compact

N2C-2 / N2C-4 / N2C-6 / N2C-8





Preventative Maintenance Guide



SERVICING THE GENERATOR

CLEANING

Clean the equipment with a damp cloth only and avoid excessive moisture around any electrical sockets. If required you may use a mild detergent, however do not use abrasives or solvents as they may damage the warning labels on the equipment.

SERVICE INTERVALS

Description of Service Required		Service Recommended Every:				
Component	Operation	Daily	Weekly	3 Months	12 Months	24 Months
Generator	Check status indicators located on the control panel	$\overline{4}$				
Generator	Check regulated outlet pressure		\checkmark			
Generator	Check 02 purity		1			
System	Check filter drains					
System	Check inlet air quality			1		
Generator	Check for air leaks					
Generator	Check pressure gauges during purging for excessive back pressure			1		
Generator	Check condition of electrical supply cables and conduits					
Generator	Check cyclic operation			1		
02 Cell	Calibrate Oxygen Cell			\bigcirc		
Generator	Replace the mist-x silencer				1	
Filtration	Replace the buffer tank filter				1	
Generator	Replace / Calibrate the oxygen sensor					1
Generator	Replace / Service valves					1

Key

Check Recommended Service

SERVICE KITS

Recommended every 12 months

-	Catalogue No's	Description	Contents
	M12.N2C.0001	Kit: 12 month N2 Compact service	Mist-X 150 silencer P010A0 element

Recommended every 24 months

Catalogue No's	Description	Contents
M24.PPM.0002	Kit: 02 Cell PPM	02 Cell PPM
M24.PCT.0002	Kit: 02 Cell %	02 Cell %

Catalogue No's	Description	Contents
M24.N2C.0001	Kit: 24 Month N2C valve overhaul (with Analyser)	Outlet Valves x2 Air inlet valve x2 Exhaust valve x2



EXHAUST SILENCER REPLACEMENT

The exhaust silencer is located under the inlet manifold assembly. Unscrew the element from the exhaust port (01) and discard (02). Fit the replacement element ensuring that it is fully engaged onto the pipe fitting and secure it hand tight.



OXYGEN CELL REPLACEMENT

Unscrew the oxygen cell lead (01) and solenoid plugs (02) then remove the 4-20mA connections and move the lead to prevent obstruction. Disconnect the tubing from the 3-way ball valve (03) to the regulator (04). Loosen the regulator retaining collar (05) then unscrew the top retaining screw (06) of the assembly and remove. Cut the tie wrap and unscrew the oxygen sensor. Remove the used cell and replace with the new one.

Note: Ensure to wear gloves when handling the new cell to prevent causing any damage.

Refit in reverse order.



OXYGEN ANALYSER CALIBRATION



Hot surfaces and hazardous live terminals. Take care when performing the following calibration procedure as there are hazardous live voltages and potentially hot surfaces within the enclosure.

The O₂ analyser should be calibrated at least once every three months against a calibrated gas supply or a calibrated independent analyser.

For low purity applications the calibration may be performed using compressed air, however this method is not recommended when the purity of the gas is critical.

The purity of the calibration gas should not exceed 50ppm for high purity generators (ppm oxygen cells) and 5% for lower purity generators (% oxygen cells). Do not exceed 7 barg pressure.



The pressure regulator and flow control valve are factory set to deliver 250cc/min. to the O₂ cell. Adjusting either component could cause damage to the O2 cell or incorrect calibration.

USING A CALIBRATED GAS SUPPLY

- Select menu 3.1 and enable the O2 Alarm Over-ride.
- Connect the gas supply to the O2 Analyser calibration port (1) on the side of the generator.
- Locate the calibration ball valve (2) inside of the shroud and rotate the handle clockwise so that it is pointing down as shown.
- Wait for the O2 reading to stabilise before entering the calibrated level.

USING A CALIBRATED INDEPENDENT ANALYSER

- Select menu 3.1 and enable the O2 Alarm Over-ride.
- Connect the analyser to the nitrogen outlet port of the generator.
- Wait approximately for the O_2 reading to stabilise before entering the calibrated level.

USING COMPRESSED AIR

- Select menu 3.1 and enable the O2 Alarm Over-ride.
- Connect the O2 sample line between the elbow push in fitting, located on the ball valve (3), and the O2 Analyser calibration port (1).



If a sample line other than the one provided by Parker is used ensure that it is suitable rated for the working pressure of the generator.

- Open the ball valve (3) and rotate the handle of the calibration ball valve (2) so that it is pointing downwards as shown.
- Wait for the O2 reading to stabilise before entering the calibrated level.



The sample line will need to be depressurised prior to disconnection. Close the ball valve (3) and wait until the pressure shown on the pressure gauge (4) reaches zero. When the line is fully depressurised, rotate the handle of the calibration ball valve (2) so that it is pointing upwards and disconnect the line from the generator.



ENTERING THE CALIBRATED LEVEL

- Navigate to menu 3.2 and press 🤳 .
- Using the \bigwedge and \bigvee keys enter the purity of the calibration gas.
- Press to send the calibration level to the O2 Analyser.
- On successful completion of the calibration the new O2 reading will be shown on the bottom line of the display.
- If the calibration is not successful the original reading from the analyser will be loaded. Should this occur repeat the above steps.
- On completion of the calibration, return the ball valves back to their original position and remove the regulated calibration gas supply as applicable.
- Navigate to menu 3.1 and disable the O2 Alarm Over-ride.
- When returning to the main operating menu, "CAL" will be shown on the top line of the display. This will remain for a period of twenty minutes after the calibration. Throughout this time period the O_2 alarm is overridden, to allow the sensor(s) to return to the required level.

FILTER DEPRESSURISATION

Close the ball valves located on the inlet and outlet ports of the filter and depressurise it by opening the manual drain on the filter bowl (01).



FILTER BOWL REMOVAL

Unscrew the filter bowl (01 & 02) and remove the used element (03). Note: A strap wrench may be required for the removal of the 050 & 055 filter bowl.



Caution



0 bar / 0 psi



Safety Gloves



Dispose Safely







INSERTION OF REPLACEMENT ELEMENT INTO FILTER BOWL

Insert the new element into the filter bowl ensuring that the lugs are seated correctly in the grooves.



REPLACEMENT OF FILTER HEAD 0 RING

Replace the O-ring located in the filter head with the new O-ring provided.





Ensure to lubricate the O-ring and threads with a suitable acid free Petroleum jelly.

RECONNECTING THE FILTER BOWL WITH HEAD

Refit the filter bowl and head ensuring that the threads are fully engaged (01) and the locking details are aligned (02).

Note: To ensure that the bowl is fully engaged into the head, the 010 bowl requires 360° of rotation until the thread stop.



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ONE YEAR AIR QUALITY GUARANTEE

Your air quality has been guaranteed for 1 year and will be renewed at every annual filter element change.

Annual filter element changes ensure:

- Optimal performance is maintained
- Air quality continues to meet international standards
- Protection of downstream equipment, personnel and processes
- Low operational costs
- Increased productivity and profitability
- Peace of mind

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