



BGI, INC.
WALTHAM, MA 02451

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INSTRUCTIONS: SCC1.062 Triplex Cyclone

Introduction:

This cyclone is intended to be used with a BGI sampling pump listed below or any sampling pump meeting the following pressure/volume characteristics:

| Media Type 37mm | Flow Rate Lpm | Pressure Drop Cm of H₂O | BGI Pump Recommended |
|----------------------------|--------------------------|---|---------------------------------|
| GF/A Fiberglass | 3.5 | 30.5 | 400S |
| GF/A Fiberglass | 1.5 | 6.6 | AFC123 |
| GF/A Fiberglass | 1.05 | 3.8 | AFC123 |
| Gelman Teflo | 3.5 | 20.0 | 400S |
| Gelman Teflo | 1.5 | 6.0 | AFC123 |
| Gelman Teflo | 1.05 | 3.0 | AFC123 |
| 0.8µm MCE | 3.5 | 33.8 | 400S |
| 0.8µm MCE | 1.5 | 11.8 | AFC123 |
| 0.8µm MCE | 1.05 | 7.8 | AFC123 |

Operation:

Remove the front portion of a 3-piece cassette (blue plug) by inserting a coin or opener in the annular slot closest to the blue plug and twisting. Save the portion removed to reinstall, for filter protection after sampling. Press the portion of the cassette containing the filter onto the tapered top of the cyclone – fitted with an orange “O” ring.

Next, remove the red plug from the back of the cassette and push in the taper Luer plug, which is attached to the hose.

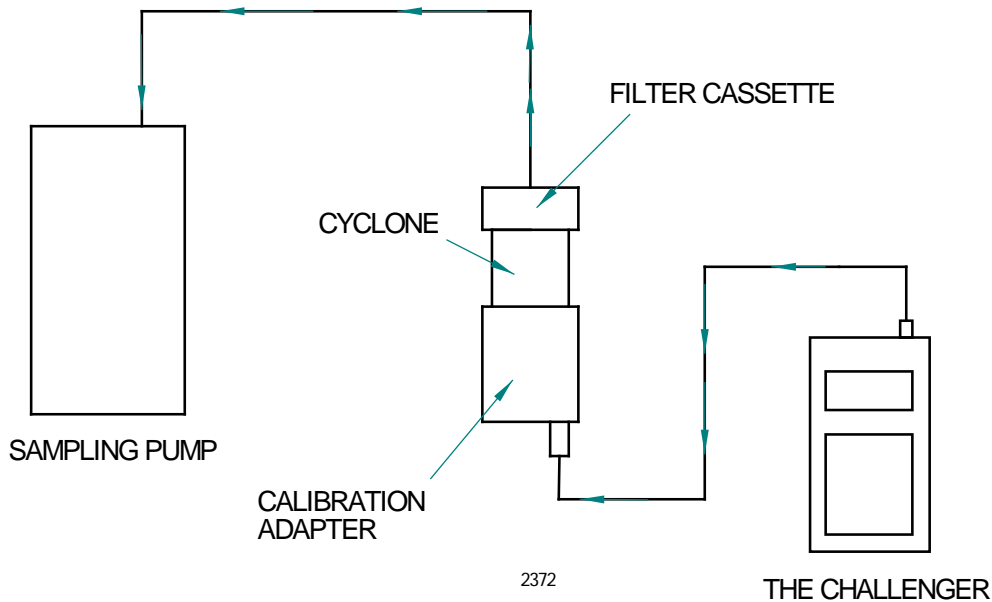
The cyclone is clipped to the subjects lapel and the long hose is run over the subject's shoulder to the personal sampler appropriately situated on the waist belt.

Proceed with sampling according to your experience, regulations, or the instructions for the personal sampler being used. The procedures are the same as for a routine cassette dust sample, except that only the fraction based on the flow rate reaches the filter surface. Selection of filter materials varies with different countries, regulations or research intentions.

Calibration:

Press the calibration adapter (TC-1) onto the body of the cyclone. Attach your calibration device (rotameter or preferably The Challenger) to the calibration adapter of the cyclone with a suitable section of ¼ inch I.D. tubing. The cyclone should be set up for normal use with a fresh filter. Turn the personal sampler on and adjust the flow rate as desired to 3.5, 1.5 or 1.05 liters per minute. Because of the calibration adapter used on this cyclone design, the old fashioned calibration jar is no longer necessary.

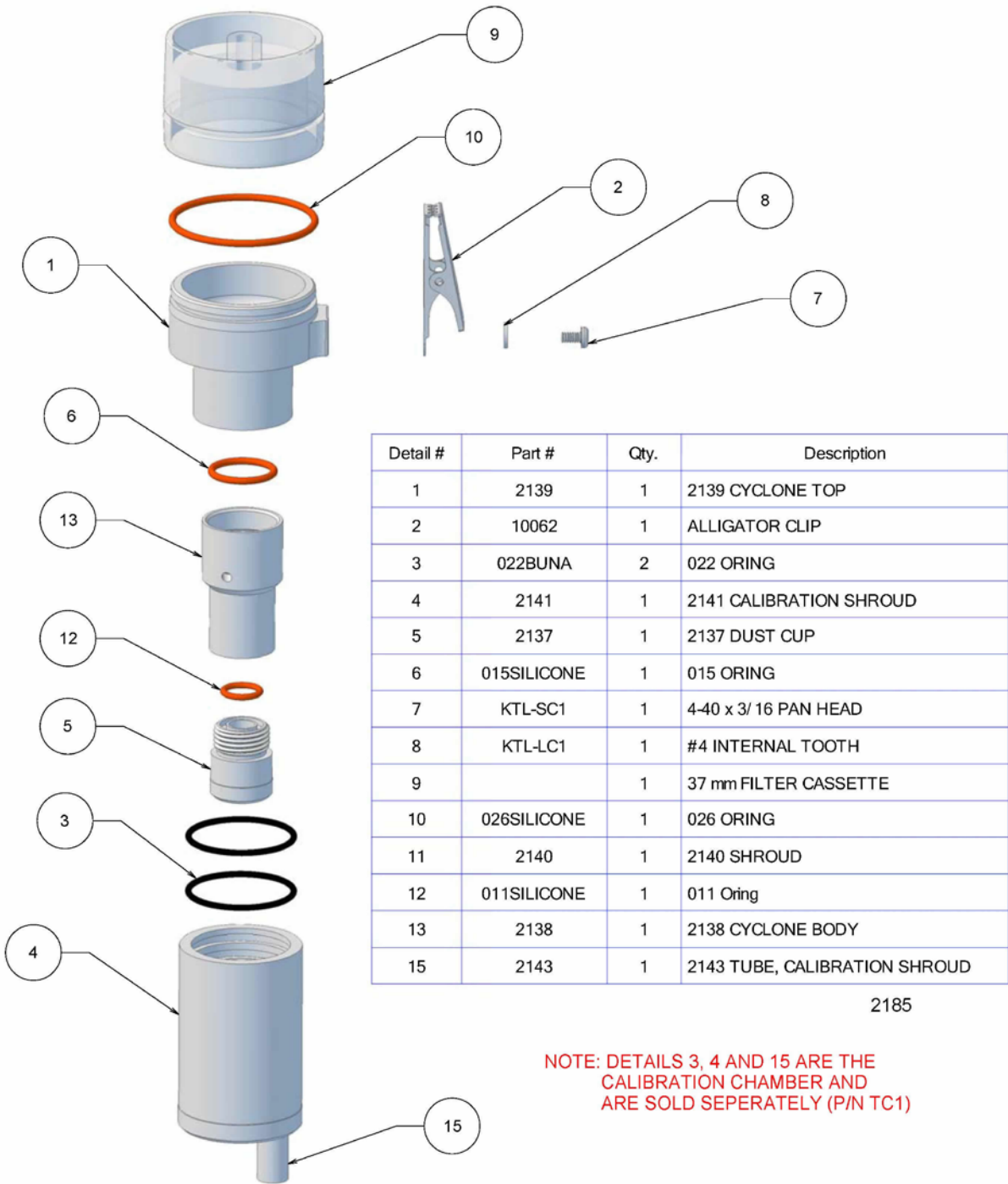
| D50 µm | Flow Rate Lpm |
|-----------|------------------|
| 1 | 3.5 |
| 2.5 | 1.5 |
| 4.0 | 1.05 |



**Schematic Diagram of Connections for Calibrating
The Triplex Personal Sampling cyclone**

Cleaning:

Disassemble the cyclone into its component metal parts. Wash with soapy water, rinse and air dry. Do not leave to soak for extended periods of time. If deposited material proves stubborn to remove, utilize an ultrasonic cleaner and/or rub with a clean soft cloth. Be certain that all components are thoroughly dry before re-assembling and using.



Exploded View of Triplex (SCC1.062) Cyclone
With Calibration Chamber

REVISIONS

June, 2007

Added "The Challenger" to Schematic