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## Version 1.2

## INSTRUCTIONS: *min/PM*

*(Note: If Inlet is used for High Altitude sampling with the PQ167HA the flow rate must be set to 5 Lpm)*

### 1.0 Size selective inlet

The size selective inlet will be familiar to all who have had experience with the Standard EPA Louvered Inlet in its original 16.7 lpm configuration. The only two differences are that it has been scaled down to 1/3 its original dimensions and the acceleration jet in the impactor is changeable over five size ranges. An exploded diagram of the inlet is shown in Figure 9 with all parts identified.

### 2.0 Jet Differential

If a Size Selective Jet (SSJ) other than PM10 was ordered/furnished with your instrument it was furnished as a separate item. The individual jets are hand detachable and removed/installed by screwing in and out. A light grease should be applied to the threads to prevent seizure. Jets manufactured prior to May,2005 were not marked. As a guide to their functional size refer to the table of approximate internal dimensions below. Later jets were color coded and their functional size can also be found in the following table.

Function	P/N	I.D. (In.)	I.D. (mm)	Color
TSP	2599	0.38	9.6	Clear
PM 10	2616	0.26	6.6	Blue
PM 4.0	2741	0.14	3.6	Green
PM 2.5	2617	0.11	2.8	Red
PM 1.0	2618	2 holes	2 holes	Black

### 3.0 Maintenance

Items which require cleaning and maintenance are common to all ambient air sampling devices fitted with size selective inlets. The inlet and the sampler may be considered two separate items for cleaning and maintenance purposes.

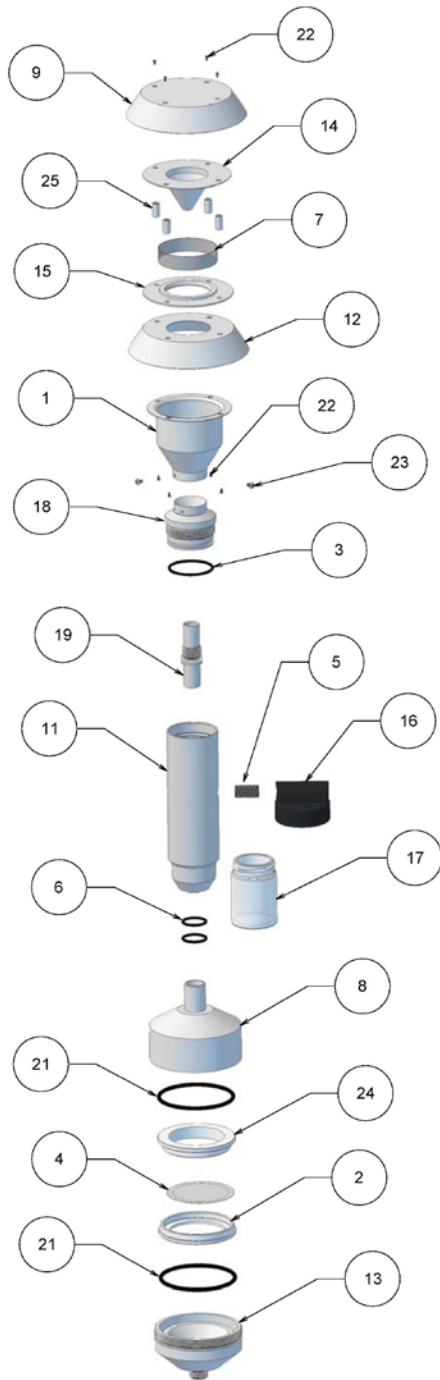
Cleaning should occur once every 90 days or sooner in highly polluted environments. Until such time as sufficient experience has been gathered, the unit should be inspected once a month. In order to perform an inspection it is only necessary, after removing the inlet from the top of the filter holder to unscrew the top from the bullet as shown in Figure 10.

Normal cleaning of air sampling inlets is generally, best done with clean water and lint free wiping cloths. If an ultrasonic cleaner is available it is the preferred device as it will remove dirt from deep corners and pockets, avoiding the need for further disassembly. After ultrasonic, or any liquid cleaning, be certain to dry thoroughly before reassembling and placing in service.

### **Summary of Maintenance Items:**

<b>Frequency*</b>	<b>Maintenance item</b>
Every 5 sampling days	1. Service water collector bottle
Monthly	1. Clean inlet surfaces 2. Check inlet screen for any clogging
Quarterly (every 3 months)	1. Inspect O-rings. Remove and lightly coat them with Vacuum grease. 2. Clean impaction surface.

\*Frequency may vary depending on climate, amount of particulate matter in the air, weather, and so on.



Detail #	Part #	Qty.	Description
1	2583	1	2583 NOZZLE ENTRY
2	1729-L29	1	1729-L29 CASSETTE LOWER SECTION
3	024BUNA	1	024 ORING
4	1728-L28	1	1728-L28 FILTER SCREEN
5	OM10123	1	NIPPLE
6	015BUNA	2	015 ORING
7	2589	1	2589 SCREEN
8	2672	1	2672 UPPER FILTER HOLDER
9	2584	1	2584 TOP
10	2596	3	2596 RECEIVER TUBE
11	2597	1	2597 OUTER TUBE
12	2586	1	2586 LOWER PLATE
13	1425	1	1425 FILTER HOLDER
14	2585	1	2585 WIND DEFLECTOR
15	2587	1	2587 RAIN DEFLECTOR
16	OM10120	1	JAR TOP
17	OC13	1	JAR
18	2598	1	2598 IMPACTOR NOZZLE
19	2617	1	2617 NOZZLE INSERT, PM 2.5
20	2595	1	2595 TARGET PLATE
21	135BUNA	2	135 ORING
22	10002	8	4-40 x 1/4 PAN HEAD
23	OM10124	3	2-56 x 1/8 PAN HEAD
24	1727-L27	1	1727-L27 CASSETTE UPPER SECTION
25	2588	4	2588 SPACER
26	2602	1	2602 EXIT ADAPTER

4015

**Fig. 9 Exploded Diagram of Inlet with Filter Holder**



**Figure 10: Drawing of Initial Disassembly of Inlet**

The jet may also be removed from the top of the inlet as shown in Figure 11.



4013

**Figure 11: Drawing of Jet Removed for Cleaning or Size Change**

## **REVISIONS**

Revision 1.0 – released May, 2005 – Original

Revision 1.1 – released June, 2009 – changed photos to drawings in fig. 10 & 11. Improved fig. 9

Revision 1.2 – released Sept, 2013 – updated drawings to shaded