



## **Thermo 5030 SHARP Particulate Maintenance Schedule**

### **Routinely (weekly/monthly)**

1. Check the instrument for any alarms
2. Check recent ambient data for anomalies
3. Check key diagnostics such as RH, mass, flow, pressures and temperatures. Recommend graphing 1-month periods to check for drift.

### **Every 1 month**

1. Check the spots on the filter tape for uniform coverage and clean crisp edges.
2. Perform a flow calibration and leak test.
3. Install a Hepa filter and perform a Nephelometer zero.

### **Every 3 months**

1. Clean the PM10 and PM2.5 inlets.

### **Every 6 months**

1. Calibrate the RH, Temperature and P3 Barometric Pressure sensors.
2. Verify the Mass Calibration using a zero/span foil set.
3. Perform a High Voltage Calibration

### **Annually**

1. Clean the heater/inlet tube

### **Other - as needed**

1. Install pump carbon vane kit when flow cannot be maintained, or the pump power is above 95%. Clean/replace felt pads.
2. Disassemble and clean Nephelometer if Neph readings become erratic or background counts become high (Range 1 analog counts should be between 100 and 700, Range 2 between 10 and 70).
3. If analog counts are still high after cleaning than an electronic adjustment should be done by a trained technician. Adjust potentiometer R1 to obtain a source current of 65 mA. Adjust potentiometer R3 to obtain a zero count between 150 and 200.
4. If the beta signal becomes very erratic or the tape spot indicates a foreign body in the filter chamber, then the filter chamber should be disassembled and cleaned.