Calibration of the Engine Exhaust Condensation Particle Counter (EECPC), TSI model 3790A, requires following the procedures described in EURO 5 Regulation 83. Using these systems these components adhere to the guidelines of ISO 27891.

The instruments needed to construct the calibration bench are similar to standard particle instruments from TSI Incorporated. See Figure 1 for a schematic of the entire calibration process.

**Aerosol Generation**
- 3074B Pressurized Air Supply. This optional item is used to assure that the pressurized air used in the calibration process is dry, and free of oil and particles.
- 3480 Electrospray Aerosol Generator (EAG)
- 1050001 Dilution Bridge
- 3082 Electrostatic Classifier
- 3088 Soft X-ray Neutralizer (strongly recommended; in general, it increases the concentration of particles available for calibration)
- 3085A Nano DMA

**Flow Balance**
- 1602051 Filter
- 4148 Flow Calibrator (includes small filter shown in Figure 1) (permits calculation of relative humidity of air presented to aerosol instrumentation, when ambient humidity is known)

**EECPC Calibration**
- 3708 Flow Splitter
- 3790A Engine Exhaust CPC (CPC under Test)
- 3750 Condensation Particle Counter (Reference CPC)
- 3068B Aerosol Electrometer (Reference Aerosol Electrometer)

**Tubing**
- 3001788 Conductive Tubing (fits ¼” barb)
- 3001789 Conductive Tubing (fits ⅜” barb)

Details for generating emery oil aerosol for the calibration process are provided in a separate application note.
Figure 1: Schematic of the EECPC Calibration Setup