

## Environmental Protection Agency

## § 1065.1001

temperature ( $T_M$ ) and pressure ( $P_M$ ). Use the following equation:

$$\text{Intake air flow} = \frac{(\text{displacement})(\text{rpm})(\text{volumetric efficiency})(P_M/101.3 \text{ kPa})(293.15 \text{ K}/T_M)}{}$$

### § 1065.935 Specifications for THC analyzers.

- (a) Use a flame ionization detector (FID).
- (b) The analyzer must have an accuracy and precision of  $\pm 2$  percent of point or better under steady-state laboratory conditions.
- (c) The analyzer must reach at least 90 percent of its final response within 1.0 second after any step change to the input concentration greater than or equal 80 percent of full scale.
- (d) Zero and span the analyzer daily during testing. Calibrate it according to the analyzer manufacturer's specifications.

### § 1065.940 Specifications for $\text{NO}_x$ and air/fuel sensors.

- (a) Use stabilized zirconia-based sensors.
- (b) The sensors must have an accuracy and precision of  $\pm 2$  percent of point or better under steady-state laboratory conditions.
- (c) The sensors must reach at least 90 percent of its final response within 1.0 second after any step change to the input concentration greater than or equal 80 percent of full scale.
- (d) The sensors must be zeroed and spanned daily during testing, and must be calibrated according to the sensor manufacturer's specifications.

### § 1065.945 Specifications for CO analyzers.

- (a) Use a non-dispersive infrared (NDIR) detector that is compensated for  $\text{CO}_2$  and water interference.
- (b) The analyzer must have an accuracy and precision of  $\pm 2$  percent of point or better under steady-state laboratory conditions.
- (c) The analyzer must reach at least 90 percent of its final response within 5.0 second after any step change to the input concentration greater than or equal 80 percent of full scale.
- (d) The analyzer must be zeroed and spanned daily during testing, and must

be calibrated according to the analyzer manufacturer's specifications.

### § 1065.950 Specifications for speed and torque measurement.

- (a) Determine torque from a previously determined relationship of torque and engine speed, throttle position, and/or manifold absolute pressure. Torque estimates must be between 85 percent and 105 percent of the true value. You can demonstrate compliance with this accuracy requirement using steady-state laboratory data.
- (b) Measure speed from the engine's electronic control module. Speed estimates must be within  $\pm 5$  rpm of the true value.

## Subpart K—Definitions and Other Reference Information

### § 1065.1001 Definitions.

The following definitions apply to this part. The definitions apply to all subparts unless we note otherwise. All undefined terms have the meaning the Act gives to them. The definitions follow:

*Accuracy* means the maximum difference between a measured or calculated value and the true value, where the true value is determined by NIST.

*Act* means the Clean Air Act, as amended, 42 U.S.C. 7401 *et seq.*

*Adjustable parameter* means any device, system, or element of design that someone can adjust (including those which are difficult to access) and that, if adjusted, may affect emissions or engine performance during emission testing or normal in-use operation.

*Aftertreatment* means relating to any system, component, or technology mounted downstream of the exhaust valve or exhaust port whose design function is to reduce exhaust emissions.

*Auxiliary emission-control device* means any element of design that senses temperature, engine speed, motive speed, transmission gear, atmospheric pressure, manifold pressure or vacuum, or any other parameter to activate, modulate, delay, or deactivate the operation of any part of the emission-control system. This also includes any other feature that causes in-use emissions to be higher than those