each analyzer the zero and span response for each range used during the preceding test or test segment.

c) If during the test, the filter element(s) were replaced or cleaned, a vacuum check must be performed per §86.328 immediately after the span checks. If the vacuum side leak check does not meet the requirements of §86.328 the test is void.

d) Read and record the post-test data specified in §86.337(e).

e) For a valid test, the analyzer drift between the before-test and after-test (before-segment and after-segment for Diesels) span checks for each analyzer must meet the following requirements:

1. The span drift (defined as the change in the difference between the zero response and the span response) must not exceed 2.0 percent of full-scale chart deflection for each range used;

2. The zero response drift must not exceed 2.0 percent of full-scale chart deflection for each range used above 155 ppm (or ppm C), or 3 percent of full-scale chart deflection for each range below 155 ppm (or ppm C).

(f) Determine chart deflections.

1. Locate the last 10 seconds of each gasoline-fueled engine mode except CT. Locate the last 50 seconds of each gasoline-fueled engine CT mode. For all Diesel engine modes locate the last 60 seconds.

2. (i) Divide the last 10 seconds or 60 seconds, whichever is applicable, into a minimum of 10 equally spaced increments. Determine the chart deflection of each increment for the CO\textsubscript{2}, CO, HC, and NO\textsubscript{X} analyzers.

(ii) Option for Diesel engine modes. If the deviation from a straight line (other than instrument noise) during this 60 seconds is less than ±5 percent of full-scale, the average chart deflection may be determined by eye. The average value (one number) may then be used in lieu of the 10 values required by paragraph (d)(2)(i) of this section.

3. Other methods of determining the chart deflection of the analyzers may be used only with prior approval by the Administrator.

e) Determine CO\textsubscript{2}, CO, HC, and NO\textsubscript{X} concentrations for each mode.

1. If the option in paragraph (d)(2)(i) of this section is employed, then those chart deflections for both linear and non-linear analyzers may be substituted for the average chart deflection in step (e)(2).

2. For linear instruments, average the chart deflections determined in paragraph (d)(2)(i) of this section. Determine the concentration for this average chart deflection using calibration data.

3. For non-linear instruments, calculate concentrations for each chart deflection determined in paragraph (d)(2)(i) of this section. Take the average of these concentrations for each mode.

4. For purposes of this paragraph, calibration data includes calibration curves, linearity curves, span-gas responses, and zero-gas responses.

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