
40 C.F.R. § 1045.110

How must my engines diagnose malfunctions?

The following engine-diagnostic requirements apply for engines equipped with three-way catalysts and closed-loop control of air-fuel ratios:

(a) *Equip your engines with a diagnostic system.* Equip each engine with a diagnostic system that will detect significant malfunctions in its emission control system using one of the following protocols:

(1) If your emission control strategy depends on maintaining air-fuel ratios at stoichiometry, an acceptable diagnostic design would identify a malfunction whenever the air-fuel ratio does not cross stoichiometry for one minute of intended closed-loop operation. You may use other diagnostic strategies if we approve them in advance.

(2) If the protocol described in paragraph (a)(1) of this section does not apply to your engine, you must use an alternative approach that we approve in advance. Your alternative approach must generally detect when the emission control system is not functioning properly.

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