



## Ohio Administrative Code

### Rule 1501:10-2-21 Equipment maintenance diagnostic testing.

Effective: November 3, 2011

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(A) Exhaust emissions for diesel-powered equipment shall be monitored and controlled using the control and conditioning systems of rule 1501:10-2-05 of the Administrative Code, the threshold limits and other requirements of rule 1501:10-2-07 of the Administrative Code, the baseline exhaust emissions values established in rule 1501:10-2-20 of the Administrative Code, and the diagnostic testing of this rule.

(B) Equipment maintenance diagnostic testing. At intervals not to exceed one hundred hours of engine operation, a mechanic qualified in accordance with rule 1501:10-2-24 of the Administrative Code shall perform equipment maintenance diagnostic testing of each piece of diesel-powered equipment in the mine and make all necessary adjustments and repairs to meet the manufacturer's specifications and the requirements of this chapter, or remove the equipment from service. The qualified mechanic shall:

- (1) Verify the identification numbers on the equipment;
- (2) Check the level of the engine lubricating oil;
- (3) Check the level of the transmission fluid;
- (4) Set the brakes and chock the wheels;
- (5) Install a functioning portable carbon monoxide (CO) sampling device into the untreated exhaust port coupling provided in the operator's cab;
- (6) Start the engine and allow it to attain normal operating temperature;
- (7) At high idle speed, check the intake restriction and the exhaust back pressure;



(8) If the intake restriction is more than the manufacturer's maximum specified intake restriction, replace the intake filter with a new one;

(9) If exhaust gas backpressure is above that specified by the manufacturer, take steps to bring the exhaust gas backpressure back within the manufacturer's specified limit prior to again beginning the equipment maintenance diagnostic testing of paragraph (B) of this rule;

(10) For mobile equipment, shift into the highest gear and fully accelerate the engine, or for stationary equipment, induce a load and put the engine at full throttle. Maintain full acceleration or full throttle for a minimum of sixty seconds prior to taking the reading required under paragraph (B)(11) of this rule to dissipate any reading inaccuracies due to turbo lag;

(11) Start the portable CO sampling device, record the CO level after sixty seconds, after seventy-five seconds, and after ninety seconds, and then take the average of these three readings;

(12) Install the portable CO sampling device into the treated exhaust port coupling provided in the operator's cab and repeat steps of paragraphs (B)(10) and (B)(11) of this rule; and

(13) Comply with record keeping requirements of rule 1501:10-2-17 of the Administrative Code.

(C) For any diesel-powered equipment tested under paragraph (B) of this rule, if the average CO reading for untreated exhaust emissions is greater than twice the baseline established under paragraph (B) of rule 1501:10-2-20 of the Administrative Code, or if the average CO reading for treated exhaust gas is greater than one hundred parts per million (ppm), the equipment has failed the diagnostic test. A mechanic qualified in accordance with rule 1501:10-2-24 of the Administrative Code shall service and retest the equipment until it meets the standards of this chapter before the equipment is returned to regular service.

(D) The chief may approve an alternative to the equipment maintenance diagnostic testing procedure of paragraph (B) of this rule.