

(85 °C) under test conditions specified in § 7.103(a)(4).

(3) The exhaust system shall be designed so that improper installation of the flame arrester is impossible.

(4) The exhaust system shall provide a means to cool the exhaust gas and prevent discharge of glowing particles.

(i) When a wet exhaust conditioner is used to cool the exhaust gas and prevent the discharge of glowing particles, the temperature of the exhaust gas at the discharge from the wet exhaust conditioner shall not exceed 170 °F (76 °C) when tested in accordance with the exhaust gas cooling efficiency test in § 7.102. A sensor shall be provided that activates the safety shutdown system before the exhaust gas temperature at discharge from the wet exhaust conditioner exceeds 185 °F (85 °C) when tested in accordance with the safety system controls test in § 7.103. All parts of the wet exhaust conditioner and associated components that come in contact with contaminated exhaust conditioner water shall be constructed of corrosion-resistant material.

(ii) When a dry exhaust conditioner is used to cool the exhaust gas, the temperature of the exhaust gas at discharge from the diesel power package shall not exceed 302 °F (150 °C) when tested in accordance with the exhaust gas cooling efficiency test of § 7.102. A sensor shall be provided that activates the safety shutdown system before the exhaust gas exceeds 302 °F (150 °C) when tested in accordance with the safety system control test in § 7.103. A means shall be provided to prevent the discharge of glowing particles, and it shall be evaluated under the provisions of § 7.107.

(5) Other means for cooling the exhaust gas and preventing the propagation of flame or discharge of glowing particles shall be evaluated under the provisions of § 7.107.

(6) There shall be a connection in the exhaust system for temporary attachment of a device to indicate the total backpressure in the system and collection of exhaust gas samples. This opening shall be closed by a plug or other suitable device that is sealed or locked in place except when in use.

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§ 7.99 Critical characteristics.

The following critical characteristics shall be inspected or tested on each diesel power package to which an approval marking is affixed:

(a) Finish, width, planarity, and clearances of surfaces that form any part of a flame-arresting path.

(b) Thickness of walls and flanges that are essential in maintaining the explosion-proof integrity of the diesel power package.

(c) Size, spacing, and tightness of fastenings.

(d) The means provided to maintain tightness of fastenings.

(e) Length of thread engagement on fastenings and threaded parts that ensure the explosion-proof integrity of the diesel power package.

(f) Diesel engine approval marking.

(g) Fuel rate setting to ensure that it is appropriate for the intended application, or a warning tag shall be affixed to the fuel system notifying the purchaser of the need to make proper adjustments.

(h) Material and dimensions of gaskets that are essential in maintaining the explosion-proof integrity of the diesel power package.

(i) Dimensions and assembly of flame arresters.

(j) Materials of construction to ensure that the intake system, exhaust system, cooling fans, and belts have been fabricated from the required material.

(k) Proper interconnection of the coolant system components and use of specified components.

(l) Proper interconnection of the safety shutdown system components and use of specified components.

(m) All plugs and covers to ensure that they are tightly installed.

(n) The inspections and tests described in the diesel power package checklist shall be performed and all requirements shall be met.

§ 7.100 Explosion tests.

(a) *Test procedures.* (1) Prepare to test the diesel power package as follows:

(i) Perform a detailed check of parts against the drawings and specifications submitted under § 7.97 to determine that the parts and drawings agree.