$$\text{PT gr/hr} = \frac{(P_{fcorr}\ \text{mg})(\text{m mix kg/hr})\text{avg.}}{(\text{m sample kg})(1000\ \text{mg/gr})}$$

Where:

$$(\text{m mix kg / hr})\ \text{avg.} = \sum_{i=1}^{i=n}(\text{m mix kg / hr}_i)(WF_i)$$

$$(\text{m sample kg}) = \sum_{i=1}^{i=n}(\text{m sample kg}_i)$$

(B) Determination of particulate index for the mass particulate from the average of the test modes shall be as follows:

$$PI = \frac{(\text{PT gr /hr})(1000\ \text{mg /gr})(1\ \text{hr /60 min})(35.31\ \text{ft}^3\ /\text{m}^3)}{(1/1\ \text{mg /m}^3)}$$

(v) When the effective weighting factor, $WF_{E,i}$, for each mode is calculated for the single filter method, the following shall apply.

$$\text{(A)}\quad WF_{E,i} = \frac{(\text{m sample kg}_i)(\text{m mix kg /hr avg})}{(\text{m sample kg})(\text{m mix kg /hr}_i)}$$

(B) The value of the effective weighting factors shall be within ±0.005 (absolute value) of the weighting factors listed in Table E–3.

(b) A particulate index for each requested rated speed and horsepower shall be the value determined in paragraph (a)(9)(iii)(C) of this section for the multiple filter method or paragraph (a)(9)(iv)(B) of this section for the single filter method.

(1) Particulate indices less than 20,000 cfm shall be rounded up to the next 500 cfm. Example: 10,432 cfm shall be listed 10,500 cfm.

(2) Particulate indices greater than 20,000 cfm shall be rounded up to the nearest thousand 1,000 cfm. Example: 26,382 cfm shall be listed 27,000 cfm.

[61 FR 55504, Oct. 25, 1996; 62 FR 34640, June 27, 1997]

§ 7.90 Approval marking.

Each approved diesel engine shall be identified by a legible and permanent approval marking inscribed with the assigned MSHA approval number and securely attached to the diesel engine. The marking shall also contain the following information:

(a) Ventilation rate.

(b) Rated power.

(c) Rated speed.

(d) High idle.

(e) Maximum altitude before deration.

(f) Engine model number.

§ 7.91 Post-approval product audit.

Upon request by MSHA, but no more than once a year except for cause, the approval holder shall make a diesel engine available for audit at no cost to MSHA.

§ 7.92 New technology.

MSHA may approve a diesel engine that incorporates technology for which the requirements of this subpart are not applicable if MSHA determines that the diesel engine is as safe as those which meet the requirements of this subpart.

Subpart F—Diesel Power Packages Intended for Use in Areas of Underground Coal Mines Where Permissible Electric Equipment is Required

SOURCE: 61 FR 55518, Oct. 25, 1996, unless otherwise noted.

§ 7.95 Purpose and effective date.

Part 7, subpart A general provisions apply to subpart F. Subpart F establishes the specific requirements for MSHA approval of diesel power packages intended for use in approved equipment in areas of underground coal mines where electric equipment is required to be permissible. It is effective November 25, 1996.

§ 7.96 Definitions.

In addition to the definitions in subparts A and E of this part, the following definitions apply in this subpart.

Cylindrical joint. A joint comprised of two contiguous, concentric, cylindrical surfaces.

Diesel power package. A diesel engine with an intake system, exhaust system, and a safety shutdown system installed.

Dry exhaust conditioner. An exhaust conditioner that cools the exhaust gas without direct contact with water.

Exhaust conditioner. An enclosure, containing a cooling system, through which the exhaust gases pass.

Exhaust system. A system connected to the outlet of the diesel engine which includes, but is not limited to, the exhaust manifold, the exhaust pipe, the exhaust conditioner, the exhaust flame arrester, and any adapters between the exhaust manifold and exhaust flame arrester.

Fastening. A bolt, screw, or stud used to secure adjoining parts to prevent the escape of flame from the diesel power package.

Flame arrester. A device so constructed that flame or sparks from the diesel engine cannot propagate an explosion of a flammable mixture through it.

Flame arresting path (explosion-proof joint). Two or more adjoining or adjacent surfaces between which the escape of flame is prevented.

Flammable mixture. A mixture of methane or natural gas with normal air, that will propagate flame or explode when ignited.

Grade. The slope of an incline expressed as a percent.

High idle speed. The maximum no load speed specified by the engine manufacturer.

Intake system. A system connected to the inlet of the diesel engine which includes, but is not limited to, the intake manifold, the intake flame arrester, the emergency intake air shutoff device, the air cleaner, and all piping and adapters between the intake manifold and air cleaner.

Plane joint. A joint comprised of two adjoining surfaces in parallel planes.

Safety shutdown system. A system which, in response to signals from various safety sensors, recognizes the existence of a potential hazardous condition and automatically shuts off the fuel supply to the engine.

Step (rabbet) joint. A joint comprised of two adjoining surfaces with a change or changes in direction between its inner and outer edges. A step joint may be composed of a cylindrical portion and a plane portion or of two or more plane portions.

Threaded joint. A joint consisting of a male- and female-threaded member, both of which are the same type and gauge.

Wet exhaust conditioner. An exhaust conditioner that cools the exhaust gas