

Environmental Protection Agency

§ 204.55-2

(5) The machine shall have been warmed up and shall be operating in a stable condition as for continuous service and at its maximum rated capacity. All cooling air vents in the engine/compressor enclosure, normally open during operation, shall be fully open during all sound level measurements. Service doors that should be closed during normal operation (at any and all ambient temperatures) shall be closed during all sound level measurements.

(f) *Microphone locations.* Five microphone locations must be employed to acquire portable air compressor sound levels to test for noise standard compliance. A microphone must be located 7 ± 1 meters from the right, left, front, and back sides and top of the test unit. The microphone position to the right, left, front, and back sides of the test unit must be located 1.5 ± 1 meters above the reflecting plane.

(g) *Data required.* The following data must be acquired during noise emission standard compliance testing:

(1) A-weighted sound level at one microphone location prior to operation of the test unit and at all microphone locations during test unit operations, as defined in paragraph (d) of this section.

(2) Portable air compressor engine speed.

(3) Portable air compressor compressed gas pressure.

(4) Portable air compressor flow rate.

(5) All other data contained in Appendix I, Table IV.

(h) *Calculation of average sound level.* The average A-weighted sound level from measurements at the specified microphone locations must be calculated by the following method:

$$L = 10 \log (1/5[\text{Antilog } L_1/10 + \text{Antilog } L_2/10 + \text{Antilog } L_3/10 + \text{Antilog } L_4/10 + \text{Antilog } L_5/10])$$

Where:

L = The average A-weighted sound level (in decibels)

L_1 = The A-weighted sound level (in decibels) at microphone position 1

L_2 = The A-weighted sound level (in decibels) at microphone position 2

L_3 = The A-weighted sound level (in decibels) at microphone position 3

L_4 = The A-weighted sound level (in decibels) at microphone position 4

L_5 = The A-weighted sound level (in decibels) at microphone position 5

(i) The Administrator may approve applications from manufacturers of portable air compressors for the approval of test procedures which differ from those contained in this part so long as the alternate procedures have been demonstrated to correlate with the prescribed procedure. To be acceptable, alternate testing procedures shall be such that the test results obtained will identify all those test units which would not comply with the noise emission limit prescribed in § 204.52 when tested in accordance with the procedures contained in § 204.54 (a) through (h). Tests conducted by manufacturers under approved alternate procedures may be accepted by the Administrator for all purposes.

(j) *Presentation of information.* All information required by this section may be recorded using the format recommended on the Noise Data Sheet shown in Appendix I, Table IV.

[41 FR 2172, Jan. 14, 1976, as amended at 41 FR 8347, Feb. 26, 1976; 47 FR 57711, Dec. 28, 1982]

§ 204.55 Requirements.

§ 204.55-1 General standards.

(a) Every new compressor manufactured for distribution in commerce in the United States which is subject to the standards prescribed in this subpart and not exempted in accordance with § 204.5:

(1) Shall be labeled in accordance with the requirements of § 204.55-4.

(2) Shall conform to the applicable noise emission standard established in § 204.52

(b) [Reserved]

[41 FR 2172, Jan. 14, 1976, as amended at 47 FR 57711, Dec. 28, 1982]

§ 204.55-2 Requirements.

(a)(1) Prior to distribution in commerce, compressors of a specific configuration must verify such configurations in accordance with this subpart.

(2) [Reserved]

(3) At any time with respect to a configuration under this subpart, the Administrator may require that the manufacturer ship test compressors to an

EPA test facility in order for the Administrator to perform the tests required for production verification.

(b) The requirements for purposes of testing by the Administrator and Selective Enforcement Auditing consist of:

(1) Testing in accordance with §204.54 of a compressor selected in accordance with §204.57-2; and

(2) Compliance of the test compressor with the applicable standards when tested in accordance with §204.54.

(c)(1) In lieu of testing compressors of every configuration, as described in paragraph (b) of this section, the manufacturer may elect to verify the configuration based on representative testing, the requirements of which consist of:

(i) Grouping configurations into a category where each category will be determined by a separate combination of at least the following parameters (a manufacturer may use more parameters):

(A) Engine type.

(1) Gasoline—two stroke cycle

(2) Gasoline—four stroke cycle

(3) Diesel—two stroke cycle

(4) Diesel—four stroke cycle

(5) Rotary—Wankel

(6) Turbine

(7) Other

(B) Engine manufacturer

(C) Compressor delivery rate (at rated pressure)

(ii) Identifying the configuration within each category which emits the highest sound level in dBA based on best technical judgment, emission test data, or both.

(iii) Testing in accordance with §204.54 selected in accordance with §204.57-2 which must be a compressor of the configuration which is identified pursuant to paragraph (c)(1)(iii) of this section as having the highest sound level (estimated or actual) within the category.

(iv) Compliance of the test compressor with applicable standards when tested in accordance with §204.54.

(2) Where the requirements of paragraph (c)(1) of this section are complied with, all those configurations contained within a category are considered represented by the tested compressor.

(3) Where the manufacturer tests a compressor configuration which has not been determined as having the highest sound level of a category, but all other requirements of paragraph (c)(1) of this section are complied with, all those configurations contained within that category which are determined to have sound levels no greater than the tested compressor are considered to be represented by the tested compressor: However, a manufacturer must for purposes of Testing by the Administrator and Selective Enforcement Auditing verify according to the requirements of paragraph (b)(1) and/or (c)(1) of this section any configurations in the subject category which have a higher sound level than the compressor configuration tested.

(d) A manufacturer may elect for purposes of Testing by the Administrator and Selective Enforcement Auditing to use representative testing, pursuant to paragraph (c) of this section, all or part of his product line.

(e) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any compressor determined not in compliance with applicable standards:

(1) In the case of representative testing, a new test compressor from another configuration must be selected according to the requirements of paragraph (c) of this section in order to verify the configurations represented by the non-compliant compressor.

(2) Modify the test compressor and demonstrate by testing that it meets applicable standards. The manufacturer must modify all production compressors of the same configuration in the same manner as the test compressor before distribution into commerce.

(Secs. 6 and 13, Noise Control Act, Pub. L. 92-574, 86 Stat. 1244; (42 U.S.C. 4912); 42 U.S.C. 4905; 86 Stat. 1237 and secs. 6, 10, 11, 13, Pub. L. 92-574, 86 Stat. 1234 (42 U.S.C. 4905, 4909, 4910, 4912))

[41 FR 2172, Jan. 14, 1976, as amended at 42 FR 61455, Dec. 5, 1977; 47 FR 57711, Dec. 28, 1982; 49 FR 26738, June 29, 1984]

§ 204.55-3 Configuration identification.

(a) A separate compressor configuration shall be determined by each combination of the following parameters: