

**§ 325.57**

sound level reading which is applicable at the test site at the time of testing.

(b) *Wind.* The wind velocity at the test site shall be measured at the beginning of each series of noise measurements and at intervals of 5-15 minutes thereafter until it has been established that the wind velocity is essentially constant. Once this fact has been established, wind velocity measurements may be made at intervals of once every hour. Noise measurements may only be made if the measured wind velocity is 12 mph (19.3 kph) or less. Gust wind measurements of up to 20 mph (33.2 kph) are allowed.

(c) *Precipitation.* Measurements are prohibited under any conditions of precipitation, however, measurements may be made with snow on the ground. The ground within the measurement area must be free of standing water.

[40 FR 42437, Sept. 12, 1975, as amended at 41 FR 28267, July 9, 1976]

**§ 325.57 Location and operation of sound level measurement systems; stationary test.**

(a) The microphone of a sound level measurement system that conforms to the rules in §325.23 shall be located at a height of not less than 2 feet (.6 m) nor more than 6 feet (1.8 m) above the plane of the roadway surface and not less than 3½ feet (1.1 m) above the surface on which the microphone stands. The preferred microphone height on flat terrain is 4 feet (1.2 m).

(b) When the sound level measurement system is hand-held or otherwise monitored by a person located near its microphone, the holder must orient himself/herself relative to the highway in a manner consistent with the recommendation of the manufacturer of the sound level measurement system. In no case shall the holder or observer be closer than 2 feet (.6 m) from the system's microphone, nor shall he/she locate himself/herself between the microphone and the vehicle being measured.

(c) The microphone of the sound level measurement system shall be oriented toward the vehicle at an angle that is consistent with the recommendation of the system's manufacturer. If the manufacturer of the system does not recommend an angle of orientation for its

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microphone, the microphone shall be oriented at an angle of not less than 70 degrees and not more than perpendicular to the horizontal plane of the test site at the microphone target point.

(d) The sound level measurement system shall be set to the A-weighting network and "fast" meter response mode.

[40 FR 42437, Sept. 12, 1975, as amended at 41 FR 10227, Mar. 10, 1976]

**§ 325.59 Measurement procedure; stationary test.**

In accordance with the rules in this subpart, a measurement shall be made of the sound level generated by a stationary motor vehicle as follows:

(a) Park the motor vehicle on the test site as specified in §325.53 of this subpart. If the motor vehicle is a combination (articulated) vehicle, park the combination so that the longitudinal centerlines of the towing vehicle and the towed vehicle or vehicles are in substantial alinement.

(b) Turn off all auxiliary equipment which is installed on the motor vehicle and which is designed to operate under normal conditions only when the vehicle is operating at a speed of 5 mph (8 kph) or less. Examples of such equipment include cranes, asphalt spreaders, liquid or slurry pumps, auxiliary air compressors, welders, and trash compactors.

(c) If the motor vehicle's engine radiator fan drive is equipped with a clutch or similar device that automatically either reduces the rotational speed of the fan or completely disengages the fan from its power source in response to reduced engine cooling loads, park the vehicle before testing with its engine running at high idle or any other speed the operator may choose, for sufficient time but not more than 10 minutes, to permit the engine radiator fan to automatically disengage when the vehicle's noise emissions are measured under stationary test.

(d) With the motor vehicle's transmission in neutral and its clutch engaged, rapidly accelerate the vehicle's engine from idle to its maximum governed speed with wide open throttle. Return the engine's speed to idle.

(e) Observe the maximum reading on the sound level measurement system during the time the procedures specified in paragraph (d) of this section are followed. Record that reading, if the reading has not been influenced by extraneous noise sources such as motor vehicles operating on adjacent roadways.

(f) Repeat the procedures specified in paragraphs (d) and (e) of this section until the first two maximum sound level readings that are within 2 dB(A) of each other are recorded. Numerically average those two maximum sound level readings. When appropriate, correct the average figure in accordance with the rules in subpart F of this part.

(g) The average figure, corrected as appropriate, contained in accordance with paragraph (f) of this section, is the sound level generated by the motor vehicle for the purpose of determining whether it conforms to the Standard for Operation Under Stationary Test, 40 CFR 202.21. (Table 1 in §325.7 lists the range of maximum permissible sound level readings for various test conditions.)

[40 FR 42437, Sept. 12, 1975, as amended at 41 FR 10226, Mar. 10, 1976]

**Subpart F—Correction Factors**

**§ 325.71 Scope of the rules in this subpart.**

(a) The rules in this subpart specify correction factors which are added to, or subtracted from, the reading of the sound level generated by a motor vehicle, as displayed on a sound level measurement system, during the measurement of the motor vehicle's sound level emissions at a test site which is not a standard site.

(b) The purpose of adding or subtracting a correction factor is to equate the sound level reading actually generated by the motor vehicle to the sound level reading it would have generated if the measurement had been made at a standard test site.

**§ 325.73 Microphone distance correction factors.<sup>1</sup>**

If the distance between the microphone location point and the microphone target point is other than 50 feet (15.2 m), the maximum observed sound level reading generated by the motor vehicle in accordance with §325.39 of this part or the numerical average of the recorded maximum observed sound level readings generated by the motor vehicle in accordance with §325.59 of this part shall be corrected as specified in the following table:

TABLE 2—DISTANCE CORRECTION FACTORS

If the distance between the microphone location point and the microphone target point is	The value dB(A) to be applied to the observed sound level reading is—
31 feet (9.5 m) or more but less than 35 feet (10.7 m) .....	-4
35 feet (10.7 m) or more but less than 39 feet (11.9 m) .....	-3
39 feet (11.9 m) or more but less than 43 feet (13.1 m) .....	-2
43 feet (13.1 m) or more but less than 48 feet (14.6 m) .....	-1
48 feet (14.6 m) or more but less than 58 feet (17.7 m) .....	0
58 feet (17.7 m) or more but less than 70 feet (21.3 m) .....	+1
70 feet (21.3 m) or more but less than 83 feet (25.3 m) .....	+2

[40 FR 42437, Sept. 12, 1975, as amended at 54 FR 50385, Dec. 6, 1989]

**§ 325.75 Ground surface correction factors.<sup>1</sup>**

(a) *Highway operations.* When measurements are made in accordance with the rules in subpart D of this part upon

<sup>1</sup>Table 1, in §325.7 is a tabulation of the maximum allowable sound level readings taking into account both the distance correction factors contained in §325.73 and the ground surface correction factors contained in §325.75.

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