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U.S. ENVIRONMENTAL PROTECTION AGENCY



NOISE ADVISORY CIRCULAR

PORTABLE AIR COMPRESSORS

A/C No. 3 May 31, 1978 Page 1 of 2 pages

Subject: Meter reading

A. Purpose

To describe the proper procedure for reading the sound level meter during noise emission testing of portable air compressors under section 204.54 of the Portable Air Compressor Noise Emission Regulation (40 CFR 204.50 et seq.) and to outline the procedure for handling extraneous noise which occurs during testing under the same regulation.

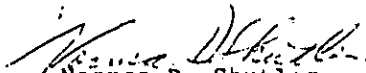
B. Background

In correspondence with the compressor industry it has become apparent that some misunderstanding as to the correct method to read the meter in EPA's government test procedure exists. At the May 1977 meeting with the industry and in subsequent correspondence, EPA has attempted to describe in detail the proper procedures for a test director to use in reading an oscillating noise meter needle and in voiding a test due to extraneous noise. This advisory circular describes this procedure.

C. Discussion

Because the noise emitted by a portable air compressor is non-steady-state, the needle of the sound level meter fluctuates during the noise measurements conducted under the regulation. The test director must record the high needle reading as the official noise level at each microphone position. If the variation is caused by an identifiable extraneous noise source, the test director must void the test without regard to, or knowledge of, the levels being measured. Examples of such extraneous noise sources are trains, airplanes, boats, and chainsaws.

The situation may arise when the test conductor observes the meter needle to rise and fall sharply or otherwise behave in an unusual manner which is not inherent in compressor noise but no extraneous noise source can be identified. In such cases the noise measurement at that particular microphone position may be repeated. If the same behavior is observed during the second measurement, the maximum level from the first measurement is recorded as the compressor's noise emission level at that particular microphone position. If the behavior is not observed during the second measurement then it is presumed the first measurement was influenced by an unobserved extraneous noise source. Then, the maximum level observed during the second measurement will be recorded as the compressor's noise level at that particular microphone position.



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