

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 362

MEASUREMENT OF NOISE EMITTED BY VEHICLES

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 362, *Measurement of Noise Emitted by Vehicles*, was drawn up by Technical Committee ISO/TC 43, *Acoustics*, the Secretariat of which is held by the British Standards Institution (B.S.I.).

Work on this question by the Technical Committee began in 1958 and led, in 1960, to the adoption of a Draft ISO Recommendation.

This first Draft ISO Recommendation (No. 419) was circulated to all the ISO Member Bodies for enquiry, in November 1960. Taking into account the observations put forward by the Technical Committee ISO/TC 22, *Automobiles*, regarding mechanical specifications, Technical Committee ISO/TC 43 presented a Second Draft ISO Recommendation, which was circulated to all the ISO Member Bodies in May 1962, and which was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Australia	France	Poland
Austria	Germany	Portugal
Belgium	Greece	Spain
Brazil	Hungary	Sweden
Canada	India	Switzerland
Chile	Ireland	United Kingdom
Czechoslovakia	Israel	U.S.A.
Denmark	Netherlands	U.S.S.R.
Finland	New Zealand	Yugoslavia

One Member Body opposed the approval of the Draft: Japan.

The second Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1964, to accept it as an ISO RECOMMENDATION.

MEASUREMENT OF NOISE EMITTED BY VEHICLES

1. SCOPE

This ISO Recommendation describes methods of determining the noise emitted by motor vehicles, these being intended to meet the requirements of simplicity as far as is consistent with reproducibility of results and realism in the operating conditions of the vehicle.

2. GENERAL REQUIREMENTS

2.1 Test conditions

This ISO Recommendation is based primarily on a test with vehicles in motion, the ISO reference test. It is generally recognized to be of primary importance that the measurements should relate to normal town driving conditions, thus including transmission noise etc. Measurements should also relate to vehicle conditions which give the highest noise level consistent with normal driving and which lead to reproducible noise emission. Therefore, an acceleration test at full throttle from a stated running condition is specified.

Recognizing, however, that different practices already exist, specifications of two other methods used are also given in the Appendix. These relate to:

- (a) a test with stationary vehicles (see Appendix A1) and
- (b) a test with vehicles in motion, under vehicle conditions which (in the case of certain vehicles) are different from those in the ISO reference test (see Appendix A2).

When either of these tests is used, the relation between the results and those obtained by the ISO reference test should be established for typical examples of the model concerned.

2.2 Test site

The test methods prescribed call for an acoustical environment which can only be obtained in an extensive open space. Such conditions can usually be provided

- for type-approval measurements of vehicles,
- for measurements at the manufacturing stage, and
- for measurements at official testing stations.

It is desirable that spot checking of vehicles on the road should be made in a similar acoustical environment. If measurements have to be carried out on the road in an acoustical environment which does not fulfil the requirements stated in this ISO Recommendation, it should be recognized that the results obtained may deviate appreciably from the results obtained using the specified conditions.

2.3 Interpretation of results

The results obtained by the methods specified give an objective measure of the noise emitted under the prescribed conditions of test. Owing, however, to the fact that the subjective appraisal of the annoyance or noisiness of different classes of motor vehicles is not simply related to the indications of a sound level meter, it is recognized that the correct interpretation of results of the measurements in this ISO Recommendation may require different limits to be set for the corresponding annoyance of different classes of vehicles.