ISO/TS 19425:2024-07 (E)

Reciprocating internal combustion engines - Measurement method for air cleaners - Sound power level of combustion air inlet noise and insertion loss using sound pressure

Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Test environment ... **5**
4.1 General ... 5
4.2 Criterion for background noise ... 5
4.3 Criterion for acoustic adequacy of test environment ... 6

5 Instrumentation ... **6**
5.1 General ... 6
5.2 Calibration ... 6
5.3 Application ... 7

6 Installation and operation conditions ... **7**
6.1 General ... 7
6.2 Installation condition ... 7
6.3 Operation condition ... 8

7 Measurement ... **9**
7.1 General ... 9
7.2 Measurement uncertainty ... 9
7.3 Characteristic source dimension ... 10
7.4 Measurement radius ... 10
7.5 Measurement surface and area ... 10
7.6 Microphone arrays ... 10

8 Calculation ... **12**
8.1 General ... 12
8.2 Calculation of sound power level ... 12
8.2.1 Mean time-averaged sound pressure levels ... 12
8.2.2 Corrections for background noise ... 13
8.2.3 Corrections for environmental ... 13
8.2.4 Surface time-averaged sound pressure levels ... 14
8.2.5 Sound power levels ... 14
8.3 Calculation of insertion loss ... 14

9 Information to be recorded ... **15**

10 Test report ... **16**

Annex A (normative) **Qualification procedures for the acoustic environment** ... **17**

Annex B (normative) **Calculation of A-weighted sound power levels from frequency band levels** ... **20**

Annex C (normative) **Sound power level under reference meteorological conditions** ... **22**

Bibliography ... **23**