ISO/TS 19425:2015-12 (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

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 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 6

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

7 Measurement 8
7.1 General 8
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)Qualificationproceduresfortheacousticenvironment 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 24