

ICS 23.100.10

CCS J 20



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 34887-2017

**Hydraulic fluid power -- Test code for the determination of noise
level of hydraulic motors**

液压传动 马达噪声测定规范

(English Translation)

Issued on: November 1, 2017

Implemented on: May 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

Preface
1 Scope
2 Normative references
3 Terms and definitions
4 Measurement uncertainty
5 Test environment
6 Measuring instruments
7 Motor installation conditions
8 Operating conditions
9 Noise measurement point location and the number of points
10 Determination procedures
11 Record information
12 Test report
13 Marking instructions
Appendix A (informative) Technical differences and causes
Appendix B (Normative) Accuracy of measuring instruments and system error
Appendix C (Normative) Noise measurement point location and measuring points
Appendix D (Normative) Background noise sound pressure level correction value
Appendix E (Normative) Sound pressure level and sound power level calculation

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses redrafted Law Amendment uses ISO 4412-2:1991 "hydraulic transmission test airborne noise level test rules Fan Part 2. Motor "(in English).

This standard compared with ISO 4412-2:1991 there are technical differences, Appendix A gives the corresponding technical differences and their causes Table.

This standard is proposed by the China Machinery Industry Federation.

This standard by the National Hydraulic Pneumatic Standardization Technical Committee (SAC/TC3) centralized.

1 Scope

This standard specifies the specifications for the airborne noise level measurement of hydraulic motors (hereinafter referred to as motors) operating under steady-state conditions.

This standard applies to the A-weighted sound power level measurement motor, motor frequency band (center frequency from 125Hz ~ 8000Hz) sound power Rate level.

This standard does not apply to the working speed is less than 50r/min, motor reference rectangular hexahedron size larger than 1m motor, its His form of hydraulic motor can also be used for reference.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 3141 industrial liquid lubricants ISO viscosity classification (GB/T 3141-1994, eqvISO 3448.1992) GB/T 3241 electroacoustic octave and fractional octave filter (GB/T 3241-2010, IEC 61260:1995, MOD) GB/T 3767 Acoustics sound pressure method for the determination of noise source sound power level and acoustic energy level above the free surface of the reflecting surface above the engineering method GB/T 3785.1 Electroacoustic sound level meter Part 1. Specification (GB/T 3785.1-2010, IEC 61672-1:2002, IDT) GB/T 3785.2 electroacoustic sound level meter Part 2. Type evaluation test (GB/T 3785.2-2010, IEC 61672-2.

2003, IDT)

GB/T 3947 Acoustics terminology GB/T 6882 Acoustics sound pressure method for the determination of noise source sound power level and sound energy level anechoic chamber and semi-anechoic chamber precision method GB/T 7631.2 Lubricants, industrial oils and related products (Category L) classification - Part 2 H group (hydraulic system) (GB/T 7631.2-2003, ISO 6743-4:1999, IDT) GB/T 17483 hydraulic pump air noise level sounding specification (GB/T 17483-1998, eqvISO 4412-1.1991)

3 Terms and definitions

GB/T 3767 and GB/T 3947 as defined by the following terms and definitions apply to this document.

Freefield freesoundfield in homogeneous isotropic media, the boundary affects sound fields that can be ignored.

[GB/T 3947-1996, Definition 4.57]

Note that in practice this is a sound field with negligible boundary effects in the 125 Hz to 8000 Hz frequency range.

Reflective surface free field above free field over a reflecting plane Sound field in an isotropic, homogeneous medium in an infinite, hard, flat surface above half-space.

Note The sound source under test is on this surface.

Anechoic room

The boundary effectively absorbs all the incident sound so that it is essentially a free-field room.