INCH-POUND
MIL-STD-202-201
18 April 2015

SUPERSEDING
MIL-STD-202G
w/CHANGE 2 (IN PART)
28 June 2013
(see 6.1)

**DEPARTMENT OF DEFENSE**

**TEST METHOD STANDARD**

# METHOD 201, VIBRATION




AMSC N/A

FSC 59GP

# FOREWORD

1. This standard is approved for use by all Departments and Agencies of the Department of Defense.

2. This entire standard has been revised. This revision has resulted in many changes to the format, but the most significant one is the splitting the document into test methods. See MIL-STD-202 for the change summary.

3. Comments, suggestions, or questions on this document should be emailed to std202@dla.mil or addressed to: Commander, Defense Logistics Agency, DLA Land and Maritime, ATTN: VAT, P.O. Box 3990, Columbus, OH 43218–3990. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil.

CONTENTS


| PARAGRAPH | | PAGE |
|---|---|---|
| | FOREWORD…… | ii |
| 1. | SCOPE | 1 |
| 1.1 | Purpose…… | 1 |
| 2. | APPLICABLE DOCUMENTS | 1 |
| 3. | DEFINTIONS | 1 |
| 4. | GENERAL REQUIREMENTS | 1 |
| 4.1 | Procedure…… | 1 |
| 5. | DETAILED REQUIREMENTS | 1 |
| 5.1 | Measurements…… | 1 |
| 5.2 | Summary…… | 1 |
| 6. | NOTES | 2 |
| 6.1 | Supersession data…… | 2 |

# METHOD 201
# VIBRATION

## 1. SCOPE

1.1 Purpose. The vibration test is used to determine the effects on component parts of vibration within the predominant frequency ranges and magnitudes that may be encountered during field service. Most vibration encountered in field service is not of a simple harmonic nature, but tests based on vibrations of this type have proved satisfactory for determining critical frequencies, modes of vibration and other data necessary for planning protective steps against the effects of undue vibration. Vibration, by causing loosening of parts or relative motion between parts in the specimen, can produce objectionable operating characteristics, noise, wear, and physical distortion, and often results in fatigue and failure of mechanical parts.

## 2. APPLICABLE DOCUMENTS

This section not applicable to this standard.

## 3. DEFINTIONS

This section not applicable to this standard.

## 4. GENERAL REQUIREMENTS

4.1 Procedure.. Prior to vibration, the specified tests or measurements shall be made. The specimens shall be mounted as specified using suitable mounting apparatus to assure that mounting is free from resonances over the test frequency range. The specimens shall be subjected to a simple harmonic motion having an amplitude of 0.03 inch (0.06 inch maximum total excursion), the frequency being varied uniformly between the approximate limits of 10 and 55 hertz (Hz). The entire frequency range, from 10 to 55 Hz and return to 10 Hz, shall be traversed in approximately 1 minute. Unless otherwise specified, this motion shall be applied for a period of 2 hours in each of 3 mutually perpendicular directions (total of 6 hours).1/ If applicable, this test shall be made under electrical-load conditions.

## 5. DETAILED REQUIREMENTS

5.1 Measurements. The specified measurements shall be made during and after vibration.

5.2 Summary. The following details are to be specified in the individual specification:

a. Tests and measurements prior to vibration (see 4.1).

b. Method of mounting (see 4.1).

c. Duration of vibration, if other than that specified (see 4.1).

d. Direction of motion, if other than that specified (see 4.1).

e. Electrical-load conditions, if applicable (see 4.1).

f. Tests and measurements during and after vibration (see 5.1).

---

1/ In the previous issue of this method, test conditions A and B referred to a length of test of 5 hours and 2-1/2 hours, respectively.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Supersession data. The main body and 38 parts of this revision of MIL-STD-202 replace superseded MIL-STD-202.

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Review activities:
Army - AR, AT, AV, CR4, MI, SM, TE
Navy - AS, OS, SH
Air Force - 19, 99
NSA - NS

Preparing activity:
DLA – CC

(Project 59GP-2015-017)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil/