JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS D 1614 : 2017

(JSAE)

Radiator for automobiles—Test method of heat dissipation

ICS 43.060.30

Reference number : **JIS D 1614 : 2017 (E)**

Date of Establishment: 1966-01-01
Date of Revision: 2017-03-21
Date of Public Notice in Official Gazette: 2017-03-21
Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area

JIS D 1614:2017, First English edition published in 2017-08

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Printed in Japan

HT/AT

Contents

Page

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Society of Automotive Engineers of Japan, Inc. (JSAE) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS D 1614**:2000 is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

Radiator for automobiles— Test method of heat dissipation

1 Scope

This Japanese Industrial Standard specifies the testing method for heat dissipation of a cooling radiator intended to be used for automobile water cooling engines (hereafter referred to as radiator).

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this Standard. The most recent edition of the standard (including amendments) indicated below shall be applied.

JIS B 8330 *Testing methods for turbo-fans*

3 Terms and definitions

For the purposes of this Standard, the following terms and definitions apply.

3.1 inlet air-water temperature difference

difference between the inlet temperature of cooling water flowing into the radiator (hereafter referred to as water) and that of the air, expressed in degrees Celsius (°C)

3.2 waterside heat dissipation amount

amount of heat which the water loses per unit time under test conditions, expressed in kilowatts (kW)

3.3 heat dissipation amount

amount of heat which is converted to the state where the inlet air-water temperature difference at the time of measurement of waterside heat dissipation amount is 60 °C, expressed in kilowatts (kW)

3.4 water flow rate

amount of water passing through the radiator per unit time, expressed in litres per minute (L/min)

3.5 frontal mass wind velocity

wind velocity at the radiator core frontal area multiplied by the mass per unit volume of air, expressed in mass per unit area divided by second [kg/(m^2·s)]

3.6 waterside inlet-outlet pressure difference, waterside inlet-outlet pressure loss

difference of total pressure [1)] between the waterside inlet and outlet of the radiator measured under test conditions, expressed in kilopascals (kPa)

Note [1)] Total pressure = static pressure + dynamic pressure