

# JIS

**JAPANESE INDUSTRIAL STANDARD**

**Cylinder Liners for  
Automotive Engines**

**JIS D 3103—1989**

**Translated and Published**

**by**

**Japanese Standards Association**

**In the event of any doubt arising,  
the original Standard in Japanese is to be final authority.**

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Cylinder Liners for  
Automotive Engines

D 3103-1989

1. Scope

This Japanese Industrial Standard specifies the cylinder liners used for 4-cycle automotive engines. However, this does not apply to cylinder liners used for light alloy cylinder block with internal chill.

Remark: In this Standard the units and numerical values shown in { } are in accordance with conventional units and, appended for informative reference.

2. Definitions

For the purposes of this Standards, following definitions apply:

- (1) wet cylinder liner The cylinder liner of style where the cooling liquid contact the jacket part.
- (2) dry cylinder liner The cylinder liner of style having no jacket part, where cooling liquid does not contact.
- (3) mid stop The style to fix the position of central axis direction by the flange set at upper part (upper flange) and the flange set at the middle part (lower flange) in wet cylinder liner.

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Applicable Standards:

JIS B 0401-System of Limits and Fits

IIS B 0601-Definitions and Designation of Surface Roughness

JIS G 0565-Methods for Magnetic Particle Testing of Ferromagnetic  
Materials and Classification of Magnetic Particle Indication

JIS H 8615-Electroplated Coatings of Chromium for Engineering Purposes

JIS Z 2201-Test Pieces for Tensile Test for Metallic Materials

JIS Z 2241-Method of Tensile Test for Metallic Materials

JIS Z 2244-Method of Vickers Hardness Test

JIS Z 2245-Method of Rockwell and Rockwell Superficial Hardness Test