

INTERNATIONAL
STANDARD

ISO
2534

Third edition
2020-05

**Road vehicles — Engine test code —
Gross power**

Véhicules routiers — Code d'essai des moteurs — Puissance brute



Reference number
ISO 2534:2020(E)

© ISO 2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Accuracy of measuring equipment and instruments	2
4.1 Torque	2
4.2 Engine speed (rotational frequency)	2
4.3 Fuel flow	2
4.4 Fuel temperature	2
4.5 Air temperature	2
4.6 Barometric pressure	2
4.7 Back pressure in exhaust system	3
4.8 Depression in inlet system	3
4.9 Absolute pressure in inlet duct	3
5 Tests	5
5.1 Auxiliaries	5
5.1.1 Auxiliaries to be fitted	5
5.1.2 Auxiliaries to be removed	6
5.1.3 Compression-ignition engine starting auxiliaries	6
5.2 Setting conditions	6
5.3 Test conditions	6
5.4 Test procedure	8
5.5 Data to be recorded	8
6 Power correction factors	8
6.1 Definition of factor α for power correction	8
6.2 Atmospheric conditions	9
6.2.1 Reference atmospheric conditions	9
6.2.2 Test atmospheric conditions	9
6.3 Determination of power correction factors	9
6.3.1 Naturally aspirated and pressure-charged spark-ignition engines — Factor α_a	10
6.3.2 Compression-ignition engines — Factor α_c	10
6.3.3 Turbocharged engine with a system compensating the ambient conditions	12
6.3.4 Other types of engine	12
7 Measurement of and correction for smoke value for compression-ignition engines	12
7.1 Correction factor for light absorption coefficient of smoke	12
7.2 Determination of correction factor for light absorption coefficient of smoke	12
7.3 Limits of application	12
8 Test report	13
8.1 Compression-ignition engines — Essential characteristics	13
8.1.1 Description of engine	13
8.1.2 Cooling system	13
8.1.3 Temperatures specified by the manufacturer	14
8.1.4 Pressure charger (with/without) (delete where inapplicable)	14
8.1.5 Inlet system	15
8.1.6 Additional smoke control devices (if any, and if not covered by another heading)	15
8.1.7 Fuel feed system	15
8.1.8 Valve timing	16
8.1.9 Exhaust system	16
8.1.10 Lubrication system	16
8.1.11 Electrical equipment	17
8.1.12 Other engine-driven equipment	17