

Automotive fuels — Diesel — Requirements and test methods

ICS 75.160.20

National foreword

This British Standard is the UK implementation of EN 590:2009+A1:2010. It supersedes BS EN 590:2009, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

The UK National Annex NA gives the sampling requirements to comply with Clause 3. The UK National Annex NB gives the pump marking requirements to comply with Clause 4, and the UK National Annex NC gives the climate-dependent requirements to comply with 5.5.

The UK participation in its preparation was entrusted to Technical Committee PTI/2, Liquid fuels.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Automotive fuels - Diesel - Requirements and test methods

Carburants pour automobiles - Carburants pour moteur
diesel (gazole) - Exigences et méthodes d'essai

Kraftstoffe für Kraftfahrzeuge - Dieselmotorkraftstoff -
Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 12 March 2009 and includes Amendment 1 approved by CEN on 28 December 2009.

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Foreword

This document (EN 590:2009+A1:2010) has been prepared by Technical Committee CEN/TC 19 “Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2010, and conflicting national standards shall be withdrawn at the latest by August 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1, approved by CEN on 2009-12-28.

This document supersedes A1 EN 590:2009 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This document has been prepared as part of a mandate given to CEN by the European Commission and the European Free Trade Association. It stipulates the first step towards fulfilling that mandate, i.e. to reflect the different characteristics of FAME blended up to 10 % (V/V) in diesel compared to pure hydrocarbon diesel.

The requirements of the European Fuels Directive 98/70/EC [1], including amendment 2003/17/EC [2] A1 and Amendment 2009/30/EC [8] A1 have been included. Table 1 explicitly differentiates between requirements included in the European Fuels Directive 98/70/EC [1], including Amendment 2003/17/EC [2] A1 and Amendment 2009/30/EC [8] A1, and other requirements. Dates are included with all normative test method references in order to comply with the requirements of the European Commission, with the accompanying assurance that updated versions will always give similar accuracy and the same or better precision.

Significant technical changes between this European Standard and the previous edition are:

- a) Provision is made for a maximum of 7 % (V/V) of fatty acid methyl esters (FAME) to be included in automotive diesel fuel.
- b) Inclusion of the revised EN 14214 FAME specification.
- c) Clarification of the fact that cold flow requirements of FAME when used as an extender for diesel according to this specification (as set out in Table 2 of EN 14214:2008) do not apply.
- d) Addition of the Ignition Quality Tester as an alternate test method to the CFR engine test.
- e) Deletion of the 350 mg/kg sulfur content, which was only allowed until 2005 A1, and of the 50 mg/kg level which was allowed until 2009 A1.
- f) Inclusion of the revised total contamination test method EN 12662, which in itself is again under revision to improve precision for FAME containing product following new interlaboratory studies.
- g) Inclusion of the revised EN 12916, which is now able to distinguish between polycyclic aromatic hydrocarbons and fatty acid methyl esters (FAME) due to the deletion of the back-flush step.
- h) Inclusion of an additional requirement and method (EN 15751) to determine the oxidation stability, with a limit of 20h.
- i) Addition of a workmanship clause 5.4.3 and a note referring to good house keeping via CEN/TR 15367-1.
A1
- j) Lowering of the maximum level of polycyclic aromatic hydrocarbons from 11 % (m/m) to 8,0 % (m/m). A1

- k) A general update of the revised test methods, some of them already having been included in the Technical Corrigendum to the previous version.

Annex A is normative and contains the precision data generated on the test methods which are the result of inter-laboratory testing, carried out by working groups of CEN/TC 19. Many of the test methods included in this standard were the subject of inter-laboratory testing to determine the applicability of the method and its precision in relation to blends of automotive diesel fuel containing 5 % (V/V) or higher of different sources of fatty acid methyl esters (FAME), a.o. rape seed and sunflower oil.

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