



The Coordinating European Council

for the Development of Performance Tests for Fuel, Lubricants and other Fluids

CEC 2013 - Role of CEC in Developing Tests for the European Automotive Industry



10th ICIS Middle Eastern Base Oils & Lubricants Conference

7 October 2013, Dubai

Dr Ian Field – Vice-Chairman, CEC Management Board

Who Needs Lubricant Tests?

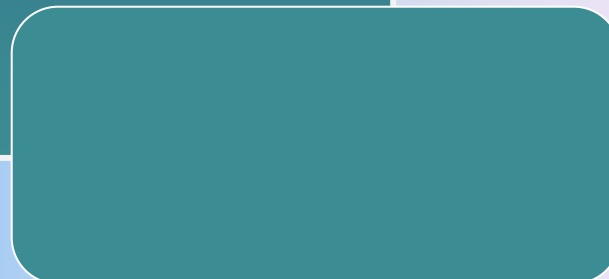
Need to define lubricants that will protect their engines

Want to market high quality lubricants with no risk of field problems

ALL NEED

Well designed, reliable and cost effective engine tests that cover all engine parameters and match real field performance

Want to market high quality lubricant additive packages with no risk of field problems and design new formulations that add value and meet future demands



Who Manages CEC?



What is the CEC?

The Co-ordinating European Council for the development of performance tests for transportation fuels, lubricants and other fluids

- CEC is an Industry-based organisation for the development of Test Procedures and Methods:
 - Automotive Fuels, Engine Oils & Transmission Fluids
 - Marine & Large Engine Oils
 - Two-stroke Engine Oils
 - Associated Bench Tests
 - Industrial & Hydraulic Fluids

CEC Mission Statement

CEC Mission

Managed by
industry
stakeholders

Quality
processes for
test labs

Rating
workshops

TMS for
bench tests

Use of lead
lab to
develop new
tests

**All CEC processes combine
to provide high quality tests
that will reliably assess the
true performance of a
lubricant or fuel**

Support of
statistics
group

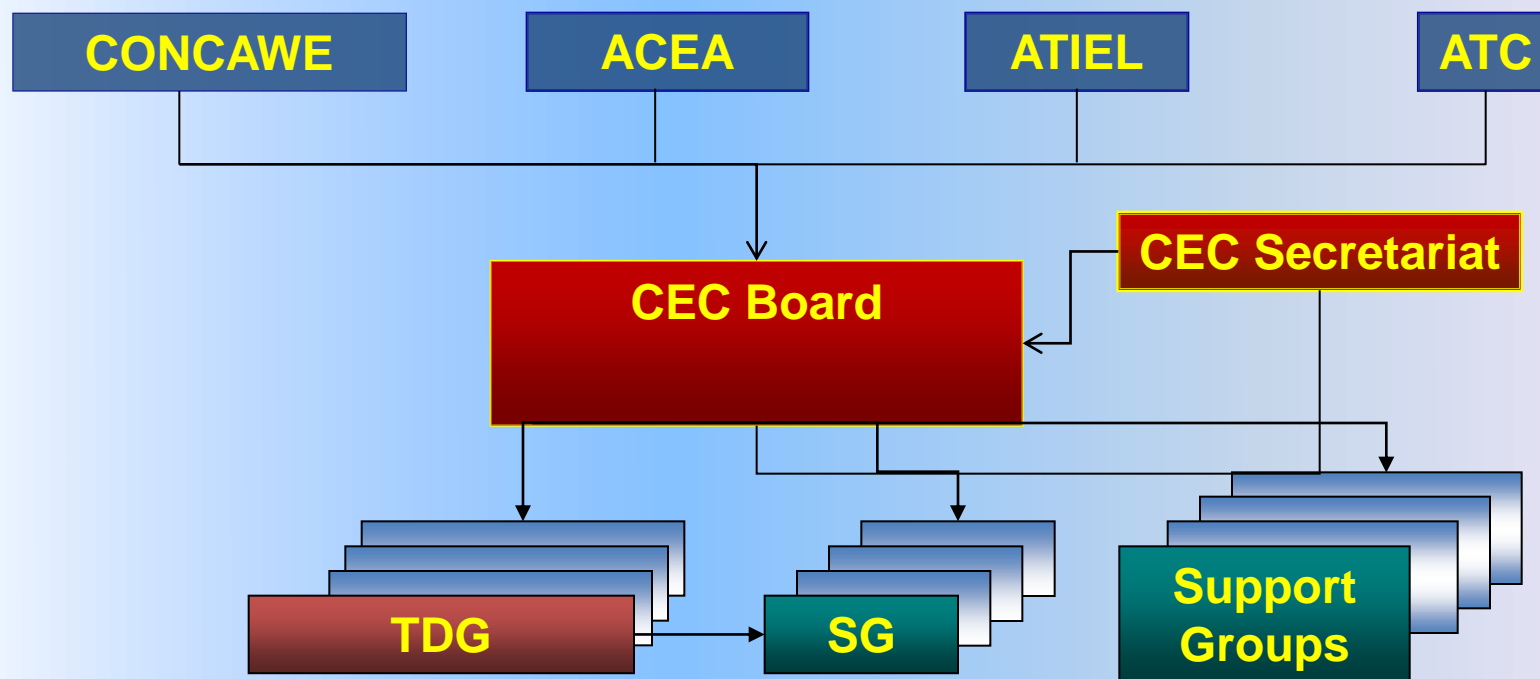
Terms of
reference for
new test
development

Expert fuels
and lubes
advisors

Monitoring
and
referencing of
test engines

CEC organisation

CEC Organisation





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for the Development of Performance Tests for Fuel, Lubricants and other Fluids

CEC Management Board

Alister Jackson – ExxonMobil
Benoît Engelen – Total

Vincent Panel – BP
Nick Clague – SK Lubricants

Suhair Abdelhalim – Ford
Paul Greening – ACEA director

Ian Field – Infineum
Frank Stunnenberg – Chevron Oronite

CONCAWE

ACEA

ATIEL

ATC

Chairman
Anders Røj – ACEA (Volvo)

CEC Board

CEC Secretariat

**Articles of
Association**

Bye-Laws

Guidelines

**Test
Methods**

**Legal
requirement**

Constitution

**How to
operate**

End result

Test development process

CEC Test development process – TDG's

- CEC tests are often introduced through the AAA (ACEA, ATIEL, ATC) group
 - Usually initiated by an OEM
- The CEC Secretariat produces tender document for one lead laboratory to develop the test
 - Tenders are evaluated by a small CEC MB team
- The Lead lab is chosen and Sponsors are invited to join the Test development group (TDG) to pay for the test development
- Test is then developed with a draft CEC procedure established and repeatability results analysed by the groups Statistical representative (SDG)
- Lead laboratory assists other Sponsors to install the test and reproducibility established from RR results from these additional labs
- If SDG recommends acceptance CEC MB will approve as a valid CEC test
- New Valid CEC Lubricant tests usually go into the next ACEA Oil sequences

Quality Requirements & Support Groups



Test Laboratory Quality Requirements

- All laboratories running CEC tests must have an ISO 9001 equivalent system for the general quality definition and procedures
- For engine/rig tests an ISO 17025 equivalent system is required
- Laboratories must actively participate in CEC Group activities, meetings and round robin tests
 - Every laboratory must contribute to the improvement of the test method and share data/experience

CEC Web-based Test Monitoring

- Simple process for uploading Reference data and Graphical software for analysis of data
- Location: www.cec-tms.net



CEC TMS
ONLINE TEST MONITORING

The Coordinating European Council
for the Development of Performance Tests for Fuels, Lubricants and Other Fluids

CEC Performance Tests

Online Test Monitoring

An online system has been adopted for monitoring all non-ERC database CEC tests. Introduction of the new system, which makes it easy to capture and analyse real-time reference test data, will be completed by 2008 and is key to maintaining test quality.

Reference test results are recorded on a continuous basis rather than the traditional manual 'round robin' approach. Members can display, analyse and compare reference test results in graphic format across all key test parameters, making this a powerful tool for monitoring test quality and spotting data trends.

Enter your login details on the left to sign in the CEC Online Test Monitoring System

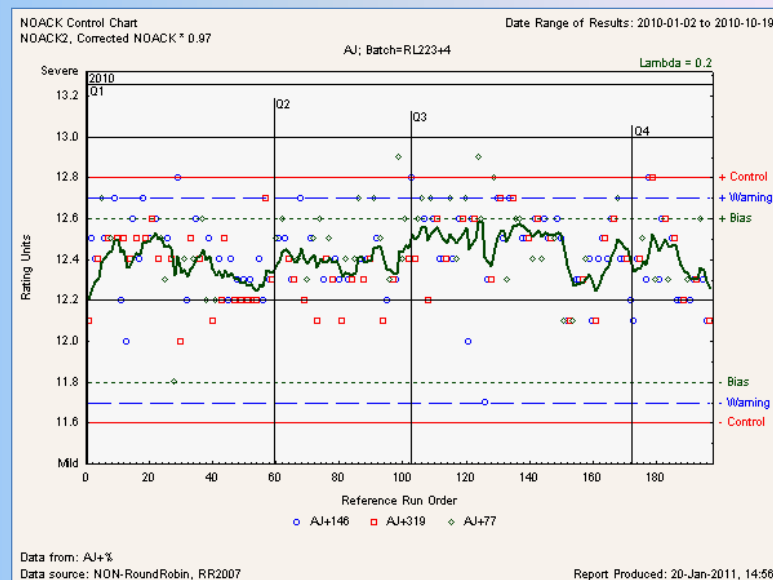
About CEC

CEC is an industry-based organisation for the development of new Test Procedures for the performance testing of Automotive Engine Oil, Fuels & Transmission Fluids (using gasoline & diesel engines). In addition, it covers Marine & Large Engine Oils, Two-stroke Engine Oils & Associated Bench Tests.

It maintains existing tests on an ongoing basis, concentrating on quality assurance (it forms part of EELOMS - European Engine Lubricants Quality Management System) and maintaining confidentiality amongst Stakeholders. It also manages the provision of Reference Fluids (lubricants and fuels) for its tests. CEC is based in Brussels and maintains a Secretariat in Leicestershire UK.

For More information on CEC [click here](#)

CEC Secretariat Services are provided by Interlink Administrative Services Ltd. Tel: +44 (0)1455 621993, Fax: +44 (0)1455 622994, Email: cecinfo@interlink.co.uk Interlink Administrative Services PO Box 6475, Earl Shilton, Leicester, LE9 8ZB, UK. Copyright © CEC 2008, Site Designed and Hosted in Partnership with PDC Ltd

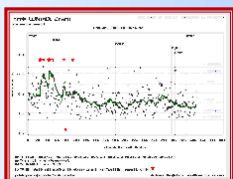


<https://atc-erc.org>

- **Candidate test registration database**
- **Reference test registration database and charting**

Data Range of Results: 10/00/00-20/00/201

Support Groups



- Statistical Development Group – SDG
 - A designated Statistical Development Liaison Officer allocated to each Group
 - Assuring Quality of Test Results



- Rating Group – RG
 - Regular Workshops for Raters
 - Ensure Rating is consistent across the industry



- Reference Fuels Group – RFG
 - A suite of reference fuels are supplied for use within TDG and SG test groups to ensure consistency of fuel used



- Reference Oils Group – ROG
 - Reference oils are supplied to TDG and SG test groups to enable the initial development of tests using calibration oils and to ensure correct severity of testing by running Round Robins and/or set reference frequency protocols

New and Potential Test Developments

New Developments - In progress

- CEC L-39-96 Seals Special Project Group to look for new elastomers
- TDG L-104 OM646LA, Effects of Biodiesel Fuel
- TDG L-106 DV6 Euro 5, Soot Handling Test
- TDG-L-107 M271EVO Sludge Test
- TDG-L-109 Oxidation Test in the Presence of Biodiesel Fuel
- TDG-L-111 EP6 Gasoline engine test for high temperature deposits

New Test Development Group (TDG):

CEC TDG-L-104 – Effects of Biodiesel Test (OM646LA)

Terms of Reference for TDG-L-104

- 1st meeting : 12th March 2010
- New Biodiesel test to determine the effects on Piston deposits, Engine Sludge and Oil degradation.
- Using the same Daimler AG OM 646 DE 22 LA engine as used in CEC L-099.
- Test Fuel - B15 = 85% Diesel Fuel + 15% FAME
- Test Oil will be diluted with \approx 7% B100



OM 646 LA - Euro V

- Engine type: R4 CDI
- Capacity: 2.2 l
- Power max: 110 kW
- Torque max: 340 Nm

New Test Development Group (TDG):

TDG L-106 – DV6 Euro 5, Oil Dispersion Test at Medium Temperature for Passenger Car Direct Injection Diesel Engines - Replacement of DV4

Terms of Reference for TDG-L-106

Performance criteria

- Viscosity increase at 6% soot
- Piston deposits
- The target of the test development is to maintain the same duration as DV4 -120hrs

Hardware

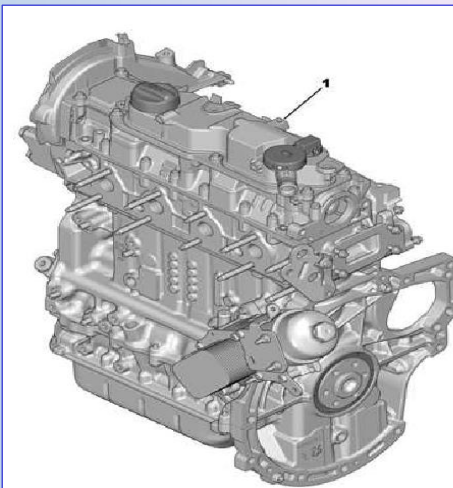
- PSA's DV6CTED Euro 5 1.6L HDi engine. This engine will be available for between 5 to 10 years and PSA will provide engine hardware, adaptation parts, opened ECU (during test development), normal ECU (when test is developed) and technical support.

Fuel

- CEC DF-98-07 (B5 used in the OM646 wear test)

First meeting:

- 6th June 2011



Type and size: DV6CTED, Euro 5, 1.6L HDi

Power : 82 kW @ 3600rpm

Torque rating: 270 Nm @ 1750rpm

Oil capacity: ~3,5 L can be extended to ~4,5L TBC

Summary


The CEC is a key organisation supporting the lubricant industry and its stakeholders by –


- Developing new tests to meet industry needs
- Ensuring the tests are meaningful and reliable
- Monitoring the running of the tests to ensure reliability throughout the life of the test



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CEC - Website: www.CECtests.org



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Test Methods & Publications & PapersRating Workshop

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Test Methods & Publications

For details on how to order please [click here](#).

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CEC TMS

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