

Guideline 1

CEC Purpose, Structure and Contacts

1. CECs Purpose

The Automotive and Petroleum Industries, use standards and specifications to define the quality of fuels and lubricants. Such standards and specifications require test methods to measure particular aspects of quality. CEC was formed to develop such test methods. Its focus is on “performance” which most closely simulates real world experience by using engines, transmissions, rigs and similar equipment. Laboratory bench tests may be developed to support performance tests.

CECs geographical focus is Europe. The ‘customer’ for its test developments will usually be the European Motor Industry, which needs to define the qualities of fuels and lubricants to be used in the equipment it manufactures. New test methods are needed to keep pace with automotive engineering and fluids developments.

2. CECs Structure

CEC has a Management Board currently drawn from industry organisations having interest in the development of performance tests for fuels and lubricants. The CEC Secretariat is outsourced. Test method development is carried out by Working Groups with membership drawn from laboratories and other organisations having relevant experience and interest in the subject. Funding of test development may be by a variety of mechanisms.

Each member Industry Association shall pay a subscription, as determined by the Management Board, to cover the administrative expenses of CEC. Subscriptions shall be shared on an equal basis.

Decisions are made in accordance with Guideline 4.

3. Contacting CEC

The primary point of contact with CEC is the Secretariat:

Kellen S.A.
Avenue de Tervuren 188A/Box4
1150 Brussels
Belgium
Phone: +32 (0)2 761 16 84
Email: info@cectests.org
Web Site: www.cectests.org

Guideline 1, Appendix 1

Industry Associations currently represented on the CEC Management Board

ACEA	Association des Constructeurs Européens d'Automobiles	<i>Avenue des Nerviens 85 B-1040 Brussels Belgium</i>
ATC	Technical Committee of Petroleum Additive Manufacturers in Europe (ATC)	<i>Av. De Tervuren 188A/Box 4 B-1150 Brussels Belgium</i>
ATIEL	Association Technique de l'Industrie Européenne des Lubrifiants	<i>Boulevard du Souverain 165 B-1160 Brussels Belgium</i>
CONCAWE	The Oil Companies' European Organisation for Environment, Health and Safety	<i>Boulevard du Souverain 165 B-1160 Brussels Belgium</i>

Guideline 2

CEC Management Board

1. Role and Responsibilities

These shall include:

- Establish and maintain the general policies, Guidelines and strategies of CEC and direct test development activities.
- Respond to requests for test developments from relevant industry groups (see Appendix 1).
- Establish the technical Test Development Groups (TDGs), Surveillance Groups (SGs) and Support Groups from the contracted laboratories and other participating sponsors. (In the rare occasions, where technical expertise is required and none is available within a sponsoring group, a non-sponsor member can be assigned to support the group.)
- Oversee the activities of these groups and approve their leaders.
- Recommend / agree methodology for each test development and its funding.
- Appoint and oversee the CEC Secretariat, and contractors.
- Appoint the internal and external auditors.
- Manage the process for awarding test development contracts and the control of expenditure against budget.
- Liaise with external organisations.
- Decide on communication and technical exchange activities e.g. technical workshops, conferences, and symposia.
- Appoint a Board of Directors, which shall, under Belgian law, represent CEC against third parties.
- Ensure that CEC adheres to European competition law and anti-trust regulations.
- Hold Management Board Meeting Minutes for a minimum of 10 years as a legal requirement.

2. Decision-Making

All decisions made and positions agreed by the Management Board will be by consensus. Consensus recognises that an Industry Association, whilst not agreeing with a view being expressed by a majority, will not unreasonably block the decision. The dissenting Industry Association will be required to explain their position. In this case consensus fails, and CEC will not adopt that decision/position.

Guideline 2, Appendix 1

Template for Acceptance of New Test Procedures into CEC System

1. Demonstrated Need

- If replacement for an existing test, there must be a continuing need for the measurement of the proposed parameters.
- If new, there must be technical significance and potential for use.
- Alternative tests, e.g. existing International tests with adequate quality, must be considered.

2. Endorsement

The template must be supported with a documented need that is, preferably, with full endorsement of ACEA WG-FL and other involved CEC member associations.

Note: For Lubricant tests, test development must be intended to lead to the test forming an element of ACEA test sequences, or, an oil approval requirement for a minimum of two OEMs.

3. Availability of Support

Sponsoring OEM(s) or Industry Bodies will be required to ensure availability of:

- Engine, fuel system or transmission hardware and management system
- Technical Support
- Advice on reference oils & fuels
- Hardware for a minimum of 5 years from estimated test development completion
- Identified correlation fluids which correlate with field performance or OEM performance experience and which can be used to calibrate the test method

4. Confidentiality

The submitter must confirm that the confidentiality requirements as outlined in Guideline 5 have been met.

Guideline 3

Role of the CEC Secretariat

The Management Board will choose the supplier of secretariat services. The supplier will be accountable to the Management Board and report to the Chairman under the terms of an agreed contract.

The secretariat will:

- Provide administrative and technical support.
- Work in accordance with the Articles of Association, Guidelines, Management Board and Board of Directors decisions.
- Provide financial management of CEC funds.
- Support the CEC Management Board by arranging Board meetings, production and distribution of agendas, taking minutes and updating the Management Board on financial and technical matters, which are defined as supplier responsibilities.
- Control the preparation, sale and distribution of new and updated publications.
- Maintain the CEC website.
- Assist TDGs in their test development task by preparing contracts, and monitoring costs and expenses against budget, through to the final production of the test method.
- Monitor progress of test developments.

Guideline 4

General Principles for Running CEC Groups and their Meetings

1. Responsibility of the Chairman / Vice-Chairman

It is the Chairman's responsibility to:

- Ensure compliance with applicable laws including the Competition Laws of the EU (See Article 34 of the CEC Articles of Association).
- Ensure compliance with CEC requirements on membership, decision-taking and quality principles.
- Read out the Confidentiality Statement outlined in Guideline GL/05 at the beginning of every meeting
- Read out the CEC Anti-trust statement at the beginning of every meeting.
- Ensure compliance with CEC Articles of Association and Guidelines.
- TDG Chairmen to maintain monthly contact with the Management Board representative for the TDG.
- Provide a Progress Update for every CEC Management Board Meeting and a public Progress Report for dissemination to interested parties after each Group meeting for TDGs. Provide a full Progress Report on an annual basis for SGs. Upon request from the Management Board the frequency of reporting may be increased.
- Set the frequency of meetings to ensure swift progress of test development and/or ongoing quality assurance or improvement of the test method. For mature tests the meeting frequency can be reduced to once per year.
- Represent the Group to the Management Board.
- Actively engage the Vice-Chairman (if appointed) in the project management of a Test Development Group.
- Approve and sign off all updates to the CEC Test Method looked after by the Surveillance Group, liaising with other relevant officers where necessary (e.g. communicating with the SDG Liaison Officer for updates to Section 11)

It is the Vice-Chairman's responsibility to:

- Take on the Chairman's responsibilities as listed above whenever the Chairman is unable to attend a meeting
- In a TDG, if the Chairman is from the lead laboratory, then the Vice Chairman should take responsibility for ensuring:
 - That the Budget is correctly spent and the work invoiced for is completed.
 - The data accountability of the lead laboratory.
 - That the lead laboratory carries out its project management responsibilities (maintaining the project timeline, with accurate and regular reporting etc.)

2. Confidentiality of Meetings

See Guideline 5.

3. Minutes of Meetings

3.1. Preparation

The minutes shall be prepared either by the secretary of the relevant group or by a member of the group selected by the Chairman, using the CEC Minutes Template provided by the CEC Secretariat.

3.2. Confirmation of Minutes

Draft minutes of CEC Group meetings shall be sent for checking, amendments and confirmation to the Chairman of the relevant meeting. A response is expected from the Chairman within five working days from the receipt of the draft minutes.

3.3. Distribution

The Minutes of a meeting must be sent promptly to the CEC Secretariat for publication in the Group area of the CEC Web Site so that they are available to all Group Members. It is expected that, where possible, minutes be distributed within 20 working days from the date of the meeting.

3.4. Approval of Minutes and Amendments

The Committee/Group members shall approve the Minutes during the next meeting of the relevant Committee or Group.

3.5. Archive

Copies of all minutes of meetings will be retained on the CEC Web Site for a period not less than 5 years.

4. Decision Making

'Consensus' is defined as an agreement without dissent.

4.1. Working Groups Operating Under Sponsor-Funded Options

Decisions will be reached by consensus amongst the sponsors, including the sponsoring OEM.

Failure to reach consensus should be reported to the Management Board, with full details of majority and minority positions.

The Management Board will decide on the issue and their decision will be final.

4.2. Voluntary Working Groups, or Working Groups Formed Before 2001

Decisions will be reached by consensus amongst contributing members. Failure to reach consensus should be reported to the Management Board, with full details of majority and minority positions. The Management Board will decide on the issue and their decision will be final.

4.3. Support Groups

Decisions will be reached by consensus. Failure to reach consensus should be reported to the Management Board, with full details of majority and minority positions.

The Management Board will decide on the issue and their decision will be final.

4.4. Special Groups

Decisions will be reached by consensus. Failure to reach consensus should be reported to the Management Board, with full details of majority and minority positions.

The Management Board will decide on the issue and their decision will be final.

5. Additional Expectations for CEC Fuel Test Development and Surveillance Group Membership

5.1. Test Labs

1. A member company representative should attend all TDG and SG meetings - if the nominated individual is not available then a knowledgeable stand-in should be appointed. Chairman may excuse attendance for exceptional circumstances.
2. Additional member company representatives may attend group meetings with the permission of the chairman, however this may need to be restricted due to the size of the Group.
3. Participation in test development programmes and round robin programmes as agreed by the Group.
4. Conduct at least 1 high reference test and 1 low reference test every year to demonstrate test stand discrimination is within limits.
5. Report all CEC reference fuel test results to the CEC TDG or SG.

5.2 Non-Test Lab Group Members

1. A member company representative should attend all Group meetings - if the nominated individual is not available then a knowledgeable stand-in should be appointed. The Chairman may excuse attendance for exceptional circumstances.
2. Additional member company representatives may attend Group meetings with the permission of the Chairman, however this may need to be restricted due to the size of the Group.
3. Participation in SG round robin programmes by sponsoring tests at third party laboratories at the request of the Group.
4. Report all CEC reference fuel test results to the CEC TDG or SG.

5.3 Non-Test Lab Expert Members

1. CEC technical officers e.g. reference fuels and lubricants co-ordinators are permitted to attend all SG meetings and should inform the SG Chairman that they plan to attend a meeting.
2. Attendance at Group meetings at the request of the Group - if the nominated individual is not available then a knowledgeable stand-in can be appointed if available.
3. Provide expert help and advice to the group as required.
4. The Chairman must conduct a periodic review of expert member contribution and request non-contributing expert members to stand down where appropriate.

Guideline 5

Membership of CEC Working Groups and Confidentiality of CEC Information

1. Membership

The member of a CEC Working Group is a company, not an individual. However, in order to ensure confidentiality of information within a TDG / SG, members are obliged to name one company representative who will represent them in a Group. This representative will be responsible for conveying the views of its company to the TDG / SG and making decisions about Group matters, on behalf of its company.

Member Companies supplying Chairmen, Secretaries or SDG Liaison Officers to a TDG / SG are permitted to have a second permanent representative on the Group.

A third party contractor or consultant may represent a member company on a CEC Working Group providing that there is a formal relationship between the two parties. Any contractor or consultant will be bound by the same confidentiality rules as if he was an employee of the member company.

A member company representative on a CEC Surveillance Group may represent his company or affiliated company in more than one location / country, meaning that each location represented can attain a 'CEC Result', however, representation from each location is encouraged, especially in the more complex tests, even if attendance at meetings is only by a telephone conferencing link.

1.1. Sponsored Groups

A company providing financial sponsorship for the test development is entitled to be a member of a Test Development Group and can remain a member when it becomes a Surveillance Group, even if it chooses not to install the test.

Support to the group should be given by

- Taking on an Officer position in the Group
- Having a continuing interest in the proper operation of the test, by running tests at third party laboratories and freely sharing operational experience within the TDG / SG.

The sponsoring OEM shall be a member of the Group by virtue of the technical support and hardware provided to the Group.

The Test Development Laboratory shall contribute sponsorship funds equal to that of other sponsors.

Membership of a Surveillance Group for non-sponsors is achieved by purchasing access to the test method after it has been developed. Non-sponsors will be obliged to contribute to the work of the Group by sharing costs equitably for any additional work that is agreed and participating in one or more of the following ways:

- Contribute reference test data, as specified by the test procedure, to the test monitoring / ERC database and freely share operational experience within the SG
- Be SDG representative to the SG

- Having a continuing interest in the proper operation of the test, by running tests at third party laboratories and freely sharing operational experience within the SG.

If a member does not contribute in one or more of these ways to the work of the TDG/SG then the Chairman must recommend removal of the member from the Group. The CEC Secretariat must be informed immediately, so that the ID and password for access to the Group's area of the CEC website may be withdrawn.

Attendance at meetings is for bona-fide members only. The Chairman may, where the TDG/SG feels that attendance by other experts would assist it to deliver against its targets, invite experts to the meeting subject to the agreement of all the Group members. Additional member company representatives may, in exceptional circumstances, attend Group meetings, but only with the permission of the Chairman and on the understanding that attendance may be refused due to the size of the Group.

Ideally, all officers of a Sponsored Group shall be members of the Test Development Laboratory and / or Sponsoring Companies. If this is not possible, an Officer may be appointed by the Group from an outside specialist company (e.g. Reference Fuel Supplier), however his company will not be entitled to the completed Test Method, though they will have access to the Group's area on the CEC Web Site. The appointment must be approved by the Management Board.

1.2. Voluntary Groups

All members of a Voluntary Group must contribute to the working of the Group. Members will be expected to share costs equitably, but individual members must contribute in one or more of the following ways:

- Contribute reference test data, as specified by the test procedure, to the test monitoring / ERC database and freely share operational experience within the TDG/SG
- Be OEM sponsor
- Be SDG representative to the TDG/SG
- Having a continuing interest in the proper operation of the test, by running tests at third party laboratories and freely sharing operational experience within the TDG / SG.

If a member does not contribute in one or more of these ways to the work of the TDG/SG then the Chairman must recommend removal of the member from the Group. The CEC Secretariat must be informed immediately, so that the ID and password for access to the Group's area of the CEC website may be withdrawn.

Attendance at meetings is for bona-fide members only. The Chairman may, where the TDG/SG feels that attendance by other experts would assist it to deliver against its targets, invite experts to the meeting subject to the agreement of all the Group members. Additional member company representatives may, in exceptional circumstances, attend Group meetings, but only with the permission of the Chairman and on the understanding that attendance may be refused due to the size of the Group.

2. Confidentiality of Certain Information

Certain information being discussed or reviewed by a Technical Development Group (TDG), a Surveillance Group (SG), or by the CEC, could be confidential.

Should an OEM sponsor affirm that proprietary information remains confidential and must not be released to other OEMs, then agreement will be required from all other ACEA members that they will refrain from participating in the corresponding TDG or SG, and purchasing or obtaining the test method. This will be handled on a case-by-case basis, sharing legal opinion with the sponsoring OEM. A provider of information may require that confidential information may only be made available if subject to the terms of a confidentiality agreement.

Should confidential information be reflected in the minutes of a TDG, SG or CEC meeting, the company providing the confidential information can request that the relevant minutes bear the following text:

“This document and its contents contain confidential information. It has been provided to the recipient subject to the provisions of a confidentiality agreement entered into with [provider of information]. This document should not be disclosed to anyone unless that person is allowed, under the terms of the confidentiality agreement, to receive or review it.”

3. Test Methods and Test Results

CEC Test Methods produced electronically via the CEC Web Site are accessible to designated member company representatives and more than one named representative may have access. In addition, they are available to named representatives of companies who purchase the Test Method.

Test results obtained through Test Monitoring or Round Robins organized within a TDG / SG are strictly confidential to TDG / SG members and must be freely shared amongst Group members to aid the development or monitoring of the CEC Test Method. Information to anyone outside of the TDG / SG will only be provided by the Group Chairman, after Management Board approval and any test results will be coded to conceal the name of the contributing laboratory. It is acceptable, however, for TDG/SG members to communicate their own test results, shown amongst the Group’s coded results, to their own customers, without referral to the Management Board.

4. Confidentiality Statement

To be read out by the Chairman at the beginning of every meeting:

“Information discussed at this meeting is confidential to the Group and its members.

To be a member of this Group, you must contribute to the work of the Group as explained on the Attendance List.

All people present at this meeting must sign the Attendance List and state their reason for attending.”

5. Other CEC Communications

Management Board minutes may be conveyed to relevant representatives of member companies and participating industry association members.

Permission for making presentations or publications on behalf of CEC must first receive the approval of the Management Board.

Newsletters are not confidential and may be conveyed to everybody.

Guideline 6

Types of Working Group and their Structure

1. Formation and Closure

All Working Groups are established and closed by the Management Board.

2. Structure / Organisation of Groups

This is a typical arrangement for Officers of CEC Working Groups:

	TDG	SG	SDG	RFG	ROG	SPG / SLG
Chairman	✓	✓	✓	✓	✓	✓
Vice or Deputy Chairman	✓	✓	✓	✓	✓	✓
Secretary	✓	✓	✓	✓	✓	✓
Ref. Oil Coordinator	✓	✓				
Ref. Fuel Coordinator	✓	✓				
SDG Liaison Officer	✓	✓				
Test Procedure Coordinator	✓	✓				

3. Types of Groups

3.1. Test Development Group (TDG)

Responsible for taking a proposed new test procedure from the concept stage to publication of a CEC Test Method. The work is usually in two phases. Phase 1 takes the work to the stage of acceptable repeatability and discrimination normally in a single laboratory leading to production of a draft Test Method. Phase 2 requires reproducibility to be established in multiple laboratories and a test method to be published.

New Test Development Groups are normally sponsored groups (see Guideline 11). In exceptional cases a voluntary group could be established (see Guideline 12)

3.2. Test Surveillance Group (SG)

Responsible for maintaining and, if possible, enhancing the quality of a test developed by a Test Development Group. A key feature of the activity is to run regular “round-robins”, or carry out test monitoring among participating laboratories to ensure that quality is maintained.

3.3. Support Groups

3.3.1. Statistical Development Group (SDG)

The Statistical Development Group supports the Management Board, TDGs and SGs with statistical expertise, especially with respect to planning test programmes and interpretation of test results.

3.3.2. Reference Fuels and Reference Oils Groups (RFG, ROG)

These groups provide expertise and support to TDGs and SGs on the fuels and lubricants used in test development.

3.3.3. Rating Group

This group provides expert advice on rating of key components to all working groups, and ensures that rating is of a consistent and high quality.

3.3.4. Analytical or Bench Test Support Groups

Such a group may be set up by the Management Board, at the request of a TDG if there is a need for a supporting analytical test. The group will be a sub-group of the TDG, but any resulting test method will be published independently of the TDG method.

3.3.5. Special Project and Liaison Groups (SPGs, SLGs)

These groups are established by the Management Board as needed, to undertake specific tasks. SLGs will liaise with external bodies.

More details of Working Groups are given in other Guidelines.

4. Chairmen

Chairmen of Working Groups are chosen by the Group membership and are subject to ratification by the Management Board. They may also be appointed by the Management Board.

It is recommended that the group, where possible, should separate the TDG Chairmen functions from the lead lab responsibilities, unless there is good reason not to. This is particularly to be considered when:

- There are a large number of sponsors
- The test development does not have any test predecessor to take learnings from
- It is an engine test

This is to ensure the chairmen focus on the management of the test development group whilst the lead labs focus on the technical challenges faced by the test development group.

All other officers are appointed by the Group.

Chairmen, Vice-Chairmen and Secretary positions should be selected from different member companies.

Guideline 7

Support Groups

1. The Statistical Development Group (SDG)

1.1. Purpose

To provide expert advice to the Management Board and Working Groups on matters related to the application and development of statistics.

1.2. Membership

Members should possess experience in application of statistics and in the area of performance test development.

1.3. Activity

Activities include (but are not limited to):

- To maintain and update the Statistics Manual on the CEC website.
- To give advice to the Management Board on such issues as the quality of competing bids for business from tendering laboratories.
- To assign “liaison officers” to each TDG and SG. SDG members participate at TDG or SG meetings on request of TDG / SG Chairman. They will advise on the planning of new programmes to ensure robustness and cost-effectiveness. They will also analyse the data from test programmes and ensure that statistical quality standards for repeatability, discrimination and reproducibility are maintained.
- To establish general statistical standards for CEC activity and maintain a watching brief on related external activities.

1.4. Further Information

See the CEC Statistics Manual.

2. The Reference Oils Group (ROG)

2.1. Purpose

To manage the development, production and supply of reference lubricants for use in CEC tests.

2.2. Membership

Members should have experience in the use, development or supply of reference oils.

2.3. Activity

- To maintain and update the CEC Reference Oils Manual on the CEC website in conjunction with the relevant working group chairmen/TDG/SG leaders.
- To assist TDG/SG and Management Board in the selection / preparation of suitable Reference and/or Standardisation Oils.
- To provide stocks of Reference/Standardisation Oils.
- To rationalise the CEC Reference Oils portfolio.
- To support TDG/SG in supply issues: batch size, technical release procedures, and survey of oil analysis data, ensuring batch consistency.

- To support TDG/SG in planning of round robins.

2.4. Further information

See the Reference Oils Manual

3. The Reference Fuels Group (RFG)

3.1. Purpose

To manage the development, manufacture and supply of reference fuels for CEC tests and legislative purposes.

3.2. Membership

Members should have experience in the use, development or supply of reference fuels.

3.3. Activity

- To design new experimentation fuel specifications as requested by the Management Board and CEC Test Development and Surveillance Groups (TDG/SG).
- To arrange for suppliers to hold stocks of the Reference Fuels and make them available for sale.
- To act as a centre of expertise on Test Fuel Quality.
- To support TDG/SG in supply issues: batch size, technical release procedures, survey of fuel analysis data, fuel quality assurance.
- To support SG in planning of round robins.
- To maintain and update the Reference Fuels Manual on the CEC website.
- To undertake specific activities at the request of the CEC Management Board.

3.4 Further information

See the Reference Fuels Manual.

4. The Rating Group

4.1. Purpose

To provide expert advice to the Management Board and Working Groups on rating issues.

4.2. Membership

Members should be expert at rating.

4.3 Activity

- To ensure high and consistent quality of rating measurements in all laboratories running CEC tests.
- To address problems which may arise from e.g. new tests, new components, new or unusual phenomena, and differences in interpretation of written instructions.
- To hold Workshops on specific topics when needed.
- To give advice to individual Working Groups on request.
- To encourage the use of recognised and reproducible rating methods in the development of new CEC Tests that require parts rating.

5. Analytical and Bench Test Support Groups

5.1. Purpose

To develop new analytical or bench tests when required.

5.2. Membership

Members should have appropriate analytical experience.

5.3. Activity

- Analytical or Bench Test Support Groups shall be established by the Management Board at the request of a TDG or SG that has identified a need for a specific analytical method, which is not currently available.
- The Working Group that they support shall be responsible for the terms of reference of the Analytical or Bench Test Support Group.
- Each Support Group will have its own Group designation and produce its own test procedure.
- The Chairmen of Analytical and Bench Test Support Groups will be elected from among the group's membership or nominated by the parent working group, and endorsed by the Management Board.
- Analytical and Bench Test Support Groups will report via the Chairman to the parent group and as requested to the Management Board.

6. The Measurement Uncertainty Panel (MUP)

6.1. Purpose

To provide expert advice to the Management Board and Working Groups on matters related to Measurement Uncertainty

6.2. Membership

Members should have appropriate measurement uncertainty experience.

6.3. Activity

- Primary Role : provide guidance to the groups on measurement uncertainty determination
- Investigate the parameters listed in the “Currently under Review” section of the Look-up table.
- Provide guidance to the groups when new tests are developed on appropriate measurement uncertainty values
- Update and maintain the Look-up table
- Approve all new/changes to measurement uncertainty values in Section 5 of CEC Test Methods, prior to publication

Note: Individual testing laboratories remain responsible for demonstrating that they can achieve the stated measurement uncertainty.

Guideline 8

Special Groups

1. Purpose

Special working groups may be formed at the request of the Management Board. There are currently two types of Special Group:

- Special Project Groups (SPG)
- Special Liaison Groups (SLG)

2. Formation and Closure

A Special Group will be of a temporary nature. It will be established by the Management Board after approval of the Background to the proposal for the new Group, its Mission, Objectives and a Timing Plan.

Special Groups will be closed by the Management Board upon completion of their work, or at any time if the Group's objectives are not being met.

3. Membership

Group members shall have specialist competence in the area for which the group was established and will be invited from the CEC Stakeholders or other areas of expertise as appropriate.

Membership of a Special Project Group does not give automatic membership of any Test Development Group that may be formed as a result of work carried out within a Special Group.

4. Funding

The costs shall be met by contributions from participants, in the form of finance (grants or donations), provision of test facilities, running tests or via the contribution of specialised skills. If investigation work is required it can be managed through sponsorship, in the same way as for Test Development Groups.

5. Function and Responsibilities

5.1. Special Project Groups

These groups may handle any task requested by the Management Board, which falls outside the scope of an existing group. The Management Board will agree the terms of reference.

5.2. Special Liaison Groups

These groups may be asked to liaise with any external organisations, within or outside Europe, which are engaged in activities, which relate to those of CEC. The Management Board will agree the terms of reference.

Guideline 9

The CEC Test Method Development Process

No.	Activity	Who	Action
1.	Request a new test method	Anybody	Submit request using appropriate template-see Guideline 2, Appendix 1.
2.	Develop Terms of Reference for a new test	Industry Representatives	Produce detailed TOR for the test development proposal
2.	Review Template and Terms of Reference.	Board	Confirm that need is agreed.
3.	Identify sponsors	Board	See Guideline 13. If group is voluntary go straight to 7
4.	Choose test laboratory	Board	In case of tender, see Guideline 10.
5	Confirm sponsors and obtain letters of intent	Secretariat	See Guideline 13.
6	Form TDG	Board	Convene first meeting. See Guideline 11
7.	Develop phase 1 of the test	TDG	Lab(s) conducts test work. TDG meets regularly to review progress. See Guideline 11.
8.	Complete phase 1 of test development	TDG	Demonstrate satisfactory repeatability and discrimination. Write up draft test method.
9.	Publish draft test method on CEC Web Site	Secretariat	See Guideline 15.
10.	Sign off Phase 1	Board	Confirm that test meets Contract requirements (if applicable) and CEC standards.
11.	Identify sponsors and additional funding for Phase 2 if required	Board	Commission phase 2. See Guideline 13
12.	Develop phase 2 of the test in multiple labs.	TDG	See Procedure 1 (CEC Statistics Manual)
13.	Complete test development in multiple laboratories.	TDG	Meet reproducibility targets. Modify test method if necessary and send to Secretariat for publication.
14.	Sign off TDG and Phase 2	Board with help from SDG	Endorse acceptable reproducibility and accept method for publication.
15.	Set up Surveillance Group.	Board	Set up SG and nominate officers.
16.	Maintain test quality.	SG	Run on-going Round-Robin tests / Test Monitoring. See Procedure 1, Statistics Manual.

Note: During the test development process:

- If consensus cannot be reached, the minority view must be conveyed to the Management Board.
- A TDG must conduct a quarterly review of its development process to check timing and costs vs. the Budget as well as conformity with the Terms of Reference. If a development is moving quickly, the Chairman should consider whether a monthly review might be appropriate.
- Changes to tests that have significant cost implications, must be referred to the Management Board.
- The consent of all sponsors, with endorsement from the CEC Management Board, must be reached for any changes to be made to the test development as described in the original Terms of Reference (as a test development proceeds and more understanding is gained, new information may influence the way that a test is developed).

Guideline 10

The Tendering Process

Objective: To outline the key activities needed to tender to be the lead laboratory for a new test development.

No.	Activity	Who	What and How
1.	Develop invitation to tender.	Board plus experts from Industry Stakeholders and including SDG.	<p>The tender document should include:</p> <ul style="list-style-type: none"> Reason for the development Summary of the targets Description of the hardware Availability of hardware Availability of reference fuel Availability of reference oil Objective of development Outline of development Timetable for development Quality targets for Phase I development Additional analyses e.g. used oil analysis A commitment to confidentiality A requirement that the test laboratory to which the tender is awarded agrees to support installation in other laboratories. A requirement that the test laboratories meet current CEC quality standard.
2.	Advertise invitation to tender.	Secretariat	<p>The CEC Secretariat will advise potential laboratories about the issue of the draft tender. Dissemination of this information will be by one or more of the following communication channels:</p> <ul style="list-style-type: none"> Posting on the CEC Website Sending to contacts through the four Industry Associations Sending to all Laboratories who have informed the Secretariat of their interest to develop the test
3.	Pre-Tender Meeting	Labs wanting to tender, plus experts / Board representatives	<p>The CEC Secretariat will arrange a meeting to discuss the terms of the tender with the aim of making the information as detailed and understandable as possible and the bids as uniform as possible. Amendments to the original tender document and clarifications of the Terms of Reference will be made by one of the Board representatives present, where necessary.</p>

4.	Distribute revised tender document and clarifications to the Terms of Reference	Secretariat	Distribute clarifications of the Terms of Reference and any updates to the original tender documents to the laboratories attending the Pre-tender meeting
5.	Choose test laboratory	Board plus experts	<p>(a) Acceptance. Unless otherwise agreed by the Management Board, the following process will be followed: The Management Board will convene, or experts and Board representatives will meet to examine the bids within 10 working days of the tender deadline The Management Board may, at its discretion and with the bidders' agreement elect to send a technical expert to their laboratory for an on-site assessment. If the Management Board requires a laboratory inspection, this will take place within 20 working days of the tender deadline. The CEC Secretariat will communicate the result in writing to all bidders. The successful laboratory will be obliged to sign a Letter of Intent (examples are available on the CEC Web Site).</p> <p>(b) Criteria The Management Board will decide the criteria for each specific development. The criteria may include the following: Ability to deliver project Ability to lead project, chair and manage working group Accreditation to industry and CEC standards Experience with CEC tests Experience with the specific type of test Response to tender document Response to quality/technical questionnaire Potential conflicts of interest Costs The results of these assessments will be used to assist the Management Board in choosing a laboratory to lead the Test Development Group. In examining and deciding between bids, the Management Board may seek expert advice to assist them.</p>

			<p>(c) Limitations Bids received after the deadline will be declared invalid. Bids that modify the tender document in any way, for example, the equipment or procedure, will be declared invalid.</p>
6.	Exchange Letters of Intent.	Board and chosen lab.	See draft example available on the CEC Web Site.
7.	Provide Summary Version of Bid	Chosen Lab	Provide non-commercially sensitive version of successful bid to CEC Secretariat for publication in Group area on CEC Web Site.

Guideline 11

Sponsored Test Development and Surveillance Groups (TDGs/SGs)

Objective: To outline the key activities needed to develop a new test.

No.	Activity	Who	What and How
1.	Set Group objective and key test parameters	Management Board	e.g. “Develop a test to measure ring sticking and bore polishing in modern European heavy-duty diesel engines”
2.	Agree TDG Phase 1 membership and funding.	Management Board	See Guideline 10 if tendering is required and Guideline 13. Organise first meeting.
3.	Elect a Chairman	TDG-MB	TDG propose with ratification by Management Board, or Management Board may appoint or make recommendation to Group.
4.	Establish operating conditions	TDG	If not already defined in the tender or Terms of Reference: (a) choose type of hardware (b) choose initial operating conditions (c) agree key variables to be measured (d) agree items to be measured, tightly controlled, e.g. piston rings (e) choose reference fuel(s) and lubricant(s). (f) List health and safety requirements for hazardous materials and/or operations.
5.	Set up hardware and check feasibility	Lab	Lab sets up hardware and runs first tests. Revise procedure as needed.
6.	Test discrimination	TDG/Lab	Run appropriately chosen reference products with “good” and “bad” field performance to establish discrimination. Revise procedure if needed.
7.	Test repeatability	TDG/Lab	Run repeat tests at different quality levels to ensure adequate repeatability. Revise procedure if needed.
8.	Demonstrate acceptable precision	TDG/SDG	Design and run a test procedure to demonstrate acceptable repeatability and discrimination.
9.	Write up draft test method	TDG	Obtain standard template from CEC Secretariat.
10	Phase 1 completion	TDG/ Management Board	TDG requests endorsement from Management Board of acceptable

			completion of Phase 1. The Management Board must respond within four weeks.
11.	Start Phase 2	Management Board	It may be possible to accept a test from an external source at this stage if Phase 1 targets have been demonstrated. See Guideline 10 if tendering is required and Guideline 13.
12.	Consider changes to membership and funding	Management Board	See Guideline 10 if tendering is required and Guideline 13.
13.	Chairmanship	TDG / Management Board	Reconfirm or change
14.	Prepare for multiple testing	TDG/Labs	Distribute test procedure and set up hardware in participating labs. Before Round Robin, review initial data and lead lab test operation experiences with all operating labs. If in an exceptional case this step is considered as not required, the CEC MB has to be informed about the rationale.
15.	Trial runs	Labs	Run tests in new labs to establish familiarity with equipment and procedures. Modify equipment as needed.
16.	Establish reproducibility	TDG/SDG	Develop and run reproducibility test programme. Evaluate results, and if needed rework and validate.
17.	Modify Test Method	TDG/Labs	Modify test method if necessary and send to Secretariat ready for publication when the Board has approved the test.
18.	Phase 2 completion	Secretariat / Management Board	Submit method to Management Board for approval and request acceptance of new test into CEC.
19.	Post-Development Review	TDG/SG Management Board	Complete a review of the test development & submit comments to Management Board Use input to improve test development process
20.	Close TDG	Management Board / Secretariat	Return any unused sponsorship funds to sponsors in equal parts.
21.	Set up Surveillance Group.	Management Board	A Surveillance Group is established when a Test Development Group has developed and published a CEC Test Method. All TDG Members may join SG, even if they are not running the test.

22	Choose Chairman	SG/ Management Board	The choice needs to be ratified by the Management Board.
23	If required, establish funding for improvements to test	SG	May come from remaining TDG sponsorship funds, additional funding from SG members or from sales of sponsored test procedures instead of returning these funds to original sponsors. All sponsors to agree in writing. For new tests developed in TDGs created after 1 st July 2008 funds received through sales will remain in CEC.
24	If required, propose best lab to run additional tests / issue tender and/or workplan	SG (Management Board)	Board to be kept informed of process, price, payment terms before work commences. Depending on the number of tests and costs involved, the Management Board may recommend a tender process, or SG may decide on tender process anyway.
25	Maintain test quality	SG	Run round-robin test programmes / test monitoring at agreed intervals and in accordance with guidance from SDG. Monitor test precision and discrimination over time. Review Health and Safety requirements regularly and amend if necessary. Report results to Management Board. See Procedure 1 (CEC Statistics Manual) for details.
26	Reference new hardware batch	Labs with test stand	Mandatory for all labs with test stand. Need to run round robin test with new hardware and statistical analysis supported by SDG. In case results deviate significantly, TMS needs to be updated with new limits. CEC MB needs to be informed on the activity and outcome.
27	Close SG	Management Board	The SG would usually only be closed if the test procedure has been declared obsolete or otherwise unfit for purpose.

Note 1:

The above table does not attempt to give details of all activities of a Test Development or Surveillance Group but merely outlines typical key steps.

Note 2:

TDGs will be required to submit Progress Updates for CEC Management Board Meetings and a public Progress Report for dissemination to interested parties after each TDG meeting .

SGs will be required to submit an annual Progress Report or more frequently, if required by the Management Board.

Details of format and content of Progress Reports can be found on the CEC Web Site.

Note 3:

When the test is fully accepted into CEC, the CEC Secretariat will send an email to all TDG members along the following lines:

Quote

Gentlemen,

I can now confirm, on behalf of the CEC Management Board, that theTest, using the engine, is formally accepted into CEC. The test designation will be CEC

The CEC Secretariat is in receipt of the test method and is currently checking it and making formatting changes. It will then be passed to the CEC Chairman for approval to publish. Once the test method is published, other companies will be able to purchase a licence to access and use the test and to join SG-..... The cost will be Euro

Please refer to Guideline 18 part 5 regarding the validity of CEC candidate test results.

TDG-..... Group becomes a Surveillance Group – SG-.....– with immediate effect.

Unquote

Note 4:

If running candidate tests before the test method has been approved by the CEC Management Board the conditions of Guideline 18.5 will apply. CEC accepts no responsibility for any liability if reference oil and candidate tests are declared invalid during the subsequent setting of the acceptance limits for the reference oils.

Guideline 12

Voluntary Test Development and Surveillance Groups (TDGs/SGs)

1. Objective

To explain the operation of Voluntary Test Development and Surveillance Groups.

2. Background

Prior to 2001, all CEC development activity was “Voluntary” in that individual companies made contributions as they thought fit when joining a TDG/SG. Since 2001 test development activity has mainly been “Sponsored” by individual companies agreeing to commit funds in advance. However some voluntary groups set up before 2001 have continued and some new voluntary groups have been set up and will continue to be set up in the future.

3. Differences from Sponsored Groups

In general, Voluntary Groups will follow the same procedures as outlined in Guideline 11 for Sponsored Groups. The decision to form the Group will be made by the Management Board. The key difference is that financing of test development will be entirely a responsibility of the Group itself. Costs and workload need not be spread equally amongst members. However all members of a Voluntary Group must contribute to the working of the Group.

Guideline 13

Sponsorship and Funding of CEC Test Method Development

1. The Process

A CEC test may be developed from start to finish within CEC, or may be incorporated into the CEC system in a partially developed state.

A test may be proposed by anybody.

For a development requiring funding a “Letter of Invitation to Sponsor” will be issued describing:

- The Development Requirement
- The Development Timing and best estimate of costs.
- The mechanism for sharing costs.
- The deadline for responses.

At the end of Phase 1 sponsors and funding are reconfirmed or modified for Phase 2. Following successful completion of the test, a Surveillance Group will be established.

2. Ownership

CEC is the owner of the Test Method

3. Financial Contributions

The CEC Management Board will decide, on a case-by-case basis, the funding mechanism for each new TDG and SG. A test programme will be designed on which the total funding will be based. Sponsoring companies or organisations will usually share development costs equally between them. Any sponsorship funds remaining at the end of a test development will be returned in equal parts to those sponsors who originally paid them. Alternatively, whenever the requirements of the terms of reference are not met, additional funding may be required from the sponsors. The outstanding test programme will be defined with the assistance of the SDG representative in the group. The additional funds will be equally paid by all sponsors. In case a sponsor decides not to pay his share, his membership to the group will be terminated. If, after the test method has become available as a CEC method, this sponsor wants to purchase the test, then the sponsor contribution already paid will be subtracted from the normal purchasing price of this test method.

4. Representation

Each Sponsoring Company shall send a suitably qualified representative to attend TDG/SG meetings.

5. Joining a TDG

The deadline for commitment to Sponsor a test development is the date declared in the 'Invitation to Sponsor' letter. After this date, no further applications to join a TDG will be considered until Phase 1 is completed. Under exceptional circumstances the Management Board may allow a company late entry in Phase 1 providing that there are no valid objections from other Group Members. All Sponsors must sign the CEC Letter of Intent without amendment, guarantee to pay the agreed sponsorship fee in the quickest way possible and provide a Purchase Order guaranteeing payment to the CEC Secretariat BEFORE attending any TDG meeting.

A new sponsor may be accepted to join the Group at the beginning of Phase 2 at a sponsorship cost and with terms equal to that of buying the completed Test Method within the first two years of test development completion (See Guideline 17, section 2.1.)

In exceptional circumstances, all sponsors may be required to provide further funding at the beginning of Phase 2. Any new sponsor joining at this stage will be required to pay this additional charge as well.

6. Installation of Test at Sponsor's Laboratory

The development laboratory is obliged to assist all TDG members in the setting up of the Test in their nominated laboratory under mutually agreed conditions. This would usually take the form of free advice around Group meetings or by telephone. If a sponsoring laboratory required a visit from the developing laboratory, then a consultancy rate and travel costs would be applicable and would be arranged directly between participants under mutually agreed conditions.

If a Sponsor does not have its own laboratory facilities, it is permitted to install a test stand at another laboratory that is not a sponsor / member of the Group, **provided that the test stand is for the exclusive use of the Sponsor**. In addition, the laboratory employed to install the test stand can also represent their client (the sponsoring company) in the Working Group on a consultancy basis, if required. Note that the rules for claiming a 'CEC Result', as defined in Guideline 18, still apply.

7. Licence to Use

CEC will own all intellectual property rights in respect of the test and it has the sole right to publish and grant licences. Members of sponsored groups (including those companies joining the Group and buying access to the Test Method at the Surveillance Group stage) will be granted a licence. This licence may be extended to their affiliates, upon application to the CEC Secretariat. Once the Test Method is published, any company may buy a licence to use the Test Method, whether an original sponsor or not.

8. Applicable Law

Belgian Law shall apply and any disputes or claims shall be, to the extent permitted by otherwise applicable law, be governed by, and construed in accordance with, Belgian law, to the exclusion of conflict of Laws rules, under the exclusive jurisdiction of the Belgian Courts.

Guideline 14

CEC Test Methods - the Basics

1. Definitions

1.1. Test Methods

These are test procedures run in specified engines, transmissions, rigs or other apparatus under specified operating conditions, for the evaluation of the performance of transportation lubricants, fuels and other fluids.

1.2. Codes of Practice

These are procedures specified in such a way that they can be adapted and applied to any of a range of engines, transmissions, or other equipment for the evaluation of the performance of transportation lubricants, fuels and other fluids.

1.3. Phases of Test Development

Phase 1 is development until repeatability and discrimination are satisfactory and a draft method has been produced in CEC format. Phase 2 includes demonstration of acceptable reproducibility and the establishment of a precision statement. It leads to test method publication.

1.4. Draft Test Method

A method produced at the end of Phase 1 of Test Development. It should be endorsed by the Chairman of the TDG and by the Management Board. It will be available for internal use within the TDG. It will not have CEC coding (see 3 below).

1.5. Published Test Method

A method approved by the Management Board on completion of test development (end of Phase 2). It is given CEC coding and is available to sponsors and for sale to others, under defined conditions.

2. Layout

The standard template for test method publication is available from the CEC Secretariat and must be used to ensure consistency of presentation.

3. Nomenclature

CEC test procedures are codified according to the following system:

- i) the **CEC** initials.
- ii) a letter indicating the field of application or the nature of the standard:
 - L** indicates a Test Method for lubricants.
 - F** indicates a Test Method for fuels.
 - M** indicates a Code of Practice.
 - P** indicates general publications.
- iii) two or three digits indicating the CEC Working Group number
- iv) two figures indicating the year of approval by the Management Board.

e.g. CEC L-101-09

Modifications to the test procedure will be identified by an issue number for the test method. See Guideline 16.

4. Validity

Test Methods and Test Method updates (see Guidelines 15 and 16) become valid on the release date issued by the CEC Secretariat. Test methods may be updated periodically and a current list is maintained on the CEC website.

5. Test Availability

The Surveillance Group should inform the CEC Management Board if a Test is likely to become unavailable. If remaining tests are pre-booked, the Management Board will review, on a case by case basis, for a declaration of unavailability. However, the last remaining tests must be available from at least one commercial laboratory.

6. Copyright

All published CEC documents are covered by the law of copyright. See Guideline 15 for more information.

7. Performance Criteria

The Test Method defines the requirements for each performance criterion. Each Test Method includes a precision statement in Section 11 and a quality checklist in Section 13. This checklist defines the quality and set-up requirements for the test.

8. Publication

See Guideline 15 for more information.

9. Reference Fluids

New test developments require reference fuels and/or lubricants. Current specification data on reference fluids relevant to each test is available to Test Method Holders on the CEC Web-Site.

10. Criteria for Claiming a CEC Test Result

The Testing Laboratory **MUST** meet all of the following criteria:

- be a member of the relevant CEC Working Group
- meet CEC quality requirements, as specified in Guideline 18
- meet the requirements of the test procedure
- meet the control limits as developed by the CEC Surveillance Group.

Guideline 15

Publication of Test Methods, Codes of Practice and Technical Papers

1. Requirements for Publication of a Test Method

Official publication of a CEC Test Method requires the author or the TDG / SG Chairman to send electronically to the CEC Secretariat the complete Test Method in CEC format together with all Appendices, Attachments, Tables and Photographs, which must be listed in the contents page of the relevant section.

2. Approval and Publication of Test Methods

There are 3 key steps to the approval and publication of a CEC Test Method.

- All technical / procedural content is the responsibility of the TDG/SG. The front page of sections 2 –14 must be signed as approved by the TDG / SG Chairman after checking any technical information with relevant Group Officers, prior to submission to the Management Board for approval and publication.
- The Management Board Chairman will check for compliance with CEC's publication requirements. If acceptable, he or she will sign-off the document on the front page of Section 1.
- The CEC Secretariat will then assign an Official Release Date and make the Test Method available to authorised users on the CEC website.

A summary of Test Methods will be made available on the website.

3. Distribution

Distribution of a test method will be determined according to Test Development Group / Surveillance Group (TDG/SG) structure and funding model as per Guideline 17.

Access to Test Methods published on the CEC website will be free of charge to all original TDG sponsoring companies that transfer to the Surveillance Group and any other company that later purchases the Test Method.

4. Registration of Holders

Guideline 14 gives information about the test method coding system, format, registration and the requirements and obligations on the test method user for generating bona fide CEC test results. Guideline 1 gives contact details for the CEC Secretariat.

A Test Method Registration Form is available for completion by the Company's Official Holder of the test method. This will ensure that the Official Holder receives automatic email notification of all updates.

5. Codes of Practice and Other CEC Publications

Codes of Practice and other CEC Publications need not follow the rigorous style requirements of CEC Test Methods. Format and layout should follow that of existing examples where possible or that of best industry practice. Drafts should be submitted to the Secretariat in suitable electronic format. Approval and publication will follow the same process as for Test Methods, except that there is no requirement for signature from the Group Chairman, and there is no formal requirement for updating.

6. Technical Papers and Presentations

The CEC Management Board welcomes the presentation of Technical Papers and / or Presentations by Working Groups at appropriate conferences or seminars anywhere in the world. Both the abstract and paper must be approved in advance by the Management Board who will consider the appropriateness of the sponsors, timing and location of the event as well as the quality of the paper.

External Technical Papers and Presentations made on behalf of CEC must exclude member company logos. The CEC logo should be added, if permitted by the organiser of the conference or seminar.

7. Copyright of CEC Publications

All published CEC documents are covered by the law of copyright.

A company, having purchased access to a Test Method on the CEC Web Site, is entitled to take paper or electronic copies for internal company use, but copyright law does not allow the distribution or sale of copies to third parties.

Access to Test Methods on the Web Site is via a personal CEC Username and Password. The CEC Secretariat issues this to an 'Official Holder' appointed by the purchasing company. The Official Holder's personal CEC Username and Password shall not be made available to anyone else.

The Official Holder is kept informed by email of all updates to the Test Method Master Copy on the CEC Web-Site. The Official Holder is then responsible for updating any copies distributed for internal company use. A company may have more than one Official Holder, upon application to the CEC Secretariat.

Note: Sponsored Groups

Access to a CEC Test Method developed by a sponsored group is covered in Guideline 13, part 7, where a licence to use the Test is given, upon application to the CEC Secretariat.

Note: Voluntary Groups

Access to a CEC Test Method developed by a voluntary group is free of charge to an existing Group member if it is electronically available on the CEC Web Site. New

Members to an existing voluntary Surveillance Group must purchase access to the electronic Test Method before joining. These CEC Test Methods must be purchased for EACH company site.

8. Disclaimer

CEC Test Methods, Codes of Practice and all its other publications do not purport to address all of the safety concerns, if any, associated with their use. It is the responsibility of the user to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

Guideline 16

Revision of Test Methods

1. Summary of Activity

	Activity	Who	What and How
1	Nominate Author	TDG/SG	Choose someone within Group to be responsible for written Test Method
2	Propose update	TDG/SG	Agree technical need and wording
3	Prepare in correct format	Author	See Guideline 14, clause 2 for layout and Guideline 15, clause 1 for other requirements
4	Approve	Group Chairman	Liaise with relevant Officers in TDG/SG for specific advice, e.g. the Group's SDG Liaison Officer for statistical changes in Section 11. Sign front page of revised sections 2-14.
5	Send to Secretariat	Author	See Guideline 15, clause 1.
6	Approve	CEC Secretariat / Board Chairman	Secretariat to check formatting and send to Board Chairman. Board Chairman to check for Quality Compliance and if OK, sign front page of Section 1.
7	Assign release date	Secretariat	Advise date to Group Chairman.
8	Publish revised method	Secretariat	Send automatic email notification to all Test Method Holders.

2. Notes

To avoid delay, the TDG/SG may implement the improvements in the revised Test Method, prior to publication, providing that:

- The revisions have been fully documented in the Minutes of a TDG/SG meeting.
- The CEC Secretariat has been advised to expect modifications.
- Updates to Test Methods should be submitted promptly to the CEC Secretariat.

3. Normal Updates

For each update Section 1's issue number will be increased by one whole number. Revised sections 2 – 14 will have their revision number increased by one whole number.

4. Minor Updates

In instances where a TDG/SG wishes to make revisions that would not significantly affect test severity, a system of decimalised issue numbers for Section 1 will be used. Section 1's issue number will be increased by point one (e.g. 2.1, 2.2, 2.3.).

The decimalised Section 1 issue number indicates that sets of results obtained from methods with the same whole issue number (e.g. 2.0, 2.1, 2.2,) are comparable. Revisions to Sections 2-14 will still have their revision number increased to the next whole number.

Guideline 17

Sales of CEC Test Methods

1. General

This Guideline covers the sale of test methods to parties who have not participated in the test development and deals with the provision of data and support to these parties to the same level as that provided to the original participants. This will enable purchasers of the test method to install and run the test.

CECs' overall policy is to encourage the adoption and use of test methods as widely as possible. The guidelines herein are designed to encourage participation at the first stage of development to maximise the chance of success, but also to ensure that parties wishing to purchase later are not disadvantaged.

All income from CEC test methods will be retained by CEC in a development fund, which may be used for further test developments and / or as a contribution to CEC running costs.

There may be cases that fall outside these rules. The Management Board will review them on a case-by-case basis.

2. Calculation of Selling Price

2.1. For a Test Method Developed by a Sponsored Group

CEC will establish the cost that has been incurred by an individual sponsor based on the total development expenditure to date.

Companies wishing to purchase a method within two years of the test development completion will pay CEC the original sponsor's share plus a premium of 10 percent. This premium recognises the risk element taken by the original contributors.

Companies wishing to purchase a method after 2 years from development completion will pay CEC on the following sliding scale:

Year 3: Original sponsor share cost.

Year 4: Original sponsor share cost, less 20 percent.

Year 5 and beyond: Original sponsor share cost, less 50 percent.

These arrangements will be subject to Management Board review.

NOTE:

'Test Development Completion' is defined as the date on which the Management Board agreed that the test development had been successfully completed.

A Company wishing to join a Sponsored Surveillance Group, without previously having contributed financially to the development of the test, will be obliged to purchase access to the Test Method on the CEC Web Site, before becoming a member and participating in Working Group meetings.

2.2. For a Test Method Developed by a Voluntary Group

The CEC Management Board will establish a base value for the sale of test methods produced by these Groups, taking into consideration any suggestions made by each Group upon test development completion. The Management Board will review prices for all current Test Methods produced by voluntary groups as required.

A Company wishing to join an existing Voluntary Surveillance Group, without previously having contributed to the development of the test, will be obliged to purchase access to the Test Method on the CEC Web Site, before becoming a member and participating in Working Group meetings.

Guideline 18

Quality Standards for Test Laboratories

1. Objectives

- To ensure the standards of excellence of CEC tests.
- To ensure that data are reliable and of high quality.
- To ensure that laboratories are contributing effectively.
- To promote CEC as a benchmark for excellence.

2. Introduction

CEC Test Methods are developed to the highest levels of quality in accordance with the quality principles specified in the current CEC Constitution.

The CEC Management Board may instruct a third party through the Secretariat to visit laboratories, meet key personnel and examine test facilities, accreditation, documentation, procedures, results and statistics.

3. The Development Process

The stages of test development are described in Guideline 14.

4. Acceptance Requirements

A valid CEC Test Result requires that the Testing Laboratory complies with CEC's Quality Requirements as defined below:

Type of Test	Internationally recognised Quality Management System (e.g. ISO9001, QS9000, ISO/TS 16949)	ISO 17025	ERC Database or CEC Test Monitoring Database (as appropriate)	CEC WG Membership	CEC Result
Engine & Transmission Tests (Performance Claims)	YES	YES*	YES	FULL (1)	YES
Bench Tests (Performance Claims)	YES	YES*	YES	FULL (1)	YES
Bench Tests & Transmission Tests (Quality Monitoring)	YES	NO	YES	OTHER (2)	NO

- (1) Full Membership requires attendance at Working Group meetings.
 - (2) If a company, is running a bench or transmissions test for Quality Monitoring purposes only, it can become a ‘Corresponding Lab’. This means participation in the form of regular submissions of reference data to the CEC’s Test Monitoring System, but no membership of the Working Group. ‘Corresponding Lab’ status is not permitted for CEC engine tests, since the complexities of running engine tests necessitates membership of the CEC Surveillance Group supporting the Test.
- * The Laboratory must achieve ISO17025 accreditation within 12 months after set-up of the corresponding Surveillance Group by the Management Board or within 12 months of joining an existing Surveillance Group. Only accredited laboratories can generate a “CEC result”.

As a condition of access to and use of a CEC Test Method, CEC reserves the right to check and verify compliance with the above quality requirements of any laboratory claiming a ‘CEC Result’.

CEC understands that there may be several business reasons for running these tests with an alternative method of accreditation or assurance.

The laboratories will be responsible for assuring the repeatability and discrimination (for instance with a history of testing their own products), however, **they will not be able to generate a ‘CEC result’.**

Laboratories not meeting these requirements must state the following on the first page of the Test Report:

“THE TEST RESULTS CONTAINED IN THIS REPORT WERE NOT ACHIEVED UNDER THE CONTROL OF THE CEC QUALITY PROCESS”

An additional explanation of the Quality Control Process used for any test carried out using this Test Method should also be included in the Test Report.

5. Validity of CEC Candidate Test Results

In principle valid CEC candidate test results can only be obtained after the test method is approved and published on the CEC website and satisfactory results have been obtained on CEC reference fluids. The reference test results which are included in the statistical data supporting the approval of the test shall be considered as the first results in the test referencing and laboratory/stand approval process as set out in section 11 of the test method. Once the control and warning limits, any run rules, and laboratory acceptance criteria are set, they shall be applied retrospectively to the aforementioned reference test results (and any subsequent tests on the same reference fluids). If a laboratory/stand is retrospectively found to be “out of control” when these limits are applied, then the laboratory must run the necessary reference tests to get back “in control” before running further candidates. If there is more than one reference fluid, it is normally necessary to be in control for each individual fluid, in order to obtain valid candidate results.

Laboratories should be aware that until the method becomes approved, any candidate testing is done at their own risk. A test run after the first round robin but before the test method is approved and published can become a valid CEC candidate test provided that when laboratory acceptance rules and thereafter control chart acceptance rules are retrospectively applied, the laboratory is found to be in control immediately prior to

the aforementioned candidate test. In particular, candidate tests will not be considered valid if the last reference test(s) before the candidate test are outside the acceptance limits, or if the number of candidate tests or elapsed time since the last reference exceeds the permitted maximum.

Results obtained on replacement reference fluids, before control limits are set, have a similar status to those obtained before the test method is approved. Thus when the control limits for the new reference fluid are set, they shall be applied retrospectively as above, to determine if the test was in control at the time that each subsequent candidate test was run.

From the round robin test on the new reference to the introduction of the new control limits, there may be a time period where either reference fluid could be used to determine if the test is in control. In this situation the test is only judged out of control if it fails to meet both the contemporaneous control limits for the old fluid and the retrospective control limits for the new fluid. Once the control limits for the new fluid are set however, a laboratory will be deemed out of control for the purpose of future candidate testing if its most recent test result on either reference was outside the limits set for that particular fluid.

For example, if 10 candidates are permitted between reference tests and the new reference fluid is run in place of the 4th candidate as part of a mini round robin, then 6 more tests could in principle be run without any candidate tests being at risk, provided that these are conducted before the limits are published for the new reference fluid. Suppose now that control limits on the new reference fluid are introduced after the 8th candidate test. If the result obtained on the new reference fluid was found to be outside these limits then the previous three candidate tests would all be valid but no further testing could be carried out, until a further satisfactory reference test has been run.

6. Monitoring Process.

Test laboratories must monitor and maintain a statistical control record of their reference tests to assist both the laboratory and the working groups to maintain test stability. This is described in Procedure 2 of the Statistics Manual.

A web-based Test Monitoring system for reference results has been introduced by the CEC Management Board for all CEC¹ tests. It is a requirement for working groups to input reference data into this system. All concerns and divergences must be analysed and resolved. The Surveillance Group chairman will require participating laboratories to report on divergences and take appropriate action.

The Surveillance Group will monitor the performance of Individual laboratories, and, if there are major concerns the SG chairman will inform the Management Board. The Management Board will request a report from the relevant working groups, and may request that a technical expert be appointed to visit the laboratory.

Note 1. Excluding those CEC engine tests included in ACEA sequences, which are monitored by the European Registration Centre (ERC) database.

Guideline 19

Use of Statistics within CEC

1. Background

When the Protocols (now Guidelines) were revised in 2004, it was felt that some of those dealing with the activities of the Statistical Development Group and statistical applications in general were too detailed to fit comfortably with the other Protocols. It was decided that all Protocols relating primarily to statistical issues should be reproduced as Procedures in a Statistics Manual to be managed and updated by the Statistical Development Group. In terms of the working practices of CEC, the material in the Statistics Manual will continue to carry the same weight as the Guidelines.

2. Procedures Managed by the Statistical Development Group

Procedure 1 – Round Robins.

This describes the purpose, design, conduct and statistical analysis of round robin programmes. These are used to determine the precision and severity of test methods and the performance of reference oil/fuel batches.

Procedure 2 - Working Group Test Monitoring Systems.

This procedure describes how Test Monitoring Systems are managed within CEC.

Procedure 3 - Statistical Requirements for CEC Test Methods.

CEC requires that all test methods are fit for their intended purpose, as defined by the Management Board. These procedures shall be used to set precision targets, and demonstrate that the targets have been met.

Procedure 4 - CEC Test Methods - The Use of Precision Statistics.

This explains how the precision statements contained in CEC Test Methods can be applied.

3. Future Developments

The Statistical Development Group is empowered to propose amendments to these Procedures, as well as to add new Procedures within the Statistics Manual, if deemed necessary. The Management Board must approve any amendments or additions to the Statistics Manual.

GLOSSARY

ACEA	Association des Constructeurs Européens d'Automobiles
ASTM	American Society for Testing Materials (USA)
ATC	Technical Committee of Petroleum Additive Manufacturers in Europe (ATC)
ATIEL	Association Technique de l'Industrie Européenne des Lubrifiants
CEC	Co-ordinating European Council
CONCAWE	The Oil Companies' European Organisation for Environment, Health and Safety
CRC	Co-ordinating Research Council (USA)
EN	European Norm
ERC	European Registration Centre (see Note 1)
EUROPIA	European Petroleum Industry Association
ISO	International Standardisation Organisation
JASO	Japanese Standards Organisation
OEM	Original Equipment Manufacturer
RFG	Reference Fuels Group
ROG	Reference Oils Group
SAE	Society of Automotive Engineers
SDG	Statistical Development Group
SG	Surveillance Group
TDG	Test Development Group
WG-FL	(ACEA) Working Group for Fuels and Lubricants

Note 1

ERC - European Registration Centre is the organisation that provides conformity assessment services for engine tests run under the European Engine Lubricant Quality Management System (EELQMS) developed by ATC, ATIEL and ACEA. It includes engine test registration, data validation, and database management of engine test results.µ

CEC Guidelines

Record of Changes and Amendments

Revision No.	Date of Revision	Summary of Changes
1	July 2005	New Issue
2	August 2005	GL/13 only – additional first sentence under Part 3.
3	April 2006	Delete ref. To T & A Status in Progress Report
4	May 2006	GL/5 parts 1 & 1.2, GL/13 parts 5 & 6, GL/14 part 9, GL/18 part 4 relating mainly to Test Monitoring. Proforma 6 addition of page 1 footnote.
5	Sep 2006	Revised Proforma 6 Progress Report issue 9. Addition of ref fuels/ oils list and general tidy up.
6	November 2006	Revisions to GL in relation to joining a sponsor group in GL 5 (part 1.1), GL 13 (parts 1,5 & 6,7 &8), GL 15 (part 7). Change to issue number system for proformas contained in guidelines. Proformas 1 to 7 given the same Issue number as Guidelines i.e. Issue 6.
7	February 2007	Revision to GL 4, Item 1, first bullet point referring to Articles on Competition Law.
8	April 2007	GL2 App 1 addition of reference to correlation fluids GL13 Part 3 additional funding rules GL19 Part 2 renaming and renumbering of procedures in line with Statistics Manual
9	August 2007	GL 5 Part 1.1 addition of rules for appointment of non sponsor specialist to reference fluid co-ordinator. GL 13 Part 6 addition of rules for sponsors without own lab facilities GL 15 Part 8 addition of Disclaimer Proforma 2 – addition of other examples of Letters of Intent Proforma 6 – Update of Standards quoted, addition of Test Monitoring option on Page 1
10	March 2008	GL 17 Part 1 change to where the income from sales of sponsored test methods goes. GL17 Part 2.2 change to the requirement for new members of voluntary surveillance groups to now purchase access to the test method, prior to joining Group & attending meetings. GL 1 Appendix 1 – change to ACEA address Proformas 1-7 – addition of Revision Number and Date to titles.
11	September 2008	GL 5 Representation of members by 3 rd parties GL 11 Funding of additional tests at SG stage designed to improve test. Notification email when test finally accepted into CEC. GL 18 Validity of Candidate Test Results
12	October 2008	GL 15, part 7, Note on Voluntary Groups about new members to existing SGs must buy test method first

Revision No.	Date of Revision	Summary of Changes
13	March 2009	GL 4, part 1 change to frequency of Progress Reports and Group Meetings. GL 4, part 4.2, 4.3, 4.4 consistency of wording re consensus. GL5 part 1.1 clarification of membership of sponsored TDGs & SGs and part 1.2 4 th bullet point for Voluntary Groups. GL 6, part 3.1 addition of last paragraph GL 11, Note 2, frequency of Progress Reports, Note 4, liability for running early candidate tests and them being declared invalid. Proforma 2 addition of clause to all versions of Letter of Intent in relation to liability for running early candidate tests and them being declared invalid.
14	July 2009	GL5 clarification to 1.1 and 1.2 support by sponsoring tests and part 3, 2 nd paragraph, about showing test results outside the Group.
15	January 2010	GL18 addition of part 7, 'Conformance of Candidate and Reference Tests with the Method' introducing the Quality Index technique.
16	May 2010	Improvements to wording of Letters of Intent in Proforma 1 & 2. New version of Progress Report in Proforma 6.
17	August 2010	Amendments to Progress Report Template Appendix 1, including addition of report date & ISO 17025 column. Membership of a Surveillance Group by non-sponsors after a test is developed is added into GL5. Addition of Pre-Meeting of interested tendering parties added to GL10.
18	September 2010	Update to Guideline 18 to include instruction in part 5 about Validity of Candidate Results in relation to the introduction of new reference fluids to an existing test and update to part 4 Acceptance Requirements in line with agreed revised Quality Statement included with every Test Method.
19	February 2011	Clarification in Guideline 5 clause 3 about the sharing of test results within a Working Group. Addition in Guideline 14 of new clause 5 about Test Availability. Renumbering of other clauses after it. Update to Proforma 7 Attendance List (Revision 10)
20	May 2011	Addition of Guideline 4 part 5, providing guidance on the expectations for CEC Fuel Test Development and Surveillance Group Membership. Improvements to Proforma 7 Attendance List (Revision 11) and Progress Reports Template (Revision 13)
21	March 2012	Additional wording to Guideline 13 part 5 about joining TDGs in Phase 1

Revision No.	Date of Revision	Summary of Changes
22	November 2012	Additions to Chairman responsibilities in relation to communication with the MB and working with a Vice-Chairman in GL4 part 1. Addition to GL9 Notes to include TDG reviews of development timings / costs and how to handle proposed changes to a TDG original Terms of Reference.
23	December 2012	Removal of Post Office Box address for CEC Secretariat.
24	October 2013	Major review of all guidelines with amendments to G/L 2-1, G/L 2 Appendix 1-3, G/L 4-1, 4-3, 4-5, G/L 5-1, 5-2, G/L 6-4, G/L 7-3, G/L 9, 10 and 11 (extensive), G/L 12-2, G/L 13-3, 13-5, G/L 14-3, 14-9, G/L 15-2, 15-3, 15-4, 15-6, 15-7, G/L 16-1, 16-2, G/L 17-2, G/L 18-6. Other areas reviewed and amended for grammar and spelling. Removal of all Proformas 1 to 7. These are now stand-alone documents available on the CEC Web Site for ease of updating.
25	February 2014	Improvement to wording on decision-making in G/L 4, 4.1 and 4.2, as agreed at MB Meeting 22January 2014.
26	June 2014	Changes to G/L 18 Part 5 & 6 by SDG to tie in with update to Statistics Procedures G/L 18 Part 4 to clarify 'CEC result' and re-word Corresponding labs i/o corresponding members. Additional paragraph to G/L 5 part 1 about representation in SGs of more than 1 company location. G/L 8 clearer rules about Special Groups G/L 4 addition of Vice-Chair responsibilities
27	December 2014	Addition of Measurement Uncertainty Panel to G/L 7 Support Groups
28	February 2015	Addition of review prior to Phase 2 RR in G/L 11. Amendment to G/L 7 Part 4.3 Rating Group Activity last bullet point. Removal of G/L 18 part 7 'Conformance of Candidate and Reference Tests with the Method' and the 'Quality Index' Embedded Presentation document.
29	May 2015	Addition to G/L 6 Section 4 about TDG Chairmen
30	Sept 2015	G/L 1 Replace contact details of CEC. Remove IAS and add Kellen Europe
31	Nov 2016	Guideline 11 : Addition of a new entry 26 "reference new hardware batch" on page 27
32	Jan 2017	Guideline 11: Addition of "List health and safety requirements for hazardous materials and/or operations" under entry 4 "Establish operating conditions"
33	July 2019	Guideline 1: Change of address of Kellen and ATC, deletion of words "Constitution" and "Operating" from the Page 1 and Header