

News item

New Version of the CEC Operating Guidelines published 13th August 2025

ATIEL as member of the CEC Management Board is pleased to announce that the new version of the CEC Operating Guidelines (v35) has been published.

The whole document has been adapted to the rules and processes which have been in effect since the reorganisation of CEC in 2001 and takes into account discussions on how new test methods are developed and - more important - how tests that have already been developed by OEMs or laboratories and how they can be incorporated into the CEC system.

CEC updated the test method development process and added and explained the process for pre-developed tests.

A summary of the online seminar on CEC Operating Guidelines is also available here:

<https://cectests.org/guidelines>

About ATIEL

The Technical Association of the European Lubricants Industry (ATIEL) is a not-for-profit association (ASBL) representing the combined knowledge and experience of leading European and international engine oil manufacturers and marketers.

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OPERATING GUIDELINES

**The Coordinating European Council - The European Fuels &
Lubricants Performance Test Development Organisation**

CEC Secretariat

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Guideline 1 – CEC Purpose, Structure and Contacts

1. Introduction and Purpose

The Coordinating European Council, or the CEC, is the European fuels & lubricants performance test development organisation.

CEC is an organisation that represents the motor, oil, petroleum additive and allied industries in the development of Test Methods to evaluate the performance of transportation fuels, lubricants and other fluids.

This guideline:

1. Defines the purpose of the CEC and its structure
2. Lists the industry associations currently represented on the CEC Management Board
3. Defines applicable law
4. Identifies the contact details for CEC

2. CEC Purpose

See also the “CEC Articles of Association, Title 2., Objectives and Scope”.

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.

3. CEC Structure

CEC has a CEC Management Board currently drawn from industry organisations having interest in the development of performance tests for fuels and lubricants as detailed in the “CEC Articles of Association, Title 3., Membership”. The CEC Secretariat is outsourced. Test Method development, Test Method surveillance and support activities are carried out by Working Groups. Funding of test method development is usually shared equally between the members of the test development group.

4. Contacting CEC

The primary point of contact with CEC is the CEC Secretariat:

Kellen S.A.
Avenue de Tervueren 188A/box 4
1150 Brussels
Belgium
Phone: +32 (0)2 761 16 84
Email: info@cectests.org
Website: www.cectests.org

5. Industry Associations Currently Represented on the CEC Management Board

a. ACEA

Association des Constructeurs Européens d'Automobiles

Rond-Point Schuman 6
B-1040 Brussels
Belgium

b. ATC

Technical Committee of Petroleum Additive Manufacturers in Europe (ATC)

Sector Group of CEFIC

Technical Committee of Petroleum Additive Manufacturers in Europe AISBL (ATC)
ATC Office
Avenue de Tervueren 188A, box 4
B-1150 Brussels
Belgium

c. ATIEL

Association Technique de l'Industrie Européenne des Lubrifiants

Rue Belliard 40
B-1040 Brussels
Belgium

6. 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 2 – CEC Management Board

1. Introduction and Purpose

These guidelines define the roles and responsibilities of the CEC Management Board and the members of the CEC Management Board.

2. 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
- Establish Test Method Development Groups (TDGs), Surveillance Groups (SGs) and Support Groups from the contracted laboratories and other participating sponsors
- Approve the appointment of Group Chairs
- Oversee and support the activities of these groups
- 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 CEC Management Board Meeting Minutes for a minimum of 10 years as a legal requirement

3. Decision-Making

The decision-making process for the CEC Management Board is defined in the “CEC Articles of Association, Title 7, Article 21”.

Decision-making will be by an agreed consensus/no objection, each member Industry Association being entitled to one vote.

For clarity if the Chair, Vice-Chair or other officer of CEC is also one of the representatives of their association then they are entitled to vote in that capacity but not in their capacity as a Director of CEC (as stated in the Articles of Association).

4. Oversee and Support CEC Working Groups

A representative from the CEC Management Board will be assigned to each CEC Working Group.

The CEC Management Board representative is required to:

- Report to the CEC Management Board on the activities of the group
- Maintain regular contact with the Group Chair.
- Guide the Working Group with input and requirements from the CEC Management Board.
- Facilitate the resolution of issues within a Working Group at the request of Group Officers and members by:
 - Help the group Chair and officers focus on the priority issues
 - Facilitate the good functioning of the group
 - Where there is a low probability of resolution to recommend a course of action to the Management Board to resolve the problem(s)

Guideline 3 – CEC Secretariat

1. Introduction and Purpose

CEC operates with the support of a CEC Secretariat providing assistance to the Working Groups and to the CEC Management Board.

2. Selection of the CEC Secretariat and Accountability

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

3. Role of the CEC Secretariat

The CEC Secretariat will:

- Provide administrative and technical support
- Work in accordance with the Articles of Association, Guidelines, CEC 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 CEC 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
- Report on the progress of test developments via a half yearly Activity Report published on the CEC website

Guideline 4 – Types of Working Group and their Structure

1. Introduction and Purpose

CEC business is conducted by Working Groups.

Test Method development, Test Method surveillance and support activities are carried out by these Working Groups. Other types of Working Group can and do exist.

2. Formation and Closure

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

3. Structure / Organisation of Groups

This is a typical arrangement for Officers of CEC Working Groups

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

4. Types of Groups

a. Test Method 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.

b. Surveillance Group (SG)

Responsible for maintaining and enhancing the quality of a Test Method that has successfully completed the test development stage (TDG).

c. Statistical Development Group (SDG)

Responsible for defining the general guidelines under which statistical analysis is performed within CEC Working Groups and for coordinating the activity of the Statistical Liaison Officers in each of the Working Groups.

d. Reference Fuels Group (RFG)

Responsible for maintaining a centralised database of reference fuels used in CEC Test Methods and coordinating the activity of the Reference Fuels Coordinators in the Working Groups.

e. Reference Oil Group (ROG)

Responsible for maintaining a centralised database of reference lubricants used in CEC Test Methods and coordinating the activity of the Reference Lubricant Coordinators in the Working Groups.

f. Analytical and Bench Test Support Groups

To develop new analytical or bench tests when required to support another CEC Test Method development.

For the purposes of clarity these groups are not tasked with developing new CEC Test Methods rather they are tasked with developing a specific analytical or bench test that is required for a CEC Test Method (for example soot content of a lubricant).

g. Special Groups

Responsible for handling any task requested by the CEC Management Board, which falls outside the scope of an existing group. The CEC Management Board will agree the terms of reference. There are currently two types of Special Group:

Special Project Groups (SPG) – These groups are formed typically, but not limited to, pre-Test Development and are responsible for investigating test requirements and writing Terms of Reference.

Special Liaison Groups (SLG) – 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 CEC Management Board will agree the terms of reference.

A Special Group will be of a temporary nature. It will be established after approval of its mission, objectives and a timing plan. Special Groups will be closed by the CEC Management Board upon completion of their work, or at any time if the Group's objectives are not being met.

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 Method Development Group that may be formed as a result of work carried out within a Special Group.

Guideline 5 – Decision Making

1. Introduction and Purpose

During the normal conduct of business in CEC Working Groups it is necessary to take decisions, in this context CEC has developed this guideline to define certain parts of the process and to facilitate the overall decision-making process.

CEC Management Board decision making is governed by the “CEC Articles of Association, Title 7, Article 21” as noted in guideline 2 therefore only the definition of consensus in this guideline is relevant to the CEC Management Board.

2. Terms and Definitions

a. Consensus

Consensus is defined as an agreement without dissent.

Consensus recognises that an Industry Association or individual company, whilst not agreeing with a view being expressed by a majority, will not unreasonably block the decision. The dissenting Industry Association or individual company will be required to explain their position and to document it including a full description of the reason for the dissent. In the case that consensus fails the CEC Working Group and/or the CEC Management Board will continue discussions until consensus can be achieved.

3. Decision Making Process

The Chair of the group with support from the Vice-Chair and other officers of the group is responsible for ensuring that questions, issues and potential issues are addressed as early as possible.

In this context the Chair should clearly define the subject and lead the group in a discussion, ensuring that all group members can express their view if they wish to do so.

Any member of the group can propose a position to be taken by the group.

The Chair of the group is responsible for guiding the group to a consensus position or in cases where consensus cannot be achieved is responsible for ensuring that the different positions, majority and minority, are fully documented.

CEC recognises differences between different types of Working Groups and consequently further detail is provided here:

a. Working Groups Operating Under Sponsor-Funded Options

Decisions will be reached by consensus amongst the group members that are entitled to vote (see Guideline 9). Failure to reach consensus should be reported to the CEC Management Board, with full details of majority and minority positions.

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

Note: Membership of Working Groups operating under sponsor funding is on a company basis and is not individual (attendees represent their company) therefore each company has one vote when searching for consensus and not a number of votes equal to the number of participants.

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

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

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

The Working Group should document an agreed voting principle in advance of the need to decide on issues via voting. Preferentially a document should be written and approved by members of the Working Group.

c. Support Groups

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

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

The Working Group should document an agreed voting principle in advance of the need to decide on issues via voting. Preferentially a document should be written and approved by members of the Working Group.

d. Special Groups

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

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

The Working Group should document an agreed voting principle in advance of the need to decide on issues via voting. Preferentially a document should be written and approved by members of the Working Group.

Guideline 6 – General Principles for Running CEC Groups and their Meetings

1. Introduction and Purpose

This guideline outlines how Group Chairs and Group Officers should organise their groups and manage their meetings. Certain requirements are also established, such as those regarding compliance and for writing, validating and publishing minutes.

More specific guidelines for the different types of Working Group are provided in the relevant sections of this document.

It is recommended that every CEC group has as a minimum, a Chair, Vice-Chair and a Secretary. All groups have the remit to assign roles as necessary to fulfil the objectives of the group.

2. Appointment of Chairs and Vice-Chair

Chairs of Groups are chosen by the Group members and are subject to ratification by the CEC Management Board. They may also be appointed by the CEC Management Board.

For Test Method Development Groups where the Chair is from the lead laboratory special consideration should be taken to avoid conflicts of interest and a Vice-Chair MUST be appointed. This is to ensure the Chairs focus on the management of the Test Method Development Group whilst the lead labs focus on the technical challenges faced by the Test Method Development Group.

3. Appointment of Other Officer Positions

All other officers are appointed by the Group.

Chairs, Vice-Chairs and Secretary positions should be selected from different member companies if possible.

4. Responsibility of the Chair / Vice-Chair

It is the Chair's responsibility to:

1. Ensure compliance with applicable laws including the Competition Laws of the EU (See Article 34 of the CEC Articles of Association)
2. Ensure compliance with CEC requirements on membership, decision-taking and quality principles
3. Read out the Confidentiality Statement outlined in Guideline 6.5 at the beginning of every meeting
4. Read out the CEC Anti-Trust Statement outlined in Guideline 6.5 at the beginning of every meeting
5. Ensure compliance with CEC Articles of Association and Guidelines
6. Lead the group in meetings, in defining objectives and priorities and in resolving issues

7. Ensure that group members comply with the guideline on expectations and requirements of group members
8. Maintain contact with the CEC Management Board representative and actively engage them in resolving group issues if their assistance is needed
 - It is the responsibility of the Chair to raise topics with the Management Board as pertinent. Group meeting minutes should provide all relevant background information if required by the Management Board. Group Chairs should also be encouraged to share any additional information with the Management Board that needs to be shared within the industry bodies
9. Provide a full Progress Report on an annual basis at a minimum. Upon request from the CEC Management Board the frequency of reporting may be increased or decreased
 - Test Development Groups (TDG) must provide a progress report to the CEC Management Board following every group meeting using the template available via the CEC website (Template 11), this report will be made available to all registered website users
 - Surveillance Groups (SG) must issue a Progress Report at a minimum every 12 months to the CEC Management Board using the template available via the CEC website (Template 6). The CEC Management Board may request more or less frequent progress reports depending on test status
10. Set the frequency of meetings to ensure swift progress of group actions and priorities and/or ongoing quality assurance or improvements. For mature tests the meeting frequency can be reduced to once per year.
11. Represent the Group to the CEC Management Board
12. Actively engage the Vice-Chair (if appointed) in the project management of a Group

It is the Vice-Chair's responsibility to:

1. To support the Chair
2. In exceptional circumstances when the Chair is unavailable and with prior agreement with the Chair, take on the Chair's responsibilities as listed above
3. If the Chair is from the lead laboratory, then the Vice-Chair should take responsibility for ensuring:
 - a. That the Budget is correctly spent including approval of invoices via the CEC Secretariat
 - b. That the lead laboratory carries out its project management responsibilities (maintaining the project timeline, with accurate and regular reporting etc.)

5. Confidentiality of Meetings

Confidentiality and Anti-trust Statements must be read out by the Group Chair at the start 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 in Guideline 15.

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

“The Group Chairman will ensure complete and accurate Group Minutes.

Business will only be conducted at formal meetings. There will be no off-line or off-record sessions.

Objections must be made promptly to the CEC Management Board Chairman, either directly, or, via the CEC Secretariat if any activities appear to violate anti-trust.

There will be no agreements, discussion, understandings or exchange of data or information concerning such issues as output, production volumes, sales profits, margins, prices, customers and customer-specific information, confidential information on future plans and specific recent or prospective costs.”

6. Minutes of Meetings

a. Preparation

The minutes shall be prepared either by the secretary of the relevant group or by a member of the group selected by the Chair within 15 working days maximum, using the CEC Minutes Template available on the CEC website.

b. Confirmation of Minutes

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

c. Distribution

The minutes of a meeting must be sent promptly to the CEC Secretariat for publication in the Group area of the CEC website 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.

d. Approval of Minutes and Amendments

Group members shall approve the minutes during the next Group meeting.

e. Archive

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

Guideline 7 – Confidentiality, Copyright and Publication of CEC Information

1. Introduction and Purpose

This guideline addresses the requirements and processes for managing CEC's intellectual property.

CEC is an association sponsored by its member associations and with the exception of information that has been expressly made publicly available, for example on the public area of the CEC website, CEC information should be considered as confidential by default.

2. Copyright

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

3. Publication Approval

The CEC Management Board must always be consulted prior to publication of CEC intellectual property in any form. The CEC Management Board's decision is final.

4. 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 CEC 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.

5. CEC Working Groups

CEC recognises that there are differences between different types of Working Group's and that these differences can potentially impact what intellectual property can be made public and the process for approving the publication.

a. Sponsor Funded Working Groups

Test Method Development Groups are in most cases sponsored by individual companies and their activities are conducted in the context of CEC and coordinated by the CEC. CEC retains the intellectual property rights for the Test Method developed in the context of a Test Method Development Group.

All information should be considered confidential unless otherwise specified, such but not limited to:

1. The Test Method
2. Meeting minutes
3. Information, knowledge and technical know-how contributed by members of the Working Group that is not in the public domain

For clarity, group membership is on a company basis whereas CEC requests that one individual represent the company in the Working Group. The group member can therefore communicate about the Working Group within their organisation however it is recommended that they remind their colleagues that the information is confidential and should not be further distributed.

b. Voluntary Working Groups

CEC Voluntary Working Groups are not sponsored (e.g. Support Groups).

In all cases the Chair of the relevant Working Group should be approached with regard to the confidentiality of information and intellectual property questions. The Chair will be supported by the CEC Secretariat, the CEC Management Board and where necessary our legal advisers.

c. Intellectual Property of Test Methods, Codes of Practice

CEC owns the intellectual property for Test Methods and codes of practice (e.g. these guidelines, the statistics manuals, ...) unless otherwise specified. The process for obtaining a CEC Test Method and the associated rights and obligations are fully detailed in the guidelines 15 and 18.

d. Support Groups

Support Groups rarely have need to disclose CEC intellectual property and therefore each case should be considered separately via a request to the CEC Management Board.

e. Special Groups

Special Groups are by definition all different and therefore each case should be considered separately via a request to the CEC Management Board.

f. Invitees

Invitees to Working Group meetings are subject to the same requirements of confidentiality as are members of Working Groups. As such they are expected to respect the anti-trust and confidentiality statement read out at the beginning of the meeting by the Chair and to sign the attendance list.

6. CEC Management Board

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

7. CEC Newsletter

Newsletters are not confidential and may be further distributed by anyone receiving the newsletter directly from CEC without constraint.

8. CEC Website

CEC intellectual property disclosed via the public area of the CEC website is considered to have been placed in the public domain.

9. CEC Test Methods

A company, having purchased access to a Test Method on the CEC website, 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.

a. Licence to Use Test Methods

CEC will own all intellectual property rights in respect of the test and it has the sole right to publish and grant licences.

10. CEC– Test Method Information

CEC publishes certain information regarding its Test Methods via the public area of the CEC website whilst also respecting the confidentiality of the method and the contributions of the companies who contributed to its development and/or sponsored its development.

The information disclosed via the public area of the CEC website is considered to have been placed in the public domain.

Guideline 8 – Requirements for Proposing a New CEC Test Development

1. Introduction and Purpose

A CEC Test Method may be developed entirely within CEC or may be incorporated into the CEC system in a partially or fully developed state.

A new Test Method may be proposed by any CEC stakeholder. New Test Method development projects may also be requested by any CEC stakeholder.

Non-CEC stakeholders, for example associations, individual companies, groups of companies working in areas directly or indirectly related to fluids for the transport industry, may also propose or request new Test Methods.

2. Demonstrated Need

If proposed as a replacement for an existing method, then there must be a demonstration of the continuing need for the measurement of the proposed parameters.

If proposed as a new method, then there must be technical significance and potential for use.

Alternative methods, e.g. existing International methods with adequate quality must be considered.

3. Endorsement

The need must be supported by CEC Stakeholders:

- Fuels Tests - endorsement by ATC, ACEA
- Lubricant Tests¹ – ATIEL, ATC, ACEA

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

4. Availability of Support

Stakeholders at the origin of the request will be required to ensure availability of:

- For proposed engine and transmission Test Methods
 - Engine, fuel system or transmission hardware and management system for a minimum of 5 years from estimated test development completion

¹ Including lubricant engine tests, lubricant laboratory tests and transmission lubricant tests

- For proposed laboratory Test Methods
 - Any parts or materials required by the Test Method, such as but not limited to engine or transmission parts, elastomers, specific testing equipment or testing rigs for a minimum of 5 years from estimated test development completion
- Technical Support
- Advice on reference lubricants & fuels
- Identified correlation fluids which correlate with field performance or OEM performance experience and which can be used to calibrate the Test Method

5. Hardware Sponsor

Should one exist then a Hardware Sponsor, sometimes called the Sponsoring OEM, should be identified in the original proposal for a new CEC Test Method.

6. Confidentiality

The stakeholder submitting the proposal for a new CEC Test Method must confirm at the time of their request that it will be possible to respect the requirements described in Guideline 8.

Guideline 9 – Sponsorship and Funding of CEC Working Groups

1. Introduction and Purpose

In general, there are two types of sponsored working groups: Test Development Groups and Surveillance Groups. Funding for CEC sponsored working group activity is based on formalised agreements made by each group. Funding is usually shared equally between the members of the groups.

2. Funding of Sponsored Test Method Development

a. The Process

For a development requiring funding a “Letter of Invitation to Sponsor” will be issued by the CEC Secretariat (usually at the end of Pre-Phase 1, see Guideline 10) describing:

1. The development requirement
2. The development timing and best estimate of costs
3. The mechanism for sharing costs (funding is usually shared equally by the members of the group).
4. The deadline for responses

At the end of Phase 1 sponsors and funding are reconfirmed or modified for Phase 2. If a sponsor joins the TDG in Phase 2, the regular sponsorship fee for phase 1 has to be paid. Round Robin Tests in Phase 2 are usually sponsored by the participating laboratories.

See the Test Method Development Process guideline 10 for a definition of phase 1 and phase 2.

Funding and budget of a TDG is usually organized and handled by the CEC secretariat.

b. Financial Contributions

A test programme will be proposed in the tender response in Pre-Phase 1 upon which the total funding will be based. Total funding includes:

- The funds committed to a TDG by the lead laboratory in their tender response
- The funds committed to a TDG by the test sponsors
- The funds committed by a Reference Fluid supplier in their tender response
- Any funds committed by an organisation or company in a contract signed with the CEC

For clarity: in the case of TDGs with a lead test laboratory selected by tender the lead test laboratory is a sponsor of the group and as such is required to pay the sponsor fee.

Sponsoring companies or organisations will usually share development costs equally between them. Any substantial sponsorship funds remaining at the end of a test development will be returned in equal parts to those sponsors who originally paid them.

A CEC Test Method may be developed entirely within CEC or may be incorporated into the CEC system from a partially or fully developed state. In the case of a pre-developed test that shall be converted into a

CEC test method, the costs for the development work already performed are determined by the Management Board. The information provided by the test developer, the costs of comparable projects and expert estimates are taken into account. This amount will be used for a possible reimbursement of the development costs. Any remaining fund will be used for the ongoing operation of CEC.

Reimbursement of the development costs already incurred for a pre-developed test is possible in full or in part. The decision on this is made by the Management Board in consultation with the TDG. Additional funding for the laboratory taking over the Lead Laboratory Role may be required.

Alternatively, whenever the requirements of the terms of reference are not met, additional funding may be required from the sponsors. The required further test programme will be defined by the TDG 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 their share then their 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.

3. Funding of Surveillance Groups

Members should agree on an equitable funding mechanism for costs incurred during normal operation of the group such as but not limited to:

- Precision Round Robin testing
- Re-qualification of reference fluids or new batches
- Re-qualification of test hardware or new batches
- Special investigations

The funding and budget control of the Surveillance Groups is organised independently by the group – usually by invoices of the participating labs. CEC secretariat is not involved.

4. Types of Membership of Sponsored Working Groups

a. Types of Members

Four types of membership of a sponsored TDG or sponsored SG are possible:

i. Financial Sponsor

All companies joining a sponsored TDG or sponsored SG by paying the sponsorship fee are defined as Financial Sponsors.

ii. Expert Member

An Expert Member is an individual providing expertise required by the group.

The Chair may, where the Group feels that a specific expertise would assist it to deliver against its targets, invite experts to join the Working Group subject to the agreement of all the Group members. Such experts are defined as Expert Members.

The Chair must conduct a periodic review of expert member contribution and request non-contributing expert members to stand down where appropriate.

iii. Hardware Sponsor

A hardware sponsor – often called the sponsoring OEM – exists in many engine test Working Groups and represents the OEM who provides the engine hardware and associated know-how to enable test laboratories to perform the Test Method.

If a hardware sponsor exists, they should be identified in the original proposal for a new Test Method as required by guideline 8.

iv. In-kind Member

An In-Kind member is an organisation that provides services to the Working Group necessary to ensure the proper and optimal management of the Test Method. Examples of such organisations are, but not limited to:

1. Hardware providers
 - a. Parts manufacturers
 - b. Parts distributors
2. Reference fluid providers

b. Voting Rights in Sponsored Working Groups

Voting is undertaken in Working Groups for the purposes of decision making, see also the guideline on decision making.

When a vote is required in a sponsored Working Group the following voting rights apply to the different member types.

Member Type	Can Vote
Financial	Yes
Expert	No
Hardware Sponsor	Yes
In-Kind	No *

* In exceptional circumstances the CEC Management Board may approve that an in-kind member should have voting rights

Guideline 10 – The CEC Test Method Development Process

1. Introduction and Purpose

The development of a CEC Test Method can be a complex process and the project can potentially span one or more years.

The following process outlines the key steps in maximising the probability of success.

2. Alignment

During the different phases of CEC Test Method development extensive time is given to technical discussions between experts. These discussions are important and are a key enabler for success.

It is also critical to success to ensure that alignment is reached on non-technical elements such as but not limited to:

- A full understanding of the expected outcomes
- A shared understanding of the detail of the Needs Statement
- Should the test
 - be required to differentiate simply between acceptable and unacceptable performance (a pass/fail test also known as a no-harms test)
 - be required to differentiate between different levels of performance, for example on a merit scale

It is further recommended that alignment is reached regarding detailed technical elements and that any generic technical descriptions. For example, engine wear, is the requirement to address:

- Corrosive wear
- Abrasive wear
- Adhesive wear
- Etc.

These topics should be discussed during Proposal Phase and Pre-Phase 1 by all participants and where doubt exists then the Working Group can address their questions to the authors of the Needs Statement or to the Management Board regarding the Terms of Reference.

3. CEC Test Method Development Process

The Test Method development process has four main phases:

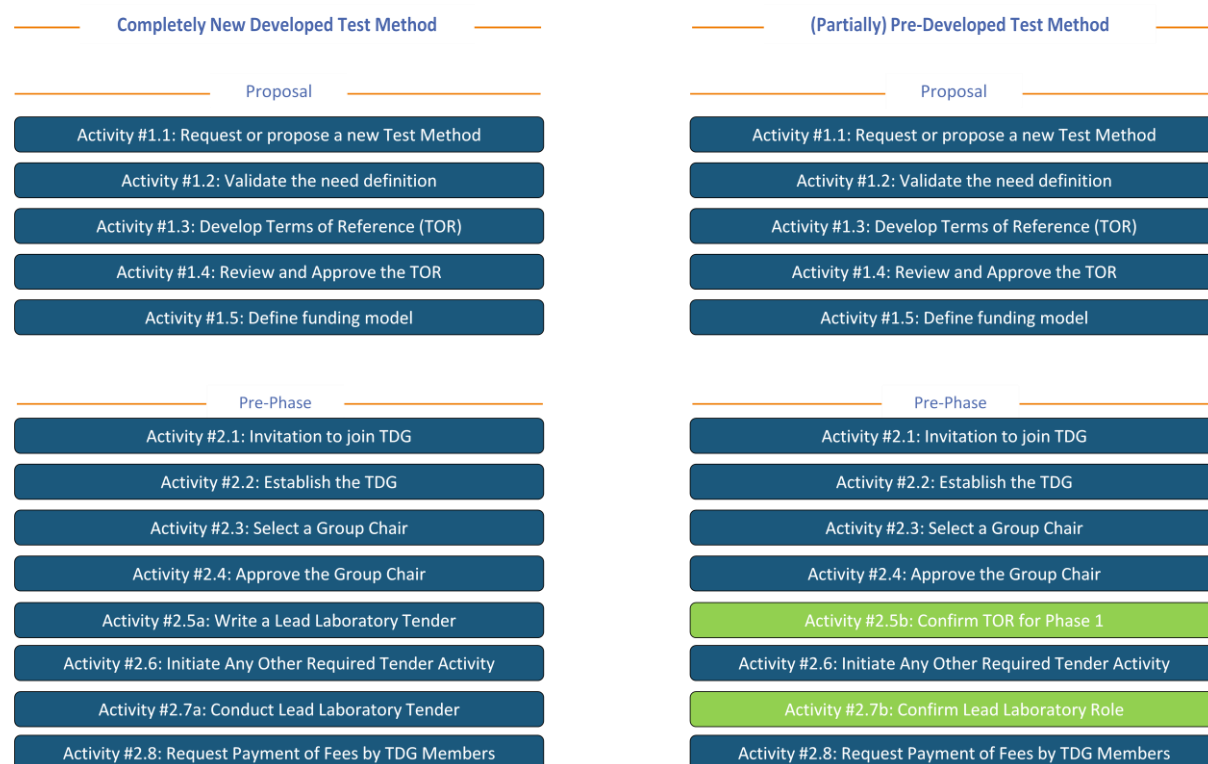
- 1) Proposal
- 2) Pre-phase 1
 - a. The need for a new Test Method is established
 - b. The terms of reference are written (typically by a Special Project Group)
 - c. A TDG is formed

- d. The lead laboratory tender is conducted
- e. The sponsor fee is calculated and TDG members formalise their membership
- 3) Phase 1
 - a. The TDG develops the Test Method with a target of a repeatable Test Method at the lead test laboratory
- 4) Phase 2
 - a. The TDG refines the Test Method with a target of a reproducible test at all or a significant majority of the participating laboratories

In all cases, all new Test Method development projects must complete all activities.

A new Test Method development project may use a partly or fully established (pre-developed) Test Method, therefore some steps in this process (marked with “b” and replacing the respective steps marked with “a”) may be completed by relying on previously generated data, prior to the establishment of the TDG.

The following scheme gives an overview on the entire Test Method development process. For a pre-developed test method (right hand side) which is to be converted into a CEC test method, most steps are the same. Different activities are marked in green.



Completely New Developed Test Method	(Partially) Pre-Developed Test Method
Phase 1	Phase 1
Activity #3.1: Select TDG officers	Activity #3.1: Select TDG officers
Activity #3.2: Re-approve Group Chair	Activity #3.2: Re-approve Group Chair
Activity #3.3: Establish Operating Conditions	Activity #3.3: Establish Operating Conditions
Activity #3.4a: Setup Hardware / Develop Test Method	Activity #3.4b: Disclose Hardware and Test Method
Activity #3.5a: Establish Test Discrimination	Activity #3.5b: Validate and Confirm Test Discrimination
Activity #3.6a: Establish Test Repeatability	Activity #3.6b: Validate and Confirm Test Repeatability
Activity #3.7: Document and Validate Test Precision	Activity #3.7: Document and Validate Test Precision
Activity #3.8: Write up Draft Test Method	Activity #3.8: Write up Draft Test Method
Activity #3.9: Formalise the Financial Performance Phase 1	Activity #3.9: Formalise the Financial Performance Phase 1
Activity #3.10: Phase 1 Completion and Sign Off	Activity #3.10: Phase 1 Completion and Sign Off
Activity #3.11: Request the Start of Phase 2	Activity #3.11: Request the Start of Phase 2
Phase 2	Phase 2
Activity #4.1: Confirm Test Sponsors for Phase 2	Activity #4.1: Confirm Test Sponsors for Phase 2
Activity #4.2: Re-Confirm or Propose New TDG Officers	Activity #4.2: Re-Confirm or Propose New TDG Officers
Activity #4.3: (Re-)Approve Group Chair	Activity #4.3: (Re-)Approve Group Chair
Activity #4.4: Prepare Testing of Participating Test Labs	Activity #4.4: Prepare Testing of Participating Test Labs
Activity #4.5: Trial Runs at Participating Test Labs	Activity #4.5: Trial Runs at Participating Test Labs
Activity #4.6: Establish the Test Method in TMS / ERC	Activity #4.6: Establish the Test Method in TMS / ERC
Activity #4.7: Develop Reproducibility Test Program	Activity #4.7: Develop Reproducibility Test Program
Activity #4.8: Run the Reproducibility Test Matrix	Activity #4.8: Run the Reproducibility Test Matrix
Activity #4.9: Evaluate Reproducibility Test Matrix Results	Activity #4.9: Evaluate Reproducibility Test Matrix Results
Activity #4.10: Modify Test Method	Activity #4.10: Modify Test Method
Activity #4.11: Approval of New Test Method	Activity #4.11: Approval of New Test Method
Activity #4.12: Publication of New Test Method	Activity #4.12: Publication of New Test Method
Activity #4.13: TDG Project evaluation/Post Launch Review	Activity #4.13: TDG Project evaluation/Post Launch Review
Activity #4.14: Continuous Improvement Process	Activity #4.14: Continuous Improvement Process
Activity #4.15: Formal Closure of TDG	Activity #4.15: Formal Closure of TDG

a. Proposal

A range of activities are necessary before the Test Method development project starts. These activities exist in order to maximise the probability that the TDG can start the project successfully.

The proposal phase precedes the creation of a TDG.

Activity #1.1 Request or propose a new Test Method			
Involved	CEC stakeholders or other related industry bodies	Deliverables	A proposal for a new Test Method development
Responsible	CEC Stakeholders	How	Submit request or proposition

Activity #1.2 Validate the need definition			
Involved	CEC stakeholders or other related industry bodies	Deliverables	Validate that the new Test Method is needed by the industry
Responsible	CEC Management Board	How	The requesting or proposing body is responsible for presenting information supporting the need for a new Test Method, other stakeholders can also contribute to this effort

Activity #1.3 Develop Terms of Reference (TOR) for a new test			
Involved	CEC Stakeholders	Deliverables	Produce detailed TOR for the test development proposal
Responsible	CEC Management Board	How	CEC stakeholders can propose a TOR to CEC. Otherwise CEC will initiate a Special Project Group to write a terms of reference document based on <ul style="list-style-type: none"> • The defined need • Existing pre-work on method development • Expertise contributed by industry experts • Lessons Learned of comparable Test Method developments The members of such an SPG are not limited to employees of companies who are part of one the four associations

Activity #1.4 Review and Approve the Terms of Reference			
Involved	CEC Management Board	Deliverables	Validate that the TOR are of sufficient quality to permit a successful method development project and that they respond to the defined need
Responsible	CEC Management Board	How	Discussion

Activity #1.5 Define funding model			
Involved	CEC Stakeholders	Deliverables	Clarify how the method development project will be funded
Responsible	CEC Management Board	How	All new TDG's will be sponsored. In all cases the CEC Management Board should strive to ensure that the necessary funding will be obtained via the funding model proposed

b. Pre-Phase 1

Pre-Phase 1 activities exist in order to maximise the probability that the TDG can start the project successfully. No funding or entry fee is requested at this stage.

Activity #2.1 Issue an Invitation to Join the TDG			
Involved	CEC stakeholders	Deliverables	Invitation sent to all potential test sponsors
Responsible	CEC Secretariat	How	<p>The CEC Secretariat will advise potential test sponsors about the new TDG. 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 CEC Secretariat of their interest to develop tests with CEC <p>It should be clarified that at this stage contributing to the TDG is not an engagement to pay the sponsor fee</p>

Activity #2.2 Establish the Test Method Development Group			
Involved	CEC stakeholders	Deliverables	A critical mass of companies and skills commit to participating in the TDG
Responsible	CEC Management Board	How	<p>At this stage there is no lead test laboratory nor group Chair, therefore the CEC Management Board must work with members of their respective associations that have committed to participate in the TDG to allow a first meeting to be held. A CEC Management Board representative should be named</p>

Activity #2.3 Select a Group Chair			
Involved	TDG members CEC Management Board Representative	Deliverables	<p>A group Chair is selected</p> <p>If appropriate other group officer positions to be nominated and Approved by the TDG members</p>
Responsible	CEC Management Board	How	<p>It is preferable that the TDG members select a Chair at the first meeting. This should be facilitated by the CEC Management Board representative.</p> <p>In exceptional cases the CEC Management Board may appoint a Chair</p>

Activity #2.4 Approve the Group Chair			
Involved	CEC Management Board Representative	Deliverables	The proposed group Chair is validated Or Clear feedback is given to the TDG members regarding why the selection has not been approved at this time and requesting further discussions to resolve the issues raised
Responsible	CEC Management Board	How	The CEC Management Board will discuss the proposal and either approve the choice or if the choice is not approved the CEC Management Board will prepare a clear written explanation noting why and including the actions requested of the TDG

Activity #2.5a Write a Lead Laboratory Tender			
Involved	TDG members CEC Management Board CEC Secretariat	Deliverables	A tender document conforming to the CEC template (available on the CEC website)
Responsible	TDG Chair	How	The TDG is responsible for the technical content of the tender document. The CEC Secretariat and the CEC Management Board are responsible for all non-technical content in the tender document. It is recommended that the TDG form a subgroup to complete this activity.

Activity #2.5b For Pre-Developed Test Methods: Confirm TOR for Phase 1			
Involved	TDG members CEC Management Board CEC Secretariat	Deliverables	A TOR document conforming to the CEC tender template.
Responsible	TDG Chair	How	The TDG is responsible for the technical content of the TOR document. The owner of the pre-developed test provides suitable information about the pre-developed test so that the members of the TDG can decide whether phase 1 of the test development has already been carried out to the required quality. They should also be able to decide whether they want to participate in and sponsor the test development phase.

Activity #2.6 Initiate Any Other Required Tender Activity			
Involved	TDG members CEC Management Board CEC Secretariat	Deliverables	Launch at the earliest opportunity any other tender processes, for example reference fuels, in order to maximise efficiency
Responsible	TDG Chair	How	The TDG should discuss the major steps that will be required in the project and any external support that might be required and which would necessitate a tender, reference fuels are the most common example. It is recommended that the TDG form a subgroup to complete this activity

Activity #2.7a Conduct Lead Laboratory Tender			
Involved	CEC Secretariat TDG Members CEC Management Board	Deliverables	Follow the process defined in Guideline 12 – The Lead Laboratory Tendering Process
Responsible	CEC Management Board	How	As above

Activity #2.7b For Pre-Developed Test Methods: Confirm Lead Laboratory Role			
Involved	TDG members CEC Management Board	Deliverables	Confirmation of the lead laboratory role that is required for the following activities in Phase 1 and 2.
Responsible	TDG Chair	How	The owner of the pre-developed test proposes a laboratory that is able and willing to take on the role of lead laboratory.

Activity #2.8 Request Payment of Fees by TDG Members			
Involved	TDG Members CEC Secretariat	Deliverables	TDG Members pay promptly the TDG joining fee
Responsible	CEC Secretariat	How	Calculate the fee per TDG member based on the estimated costs for Phase 1 (e.g. winning tender offer or costs of pre-developed tests, and other project costs such as provisions for TMS costs). Ask all existing TDG members to reconfirm their membership and their commitment to pay the joining fee. Formally request by each TDG Member company.

c. Phase 1

Phase 1 Test Method development objectives are to establish test repeatability and discrimination.

A TDG must conduct a quarterly review of its development process to check timing and costs versus the Budget as well as conformity with the Terms of Reference. If a development is moving quickly the Chair should consider whether a monthly review might be appropriate.

Changes to test development projects that have significant cost implications must be referred to the CEC Management Board.

The TDG is encouraged to question the TOR and where appropriate to suggest modifications. At any time if there is a need for the TDG to question the TOR then this should be formalised and sent to the CEC Management Board for discussion. It is not the remit of the TDG to change the TOR.

As previously noted and subject to CEC Management Board approval a new Test Method development project may use a partly or fully established Test Method, therefore some steps (marked with “b” and replacing the respective steps marked with “a”) in this process may be completed by relying on previously generated data, prior to the establishment of the TDG.

Activity #3.1 Select TDG Officers			
Involved	TDG Members	Deliverables	All appropriate officer positions filled
Responsible	TDG Chair	How	<p>The TDG should decide what officer positions are necessary to allow the group to work most effectively and efficiently (note recommendations in Guideline 4 – Types of Working Group and their Structure)</p> <p>The TDG members should volunteer, nominate and validate the members to hold these positions</p> <p>Note: Roles already established in Pre-Phase 1 may continue into phase with the existing nominee if still required.</p> <p>They may no longer be required in in such case the position should not be maintained.</p>

Activity #3.2 Approve the Group Chair if Changed			
Involved	CEC Management Board Representative	Deliverables	<p>If there is a proposal to change the group Chair, then:</p> <p>The proposed group Chair is validated</p> <p>Or</p> <p>Clear feedback is given to the TDG members regarding why the selection has not been approved at this time and requesting further discussions to resolve the issues raised</p>
Responsible	CEC Management Board	How	The CEC Management Board will discuss the proposal and either approve the choice or if the choice is not approved the CEC Management Board will prepare a clear written explanation noting why and including the actions requested of the TDG

Activity #3.3 Establish Operating Conditions			
Involved	TDG Members	Deliverables	Ensure a common understanding and agreement over the basic test operating conditions
Responsible	TDG Chair	How	If not already defined in the tender or Terms of Reference, such as but not limited to: <ul style="list-style-type: none"> (a) Choose type of hardware (b) Develop initial test procedure (c) Agree on key variables to be measured (d) Agree on hardware to be measured and tightly controlled (e) Choose reference fuel(s) and lubricant(s). (f) List health and safety requirements for hazardous materials and/or operations

Activity #3.4a Setup Hardware and Check Feasibility and Develop Test Method			
Involved	TDG Members	Deliverables	
Responsible	Lead Laboratory	How	Lead Laboratory sets up hardware and runs development tests. Revise procedure as needed. Convene meetings as necessary

Activity #3.4b For Pre-Developed Test Methods: Disclose Hardware and Test Method			
Involved	TDG Members	Deliverables	
Responsible	Lead Laboratory	How	Lead Laboratory provides detailed information about hardware, test setup, test execution, and test results. Convene meetings as necessary

Activity #3.5a Establish Test Discrimination			
Involved	TDG Members SDG	Deliverables	Demonstration that the Test Method is capable of distinguishing good and bad performance
Responsible	Lead Laboratory	How	Run appropriately chosen reference fluids preferably but not limited to known “good” and “bad” field performance to establish discrimination. Revise procedure if needed Note: Reference fluids can be but are not necessarily also the eventual reference fluids

Activity #3.5b For Pre-Developed Test Methods: Validate and Confirm Test Discrimination			
Involved	TDG Members SDG	Deliverables	Demonstration that the Test Method is capable of distinguishing good and bad performance
Responsible	Lead Laboratory	How	Provide data to demonstrate appropriately chosen reference fluids preferably but not limited to known “good” and “bad” field performance to establish discrimination.

Activity #3.6a Establish Test Repeatability			
Involved	TDG Members SDG	Deliverables	Demonstration that the Test Method can give repeatable test results
Responsible	Lead Laboratory	How	Run repeat tests, preferably at different quality levels, to ensure adequate repeatability. Revise procedure if needed

Activity #3.6b For Pre-Developed Test Methods: Validate and Confirm Test Repeatability			
Involved	TDG Members SDG	Deliverables	Demonstration that the Test Method can give repeatable test results
Responsible	Lead Laboratory	How	Provide data to demonstrate adequate repeatability.

Activity #3.7 Document and Validate Test Precision (Discrimination and Repeatability)			
Involved	TDG Members CEC Management Board	Deliverables	Validation by the CEC Management Board of adequate test precision
Responsible	SDG	How	Document demonstrated repeatability and discrimination for validation by the CEC Management Board

Activity #3.8 Write up Draft Test Method			
Involved	TDG Members Test Method Coordinator	Deliverables	A fully documented Test Method conforming to CEC standards The standard template for Test Method publication is available from the CEC Secretariat and must be used to ensure consistency of presentation
Responsible	TDG Chair	How	Obtain standard template from CEC Secretariat and compile draft Test Method

Activity #3.9 Formalise the Financial Performance of Phase 1			
Involved	TDG Members CEC Management Board	Deliverables	Preparatory information for phase 1 sign-off and the start of phase 2.
Responsible	TDG Chair	How	The TDG Chair and Secretary document the allocation of the phase 1 budget vs. the initial planning and the overall financial performance including remaining funds.

Activity #3.10 Phase 1 Completion and Sign Off			
Involved	TDG Members CEC Management Board	Deliverables	Successful Phase 1 Completion
Responsible	TDG Chair	How	The TDG requests endorsement from the CEC Management Board of acceptable completion of Phase 1. The CEC Management Board must respond within four weeks confirming that the Lead Laboratory has fulfilled the requirements and objectives of the Letter of Intent and that the Test Method meets the Terms of Reference

Activity #3.11 Request the Start of Phase 2			
Involved	CEC Secretariat TDG Chair	Deliverables	Transition from phase 1 to phase 2
Responsible	CEC Management Board	How	Formally request the TDG to start phase 2

d. Phase 2

The objective of phase 2 is to establish test reproducibility.

Test Method reproducibility is typically established by running a Round Robin within participating test laboratories as defined by the CEC Statistics Manual and taking expert guidance from the SDG member on the group.

A TDG must conduct a regular review of its development process to check timing and conformity with the Terms of Reference.

The TDG is encouraged to question the TOR and where appropriate to suggest modifications. At any time if there is a need for the TDG to question the TOR then this should be formalised and sent to the CEC Management Board for discussion. It is not the remit of the TDG to change the TOR. Final decision on the requested change of TOR is made by the CEC MB, taking into account the needs statement of the stakeholders.

As previously noted and subject to CEC Management Board approval a new Test Method development project may use a partly or fully established Test Method, therefore some steps in this process may be completed by relying on previously generated data, prior to the establishment of the TDG.

Activity #4.1 Confirm Test Sponsors for Phase 2			
Involved	CEC stakeholders	Deliverables	Validated list of test sponsors for phase 2. Members may leave or join the group. (Tests in Phase 2 are usually sponsored by the participating laboratories).
Responsible	CEC Secretariat	How	Additional test sponsors can be accepted as per CEC Guidelines

See financial rules in Guideline 9 and 15 for leaving or joining between phase 1 and phase 2.

Activity #4.2 Reconfirm or Propose New TDG Officers			
Involved	TDG Members	Deliverables	Validation of the TDG officers for phase 2
Responsible	TDG Chair	How	Discussion at the first TDG meeting at the beginning of phase 2

Activity #4.3 Approve the Group Chair if Changed			
Involved	CEC Management Board Representative	Deliverables	<p>If there is a proposal to change the group Chair, then:</p> <p>The proposed group Chair is validated</p> <p>Or</p> <p>Clear feedback is given to the TDG members regarding why the selection has not been approved at this time and requesting further discussions to resolve the issues raised</p>
Responsible	CEC Management Board	How	The CEC Management Board will discuss the proposal and either approve the choice or if the choice is not approved the CEC Management Board will prepare a clear written explanation noting why and including the actions requested of the TDG

Activity #4.4 Prepare for Testing at Participating Test Laboratories			
Involved	TDG Members Participating Test Laboratories Lead Laboratory	Deliverables	Successful installation at all participating test laboratories
Responsible	TDG Chair	How	<p>Lead Laboratory to assist participating laboratories in setting up their test installations. Before testing, review initial data and lead laboratory test operation experiences with all participating laboratories</p> <p>Note: The development lead laboratory is obliged to assist all participating test laboratories in the setting up of the test in their nominated laboratory under mutually agreed conditions. This would usually take the form of free advice, Operator Group meetings or by telephone.</p> <p>If a participating test laboratory required a visit from the lead test laboratory, then a consultancy rate and travel costs would be applicable and should be arranged directly between participants under mutually agreed conditions</p>

Activity #4.5 Trial Runs at Participating Test Laboratories			
Involved	TDG Members Participating Test Laboratories Lead Laboratory	Deliverables	Participating test laboratories are ready to start phase 2 reproducibility testing
Responsible	Participating Test Laboratories	How	Run tests to establish familiarity with equipment and procedures. Modify equipment as needed

Activity #4.6 Establish the Test Method in TMS / ERC ²			
Involved	Participating Test Laboratories Lead Laboratory	Deliverables	Prepare TMS or ERC to accept data.
Responsible	TDG Chair SDG	How	Propose to the TDG members, particularly the test laboratories, the data to be entered into the TMS/ERC system

Activity #4.7 Develop Reproducibility Test Matrix			
Involved	TDG Members SDG	Deliverables	A test matrix that will produce data appropriate for the determination and validation of test reproducibility
Responsible	TDG Chair SDG	How	Design a reproducibility test matrix considering the TOR targets, the number of participating test laboratories etc. For a pre-developed Test Method, already existing previously generated data may be included.

Activity #4.8 Run the Reproducibility Test Matrix			
Involved	Participating Test Laboratories Lead Laboratory	Deliverables	Successful completion of the reproducibility test matrix
Responsible	TDG Chair	How	Run the tests as required by the matrix. For a pre-developed Test Method, already existing previously generated data may be included.

² Test monitoring systems are the tool that CEC uses to assess the uniformity of testing across laboratories. CEC reference results are stored in two separate data depositories. The ATC ERC database (<https://atc-erc.org>) covers methods used in ACEA engine tests for lubricants; both reference and candidate results are stored. The remaining test methods are stored in the CEC-TMS database (<https://tms.cectests.org>) where only reference results are kept.

For more details see: CEC Statistics Manual, Procedure 2: “Test Monitoring Systems, Analysis of Test Monitoring Data and On-line Data Depositories” (to be found on the CEC website), and the ATC Code of Practice (to be found on <https://atc-erc.org>).

Activity #4.9 Evaluate Reproducibility Test Matrix Results			
Involved	Participating Test Laboratories Lead Laboratory	Deliverables	Initial analysis of test reproducibility
Responsible	SDG	How	Conduct repeatability and reproducibility analysis as per the statistics manual

Activity #4.10 Modify Test Method			
Involved	TDG Members Participating Test Laboratories Lead Laboratory	Deliverables	
Responsible	Test Method Coordinator	How	If targets are not met it may be necessary to modify the test procedure and repeat some or all the Round Robin testing. Depending upon the modifications required it may be necessary to put the test development back into Phase 1. If targets are met, then the Test Method can be finalised and sent to the CEC Secretariat ready for publication when the Board has approved the test

Activity #4.11 Approval of the New Test Method			
Involved	TDG Chair	Deliverables	New Test Method approved
Responsible	CEC Management Board	How	(1) Request approval from the Measurement Uncertainty Panel for section 5 of the Test Method (2) Submit a request to the CEC Management Board with supporting data and information to approve the Test Method and complete. Approve the Test Method and endorse the reproducibility and repeatability

Activity #4.12 Publication of the Test Method			
Involved	TDG Chair	Deliverables	Test Method available via the CEC website
Responsible	CEC Secretariat	How	Test method uploaded to the CEC website and TDG members informed about the formal acceptance of a new Test Method into CEC.

Activity #4.13 TDG Project Evaluation / Post Launch Review			
Involved	TDG Members	Deliverables	Positive points identified for future application and areas for improvement identified for further analysis
Responsible	TDG Chair	How	Complete a review of the test development & submit comments to CEC Management Board

Activity #4.14 Continuous Improvement / Implementation of the Project Evaluation Recommendations			
Involved	TDG Chair	Deliverables	Project evaluation recommendations considered, validated and an implementation plan created
Responsible	CEC Management Board	How	Discuss the Project Evaluation Review findings and develop an implementation plan including, for example <ul style="list-style-type: none"> • Modify the CEC guidelines as appropriate • Communicate to other TDGs as necessary

Activity #4.15 Formal Closure of the TDG			
Involved	CEC Secretariat	Deliverables	Remaining sponsor funds returned and TDG formally disbanded
Responsible	CEC Management Board	How	Return any substantial unused sponsorship funds to sponsors in equal parts. Communicate to the TDG members that the TDG is formally closed. Initiating the formation of the Surveillance Group (SG).

Guideline 11 – Reference Fuel Tender Process

1. Introduction and Purpose

Some CEC Test Methods require a specific fuel in terms of properties and / or performance. CEC's objective is to select a fuel provider that can provide the necessary technical and project management skills and expertise to successfully deliver the project.

For this purpose, a tender is conducted.

2. 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.

3. Fuel Tendering Process

The following process outlines the key activities required to conduct a tender to select the lead test

Activity #1 Confirm the need for a Fuel Tender			
Involved	TSG or SG Working Group	Deliverables	Confirmation by the Working Group that a fuel tender is required
Responsible	TDG or SG Chair	How	<ul style="list-style-type: none"> Propose a fuel tender to the Working Group showing the key deliverables in line with the Terms of Reference and/or other relevant data/documents

Activity #2 Inform CEC MB and Reference Fuels Group of the process and timing			
Involved	Secretariat Management Board	Deliverables	All interested parties are aware of the need for a fuel tender and their role in the process
Responsible	Secretariat	How	<ul style="list-style-type: none"> Communication sent via e-mail or other appropriate communication channel to the Management Board and the Reference Fuels Group

Activity #3 Formally Initiate a Fuel Tender			
Involved	TDG or SG Chair	Deliverables	Fuel Tender process formally launched via the secretariat
Responsible	TDG or SG Chair	How	<ul style="list-style-type: none"> Request sent to the secretariat by e-mail referring to the confirmed need together with the key deliverables

Activity #4 Initiate the two tender activities (technical and commercial)			
Involved	Secretariat	Deliverables	Formal launch of the technical and commercial tender writing activities
Responsible	Secretariat	How	<ul style="list-style-type: none"> Formally request the TDG or SG to write a technical tender indicating the desired completion date Formally request the Management Board to write a commercial tender (or to delegate this task)

Activity #5a Establish a Working Group to write the commercial tender			
Involved	Management Board Chair Secretariat Board representative to the TDG/SG	Deliverables	Working Group established with clear deliverables and timing
Responsible	Management Board Chair	How	<ul style="list-style-type: none"> Establish a sub-group of the Management Board or other delegated group to complete the task

Activity #5b Establish a Working Group to write the technical tender			
Involved	TDG or SG Chair TDG or SG Members	Deliverables	Working Group established with clear deliverables and timing
Responsible	TDG or SG Chair	How	<ul style="list-style-type: none"> Establish a subgroup of the TDG or SG together with invited experts to complete the task

Activity #6a Circulate the draft commercial tender to the MB members			
Involved	Commercial fuel tender subgroup	Deliverables	Draft commercial tender circulated to all Management Board members for comments with a deadline for responses
Responsible	Subgroup Chair	How	<ul style="list-style-type: none"> Communication via normal Working Group communication channels, (preferably using the CEC website for traceability purposes)

Activity #6b Circulate the draft technical tender to the TDG or SG members			
Involved	Technical fuel tender subgroup	Deliverables	Draft technical tender circulated to all TDG or SG members for comments with a deadline for responses
Responsible	Subgroup Chair	How	<ul style="list-style-type: none"> Communication via normal Working Group communication channels, (preferably using the CEC website for traceability purposes)

Activity #7a Finalisation of the draft (commercial part)			
Involved	Commercial fuel tender subgroup	Deliverables	Final version of the commercial tender written incorporating the feedback received after comments
Responsible	Subgroup Chair	How	<ul style="list-style-type: none"> An iterative process considering the merit of comments and feedback and incorporation, if appropriate, into the subsequent draft

Activity #7b Finalisation of the draft (technical part)			
Involved	Commercial fuel tender subgroup	Deliverables	Final version of the commercial tender written incorporating the feedback received after comments
Responsible	Subgroup Chair	How	<ul style="list-style-type: none"> An iterative process considering the merit of comments and feedback and incorporation, if appropriate, into the subsequent draft

Activity #8a Management Board approval of the draft (commercial part)			
Involved	Management Board	Deliverables	Draft commercial tender approved
Responsible	Management Board Chair	How	<ul style="list-style-type: none"> The final version of the tender from the subgroup should be put to an approval vote by the MB Chair

Activity #8b Working Group approval of the draft (technical part)			
Involved	TDG or SG Members	Deliverables	Draft technical tender approved by the Working Group
Responsible	TDG or SG Chair	How	<ul style="list-style-type: none"> The final version of the tender from the subgroup should be put to an approval vote by the TDG or SG Chair

Activity #9 Final Approval of the draft (technical part)			
Involved	Management Board TDG or SG Chair	Deliverables	Draft technical tender approved by the Management Board
Responsible	TDG or SG Chair	How	<ul style="list-style-type: none"> The final version of the technical tender should be put to an approval vote by the Management Board

Activity #10 Establish a Tender Committee			
Involved	Management Board	Deliverables	Tender Committee established with members clearly identified
Responsible	Management Board Chair	How	<ul style="list-style-type: none"> Establish a sub-group of the Management Board or other delegated group to complete the task

Activity #11 Initiate the Tender			
Involved	Secretariat Potential Suppliers	Deliverables	Potential suppliers receive an invitation to tender
Responsible	Secretariat	How	<ul style="list-style-type: none"> The completed tender document (commercial + technical) should be sent to potential suppliers via e-mail or an appropriate tendering platform

Activity #12 Inform the technical and commercial tender subgroups of initial feedback			
Involved	Secretariat Potential Suppliers	Deliverables	Two documents summarising the technical and commercial elements of the potential supplier feedback
Responsible	Secretariat	How	<ul style="list-style-type: none"> Collate initial feedback, comments and questions from potential suppliers

Activity #13a Hold a pre-tender technical conference call with the potential suppliers			
Involved	Technical subgroup Secretariat Potential Suppliers	Deliverables	Potential suppliers have sufficient opportunity to clarify the needs to allow for optimised tender responses
Responsible	Technical subgroup Chair	How	<ul style="list-style-type: none"> An invitation to a conference call is sent to potential suppliers and the technical subgroup

Activity #13b Hold a pre-tender commercial conference call with the potential suppliers			
Involved	Commercial subgroup Secretariat Potential Suppliers	Deliverables	Potential suppliers have sufficient opportunity to clarify the needs to allow for optimised tender responses
Responsible	Commercial subgroup Chair	How	<ul style="list-style-type: none"> An invitation to a conference call is sent to potential suppliers and the commercial subgroup

Activity #14 Revision of the tender (technical + commercial)			
Involved	Fuel tender subgroups	Deliverables	Final version of the tender written incorporating the feedback received after comments
Responsible	Subgroup Chairs	How	<ul style="list-style-type: none"> An iterative process considering the merit of comments and feedback and incorporation, if appropriate, into the subsequent draft

Activity #15 Final Tender Document sent to potential suppliers			
Involved	Potential suppliers Secretariat	Deliverables	Potential suppliers receive an updated and final invitation to tender
Responsible	Secretariat	How	<ul style="list-style-type: none"> The completed tender document (commercial + technical) should be sent to potential suppliers via e-mail or an appropriate tendering platform

Activity #16 Potential supplier submits detailed tender proposals with initial price indication			
Involved	Potential suppliers Secretariat	Deliverables	Final tender responses received by the tender deadline
Responsible	Potential Suppliers	How	<ul style="list-style-type: none"> Tender responses submitted via e-mail (or via a tendering platform if in use)

Activity #17a Technical tender responses provided to the technical subgroup			
Involved	Technical subgroup Secretariat	Deliverables	A pack of documents is provided to the technical subgroup from the secretariat containing no commercial information
Responsible	Secretariat	How	<ul style="list-style-type: none"> The Secretariat is responsible for separating the technical and commercial responses and ensuring the documents provided to the technical subgroup contain no commercial information

Activity #17b Commercial tender responses provided to the commercial subgroup			
Involved	Commercial subgroup Secretariat	Deliverables	A pack of documents is provided to the commercial subgroup from the secretariat
Responsible	Secretariat	How	<ul style="list-style-type: none"> The Secretariat is responsible for separating the technical and commercial responses

Activity #18a Technical tender ranking validated by the TDG or SG			
Involved	Technical subgroup TDG or SG Chair	Deliverables	The technical subgroup proposes a ranking of the technical tenders to all TDG or SG members
Responsible	Technical subgroup Chair	How	<ul style="list-style-type: none"> Following their detailed review of the technical offers the technical subgroup presents a proposed ranking (and hence preferred candidate) to all the TDG or SG members for validation

Activity #18b Commercial tender ranking validated by the Management Board			
Involved	Commercial subgroup Management Board Chair	Deliverables	The commercial subgroup proposes a ranking of the commercial tenders to the Management Board
Responsible	Commercial subgroup Chair	How	<ul style="list-style-type: none"> Following their detailed review of the commercial offers the commercial subgroup presents a proposed ranking (and hence preferred candidate) to the Management Board for validation

Activity #19 Management Board selects a supplier based on the tender reviews			
Involved	Management Board Secretariat Management Board Chair	Deliverables	Fuel supplier selected by the Management Board
Responsible	Management Board Chair	How	<ul style="list-style-type: none"> The two tender review Chairs present their validated conclusions to the Management Board who select a supplier

Activity #20 Inform successful bidder and initiate contract signature			
Involved	Secretariat	Deliverables	Communicate the decision to the selected supplier and propose a supply contract
Responsible	Secretariat	How	<ul style="list-style-type: none"> Contact the selected supplier and send a draft version of the CEC supply contract after incorporating the pricing and other details from the final accepted offer

Activity #21 Inform unsuccessful bidders			
Involved	Secretariat	Deliverables	All companies responding to the tender receive a formal response to their offer
Responsible	Secretariat	How	<ul style="list-style-type: none"> Provide as a minimum a formal tender response communicating the decision and where appropriate provide feedback on the quality of the technical and commercial offers

Activity #22 Develop a detailed technical plan to deliver a reference fuel meeting the required characteristics			
Involved	Selected supplier TDG or SG members	Deliverables	A detailed technical plan with (as a minimum) timeline, costs and risk analysis
Responsible	TDG or SG Chair	How	<ul style="list-style-type: none"> The selected supplier will join the TDG or SG as an In-Kind member The selected supplier and the TDG or SG (or a subgroup thereof) should work to develop a detailed technical plan (consistent with the technical and commercial offers) that will deliver the required reference fuel(s)

Guideline 12 – The Lead Laboratory Tendering Process

1. Introduction and Purpose

Sponsored test developments require that a lead test laboratory is selected. CEC's objective is to select a lead test laboratory that can provide the necessary technical and project management skills and expertise to successfully deliver the project.

For this purpose, a tender is conducted.

2. 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.

3. Lead Laboratory Tendering Process

The following process outlines the key activities required to conduct a tender to select the lead test laboratory for a new Test Method development.

Activity #1 Write the invitation to tender based on the Terms of Reference			
Involved	TDG Members Experts from Industry Stakeholders	Deliverables	A tender document conforming to the CEC template (available on the CEC website)
Responsible	CEC Management Board	How	The tender document should include: <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

Activity #2 Publicise invitation to tender			
Involved	CEC stakeholders	Deliverables	Invitation sent to all potential lead test laboratories
Responsible	CEC Secretariat	How	<p>The CEC Secretariat will advise potential laboratories about the issue of the draft tender.</p> <p>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 CEC Secretariat of their interest to develop tests with CEC

Activity #3 Pre-Tender Meeting			
Involved	TDG members Potential lead test laboratories Board Members plus invites experts	Deliverables	Ensure that all potential lead test laboratories have had the opportunity to discuss and clarify the information provided in the tender documents
Responsible	CEC Management Board	How	<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 Management Board representatives present, where necessary.</p>

Activity #4 Distribute revised tender document and clarifications to the Terms of Reference			
Involved	CEC Secretariat	Deliverables	Revised tender documents sent to all potential lead test laboratories
Responsible	CEC Secretariat	How	Distribute clarifications of the Terms of Reference and any updates to the original tender documents to the laboratories attending the Pre-tender meeting

Activity #5 Select Lead Test Laboratory			
Involved	TDG Members Experts from Industry Stakeholders	Deliverables	Select and inform the lead test laboratory Inform and provide feedback to those not retained
Responsible	CEC Management Board	How	<p>Unless otherwise agreed by the CEC Management Board, the following process will be followed:</p> <ul style="list-style-type: none"> • The TDG members will be provided with the tender responses but the financial information will be removed

- The TDG Chair will convene a meeting of the TDG members (or an appropriate subgroup) within 20 working days of the tender deadline to review the technical quality of the bids
- The TDG may, at its discretion and with the bidders' agreement, conduct an onsite assessment at the bidders' laboratories
- The CEC Management Board will convene a meeting to review the bids within 20 working days of the tender deadline. Industry experts may be invited to contribute to the discussion
- The CEC Management Board may, at its discretion and with the bidders' agreement, ask the TDG to conduct an onsite assessment at the bidders' laboratories
- If the CEC Management Board requires a laboratory inspection, this will take place within 30 working days of the tender deadline
- The TDG will provide a technical assessment of each bid to the CEC Management Board
- The CEC Management Board will select the lead test laboratory based on the selection criteria listed below
- The CEC Secretariat will communicate the result in writing to all bidders
- The successful test laboratory must sign a Letter of Intent (examples are available on the CEC website)

Selection Criteria

- The CEC Management Board will decide the criteria for each specific development
- The criteria may include the following:
 - Ability to deliver the project
 - Accreditation to industry and CEC standards
 - The TDG review of the technical quality of the bids
 - Experience with CEC Test Methods
 - Experience with the specific type of test
 - Response to tender document – are all elements of the tender document addressed for example
 - Response to the quality and technical questionnaire

			<ul style="list-style-type: none"> • Potential conflicts of interest • Costs <p>Note:</p> <ul style="list-style-type: none"> • The results of these assessments will be used to assist the CEC Management Board in choosing a laboratory to lead the Test Method Development Group. • In examining and deciding between bids, the CEC Management Board may seek expert advice to assist them
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Activity #6 Exchange Letters of Intent			
Involved	CEC Management Board and selected lead test laboratory	Deliverables	Formalise the legal and contractual framework for the project
Responsible	CEC Secretariat	How	See draft example available on the CEC website

Activity #7 Provide Redacted Summary Version of Bid			
Involved	Selected lead test laboratory	Deliverables	Provide all relevant information to all TDG members
Responsible	CEC Secretariat	How	Provide non-commercially sensitive version of the successful bid to the CEC Secretariat for publication in Group area on CEC website

Guideline 13 – CEC Test Methods

1. Introduction and Purpose

CEC Test Methods are at the heart of CEC activity and as such it is important to define the contents of a CEC Test Method and the processes by which Test Methods can be updated and how such changes should be communicated.

2. Disclaimer

CEC Test Methods, Codes of Practice and all its other publications do not purport to address all 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.

3. CEC Test Methods

a. Definitions

i. *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 lubricants, fuels and other fluids used in the transport and mobility sectors.

ii. *Guidelines and Manuals*

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 lubricants, fuels and other fluids used in the transport and mobility sectors (e.g. Statistics Manuals).

iii. *Draft Test Method*

A method produced during Phase 1 of Test Development. It should be endorsed by the members of the TDG. It will be available for internal use within the TDG. It will not have CEC coding (see the *Nomenclature* paragraph below).

iv. *Published Test Method*

A method approved by the CEC 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.

v. *Test Method Revision*

A significant change to the test procedure requiring a new issue of the Test Method and communication by the CEC Secretariat.

vi. *Test Method Update*

A small change to the test procedure that will not significantly affect test severity. This change is shared and communicated only internally in the Working Group.

4. CEC Test Method Layout

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

a. Guidelines, Manuals and Other CEC Publications

Guidelines, Manuals 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 CEC 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 Chair, and there is no formal requirement for updating.

5. Requirements for Publication of a Test Method

Official publication of a CEC Test Method requires the author or the TDG / SG Chair 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.

6. Approval and Publication of Test Methods

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

- a. 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 Chair after checking any technical information with relevant Group Officers, prior to submission to the CEC Management Board for approval and publication
- b. The CEC Management Board Chair 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
- c. 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 the Test Methods is available on the public area of the website.

7. Nomenclature

a. CEC test procedures are codified according to the following system:

- The **CEC** initials.
- 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 Manual
 - **P** indicates general publications
- Two or three digits indicating the CEC Working Group number
- Two figures indicating the year of approval by the CEC Management Board

e.g. CEC L-101-09

i. Test Method Revisions

Significant changes to the test procedure, revisions, will be identified by an issue number for the Test Method.

ii. Test Method Updates

For small changes to the test procedure, updates, 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.

8. Validity

Test Methods revisions become valid on the date they are issued by the CEC Secretariat.

Test Method updates become valid when endorsed by the group during a Working Group meeting and must be subsequently recorded in SG meeting minutes. Test Methods may be updated periodically, and a current list is maintained on the CEC website.

9. Revision of Published Test Methods

All revisions to section 5 of the Test Method with respect to measurement uncertainty must be approved by the measurement uncertainty panel prior to approval and publication.

Activity #1 Nominate Test Method Coordinator / Author			
Involved	SG Members	Deliverables	A single person is named as Test Method Coordinator
Responsible	SG Chair	How	Volunteers and selection by SG

Activity #2 Propose a Test Method Change			
Involved	SG Members	Deliverables	A Test Method change is proposed, discussed and approved (or not) by the SG
Responsible	Test Method Coordinator	How	The Test Method Coordinator proposes a change or presents a change proposed by another SG member and ensures that the update is proposed to the SG The SG agrees (or not) the need for the change and the proposed new wording

Activity #3 Decide if the Change is an Update or a Revision			
Involved	Test Method Coordinator	Deliverables	A proposed Test Method Revision or a proposed Test Method Update See paragraph 4 in this guideline for a definition of Revision and Update
Responsible	SG Chair	How	The Test Method Coordinator liaises with the other SG officers and recommends Revision or Update to the SG Chair

Activity #4 Prepare a Revised Test Method			
Involved	Test Method Coordinator	Deliverables	A revised Test Method ready for approval in the required CEC format
Responsible	Test Method Coordinator	How	Prepare the proposed revised Test Method ensuring consistency with the standard template for Test Methods available from the CEC Secretariat

Activity #5 Approve the Revised Test Method			
Involved	Test Method Coordinator SG Chair	Deliverables	A revised Test Method approved by the SG Chair
Responsible		How	SG Chair liaises with the other SG officers in their areas of responsibility and either agrees with the revision and signs the front page of revised sections 2-14 Or Requests further modifications to the proposed revision to the Test Method Coordinator

Activity #6 Send Revised Test Method to CEC Secretariat			
Involved	SG Chair CEC Secretariat	Deliverables	The CEC Secretariat has a copy of the proposed Test Method revision approved by the SG Chair
Responsible	SG Chair	How	The revised Test Method is sent to the Secretariat by the SG Chair in Word format based on the CEC template. The Secretariat converts the document to pdf format and sends it to the Management Board Chair for approval and signature. The signed document is returned to the Secretariat by the Management Board Chair

Activity #7 Approve the Revised Test Method			
Involved	CEC Secretariat CEC Management Board Chair	Deliverables	A revised Test Method approved by the CEC Management Board Chair
Responsible	CEC Management Board Chair	How	Management Board Chair liaises with industry experts in their areas of responsibility and either agrees with the revision and signs the front page of section 1 Or Requests further modifications to the proposed revision to the SG Chair

Activity #8 Assign Release Date			
Involved	CEC Secretariat	Deliverables	A release date is assigned for the revised Test Method and the SG Chair is notified of the date
Responsible	CEC Secretariat	How	The Secretariat assigns the date based on the anticipated signing date by the Management Board Chair.

Activity #9 Publish Revised Test Method			
Involved	CEC Secretariat	Deliverables	All relevant stakeholders are notified of the change
Responsible	CEC Secretariat	How	CEC Secretariat sends an e-mail to all Test Method holders participating in the SG.

Guideline 14 – Surveillance Groups

1. Introduction and Purpose

CEC recognises the importance of maintaining and where possible improving the quality of existing Test Methods.

As previously noted, the development of a CEC Test Method can be a complex process and the project can potentially span one or more years. It is therefore of great importance to capitalise on the quality of the work done during the method development project by starting a continuous improvement project once the test reaches SG status. This is the primary objective of a Surveillance Group.

CEC also recognises the importance of ensuring that its Test Methods are available to all industry stakeholders and therefore a task of high importance for the SG is to be able to clearly identify with a maximum of advance notice any factors that may impact test availability, such as the availability of engine parts or reference fluids.

2. Surveillance Groups (SG) Responsibilities

The SG is responsible for:

- Maintaining and where possible improving the quality of a Test Method
- Defining the quality targets taking specific guidance from the SDG member, for example reproducibility and repeatability targets, other statistical quality measures
- Within the limits of its capabilities, for attempting to resolve future risks impacting test availability
- Test Method Management: create Test Method Revisions or Test Method Updates as required

3. Formation of an SG

Initiating the formation of the Surveillance Group is the final action of the Test Method Development process. Initiating means starting the process detailed here within.

Activity #1 Confirm List of Group Members and Issue Invitations to Join the SG			
Involved	CEC stakeholders	Deliverables	<p>Invitation sent to all test sponsors who did not withdraw from the TDG</p> <p>Invitation sent to new potential group members</p>
Responsible	CEC Secretariat	How	<p>The CEC Secretariat will advise all test sponsors who did not withdraw from the TDG that the SG is being formed, that they are welcome to join the SG and that they should confirm their intention to join the SG by reply.</p> <p>The CEC Secretariat will advise potential new SG members about the new SG. This communication should include information regarding the cost of joining an SG for new members.</p> <p>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 CEC Secretariat of their interest to run CEC Test Methods. <p>In all cases these communications should include references to the Requirements, Expectations and Entitlements for Members of CEC Groups</p>

Activity #2 Establish the Surveillance Group			
Involved	CEC stakeholders	Deliverables	A critical mass of companies and skills commit to participating in the SG
Responsible	CEC Management Board	How	<p>At this stage there is no SG Chair, therefore the CEC Management Board must work with members of their respective associations that have committed to participate in the SG to allow a first meeting to be held. Typically, the TDG Chair may be asked to organise the first SG meeting.</p> <p>A CEC Management Board representative should be named, for continuity reasons this should preferably be the same person that represented the MB during the TDG.</p>

Activity #3 Select a Group Chair			
Involved	SG members	Deliverables	A group Chair is selected If appropriate other group officer positions to be nominated and Approved by the SG members
Responsible	CEC Management Board Representative	How	It is preferable that the SG members select a Chair at the first meeting. In exceptional cases the CEC Management Board may appoint a Chair

Activity #4 Approve the Group Chair			
Involved	CEC Management Board Representative	Deliverables	The proposed group Chair is validated Or Clear feedback is given to the TDG members regarding why the selection has not been approved at this time and requesting further discussions to resolve the issues raised
Responsible	CEC Management Board	How	The CEC Management Board will discuss the proposal and either approve the choice or if the choice is not approved the CEC Management Board will prepare a clear written explanation noting why and including the actions requested of the TDG

Activity #5 Approve SG Officers			
Involved	SG Chair CEC Management Board	Deliverables	A group Chair is selected If appropriate other group officer positions to be nominated and approved by the SG members
Responsible	CEC Management Board	How	It is preferable that the SG members select a Chair at the first meeting. In exceptional cases the CEC Management Board may appoint a Chair

4. Test Precision Monitoring

Test monitoring systems are the tool that CEC uses to assess the test precision and the uniformity of testing across laboratories.

CEC reference results are stored in two separate central data depositories:

Every CEC Engine lubricant test that is used for ACEA oil specifications needs to be registered at ERC, European Registrations Centre, <https://atc-erc.org>. Both reference and candidate results are stored in the ATC ERC database.

The remaining test methods are stored in the CEC-TMS database, where only reference results are kept. This system is operated by CEC.

Test Precision Monitoring is done using the data from these two systems.

The Group Chair must liaise with the SDG representative prior to every group meeting to review Test Precision data and action any anomalies. All such anomalies, concerns and divergences must be analysed and resolved. The Surveillance Group Chair will require participating laboratories to report on divergences and take appropriate action.

It is recommended that a Reference Data Review is included as an item on the SG meeting agenda.

For tests using Round Robins, these must be run at agreed intervals in accordance with guidance from SDG.

The SG must plan the introduction of new test hardware or test fluid batches and communicate this to ATC-ERC for Lubricant tests.

The SG is responsible for ensuring reference samples have control limits and promptly updating the Test Method and the test precision monitoring system (such as TMS or ERC) with new control limits when results suggest a change is applicable.

If at any point during the life of a test additional tests are required to understand a severity shift, improve quality or introduce new hardware or test fluids then the group should follow the funding mechanism that they have previously established as described in these Guidelines. The group can also seek guidance from the CEC Management Board.

For more information see the CEC Statistics Manual, Procedure 2: “Test Monitoring Systems, Analysis of Test Monitoring Data and On-Line Data Depositories”, to be found on the CEC website.

5. Managing Laboratory Performance

The Surveillance Group will monitor the performance of individual laboratories, and, if there are major concerns the SG Chair will inform the CEC Management Board.

Should the Chair, SDG or individual laboratory identify a precision issue such as consecutive reference tests outside of warning or control limits then the Chair is required to ensure that the laboratory concerned develops an action plan in order to bring the test back into control.

The CEC Management Board may request a report from the relevant Working Groups and may further request that a technical expert be appointed to visit the laboratory.

6. Reference Test Protocol

The Chair and SDG should ensure that test laboratories are adhering to the Reference Test protocol during their reviews even in the case of Lubricant tests where this would normally be addressed by ERC who contact individual laboratories if the protocol has not been followed.

7. Test Method Management

It is recommended that a Test Method Review is also included as an item on the SG meeting agenda in order to identify potential test improvements and clarifications but also to identify any issues based on experience in following the Test Method as stated.

8. Managing Test Availability

The SG must discuss the availability of hardware, fuel, lubricant or any other critical component that is required to carry out testing. The SG is responsible for developing an action plan in the case of real or potential issues in the availability.

The SG must update the CEC Life Plan to indicate critical component availability and fluids batch changes as requested by the CEC Secretariat prior to each CEC Management Board meeting.

It is the responsibility of the SG to recommend to the CEC Management Board that the test be declared unavailable in any of the following cases:

1. Critical test components become unavailable
2. The majority of active laboratory participants simultaneously experience test precision issues (test out of control). The SG must define what a majority is.

The CEC Management Board is responsible for declaring the test unavailable.

If a test is available however all remaining test slots have been reserved and the test is not open to new customers, then the SG must inform the CEC Management Board. The CEC Management Board must decide if the test is to be declared as unavailable.

9. Operators Sub-Group

The SG can optionally establish a sub-group of operating laboratories which would meet just prior to full SG meetings. These groups would discuss the operation of the test and recommend Test Method modifications to improve test quality.

10. Health and Safety

The SG should review Health and Safety requirements regularly and amend the Test Method accordingly if necessary.

11. SG Closure

The SG is responsible for proposing closure of the group to the CEC Management Board. The SG would usually only be closed if the test procedure has been declared obsolete, permanently unavailable, or otherwise unfit for purpose, with no realistic prospect of being improved.

If a test has been declared as unavailable, and there is no plan how the test can be made available again, then the SG should recommend to CEC Management Board that the test is permanently unavailable, and that the SG is closed.

If a test is no longer required, even if it remains possible to operate the test, then the SG should recommend to CEC Management Board that the test is obsoleted, and that the SG is closed.

Guideline 15 – Requirements, Expectations and Entitlements for Members of Sponsored CEC Groups

These requirements and expectations do not apply to Special Project Groups, Special Liaison Groups or Support Groups.

1. Entitlements

Members of sponsored groups (including those companies joining the Group by 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.

a. Test Method Access

CEC Test Methods produced electronically via the CEC website 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.

Access to Test Methods on the website 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 website. 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.

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.

2. Membership

A contributing member is one that is defined as:

The member of a CEC Working Group is a company, not an individual. However, 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 Chairs, 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 they were an employee of the member company.

In addition, a 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 Test Result', see Guideline 16 on quality requirements, still apply.

A member company representative on a Surveillance Group may represent their 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.

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 website. The appointment must be approved by the CEC Management Board. E.g. an independent Project Manager.

Contributing members must adhere to the requirements detailed in the Requirements paragraph of this guidelines.

3. Re-joining a Working Group

There are various reasons that members may leave a Working Group. In some cases, such members may wish to re-join the Working Group.

In all cases of a company wishing to re-join a Working Group of which they had previously been a member the CEC Management Board will decide whether this is possible and under what terms. The CEC Management Board will consult with the Working Group Chair before finalising its decision.

4. Becoming a Group Member

a. Joining a Sponsored Test Method Development Group

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 CEC Management Board may allow a company late entry in Phase 1 as a Financial Sponsor providing that there are no valid objections from other Group Members and that such companies provide a clear explanation of the added value they can bring to the Working Group.

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. The sponsorship cost in such a case will be equitable to all phase 1 costs approved by the CEC Management Board.

A new sponsor may be accepted to join the Group at the beginning of Phase 2 at a sponsorship cost that is equitable to the phase 1 contributions of existing members that were approved by the CEC Management Board.

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.

b. Sponsored Surveillance Groups

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

The sponsoring OEM, if one exists, shall be a member of the Group by virtue of the technical support and hardware provided to the Group and becomes a Hardware Sponsor member.

Reference fluid suppliers shall be In Kind members of the Group unless they choose to be a Financial Sponsor. Membership requirements of reference fuel suppliers are laid out in the initial fuel tendering or supply contract.

Where possible the SDG representative should be from one of the test sponsors.

Membership of a Surveillance Group for non-sponsors is achieved by purchasing access to the Test Method after it has been developed.

5. Requirements

a. Attendance at Meetings

Additional member company representatives may, in exceptional circumstances, attend Group meetings, but only with the permission of the Chair and on the understanding that attendance may be refused due to the size of the Group.

CEC technical officers e.g. reference fluid co-ordinators and CEC Management Board Members are permitted to attend all group meetings and should inform the Group Chair that they plan to attend a meeting.

b. Requirements of Group Members

Members are obliged to contribute to the work of the Group in one or more of the following ways:

1. Taking on an Officer position in the Group To provide funds to the group as per the agreed funding model developed by the Working Group and approved by the Management Board
2. A member company representative should attend all Group meetings - if the nominated individual is not available then a knowledgeable stand-in should be appointed. With the Chair's agreement attendance can take place via tele-conference or video. Chair may excuse attendance for exceptional circumstances
3. For Group Members that have installed a test, conduct referencing as per the protocol in the applicable Test Method
4. Freely share test results amongst the Group members to aid the development or monitoring of the CEC Test Method
5. 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 Group

6. Report all CEC reference test results to the CEC TDG or SG and upload data to TMS/ERC if applicable
7. Use of a CEC Test Method in published specifications (for example OEM product specifications)

c. Non-Contributing Members

If a member does not contribute to the work of the Group in one or more of these ways, then the Chair must recommend removal of the member from the Group and seek agreement from the CEC MB. 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.

d. Confidential Information

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

Should a Hardware Sponsor or other provider of equipment or intellectual property 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 from purchasing or obtaining the Test Method. This will be handled on a case-by-case basis, sharing legal opinion with Hardware Sponsor. 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."

Test results obtained through Test Monitoring or Round Robins organised within a TDG / SG are strictly confidential to TDG / SG members.

Information to anyone outside of the TDG / SG will only be provided by the Group Chair, after CEC 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 and this without referral to the CEC Management Board.

Guideline 16 – Quality Standards for Test Laboratories

1. Quality Standards for Test Laboratories

a. 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 CEC Secretariat to visit laboratories, meet key personnel and examine test facilities, accreditation, documentation, procedures, results and statistics.

3. 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.

4. Acceptance Requirements

a. Testing Laboratory Quality 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, IATF 16949, ISO 17025)	ISO 17025	ERC Database or CEC Test Monitoring Database TMS (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 is subject the requirements of group members as defined in the guideline on requirements and expectations of group members

(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 Surveillance Group supporting the Test

* The Laboratory must achieve ISO17025 accreditation within 12 months after set-up of the corresponding Surveillance Group by the CEC 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 Test Result'.

b. 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 this Guideline
- Meet the requirements of the test procedure
- Meet the control limits as developed by the CEC Surveillance Group

Laboratories **meeting** these requirements and claiming a CEC Test Result must state the following on the first page of the Test Report:

“THE TEST RESULTS CONTAINED IN THIS REPORT WERE
ACHIEVED UNDER THE CONTROL OF THE CEC QUALITY
PROCESS”

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 Test 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 general, it is the obligation of the Surveillance Group (SG) to manage the validity of the results of their respective test method, including all out of control results (either caused by the method itself or by individual labs).

a. Candidate Results Generated Before SG Status

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 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 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 (during the TDG Phase 2) 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. 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.

b. Candidate Results Generated Before Control Limits are Set

Results obtained on replacement reference fluids or new parts batches, 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 fluids or parts batches to the introduction of the new control limits, there may be a 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.

Guideline 17 – Support Groups

1. The Statistical Development Group (SDG)

a. Purpose

To provide expert advice to the CEC Management Board and Working Groups on matters related to the application and development of statistics, especially with respect to planning test programmes and interpretation of test results.

b. Membership

Members should possess experience in application of statistics and in performance Test Method development.

c. Activity

Activities include (but are not limited to):

- a. To maintain and update the Statistics Manual on the CEC website
- b. To give advice to the CEC Management Board on such issues as the quality of competing bids for business from tendering laboratories
- c. To assign “liaison officers” to each TDG and SG. SDG members participate at TDG or SG meetings on request of TDG / SG Chair. 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
- d. To establish general statistical standards for CEC activity and maintain a watching brief on related external activities

d. Statistics Manual

i. Background

When the 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.

ii. Procedures Managed by the Statistical Development Group

a. 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.

b. Procedure 2 - Working Group Test Monitoring Systems

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

c. Procedure 3 - Statistical Requirements for CEC Test Methods

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

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

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

e. Procedure 5 - Glossary of Terms

This explains the terms used in the Procedures 1-4.

iii. 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 CEC Management Board must approve any amendments or additions to the Statistics Manual.

2. The Reference Oils Group (ROG)**a. Purpose**

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

b. Membership

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

c. Activity

- a) To maintain and update the CEC Reference Oils Manual on the CEC website in conjunction with the relevant Working Group Chairs and TDG/SG Chair and officers
- b) To assist TDG/SG and CEC Management Board in the selection / preparation of suitable Reference and/or Standardisation Oils
- c) To provide stocks of Reference/Standardisation Oils
- d) To rationalise the CEC Reference Oils portfolio
- e) To support TDG/SG in supply issues: batch size, technical release procedures, and survey of oil analysis data, ensuring batch consistency
- e. To support TDG/SG in planning of round robins

d. Further information

See the Reference Oils Manual.

3. The Reference Fuels Group (RFG)**a. Purpose**

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

b. Membership

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

c. Activity

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

d. Further information

See the Reference Fuels Manual.

4. Analytical and Bench Test Support Groups

a. Purpose

To develop new analytical or bench tests when required to support another CEC Test Method development.

For the purposes of clarity these groups are not tasked with developing new CEC Test Methods rather they are tasked with developing a specific analytical or bench test that is required for a CEC Test Method (for example soot content of a lubricant).

b. Membership

Members should have appropriate analytical experience.

c. Activity

- a. Analytical or Bench Test Support Groups shall be established by the CEC 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
- b. The Working Group that they support shall be responsible for the terms of reference of the Analytical or Bench Test Support Group
- c. Each Support Group will have its own Group designation and produce its own test procedure
- d. The Chairs 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 CEC Management Board
- e. Analytical and Bench Test Support Groups will report via the Chair to the parent group and as requested to the CEC Management Board
- f. Any Test Method developed is independent from the TDG or SG Test Method

5. The Measurement Uncertainty Panel (MUP)

a. Introduction

The MUP is only active when there is a specific need for their expertise and guidance. It is not expected that the MUP hold regular meetings.

b. Purpose

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

c. Membership

Members should have appropriate measurement uncertainty experience.

d. Activity

- a. Primary Role: provide guidance to the groups on measurement uncertainty determination
- b. Investigate the parameters listed in the “Currently under Review” section of the Look-up table
- c. Provide guidance to the groups when new tests are developed on appropriate measurement uncertainty values
- d. Update and maintain the Look-up table
- e. 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 18 – Sales of CEC Test Methods

1. Sales of CEC Test Methods

a. 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.

The Purchaser (and every other entity in its Affiliates and all Representatives) shall strictly comply with all applicable Sanctions, including European, US and international legislation, and to do whatever is necessary to enable CEC to comply with all applicable Sanctions.

All income from CEC Test Methods will be retained by CEC and are used as a contribution to CEC running costs.

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

b. Calculation of Selling Price

CEC will establish the cost that has been incurred by an individual sponsor based on the total development expenditure to date. This also applies to tests that have already been pre-developed outside of CEC and have been transferred to a CEC test.

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 CEC Management Board review.

NOTE:

'Test Development Completion' is defined as the date on which the CEC 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 website, before becoming a member and participating in Working Group meetings.

GLOSSARY

ACEA	Association des Constructeurs Européens d'Automobiles
ASTM	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
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	Test Method Surveillance Group
TDG	Test Method Development Group
TMS	CEC Test Monitoring System (see Note 2)
WG-FL	(ACEA) Working Group for Fuels and Lubricants

NOTE 1

ERC - **E**uropean **R**egistration **C**entre 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.

See: <https://atc-erc.org>

NOTE 2

TMS - **T**est **M**onitoring **S**ystem is a data depository to store CEC reference results for CEC test methods other than ACEA engine tests for lubricants.

See: <https://tms.cectests.org>