



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

CEC ACTIVITY REPORT JANUARY – JUNE 2021

1. Chairman's Introduction

The challenges of 2020 continued into 2021, but everyone involved in CEC activities have demonstrated that CEC can operate very effectively in a virtual environment. I personally want to thank all contributors to CEC for your continued engagement and commitment to the development and maintenance of our test methods.

In March 2021 a new Chair of CEC was appointed. I would like to thank my colleagues on the CEC Management Board who managed all the key CEC priorities whilst a new Chair was being identified.

Significant progress has been made on the strategic review of CEC that was initiated at the end of 2020. The future scope of CEC and new funding models for CEC have been reviewed by the individual Associations that make up CEC with positive feedback and constructive additions proposed. I would like to thank everyone in the Associations who have inputted into this critical CEC activity. Our self-imposed deadline for review was mid-2021 and this deadline will be met. Please expect further communications on this strategic review over the coming months.

Although slightly delayed, the activities associated with the new CEC website significantly increased during Q2 2021. Currently the website is undergoing testing by various people in our industry Associations and feedback to the web designers is being proactively provided. It is expected that the new CEC website will "go live" towards the end of Q3 2021.

The update to the CEC guidelines (the main working document for all CEC activities) was put on hold at the end of 2020. Activity on this restarted in Q2 2021 and the latest draft has been provided to the industry Associations for review. The aim is to officially publish the new CEC guidelines during Q4 2021.

In our lubricant TDG's L-115 (bearing wear test) and L-116 (ring liner wear test) have both experienced discrimination issues which unfortunately the TDG's have been unable to resolve. Both TDG's feel that they currently have exhausted all technical options to resolve the issues and all TDG budget has been used. The CEC Management Board has taken the decision to place both TDG's into a dormant state pending a revision to the TDG's Terms of Reference. Good progress has been made with Daimler to develop a CEC version of the Daimler OM471 engine test (as a replacement for SG-L-101). Further progress on development of the CEC version of the OM471 is expected in Q3 2021.

On the fuels side F-113 (direct injection injector fouling) has experienced test reproducibility issues. The Chair of the TDG has been tasked to present ways to progress the test development to the TDG. The F110 (injector deposits) working group members continue work on returning the method to SG status with cautious optimism. All members associations have validated the needs statement for a replacement of the F-098 (injector nozzle coking) method, however no OEM sponsor has been identified. It has been agreed by the CEC Management Board that a Special Projects Group (SPG) should be set up to evaluate ways to develop a replacement for F-098 without OEM sponsorship.

Looking forward to the second half of 2021, the CEC is pleased to announce that the postponed 2020 CEC Workshop will take place in November 2021 (provisional date is 25th November 2021). It has been decided that this Workshop will be virtual. The actual agenda for the Workshop will be worked on over the next few months, but it is expected that a significant part of the Workshop will concentrate on the key strategic item of the Future Scope of CEC. Expect to hear more details about the November Workshop during Q3 2021.

2. List of Board Members and Responsibilities

2.1. List of Board Members

| | |
|----------------------|---------------------|
| Craig Jones | ATC, Chair |
| Mike Conroy | CONCAWE, Vice-Chair |
| Paul Decker-Brentano | ACEA |
| Bengt Otterholm | ACEA |
| Nigel Britton | ATC |
| Toby Stein | ATC, Treasurer |
| Andrew Bailey | ATIEL |
| Nikolay Doroshenko | ATIEL |
| Angela Spieckermann | CONCAWE |

2.2. Management Board Responsibilities

| Issue | Leader | Backup | Admin, Secretariat |
|---|---------------------------------|----------------|--------------------|
| General Administration | Craig | Mike | Kellen |
| Finance/Compliance | Toby | | Kellen |
| Website | Nigel | | Kellen |
| Monitoring Lubricants Groups (SG) | Nikolay (engine)/Andrew (Bench) | Andrew/Nikolay | Kellen |
| Monitoring Fuels Groups (SG) | Mike | Nigel | Kellen |
| Monitoring Transmissions (SG) | Toby | Bengt | Kellen |
| Monitoring Reference Fluids Groups + Rating | Nigel (Lubes)/Mike (Fuels) | | Kellen |
| Articles of Association / Guidelines | Craig | Mike | Kellen |
| External Communications | Craig | | Kellen |
| Quality/SDG | Nigel (Lubes)/Mike (Fuels) | | Kellen |
| Lubricant Tests: | | | |
| TDG-L-115 – Bearing Wear Test | Bengt | Nigel | Kellen |
| TDG-L-116 – Ring Liner Wear Test | Nigel | Bengt | Kellen |
| TDG-L-117 | Paul | Andrew | Kellen |
| Fuel Test Development: | | | |
| TDG-F-113 - IDID | Mike | Nigel | Kellen |
| Confidentiality Issues | Craig | Mike | Kellen |
| CEC Strategic items | Craig | Mike | Kellen |

3. Update on TDG's - Activity report – timeframe January – June 2021

3.1. TDG-F-110

Introduction

- A test for IDID, Internal Diesel Injector Deposits (direct injection common rail diesel engines)
- The test method development required two methods with different contaminants, NaDDSA and PIBSI
- The method moved to SG status with NaDDSA contaminant
- The method never achieved SG status with the PIBSI contaminant, and no work has been carried out in recent times
- The test was put back into TDG status with NaDDSA contaminant due to sustained issues achieving acceptable reproducibility and (at the time) a lack of a clear route forward to solve the problem

Current Status

- Work has since continued within the TDG to try and resolve the problem
 - This demonstrates a continued interest in the test method
- A recent Round-Robin seems to have demonstrated significantly better reproducibility

- Tighter control on the pre-test soak temperature and the avoidance of temperature extremes (caused by, for example, forced rapid cooling)

Next Steps

- The TDG Chair and SDG representative will present the results of the tests to the CEC MB on 23 June and request SG status.

3.2. TDG-F-113 – DISI test

Introduction

- A test for Direct Injection Gasoline injector performance
- Has been in TDG status for an extended period
 - Difficulties in establishing the reference fuels
 - Difficulties with the parts supplier
- Recent presentation to the demonstrated that test repeatability is quite good (with some issues at low fouling) but a significant reproducibility problem
- Phase 1 of the TDG is not yet approved but de facto the work going on is phase 2 and it was hoped that progressing the reproducibility issue would help resolve the repeatability issue at low fouling

Current Status

- It is beginning to seem unlikely that a clear route to better reproducibility can be identified
 - It appears that within a same lab, when changing test bed, test installation or injector batch, the test variability remains a concern
- The remains a clear interest from the stakeholders to develop a method, there is already a significant amount of candidate testing ongoing (using the draft CEC method or closely related in-house methods)
- Chair has been asked to propose three options to the TDG
 - Abandon the method since no clear route exists to develop a method meeting CEC quality criteria
 - Continue trying to resolve the R&R problems
 - Identify potential solutions meeting the majority of the needs of the stakeholders

Next Steps

Discussion at the next TDG meeting on 22 June 2021 – Mike Conroy as the Management Board representative for that group will attend the meeting.

3.3. TDG-L-115 – Low Soot Bearing Wear Test and TDG-L-116 –Low Soot Ring Liner Wear Test

Both tests have found difficulty in achieving discrimination, either due to the test method itself or the difficulties in obtaining appropriate high and low performance reference lubricants. Both groups have been declared dormant whilst the CEC MB is making a decision on whether or not to formally close the groups. Both groups have spent the initial budget and any further work would have to be done on a voluntary basis or a new round of funding would be required.

The next steps will be further discussed within the Management Board.

3.4. OM471 Daimler test

CEC is still working with Daimler on bringing their OM471 test development into the CEC process.

Several discussions took place regarding the funding mechanism and proposed obligations.

A discussion was recently held with the CEC lawyer who confirmed that the proposed obligations of use are acceptable for CEC. The CEC lawyer sent its analysis which was shared with Daimler for final sign off.

4. Update on SG's - Activity report – timeframe January – June 2021

4.1. SG-F-098

The SG identified the end of test life quite some time ago (before the end of 2019). End of Life is foreseen in 2022.

A Needs Statement for a replacement test was validated in late 2020.

ACEA have since looked for a hardware sponsor. There have not been any volunteers from the ACEA community.

The consequence is that if a test method is to be develop then it will need to be done without a Hardware Sponsor. This is seen as a blocking issue for initiating an SPG to write the Terms of Reference.

A subgroup within the Management Board has identified the need to work on the issue of developing test methods without a Hardware Sponsor and have proposed to initiate an SPG to address the question of how we might be able to develop a new engine test method that responds to the Needs Statement for the F-98 replacement test. This will be further discussed within the Management Board.

4.2. SG-L-036 and L-105

Michael Johnscher from ISP Salzbergen has been appointed as the new Chair of SG-L-036 and L-105

4.3. SG-L-084

Emma Packard from Infineum UK Ltd., Milton Hill has been appointed as the new Chair of SG-L-084.

5. Update on TMS

- A new test type DW10C3 is currently in development and will be chaired by Frederic Lebeau.
- There was a TMS meeting in May to discuss the progress of each test type. All agreed that everything was running smoothly. Additionally, PDC now track the last upload dates of each test type to ensure that we can chase any dormant tests.

Upgrade of Framework

PDC has completed the update to the current CEC TMS framework and dependencies to mirror the new CEC Members area. This ensures compatibility between both applications.

Integration into CEC Members

PDC has created a plan for the migration of the users to build the association between CEC Members and CEC TMS Users. This will require updates to the main CEC Members database so that this will become the single source of truth for user accounts.

The migration will map each of the TMS users against the CEC Members and append their TMS id recreating the relationship between the user and their data. The current TMS user table will then be dropped and the references will use the newly formed relationship.

PDC will then need to update the routines that dictate authentication and authorisation to the TMS which will be controlled from within additional functionality added to the CEC Members administration area.

Timeline for Integration

Completed:

The first phase of the integration has taken place with the CEC TMS being updated and brought into line with the CEC Members area.

July:

The next phase is to migrate the database structure and update the authentication/authorisation on TMS. PDC will then commence with the migration of the CEC TMS data and conduct some local testing.

Additional changes will also be made to the CEC Members area to allow the secretariat to manage TMS access.

August - September Launch:

After this, PDC will look at releasing a to the SDG for an additional check before making both the CEC TMS and Members Area are released into production.

6. Progress with CEC's New Website

CEC Website progress

- PDC are transferring the new front-end site over to a dedicated content management system, which will allow appointed admins to edit and add content within the template with great ease. This will also go live in conjunction with the Member's area and will be directly linked to it.

CEC Member's area progress

- Testing is currently in progress, with the site set to go live in September. PDC are working through any comments that testers may have and adjusting the system to suit.
- Once testing is complete all data will be migrated over.

7. Strategic items

As mentioned in the introduction, significant progress has been made on the strategic review of CEC that was initiated at the end of 2020, the development of the new CEC website has progressed to the testing stage; we are still targeting a “go live” in Q3 2021. The work on updating the CEC guidelines, which is the main working document for CEC activities, has continued and we expect that the new guidelines will be launched later this year.

8. Upcoming events and activity for 2021

- Management Board Meeting on 23 June by teleconference
- Management Board Meeting on 8 September 2021 by teleconference
- SG-F-005 meeting on 22 September 2021 at AC Analytical Controls BV in Rotterdam, The Netherlands or by teleconference
- SG-F-016 meeting on 22 September 2021 at DTC Vienna or by teleconference
- SG-F-020 meeting on 22 September 2021 at DTC Vienna or by teleconference
- SG-L-114 meeting on 28 September 2021 at Total Givores, France or by teleconference
- SG-L-117 meeting on 6 October 2021 by teleconference
- SG-L-106 & SG-L-111 meetings on 20 October 2021 via call
- SG-F-023 meeting on 09 November 2021 via call
- SG-F-098 meeting on 10 November 2021 at Haltermann GmbH Location in Hamburg, Germany or by teleconference
- Daimler tests meetings on 10 & 11 November 2021 at APL Landau, Germany or by teleconference
- Management Board Meeting on 24 November 2021 by teleconference
- CEC Workshop on 25 November 2021, via webinar

It is important the all working groups meet at least once a year either physically or virtually.