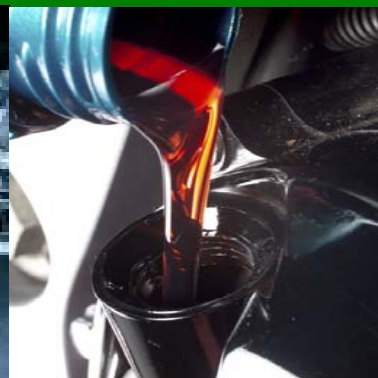
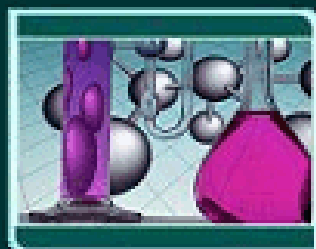


CEC 2008 - Developing Fuels and Lubricant Tests for the European Automotive industry



BASE OILS AND LUBRICANTS
IN RUSSIA AND THE CIS - Moscow April 2008

*Author : Hans Thomassen – Chairman of CEC Board
Managing Director of Kuwait Petroleum R&T*



CEC

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

CEC is an Industry-based organisation for the development of Test Procedures / Methods:

- Automotive Fuels, Engine Oils & Transmission Fluids
- Marine & Large Engine Oils
- Two-stroke Engine Oils
- Associated Bench Tests
- Industrial & Hydraulic Fluids

European industry organisations involved

ACEA: www.acea.be

Association des Constructeurs Européens de l'Automobile

ATC: www.atc-europe.org

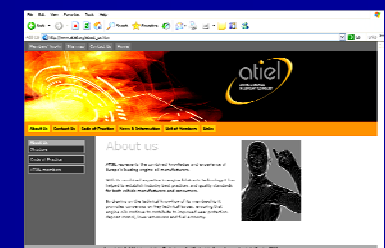
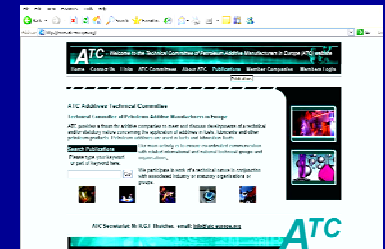
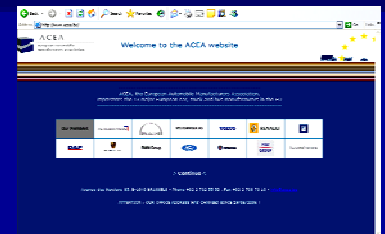
ATC is the organisation of Europe's additive manufacturers

ATIEL: www.atiel.org

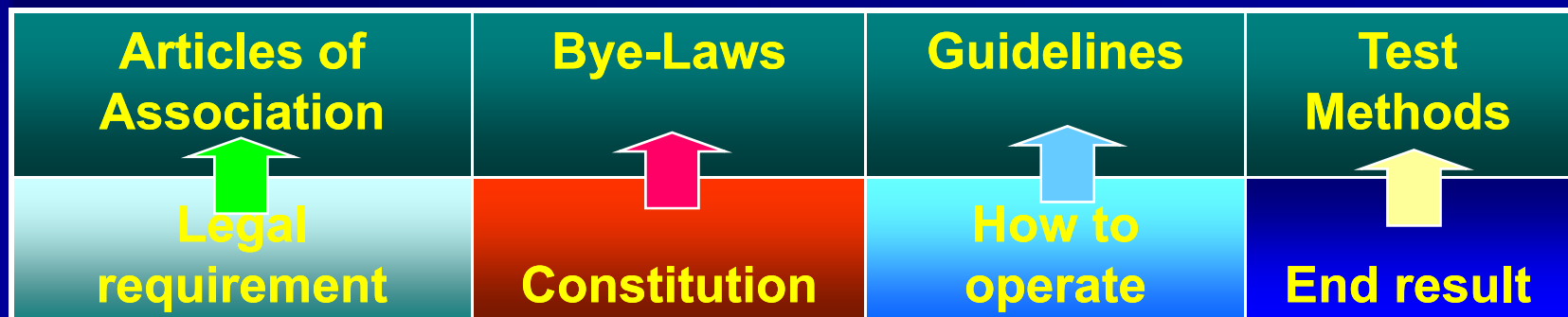
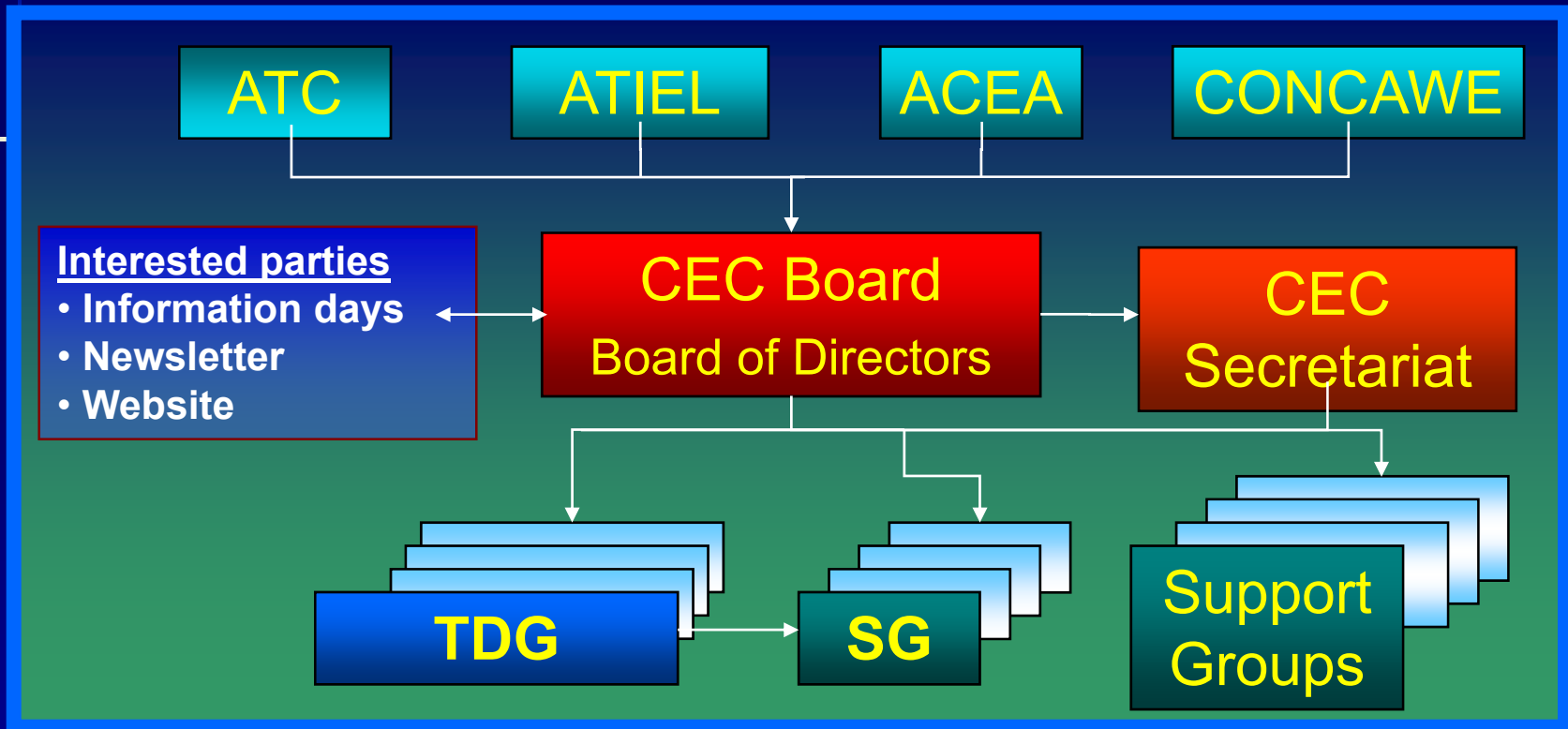
ATIEL is the organisation of Europe's leading engine oil manufacturers

CONCAWE: www.concawe.be

The Oil companies' European association for environment, health and safety in refining and distribution



CEC Organisation



CEC Secretariat

- Secretarial & administrative support to Management Board
- Finance, Legal and Accounts
- Support to all CEC Groups
- Maintenance, updating and sales of Test Methods
- Maintenance of CEC's secure Web Site and information to stakeholders.
- Helpdesk facility
- Organisation of CEC Conferences

CEC - Website: www.cectests.org



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

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[Test Methods & Publications](#) - [Presentations & Papers](#) - [Tenders](#) - [Rating Workshop](#)

Working Group Members & Test Method Holders please click the login button

[Login](#)

The European Fuels and Lubricants Performance Test Development Organisation

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

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

CEC represents the Automotive Fuels, Lubricants, Additives and allied industries in the development of performance tests, usually via their European Industry groups; ACEA, ATIEL, ATC and CONCAVE, see the 'Links' page.

CEC Test Methods are used extensively by the automotive and petroleum industries in Europe and throughout the world.

CEC develops timely, quality focussed and cost-effective test methods in response to industry needs. These tests evaluate the performance of transportation fuels, lubricants, additives and other fluids. They can be engine or rig tests. CEC also develops analytical tests to support its engine and rig tests.

CEC Test Methods and Publications

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

Please click on the links below to view CEC Test Methods and publications:

- [Codes of Practice](#)
- [Fuels](#)
- [General Publications](#)
- [Lubricants](#)
- [Reports](#)

Search CEC Tests Methods and Publications:

Latest CEC Newsletter

Click on Newsletter below to view:

- [CEC Newsletter February 2008](#)

CEC Secretariat Services are provided by Interlynk Administrative Services Ltd. Tel: +44 (0)1455 821993, Fax: +44 (0)1455 821994, E-mail: cecinfo@interlynk.co.uk
Interlynk Administrative Services PO Box 6475, Earl Shilton, Leicester, LE9 9ZB, UK. Copyright © CEC 2004, Site Designed and Hosted in Partnership with PDC Ltd

TDG - Test Development Group

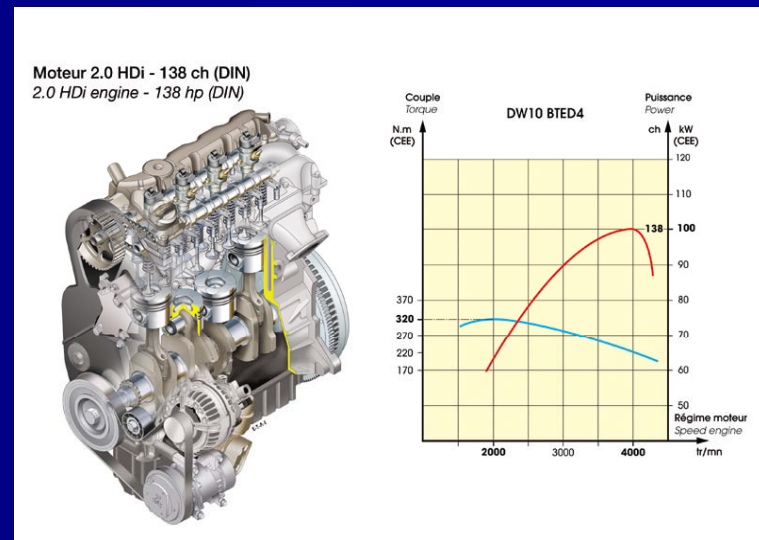
- Template for Acceptance –from ACEA, ATC, ATIEL or Concawe.
- Financing & Stakeholders > flexibility
- All results Confidential to Group – Meetings & Documents restricted to active members only
- Sale and use of Test Method once developed is up to Group to decide, with approval by the Management Board
- After completion > SG - Surveillance Group

Recent Test Developments

- F-098 – Injector Fouling in Direct Injection Diesel Engines (DW10)
- L-099 – Diesel Engine Wear Test (OM646LA)
- L-101 - Piston Cleanliness and Bore Polishing Test (OM 501LA)

F-098 - Diesel Injector Fouling Test (DW10)

- PSA DW 10 Euro 5 diesel engine with common rail fuel injection at 1600 bar
- Cyclic test methods including hot soak periods
- No power loss with conventional EN 590 diesel fuel
- Approx. 12% power loss with calibration fuel
- Sensitive to B10 Biodiesel fuel
- Round robin is complete, finalising the test method and precision statement



Engine :
DW10BTED4 10YVD SIEM

L-099 - Diesel Engine Wear Test (OM646LA)

- Replacement for OM602A in ACEA and for OM611LA in Mercedes-Benz (MB) in-house specifications
- Cam wear is main parameter for ACEA
- MB parameters include – Piston merits, Cylinder, Ring, Timing chain and Bearing wear, Viscosity increase, Bore polishing and Engine sludge
- B5 Biodiesel used
- 300 hours cyclic test
- Min. 3% soot in oil required at EOT
- Round robin being evaluated to confirm test suitability for cam wear



OM 646 LA - Euro V

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

L-101 - Piston Cleanliness and Bore Polishing Test (OM 501LA)

- Replacement for OM441LA in ACEA and Mercedes-Benz (MB) specifications
- Piston merit is main criteria for ACEA
- MB parameters include - Engine sludge, General engine deposits, Bore polishing, Cylinder wear, Ring sticking and Oil consumption.
- B5 Biodiesel used
- 300 hours cyclic test
- Round robin being evaluated to confirm test suitability for piston merit



OM 501 LA - Euro V

- Engine type: HDD V6
- Capacity: 11.9 l
- Power max: 350 kW
- Torque max: 2300 Nm

Learnings

- TDG's tend to encounter issues that in the past would have been discussed in Investigation Groups. Thus, future developments should include an investigation stage in the project.
- Biodiesel adds new aspects to engine testing.

Ongoing Test Developments

- T-091 (Torque Converter Clutches W280 and W260)
- L-100 Turbo Charger Deposit Test
- T-102 (Start Clutches)

Potential Future Test Developments

- FZG PTX C/10/90-Pitting Test ?
- New gasoline sludge test replacing the M111 ?
- New test to examine the effect of biodiesel on engine lubricants

Test Monitoring

- CEC is currently developing a new website for the test monitoring system which has the potential to be fully integrated into the CEC website
- Test monitoring provides a “life” tool to evaluate the severity of laboratory tests
- Test monitoring also provides “proof” of severity drifts in test methods enabling industry associations to respond quickly

CEC Web-based Test Monitoring

The screenshot displays the CEC Performance Tests Extranet Area. At the top right, there is a link for 'Admin | Logout'. The main header features the CEC logo and the text 'The Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids'. Below this is a navigation bar with links for 'WebSTATISTICA', 'Help & FAQ', and 'Contact'. The left sidebar is labeled 'CEC Performance Tests'. The main content area welcomes 'Chris Gray' and prompts the user to 'Select Test Type' from a list: RE1, RE2, RE3, RE4, SYNBR5, and XUD9. A 'Submit' button is located below the list. Under the 'Latest News' section, there is a link for 'CEC TMA system for evaluation'. At the bottom, a footer provides contact information for Interlynk Administrative Services Ltd, including telephone, fax, and email details, along with copyright and partnership information.

Admin | Logout

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

CEC Performance Tests WebSTATISTICA Help & FAQ Contact

Welcome **Chris Gray** to the CEC Performance Tests Extranet Area

Select Test Type
Select test type for which you wish to use from the list.

RE1
RE2
RE3
RE4
SYNBR5
XUD9

Submit

Latest News
[CEC TMA system for evaluation](#)

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CEC Web-based Test Monitoring

The screenshot displays the CEC Web-based Test Monitoring interface. At the top right, there are links for [Main](#), [Admin](#), and [Logout](#). The main header features the CEC logo and the text "The Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids". Below this is a navigation bar with "Select Test Type" (highlighted), "RE1 Main", "WebSTATISTICA", "Help & FAQ", and "Contact". A left sidebar lists various functions: "CEC Performance Tests", "List Test Data", "Control Chart", "Discrimination Chart", "List Control Limits", "Download Control Limits", "Upload Data", "Download Data", and "Documentation". The main content area shows the "RE1 - SG-L-039 ELASTOMER Material RE1 - Upload Test Data" section, which includes a file input field, a "Browse..." button, and an "Upload" button. The footer contains contact information for Interlynk Administrative Services Ltd, including telephone, fax, and email details, along with copyright and hosting information.

CEC

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

CEC Performance Tests

Select Test Type RE1 Main WebSTATISTICA Help & FAQ Contact

List Test Data

Control Chart

Discrimination Chart

List Control Limits

Download Control Limits

Upload Data

Download Data

Documentation

RE1 - SG-L-039 ELASTOMER Material RE1 - Upload Test Data

Browse... Upload

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CEC Web-based Test Monitoring

Main | Admin | Logout



The Coordinating European Council
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[Select Test Type](#)
[RE1 Main](#)

[WebSTATISTICA](#)

[Help & FAQ](#)

[Contact](#)

CEC Performance Tests

List Test Data

Control Chart

Discrimination Chart

List Control Limits

Download Control Limits

Upload Data

Download Data

Documentation

RE1 - SG-L-039 ELASTOMER Material RE1 - Control Chart Configuration

- Pick one or more parameters from the list below. To select multiple items from the list hold the Ctrl key whilst selecting individual items.
- To select ONLY your lab pick MYLAB. For other lab and Instruments then select individual items and holding Ctrl to select multiple items
- To select an entire Fluid, pick all the Fluid + Batch combinations from the list.
- Select your data source from the list below. To select multiple sources hold down the Ctrl key whilst selecting.
- Select a start and end date. Date format is yyyy-mm-dd.

1. Select Parameters

ALL

Median Elongation @ break Change (%)

Fresh median elongation @ break (%)

Elastomer micro-hardness Change

Fresh elastomer micro-hardness

Median Tensile strength Change(N/mm**2)

2. Select Lab and Instrument

ALL

EA+EA

EB+EB

EC+EC

ED+ED

EE+EE

3. Select Fluid and Batch

ALL

RL133+16

RL133+17

RL133+18

RL133+19

RL133+20

4. Select Data Source

ALL

NON-RoundRobin

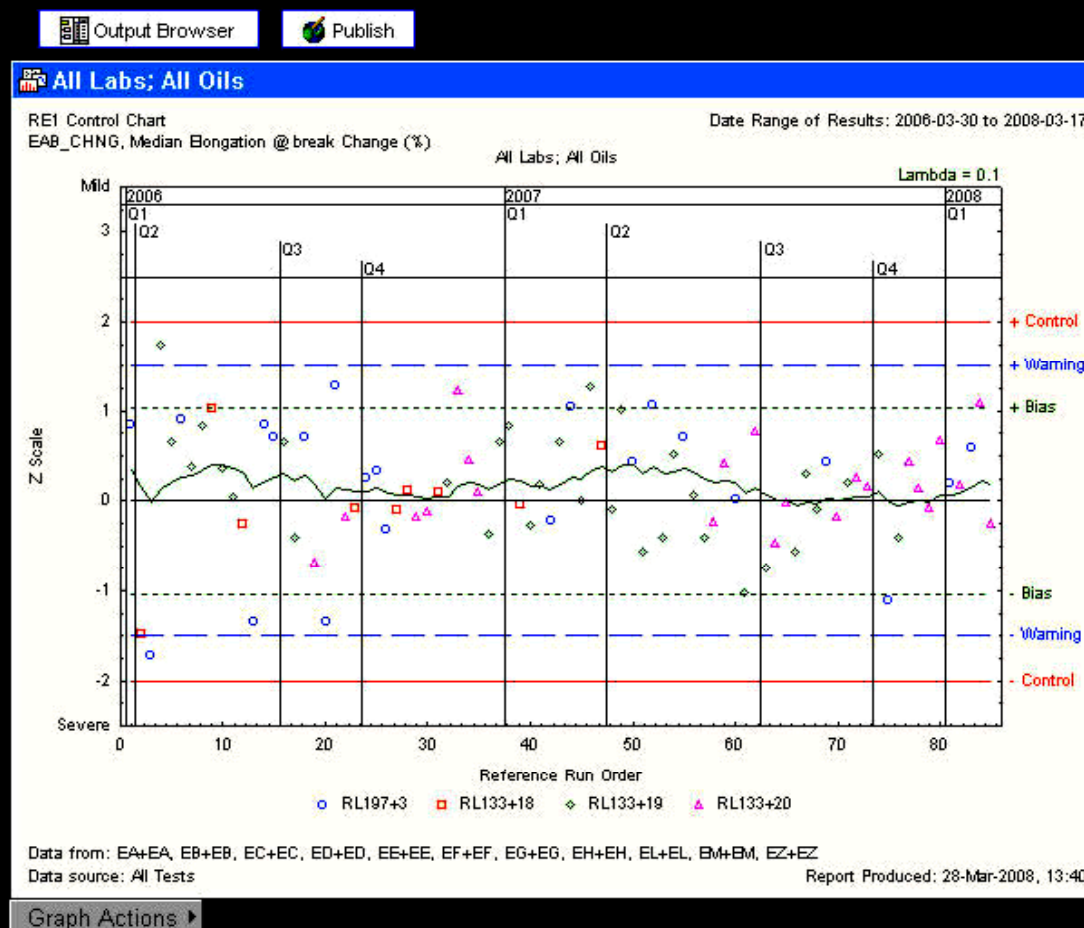
TOTAL

5. Select Start + End Date

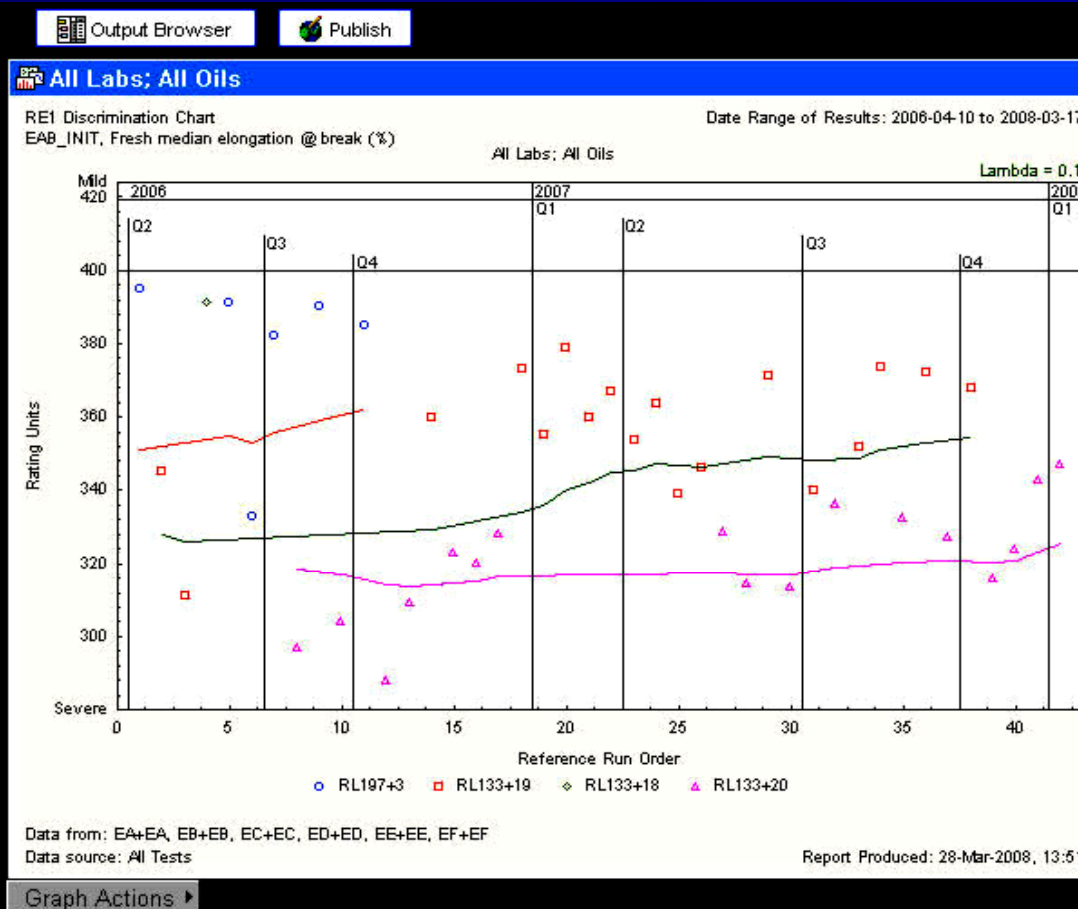
Start Date:

End Date:

CEC Web-based Test Monitoring



CEC Web-based Test Monitoring



On behalf of the CEC
Management Board

I thank the organizers to allow
me to show this presentation to
you.