



WELCOME

Enhancing compliance with European automotive engine lubricant quality standards

CIS Base Oils and Lubricants Conference
23 May 2019

www.atiel.org

Today's session - what we will cover

01

The European Engine Lubricants Quality Management System (EELQMS)

Quality Compliance and Monitoring

02

03

Improving Efficiency:
Interchange Guidelines

Introduction to ATIEL

- The technical association of the European lubricants industry.
- Industry body that represents European lubricant manufacturers and marketers.
- Provides expert advice to regulators, industry partners and end-consumers.
- Seeks to enhance the reputation of the lubricants industry by promoting superior standards of lubricant technology and performance.
- Major stakeholder in European Engine Lubricants Quality Management System (EELQMS)
- Develops VGRA and BOI Interchange Guidelines



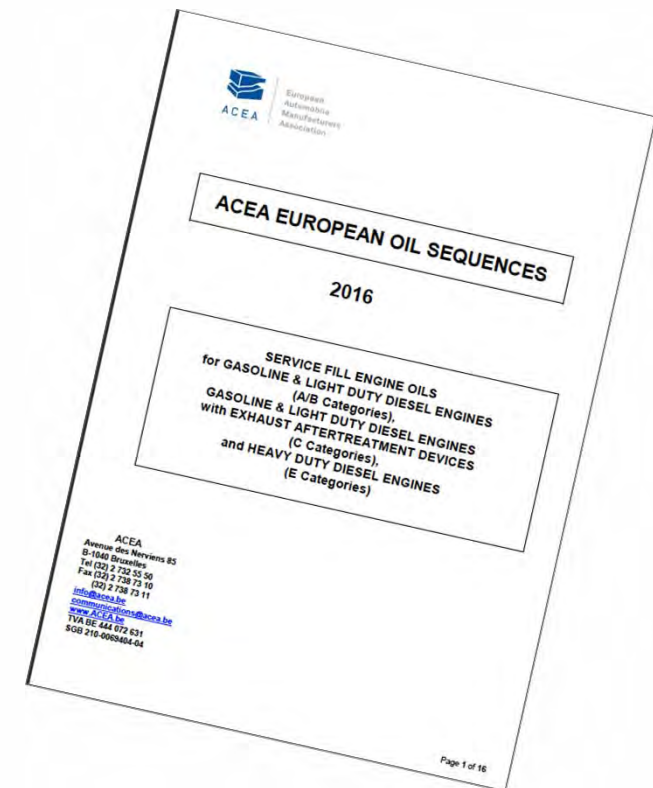
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01

The European Engine Lubricants Quality Management System (EELQMS)

ACEA European Oil Sequences

- ACEA European Oil Sequences cover light duty passenger cars & heavy duty trucks.
- The ACEA Oil Sequences are updated regularly to address:
 - **Changes in European legislation**
 - **Changes in engine technology**
 - **Changes in fuel composition**
- The current issue of the Oil Sequences is ACEA 2016, released 1 December 2016.
- After 1 December 2018, all ACEA claims have had to be to the 2016 Sequences and the 2012 and all other previous ACEA Sequences will be obsolete.



ACEA performance claims

- All lubricant **marketers** are responsible for all aspects of product liability when making ACEA claims!
- Lubricant marketers claiming ACEA performance can include claims for specific engine categories on their product labelling.
- For these claims to be valid ACEA **requires** these engine lubricants to be developed in accordance with the European Engine Lubricant Quality Management System (EELQMS).



About the EELQMS

- Voluntary quality management system for automotive engine lubricants - but ACEA requires marketers making claims to comply with EELQMS.
- Developed by industry stakeholders to promote development of improved, fit-for-purpose engine lubricants that meet increasing technical requirements.
- Designed to assist lubricant marketers in assuring the quality of their lubricants and performance claims made for them in the marketplace.
- Visit: www.eelqms.eu



Summary of EELQMS guidelines

Lubricant marketers developing engine lubricants in compliance with ACEA Oil Sequences shall carry out formulation development, blending and marketing in accordance with the guidelines in the ATIEL Code of Practice and ATC Code of Practice:

- Incorporating EELQMS guidelines in a quality management system (eg ISO 9001, or ISO TS 16949).
- Ensuring an independent audit of the lubricant development process.
- Having Code of Practice checklists signed off by an authorized company representative.
- Blending products according to requirements of ATIEL Code of Practice, including accreditation to an auditable QMS.
- Signing a Marketers' Letter of Conformance and submitting the Letter and quality certificates to the EELQMS administrators, SAIL.



A background image showing a clear plastic bottle being poured with water. The water is captured in mid-pour, creating a dynamic splash and ripples. The scene is set against a light, neutral background.

Quality Compliance and Monitoring

02

ATIEL Compliance Policy

- Launched to support LoC signatory marketers who make valid ACEA performance claims.
- Encourages greater compliance across the industry through:
 - continuous monitoring of lubricant quality in the market
 - exchange of information and technical data that supports education of lubricant marketers.
- Provides framework for supporting marketers in taking corrective action to address non-compliance issues.
- Sets out procedures for ATIEL to give feedback and advice to marketers, or to take action against them, depending on the severity of non-compliance.
- Available on the ATIEL website: www.atiel.org/code-of-practice/compliance-policy.



Execution delegated to SAIL

- Administers LoC submissions and approves company registrations;
- Manages product surveys on behalf of ATIEL;
- Interacts with all stakeholders and protects confidentiality of survey process
- Licences use of EELQMS trademark and logo
- Collects registration fees
- Detailed information available on the SAIL website:
www.sail-europe.eu



Products/brands registration and compliance

- Register with SAIL and submit a signed Marketers' Letter of Conformance
- Template letter available on SAIL website: www.sail-europe.eu
- Registrants have exclusive right to use of the EELQMS quality logo on product documentation and labels
- Quality of products claiming compliance are checked regularly through SAIL's product survey programme, covering all LoC signatories
- Pay annual registration fee (€975/year)



ATIEL quality surveys

- Enhance the overall robustness of quality management.
- One of the most effective ways to measure levels of compliance with EELQMS.
- Has become an ongoing activity and a core part of ATIEL's Quality Management Committee's initiatives.
- Conducted and administered on behalf of ATIEL by independent bodies.



Quality survey methodology

- All samples sourced independently, coded and 'blind' tested.
- Tested against most appropriate ACEA European Oil Sequences and parameters including:
 - Viscosity (high and low temp)
 - Noack volatility
 - SAPS (Sulphated Ash, Phosphorous & Sulphur)
 - TBN (Total Base Number)
- Testing and statistical analysis conducted by independent expert laboratory.
- Individual results shared only with respective marketer.
- Appropriate follow-up actions and sanctions in case of serious breaches of compliance.



2017/2018 quality survey

- 184 samples from ATIEL members, LoCs & OEMs tested over the year 2017.
- Countries tested included Germany, UK, Russia, Poland, Belgium/Netherlands, Norway, Turkey, Spain/Portugal, Sweden and Italy
- Monthly review of data by ATIEL QMS Committee.
- Most failures due to incompatible combined claims e.g. A3/B4, C3.
 - Sulphated ash and TBN will fail for one of the specs.
- Other failures included TBN, Sulphated ash, NOACK, HTHS, Phosphorus, MRV and CCS.
- But number of failing oils is small.
- In the 2018 survey we see the number of failures decreasing significantly.

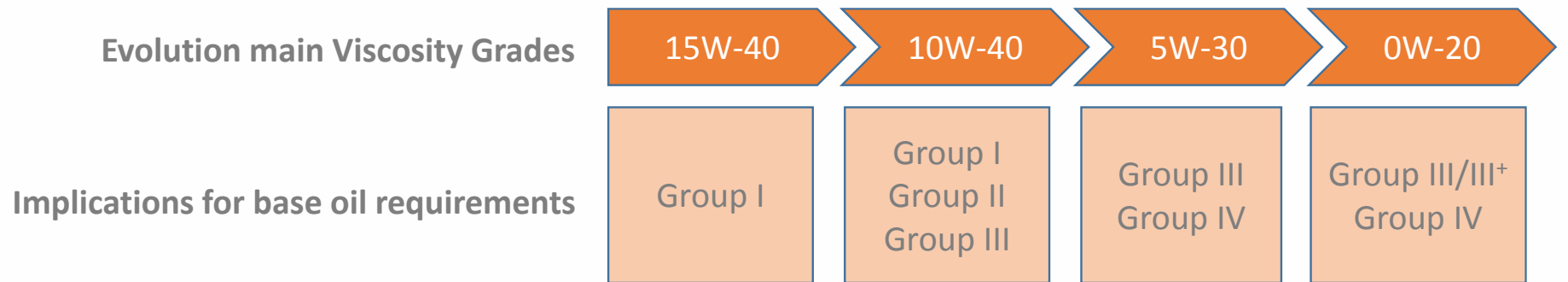


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03

Improving Efficiency: Interchange Guidelines

Engine Oil Specifications driven by Emission Legislation



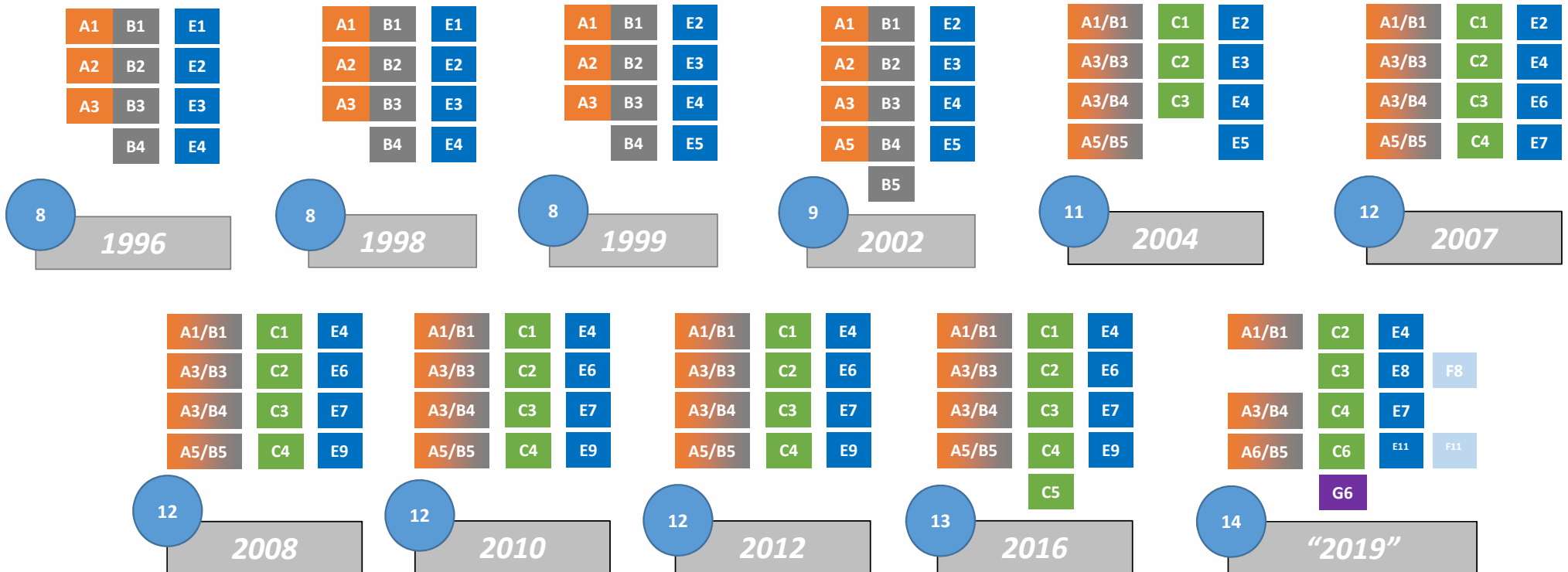
Increased use of Group II and III base oils in Light and Heavy Duty

- Very limited BOI interchange guidelines for Grp II and III
- Current guidelines focused around group 1 base stocks

Interchange Guidelines did not hold pace with specification evolution

The Complexity Challenge

From 8 to 14 Categories



Interchange Guidelines help to manage increasing complexity







New Engine Tests Add Complexity



Proposed new engine tests in “ACEA 2019 Sequences”

Heavy Duty

- CEC OM471LS 
- Mack T-13 

Light Duty

- M271 EVO Sludge 
- Toyota Turbocharger 
- Seq IVB Wear 
- Seq. VH Sludge 
- Seq. IX LSPI 
- Seq. X Chain Wear 

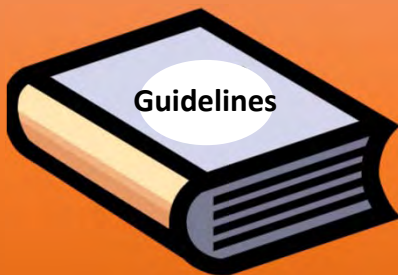
- For new  Tests no VGRA/BOI interchange guidelines available
- For  tests the North American (API) Interchange guidelines are applied

The Industry Response



Complexity Increase

- Number of ACEA categories increased from 8 (1996) to 14 (2016)
- New and more engine tests in ACEA Sequence for which there are no interchange guidelines
- Changing viscosity grades
- New and more base oils appearing on the market



Interchange Guidelines

- Viscosity Grade Read Across and Base Oil Interchange can contribute to managing the increased complexity and reduce engine oil development costs, while continuing to assure final product performance.
- ATIEL and ATC joined forces to move the development of read across guidelines for (new) CEC tests forward.

Summary



QUALITY

Quality is important if you want to meet the requirements of the ACEA European Oil Sequences and make valid performance claims.



EELQMS

The European Engine Lubricants Quality Management System (EELQMS) is the only quality system for meeting ACEA requirements.

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ATIEL COP

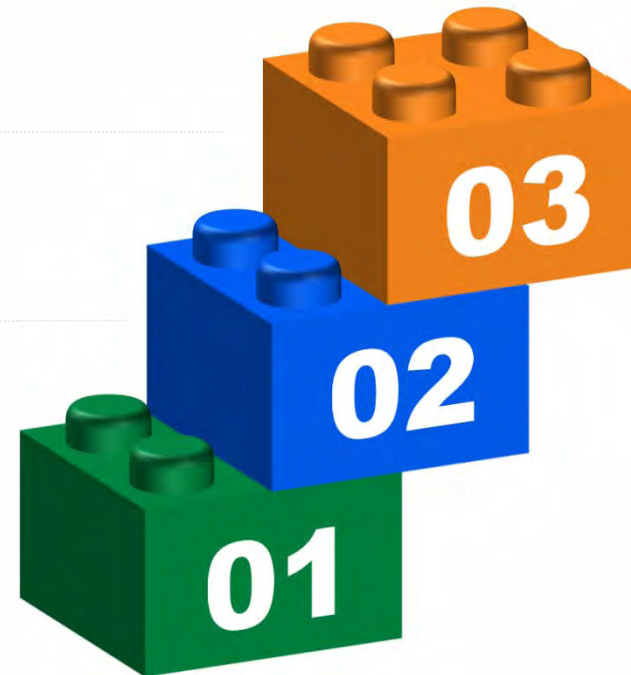
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COMPLIANCE

ATIEL monitors quality compliance in the market and takes appropriate follow-up action where necessary.



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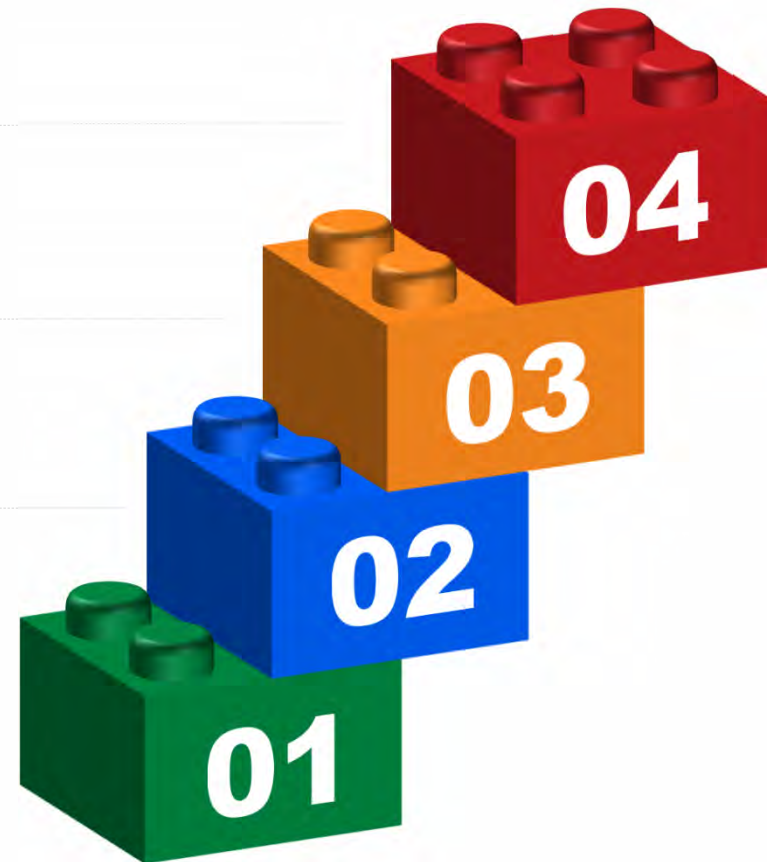
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MANAGE COMPLEXITY

Viscosity Grade read Across and Base Oil Interchange Guidelines help to manage increased complexity, while maintaining lubricant Quality



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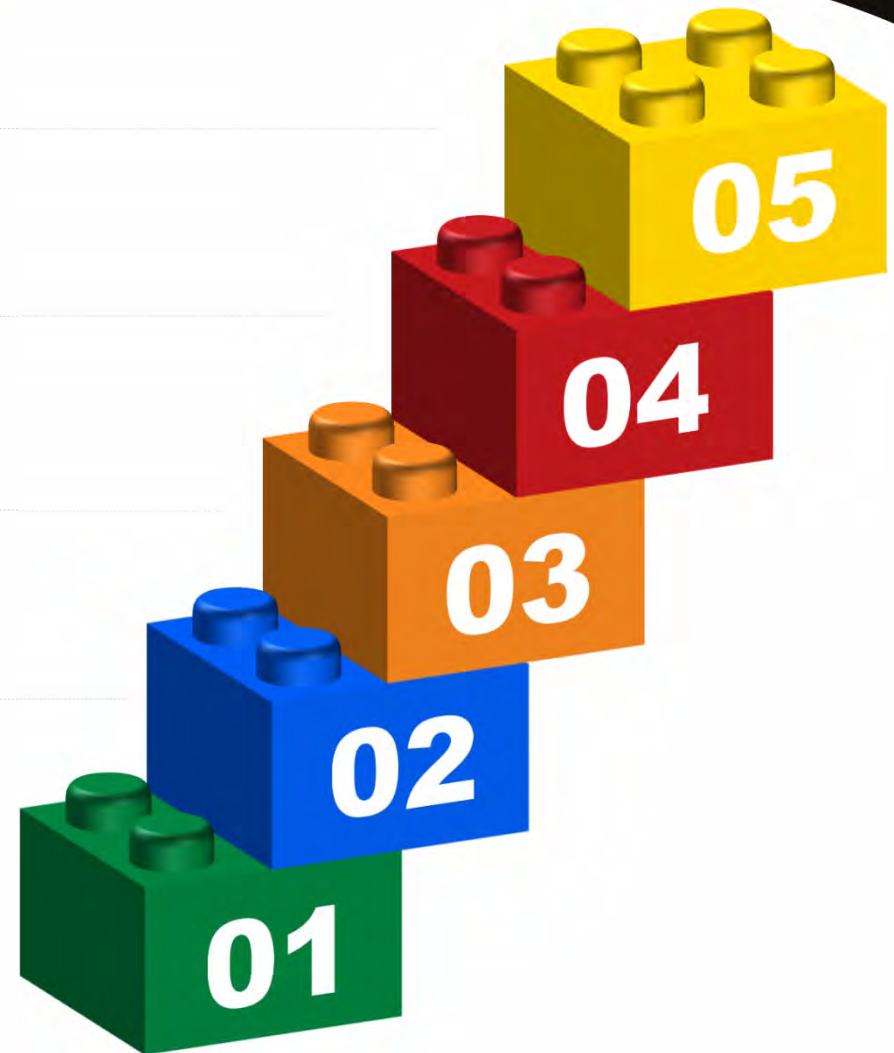
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Thank you!

For more information visit:

www.atiel.org
www.eelqms.eu

Contact us at: **info@atiel.eu**