



# Safeguarding quality in European automotive engine lubricants

*The role of the European Engine Lubricant Quality Management System (EELQMS) and the ATIEL Code of Practice.*



CIS Base Oils, Lubricants and Fuels Conference, 26-28 May 2015

## Speaker introduction



- Peter Tjan
  - President of ATIEL since 2011
  - 25-year career in the oil industry
  - Experience in refining, lubricants marketing and sales



## What we will cover

- ATIEL and its role in the lubricants industry.
- Overview of the European Engine Lubricant Quality Management System (EELQMS) and the ATIEL Code of Practice.
- How EELQMS helps marketers of engine lubricants claiming to meet European OEM quality requirement to support their performance claims.
- How the ATIEL Code of Practice supports cost-effective lubricant development while giving reassurance to OEMs and end-users of the quality and consistency of lubricants.
- Quality surveys ATIEL is undertaking to assess levels of compliance among products in the market.



atiel

## About ATIEL

- 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.

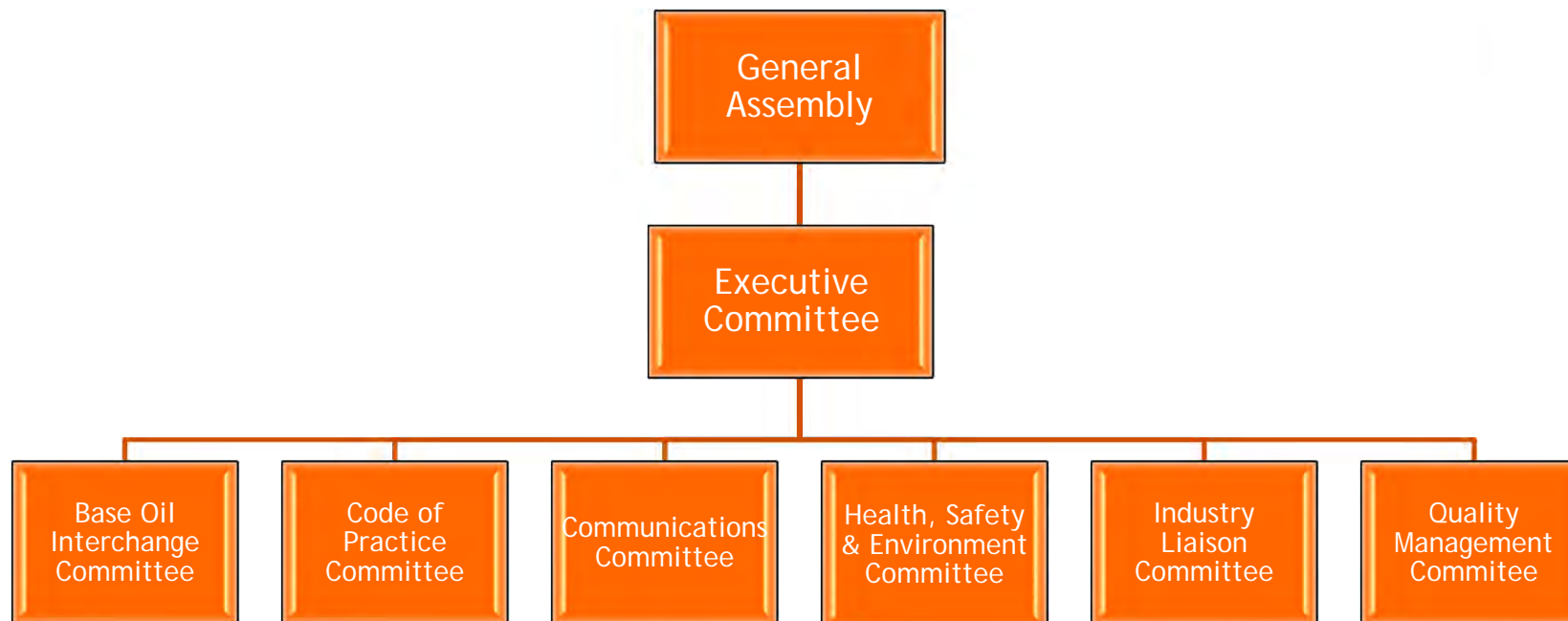


## ATIEL members



20 member companies - European and global representation

## How we work in ATIEL





## ATIEL: key activities (1)

### For its members -

- ATIEL provides a forum for debate on topical, non-competitive industry issues and a platform for sharing resources and expertise.
- Through the work of technical committees and working groups ATIEL:
  - monitors current and future technical trends and regulatory programmes
  - facilitates the development of scientifically sound responses to changes in market needs
  - promotes European quality standards and best practices around the world
  - carries out quality surveys to assess levels of quality compliance in the marketplace



## ATIEL: key activities (2)

For regulators, industry partners and end-consumers

- ATIEL contributes to the development of best practices and standards that promote superior quality products in the marketplace.
- Through the collective expertise of its members ATIEL:
  - Sets clear and consistent guidelines and best practices that address the needs of vehicle manufacturers and consumers.
  - Acts as a focal point for technical issues relating to the performance and environmental demands of engine oils.
  - Acts as a respected partner and advisor on lubricants matters to all external stakeholders.



## Why quality is important

- Vehicle OEMs need to know that appropriate quality engine lubricants will be available in all their markets.
- Trade/workshops need assurance that inadequate lubricant performance will not lead to warranty claims.
- Consumers need confidence in the quality of the products being used in their vehicles.



## Engine lubricant performance claims



- Do you recognise this type of product labelling?
- Example of an engine lubricant with an ACEA (European Automobile Manufacturers' Association) performance claim (ACEA A5/B5).
- Could become more familiar in your market...

## OEMs - ACEA

- ACEA (European Automobile Manufacturers Association) represents the interests of 15 major European car, truck and bus manufacturers.
- Sets performance specifications for engine lubricants through its European Oil Sequences.
- ACEA performance specifications increasingly adopted outside Europe.



## ACEA members

**BMW Group**

PSA PEUGEOT CITROËN

**DAF**

**DAIMLER**

**FIAT**



**GM**



**IVECO**



**TOYOTA**

**VOLKSWAGEN**  
AGTIENGESELLSCHAFT



## Role of quality standards

- 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 ACEA Oil Sequences are 2012.





## Influence of ACEA Oil Sequences

- Market growth for vehicles and lubricants is mainly outside Western Europe.
- Russia is one of the largest car markets in Europe - and still growing.
- Many ACEA members already have vehicle assembly or engine production facilities in Russia.
- They need to know that appropriate quality lubricants will be available in the market.





## ACEA performance claims

- Lubricant **marketers** are responsible for all aspects of product liability!
- 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

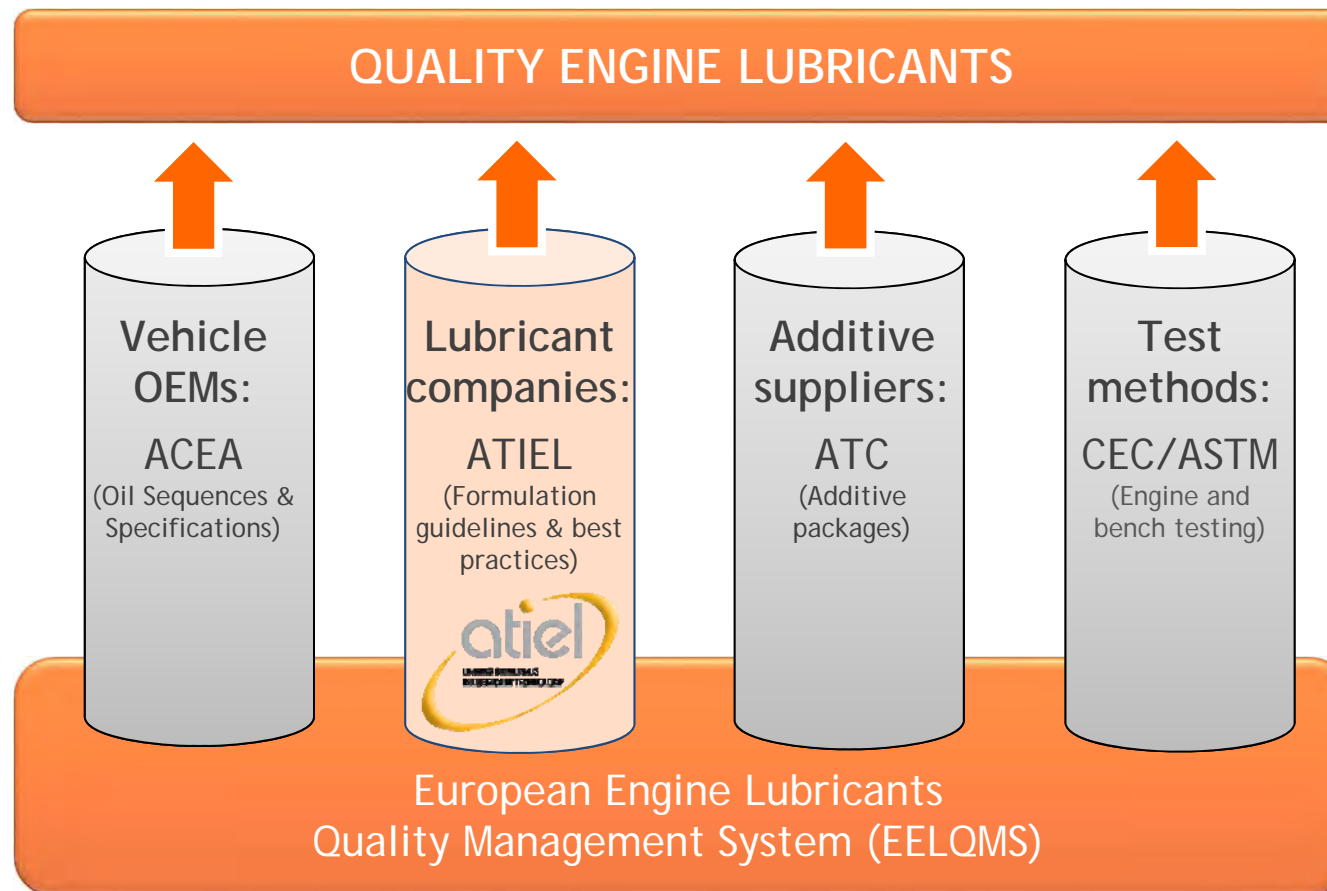
- The European Engine Lubricant Quality Management System (EELQMS) is a voluntary quality management system for automotive engine lubricants.
- Developed by industry stakeholders to promote development of improved, fit-for-purpose engine lubricants that meet increasing technical requirements of the automotive industry.
- Designed to assist lubricant marketers in assuring the quality of their lubricants and the performance claims being made for them in the marketplace.



EELQMS

EUROPEAN ENGINE  
LUBRICANTS QUALITY  
MANAGEMENT SYSTEM

## EELQMS stakeholders



The EELQMS is administered by ATIEL.

## EELQMS contribution to quality

- EELQMS provides a detailed process and structure for lubricant development, production and performance validation.
- Provides assurance of the quality of engine lubricants on the market that claim to meet the performance requirements of ACEA.
- It is a voluntary system but the ONLY system that can be used to qualify engine lubricants against ACEA Oil Sequences.
- The ATIEL Code of Practice is a key element of the EELQMS.





## ATIEL Code of Practice

- Been in existence since 1996.
- Provides guidelines to help formulators and marketers in the development of lubricants that meet ACEA performance requirements.
- Has evolved in line with ACEA Oil Sequences and is currently on Issue 19.



## Code of Practice - contribution to quality

- The existence of the ATIEL Code of Practice has contributed to:
  - Higher quality lubricants in the market
  - More precise engine & lab tests
  - Clearer formulation guidelines
  - Development of a robust lubricant quality management system

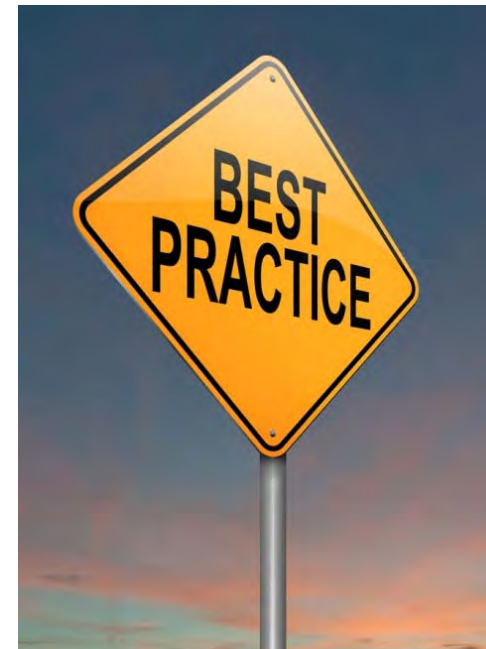




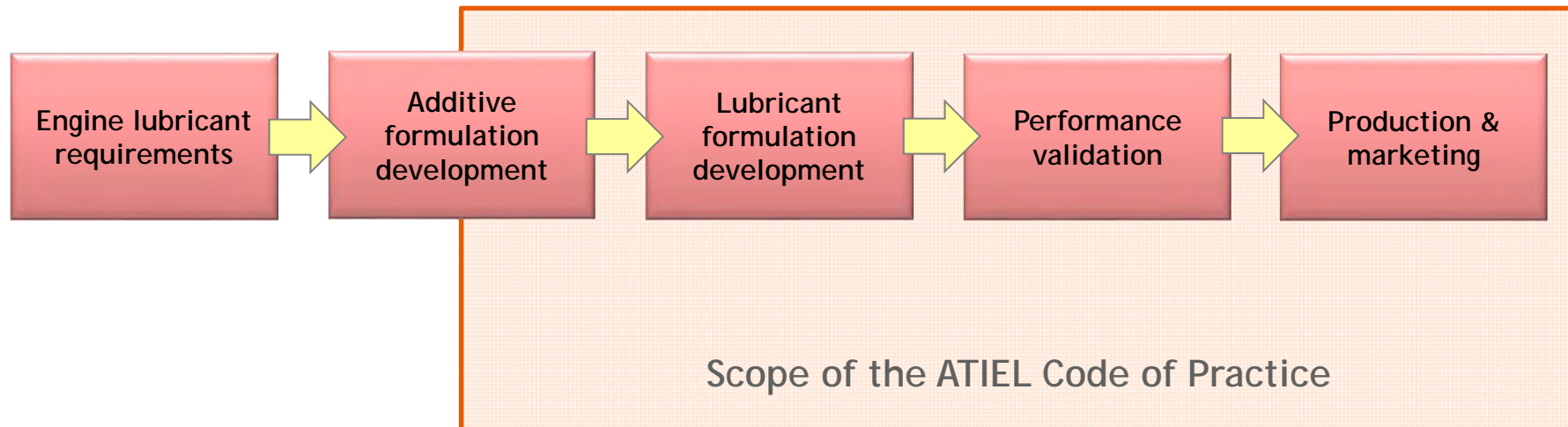
## Code of Practice - guidelines

The ATIEL Code of Practice Provides lubricant development guidelines that:

- Enable lubricant companies to comply with the requirements of the ACEA Oil Sequences.
- Represent accepted industry best practices.
- Offer a common approach and standards for the whole industry to follow.
- Give reassurance to OEMs and end-users of the quality and consistency of Lubricants making ACEA performance claims.



## How the ATIEL Code of Practice applies to the lubricant development process?

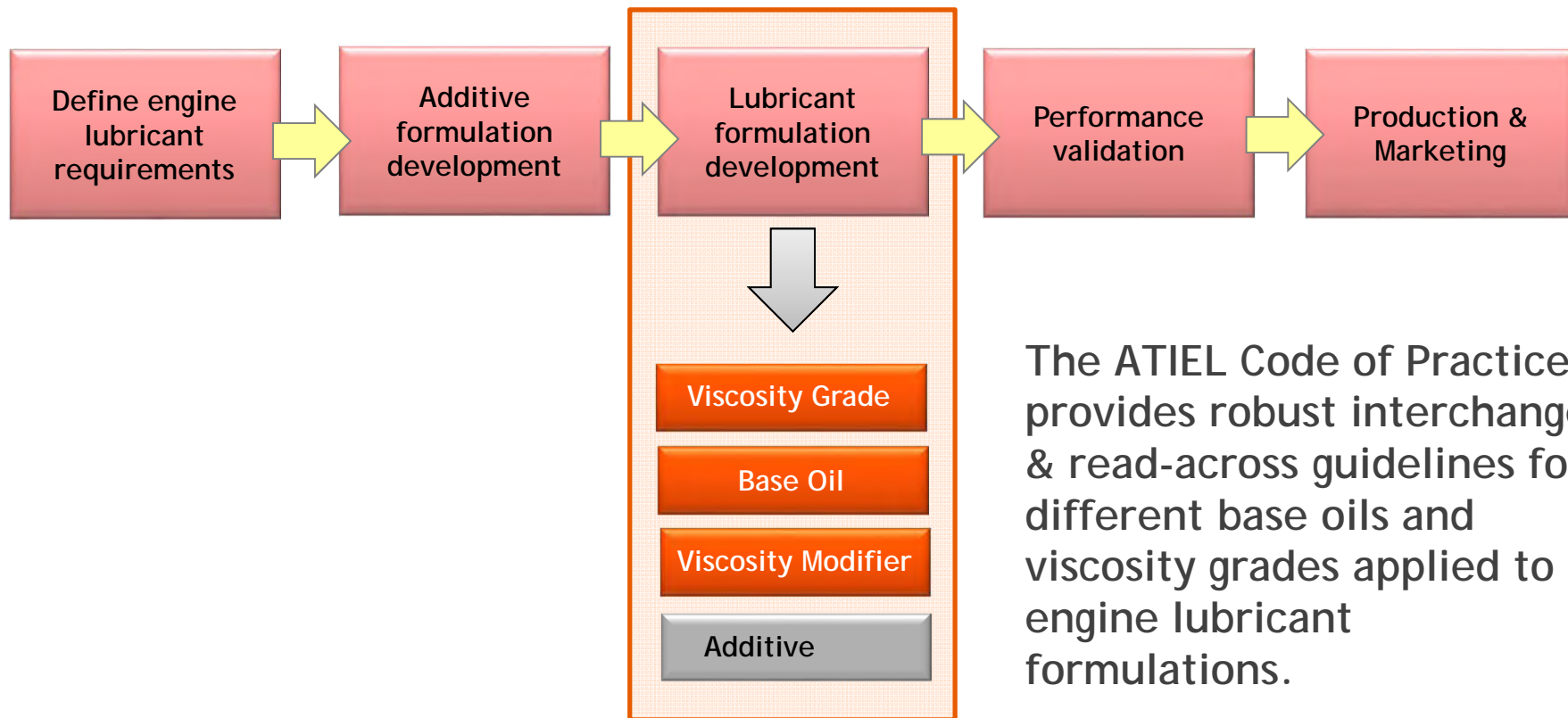




## ATIEL Code of Practice - how does it help?

- Facilitates efficient lubricant development by:
  - providing a documented, structured approach
  - eliminating unnecessary or duplicate testing
  - reducing product development time
  - making more effective use of resources
- Provides guidelines for base oil interchange, viscosity grade read-across and viscosity modifier interchange.
- Provides standard guidelines and auditable quality management systems to ensure consistent quality of lubricants.
- Ensures availability of appropriate lubricants worldwide (different base oils, viscosity grades) through controlled formulation flexibility.

# Engine lubricant development programme



The ATIEL Code of Practice provides robust interchange & read-across guidelines for different base oils and viscosity grades applied to engine lubricant formulations.

## Marketing

Compliance with the Code of Practice includes signing a Lubricant Marketers' Letter of Conformance:

Required for ACEA performance claims

Confirms compliance with EELQMS

Signed Letters held by ATIEL

List of signatories on ATIEL website

Renewed every two years

Membership of ATIEL is not required to be a signatory

Letter of Conformance template available from ATIEL website: [www.atiel.org](http://www.atiel.org)





## Summary of stakeholder benefits

### OEMs

- Controlled and consistent quality of engine lubricants
- Wide availability of lubricants meeting ACEA requirements
- Protection against warranty claims



### End user

- Trouble-free operation
- Confidence in lubricant performance claims
- Wide availability of lubricants of appropriate quality



### Lubricant and additive industry

- Timely, cost-effective engine lubricant development
- Common approach & standards (level playing field)
- Formulation optimisation and controlled flexibility





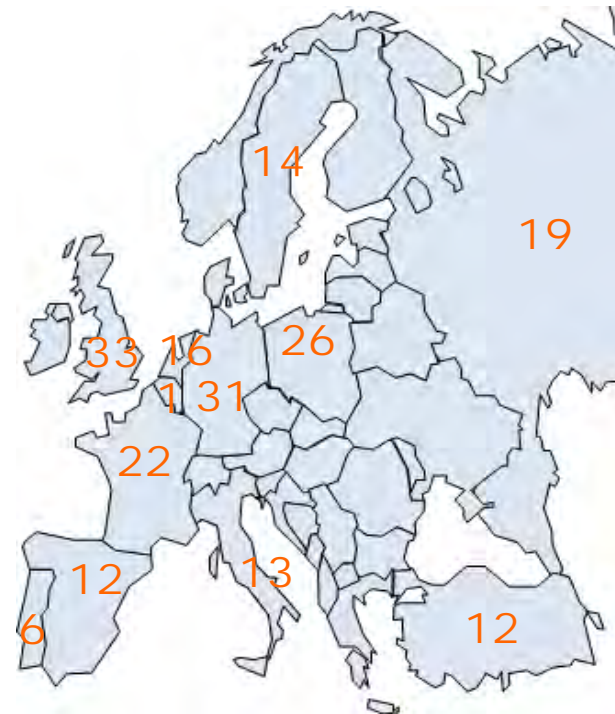
## ATIEL Quality Survey

- In July 2013 ATIEL conducted its first engine lubricants quality survey.
- Surveys are one of the most effective ways to demonstrate compliance with the EELQMS.
- As a result this has become a regular activity and a core part of ATIEL's overall quality management initiatives.



## Independent quality survey

- Paid for by ATIEL members but conducted by independent body.
- Over 200 engine lubricant samples from ATIEL members purchased from outlets across Europe.
- All ATIEL members represented in the sample.
- Covered a range of common viscosity grades and quality levels.



## Purpose of the quality survey?

- To establish a base line for compliance with quality standards in Europe.
- To replicate to some extent best practice from other markets (eg API programme in North America).
- Test validity of anecdotal evidence of inaccurate performance claims of some lubricants on the market.
- To visibly demonstrate the benefits of full adoption and application of the EELQMS.
- To enhance the overall robustness of quality management system activity.



## Quality survey methodology

- All samples sourced completely independently, coded and 'blind' tested.
- Tested against most appropriate standards - ACEA European Oil Sequences 2008.
- Testing covered key performance 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.



## 1<sup>st</sup> quality survey results

- Not a totally scientific study but a way to 'test the water' and gain learnings.
- Overall level of compliance encouraging but some issues raised.
- No serious quality issues identified.
- Individual results shared only with respective marketer and appropriate follow-up actions taken.





## Quality surveys: ongoing activity

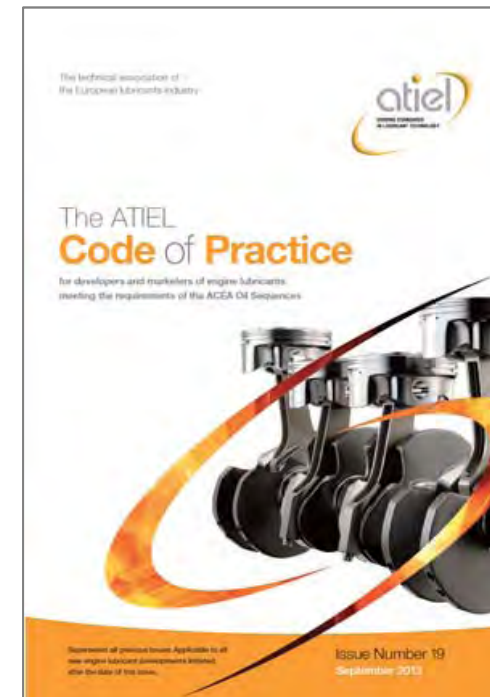
- Quality survey will become a regular, annual ATIEL activity.
- Second survey started in 2014 covering broader range of products.
- Extended to cover Letter of Conformance signatories (ie beyond ATIEL membership).
- Baseline and methodology will develop and results become more meaningful over time as more data gathered.





## Conclusion

- The EELQMS and ATIEL's Code of Practice benefit all stakeholders:
  - OEMs ✓
  - Lubricant companies ✓
  - Additive companies ✓
  - Workshops ✓
  - Consumers ✓
  - Base oil suppliers ✓





# Thank you!

For more information and to download a copy of our  
Code of Practice visit: [www.atiel.org](http://www.atiel.org)

Contact us at: [info@atiel.eu](mailto:info@atiel.eu)