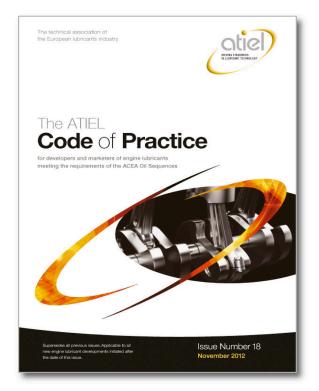
The ATIEL Code of Practice

for developers and marketers of engine lubricants meeting the requirements of European ACEA performance specifications.



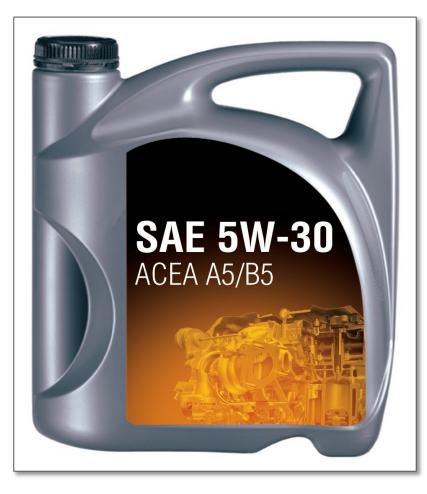
Speaker introduction



• Adri van de Ven

- Kuwait Petroleum Product Development Manager
- Member of the ATIEL Base Oil Interchange Committee
- 28-year career in the oil industry

Engine lubricant performance claims



- Recognise this?
- Example of an engine lubricant with an ACEA (European Automobile Manufacturers' Association) performance claim (ACEA A5/B5).
- Could become more familiar...

ACEA European Oil Sequences

- ACEA European Oil Sequences are quality standards for engine lubricants used in light duty passenger cars & heavy duty trucks.
- The ACEA Oil Sequences are updated regularly to address:
 - Changes in legislation
 - Changes in engine design/technology
 - Changes in fuel composition (eg biofuels)



ACEA members



otie

Influence of ACEA Oil Sequences

- Market growth for vehicles and lubricants is mainly outside Western Europe.
- Russia is reportedly now the largest car market in Europe - and still growing.
- European manufacturers are increasing their presence in Russia.
- 12 out of 15 ACEA members already have vehicle assembly or engine production facilities in Russia.



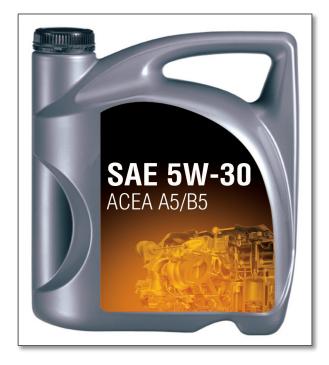
Importance of quality standards

- ACEA members need to know that appropriate <u>quality</u> engine lubricants will be available in <u>all</u> their markets.
- Trade/workshops need assurance that inadequate lubricant performance will not lead to warranty claims.
- Consumers need confidence in quality of the products being used in their vehicles.
- ATIEL, through its Code of Practice, is there to help...



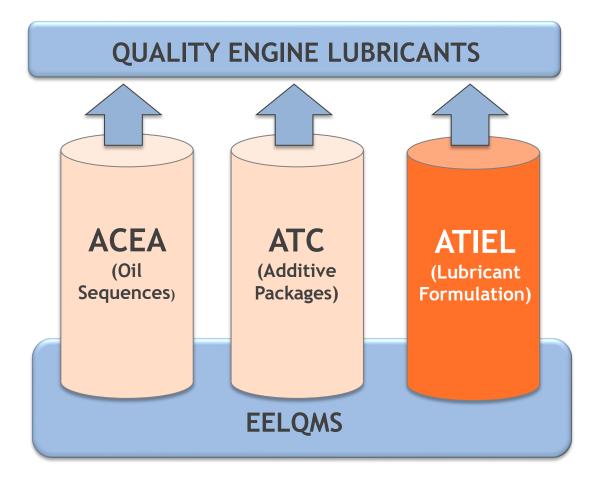
ACEA performance claims

- Lubricant marketers are responsible for all aspects of product liability!
- Companies claiming ACEA performance can include claims for specific engine categories on their product labelling.
- For claims to be valid ACEA <u>requires</u> engine lubricants to be developed in accordance with the European Engine Lubricant Quality Management System (EELQMS).
- The ATIEL Code of Practice is a core pillar of EELQMS.



EELQMS

European Engine Lubricants Quality Management System



 Developed through collaboration of key stakeholders - ACEA, ATC and ATIEL.



EELQMS - 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 to ensure wide availability of appropriate quality lubricants







What is ATIEL?

- The technical association of the European lubricants industry.
- Represents the common interests of European lubricant manufacturing and marketing companies.
- Membership open to companies actively engaged in the marketing and/or manufacture of lubricants in Europe.
- Promotes dialogue between members and associated industries on technical issues, regulations, specifications and best practice.

DRIVING STANDARDS

IN LUBRICANT TECHNOLOGY



ATIEL membership



 20 member companies -European and global, major and independent representation

ATIEL: key technical activities

QUALITY

- Developing guidelines and best practices for formulation of engine lubricants.
- Promoting quality and availability of appropriate lubricants.
- Supporting auditable quality management systems.



PRODUCT SAFETY

- Assisting lubricants companies to comply with European Union's REACH regulation.
- Developing common practices on health, safety and environmental issues.



ATIEL Code of Practice

- Document that assists lubricant companies in their compliance with the requirements of the ACEA Oil Sequences.
- Provides formulation guidelines that present accepted industry best practices updated in line with evolution of the ACEA Oil Sequences.
- Provides a common approach and standards for the whole industry.
- In existence since 1996 currently on Issue 19.



Code of Practice - contribution to quality

Since 1996 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 lubricant quality management system



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 standard guidelines and auditable quality management systems to ensure consistent quality of lubricants.
- Ensures availability of appropriate lubricants worldwide (different base stocks, viscosity grades) through controlled formulation flexibility.

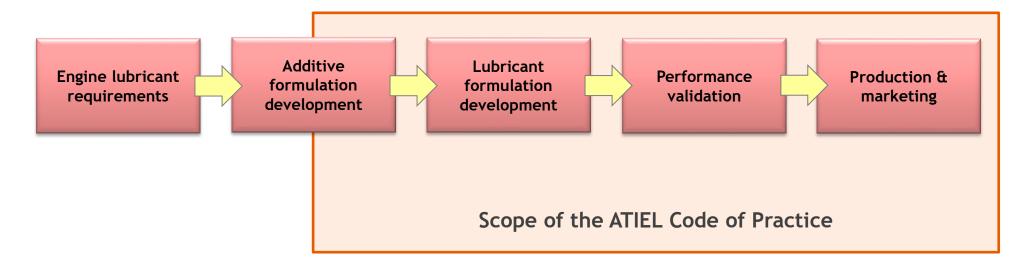
ATIEL Code of Practice

- Lubricant marketers are responsible for all aspects of product liability!
- For engine lubricants to be accepted for use by ACEA, they must meet minimum quality & performance levels as set out in the Oil Sequences.
- Marketers of a lubricant claiming to meet ACEA performance requirements must ensure compliance with the ATIEL Code of Practice.
- Compliance with the Code of Practice includes signing a Marketers' Letter of Conformance and filing it with ATIEL.



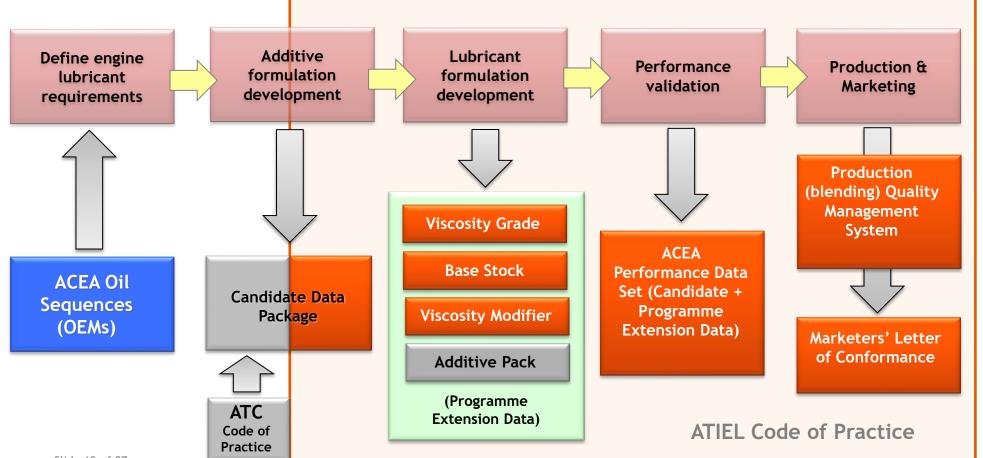


How does the ATIEL Code of Practice apply to the lubricant development process?



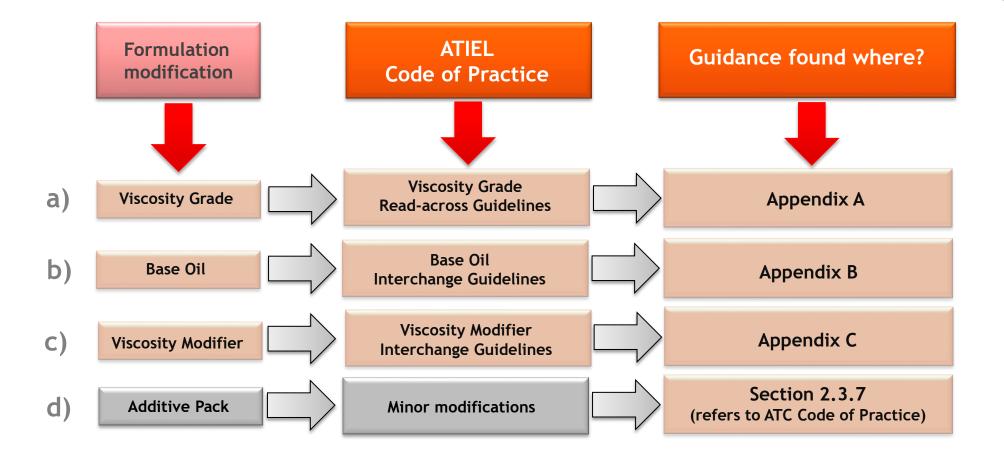
 The primary role of the Code of Practice is to generate an ACEA Performance Data Set to support the technical integrity of a lubricant relative to the ACEA performance requirements.

Engine lubricant development programme



Slide 19 of 87

How to use the Code of Practice



Lubricant formulation development

Viscosity Grade Read-Across (VGRA) guidelines allow development of tailored viscosity formulations for:

- different climate zones
- fuel economy
- different engine types

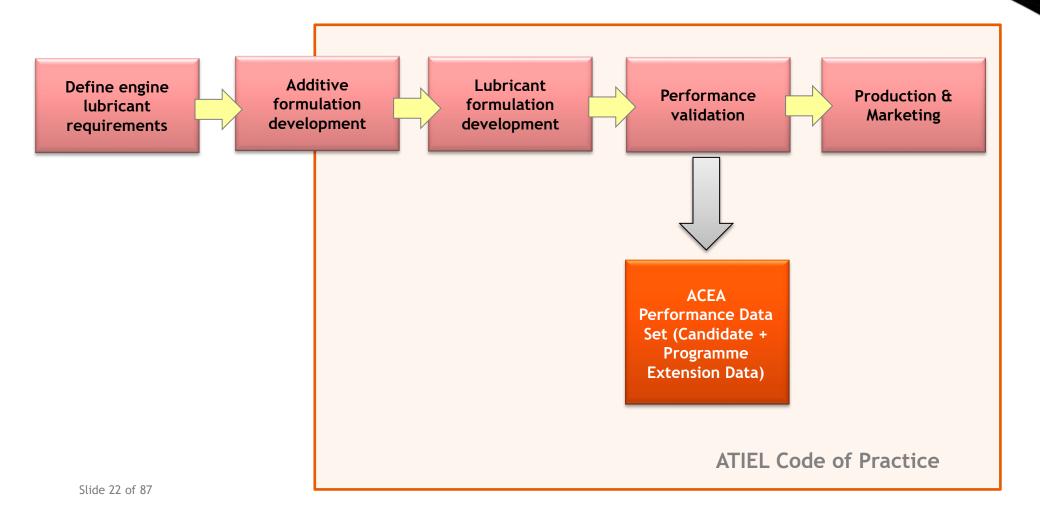
Base Oil Interchange (BOI) guidelines allow:

- Formulators to accommodate variations in availability of base stocks
- Optimisation of lubricant formulations

Viscosity Modifier Interchange (VMI) guidelines allow for:

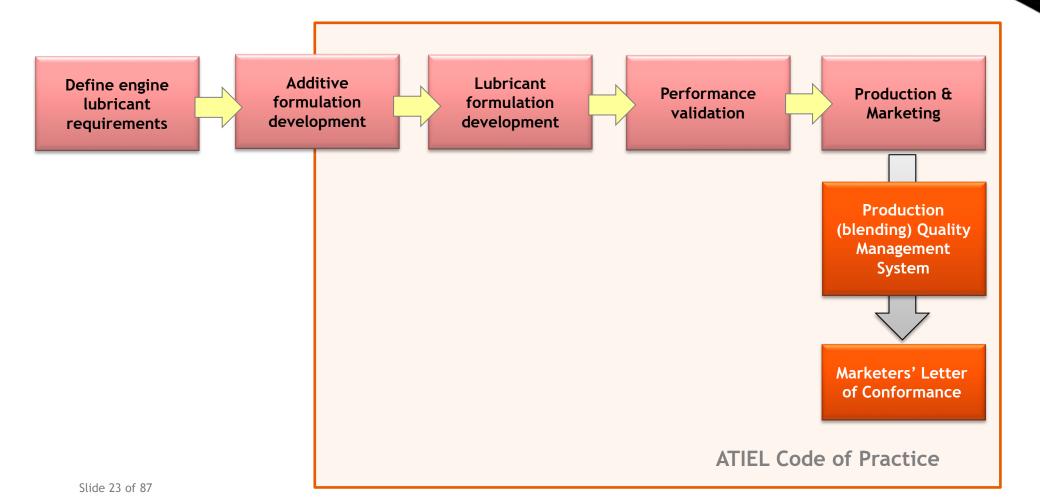
- Variations in availability of different viscosity modifiers
- Formulation optimisation
- Product performance enhancement

Performance validation



atie

Engine lubricant development programme



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: <u>www.atiel.org</u>



Benefits of compliance

- Compliance with the ATIEL Code of Practice benefits all stakeholders:
 - OEMs
 - Lubricant companies
 - Additive companies
 - Workshops
 - Consumers

- \checkmark
- ATIEL is committed to update the Code of Practice in line with the continuous evolution of the ACEA Oil Sequences.
- ATIEL actively promotes cross-industry adoption of the Code of Practice both in and outside Europe.

Conclusion

- Lubricant marketers are responsible for all aspects of product liability!
- ACEA quality lubricants are increasingly required outside Western Europe.
- For lubricants to be accepted for use by ACEA, they must meet minimum quality & performance levels set out in the Oil Sequences.
- Marketers of a lubricant claiming to meet ACEA performance requirements must ensure compliance with EELQMS and the ATIEL Code of Practice.
- Compliance with the Code of Practice includes signing a Marketers' Letter of Conformance.







Thank you!

To download the current issue of the ATIEL Code of Practice please visit: <u>www.atiel.org</u>