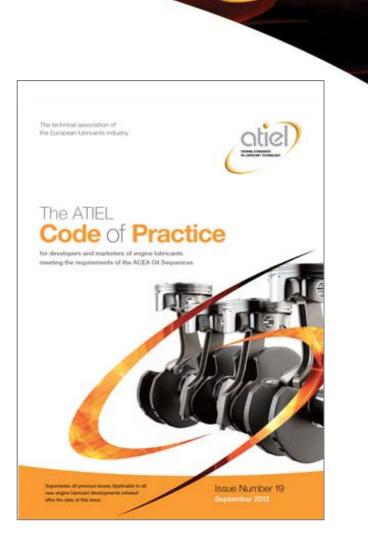
Promoting quality across the European engine lubricants industry

Argus European Base Oils Markets 20th March 2014 - Istanbul



Speaker introduction



Peter Tjan

- President of ATIEL since 2011
- 25-year career as an oil industry executive
- Experience in refining, lubricants marketing and sales

ATIEL

"ATIEL is a representative body for manufacturers and marketers in the European lubricants industry and acts on behalf of its members as the main point of contact for external stakeholders. ATIEL, also in cooperation with other industry stakeholders^{*}, seeks to enhance the reputation of the lubricants industry by providing expert advice to regulators, industry partners and endconsumers and promoting superior standards of technology and lubricants performance."

* a.o. ACEA, ATC, CONCAWE, UEIL and national lubricants associations



ATIEL members



20 member companies - European and global representation

ATIEL: key activities

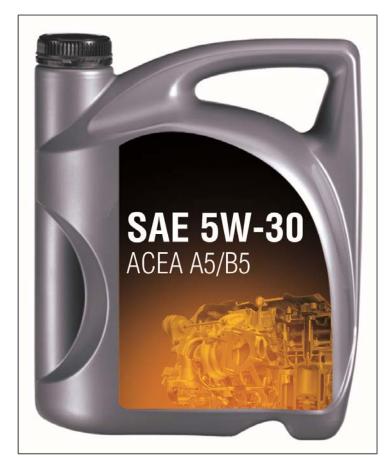
For its members, ATIEL provides a forum for debate on topical noncompetitive industry issues and a platform for sharing resources and expertise:

- it monitors current and future technical trends and regulatory programmes,
- facilitates the development of scientifically sound responses to market needs,
- helps to promote European standards around the world.

For regulators, industry partners and end-consumers, ATIEL works towards the development of best practices and standards to promote superior quality products in the marketplace:

- it sets clear and consistent guidelines and best practices that address the needs of equipment manufacturers and consumers,
- acts as a European focal point for technical issues relating to the performance and environmental demands of engine oils and
- through the collective expertise of its members, acts as a respected partner and advisor on lubricants matters to all external stakeholders.

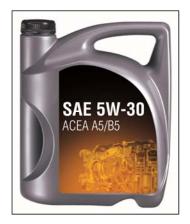
Why quality is important



- Do you recognise this?
- Example of an engine lubricant with an ACEA (European Automobile Manufacturers' Association) performance claim (ACEA A5/B5).
- The ACEA European Oil Sequences are performance standards for automotive engine lubricants.
- ATIEL is here to help you meet these requirements...

ACEA performance claims

- Lubricant marketers claiming ACEA performance can include claims for specific engine categories on their product labelling.
- For these claims to be valid ACEA
 <u>requires</u> these engine lubricants to be
 developed in accordance with the ATIEL
 Code of Practice.
- Lubricant marketers are responsible for all aspects of product liability!



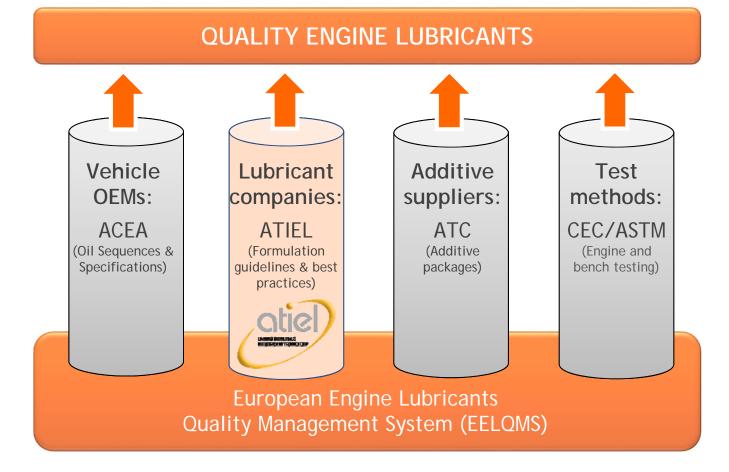
Relevance to Turkish automotive market

- Turkey is the sixth largest vehicle manufacturer in Europe
- Over one million vehicles produced in 2012 (light and heavy duty)
- Exports to over 150 countries
- Over 50% of vehicles produced destined for EU countries
- 15 production facilities in Turkey including six ACEA members:
 - Daimler, Ford, Hyundai, Renault, Toyota and Volkswagen





How industry structure underpins quality



The ATIEL Code of Practice

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



ATIEL Code of Practice

Provides 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.



Code of Practice - 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

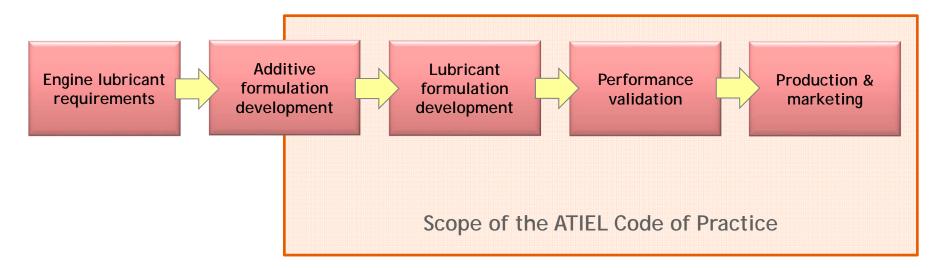
- Timely, cost-effective engine lubricant development
- Common approach & standards (level playing field)
- Formulation optimisation and controlled flexibility







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



Engine lubricant development programme Additive Lubricant **Define engine** Performance **Production &** formulation formulation lubricant validation Marketing development development requirements The ATIEL Code of Practice Viscosity Grade provides robust interchange & read-across guidelines for Base Oil different base oils and **Viscosity Modifier** viscosity grades applied to engine lubricant **Additive** formulations.

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 readacross 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.

Why we need interchange guidelines

The purpose of interchange guidelines is to maintain the integrity and quality of lubricants while allowing formulators and marketers to:

- accommodate variations in availability of base oils
- optimise their formulations
- Develop variations in formulations for different climate zones, performance criteria (eg fuel economy), engine types etc.







Base Oil Interchange principles

- Interchange guidelines define the minimum physical and engine testing necessary to ensure engine lubricant performance remains compliant for the relevant ACEA Oil Sequence(s).
- BOI guidelines are data-driven for current and future engines.
- General engineering principle should always be applied identify & test the 'worst case'.
- Each individual interchange (eg BOI, VGRA, VMI) must be considered <u>step-by-step</u>, and the evaluation documented and made available for auditing.

Base Oil Interchange guidelines

Base Oil Interchange Guidelines define for each Oil Sequence where base stocks can be interchanged with minimum engine testing, provided that:

- Only the base oils are changed
- Viscosity Modifier concentration is not changed by more than +/-15% relative
- There are no other changes to overall formulation composition

In the majority of cases some engine tests still have to be run.

ATIEL Code of Practice - Guidelines for base stock quality assurance & interchange

- Base stocks must be produced in plants that:
 - Are accredited to a quality management system
 - Have routine quality control
 - Meet feedstock approval procedures
- Enables base oils to be interchanged where guidelines have been established
- Guidelines cover all ACEA sequences

Importance of quality standards

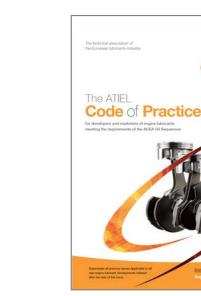
- OEMs need to know that appropriate <u>quality</u> engine lubricants will be widely available in <u>all</u> their markets.
- Trade/workshops need assurance that inadequate lubricant performance will not lead to warranty claims.
- Consumers need confidence in the quality of the products being used in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





Conclusion

- ATIEL's Code of Practice benefits all stakeholders:
 - OEMs
 - Lubricant companies
 - Additive companies
 - Workshops
 - Consumers
 - Base oil suppliers



sue Number 19

- 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.



Thank you!

For more information and to download a copy of our Code of Practice visit: <u>www.atiel.org</u>

Contact us at: info@atiel.eu