

WELCOME

Monitoring engine lubricant quality in the market

15:00-15:30

8th International Scientific-Technical Conference

10-12 May 2017, Krynica Zdroj, Poland

www.atiel.org

Speaker introduction



Piotr Niemiec

- Product Range Development Coordinator, LOTOS Oil
- Member of the ATIEL Quality Management, Industry Liaison and Base Oil Interchange Committees
- 10 years' experience in the oil industry

Today's session - what we will cover

- Introduction to ATIEL
- Lubricant quality and performance claims
- Lubricant Marketer's Letter of Conformance
- Monitoring lubricant quality in the market
- Summary and questions

The background of the slide features a dynamic image of a clear liquid being poured from a white plastic bottle on the left side. The liquid is captured mid-pour, creating a graceful arc and splashing into the air. The scene is set against a light gray background, which is framed by a curved white border at the top. Above this border is a decorative header with a black background on the right containing the "atiel" logo, and a vibrant orange and yellow abstract pattern on the left.

ABOUT ATIEL

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.



ATIEL members



ATI EL activities

Contributes to development of best practices and standards that promote superior quality products in the market:

- Through its Code of Practice sets clear and consistent technical guidelines for lubricant development.
- Monitors current and future technical trends and regulatory programmes
- Acts as a focal point for technical issues relating to the performance and environmental demands of engine oils.
- Carries out quality surveys to assess levels of quality compliance in the marketplace.



A background image showing a white plastic container pouring a thick, golden-yellow liquid (oil) into a clear glass. The liquid is captured in motion, creating a dynamic splash and ripples. The scene is set against a light gray background.

LUBRICANT QUALITY & PERFORMANCE CLAIMS

Importance of quality standards

- 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 quality of the products being used in their vehicles.



ACEA performance claims

- Marketers claiming ACEA performance can include claims for specific engine categories on product labelling.
- For claims to be valid engine lubricants must be developed in accordance with the European Engine Lubricant Quality Management System (EELQMS) - visit www.eelqms.eu.
- Do your products and performance claims meet the ACEA requirements?



The background of the slide is a light gray. On the left side, there is a faint, artistic illustration of a white plastic bottle pouring a golden liquid. The liquid is captured in mid-pour, creating a dynamic splash and several small droplets. The top of the slide features a decorative header with overlapping orange and red circles and a black background on the right side where the logo is located.

MARKETER'S LETTER OF CONFORMANCE

Letter of Conformance (LoC)

- Required for making ACEA performance claims.
- Final step of complying with the requirements of the EELQMS.
- Submission of an LoC to ATIEL implies a commitment to develop and manufacture lubricants in accordance with the EELQMS.
- LoCs renewed every two years.
- Letter of Conformance template available from ATIEL website: www.atiel.org/code-of-practice/letters-of-conformance/letters-of-conformance.

Template for the EELQMS Lubricant marketers' Letter of Conformance

(Letter to be addressed to ATIEL and sent by registered mail) to:

ATIEL
 Boulevard du Souverain 165
 Brussels B 1160
 Belgium

From: [Company name]

[Insert current address]

[Insert nominated e-mail address for correspondence]


Date: [Insert current date]

Subject: Participation in the ATIEL European Engine Lubricants Quality Management System: Letter of Conformance

[Name of the participating company], hereinafter referred to as "The Company", duly represented by the undersigned acting for The Company and entities acting under its brand, hereby formally declares to participate in the European Engine Lubricants Quality Management System (EELQMS).

The commitments referred to in this letter apply to all product brands owned or managed by The Company that make ACEA claims:

[Please list the brands below* #]



EELQMS
EUROPEAN ENGINE LUBRICANTS QUALITY MANAGEMENT SYSTEM

* The list should include just the generic brand name(s) over which the Company has control and/or ownership and not all product names.

Manufacturers who manufacture products for brands that are owned and managed by separate, independent marketers should not include these brands in the list.

ATIEL Code of Practice
© ATIEL 2016

Issue 20 2016

Letter of Conformance signatories

- Currently over 140 lubricant marketers worldwide have signed a Letter of Conformance.
- Signatories declare list of lubricant product brands covered by the LoC, to provide greater transparency and assurance for consumers.
- Membership of ATIEL not required to be an LoC signatory.
- List of current signatories on ATIEL website: www.atiel.org/code-of-practice/letters-of-conformance/letters-of-conformance-marketers-signatories.




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 the education of lubricant marketers.
- Provides a 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 the non-compliance.
- Available on the ATIEL website: www.atiel.org/code-of-practice/compliance-policy



EELQMS recognition among OEM stakeholders

- Requirements of EELQMS are recognised by individual OEMs as well as by ACEA.
- Included in OEM lubricant approval processes.

Mercedes-Benz	Mercedes-Benz Specifications for Operating Fluids Quality Assurance	
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Dear BEAM – User,

News of importance for all engine oil applications:

With our last BEAM update a new part for – Quality Assurance – was implemented.

18. QUALITY ASSURANCE

EELQMS – Letter of Conformance Browse...

Expiry Date

IMDS ID-Number

IMDS Date

ACEA registered ☐

EELQMS - this part is important for all marketers of engine oils with

EELQMS – European Engine Lubricant Quality Management System
ACEA - European Automobile Manufacturers Association

Questions about quality are very important. Therefore, we'll ask the company if they have signed the ATIEL Letter of Conformance:

To register for the Letter of Conformance, see ATIEL > Code of Practice:
<http://www.atiel.org/code-of-practice/about-the-eelqms>
<http://www.cectests.org/eelqms.asp>



VOLVO STD 417-0002 APPROVAL REQUEST	
ATIEL Letter of Conformance and API License	
My company (as it appears in sheet 4) has signed the ATIEL Letter of Conformance	<input type="text"/> Y/N
If you have answered no to the above but your company is part of a Company Group that has signed, please name that company and describe your relationship with it in the box below.	
<input type="text"/>	
My company (as it appears in sheet 4) has an API license for the product named as on sheet 4.	<input type="text"/> Y/N

A close-up, slow-motion photograph of a white plastic oil can pouring a thick, golden-yellow lubricant. The liquid is captured mid-pour, creating a dynamic, flowing shape with some splashing at the bottom. The background is a light, neutral color.

MONITORING LUBRICANT QUALITY IN THE MARKET

ATIEL Quality Surveys

- Started in 2013.
- Conducted by independent body on behalf of ATIEL.
- One of the most effective ways to measure levels of compliance with quality and performance standards.
- Enhances the robustness of quality management initiatives.
- Core part of the ATIEL Quality Management Committee's activities.



Survey methodology

- Samples sourced every month from across Europe, covering a range of common viscosity grades.
- Samples 'blind tested' against most appropriate ACEA European Oil Sequences and key parameters including:
 - Viscosity (high and low temp)
 - Noack volatility
 - Sulphated Ash
 - TBN (Total Base Number)
- Testing and statistical analysis conducted by independent expert laboratory.
- Anonymized data reported to ATIEL Quality Management Committee.
- Individual results shared confidentially only with respective marketer and appropriate follow-up actions taken.



Survey findings

- ATIEL survey activity has identified two main issues:
 - Lubricant quality (mostly relating to TBN lower than spec)
 - Invalid performance claims
- Invalid claims include technically impossible, highly improbable or incorrectly described or misrepresented claims.
- Could be due to lack of technical knowledge or misunderstanding of the ACEA Sequences.
- Some confusion over requirements of different releases of ACEA Sequences (ie 2010/2012/2016) and expiry dates.



Invalid performance claims found in the market

- Technically incompatible combined category claims
- Partial or incomplete claims
- Incorrect labelling or claim representation
- Claims against obsolete issues of ACEA Oil Sequences
- Claims against obsolete categories



Valid combined claims - ACEA 2016

	A3/B3	A3/B4	A5/B5	C1	C2	C3	C4	C5	E4	E6	E7	E9
A3/B3			HTHS, M111FE	SA	SA	SA	SA	SA, HTHS	TBN	SA		SA
A3/B4			HTHS, M111FE	SA	SA	SA	SA	SA, HTHS	TBN	SA		SA
A5/B5	HTHS, M111FE	HTHS, M111FE		SA, TBN	SA, TBN	HTHS, TBN	HTHS, TBN	HTHS	HTHS, M111FE, TBN	HTHS, M111FE	HTHS, M111FE	HTHS, M111FE
C1	SA	SA	SA, TBN		SA	Phos	HTHS, M111FE, NV	HTHS, Phos	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN
C2	SA	SA	SA, TBN	SA		HTHS, M111FE	HTHS, M111FE	HTHS	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN
C3	SA	SA	HTHS, TBN	Phos	HTHS, M111FE		SA, S NV, Phos	HTHS	SA, TBN	SA, TBN, Phos	SA, TBN	SA, TBN
C4	SA	SA	HTHS, TBN	HTHS, M111FE, NV	HTHS, M111FE	SA, S NV, Phos		HTHS	SA, TBN	SA, TBN	SA, TBN	SA, TBN
C5	SA, HTHS	SA, HTHS	HTHS	HTHS, Phos	HTHS	HTHS	HTHS		HTHS	HTHS	HTHS	HTHS
E4	TBN	TBN	HTHS, M111FE, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN	SA, TBN	HTHS		SA, TBN	SA, TBN	SA, TBN
E6	SA	SA	HTHS, M111FE	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN, Phos	SA, TBN	HTHS	SA, TBN		SA, TBN	Phos
E7			HTHS, M111FE	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN	SA, TBN	HTHS	SA, TBN	SA, TBN		SA, TBN
E9	SA	SA	HTHS, M111FE	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN	SA, TBN	HTHS	SA, TBN	Phos	SA, TBN	

Not compatible
Possible combinations
Possible but needs care due to physical and chemical requirements

HTHS = High temperature high shear viscosity
 SA = Sulphated ash
 TBN = Total Base Number
 Phos = Phosphorus

M111FE = M111 fuel economy
 NV = NOACK Volatility
 S = Sulphur

- Chart available on the ATIEL website in the Industry info section:
www.atiel.org/industry-info/acea-oil-sequences/acea-combined-claims

Claim validity periods

- To maintain a current claim a formulation must meet the requirements of a valid ACEA sequence.

Sequence issue	First allowable use	Mandatory for new formulation claims	Oils with this claim may be marketed until
2004	1 st Nov 2004	1 st Nov 2005	31 st Dec 2009
2007	1 st Feb 2007	1 st Feb 2008	23 rd Dec 2010
2008	22 nd Dec 2008	22 nd Dec 2009	22 nd Dec 2012
2010	22 nd Dec 2010	22 nd Dec 2011	22 nd Dec 2014
2012	14 th Dec 2012	14 th Dec 2013	1 st Dec 2018
2016	1 st Dec 2016	1 st Dec 2017	

ATIEL focus going forward

- Clarify and communicate the impact and requirements of new editions of the ACEA Oil Sequences.
- Provide clear guidance and training on technical aspects of lubricant development and valid performance claims.
- Provide technical advice to individual marketers to prevent non-conforming products reaching the market.
- Make quality survey a continuous ongoing activity.
- Communicate and enforce Compliance Policy to address products not meeting specification or performance claim requirements.

A large, faint background image on the left side of the slide shows a white plastic bottle pouring a clear liquid, likely water, into a glass. The liquid is captured in motion, creating a dynamic splash and ripples. The bottle's neck and the initial part of the pour are visible on the left, while the liquid extends towards the center of the frame.

SUMMARY & QUESTIONS

Summary

- Quality is important if you want to meet the requirements of the ACEA European Oil Sequences.
- The Letter of Conformance is the final step in demonstrating adherence to the requirements the European Engine Lubricants Quality Management System (EELQMS).
- Signing an LoC is required in order to make ACEA performance claims.
- ATIEL monitors quality compliance in the market and takes appropriate follow-up action where necessary.
- ATIEL provides information and advice to enable lubricant companies to comply with EELQMS and make valid performance claims.

Any questions?



Thank you!

For more information visit:

www.atiel.org
www.eelqms.eu

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

The background of the slide is a light gray with a large, stylized splash of water on the left side. The water is depicted in shades of yellow and orange, with droplets and ripples visible. The splash originates from a white container on the left edge of the frame.

BACK-UP SLIDES

A background image showing a white plastic jug pouring a thick, golden-yellow oil. The oil is captured in mid-pour, creating a dynamic, flowing shape with some splashing at the bottom. The background is a light, neutral color.

THE EELQMS

(European Engine Lubricants Quality Management System)

About the EELQMS

- 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.
- 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

Voluntary code vs Licensing ?



EUROPE:

- Different organisations representing OEMs, Oil and Additives industries
- ACEA owns Oil Sequences but chooses not to license
- Not legally possible to license/police against the Oil Sequences
- Voluntary code, with signatory system (Letter of Conformance) - required by ACEA to make performance claims



N. AMERICA:

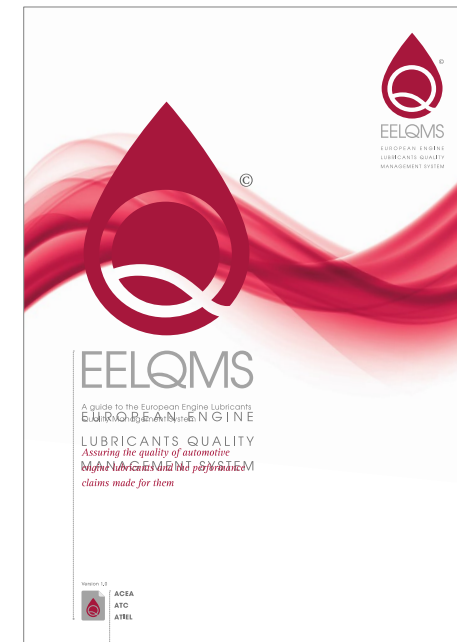
- One organisation (API) representing OEMs, Oil and Additives industries
- API develops and owns lubricant classifications
- Enabled development of licensing system
- Logo and policing system
- Fee-based licensing
- Licensing ('Donut') still voluntary

EELQMS stakeholders and inputs



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 authorised 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 registering it with ATIEL.



Invalid performance claims found in the market

- Technically impossible or highly improbable claims found in the market.
- Most likely due to lack of technical knowledge or poor understanding of the ACEA Sequences.
- Confusion over requirements of different releases of ACEA Sequences (ie 2010/2012/2016).

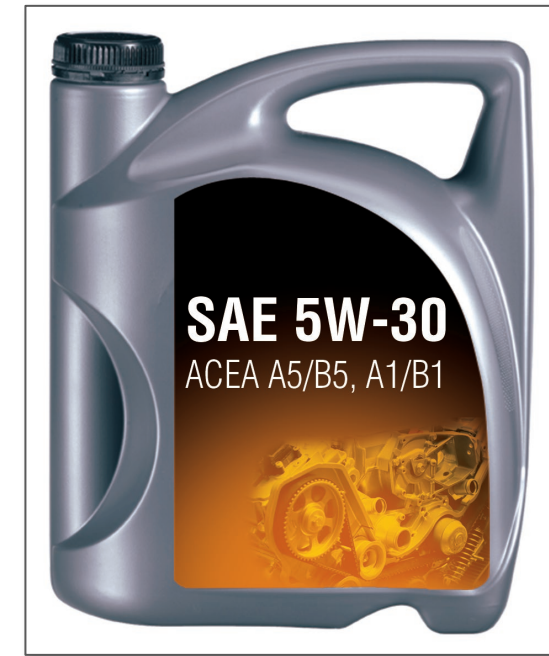
NIVEAUX DE PERFORMANCE	
SAE	5W30
ACEA	A3/B3/B4/C3/C4
API	SM/CF
Renault	RN 0720
PSA	C3
CARACTERISTIQUES	

Performance Levels
 API: SL/CH4
 ACEA: A1/B1/A3-B3/B4/E5
 VW 501.00/505.00
 MB 228.3; 229.5

ACEA	C2/C3, A3/B3/B4
ACEA (Meets Engine Test Requirements)	A5/B5
API (Meets Engine Test Requirements)	SL / SM

Combined category claims

- Combined claims for the same lubricant against two or more Categories within the ACEA Oil Sequences are possible.
- Make products as widely applicable as possible and reduce portfolio complexity
- Reduces formulation/blending costs
- But only possible if ALL the associated chemical limits and physical testing requirements can be met.



Technically valid combined claims

	A3/B3	A3/B4	A5/B5	C1	C2	C3	C4	C5	E4	E6	E7	E9
A3/B3			HTHS, M111FE	SA	SA	SA	SA	SA, HTHS	TBN	SA		SA
A3/B4			HTHS, M111FE	SA	SA	SA	SA	SA, HTHS	TBN	SA		SA
A5/B5	HTHS, M111FE	HTHS, M111FE		SA, TBN	SA, TBN	HTHS, TBN	HTHS, TBN	HTHS	HTHS, M111FE, TBN	HTHS, M111FE	HTHS, M111FE	HTHS, M111FE
C1	SA	SA	SA, TBN		SA	Phos	HTHS, M111FE, NV	HTHS, Phos	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN
C2	SA	SA	SA, TBN	SA		HTHS, M111FE	HTHS, M111FE	HTHS	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN
C3	SA	SA	HTHS, TBN	Phos	HTHS, M111FE		SA, S NV, Phos	HTHS	SA, TBN	SA, TBN, Phos	SA, TBN	SA, TBN
C4	SA	SA	HTHS, TBN	HTHS, M111FE, NV	HTHS, M111FE	SA, S NV, Phos		HTHS	SA, TBN	SA, TBN	SA, TBN	SA, TBN
C5	SA, HTHS	SA, HTHS	HTHS	HTHS, Phos	HTHS	HTHS	HTHS		HTHS	HTHS	HTHS	HTHS
E4	TBN	TBN	HTHS, M111FE, TBN	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN	SA, TBN	HTHS		SA, TBN	SA, TBN	SA, TBN
E6	SA	SA	HTHS, M111FE	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN, Phos	SA, TBN	HTHS	SA, TBN		SA, TBN	Phos
E7			HTHS, M111FE	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN	SA, TBN	HTHS	SA, TBN	SA, TBN		SA, TBN
E9	SA	SA	HTHS, M111FE	HTHS, M111FE, SA, TBN	HTHS, M111FE, SA, TBN	SA, TBN	SA, TBN	HTHS	SA, TBN	Phos	SA, TBN	

- Chart available on the ATIEL website in the Industry info section.

Not compatible
Possible combinations
Possible but needs care due to physical and chemical requirements

HTHS = High temperature high shear viscosity
 SA = Sulphated ash
 TBN = Total Base Number
 Phos = Phosphorus

M111FE = M111 fuel economy
 NV = NOACK Volatility
 S = Sulphur

Incompatible combined claims

- There are instances where making a combined claim is either:
 - Technically impossible due to conflicting demands of two or more Categories (eg right).
 - Highly unlikely due to minimal overlap in physical and chemical properties required for that combination of Categories.
- Guidance chart available on the ATIEL website in the *Industry info* section:



	AW3	AW4	AW5	C1	C2	C3	C4	C5	E4	E5	E7	E9
AW3			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
AW4			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
AW5			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
C1			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
C2			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
C3			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
C4			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
C5			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
E4			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
E5			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
E7			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN
E9			HTHS, M11FE	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN	SA, TBN

Not compatible: HTHS = High temperature high shear viscosity M11FE = M1111 fuel economy
 Possible combinations: SA = Sulfonated ash NV = NOACK viscosity
 TBN = Total Base Number S = Sulfur
 Phos = Phosphorus

Partial or incomplete claims

- ACEA Sequences state that ALL tests must be passed in order to make a performance claim.
- A claim such as 'C2 (without fuel economy)' is not valid against the ACEA C2 Category
- A claim such as 'C2 (without fuel economy)/C3' is not a valid combined claim.



Incorrect labelling

- ACEA performance claims are self-certifying.
- ACEA 'approved', 'certified' or recommended' are not valid ways of making an ACEA claim.
- ACEA also states that the year is not to be included;

The YEAR numbers for ACEA Sequence is intended only for industry use and indicates the year of implementation of that severity level for the particular category. A new year number will indicate, for example, that a new test, parameter or limit has been incorporated in the category to meet new / upgraded performance requirements whilst remaining compatible with existing applications. An update must always satisfy the applications of the previous issue. If this is not the case, then a new category is required.



Obsolete category claims

- Claims for obsolete categories such as ACEA E2 are valid as long as the claim is from the most recent ACEA issue when the category was valid (ie ACEA 2007).
- See *Industry info - ACEA claims representation* section of www.atiel.org for more information.

ACEA Oil Sequences Iss	Technical Claim	Expiry Date	Possible Claims Language	Label/PDS Claim
2007	A5/B5-04	Superseded	Not a valid claim	Not a valid claim
2007	C1-04	Superseded	Not a valid claim	Not a valid claim
2007	C2-04	Superseded	Not a valid claim	Not a valid claim
2007	C3-07	Superseded	Not a valid claim	Not a valid claim
2007	C4-07	Superseded	Not a valid claim	Not a valid claim
2007	E2-96 Issue 5	Does not expire	Quality Level	E2
2007	E4-07	Superseded	Not a valid claim	Not a valid claim
2007	E6-04 Issue 2	Superseded	Not a valid claim	Not a valid claim
2007	E7-04 Issue 2	Superseded	Not a valid claim	Not a valid claim
2004	A1/B1-04	Superseded	Not a valid claim	Not a valid claim
2004	A3/B3-04	Superseded	Not a valid claim	Not a valid claim
2004	A3/B4-04	Superseded	Not a valid claim	Not a valid claim
2004	A5/B5-04	Superseded	Not a valid claim	Not a valid claim
2004	C1-04	Superseded	Not a valid claim	Not a valid claim
2004	C2-04	Superseded	Not a valid claim	Not a valid claim
2004	C3-04	Superseded	Not a valid claim	Not a valid claim
2004	E2-96 Issue 4	Superseded	Not a valid claim	Not a valid claim
2004	E4-99 Issue 3	Superseded	Not a valid claim	Not a valid claim
2004	E6-04	Superseded	Not a valid claim	Not a valid claim
2004	E7-04	Superseded	Not a valid claim	Not a valid claim
2002	A1-02	Superseded by A1/B1	Superseded by A1/B1	Superseded by A1/B1
2002	A2-96 Issue 3	Does not expire	Quality Level	A2
2002	A3-02	Superseded by A3/B3	Superseded by A3/B3	Superseded by A3/B3
2002	A5-02	Superseded by A5/B5	Superseded by A5/B5	Superseded by A5/B5
2002	B1-02	Superseded by A1/B1	Superseded by A1/B1	Superseded by A1/B1
2002	B2-98 Issue 2	Does not expire	Quality Level	B2
2002	B3-98 Issue 2	Superseded by A3/B3	Superseded by A3/B3	Superseded by A3/B3
2002	B4-02	Superseded by A3/B4	Superseded by A3/B4	Superseded by A3/B4
2002	B5-02	Superseded by A5/B5	Superseded by A5/B5	Superseded by A5/B5
2002	E2-96 Issue 4	Superseded	Not a valid claim	Not a valid claim
2002	E3-96 Issue 4	Does not expire	Quality Level	E3