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Are all engine oil marketers entitled to make ACEA claims?

According to ACEA (European Automobile Manufacturers' Association), lubricant marketers or manufacturers making claims against the ACEA Oil Sequences are required by ACEA to submit a Letter of Conformance to ATIEL (European Lubricants Industry Technical Association). This implies a commitment to develop and manufacture engine lubricants in accordance with the guidelines described in the ATIEL Code of Practice. Comma is a signatory of ATIEL's code of practice's letter of conformance. Signatories for both oil marketers and base stock manufacturers can be downloaded from http://www.atiel.eu/

What are the current ACEA specifications?

ACEA specifications for passenger vehicles are split in two categories, those that are designed for conventional engines (such as ACEA A3/B4) and "catalyst friendly" specifications designed to protect engines fitted with exhaust after-treatment units (such as ACEA C3).

Are there different types of ACEA A3/B4? I see some with numbers at the end like A3/B4-04.

The numbers at the end of the ACEA specifications refer to the year the specifications were introduced. This means that A3/B4-04 does not refer to the current A3/B4 specification but to that which was introduced in 2004. ACEA specifications are regularly updated and as new specifications are introduced, older ones are made obsolete. Although it's important for oil blenders to know the technical capability of a formulation, strictly speaking the use of a date suffix like this is prohibited by oil marketers. The claim should be represented on the label as A3/B4 and for this to be valid the product in the bottle must meet the current standard. If it doesn't then no claim should be made at all.

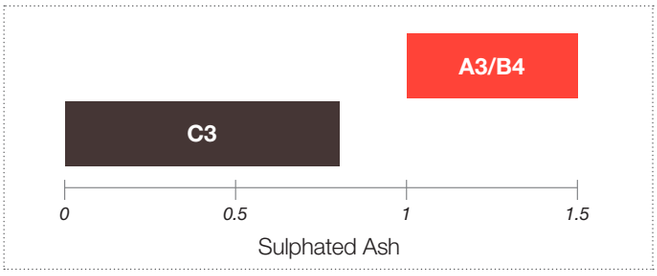
Sequence	Example
2004	A3/B4-04
2007	A3/B4-07
2008	A3/B4-08
2010	A3/B4
2012	A3/B4

Can specifications for conventional oils be claimed together with "catalyst friendly" specifications?

In the current ACEA specifications the answer is NO. The ACEA 2010 Sequences introduced chemical limits that make ACEA "A/B" and ACEA "C" unsuitable to be claimed together. ACEA "C" classification products are Low SAPS (Sulphated Ash, Phosphorous and Sulphur) engine oils specifically designed to protect Exhaust After-treatment Units whilst ACEA "A/B" products are only suitable for conventional engines. Figure 1 below shows this.

Figure 1 - Specifications no longer overlap

ACEA 2010	A3/B4	C3
Sulphated Ash	≥ 1.0 and ≤ 1.6	≤ 0.8



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Tech Talk tips / techniques / training

What are the differences between an obsolete specification (ACEA A3/B4-04) and the current equivalent?

There are technical differences that make the current version of ACEA A3/B4 higher performance than A3/B4-04. The best way to demonstrate this is to look at the following graphs:

Fig. 1 ACEA A3/B4

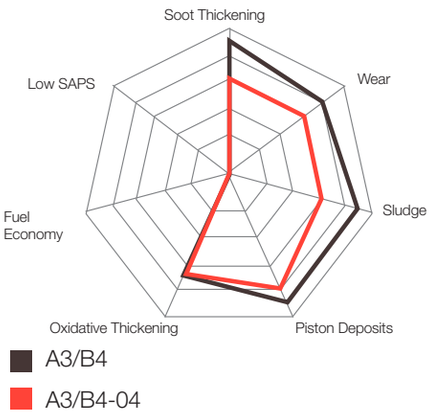


Fig. 2 ACEA C3

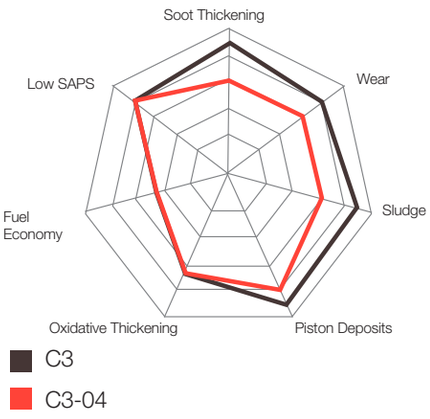
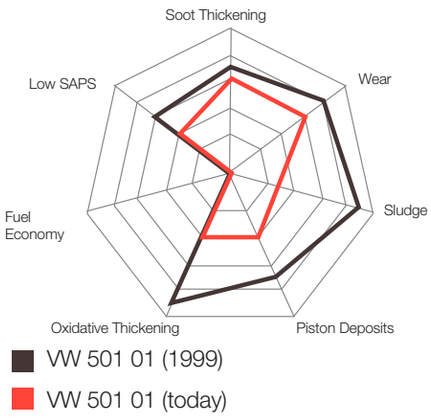


Fig. 3 VW 501 01

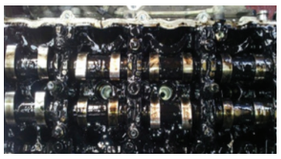


As you can see the current ACEA A3/B4 specification is a higher performance than the equivalent specification in 2004 particularly in soot handling, wear protection, sludge control and piston deposits. The same is also true for ACEA C3. In simple terms, an oil that meets the current ACEA specifications will outperform an oil that meets the equivalent but older versions. OEMs sometimes also update their specifications. For example, the bottom graph shows the major upgrade in requirements of the VW 501 01 specification over time.

Is there a risk of damage if I'm not using the current specifications?

If the vehicle requires the current ACEA specification then, yes! We make a recommendation based on ACEA A3/B4 for around 7 million vehicles on the roads today. A product described as ACEA A3/B4-04 may not be suitable for as many as 1 million of those vehicles (about 15%). As legislation has evolved engine design has adapted to accommodate the demands for cleaner and more efficient engines. Smaller, higher revving engines, smaller sump capacities and the increased use of turbochargers and exhaust after-treatment systems are placing more demands on the engine's oil. Failing to use the right product in your engine can have some very costly consequences so it's important you are fitting the product the manufacturer intended. Your engine and your warranty could be at risk if you don't.

Oil Contamination



Oil Starvation

Oil contamination and starvation can cause blocked channels and filters within the engine potentially causing serious damage. Also, according to BTN turbo, oil starvation and contamination causes 95% of turbocharger failure.

How to get it right?

To be absolutely sure that you are using a product that meets the latest manufacturer's specifications and avoid the dangers of using products based on obsolete ACEA claims, always use Comma's website or Workshop Application Guide.

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