

VLS Newsletter December 2016

ACEA 2016 sequences released

On Thursday 1st December 2016, ACEA released their European Oil Sequences for Service-fill Oils for Gasoline engines, for Light Duty Diesel engines, for Gasoline & Diesel engines with after treatment devices and for Heavy Duty Diesel engines, or ACEA 2016 oil sequences for short.

Originally planned for release earlier in the year, the lubricant sector rumour mill had been going into overdrive about the issues ACEA were facing in procuring new engine tests to replace older and now obsolete engine models against which to test their requirements.

As far back as April 2016 at the UNITI conference in Stuttgart, speakers had dropped hints about what could be expected in the new sequences. The increasing use of bio-fuel in engines was one area ACEA was widely expected to consider in drawing up their new engine oil sequences.

Traditionally ACEA's engine oil sequences are valid for a four year period. The ACEA 2016 sequences become effective from 1st December 2016, the date of their publication. Marketers are permitted to make claims against the previous 2012 ACEA sequences, which as ever are self-certificated, for a further two years up until December 1st 2018. The new ACEA 2016 sequences themselves become mandatory for all new claims from 1st December 2017.

One new change in the 2016 sequences is ACEA's 'recommends' that lubricant marketers register their products directly with the European Automobile Manufacturers' Association. Previously lubricant marketers were required to register with ATIEL, the European Technical Association, through the Letter of Conformance committing them to abide by EELQMS, or the European Engine Lubricants Quality management System, itself supported by ACEA.

On their website ACEA claim that once registered, no further changes to lubricant marketer's registrations are possible. However registrations can be declared obsolete by the author. The question of where this leaves lubricant marketers that reformulate their products in response to changing OEM requirements mid-sequence but retain the lubricant brand and product name, is left unanswered.

So what can we expect in these new sequences?

The revised 'A/B' category has specifically been labelled 'High Saps', and the 'C' category labelled 'Low Saps'. Previously ACEA differentiated 'A/B' and 'C' categories by reference to the use of fuel after treatment devices but have now sought to go even further by clarifying the key difference between these two categories in relation to Sulphated Ash, Phosphorous and Sulphur or SAPS as they are collectively called.

At VLS we have often found there to be confusion in the marketplace about the main difference between the 'A/B' and 'C' categories in relation to exhaust after-treatment devices. The further clarification around use of the specific headline term 'SAPS' is to be welcomed.

As widely expected the 'A1/B1' category has been dropped. In most cases this can be directly replaced by the more highly specified 'A5/B5' category. The one exception is that A1/B1 covered xW-20 oils with a HTHS value down to 2.6 mPa.s and this exceptionally low level of HTHS is not permitted by any of the A/B categories in ACEA 2016. However any engine able to use a very light oil such as this is almost bound to incorporate exhaust after-treatment devices these can be covered by a new C5 category, and so I believe this is the right move for ACEA.

Looking at the 'C' categories ACEA's warning that the use of some of these category oils may be unsuitable for use in certain Engine Types has been supplemented by a note that 'C' category oils will increase the life of the DPF/GPF (Diesel or Gasoline Particulate Filter), and the TWC (Three Way Catalyst) as well as maintaining the Vehicle's Fuel Economy. What ACEA do not say is the adverse effect using High SAPS oils could have on vehicles after treatment devices over the longer-term which VLS believe could shorten their life and risk leading to an increase in harmful emissions such as NO_x, potentially breaching Euro emission regulations.

A new category 'C5' has been introduced according to ACEA for stable, stay-in-grade Engine Oil with Mid SAPS-Level, for further improved Fuel Economy, intended for use as catalyst compatible Oil at extended Drain Intervals in Vehicles with all Types of modern After treatment Systems that are designed to be capable and OEM-approved for use of Low Viscosity Oils with a minimum HTHS Viscosity of 2.6 mPa.s. In other words I suspect this is the category that was needed to cater for the increasing trend for high temperature lower viscosity oils such as those favoured by Honda or Toyota with a rating of 0w16 or less.

Across both 'A/B' and 'C' categories, ACEA have introduced a new requirement to report on HTHS viscosity at 100 degrees centigrade although no specific measures are given, and as expected a new requirement around oil oxidation with the use of Biodiesel for Engine Oils operating in the presence of Biodiesel Fuel. For the category 'C2' a minimum value has been introduced for Phosphorous for the first time matching that of its sister category 'C3'.

In terms of engine tests a new Gasoline Direct Injection cleanliness test has been introduced citing the jointly-developed BMW/Peugeot 'Prince engine' (EP6CDT) replacing the previous Peugeot TU engine test TU5JP-L4. The valve train/scuffing wear Peugeot/Citroen engine test TU3M has been omitted and the Daimler M271 engine test introduced for black sludge. For the DI Diesel Oil Dispersion at Medium Temperature engine test as previously reported, ACEA have replaced the Ford/PSA DV4TD engine test with the newer DV6C, which is Euro 5 compliant. The Daimler OM646LA Bio engine test has become the test method of choice for the effects of Bio diesel.

The new expected 'HD' specifications have not made the final cut in the 2016 ACEA sequences to accompany the existing Heavy Duty Diesel Oil 'E' category. This might be due to ongoing discussion in the test community about the right test methods and engines needed to accompany any new category in this area. The oil oxidation with bio diesel measure has, however, been brought into the revised 'E' category of sequence for the first time, mirroring that of the 'A/B' and 'C' categories.

On engine tests for this category, the Mack T-8E engine has replaced the Mack T11 engine in category 'E9' for soot in oil. The Biofuel Impacted Piston Cleanliness and Engine Sludge test has again stipulated the Daimler OM646LA Bio engine of previous categories.

In the absence of a new HD category the changes to 'E' are not as marked as in the previous 'A/B' and 'C' categories.

Overall the ACEA 2016 sequences come across as a sensible and measured update of the 2012 sequences with references to more modern engine tests and recognising the wider use of bio diesel and lower viscosity lubricants, rather than a wholesale re-casting of lubricant requirements.

The last time the market switched to a new sequence with the phasing out of ACEA 2010 to ACEA 2012 in December 2014, some lubricant marketers were left exposed as stock which had not cleared quickly enough from distributor shelves still made claims against the previous and obsolete sequence as ATIEL reported recently in their bi-annual engine oil quality survey programme.

Hopefully this time when ACEA 2012 becomes obsolete in December 2018, the sector will be more prepared for a smoother changeover.

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