acea

September 2023

ACEA Oil Sequences

General requirements

SERVICE-FILL ENGINE OILS FOR GASOLINE LIGHT-DUTY DIESEL ENGINES AND HEAVY-DUTY DIESEL ENGINES

Date		Updated documents
30 April 2021	Revision 0	New General Requirements document for light-duty and heavy-duty ACEA Oil Sequences. This includes the links to the 2021 ACEA Oil Sequence for Light-Duty Engines and the 2016 ACEA Oil Sequence for Heavy-Duty Engines (revision 3)
1 May 2022	Revision 1	Update to 2021 ACEA Oil Sequences for Light-Duty Engines: TBN measurements are not required for C2-21 category, being consistent with C2-16
1 May 2022	Revision 0	Initial release of 2022 ACEA Oil Sequences for Heavy-Duty Engines
12 September 2023	Revision 0	Initial release of 2023 ACEA Oil Sequences for Light-Duty Engines
17 October 2023	Revision 1	2022 ACEA Oil Sequences for Heavy-Duty Engines (revision 1) Changed Footnote 2.32, 2.33, 2.5; deleted consumer language and added table; revised limits for Mack T-12

This document details the general requirements of the ACEA Oil Sequences for:

- service-fill oils for gasoline engines;
- light-duty diesel engines;
- gasoline and light-duty diesel engines with aftertreatment devices; and
- heavy-duty diesel engines.

It should be read in conjunction with:

- The latest version of the ACEA Oil Sequences for Light-Duty Engines (service-fill oils for gasoline engines, light-duty diesel engines, and gasoline and light-duty diesel engines with aftertreatment devices); and
- The latest version of the ACEA Oil Sequences for Heavy-Duty Engines (service-fill oils for heavy-duty diesel engines).

These two documents detail the periods during which valid claims can be made for oils meeting those specifications, as well as the full specifications of the respective ACEA Oil Sequences.

The ACEA Oil Sequences currently comprise oil classes for gasoline, light-duty diesel engines and heavy-duty diesel engines. Within each class, there are categories which reflect different performance requirements. Typical applications for each sequence are described in the specific ACEA Oil Sequence for guidance only. Specific applications of each sequence are the responsibility of individual engine manufacturers for their own vehicles / engines.

The ACEA Oil Sequences define the minimum quality level of an oil product for self-certification to the European Engine Lubricants Quality Management System (EELQMS) and for presentation to ACEA members. Individual ACEA member companies may require performance parameters other than those covered by the tests shown, or more stringent limits.

CONDITIONS FOR USE OF PERFORMANCE CLAIMS AGAINST ACEA OIL SEQUENCES

ACEA requires that any claims by oil companies or oil distributors for oil performance to meet these ACEA Oil Sequences must be based on credible data and controlled tests in accredited test laboratories.

ACEA requires that engine performance testing used to support a claim of compliance with these ACEA Oil Sequences should be generated according to EELQMS but reserves the right to define alternatives in exceptional cases.

EELQMS addresses product development testing and product performance documentation, involves the registration of all candidate and reference oil testing, and defines the compliance process. Compliance with the Code of Practice of the Technical Association of the European Lubricants Industry (ATIEL), which forms part of the EELQMS, is mandatory for any claim to meet the requirements of this issue of the ACEA sequences. Therefore, ACEA requires that

claims against the ACEA Oil Sequences can only be made by oil companies who have signed the EELQMS oil marketers' letter of conformance.

The ACEA Oil Sequences are subject to continuous development. Replacement tests and other changes required by European vehicle manufacturers are integrated and new issues are published on a regular basis. As new editions are published, older editions have to be withdrawn. The validity of old and new editions of the ACEA Oil Sequences are shown in the respective ACEA Oil Sequences.

CERTIFICATION AND REGISTRATION

Claims against the ACEA Oil Sequences can be made on a self-certification basis. For any claim being made, ACEA recommends that oil suppliers register their products with the ACEA registration system on the ACEA website after their launch into the market. Registration does not replace the required EELQMS oil marketers' letter of conformance registration in SAIL (Services to Associations and Industry in the Lubricants sector).

All information needed for registering in ACEA's registration system is available on ACEA's website. After the form is completed, it will be saved on the ACEA server. If claims are no longer needed, oil companies are asked to delete their registration. If registered claims continue to be used after three years, re-registration is recommended.

NOMENCLATURE AND ACEA PROCESS

Each set of ACEA Oil Sequences is designated for consumer use by a two-part code comprising a letter to define the class (eg C), and a number to define the category (eg C2).

In addition, for industry use, each sequence has a two-digit number to identify the year of implementation of that severity level (eg A3/B4-21).

Classes may be added in future if, for example, natural gas engines, H2 combustion engines or engines which operate with alternative fuels (e-fuels), prove to require oil characteristics which cannot readily be incorporated into existing classes.

The category indicates oils for different purposes or applications within that general class, related to some aspect or aspects of the performance level of the oil. Typical applications for each category are described in the light-duty and heavy-duty sequence documents for guidance only. Specific applications of each category are the responsibility of the individual motor manufacturer for their own vehicles and engines. Oils within a category may also meet the requirements of another category, but some engines may only be suited to oils of one category within a class.

The year numbers for each ACEA Oil Sequences document are intended only for industry use and indicate 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.

An administrative issue number is added for industry use where it is necessary to update the technical requirements of a sequence without the intention to increase severity (eg when a CEC test engine is updated to the latest version whilst maintaining equivalent severity, or where a severity shift in the test requires modification of the specified limits).

Where claims are made that oil performance meets the requirements of the ACEA Oil Sequences (eg product literature, packaging, labels), they must specify the ACEA class and category (see nomenclature and ACEA process for definitions).

ABOUT THE EU AUTOMOBILE INDUSTRY

- 13.0 million Europeans work in the auto industry (directly and indirectly), accounting for 7% of all EU jobs
- 11.5% of EU manufacturing jobs – some 3.4 million – are in the automotive sector
- Motor vehicles are responsible for €374.6 billion of tax revenue for governments across key European markets
- The automobile industry generates a trade surplus of €101.9 billion for the European Union
- The turnover generated by the auto industry represents over 7% of the EU's GDP
- Investing €59.1 billion in R&D per year, automotive is Europe's largest private contributor to innovation, accounting for 31% of the EU total

ACEA REPRESENTS EUROPE'S 14 MAJOR CAR, VAN, TRUCK AND BUS MANUFACTURERS

ACEA
European Automobile
Manufacturers' Association
+32 2 732 55 50
info@acea.auto
VAT: BE 444 072
www.acea.auto

twitter.com/ACEA_auto

linkedin.com/company/acea

youtube.com/c/ACEAauto