



CK-4 and FA-4 to Replace CJ-4

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In case you haven't noticed, the majority of diesel engine manufacturers are starting to use SAE 10W-30 oil as a factory fill. In addition to 10W-30 grade, we will begin to see even lighter viscosity oils, such as 5W-40, and 5W-30. While these lighter viscosity oils will not currently be used as a factory fill, they will be covered where allowed by OEM factory warranty. These lighter viscosity oils are going to be necessary to meet the new API classification of CK-4 which will be replacing CJ-4 sometime, we believe in 2017.

In addition to the usual demands to decrease greenhouse gases and particulate matter, a large focus for the new CK-4 API classification has been put on fuel economy. The new focus has manufacturers developing oils with improved "HTHS", High Temperature High Sheer, or in simpler terms, the ability of the oil to withstand viscosity decrease caused by elevated temperatures during normal operation. In order to improve fuel economy and lessen the effects of drag, more and more OEM's will be recommending or requiring, lighter grade oils.

The use of anything lighter than a traditional 15W-40 is raising dependability concerns among diesel truck fleet and heavy equipment owners. These lighter grade oils, primarily SAE 10W-30, 5W-40 and even 5W-30 are being put through stringent testing as they have been in the past, with the addition of a couple of new tests. Mack T-13 oxidation test, which determines the oil's ability to withstand oxidation at higher temperatures, and Caterpillar C-13 Aeration test, that reports the oil's ability to prevent foaming, have been added to insure durability and reliability of these products while meeting the new HTHC requirements. Robustness of the newer formulation is proving not to be as big a challenge as one might believe. With the adjusted treat rates, OEM's are seeing similar wear results of that of the CJ-4 15W-40 oils.

CK-4 API classification, which is going to be primarily higher viscosity 15W-40 and 10W-30 oils, in either mineral or synthetic blends, will be backwards compatible like previous API classifications. 2017 will also introduce a second API Classification, FA-4. FA-4 will be the lower viscosity oils like 5W-40, 5W-30 and some 10W-30's. To meet the new demands for improved fuel economy and lighter viscosity grades, the FA-4 classification engine oils will be primarily full synthetic. However, FA-4 will not be backwards compatible.

Owner and operators will have the option to use FA-4 engine oils, but they are not going to be required. However, all FA-4 engine oils will be approved by the OEM's in order to take advantage of better fuel economy.

D-A, along with additive vendors, are developing engine oils that will meet or exceed the CK-4 and FA-4 demands. Private testing of these products is slated to be done well in advance of the March 2017 licensing submission date.

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