

API Introduces Two New Diesel Engine Oil Standards, API Service Categories CK-4 And FA-4.

API's development of engine oil standards is nothing new. We've been publishing them since the 1940's. Normally, engine oil standards are developed to protect new and current engine technologies, meet government regulations, and ensure tests are in place to measure engine oil performance. All of these factors figured into the development of API CK-4 and FA-4. What's different about the development is API's introduction of two diesel engine oil standards at the same time. We haven't done that since API CF and CF-2 in 1994.

Key Points:

- API CK-4 and FA-4 will first appear in the API Service Symbol "Donut" on December 1, 2016. This delay in licensing allows marketers time to test their new formulations and ready them for market.
- Most truck manufacturers recommending API-licensed CJ-4 engine oils will likely recommend truck owners start using licensed API CK-4 oils as soon as they are available. API CK-4 oils will better protect today's diesel engines.
- API FA-4 oils, however, are different. These oils have been designed to protect diesel engines that are expected to be on the road sometime in 2016 or 2017. Some engine manufacturers might recommend API FA-4 oils for their previous model-year vehicles, but it is likely manufacturers recommending API CJ-4 oils today will just recommend API CK-4 for these vehicles when the new categories are introduced.

Official Descriptions For API CK-4 And FA-4, Both Are Summarized Below:

API CK-4 describes oils for use in high-speed four-stroke cycle diesel engines designed to meet 2017 model year on-highway and Tier 4 non-road exhaust emission standards as well as for previous model year diesel engines. These oils are formulated for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm. However, the use of these oils with greater than 15 ppm sulfur fuel may impact exhaust aftertreatment system durability and/or oil drain interval.

- API CK-4 oils are especially effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment systems are used. API CK-4 oils are designed to provide enhanced protection against oil oxidation, viscosity loss due to shear, and oil aeration as well as protection against catalyst poisoning, particulate filter blocking, engine wear, piston deposits, degradation of low- and high-temperature properties, and soot-related viscosity increase.
- API CK-4 oils exceed the performance criteria of API CJ-4, CI-4 with CI-4 PLUS, CI-4, and CH-4 and can effectively lubricate engines calling for those API Service Categories. When using CK-4 oil with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval recommendations.

API FA-4 describes certain XW-30 oils specifically formulated for use in select high-speed four-stroke cycle diesel engines designed to meet 2017 model year on-highway greenhouse gas (GHG) emission standards. These oils are formulated for use in on-highway applications with diesel fuel sulfur content up to 15 ppm. Refer to individual engine manufacturer recommendations regarding compatibility with API FA-4 oils.

- API FA-4 oils are blended to a high temperature high shear (HTHS) viscosity range of 2.9cP-3.2cP to assist in reducing GHG emissions. These oils are especially effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment systems are used. API FA-4 oils are designed to provide enhanced protection against oil oxidation, viscosity loss due to shear, and oil aeration as well as protection against catalyst poisoning, particulate filter blocking, engine wear, piston deposits, degradation of low- and high-temperature properties, and soot' related viscosity increase.
- API FA-4 oils are neither interchangeable nor backward compatible with API CK-4, CJ-4, CI-4 with CI-4 PLUS, CI-4, and CH-4 oils. Refer to engine manufacturer recommendations to determine if API FA-4 oils are suitable for use. API FA-4 oils are not recommended for use with fuels having greater than 15 ppm sulfur. For fuels with sulfur contents greater than 15 ppm, refer to engine manufacturer recommendations.