TECHNICAL BULLETIN

API CK-4 and FA-4 Oils

Issue: July 2017

Background

Starting from December 1st 2016, the API (American Petroleum Institute) launched two new diesel specifications with the aim of providing enhanced engine protection, lower fuel economy and to help meet new US environmental regulations starting in 2017. Both specifications are designed to provide enhanced engine protection for heavy duty engines.

API CK-4

API CK-4 effectively replaces API CJ-4 and is backward compatible with most applications where currently an API CJ-4, CI-4/Plus or CH-4 oil is recommended.

CK-4 has improved -

- Shear stability
- Oxidation resistance
- Aeration control

API CK-4 oils are designed for use in high-speed four-stroke diesel engines that are designed to meet 2017 model year, on-highway and Tier 4 non-road exhaust emission standards (reduction of particle matter and NOx) as well as being compliant for previous model year diesel engines.

These oils are effective at sustaining emission control system durability where particulate filters and other advanced after treatment 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/PLUS, CH-4 and can effectively lubricate engines calling for those API Service Categories.

Note: When using CK-4 oil with higher than 15 ppm sulphur fuel, consult the engine manufacturer for service interval recommendations.

These oils are formulated for use in all applications with diesel fuels ranging in sulphur content up to 500 ppm (0.05% by weight). However, the use of these oils with greater than 15 ppm (0.0015% by weight) sulphur fuel may impact exhaust after-treatment system durability and/or oil drain interval.

API FA-4

API FA-4 oils are XW-30 oils specifically formulated for use in select high-speed four-stroke diesel engines designed to meet 2017 model year on-highway greenhouse gas (GHG) emission standards.

API FA-4 oils provide similar improvements to CK-4 oils but they are **NOT** backward compatible with earlier engines. These oils are designed for use in on-highway engines manufactured from 2017 onwards. This specification requires a **XW-30 viscosity grade** oil with a low HTHS viscosity (between 2.9 cP and 3.2 cP).

API FA-4 oils are **NOT** interchangeable or backward compatible with API CK-4, CJ-4, CI-4, CI-4PLUS and CH-4 oils. Users need to refer to engine manufacturer recommendations to determine if API FA-4 oils are suitable for use with their engine.

API FA-4 oils are not recommended for use with fuels having greater than 15 ppm sulphur. For fuels with sulphur content greater than 15 ppm, refer to engine manufacturer recommendations. These

oils are formulated for use in on-highway applications with diesel fuel sulphur content up to 15 ppm (0.0015% by weight).

These oils are blended to a high temperature high shear (HTHS) viscosity range of 2.9cP–3.2cP to assist in reducing GHG (Green House Gas) emissions. They are effective at sustaining emission control system durability where particulate filters and other advanced after-treatment 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.

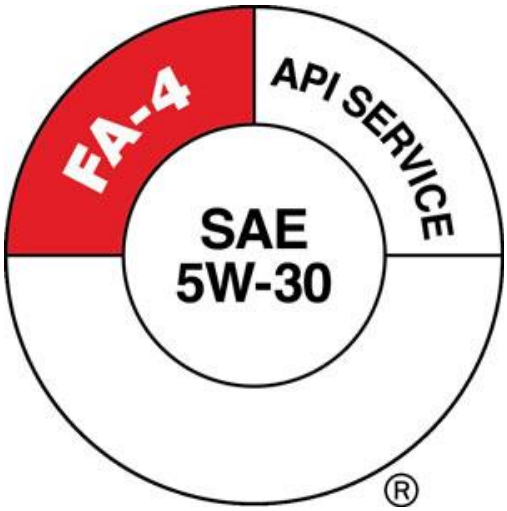
SUMMARY

API CK-4 OILS

- Next generation after CJ-4 oils
- Better Shear stability
- Better Oxidation resistance
- Better Aeration control
- Can replace CJ-4, CI-4 Plus, CI-4 and CH-4 oils
- Designed to run on diesel fuel with lower the 15 PPM sulphur

API FA-4 Oils

- XW-30 viscosity engine oils
- Not backward compatible with previous API Service Category oils
- Designed for vehicles manufactured from 2017 onwards
- Low HT/HS range between 2.9cP–3.2cP
- Not recommended for use with diesel fuels with over 15 PPM Sulphur



Click Here to visit the Penrite Recommendation Guide, which will ensure you receive the correct oil for your vehicle

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