

New Product Upgrade: BIZOL Truck New Generation SAE 15W-40 API CK-4

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The new API Service Category CK-4 is a direct successor of the CJ-4 category that was in use for almost a decade. CK-4 engine oils have started to come to the market for nearly three years ago. Since that, many customers have successfully field tested and adopted the new oils. Although there are no differences between CK-4 and CJ-4 in chemical limits (%Ash, %Phosphorus, %Sulfur, Volatility), performance-wise, CK-4 supersedes CJ-4 and previous service categories, bringing improvements in terms of oxidation stability, shear stability, and aeration. This category includes SAE xW-30 and xW-40 viscosity grades with HTHS no less than 3.5 cP.

CK-4 engine oils are primarily intended for the use in high-speed four-stroke diesel engines designed to meet 2017 model year on-highway and Tier 4 nonroad exhaust emission standards as well as for previous model year diesel engines. Even though CK-4 oils are approved for the use with "dirty" diesel fuels containing as much as 500 ppm sulfur, the use of these oils with greater than 15 ppm sulfur may impact exhaust aftertreatment system durability and oil service intervals. In regions with very poor fuel quality, the use of an aftermarket TBN booster may be advised to prevent engine corrosion.

Along with CK-4, a lower viscosity API category FA-4 with HTHS 2.9 to 3.2 cP has been introduced that brings additional improvements in fuel economy and reduction in greenhouse gas emissions. Unfortunately, the FA-4 category is not backward compatible and is only suitable for newer engines designed to use lower viscosity oil. Any engine designed to work with FA-4 category will also work seamlessly with CK-4, but not vice versa. API FA-4 oils are also not recommended for the use with fuels having more than 15 ppm sulfur. Since the fuel economy improvements from switching to FA-4 category are rather marginal, hardly ever exceeding 1%, while the risk of misapplication is real, the adoption of FA-4 oils has been very slow so far.

While constantly analyzing field experience and customer preferences, we proudly launch the upgrade of BIZOL Truck New Generation API CK-4. No FA-4 upgrade is planned at this point.

Why do I need to upgrade if CJ-4 works just fine?

Heavy duty engine manufactures are constantly being pushed to develop engines that are more durable, more fuel efficient, and produce less CO₂, NO_x and PM emissions. New legislative mandates along with new engine designs set new requirements for oil. The API CK-4 Service Category embraces a number of individual OEM specifications, for instance

OEM	CK-4 compatible specifications
Cummins	CES 20086
Detroit Diesel	DFS 93K222
Volvo	VDS-4.5
Mack	EOS-4.5
Renault	RLD-4
Ford	WSS-M2C171-F1

In many aspects the API CK-4 category is similar to the ACEA E9 category, and many HDEO products on the market meet the requirements of both. However these two categories are not identical. The forthcoming ACEA 2020 Heavy-Duty Oil Sequences will provide an upgrade of ACEA E9 – preliminarily named ACEA E11 – with the introduction of new engine tests specifically developed for API CK-4.

What benefits does BIZOL Truck New Generation CK-4 offer?

BIZOL Truck New Generation API CK-4 SAE 15W-40 oil is fully backward compatible, meaning it meets all requirements of the earlier API service categories while adding new API CK-4 performance benefits. BIZOL Truck New Generation can be used whenever the owner's manual calls for one of the following: API CJ-4, CI-4, CI-4 PLUS and CH-4, or ACEA E9, E7 and E4. For older engines, the most important

consideration is viscosity grade. Many OEMs require the use of SAE 15W-40 oils in older engines, particularly those built before 2007-2010. Therefore, owners of older engines can still use the recommended viscosity grades, while gaining in engine cleanliness, oil service intervals and wear protection. Owners of newer engines won't be disappointed either: BIZOL Truck New Generation CK-4 features superior oxidation stability and stands up better to higher heat that is common with newer engines. Beside that, BIZOL Truck New Generation provides better DPF protection than its highly successful predecessor.