

WHICH OIL IS RIGHT FOR YOU?



API.org/EOLCS • MotorOilMatters.org • DieselOilMatters.com

API's Certification Mark and Service Symbol

identify quality motor oils for gasoline- and diesel-powered vehicles. Oils displaying these marks meet performance requirements set by U.S. and international vehicle and engine manufacturers and the lubricant industry. Hundreds of companies worldwide participate in this voluntary program, which is backed by a marketplace sampling and testing program.

GET MORE FROM YOUR MOTOR OIL.

Follow your vehicle manufacturer's oil change recommendations. This includes using recommended SAE oil viscosity and ILSAC or API performance standard.

If you find it necessary to mix brands of oil, use same viscosity grade and API service category to maintain performance.

Properly dispose of used oil. Learn more about recycling used oil at RecycleOil.org. To find used oil collection center locations, go to Earth911.com.

Ask for API-licensed oil whenever you have your oil changed.

Look for API Certification Marks every time you buy motor oil.

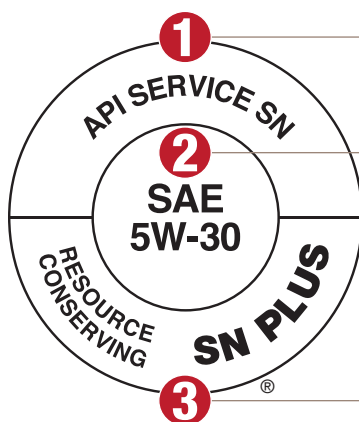
For more information visit MotorOilMatters.org.

Learn about chemical additives in motor oil at AmericanChemistry.com.



The API Certification Mark, also known as the "Starburst"

An oil displaying this mark meets the current engine protection standard and fuel economy requirements of the International Lubricant Specification Advisory Committee (ILSAC), a joint effort of U.S. and Japanese automobile manufacturers. Automobile manufacturers recommend oils that carry the API Certification Mark. See the **ILSAC STANDARD FOR PASSENGER CAR ENGINE OILS** chart on the next page for descriptions of current and obsolete ILSAC standards.

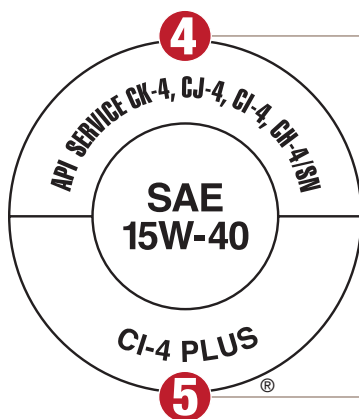


The API Service Symbol, also known as the "Donut"

1. Performance Level Motor oils designed for cars, vans, and light trucks with gasoline engines fall under API's "S" (Service) categories. Motor oils designed for heavy-duty trucks and vehicles with diesel engines fall under API's "C" (Commercial) categories. Please see the **Gasoline Engines** and **Diesel Engines** charts on the next pages for descriptions of current and obsolete API service categories.

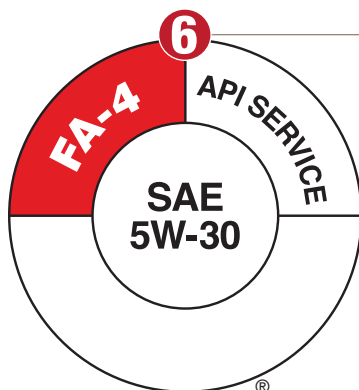
2. Viscosity Grade The measure of an oil's ability to flow at certain temperatures. Vehicle requirements may vary. Follow your vehicle manufacturer's recommendations on SAE oil viscosity.

3. Resource Conserving "Resource Conserving" applies to oils intended for gasoline-engine cars, vans, and light trucks. Widespread use of "Resource Conserving" oils may result in an overall savings of fuel in the vehicle fleet as a whole.



4. Multiple Performance Levels Oils designed for diesel engine service might also meet gasoline engine service. For these oils the designation is "C" category first followed by the "S" category. "C" category oils have been formulated primarily for diesel engines and may not provide all of the performance requirements consistent with vehicle manufacturers' recommendations for gasoline-fueled engines.

5. PLUS Classifications API currently licenses two PLUS classifications for use in the lower portion of the API Donut: CI-4 PLUS and SN PLUS. CI-4 PLUS identifies oils formulated to provide a higher level of protection against soot-related viscosity increase and viscosity loss due to shear in diesel engines. When originally introduced, CI-4 PLUS identified CI-4 oils meeting a higher level of performance. CK-4 and CJ-4 oils include all CI-4 PLUS performance requirements. SN PLUS identifies oils that meet API SN and are also formulated to provide additional protection against low-speed pre-ignition for turbocharged direct injection gasoline-powered vehicles.



6. The API Service Symbol with FA-4 FA-4 and the FA-4 Donut identify 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. API FA-4 oils are not interchangeable or 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.

The current and previous ILSAC standards and API Service Categories are listed here. Vehicle owners should refer to their owner's manuals before consulting these charts. Oils may have more than one performance level.

For automotive gasoline engines, the latest ILSAC standard or API Service Category includes the performance properties of each earlier category and can be used to service older engines where earlier category oils were recommended.

ILSAC STANDARD FOR PASSENGER CAR ENGINE OILS

Name	Status	Service
GF-5	Current	Introduced in October 2010, designed to provide improved high temperature deposit protection for pistons and turbochargers, more stringent sludge control, improved fuel economy, enhanced emission control system compatibility, seal compatibility, and protection of engines operating on ethanol-containing fuels up to E85.
GF-4	Obsolete	Use GF-5 where GF-4 is recommended.
GF-3	Obsolete	Use GF-5 where GF-3 is recommended.
GF-2	Obsolete	Use GF-5 where GF-2 is recommended.
GF-1	Obsolete	Use GF-5 where GF-1 is recommended.

GASOLINE ENGINES (Follow your vehicle manufacturer's recommendations on oil performance levels)

Category	Status	Service
SN	Current	Introduced in October 2010, designed to provide improved high temperature deposit protection for pistons, more stringent sludge control, and seal compatibility. API SN with Resource Conserving matches ILSAC GF-5 by combining API SN performance with improved fuel economy, turbocharger protection, emission control system compatibility, and protection of engines operating on ethanol-containing fuels up to E85.
SM	Current	For 2010 and older automotive engines.
SL	Current	For 2004 and older automotive engines.
SJ	Current	For 2001 and older automotive engines.
SH	Obsolete	CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1996. May not provide adequate protection against build-up of engine sludge, oxidation, or wear.
SG	Obsolete	CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1993. May not provide adequate protection against build-up of engine sludge, oxidation, or wear.
SF	Obsolete	CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1988. May not provide adequate protection against build-up of engine sludge.
SE	Obsolete	CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1979.
SD	Obsolete	CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1971. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SC	Obsolete	CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1967. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SB	Obsolete	CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1951. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SA	Obsolete	CAUTION: Contains no additives. Not suitable for use in most gasoline-powered automotive engines built after 1930. Use in modern engines may cause unsatisfactory performance or equipment harm.



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DIESEL ENGINES (Follow your vehicle manufacturer's recommendations on oil performance levels)

Category	Status	Service
CK-4	Current	API Service Category 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 (0.05% by weight). However, the use of these oils with greater than 15 ppm (0.0015% by weight) sulfur fuel may impact exhaust aftertreatment system durability and/or oil drain interval. These 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.
CJ-4	Current	For high-speed four-stroke cycle diesel engines designed to meet 2010 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 (0.05% by weight). However, the use of these oils with greater than 15 ppm (0.0015% by weight) sulfur fuel may impact exhaust aftertreatment system durability and/or drain interval. API CJ-4 oils exceed the performance criteria of API CI-4 with CI-4 PLUS, CI-4, CH-4, CG-4 and CF-4 and can effectively lubricate engines calling for those API Service Categories. When using CJ-4 oil with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval.
CI-4	Current	Introduced in 2002. For high-speed, four-stroke engines designed to meet 2004 exhaust emission standards implemented in 2002. CI-4 oils are formulated to sustain engine durability where exhaust gas recirculation (EGR) is used and are intended for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, CG-4, and CH-4 oils. Some CI-4 oils may also qualify for the CI-4 PLUS designation.
CH-4	Current	Introduced in 1998. For high-speed, four-stroke engines designed to meet 1998 exhaust emission standards. CH-4 oils are specifically compounded for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, and CG-4 oils.
CG-4	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 2009.
CF-4	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 2009.
CF-2	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 2009. Two-stroke cycle engines may have different lubrication requirements than four-stroke engines, so the manufacturer should be contacted for current lubrication recommendations.
CF	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 2009. Later "C" category oils are usually suitable or preferred for diesel automotive engines for which "CF" oils were specified. Older equipment and/or two-stroke diesel engines, especially those calling for monograde products, may however require "CF" category oil.
CE	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 1994.
CD-II	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 1994.
CD	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 1994.
CC	Obsolete	CAUTION: Not suitable for use in most diesel-powered engines built after 1990.
CB	Obsolete	CAUTION: Not suitable for use in most diesel-powered engines built after 1961.
CA	Obsolete	CAUTION: Not suitable for use in most diesel-powered engines built after 1959.
FA-4	Current	API Service Category 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 (0.0015% by weight). Refer to individual engine manufacturer recommendations regarding compatibility with API FA-4 oils. These 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 not interchangeable or 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 content greater than 15 ppm, refer to engine manufacturer recommendations.