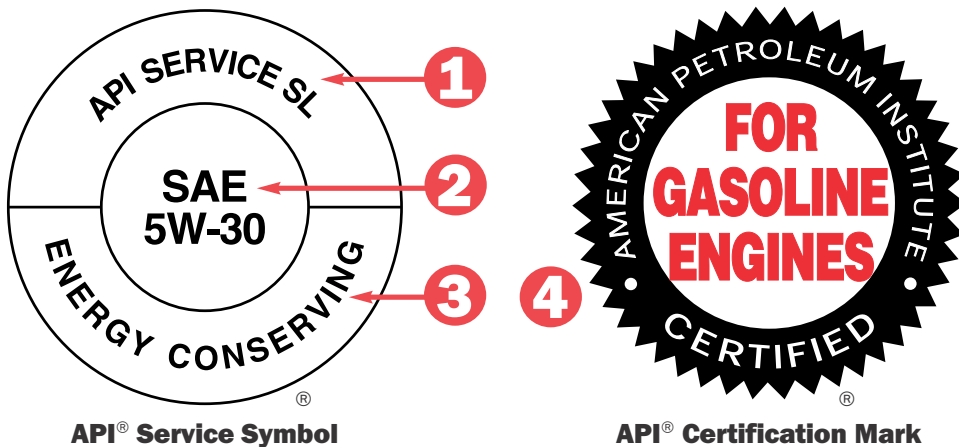


API

AMERICAN PETROLEUM INSTITUTE

Motor Oil Guide



API's Service Symbol and Certification Mark identify quality engine oils for gasoline- and diesel-powered vehicles. Oils displaying one or both of these marks meet performance requirements set by U.S. and international vehicle and engine manufacturers and the lubricant industry. More than 500 companies worldwide participate in this voluntary program, which is backed by a marketplace sampling and testing program.

1. Performance Level:

Gasoline engine oil categories (for cars, vans, and light trucks with gasoline engines): Oils designed for gasoline-engine service fall under API's "S" (**S**ervice) categories. Look for current service categories SL and SJ. See reverse for descriptions of current and obsolete API service categories.

Diesel engine oil categories (for heavy-duty trucks and vehicles with diesel engines): Oils designed for diesel-engine service fall under API's "C" (**C**ommercial) categories. Look for current categories CI-4, CH-4, CG-4, CF-4, CF-2, and CF.

2. Viscosity: The measure of an oil's thickness and ability to flow at certain temperatures.

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

4. API Certification Mark: An oil displaying this mark meets the current engine protection standard and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), a joint effort of U.S. and Japanese automobile manufacturers. Most automobile manufacturers recommend oils that carry the API Certification Mark.

Guidelines to help you get more from your motor oil.

- Refer to your owner's manual for type of oil to use.
- Follow manufacturer's oil change recommendations.
- Use only the recommended API category: "S" for gasoline engines; "C" for diesel engines.
- Select the proper SAE oil viscosity.
- If you find it necessary to mix brands of oil, use the same viscosity grade and API service category to maintain performance.
- Properly dispose of used oil. Contact your local service station or recycling center for assistance.

Learn more about recycling used oil on the web at www.recycleoil.org.

Look for the API Quality Marks every time you buy motor oil.

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

Guide to SAE Grades of Motor Oil for Passenger Cars

Multigrade oils such as SAE 5W-30 and 10W-30 are widely used because, under all but extremely hot or cold conditions, they are thin enough to flow at low temperatures and thick enough to perform satisfactorily at high temperatures. **Note that vehicle requirements may vary. Follow your vehicle manufacturer's recommendations on SAE oil viscosity.**

If lowest expected outdoor temperature is	Typical SAE Viscosity Grades for Passenger Cars
0°C (32°F)	5W-20, 5W-30, 10W-30, 10W-40, 20W-50
-18°C (0°F)	5W-20, 5W-30, 10W-30, 10W-40
Below -18°C (0°F)	5W-20, 5W-30

For more information about API's Engine Oil Program, call the American Petroleum Institute at 202-682-8516 or visit our website at www.api.org/eolcs. This guide is provided as a service to the motoring public courtesy of the American Petroleum Institute.

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Which oil is right for you?

The current and previous API Service Categories are listed below. 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 engine oil service category includes the performance properties of each earlier category. If an automotive owner's manual calls for an API SH or SJ oil, an API SL oil will provide full protection. For diesel engines, the latest category usually – but not always – includes the performance properties of an earlier category.

Gasoline Engines		
Category	Status	Service
SL	Current	For all automotive engines presently in use. Introduced July 1, 2001. SL oils are designed to provide better high-temperature deposit control and lower oil consumption. Some of these oils may also meet the latest ILSAC specification and/or qualify as Energy Conserving.
SJ	Current	For 2001 and older automotive engines.
SH	Obsolete	For 1996 and older engines. Valid when preceded by current C categories.
SG	Obsolete	For 1993 and older engines.
SF	Obsolete	For 1988 and older engines.
SE	Obsolete	For 1979 and older engines.
SD	Obsolete	For 1971 and older engines.
SC	Obsolete	For 1967 and older engines.
SB	Obsolete	For older engines. Use only when specifically recommended by the manufacturer.
SA	Obsolete	For older engines; no performance requirement. Use only when specifically recommended by the manufacturer.

Note: API intentionally omitted "SI" and "SK" from the sequence of categories. For more information about API's Engine Oil Program, call the American Petroleum Institute at 202-682-8516 or visit our website at www.api.org/eolcs. This guide is provided as a service to the motoring public courtesy of the American Petroleum Institute.

Diesel Engines		
Category	Status	Service
CI-4	Current	Introduced September 5, 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.
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	Current	Introduced in 1995. For severe duty, high-speed, four-stroke engines using fuel with less than 0.5% weight sulfur. CG-4 oils are required for engines meeting 1994 emission standards. Can be used in place of CD, CE, and CF-4 oils.
CF-4	Current	Introduced in 1990. For high-speed, four-stroke, naturally aspirated and turbocharged engines. Can be used in place of CD and CE oils.
CF-2	Current	Introduced in 1994. For severe duty, two-stroke-cycle engines. Can be used in place of CD-II oils.
CF	Current	Introduced in 1994. For off-road, indirect-injected and other diesel engines including those using fuel with over 0.5% weight sulfur. Can be used in place of CD oils.
CE	Obsolete	Introduced in 1987. For high-speed, four-stroke, naturally aspirated and turbocharged engines. Can be used in place of CC and CD oils.
CD-II	Obsolete	Introduced in 1987. For two-stroke-cycle engines.
CD	Obsolete	Introduced in 1955. For certain naturally aspirated and turbocharged engines.
CC	Obsolete	For engines introduced in 1961.
CB	Obsolete	For moderate duty engines from 1949 to 1960.
CA	Obsolete	For light duty engines (1940's and 1950's).

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