

API Service Classifications

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C Classification - Commercial (Fleets, Contractors, Farmers etc.)

CA - For Light Duty Diesel Engine Service Service typical of diesel engines operated in mild to moderate duty with high-quality fuels and occasionally has included gasoline engines in mild service. Oils designed for this service provide protection from bearing corrosion and from ring belt deposits in some naturally aspirated diesel engines when using fuels of such quality that they impose no unusual requirements for wear and deposit protection. They were widely used in the late 1940's and 1950's but should not be used in any engine unless specifically recommended by the equipment manufacturer.

CB - For Moderate Duty Diesel Engine Service Service typical of diesel engines operated in mild to moderate duty, but with lower quality fuels which necessitate more protection for wear and deposits. Occasionally has included gasoline engines in mild service. Oils designed for this service provide necessary protection from bearing corrosion and from ring belt deposits in some naturally aspirated diesel engines with higher sulphur fuels. Oils designed for this service were introduced in 1949.

CC - For Moderate Duty Diesel and Gasoline Engine Service Service typical of many naturally aspirated diesel engines operated in moderate to severe duty service and certain heavy duty gasoline engines. Oils designed for this service provide protection from high temperature deposits and bearing corrosion and low temperature deposits in gasoline engines. These oils were introduced in 1981.

CD - For Severe Duty Diesel Engine Service Service typical of certain naturally aspirated, turbocharged or supercharged diesel engines where highly effective control of wear and deposits is vital, or when using fuels of a wide quality range including high sulphur fuels. Oils designed for this service were introduced in 1955, and provide protection from bearing corrosion and from high temperature deposits in these diesel engines.

CD-II - For Severe Duty 2-Stroke Diesel Engine Service Service typical of 2-stroke cycled engines requiring highly efficient control over wear and deposits. Oil designed for this service also meets all performance requirements of API service category CD.

CE - For High Performance Diesel Engine Service Service typical of many turbocharged or supercharged high performance diesel engines, operated under both low speed - high load and high speed - high load conditions. Oils designed for this service have been available since 1984, and provide improved control of oil consumption, oil thickening and piston assembly deposits and wear relative to the performance potential offered by oils designed for Category CD.

CF-4 - For High Performance Diesel Engine Service This category was adopted in 1990 and describes oils for use in high speed, four stroke diesel engines. API CF-4 oils exceed the requirements of the CE category, providing improved control of oil consumption and piston deposits.

CF - For Indirect Injected Diesel Engine Service API service category CF denotes service typical of indirect injected diesel engines, and other diesel engines which use a broad range of fuel types, including those using fuel with higher sulphur content, for example over 0.5% wt. Effective control of piston deposits, wear and copper containing bearing corrosion is essential for these engines, which may be naturally aspirated, turbocharged or supercharged. Oils designed for this service have been in existence since 1994. Oils designated for this service may also be used when API service category CD is recommended.

CF-2 - Two Stroke Cycle Diesel Engine Service. API service category CF-2 denotes service typical of two stroke cycle engines requiring highly effective control over cylinder and ring face scuffing and deposits. Oils designated for this service have been in existence since 1994 and may also be used when API service category CD-II is recommended.

CG-4 - 1994 Severe Duty Diesel Engine Service API service category CG-4 describes oils for use in high speed

four stroke diesel engines used in heavy duty applications both on and off road. CG-4 oils provide effective control over high temperature piston deposits, wear, corrosion, foaming, oxidation stability and soot accumulation. These oils are especially effective in vehicles designed to meet 1994 exhaust emission standards, and may be used in engines requiring CD, CE and CF-4 oils.

S Classification - Service (Service Stations, Garages etc.)

SA - Formerly for Utility Gasoline and Diesel Engine Service Service typical of older engines operated under such mild conditions that the protection afforded by compounded oils is not required. This category should not be used in any engine unless specifically recommended by the equipment manufacturer.

SB - For Minimum Duty Gasoline Engine Service Service typical of older gasoline engines operated under such mild conditions that only the minimum protection afforded by compounding is desired. Oils designed for this service have been used since the 1930's and provide only antiscuff capability and resistance to oil oxidation and bearing corrosion. They should not be used in any engine unless specifically recommended by the equipment manufacturer.

SC - for 1964 Gasoline Engine Warranty Maintenance Service Service typical of gasoline engines in 1964 through 1967 models of passenger cars and some trucks operating under engine manufacturers warranties in effect during those model years. Oils designed for this service provide control of high and low temperature deposits, wear, rust and corrosion in gasoline engines.

SD - for 1968 Gasoline Engine Warranty Maintenance Service Service typical of gasoline engines in 1968 through 1970 models of passenger cars, and some trucks operating under engine manufacturers warranties in effect during those years. Also may apply to certain 1971 and or later models as specified. Oils designed for this service provide more protection against high and low temperature engine deposits, wear, rust and corrosion in gasoline engines than oils which are satisfactory for API Engine Service Category SC and may be used when API Engine Service Category SC is recommended.

SE - for 1972 Gasoline Engine Warranty Service Service typical of gasoline engines in passenger cars and some trucks beginning with 1972 and certain 1971 models operating under engine manufacturers warranties. Oils designed for this service provide more protection against oil oxidation, high temperature engine deposits, rust and corrosion in gasoline engines, than oils which are satisfactory for API Engine Service Categories CD or SC and may be used when either of these classifications is recommended.

SF - for 1980 Gasoline Engine Warranty Maintenance Service Service typical of gasoline engines in passenger cars and some trucks beginning with the 1980 model year, operating under manufacturers recommended maintenance procedures. Oils developed for this service provide increased oxidation stability and improved anti-wear performance relative to oils which meet the minimum requirements for API Service Classification SE. The oils also provide protection against engine deposits, rust and corrosion. Oils meeting API Service Classification SF may also be used where API Service Categories SE, SD or SC are recommended.

SG - for 1989 Gasoline Engine Warranty Maintenance Service Service typical of gasoline engines in passenger cars, vans and light trucks beginning with the 1989 model year, operating under manufacturers recommended maintenance procedures. Category SG quality oils include the performance properties of API service category CD. Oils developed for this service provide improved control of engine deposits, oil oxidation and engine wear relative to oils developed for previous categories. These oils also provide protection against rust and corrosion. Oils meeting API Service Category SG may be used where API Service Categories SF or SE are recommended.

SH - for 1994 Gasoline Engine Warranty Maintenance Service Category SH covers the performance requirements of the CMA Product Approval Code of Practice and SH oils have been developed to provide performance exceeding the minimum requirements of category SG oils, in the areas of deposit control, oil oxidation, wear, rust and corrosion. These oils may be used where a SG or earlier category rated oil is required.