

Engine

Service Engineering

This Service Information bulletin supersedes S.I. 11 08 98 **dated June 2000** and replaces S.I.02 12 98 dated June 2000.

SUBJECT **BMW Engine Oils**

MODEL All

SITUATION Starting with the introduction of the 1999 3 Series (E46), BMW introduced an extended oil change interval of approximately 15,000 miles depending on engine operating conditions.

The engine oil change interval of approximately 15,000 miles has been carried over to all 2001 BMW models. However, engine oil should be changed at least once a year. This revision (annual oil change) is retroactive to earlier model years and is included in the BMW Maintenance Plan.

To coincide with the increased oil change interval, BMW also introduced "BMW High Performance Synthetic Oil" SAE 5W-30.

BMW recommends the use of BMW High Performance Synthetic Oil SAE 5W-30 or Castrol RS SAE 10W-60 Synthetic Oil also called Castrol TWS Motorsport SAE 10W-60 Synthetic Oil on all models as outlined below whenever a service is necessary to avoid engine damage.

Synthetic Engine Oil Recommendations

Model / Engine	Production Date	Engine Oil
E39 M5 / S62	Up to 3/2000	Castrol RS SAE 10W-60 Synthetic Oil also called Castrol TWS Motorsport SAE 10W-60 Synthetic Oil
E39 M5 / S62 E52 Z8 / S62	From 3/2000	BMW High Performance Synthetic Oil SAE 5W-30 Or Castrol RS SAE 10W-60 Synthetic Oil also called Castrol TWS Motorsport SAE 10W-60 Castrol RS SAE 10W-60 Synthetic Oil also called
Synthe E46 M3 / S54	All	
E36 M roadster,		Castrol TWS Motorsport SAE 10W-60 Synthetic M coupe / S54 Oil

All other current models / engines not listed above.

From 1999 model year - vehicles with extended oil change intervals of approximately 15,000 miles.

BMW High Performance Synthetic Oil SAE 5W-30.

Synthetic Engine Oil Benefits

BMW High Performance Synthetic Oil SAE 5W-30 and Castrol RS SAE 10W-60 Synthetic Oil also called Castrol TWS Motorsport SAE 10W-60 Synthetic Oil offers several benefits over conventional mineral based oils.

These oils have been durability tested on BMW engines and supply superior lubrication under all operating conditions and over the extended BMW oil change intervals.

-- Superior thermal stability

The synthetic based oil resists thickening at very low ambient temperatures providing improved flow, lubrication and less internal engine resistance during cold starts.

Under high heat conditions, the oil resists thermal breakdown/shearing which causes a loss of lubrication quality with conventional oils.

Using BMW High Performance Synthetic Oil eliminates the need for seasonal oil changes since it covers all ambient temperature ranges.

-- Superior lubrication throughout the life of the oil

Compared to conventional engine oils, BMW High Performance Synthetic Oil is better able to keep engine combustion contaminants in suspension and is less susceptible to the harmful effects of oxidation.

The oil resists sludge build up thus allowing extended oil change intervals. Synthetic based oils also have a lower volatility which makes them less susceptible to evaporation thereby reducing oil consumption.

1999 Model Year and Later Oil Recommendation

BMW High Performance Synthetic oil must be used on all 1999 and later BMW vehicles which have oil change intervals of approximately 15,000 miles (except M5 produced up to 3/00 and E46 M3, E36 M roadster and M coupe with S54 engines) as stated in the owners manual. In addition, there is a label affixed to the engine cover which states the oil specifications and refers to the BMW website (www.bmwusa.com) and toll free number (1-800-831-1117) for additional information.

M5 and Z8 Oil Recommendation

M5 (S62 engine) produced up to 3/00:

- The M5 up to 3/00 production requires a specially formulated synthetic engine oil - Castrol Formula RS SAE 10W-60 or Castrol TWS Motorsport SAE 10W-60 and is the only approved oil for this engine.

- **Castrol Formula RS SAE 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic Oil must be used on M5 models produced up to 3/00 whenever a service is necessary to avoid engine damage and is available under BMW part number 07 51 0 009 420 (1 liter bottle).**

Notes: For logistical reasons Castrol Formula SAE RS 10W-60 Synthetic Oil has been renamed and is now called Castrol TWS Motorsport SAE 10W-60 Synthetic Oil. Since the formulation has remained the same it is sold under the same BMW part number 07 51 0 009 420.

Only if a customer needs to top up oil between oil changes and Castrol Formula RS 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic Oil is not available is it permissible to use synthetic engine oils with a lower viscosity which conform to the API classification SH or higher.

However engine oil consumption will increase when Castrol Formula RS 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic is diluted (topped up with other low viscosity synthetic engine oils).

M5 (S62 engine) produced from 3/00 and all Z8:

- The S62 engine incorporates redesigned piston rings from 3/00 which permit the use of BMW High Performance Synthetic Engine Oil SAE 5W-30.
- The recommended engine oil for all Z8 vehicles and M5 vehicles (produced from 3/00) is BMW High Performance Synthetic Engine Oil SAE 5W-30.

Note: Refer to Service Information bulletin 11 04 00 for S62 engine oil level checking procedure.

E46 M3, M roadster, M coupe with S54 engines - Oil Recommendations

- All M models with the S54 engines require the use of Castrol Formula RS SAE 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic Oil and is the only approved oil for this engine.
- **Castrol Formula RS SAE 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic Oil must be used on E46 M3, E36 M roadster and M coupe with S54 engines whenever a service is necessary to avoid engine damage and is available under BMW part number 07 51 0 009 420 (1 liter bottle).**

Notes: For logistical reasons Castrol Formula SAE RS 10W-60 Synthetic Oil has been renamed and is now called Castrol TWS Motorsport SAE 10W-60 Synthetic Oil. Since the formulation has remained the same it is sold under the same BMW part number 07 51 0 009 420.

Only if a customer needs to top up oil between oil changes and Castrol Formula RS 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic Oil is not available is it permissible to use synthetic engine oils with a lower viscosity which conform to the API classification SH or higher.

However engine oil consumption will increase when Castrol Formula RS 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic is diluted (topped up with other low viscosity synthetic engine oils).

Note: Refer to Service Information bulletin 11 04 00 for S54 engine oil level checking procedure.

1998 Model Year and Earlier Oil Recommendation

BMW High Performance Synthetic engine oil may also be used on earlier BMW models.

BMW High Performance Synthetic engine oil is included and may be claimed on all vehicles covered under the BMW Maintenance Plan.

BMW **High Performance** Synthetic Oil will replace BMW approved Special Oils.

The oil change intervals should not be extended due to the greater durability of a fully synthetic engine oil. The engine oil and filter should always be changed as per the vehicle's Service Indicator when the "Oil Service" or the "Inspection" display appears regardless of the type of oil being used.

BMW mineral based High Performance engine oil is also offered for model year 1998 and earlier BMW models. However, for reliable engine performance in all temperature ranges mineral based engine oil viscosity must be matched to the temperature range at which the vehicle will be operated. See the Temperature - Viscosity chart in the Owners Manual or Operating Fluids Manual for further information.

Engine Oil Additives

The use of engine oil additives is not recommended and not necessary on BMW engines. Instead, it is mandatory to use BMW High Performance Synthetic Oil in 1999 model year and later BMW models, Castrol Formula RS SAE 10W-60 Synthetic Oil or Castrol TWS Motorsport SAE 10W-60 Synthetic Oil in M5 S62 models produced up to 3/00 and E46 M3, E36 M roadster and M coupe with S54 engines. Also recommended is the use of either BMW High Performance Synthetic Oil, BMW High Performance Mineral Oil or one of today's highly advanced brand name lubricating oils conforming to API classification SH or higher in 1998 and earlier BMW models.

PARTS INFORMATION As part of the BMW global alliance with CASTROL we are changing our private label engine oil supplier for both mineral and synthetic engine oils. As part of this change, the synthetic engine oil will now be a SAE 5W-30 oil which covers the same temperature range as the SAE 5W-40 synthetic engine oil.

BMW engine oils are available under the following part numbers:

Part Number	Description	Quantity
07 51 0 017 866	BMW High Performance Synthetic Oil SAE 5W-30	1 quart bottle (minimum shipping quantity 12 quarts)
07 51 0 017 954	BMW High Performance Synthetic Oil SAE 5W-30	1 quart bulk (minimum shipping quantity four - 55 gallon drums)
07 51 0 009 420	Castrol Formula RS SAE 10W-60	1 liter (1.06 quart) bottle

	Synthetic Oil	(minimum shipping quantity or 12 liters)
	Castrol TWS Motorsport SAE 10W-60 Synthetic Oil	
07 51 0 017 868	BMW High Performance Mineral Base Oil SAE 15W-40	1 quart bottle (minimum shipping quantity 12 quarts)

**WARRANTY
INFORMATION**

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