



PRECISION PERFORMANCE
SINCE 2002



TECHNICAL LIBRARY

ENGINE OIL QUICK REFERENCE

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- 1 When in doubt, always refer to the manufacturer specifications and recommendations for lubricants and viscosities to be used.
- 2 In a pinch, motorcycle oils of the appropriate viscosity will be acceptable substitute for recommended oils.
 - ▶ For new or rebuild engines, use break-in specific oils only.
- 3 For a new or freshly rebuild engine, never use synthetic oil.
 - ▶ Joe Gibbs break-in oil should be used the first 200-400 miles.
 - For water-cooled engines, BR40 should be used.
 - For air-cooled engines, BR (15w50) should be used.
 - ▶ Do not exceed oil temperature of 210F when using break-in oils.
 - ▶ A non-synthetic oil should be used for at least 1000 miles (or until the engine is properly broken in) before switching for a synthetic oil.
 - Break in oil can be used but do not exceed the 400 miles on any fill as they are not designed for extended use.
 - **Break in oils are not designed for track use.**
 - After initial 200-400 miles, you may continue to use BR with 400 mi drain interval or switch to Joe Gibbs HR oil:
 - HR conventional 10w40 for water-cooled engines
 - HR conventional 15w50 for air-cooled engines
- 4 After an engine has been properly broken in with at least 1000 miles on the engine and rings are fully seated, a break-in oil is no longer required:
 - ▶ Joe Gibbs HR oils can continue to be used if synthetic oil is not required in street applications.
 - ▶ Joe Gibbs DT oils are full synthetic and are for street use only.
 - ▶ Joe Gibbs XP oils are available in conventional and synthetic for track use.
 - ▶ It is safe to switch back to a non-synthetic even if you have already run a synthetic product.
 - ▶ Try not to mix different brands of oils.
- 5 For air-cooled engines on the street, in warmer climates:
 - ▶ A 5w40 or 10w40 oil can be used up to 90F on the street.
 - ▶ A 15w50 or 20w50 oil is recommended for track use even at temperatures below 90F with any air-cooled engine.
 - ▶ Above 90F, a 15w50 or 20w50 oil should always be used.
- 6 For newer (water-cooled) Porsche vehicles after break-in period:
 - ▶ Under warranty, use Motul 8100 X-Cess 5w40 or equivalent MID-SAPS 5w40 Porsche approved lubricant for year round use. Do not use a LOW-SAPS or emissions system protection lubricant under any circumstances.
 - ▶ When no longer under warranty, Joe Gibbs DT40 is recommended for year round use for street only.
 - ▶ **Joe Gibbs XP9 10w40 oil is required for track use.**
- 7 Normal drain intervals should not exceed 6 months or 5,000 miles.
- 8 Vehicles on severe schedules such as those that are driven on the track should have their oil change more frequently, not to exceed 10 hours runtime or 500 miles.
- 9 The oil filter should be changed every time you change the oil.
- 10 If using the LN Engineering spin on oil filter adapter, be sure to use the appropriate filter. We use and recommend the Napa Gold or Platinum 1042 filter.
 - ▶ For track and for Accusump installations, use the LN Engineering billet washable oil filter.
 - ▶ Vehicles fitted with the IMS Solution use a Napa Gold or Platinum 1348.
- 11 Used oil analysis should be considered a tool to determine the health of your engine and proper drain intervals.
 - ▶ Drain intervals can vary based on service life and the severity of duty your engine sees as well as the formulation of the motor oil you are using. Most racing oils intended for severe duty in high performance engines have less detergent, so their starting TBN, or total base number, is lower than these long life oils. So it is very important to do UOA to determine the proper drain intervals as well as to determine a baseline for the condition of your engine which will allow you to monitor the health of your engine.
 - ▶ Vehicles subjected to very short drives or sustained operation in heavy traffic with lots of idling should indeed be serviced more often, just like a race car should.
 - ▶ Regular used oil analysis is the best way to determine ideal drain intervals for your driving habits - a good rule of thumb is to change the oil with the TBN, or total base number, is reduced by 50% of the original total.
 - ▶ Another good rule of thumb is when the TBN equals the TAN (which requires additional testing), then it is also time to change the oil.