



AMSOIL PRESS RELEASE

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## Amsoil vs Royal Purple

As you may know, Royal Purple is well known in racing circles. The chemistry they use is something AMSOIL, Inc. chooses not to use. One of their big selling points is extended drain intervals. Some additive chemicals can cause adverse conditions when used for long periods.

Royal Purple uses a different chemistry than most oils. They are one of only a handful of marketers using Molybdenum Disulfide (Moly) in their oil. **Moly is a solid material, which is specifically banned by Cummins®, due to excessive valve train wear.**

Moly is a processed mineral that is similar in appearance to graphite. Moly has good lubricating properties when used either by itself (in dry power form or as an additive to oil or other lubricants). Particles of the Moly can come out of suspension and agglomerate. This can actually clog oil filters or oil lines and the rest normally settles in the bottom of the oil pan. This seems to be more likely when using extended drain intervals. The only test we ran on Royal Purple involved their 20W50 Racing oil versus our AMSOIL Series 2000 Synthetic 20W50 Racing Oil (TRO). We ran two 4 ball wear tests with different parameters, a spectrographic baseline, FTIR scan and volatility tests. The Royal Purple showed a significantly high volatility rate with a 12.51% boil off rate.

This compares to the AMSOIL TRO with only a 4.47% volatility rating. Wear scars were also smaller with the TRO. For example the AMSOIL TRO left a .41mm scar and the Royal Purple oil left a .66mm scar. The lower the scare damage number the better!

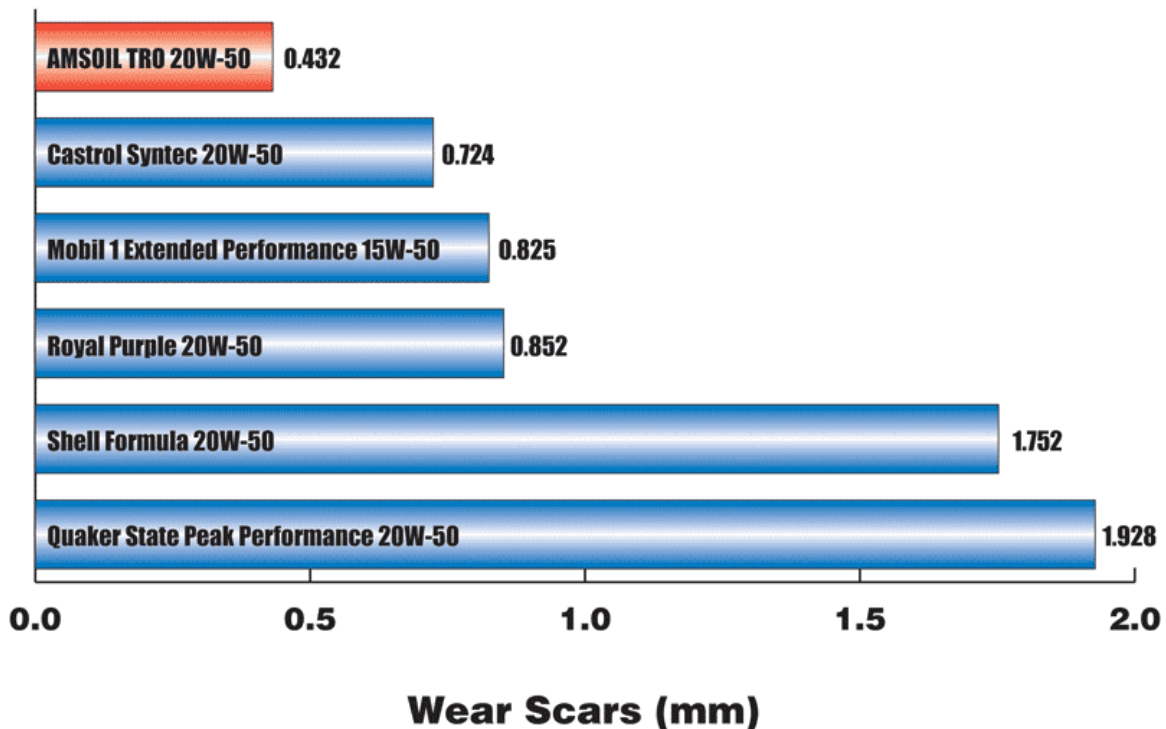
There was also a surprising difference in the viscosity index. The RP has a VI of 129 versus 155 for the TRO. The higher the VI, the better the viscosity stays in place at high temperatures.

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### Four-Ball Wear Test (ASTM D-4172)

60 kg pressure @ 150° C, 1800 rpm, for 1 hour duration

As tested by an independent lab in 11/2005



Note: This information was provided by AMSOIL, Inc. Tech Department. An independent lab tested the Royal Purple 20W-50 racing oil against the AMSOIL 20W-50 racing oil. The results are posted above. Test results found Moly in the Royal Purple oil sample.