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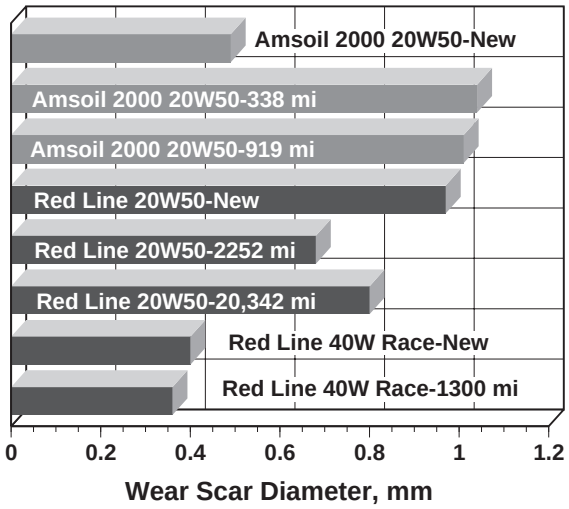
Is Amsoil Series 2000 really better than Red Line?

Recently Amsoil introduced a new high-performance racing lubricant with considerable advertising and a very aggressive strategy of putting the ASTM D 4172 antiwear data on each and every container of oil and comparing it with the industry leaders. We are very flattered that they chose Red Line as a pre-eminent leader in the field of high-performance synthetic lubrication. However, we were a little surprised that the testing which Amsoil commissioned showed Amsoil as being clearly superior to Red Line Oil by a wide margin.

When we first obtained the new Amsoil Series 2000 product we tested it according to the ASTM D 4172 Wear Test at the conditions which Amsoil claimed to be representative of automotive engine protection. We found that the unused Amsoil product provided results consistent with their advertising, so we tried it in an engine. Engine oils are designed to lubricate operating engines, so we filled a Ford 4.0L engine and took samples at 338 miles and 919 miles. We compared it with new Red Line 20W50 and Red Line 20W50 taken from the same Ford 4.0L engine at 20,000 miles operating under the same service conditions as with the Series 2000. We also tested the Red Line 20W50 in a turbocharged 2.0L engine at 2252 miles and Red Line 40 Wt Racing Oil taken from a ZR-1 Corvette with 1300 miles of drag racing and street use. The results of these test were just as we suspected. We perform a lot of testing with antiwear additives, friction reducers and synthetic base oils. We know that there are many components which we could add to our oils to perform better in these ASTM tests on unused oils, but protection in an operating engine is the real goal, not simply obtaining good numbers with unused oil. What we found with the Amsoil Series 2000 is consistent with our chemical experience that many of these components are very chemically reactive, which allows it to very aggressively react with steel in the new oil test, but when exposed to the blowby gases in the operating engine, these additives may be rapidly deactivated, bringing the wear characteristics right back to what you would find with a typical good synthetic oil.

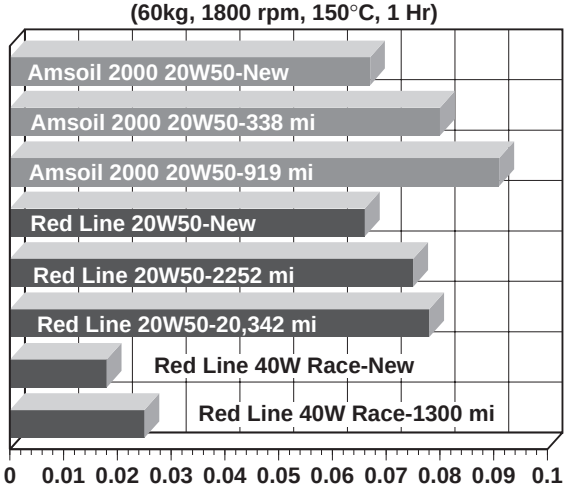
Wear Scar Diameter

ASTM D4172 (60kg, 1800 rpm, 150°C, 1 Hr)



Coefficient of Friction

ASTM D4172 (modified)
(60kg, 1800 rpm, 150°C, 1 Hr)



The unique characteristic with Red Line is that the wear figures actually improve with use when using Red Line Oil in an operating engine. This is not surprising because part of the synthetic additive and base oil chemistry actually reacts with the blowby gases to create a more effective antiwear chemistry. The polyol esters and unique antiwear chemistry in Red Line are designed to improve the wear characteristics after a period of engine operation as evidenced by the ASTM D 4172 Wear Test. We could actually improve the load-carrying capability of our unused oils by removing some of the synthetic base components which we have found to provide excellent antiwear in actual engines. We at Red Line feel strongly that protection of operating engines is much more important than new antiwear numbers. We also find it very curious that Amsoil chose not to compare their Series 2000 Race Oil with Red LIne Race Oil. Red Line Race Oil right out of the bottle provides significantly better results than even the unused Amsoil Series 2000 and what is unique with the Red Line is that the results again improve with engine operation instead of rapidly degrading as with the Amsoil product.

The Coefficient of Friction data also parallels the antiwear results. The Red Line Race Oils provide significantly lower friction than any other racing lubricant on the market and our street engine oils provide very low coefficient of friction for even long drain use. Low friction is a very important characteristic for high-performance use.

Red Line is committed to the manufacture of High-performance synthetic lubricants which have no equal. We have performed these tests at an independent testing laboratory using coded names to insure an unbiased result. We have proven Red Line to provide excellent engine protection and these results confirm what engine builders have been describing to us for years. The Amsoil Series 2000 product when subjected to testing after engine operation is definitely not superior to Red Line Race Oils or Street Motor OIls.