

# They Say Nothing Outperforms Mobil 1? Wrong!

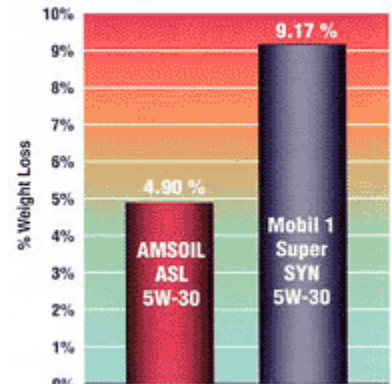
AMSOIL INC. set out to examine the specifics of the overly broad “Nothing Outperforms...” Mobil claim. AMSOIL 5W-30 Synthetic Motor Oil (ASL) and Mobil 1 SuperSyn 5W-30 Motor Oil were analyzed in five key bench tests measuring motor oil performance: NOACK volatility, flash/fire point, pour point, four ball wear and total base number (TBN). As shown in the charts below, AMSOIL outperformed Mobil 1 in all five areas.



## NOACK Volatility

The NOACK Volatility Test determines the evaporation loss of lubricants in high-temperature service. The more motor oils vaporize, the thicker and heavier they become, contributing to poor circulation, reduced fuel economy, increased oil consumption and excessive wear and emissions. A maximum of 15 percent evaporation loss is allowable to meet the API SL and ILSAC GF-3 specifications. As shown in the graph, AMSOIL 5W-30 Synthetic Motor Oil lost an extremely low 4.9 percent of its original weight during high-temperature service, maintaining its superior protective and performance qualities, while Mobil 1 SuperSyn 5W-30 Motor Oil lost 9.17 percent of its original weight.

NOACK Volatility (ASTM D-5800)

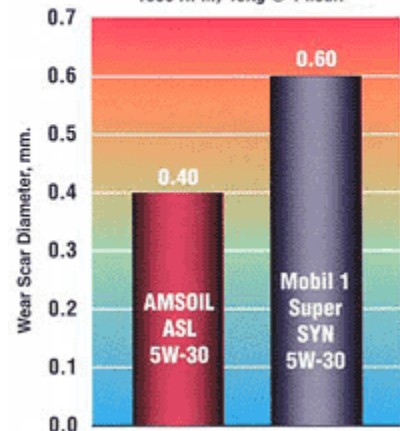


## Four Ball Wear

The Four Ball Wear Test determines the wear protection properties of a lubricant by measuring the wear scars produced by four metal balls in sliding contact under the test parameters. The smaller the average wear scar, the better the wear protection provided by the lubricant. As shown in the graph, AMSOIL 5W-30 Synthetic Motor Oil completed the Four Ball Wear Test producing a smaller wear scar than the Mobil 1 SuperSyn 5W-30 Motor Oil.

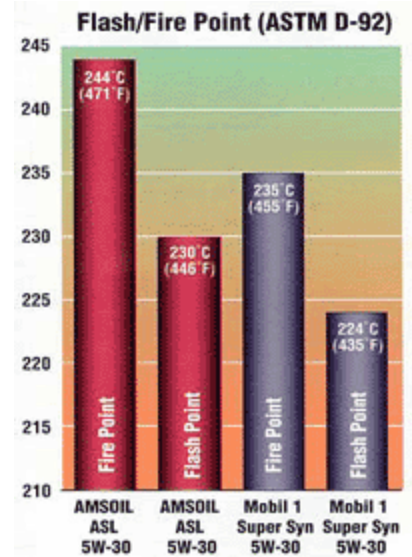
Four Ball Wear Test Para 3 (ASTM D-4172)

4-BALL PARA 3 - 150°C,  
1800 RPM, 40Kg @ 1 hour.



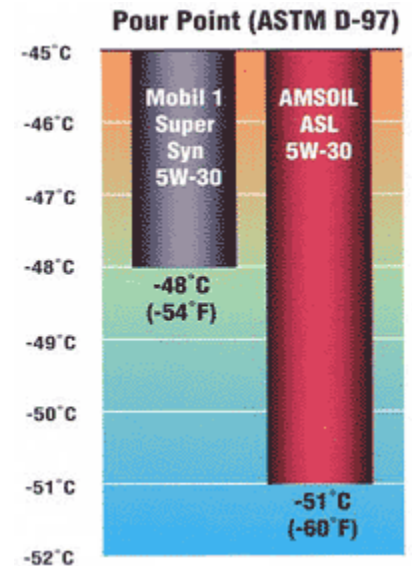
## Flash/Fire Point

The Flash/Fire Point Test determines the lowest temperatures at which application of a flame will cause lubricant vapors to ignite (flash point) and sustain burning for five seconds (fire point). Lubricants with higher flash and fire points exhibit more stable volatility characteristics and are safer to use and transport. As shown in the graph, AMSOIL 5W-30 Synthetic Motor Oil has higher flash and fire points than does Mobil 1 SuperSyn 5W-30 Motor Oil.



## Pour Point

The Pour Point Test determines the lowest temperature at which a lubricant flows. The lower a lubricant's pour point, the better protection it provides in low-temperature service. As shown in the graph, AMSOIL 5W-30 Synthetic Motor Oil has a lower pour point than Mobil 1 SuperSyn 5W-30 Motor Oil.



## Total Base Number

Total Base Number (TBN) is the measurement of a lubricant's reserve alkalinity. The higher a motor oil's TBN, the more effective it is in handling contaminants and reducing the corrosive effects of acids for an extended period of time. As shown in the graph, AMSOIL 5W-30 Synthetic Motor Oil has a higher TBN than Mobil 1 SuperSyn 5W-30 Motor Oil.

