AMSOIL
The First in Synthetics®

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AMSOIL Regulatory Compliance

DATA SHEET

XL Synthetic Motor Oil

Boosted Protection For Extended Life

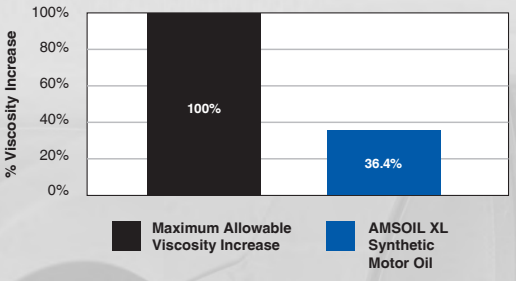


AMSOIL XL Synthetic Motor Oil is the choice for those who want to do something extra for their vehicle. Its boosted formulation delivers extra cleaning power, outstanding wear control, excellent high- and low-temperature protection and exceptional fuel economy. XL is engineered for advanced automotive technology, including turbos and direct injection. It is packed with extra engine protection, allowing you to go up to 12,000 miles (19,300 km) or one year, whichever comes first, between oil changes.

Resists Oil Breakdown

XL Synthetic Motor Oil maintains its fluidity (viscosity) under the most extreme conditions. Some oils break down and significantly increase in viscosity after extended periods of high-temperature operation. These changes can cause excessive oil consumption, engine deposits, accelerated wear and difficult cold-starts. The GM Oxidation and Deposit (GMOD) Test consists of a 5.7L V8 engine running at 293°F (100° hotter than normal) for 100 hours. These severe operating conditions test an oil's ability to control viscosity increase, deposits and oil consumption. The testing revealed that AMSOIL XL Synthetic Motor Oil provides **64 percent more protection against oil breakdown**[1] than required by the GM dexos1® Gen 2 specification, ensuring protection in extreme temperatures.

GM Oxidation and Deposit (GMOD) Test
Lower Number = Better Viscosity Control



Protects Pistons from Low-Speed Pre-Ignition

XL Synthetic Motor Oil features unique chemistry proven to protect your engine against the harmful effects of low-speed pre-ignition (LSPI). LSPI is the spontaneous ignition of the fuel/air mixture prior to spark-triggered ignition. Most new engines feature gasoline direct-inject (GDI), often coupled with a turbocharger. These technologies heighten the possibility of LSPI events, which can destroy pistons and connecting rods. A properly formulated motor oil is critical for protecting your engine against LSPI.

Original equipment manufacturers (OEMs) like GM have addressed the issue by designing tests to determine a motor oil's ability to prevent LSPI. XL Synthetic Motor Oil achieved **100 percent protection against LSPI**[2] – zero occurrences were recorded throughout five consecutive tests.

Keeps Engines Clean

AMSOIL XL Synthetic Motor Oil is fortified with detergent and dispersant additives. Its boosted additive package effectively raises the total base number (TBN) to neutralize acids and resist sludge, corrosion and carbon deposits. XL provides **25 percent more cleaning power**[3] to help keep your engine running smoother, longer.

Reduces Maintenance

Motorists, business owners and fleet managers benefit from the boosted engine protection of AMSOIL XL Synthetic Motor Oil. Frequent oil changes are expensive, time-consuming and inconvenient. The extra protection built into XL can provide extended drain intervals up to **12,000 miles (19,300 km) or one year**[4], if you choose, allowing you to change oil on your schedule, reduce maintenance, save money and reduce waste oil.

Maximizes Fuel Economy & Maintains Low Emissions

XL Synthetic Motor Oil is licensed by the American Petroleum Institute (API) to meet and exceed the requirements commonly found in owner's manuals. It excels in fuel-economy testing, earning the additional "Resource Conserving" designation[5] from the API. XL is also friendly toward modern emissions control systems, promoting proper operation of catalytic converters for optimum service life and low exhaust emissions.

[1] Based on independent testing of AMSOIL XL 5W-30 motor oil in the GMOD engine test required for the GM dexos1 Gen2 specification.
[2] Based on zero LSPI events in five consecutive tests of AMSOIL XL 5W-30 Motor Oil in the LSPI engine test required by the GM dexos1 Gen 2 specification.
[3] vs. AMSOIL OE Motor Oil
[4] See reverse side for details.
[5] Applicable to XL 0W-20, 5W-20, 5W-30 and 10W-30 motor oil.

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TYPICAL TECHNICAL PROPERTIES
AMSOIL XL Synthetic Motor Oil

	0W-20 (XLZ)	**5W-20** (XLM)	**5W-30** (XLF)	**10W-30** (XLT)	**10W-40** (XLO)
Kinematic Viscosity @ 100°C, cSt (ASTM D445)	8.7	8.8	11.1	10.9	15.7
Kinematic Viscosity @ 40°C, cSt (ASTM D445)	45.8	50	62.9	68.2	103.4
Viscosity Index (ASTM D2270)	171	156	169	150	162
CCS Viscosity, cP @ (°C) (ASTM D5293)	6096 (-35)	4907 (-30)	4619 (-30)	4740 (-25)	5315 (-25)
Flash Point °C (°F) (ASTM D92)	210 (410)	230 (446)	214 (417)	236 (456)	238 (460)
Fire Point °C (°F) (ASTM D92)	230 (446)	244 (471)	234 (453)	260 (500)	258 (496)
Pour Point °C (°F) (ASTM D97)	-48 (-54)	-44 (-47)	-44 (-47)	-44 (-47)	-44 (-47)
NOACK Volatility, % weight loss (g/100g) (ASTM D5800)	11.8	8.4	9.5	4.8	5.1
High-Temperature/High-Shear Viscosity @ 150°C, 1.0 X 10^6 $s.^{-1}$, cP (ASTM D5481)	2.74	2.8	3.3	3.3	4.4
Total Base Number (ASTM D2896)	10	10	10	10	10

APPLICATIONS

Use AMSOIL XL Synthetic Motor Oil in applications that require any of the following specifications:

0W-20 (XLZ): API SP (Resource Conserving), SN PLUS, SM…; GM dexos1 Gen 3 (supersedes dexos1 Gen 2 and 6094M); ACEA A1/B1; Chrysler MS-6395; Ford WSS-M2C947-B1, WSS-M2C947-A, WSS-M2C962-A1; ILSAC GF-6A, GF-5, GF-4…

5W-20 (XLM): API SP (Resource Conserving), SN PLUS, SM…; GM dexos1 Gen 3 (supersedes dexos1 Gen 2 and 6094M); ACEA A1/B1; Ford WSS-M2C945-B1, WSS-M2C945-A, WSS-M2C930-A, WSS-M2C960-A1; Chrysler MS-6395; ILSAC GF-6A, GF-5, GF-4…;

5W-30 (XLF): API SP (Resource Conserving), SN PLUS, SM…; GM dexos1 Gen 3 (supersedes dexos1 Gen 2, LL-A-025, 6094M and 4718M); ACEA A1/B1 A5/B5; Ford WSS-M2C946-B1, WSS-M2C946-A, WSS-M2C929-A, WSS-M2C961-A1; Chrysler MS-6395; Honda HTO-06; ILSAC GF-6A, GF-5, GF-4…

10W-30 (XLT): API SP (Resource Conserving), SN PLUS, SM…; ACEA A1/B1, A5/B5; Chrysler MS-6395; Ford WSS-M2C205-A; GM 6094M, 4718M; ILSAC GF-6A, GF-5, GF-4…

10W-40 (XLO): API SP, SN PLUS, SM...; ACEA A3/B3, A3/B4

COMPATIBILITY

AMSOIL XL Synthetic Motor Oil is compatible with conventional and other synthetic motor oils. Mixing other oils with AMSOIL motor oils, however, will shorten the oil life expectancy and reduce the performance benefits. AMSOIL does not support extended drain intervals where oils have been mixed.

Aftermarket oil additives are **not recommended** for use with AMSOIL XL Synthetic Motor Oil.

TECHNICAL SERVICES

For immediate answers to your technical questions call (715) 399-TECH (8324) between 8 a.m. and 5 p.m. Central time or email tech@amsoil.com.

SERVICE LIFE

In gasoline-fueled vehicles, AMSOIL XL Synthetic Motor Oil is recommended for up to 12,000 miles (19,300 km)/one year oil change intervals, or longer when recommended in owner's manuals or indicated by electronic oil life monitoring systems. Change the oil filter at every oil change regardless of filter brand.

AMSOIL PRODUCT WARRANTY

Using AMSOIL synthetic lubricants or practicing extended drain intervals does not void your new vehicle or equipment manufacturer's warranty. All AMSOIL products are backed by a Limited Liability Warranty. For complete information visit www.AMSOIL.com/warranty.aspx.

HEALTH & SAFETY

This product is not expected to cause health concerns when used for the intended application and according to the recommendations in the Safety Data Sheet (SDS). An SDS is available via the Internet at AMSOIL.com or upon request at 715-392-7101. **Keep Out of Reach of Children.** Recycle used oil and bottle.

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