

05/08/2011



Olio motore VW 507 00 per motori diesel Euro IV

SPECIFICHE VOLKSWAGEN

http://dodgecaliberclub.forumfree.it/

Dodge Caliber CRD olio motore

NON TUTTI SINTETICI SONO UGUALI

Castrol e Mobil finirono in tribunale perché attraverso un processo detto hydrocracking, la Castrol definì alcuni suoi oli: sintetici, (Castrol Syntec ecc.) mentre non lo questo agli occhi della Mobil era un inganno nei confronti dei consumatori, mentre la Castrol dichiarava che con questo processo, gli oli prodotti da derivazione petrol erano quasi esenti da impurità', molto simili ai sintetici, e perciò li definì Syntec!!

L'unico modo certo, per capire se l'olio dopo 10.000-15.000 km offre ancora le prestazioni ottime, è far analizzare l'olio da un centro specializzato come Laboratorio E http://www.blackstone-labs.com/what-is-oil-analysis.php



Purtroppo in Italia gli oli lavorati con l'Hydrocracking possono essere venduti con la scritta totalmente sintetici oppure full sint eccetera.

Bella fregatura direi

Comunque solo gli oli di categoria/gruppo IV (4) sono i veri 100% sintetici, gli altri sono solo dei falsi ma legalizzati.

Consultate nella lista quali sono del gruppo 5, 4 e quali del gruppo 3. Credo che il più serio sia sempre la Mobil 1, Valvoline, Amsoil e Red Line (Red Line appartiene superiore)

OGNI olio sintetico sul mercato oggi è convertito verso quest'olio di gruppo III, con l'eccezione della maggior parte della linea Amsoil, Mobil 1, e un paio di oli speci difficili da trovare (Red Line, SynLube).

Eppure ci sono delle differenze tra le qualità dell'olio di Gruppo III. Molti produttori acquistano uno stock di base che è raffinato quanto basta per passare da una class gruppo II a classificazione del gruppo III, dove possono chiamarlo un sintetico e caricare il prezzo più alto. In molti casi, questi oli non sono molto meglio di un olio gruppo II.

Cinque gruppi di oli

Gruppo I - olio base, usato raramente;

Gruppo II - minerali : sono le basi ottenute dalla raffinazione del petrolio;

Gruppo III - Hydrocracked Realizzate partendo da una base minerale attraverso appunto il processo di Hydrocraked.

Sono considerati sintetici ma NON in Germania. (XVHI, LHC, NHC, MC etc)

Gruppo III+ - Visom della Mobil

Gruppo IV - Sintetici : ottenuti per sintesi chimica e non dal petrolio, possono essere di vario tipo: **PAO/SHC** (PoliAlfaOlefine, Synthetic Hydro-Carbon), Poli glicoli Gruppo V - Estere. Utilizzate all'inizio solo per motori aeronautici per la loro altissima stabilità alle alte temperature e la loro composizione molecolare che produce u (Red Line)

Perché comprare in Germania? Perché l'olio dichiarato Fully Synthetic (Vollsynthetisch) è 100% Gruppo IV (PAO.) L'olio Hydrocracked può essere legalmente definito come sintetico (in tutto il mondo), ma non in Germania.

In Germania

Fully Synthetic (Vollsynthetisch) = 100% PAO/SHC Synthetic Technology (HC Synthetic) = Hydrocracked Part Synthetic = Semisintetico Mineral Based = Minerale I dati del 2003 by Amsoil

	COMMON 5W-30 SYNTHETIC OILS*												
Product Name	Base	Viscosity Index	Pour Point °C (°F)	Volatility % Weight Loss	Four Ball Wear Para. 1 Para. 3		TBN	Service Life	Suggested Cost (Qt)	Cost/ 10 Miles			
Amsoil XL (XLF)	Group III/ Hydrocracked	196	-51 (-60)	8.8%	0.35	0.38	10.1	7500 Miles/ 6 Months	\$5.20	4.0 cents			
Amsoil (ASL)	Group IV/ PAO	182	-51 (-60)	6.9%	0.35	0.40	>11.0	25,000 Miles/ 1 Year	\$5.85	2.6 cents			
Mobil 1	Group IV/ PAO	168	-48 (-54)	9.2%	0.35	0.60	8.5	Mfg. Rec.	\$4.78	3.7 cents			
Pennzoil Synthetic	Group II/ Hydrocracked	161	-48 (-54)	5.7%	0.40	0.60	10.0	Mfg. Rec.	\$4.49	3.6 cents			
Valvoline SynPower	Group III/ Hydrocracked	164	-44 (-47)	13.1%	0.35	0.55	8.9	Mfg. Rec.	\$4.48	3.6 cents			
Castrol Syntec	Group III/ Hydrocracked	147	-39 (-38)	10.0%	0.40	0.61	10.0	Mfg. Rec.	\$4.47	3.6 cents			
Quaker State Full Synthetic	Group III/ Hydrocracked	183	-46 (-51)	10.2%	0.35	0.55	7.7	Mfg. Rec.	\$3.97	3.2 cents			

http://www.technilube.com/faqs_info/synth_diff.php

SPECIFICHE VOLKSWAGEN 507.00 (MY07 - MY08) LA SPECIFICA 507.00 = 5W30

Dodge Caliber MY07 (VW 2.0 TDI motore BKD 103 Kw senza PDF) Dodge Caliber MY08 (VW 2.0 TDI motore BMN 125 Kw con PDF)

I motori TDI con sistema iniettore-pompa (Volkswagen/Audi) sono sottoposti a pressioni enormi. Basti pensare che si superino i 2.000 bar contro i 1.700 dei sistemi common-rail più evoluti. E' quindi fondamentale utilizzare degli olii adatti, rispettando le specifiche del manuale. Non bastano quindi genericamente olii con gradazione 5W-30 o 0W-30 o 5W-40; occorre che questi olii siano accompagnati dalla specifica 507.00 oppure 505.01 (se non si usa il service long life). La specifica 507.00 racchiude in sé la 505.01 (obsoleta e non più consigliata dalla VW) Se il TDI è dotato di filtro antiparticolato, allora è tassativo utilizzare un olio con specifica 507.00.

Gli oli con la specifica 507.00





Valvoline Synpower XL III 5W-30

Venduto come Full Synthetic

Gruppo IV PAO

Germania - Vollsynthetisch

ACEA A3/B4-04 VW 503.00, VW 504.00, 506.00, 506.01, 507.00 ACEA C2/C3 MB 229.51 BMW LL04



Amsoil European Formula 5w30

Venduto come "100% sintetico"

Gruppo III

(Polialfaolefine)

hydrocracked

VW 504 00 VW 507 00 ACEA A3/B3 ACEA A3/B4 Mercedes MB 229.51 BMW LL-04 / Longlife 04 Porsche C30



Shell Helix Ultra Extra 5W30

Venduto come Fully synthetic

Germania - (SyntheseTechnologie)

SAE 5W-40 formulato con basi PAO

Gruppo III

hydrocracked

(secondo analisi dell'olio non contiene PAO e Esters)

ACEA:C2 ACEA C3 ACEA A3/B4

BMW Longlife-04 / BMW LL-04

VW 504.00 / VW 507.00

Chrysler MS-11106

Fiat - Meets the requirements of Fiat 9.5535

Porsche C30

PSA B71 2290 approved Mercedes Benz 229.51



Castrol EDGE 5W30 (FST)

Venduto come Fully synthetic

Gruppo III

hydrocracked

ACEA C3

BMW Longlife-04 MB-Approval 229.31

MB-Approval 229.51

Porsche C30

VW 504 00

VW 507 00

Fulfils the requirements of the former VW

503 01 specification



Red Line Euro-Series 5W30

100% vero sintetico - esteri

Gruppo V Poly-OI-Ester

ACEA C2/C3 API SN/SM/SL/CF VW 504.00/507.00 BMW LL-04 MB 229.31/229.51 GM dexos2 Porsche C30



Millers Oils XF Longlife 5w-30

Venduto come Full Synthetic

Gruppo IV PAO

Germania - Vollsynthetisch LONGLIFE

ACEA C3 VW 504.00 / VW 507.00 Mercedes-Benz MB 229.51 BMW LL 04 Porsche C30



Ravenol WIV III SAE 5W-30

Venduto come Full Synthetic

Gruppo IV PAO

Germania - Vollsynthetisch LONGLIFE

ACEA A3/B4 VW 504 00 / 507 00 Porsche C30



Ravenol VMP III SAE 5W-30

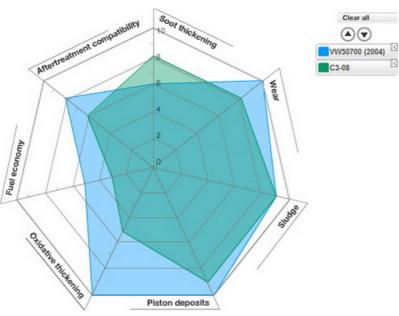
Venduto come Full Synthetic

Gruppo IV PAO

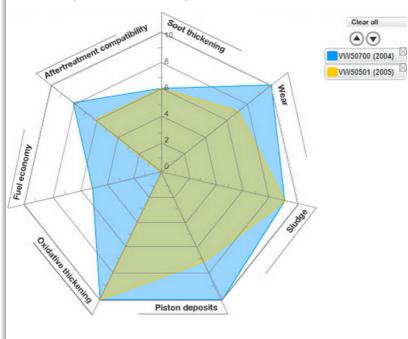
Germania - Vollsynthetisch

API SM (EC), ILSAC GF-4, ACEA A3/B4, C3 VW 504 00 / 507 00, MB 229.51, BMW Longlife-04 MB 229.31, Porsche C30





differenza di qualità dell olio con le specifiche VW 50700 - VW 50501



VW 507.00		Mobil 1 ESP ESP Formula	Amsoil EU Formula	Bardhal Technos C60	Castrol Edge FST	Motul Specific 50700	Millers Oils XF Longlife	Ravenol VMP III	Ravenol WIV III	Valvoline SynPower XL-III	Valvoline SynPower Xtreme XL-III	Red Line Euro-Series	Petronas SYNTIUM 5000 AV
		Mobil 1	Enspeed (a) Enspeed (a) Enspeed (a) Enspeed (a) Motion Of	THE CHANGE		Specific AN ANY AM STULE AM SERVE					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	215W30	
CAT Conda (Condaniana CAT)	VW	PAO+VISOM	5W 20	5W 20	5W 20	PAO	PAO	PAO FYV. 20	PAO	PAO	PAO	ESTER 5W-30	PAO 5W-30
SAE Grade (Gradazione SAE)	standard	0.05	3 W-30	0.946	0.051	0.848	0.052	0.940	0.05	0.052	0.052	3 W-30	3 W-30
Density @ 15°C, Relative (Densità a 15°C)	55 00	0.85	760	0.846	0.851		0.853	0.849	0.85	0.853	0.853		
cSt @ 40°C (Viscosità a 40°C)	55 - 82	72.8	76.3	76.5	70	72.3	73	73.5	73.4	68	68	69	74
cSt @ 100°C (Viscosità a 100°C)	9.3 - 12.5	12.1	12.3	12.2	12	11.7	11.9	11.8	11.9	11.8	11.8	11.6	12.2
Viscosity Index, ASTM D 2270 (Indice di viscosità)	156 - 169	164	159	157	169	157	159	162	160	170	170	164	159
Viscosity, CCS -30°C	6600 max	6600	6350		5800		6600	5900	5600	6600	6600		
HTHS Viscosity, mPa·s @ 150°C, ASTM D4683	≥3.5	3.58	3.7									3.7	
Pour Point, °C, ASTM D 97 (Punto di scorrimento)		-45	-43	-39	-42	-39	-30	-40	-45	-42	-42	-45	-45
Flash Point, °C, ASTM D 92 (Punto d'infiammabilità)		254	238	206	202	242	200	220	230	230	230	232	218
TBN (Total Base Number)	6.0 - 7.0	8	5.8	6.9		7.2		6.1	6.2	6.6	6.6	6	
Ash, Sulphated (Ceneri solfatate)	0.6 - 0.8	0.6			0.64			0.6	0.6			-	0.6

Che cos'è la viscosità dell'olio? LINK

SHC Synthese Technology^{TM''} - Synthetic HydroCarbons (PAO, spesso chiamato Synthetic hydrocarbons) HC - Hydrocracked



HC-Synthetic - Hydrocracked



HC-Synthese - Hydrocracked Vollsynthese - PAO



Confezione Tedesca 100% Synthetic



SyntheseTechnologie - Hydrocracked



Synthetic



Confezione Tedesca Full Synthetic



Aggiornamento 01/05/2013

Valvoline SynPower has "four times better wear protection than Mobil 1."

Valvoline Hold its Ground and Turns up the Heat

As reported in the July 24, 2008 issue of Jobbers World Online News, Valvoline launched a national advertising campaign that takes on competitor Mobil 1.

The centerpiece of the campaign claim Valvoline SynPower has "four times better wear protection than Mobil 1."

According to Valvoline, the claim is based on the industry standard Sequence IVA test. The Sequence IVA is the industry standard test for determining wear

performance of an engine oil and is required to meet the API SL and SM requirements. Multiple tests showed that Valvoline SynPower provided four times

better wear protection than Mobil 1, as measured in these tests of 5W-30 grades.

ExxonMobil responded to the claim by saying it was "not aware of any accurate technical data to support the claim" and they requested Valvoline provide

the "substantiating data to support this claim immediately."

Rather than backing down, Valvoline is holding its ground, and turns up the heat.

Marketers say the received a letter from Valvoline providing additional information and data to support Valvoline SynPower's significant performance

advantage versus Mobil 1. In addition, marketers say the letter turns the table on ExxonMobil's challenge and Valvoline is now challenging

ExxonMobil's

claim for its Mobil 1 5W-30.

According to the letter, Valvoline says the company conducted a number of tests and commissioned an independent laboratory to evaluate the

performance of SynPower and Mobil 1 in the Sequence IVA wear test. Marketers were told the tests were run on a 5W-30 since it's the top selling grade.

Now for the interesting part...

According to a letter Valvoline marketers received, the result from Valvoline's testing indicate:

Valvoline SynPower's 5W-30 wear performance is at least four times better than Mobil 1 5W-30

Mobil 1 5W-30 does not meet minimum API SM or ILSAC GF-4 specification because of its inferior performance in the Sequence IVA wear test

The letter reportedly goes on to say that Valvoline notified ExxonMobil of the failed test results in September and that the company take appropriate

action regarding their claim that Mobil 1 meets ILSAC GF-4 and API SM specifications, or provide substantiation that they in fact meet these specifications.

As of today, Valvoline told JobbersWorld, ExxonMobil has been silent.

http://www.jobbersworld.com/December%2011,%202008.htm

http://www.imakenews.com/lng/e_article001295961.cfm?x=bdSbglq,b1M25KBS



Thomas R. Smith Technical Director, Valvoline Lubricants Ashland Consumer Markets

VALVOLINE

Division of Ashland Inc P. O. Box 14000 Lexington, KY 40512 www.valvoline.com

November 20, 2008

Dear Valvoline Customer

Over the last several months, Valvoline has been running advertising claiming Valvoline SynPower 5W-30 has four times better wear protection than Mobil 1 5W-30. Because ExxonMobil has challenged our claim, both directly with Valvoline and with many of our customers, we feel compelled to reassure interested parties that our claim is fully substantiated. The purpose of this letter and attached Q&A is to provide additional information and data that support Valvoline SynPower's significant performance advantage versus Mobil 1.

Vehicle manufacturers and oil industry experts, working together, set minimum performance standards for motor oil – the current specifications are ILSAC GF-4 and API SM and these specifications have been required since 2005. Vehicle manufacturers recommend that consumers only use oil which meets those minimum standards. In fact, Valvoline's Premium Conventional motor oil, DuraBlend synthetic blend, MaxLife and SynPower brands all meet or exceed the SM and GF-4 specifications. And, notably, SynPower substantially exceeds the industry benchmark wear test – the Sequence IVA wear test.

The Sequence IVA wear test measures cam lobe wear in the vavletrain at low temperatures and rpms, simulating idling after start-up and stop-and-go traffic. The Seq IVA is an important industry recognized test to evaluate an oil's performance with regards to wear protection in modern engines. Over the past couple years, Valvoline conducted a number of tests and commissioned an independent laboratory to evaluate the performance of SynPower and the segment leader, Mobil 1, in the Sequence IVA wear test. The labs used 5W-30 for the testing, given that it is the top selling grade weight. The results from testing 5W-30 are often used by industry experts to substantiate performance of several viscosity grades of oil. The results from Valvoline's testing indicate that:

- 1. Valvoline SynPower's 5W-30 wear performance is at least four times better than Mobil 1 5W-30
- Mobil 1 5W-30 does not meet minimum API SM or ILSAC GF-4 specifications because of its inferior performance in the Sequence IVA wear test.

Valvoline notified ExxonMobil of these failing test results in September. At that time, Valvoline requested that ExxonMobil take appropriate action regarding their claim that Mobil 1 meets ILSAC GF-4 and API SM specifications—or provide substantiation that they in fact met these specifications—or provide substantiation that they in fact met these specifications. As of November 17, 2008, almost 60 days after the disclosure of our tests data to them, ExxonMobil has been silent. In the interest of protecting businesses that sell Mobil 1, and consumers who buy Mobil 1, Valvoline believes it is important that you know the facts. These facts include that our testing shows Mobil 1 5W-30 cannot meet basic GM, Ford, Chrysler, Toyota, Nissan, or Honda specifications.

Please refer to the attached Q&A for additional data. Talk to your Valvoline representative if you have any questions. You may also feel free to call me.

Sincerely

Valvoline

http://jobbersworld.com/valvolinesletter.htm



Valvoline SynPower exceeds the standards that Mobil 1 cannot even meet.

Q: Why should I choose Valvoline SynPower Motor Oil over Mobil 1?

A: Mobil 1 5W-30 DOES NOT MEET the most basic API SM or ILSAC GF-4 specifications. That means Mobil 1 5W-30 cannot meet basic GM, Ford, Chrysler or Honda specifications. Valvoline SynPower exceeds the specifications in all of the required tests.

Q: Can you prove it?

Yes. Valvoline and an independent laboratory conducted industry standard wear tests on Mobil 1 5W-30 and SynPower 5W-30. All tests were registered in accordance with industry standards. The test results show that SynPower performed 4 TIMES BETTER than Mobil 1.

Q: Aren't these laboratory tests just that, tests with no real-world relevance to what the automakers require in a motor oil?

A: Today's vehicles require high quality motor oil that meets certain minimum standards. The current standards are developed by lubricant manufacturers in collaboration with automobile manufacturers. He sequence IVA test "was developed to evaluate automotive lubricant's effect on controlling cam lobe wear..." Moreover, this is **the** test used to evaluate wear performance for certification that engine oil meets various API and ILSAC specifications. These sequence tests are used to evaluate different performance characteristics of engine oil and were designed as a substitute for fleet testing. The minimum specification for today's vehicles is the API SM and ILSAC GF4 ratings. Of the tests we conducted, Mobil 1 5W-30 FAILED the Sequence IVA wear requirement for SM and GF-4.

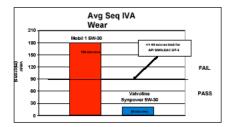
Q: Mobil 1 claims it is factory fill for some automakers. How can they make that claim and not meet the most basic automaker specifications?

A: Ask your Mobil 1 representative.

Q: Can you provide details of the tests done by Valvoline and an independent laboratory?

A: To meet the specifications for these important ratings, oil must pass several tests. SynPower exceeds the specifications in all of the required tests. On the Sequence IVA wear test, Valvoline's SynPower 5W-30 has an average wear rating of 20 microns. To qualify as an SM or GF-4, an oil cannot have a wear rating above 90 microns of wear in the Sequence IVA test. Valvoline and independent laboratory testing of Mobil 1 5W-30 showed an average of 180 microns of wear. Of the tests conducted, none of the samples of Mobil 1 5W-30 passed the Sequence IVA wear requirement for SM or GF-4. The attached graph more clearly illustrates the difference in test results.

So, Valvoline's tests results concludes that Mobil 1 5W-30 does not meet the API SM or ILSAC GF-4 specifications. Further, any oil that does not meet the SM and GF-4 specification could not meet the GM 6094M, Ford WSS-M2C929-A, Chrysler MS6395, GM 4718 (Corvette), and Honda HTO-06 specifications because meeting SM and GF-4 is a prerequisite to meeting these other standards.



Q: Must a motor oil be a synthetic to meet SM and GF-4 specs?

A: No. Valvoline's Premium Conventional motor oil, DuraBlend synthetic blend, MaxLife and SynPower brands all meet the SM and GF-4 specifications.

Aggiornamento 30/05/2013

Mobil 1 è stato riformulato di recente. LINK

Why are we reformulating Mobil 1?

A natural evolution of the formulation

• The Mobil 1 formulation strategy has always been based on selecting the best components available.

We now have the very high quality Group III+ base stock,

'Visom' exclusively available to ExxonMobil. As we developed the Mobil 1 ESP technology we found that combining Visom with PAO could deliver a formulation of equivalent performance to an all PAO formulation.

¬ Competitive advantage

 Visom is the only non-PAO stock that can deliver the required performance to formulate a 0W grade oil that meets European OEM engine oil specifications.
 Visom is not available to our competition.

☐ To support Mobil 1 growth

 Global PAO capacity is limited. As we quickly approach this limit, new base stocks must be explored to ensure we can support the continued growth of the Mobil 1 family of products.

To ensure continuity of supply

 As we saw with the 2005 hurricane, the more flexibility we have in our formulations, the better placed we are to withstand disruption to our supply. We can balance PAO and Visom supply fluctuations to ensure we can always deliver the final product to our customers.

To maintain market relevant pricing

 As PAO supply has tightened globally, raw material costs have increased substantially. In the future, an exclusively PAO formulation may be priced out of the market or result in significant margin erosion.

☐ To prepare for next generation basestocks (GTL)

• Commencing 2010, the next generation of base stocks derived from Natural Gas (Gas To Liquids) will enter the market. These high quality basestocks will arrive in substantial quantities and will probably be used in the majority of competitive premium formulations. Visom is viewed as a precursor of GTL, and hence it's use now in our flagship formulations eases our transition to a GTL world, and helps us understand how to maintain flagship performance using these high quality non-PAO basestocks.

What is the communication strategy?

With the exception of Germany, this reformulation will be invisible to consumers and B2B customers.

- Claims are identical with the exception of some now obsolete or soon to be obsolete claims
- Performance of new formulations are equivalent to current formulations
- Lating is underway to provide read-across of current marketing claims to new formulations

Leview will take place of current marketing literature to ensure accuracy of specific claims to new formulations (e.g. if we quote actual pour point values then this would need to be updated).

• There will be no proactive customer communication relating to this reformulation. However, an internal briefing document and Q&A has been prepared to allow sales to respond in the unlikely event of a customer question.

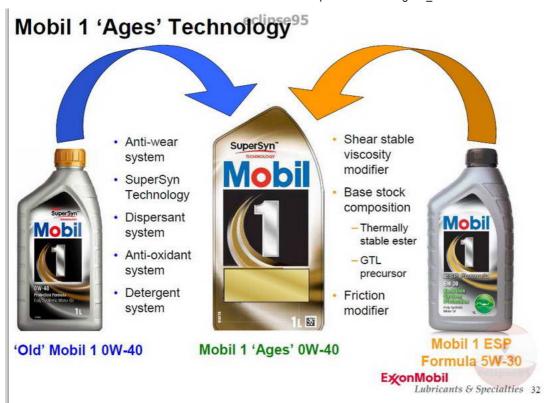
Due to the unique definition of synthetic in Germany (Synthetic = 100% PAO) this reformulation is visible to the consumer and B2B customers

• A more proactive communication is being prepared for German use

Future Mobil 1

Mobil 1 'Ages' Family

- Mobil 1 New Life 0W-40
- Mobil 1 Peak Life 5W-50
- Mobil 1 Extended Life 10W-60



Nella presentazione della Mobil è indicata la composizione di Mobil 1 ESP 5W-30. Composizione Base Stock: Estere termicamente stabile + precursore GTL (VISOM).



SHC (PAO - pure synthetic hydrocarbon) non indica più l'olio 100% PAO

Red Line Euro-Series 5W30 Motor Oil VW 507.00 (Gruppo V)



Recommended for ACEA C2/C3, VW AUDI 504.00/507.00, BMW Longlife-04, Porsche C30, GM dexos2™ and MB 229.31/229.51 Designed for the extended drain intervals and fuel economy of the latest European gasoline and diesel engines, including VW TDI models and BMW 3-series diesels.

Includes the appropriate levels of anti-wear additives and low ash content to ensure compatibility with the latest diesel particulate filters and emissions equipment.

Ester based, an upgrade over base stocks over other motor oils for these vehicles that provides additional protection

against wear and instability at high temps

Fully-synthetic ester formula for passenger cars, light trucks, performance vehicles and marine applications

Excellent wear protection and friction reduction across a wide range of operating conditions

High detergency allows extended drain intervals and provides increased cleanliness

Improved fuel economy and ring seal for more power

Superior high temperature stability and oxidation resistance increases lubrication of hot metal compared to other synthetics

High natural viscosity index (VI) provides thicker oil film in bearings and cams

Less evaporation than other synthetics for improved efficiency and ring seal

All products are completely compatible with other conventional and synthetic motor oils

TYPICAL PROPERTIES

API Service Class SN/SM/SL/CF

SAE Viscosity Grade (Motor Oil) 5W30

Vis @ 100°C, cSt 11.6

Vis @ 40°C, cSt 69

VI 164

CCS Viscosity, Poise, @*C 63@-30

Pour Point, °C -45

Pour Point, °F -49

Flash Point, °C 232

Flash Point, °F 450

NOACK Evaporation Loss,1hr @ 482°F (250°C), % 6

HTHS Vis, cP @150°C, ASTM D4741 3.7

SynLube - olio nero

SynLube, produttore lubrificanti per la Nasa ha in commercio un'olio motore garantito per 15 anni o 240.000 km

Cinque diversi lubrificanti liquidi chimicamente inerti, pacchetto additivi completamente sintetico, olio insensibile alle ossidazioni, bestia nera dell'olio motore.

SynLube ™ Lube-4-Life ® è un lubrificante eccellente che contiene grafite, bisolfuro di molibdeno (MoS2 - Moly) e PTFE lubrificante solido sub micronico.

Exclusive Limited Lubrication Performance Warranty for up to: 15 Years or 150,000 Miles (15 years or 240,000 Kilometers)

www.synlube.com

In 1969 SynLube Company was established in Vancouver, B.C. CANADA and SynLube™ became commercially available to anyone who wished to purchase it,

however due to high cost of SynLube™, the use was usually limited to Military and Space Exploration applications.

The use of SynLube™ was also verified in special applications that were subject to Nuclear Radiation or to strong Ultraviolet exposure, where conventional lubricants failed.

www.synlube.com/mars.htm

www.synlube.com/moon.htm

www.synlube.com/space.htm

SynLube Additional Benefits

Provides "dry" lubrication during cold or hot engine starting

Allows engine cranking at -50°F(-45°C)

Compatible with low and ultra low emission engine technology

Does not affect catalytic converter efficiency

Excellent long term engine wear protection

Outstanding soot thickening control

Low Base Fluid volatility reduces oil consumption and emissions

Extra protection for Turbocharger bearings

Outstanding TBN quality reserve

Stable UHVI (Ultra High Viscosity Index) of up to VI=200

Extended drain or NO drain capability

Freedom from Used Oil Disposal

Reduces bore polishing and eliminates engine piston scuffing

up to 8% fuel savings

Sub-zero and extreme high temperature service

Compatible with both conventional Petroleum and Synthetic Motor Oils

No special engine flushing is required when converting from any other Motor Oil in any Engine that does not have excessive deposits or pre-existing "sludge" or "gel" problem.

SynLube™ Lube—4—Life® is synergetic blend of man-made liquid and solid chemically inert lubricants that are thermally stable from -65°F (-54°C) to over 500°F (260°C). The sub-micronic particles of Graphite, PTFE and MoS2 are colloidally suspended in a mixture of synthetic liquid lubricants.

SynLube™ Lube-4-Life® is a 100% fully synthetic, multi-grade, super premium, colloidal Sol lubricant.

SynLube™ Lube—4—Life® does not oxidize nor decompose like conventional Petroleum or Synthetic Motor Oils. It can be therefore used, without oil changes, for up to:

15 Years

150.000 Miles

3,000 Hours of Engine operation in Gasoline Engines

2,000 Hours of Engine operation in Diesel Engines

SynLube™ Lube-4-Life® ...for Engines

is backed up, if installed in NEW vehicles, by our exclusive Limited Lubrication Performance Warranty for up to:

15 Years or 150,000 Miles (15 years or 240,000 Kilometers)

SynLubeTM Lube-4-Life® ...for Engines exceeds all of the following performance requirements:

API Service SJ Warranty Requirements for new 1997 Model Cars, Vans & Trucks

API Service SL Warranty Requirements for new 2001 Model Cars, Vans & Trucks

API Service SM Warranty Requirements for new 2005 Model Cars, Vans & Trucks

API Service SN Warranty Requirements for new 2011 Model Cars, Vans & Trucks

GM Service dexos-1 Warranty Requirements for new 2011 GM vehicles Model Cars, Vans & Trucks API Service CG-4, CF-2, CF-4, CF Warranty Requirements for Heavy Duty Diesel Engines

API Service CH-4 Warranty Requirements for new 1998 Low Emission Heavy Duty Diesels

API Service CI-4 Warranty Requirements for new 2002 Low Emission Heavy Duty Diesels with EGR

API Service CJ-4 Warranty Requirements for new 2007 Low Emission Heavy Duty Diesels using fuel with 15 PPM Sulfur.

DHD-1 performance specification for Heavy Duty Diesel Service according to International specifications

Cummins performance specification 20076 (also called CH-4 plus or CH-4+)

Mack EO-M, EO-M PLUS, EO-L, EO-L PLUS & EO-K/2 Performance Specifications

Quadruple Cummins NTC-400 performance

Caterpillar 10 TBN requirements

Detroit Diesel 7SE 270

Exceeds the requirements of MIL-L-22851C (U.S. Military)

ACEA ES-99 European Specifications for Heavy Duty Diesel Engine Oil

ACEA B4-98 European Specifications for Light Duty High Speed Diesel Engine Oil

ACEA A3-98 European Specification for Gasoline Engine Oil

CCMC PD-2 for High Performance Automotive Diesel Engines

CCMC G-5 & D-5

ILSAC GF-1, GF-2, GF-3, GF-4 & GF-5

http://www.eclipse95.altervista.org/olio_motore.html