



MANNOL[®]

В ОСНОВЕ ДВИЖЕНИЯ



Тенденции рынка и обновление продуктов **MANNOL**

- Цели производителей автомобилей и масел
- Обзор тенденций рынка масел для легковых автомобилей и дизельных грузовиков
- Краткое изложение изменений ACEA 2010
- Обзор основных масел марки Маннол для двигателей легковых и грузовых автомобилей
- Обзор трансмиссионных масел
- Другие продукты

Renata Zubaitė
SCT Lubricants

19 07 2013 Klaipėda



○ ПРИЧИНЫ ПОСТОЯННЫХ ИЗМЕНЕНИЙ ПРОИЗВОДИТЕЛЯМИ ДВИГАТЕЛЕЙ И МАСЕЛ

Охрана окружающей среды

- Законодательство о выбросах требует введения новых конструкций двигателей
- Повышенное использование альтернативных видов топлива

Стоимость владения

- Конкуренция и стремление к снижению себестоимости и долговременности

Глобализация

- Стандартизация требований в мировом масштабе
- Минимальность стандартов, устанавливающих требования к качеству

Нехватка природных ресурсов

- Повышение себестоимости сырья
- Тенденция к расширенному сохранению и повторному использованию

Ужесточение правил импорта и производства химических веществ

- Более высокая стоимость регистрации продукта

Возможности использовать более благоприятные жидкости

МАСЛА СЕГОДНЯ И В БУДУЩЕМ

- Масла европейского рынка находятся на пороге значительных изменений
- Существует четкое стремление к маслам с гораздо более низкой вязкостью
- Эта тенденция будет стимулировать рост спроса на высококачественные базовые масла
- Оптимизированные Low SAPS присадки должны будут составлять баланс экономии топлива и требуемой защиты двигателя
- Европейская промышленность масел более склонна к выполнению требований производителей двигателей. Приоритеты требований:
 1. Спецификации OEM
 2. Спецификации ACEA
 3. Спецификации API и другие



СИСТЕМЫ ФИЛЬТРАЦИИ И КАТАЛИЗАТОРЫ

Легковых автомобилей

-Фильтра твердых частиц (DPF)

- Фильтр состоит из керамического вкладыша напоминающего строением пласт меда имеющий микро трубки на которых задерживаются частицы

- Фильтр регенерируемый и не требует периодического обслуживания и очистки

- Принцип действия фильтра DPF:

-На поверхности фильтра собираются твердые частицы (сажа) и постепенно нарастают

-После превышения „критической массы” происходит их само сгорание

-Трехдорожные катализаторы (TWC)

- Три функции реализуемые TWC:

-редуцирование - ограничение эмиссии NO_x

-окисление - ограничение несгоревших углеводородов и окиси угля

-контроль - управление работой двигателя путем контроля количества кислорода в выхлопных газах - регулировка отношения топливо/ воздух

-Грузовые автомобили и автобусы

-Рециркуляция выхлопных газов (EGR)

-Фильтра твердых частиц (DPF)

-Селективная каталитическая редуция (SCR)

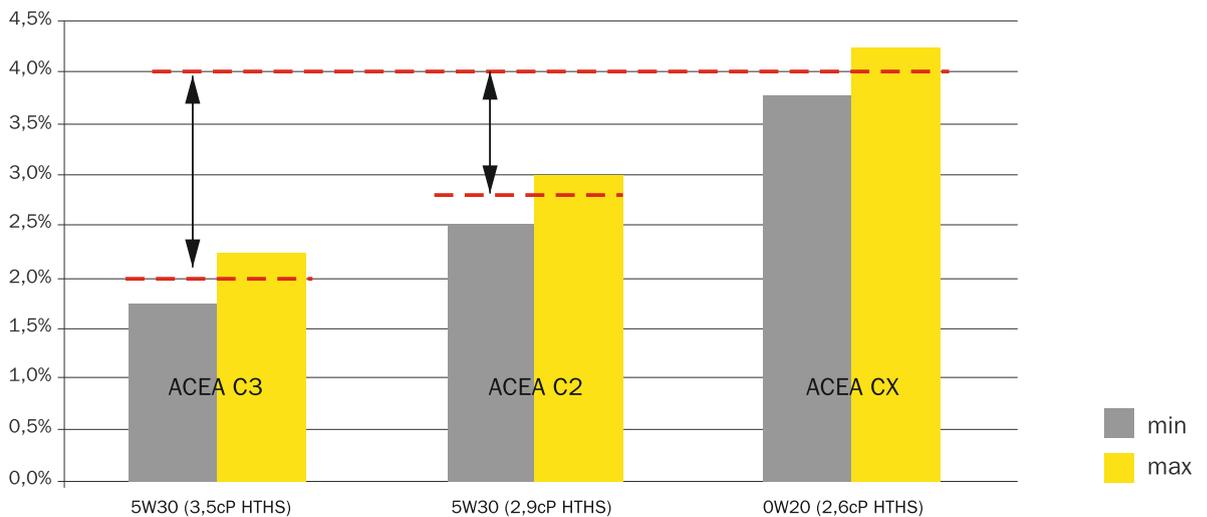
-Самообновляемые фильтра твердых частиц (CRT)

ЦЕЛИ ПРОИЗВОДИТЕЛЕЙ МАСЕЛ:

- Экономия топлива
- Долговечность
- Эмиссия

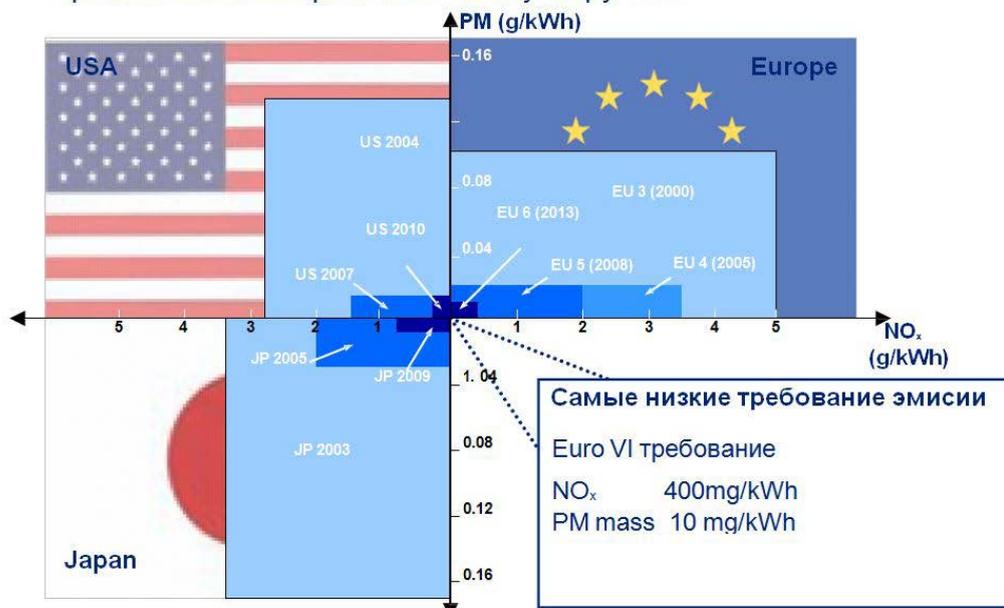


УВЕЛИЧЕНИЕ ЭКОНОМИИ ТОПЛИВА ЗА СЧЕТ ВЯЗКОСТИ



Евро VI требование выбросов - на дороге

- Требования к выбросам по всему миру



ЭЛЕМЕНТЫ МЕШАЮЩИЕ УЛУЧШЕНИЮ ЭМИССИИ В МАСЛАХ

- **Зола**, образованная из моторного масла может вызывать блокировку фильтров DPF и CRT.

Последствия:

увеличение давления выхлопного тракта

повышенный расход топлива

- **Фосфор** попадающий из моторного масла может вызывать отказ работы катализатора последствием которого является увеличение эмиссии.

- **Сера** попадающая из масла может вызывать блокировку фильтров NOx и замедлить каталитические процессы редуцирования.

SA
↓

P
↓

S
↓

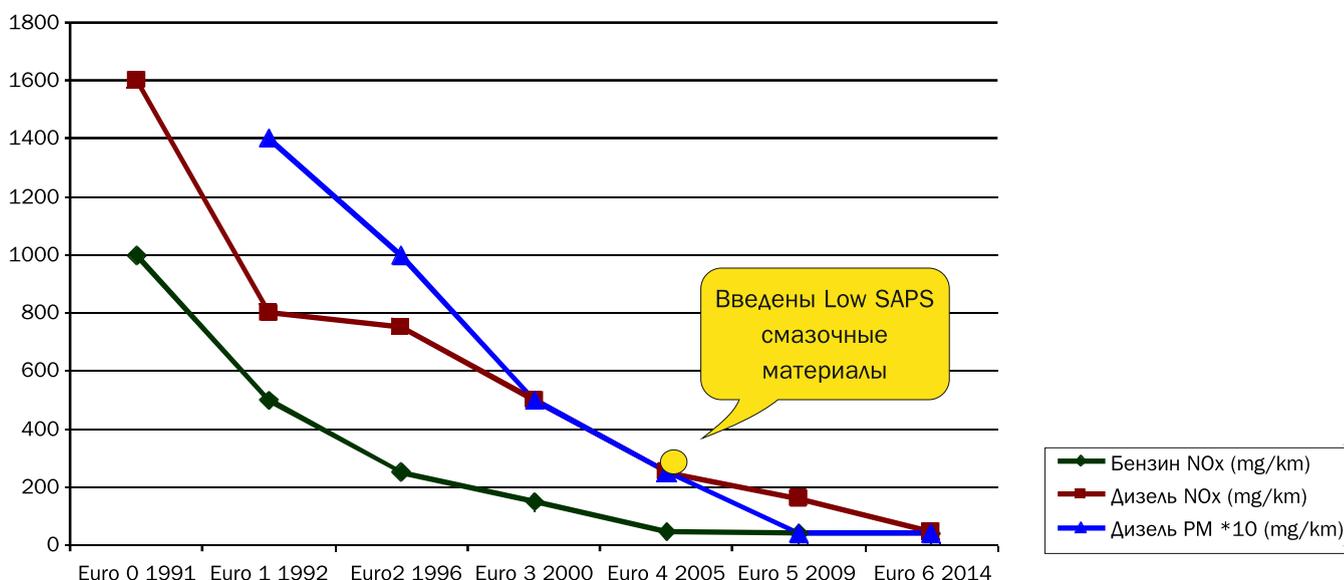
	Зольность сульфатная	Фосфор	Сера
Низкий	0,5	0,05	0,2
Средний	0,8	0,08	0,2
Стандарт	≥1,2	≥0,1	≥0,5
Уменьшение	60%	50%	40%



НОВОЕ ПОКОЛЕНИЕ - НИЗКИЙ SAPS

Элемент	Моторные масла с высоким SAPS решают проблемы	Моторные масла с низким SAPS нужны новые решения
Сульфатная зольность (Sulphated Ash)	Дисперсных систем противоизносных систем	Новые подходы к достижению требований чистоты поршня
<u>Фосфор (Phosphorus)</u>	Противоизносных систем антиоксидантных систем	Новые подходы для достижения защиты от износа и поддержанию устойчивости к окислению
<u>Сера (Sulphur)</u>	Дисперсных систем противоизносных систем Базовые масла (API группы I и II)	Новые технологии для уменьшения или удаления серы из противоизносных систем, моющих средств и антиоксидантов. Более широкое использование мало сернистых базовых масел.

ИЗМЕНЕНИЯ ТРЕБОВАНИЙ ЭМИССИИ





НОВОСТИ В АСЕА С 2010 ГОДА

-АСЕА 2008 выданное в декабре 2008 года устарело и сейчас обязательны 2010 требования

-АСЕА 2010 выпущенный в декабре 2010 стало обязательным с декабря 2012 года

-Дек 2010 Впервые разрешается декларировать соответствие требованиям АСЕА 2010

-Дек 2012 АСЕА требование для всех формулировок масел должны соответствовать требованиям АСЕА 2010. Все рецептуры соответственно заново проверены

	A1B1-08	A1B1-10	A3B3-08	A3B3-10	A3B4-08	A3B4-10	A5B5-08	A5B5-10
Сульфатная зольность, %	1,3 макс.	1,3 макс.	1,5 макс.	0,9-1,5	1,6 макс.	1,0-1,6	1,6 макс.	1,6 макс.
Щелочное число	8 мин.	8 мин.	8 мин.	8 мин.	8 мин.	10 мин.	8 мин.	8 мин.
Щелочное число, (VW TDi)	4 мин.	4 мин.	4 мин.	4 мин.	4 мин.	6 мин	4 мин.	4 мин.

	C1 08	C1 10	C2 08	C2 10*	C3 08	C3 10	C4 08	C4 10
Сульфатная зольность, %	0,5 макс.	0,5 макс.	0,8 макс.	0,8 макс.	0,8 макс.	0,8 макс.	0,5 макс.	0,5 макс.
Щелочное число					6 мин.	6 мин.	6 мин.	6 мин.
Щелочное число, (VW TDi)	декларировать	декларировать	декларировать	декларировать	декларировать	декларировать	декларировать	декларировать

СИНТЕТИЧЕСКИЕ МАСЛА КЛАССА SAE 5W30

	O.E.M for Hyundai, KIA	O.E.M for Peugeot, Citroen	O.E.M for Chevrolet, Opel	Energy Formula JP	Energy Combi LL	Diesel TDI	Energy Formula FR	Energy Formula OP
SAE	5W30	5W30	5W30	5W30	5W30	5W30	5W30	5W30
API	SN/SM/CF	SN/SM/CF	SN/SM/CF	SN	SN/SM/CF	SN/SM/CF	SL/CF	SL/CF
ACEA A/B	A3	A5/B5						A3/B4
ACEA C		C2	C2/C3	C3	C3	C3		
PSA Peugeot Citroen B712290		•				•		
MB 229,3								•
MB 229,51					•	•		
VW 504 00/507 00					•	•		
VW 502 00/505 00					•	•		•
VW 502 00/505 01					•	•		
Ford WSS-M2C913A/913B						•	•	
BMW Longlife -04					•			
Opel LL-A-025 /B-025								•
GM dexos 1				•				
GM dexos 2			•			•		
IISAC GF -3							•	
ILSAC GF-5/GF-4/GF-3	•			•				

СИНТЕТИЧЕСКИЕ МАСЛА КЛАССА SAE 5W40

Elite 5W40 – новая формулировка.
Высланы документы на получения официальных
подтверждении от производителей двигателей :
MB 229.3 ; VW 502 00/ 505 00

O.E.M. for Daewoo, GM – начнем наше
производство с середины августа

	Elite	O.E.M for Daewoo GM
SAE	5W 40	5W 40
API	SN/SM/CF	SN/SM/CF
ACEA A/B	A3/B4	A3/B4
MB 229,3	•	
MB 226.5 (v2012.2)	•	
MB 229.5		•
VW 502 00/505 00	•	•
Opel LL-B-025	•	
Renault RN 0710	•	•
Renault RN 0700	•	•
Porsche A40	•	
JASO MA-2 (2011)	•	

МИНЕРАЛЬНЫЕ И ПОЛУСИНТЕТИЧЕСКИЕ МАСЛА ДЛЯ ДИЗЕЛЬНЫХ ГРУЗОВИКОВ

	API	ACEA	MB 228,1	MB 228,3	MB 229,1	MAN 271	MAN 3275	Volvo VDS	Volvo VDS2	Volvo VDS3	Mack EO-N	Cummins CES 20074	Cummins CES 20078	Caterpillar ECF-1a	Reanult VI RLD-2	Detroit Diesel PGOS 93K216	Detroit Diesel 93K215	Deutz DQC-II-05	Global DHD-1
TS-115 W40	CH-4/SL	E3/A3/B3	•	•		•	•												
TS-2 20W50	CH-4/SL	E3/A3/B3	•		•	•		•											
TS-3 10W40	CH-4/SL	E3/A3/B3		•	•		•	•											
TS-4 Extra 15W40	CI-4/SL	E7/A3/B4		•			•			•	•		•		•		•	•	•
TS-5 10W40	CI-4/SL	E7/A3/B4		•	•		•			•	•		•		•		•	•	•
TS-11 GEO 15W40												•				•			
TS-9 NANO	CI-4/SL	E7/A3/B4		•	•					•									



МАСЛА ДЛЯ ГРУЗОВИКОВ НОВОГО ПОКОЛЕНИЯ

<i>TS 6 UHPD 10W40 Eco</i>	<i>TS-7 UHPD 10W40 Blue</i>	<i>TS-8 UHPD 5W30 Super</i>
API CI-4	API CJ-4	ACEA E4
ACEA E4/E7	ACEA E4/E6/E7/E9	MB 228.5
MB-Approval 228.5	MB -Approval 228.51	MAN 3277
MAN 3277	MB 228.31	Vovo VDS -3
Volvo VDS -3	MAN M 3477	MTU 3
Renault VI RLD-2	MAN M3575/ M3275-1	
MTU 3	MTU 3.1	
Deutz IV-10	Volvo VDS-4	
Mack EO-N	Catterpillar ECF-3	
Mack EO-M+	Cummins CES 20081	
Cummins 20078	Mack EO-0 Premium plus/EO-N	
Global DHD-1	Mack EO-N	
Detroit Diesel 93K215	Renault VI RLD-3	
	Renault VI RLD-2	
	Deutz DQC IV-10 LA / DQC-III-10 LA	
	Detroit Diesel 93K218	

ПОЛУСИНТЕТИЧЕСКИЕ МАСЛА ДЛЯ ЛЕГКОВОГО ТРАНСПОРТА

	<i>Classic</i>	<i>Stahlsynth Energy</i>	<i>Nano Technology</i>	<i>Diesel Extra</i>	<i>Molibden Benzin</i>	<i>Molibden Diesel</i>	<i>Defender</i>	<i>Gasoil Extra</i>	<i>Special</i>
SAE	10W40	5W30	10W40	10W40	10W40	10W40	10W40	10W40	10W40
API	SN/SM/CF	SL/CF	SM/CF	CH-4/SL	SL/CF	CG-4/SJ	SL/CF	SL/CF	SG/CD
ACEA A/B	A3/B4	A3/B3	A3/B4	A3/B3	A3/B3	E2/B3/A2	A3/B3	A3/B3	
MB 229, 1	•	•					•	•	
MB 229, 3			•						
VW 502 00/505 00	•		•						
VW 500 00/505 00		•		•					
VW 505 00/501 00							•	•	
Renauli RN 0700	•								

ЖИДКОСТИ АВТОМАТИЧЕСКИХ ПЕРЕДАЧ

Цели производителей коробок передач:

- Экономия топлива (FE) и уменьшение выбросов Co2
- Удовлетворенность клиентов, вождение с комфортом, надежность
- Уменьшение производственных затрат и затрат потребителей
- Увеличение интервала замены масла

МАСЛА ДЛЯ АВТОМАТИЧЕСКИХ КОРОБОК ПЕРЕДАЧ

ATF-A Automatic Fluid	GM ATF-A Suffix A; Allison C3;
ATF Dexron II Automatic	GM Dexron IID; MB 236.5/236.7; Allison C4; Cat -TO-2; Voith G607; MAN 339 V1/Z1; ZF TE-ML 03D/04D/11A/14A/17C
ATF Dexron III Automatic Plus	Dexron IIG/G/F; Ford Mercon V; Allison C-4; Allison TES 389; Caterpillars TO-2; M2C138-CJ; M2C166-H; MB 236.1; ZF TE-ML 09/11/14; Voith G607; Power steering fluid.
Dexron VI	GM Dexron VI; Ford Mercon LV; Toyota Type WS; Hyundai SP-IV; Nissan Matic S; Allison C-4; Chrysler ATF+4; Shell M-1375.4; JASO 1A
Type IV Automatic Special	Toyota Type T-IV
SP-III Automatic Special	Hyundai ATF SP-III; Mitsubishi ATF SP3; KIA ATF-SP-III
ATF AG-52 Automatic Special	VW TL 52 162; MB 236.11; Jaguar JLM 202 38; Porsche 999.917.547.00; BMW 832 29 407 807
ATF AG 55	Audi/VW G 055 005 A1/A2/A6;
ATF-WS Automatic Special	Toyota T-III/T-IV/WS Lifetime, Aisin Warner; Chrysler ATF +3/4; 4 and 5 speed European (BMW, MB, VW); Voith ATs 55.6335; MAN 339 Type Z1



ТРАНСМИССИОННЫЕ МАСЛА ДЛЯ МЕХАНИЧЕСКИХ КОРОБОК ПЕРЕДАЧ

Минеральные	Universal Getriebeoel 80W90	API GL-4 ; AGMA 252.04; ISO 12925-1 CKC; ISO 6743-6 CKC; US Stell 224; DIN 51517 Part III.
	Hypoid Getriebeoel 80W90	API GL-5 ; LS; Ford WSD-M2C200-C; SAE J2360;
	Hypoid LSD 85W140	API GL-5;MT1; SAE J2360;
	FWD Getriebeoel 75W85	API GL-4; MT1;
Синтетические	Extra Getriebeoel 75W90	API GL-5; LS; Mack GO-J; Ford WSD-M2C200-C
	Synpower 4*4 75W140	API GL-5 LS; Mack GO-J; Mack GO-J plus; Scania STO 1:0
	Basic Plus Getriebeoel 75W90	API GL-4+; VW 501 50

SCT LUBRICANTS ТАКЖЕ ПРОИЗВОДИТ :

- Судовые масла
- Масла для газовых двигателей
- Масла для двухтактных двигателей с воздушным охлаждением
- Масла для двухтактных двигателей с водяным охлаждением
- Масла для четырехтактных двигателей
- Гидравлические масла
- Компрессорные масла
- Универсальные тракторные масла STOU и UTTO

Другая продукция :

- Автошампуни для бесконтактных моек и моющие средства для промышленных помещений
- Антифризы



1/8/2013

Renata Zubaite
SCT Lubricants" Lithuania
Silutes pl. str. 119
95112 Klaipeda,
Lithuania
Renata@sct.lt

Dear Renata,

CONFORMANCE TO CES 20078 ENGINE OIL SPECIFICATION

Results from tests according to CES 20078 have been presented to Cummins. In view of the results I would like to give the following comments.

The results have been found to be within the CES 20078 limits and hence oils formulated as stated in your request can be labeled as conforming to CES 20078.

The oils shall be used per the ambient temperature and SAE grade guidelines in the engine specific Operation and Maintenance (O & M) manual as well as in any Cummins service documents.

Please notify Cummins Inc. if the formulation of this product changes.

Brand Name: Mannol TS-4 SHPD 15W40
SAE Grade: 15W-40

I hope this information will be of assistance to you.

Sincerely,

A handwritten signature in black ink that reads "Shawn D. Whitacre".

Shawn D. Whitacre
Chemical Technology

DISCLAIMER: Product registration means the manufacturer or marketer has faithfully collected information pertinent to the requirements of the specification, and with the full intention to conform to the specification. However, it is still the responsibility of the manufacturer or marketer to ensure satisfactory performance of its products in all aspects at all times. Registration for CES 20078 does not waive product liability of the manufacturer or marketer. Cummins does not warrant the performance of non-Cummins products, registered or not.

Cummins Inc.
500 Jackson Street
Columbus, IN 47201 USA
Phone 1 812 377 5000
cummins.com

Revision Date: May 1, 2006



7/28/2011

Piotr Glaser
Sudheimer Car Technik-Vertriebs GmbH
Feldstraße 154
22880 Wedel/Hamburg, Ust-ID-Nr: DE 163694656
renata@sct.lt

Dear Piotr,

CONFORMANCE TO CES 20078 ENGINE OIL SPECIFICATION

Results from tests according to CES 20078 have been presented to Cummins. In view of the results I would like to give the following comments.

The results have been found to be within the CES 20078 limits and hence oils formulated as stated in your request can be labeled as conforming to CES 20078.

The oils shall be used per the ambient temperature and SAE grade guidelines in the engine specific Operation and Maintenance (O & M) manual as well as in any Cummins service documents.

Please notify Cummins Inc. if the formulation of this product changes.

Brand Name: Mannol TS-5 UHPD 10W-40
SAE Grade: 10W-40

I hope this information will be of assistance to you.

Sincerely,

A handwritten signature in black ink that reads 'Shawn D. Whitacre'.

Shawn D. Whitacre
Chemical Technology

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Cummins Inc.
500 Jackson Street
Columbus, IN 47201 USA
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cummins.com

Revision Date: May 1, 2006



3/8/2013

Renata Zubaite
UAB SCT Lubricants
Silutes pl. 119
LT 95112
Klaipeda, Lithuania
renata@sct.lt

Dear Renata,

CONFORMANCE TO CES 20074 ENGINE OIL SPECIFICATION

Results from tests according to CES 20074 have been presented to Cummins. In view of the results I would like to give the following comments.

The results have been found to be within the CES 20074 limits and hence oils formulated as stated in your request can be labeled as conforming to CES 20074.

The oils shall be used per the ambient temperature and SAE grade guidelines in the engine specific Operation and Maintenance (O & M) manual as well as in any Cummins service documents.

Please notify Cummins Inc. if the formulation of this product changes.

Brand Name: Mannol TS-11 GEO 15W-40
SAE Grade: 15W-40

I hope this information will be of assistance to you.

Sincerely,

A handwritten signature in black ink that reads 'Shawn D. Whitacre'.

Shawn D. Whitacre
Chemical Technology

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cummins.com

Revision Date: May 1, 2006



Power. Passion. Partnership.

To	Sudheimer Car Technik Vertriebs GmbH Mr. Peter Glaser Feldstrasse 154 22880 Wedel GERMANY	Sender	MTU Friedrichshafen GmbH
Telefax No.	0049 4103-1211116	Dept.	TQZ
Date	13 October 2011	From	Gudrun Keis
Page(s)	1	Phone	+49 7541 90 - 2005
		Telefax No.	+49 7541 90 - 902005
		E-mail	gudrun.keis @mtu-online.com

Approval of Mannol TS-6 UHPD Eco: Extension

Dear Mr. Glaser,

based on the information and test results you provided, as well as our laboratory analyses, the engine oil

Mannol TS-6 UHPD Eco	SAE 10W-40
Oil Code	OS 224584
Manufacturer	UAB "SCT Lubricants", Lithuania

which you submitted for approval meets the requirements for Oil Category 3 and is approved for use in all MTU engines (except Series 8000, 4000 R64 / R74 / R84 and 956 TB31 / TB 32 / TB 33) and DDC engines Series 2000/4000.

The letter of approval does not cover Series 1800.

The approval is valid until

October 2013.

For an extension of this approval, please inform us at least one month before expiration. Please note that any modification of the engine oil will invalidate the approval in accordance with our terms of approval (MTL 5044).

Yours sincerely,

MTU Friedrichshafen GmbH

Gudrun Keis
Gudrun Keis

MTU Friedrichshafen GmbH
Maybachplatz 1
88045 Friedrichshafen/Germany
Phone +49 7541 90-0
Telefax +49 7541 90-5000
www.mtu-online.com

Vorsitzender des Aufsichtsrates/
Chairman of the Supervisory Board:
Rolf Eckrodt

Geschäftsführung/Board of Management:
Joachim Coers, Vorsitzender/President and CEO
Dr. Ulrich Dohle, Peter Kneipp, Dieter Royat

Sitz/Domicile: Friedrichshafen
Handelsregister/Register Court: Ulm, Nr./No. HRB 630 227

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DAIMLER

Daimler AG · 70546 Stuttgart

SCT Vertriebs GmbH
Attn. Mr. P. Glaser
Feldstr. 154
22880 WEDEL

Telefon/Phone +49 7 11 17-	Telefax/Fax +49 7 11 17-	Hauspost-Code/ Internal Code
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24801	59756	C401
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Ihr Zeichen, Ihre Nachricht vom/
Your reference
10.07.2009

Unser Zeichen, unsere Nachricht vom/
Our reference
EP/MDV F 13525

Name
E-Mail
Mrs Fuchs

Datum/Date
08.12.2009

MB-Approval Certificate

MB-Approval for: Engine Oil "Mannol TS-4 SHPD Extra 15W40 "

Reblend to OS175388, Lubrizol Limited
MB-BeVo-Sheet: 228.3, Oil-Code: OS175388, SAE-Grade: 15W-40
Change of Product Name - Reblend

Dear Sir or Madam,

We have examined the changes made to the previously approved operating fluid shown above. The operating fluid complies with the requirements of the Mercedes-Benz Specifications for Operating Fluids, sheet 228.3 and is therefore re-approved for use in Mercedes-Benz vehicles and assemblies. The application range is shown and explained on the sheet. Other requirements, e.g. SAE grades, capacities, change intervals etc. must also be observed.

MB-Approval is valid with date of this certificate. The validity period is limited to the validity period of the above mentioned original and will expire in 5 years at the latest. New approvals have to be applied for in good time.

A 2 litre sample of each formulation (including all SAE grade variants) must be retained at all times, and can be called upon by Daimler AG at any given moment. We will advise the address.

The MB-Approval dated 18.01.2008 becomes invalid.

Sincerely
Daimler AG



i.V. W. Schmid



i.V. Dr. Keppeler

13525 *MX*

Daimler AG, Stuttgart, Germany
Sitz und Registergericht/Domicile and Court of Registry: Stuttgart, HRB-Nr./Commercial Register No.: 19 360
Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Manfred Bischoff
Vorstand/Board of Management: Dieter Zetsche, Vorsitzender/Chairman;
Wilfried Porth, Andreas Renschler, Bodo Uebber, Thomas Weber

Daimler AG
70546 Stuttgart
Telefon/Phone +49 7 11 17-0
Telefax/Fax +49 7 11 17-2 22 44
dialog@daimler.com
www.daimler.com

MAN Truck & Bus AG



MAN Truck & Bus AG Postfach 44 02 58 90207 Nürnberg

Sudheimer Car Technik Vertriebs GmbH
Herr P. Glaser
Felstrasse 154
22880 Wedel

Ihre Zeichen	Ihre Nachricht vom	Unser Hausruf	Unser Telefax	Unsere Zeichen	Nürnberg,
		0911 420-2005	0911 420-1928	EMTA, Jäger	28.06.2011

Prolongation of approval against M 3275-1 (Multigrades)

Start of approval: 09.07.2007

Prolongation of approval until: 08.07.2014

Marketing area: worldwide

Dear Sirs,

we are pleased to inform you, that the approval for the super high performance diesel engine oil bearing the designation

Mannol TS-4 SHPD 15W40

has been prolonged for the next three years under MAN approval-n

TUC 6512/07 for SAE 15W-40

This prolongation is only available for the unchanged formulation and in combination with the original approval letter. The approval will automatically expire at the point in time indicated above, unless an prolongation has been applied for in good time by the maker or supplier.

Yours faithfully,

MAN Truck & Bus AG

This letter was created electronically without signature.

Ursula Jäger

Vorsitzender des Aufsichtsrates: Rupert Stadler
Vorstand: Dr.Ing Georg Pachta-Reyhofen (Sprecher), Lars Wrebo,
Bernd Meierhofer, Dr. Frank Hiller, Karl Gadesmann

Sitz der Gesellschaft: München
Commerzbank Aktiengesellschaft, Dachau
IBAN: DE33 7004 0041 0145 0600 00
BLZ 700 400 41 Konto 1450600
BIC: COBADEFFXXX
Stadtsparkassen München
IBAN: DE36 7015 0000 0089 1044 00
BLZ 701 500 00 Konto 89104400
BIC: SSKMDEMM

Registergericht: Amtsgericht München HRB 86 963 | USt-IdNr. DE811125281

MAN Truck & Bus AG
Postfach 44 02 5 90207 Nürnberg
Vogelweiherstraße 33 90441 Nürnberg
Telefon +49 911 420-0 oder -Durchwahl
Telefax +49 911 420 446522
Wagenladungen: Nbg.-Rbf.
Lkw-Sendungen: Nbg.- Vogelweiherstr. 33

www.man-mn.com

Ein Unternehmen der MAN Gruppe

MAN Truck & Bus AG



MAN Truck & Bus AG Postfach 44 02 58 90207 Nürnberg

Sudheimer Car Technik Vertriebs GmbH
Herr P. Glaser
Felstrasse 154
22880 Wedel

Ihre Zeichen	Ihre Nachricht vom	Unser Hausruf	Unser Telefax	Unsere Zeichen	Nürnberg,
		0911 420-2005	0911 420-1928	EMTA, Jäger	28.06.2011

Prolongation of approval against M 3275-1 (Multigrades)

Start of approval: 09.07.2007

Prolongation of approval until: 08.07.2014

Marketing area: worldwide

Dear Sirs,

we are pleased to inform you, that the approval for the super high performance diesel engine oil bearing the designation

Mannol TS 5 UHPD 10W40

has been prolonged for the next three years under MAN approval-n

TUC 6513/07 for SAE 10W-40

This prolongation is only available for the unchanged formulation and in combination with the original approval letter. The approval will automatically expire at the point in time indicated above, unless an prolongation has been applied for in good time by the maker or supplier.

Yours faithfully,

MAN Truck & Bus AG

This letter was created electronically without signature.

Ursula Jäger

Vorsitzender des Aufsichtsrates: Rupert Stadler
Vorstand: Dr. Ing Georg Pachta-Reyhofen (Sprecher), Lars Wrebo,
Bernd Meierhofer, Dr. Frank Hiller, Karl Gadesmann

Sitz der Gesellschaft: München
Commerzbank Aktiengesellschaft, Dachau BLZ 700 400 41 Konto 1450600
IBAN: DE33 7004 0041 0145 0600 00 BIC: COBADEFFXXX
Stadtsparkassen München BLZ 701 500 00 Konto 89104400
IBAN: DE36 7015 0000 0089 1044 00 BIC: SSKMDEMM

Registergericht: Amtsgericht München HRB 86 963 | USt-IdNr. DE811125281

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Telefon +49 911 420-0 oder -Durchwahl
Telefax +49 911 420 446522

Wagenladungen: Nbg.-Rbf.
Lkw-Sendungen: Nbg.-Vogelweiherstr. 33

www.man-mn.com
Ein Unternehmen der MAN Gruppe

MAN Truck & Bus AG



MAN Truck & Bus AG Postfach 44 02 58 90207 Nürnberg

Sudheimer Car Technik Vertriebs GmbH
Herr P. Glaser
Felstrasse 154
22880 Wedel

Ihre Zeichen	Ihre Nachricht vom	Unser Hausruf 0911 420-2005	Unser Telefax 0911 420-1928	Unsere Zeichen EMTA, Jäger	Nürnberg, 28.06.2011
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Prolongation of approval against M 3277

Start of approval: 22.04.2009

Prolongation of approval until: 21.04.2014

Marketing area: Europe, Asia, Commonwealth of Independent States

Dear Sirs,

we are pleased to inform you, that the approval for the super high performance diesel engine oil bearing the designation

Mannol TS-6 UHPD Eco 10W40

has been prolonged for the next three years under MAN approval-n

TUC 0150/09 for SAE 10W-40

This prolongation is only available for the unchanged formulation and in combination with the original approval letter. The approval will automatically expire at the point in time indicated above, unless an prolongation has been applied for in good time by the maker or supplier.

Yours faithfully,

MAN Truck & Bus AG

This letter was created electronically without signature.

Ursula Jäger

Vorsitzender des Aufsichtsrates: Rupert Stadler
Vorstand: Dr. Ing Georg Pachta-Reyhofen (Sprecher), Lars Wrebo,
Bernd Meierhofer, Dr. Frank Hiller, Karl Gadesmann

Sitz der Gesellschaft: München
Commerzbank Aktiengesellschaft, Dachau BLZ 700 400 41 Konto 1450600
IBAN: DE33 7004 0041 0145 0600 00 BIC: COBADEFFXXX
Stadtsparkassen München BLZ 701 500 00 Konto 89104400
IBAN: DE36 7015 0000 0089 1044 00 BIC: SSKMDEMM

Registergericht: Amtsgericht München HRB 86 963 | USt-IdNr. DE811125281

MAN Truck & Bus AG
Postfach 44 02 5 90207 Nürnberg
Vogelweiherstraße 33 90441 Nürnberg
Telefon +49 911 420-0 oder -Durchwahl
Telefax +49 911 420 446522

Wagenladungen: Nbg.-Rbf.
Lkw-Sendungen: Nbg.-Vogelweiherstr. 33

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Ein Unternehmen der MAN Gruppe



MAN Truck & Bus AG Postfach 44 02 58 90207 Nürnberg

Sudheimer Car Technik Vertriebs GmbH
Herr P. Glaser
Felstrasse 154
22880 Wedel

Ihre Zeichen	Ihre Nachricht vom	Unser Hausruf	Unser Telefax	Unsere Zeichen	Nürnberg,
		0911 420-2005	0911 420-1928	EMTA, Jäger	28.06.2011

Prolongation of approval against M 3477

Start of approval: 17.03.2009

Prolongation of approval until: 16.03.2014

Marketing area: Europe, Asia, Commonwealth of Independent States

Dear Sirs,

we are pleased to inform you, that the approval for the super high performance diesel engine oil bearing the designation

Mannol TS-7 UHPD Blue 10W40

has been prolonged for the next three years under MAN approval-n

TUC 0110/09 for SAE 10W-40

This prolongation is only available for the unchanged formulation and in combination with the original approval letter. The approval will automatically expire at the point in time indicated above, unless an prolongation has been applied for in good time by the maker or supplier.

Yours faithfully,

MAN Truck & Bus AG

This letter was created electronically without signature.

Ursula Jäger

Vorsitzender des Aufsichtsrates: Rupert Stadler
Vorstand: Dr. Ing Georg Pachta-Reyhofen (Sprecher), Lars Wrebo,
Bernd Meierhofer, Dr. Frank Hiller, Karl Gadesmann

Sitz der Gesellschaft: München
Commerzbank Aktiengesellschaft, Dachau BLZ 700 400 41 Konto 1450600
IBAN: DE33 7004 0041 0145 0600 00 BIC: COBADEFFXXX
Stadtsparkassen München BLZ 701 500 00 Konto 89104400
IBAN: DE36 7015 0000 0089 1044 00 BIC: SSKMDEMM

Registergericht: Amtsgericht München HRB 86 963 | USt-IdNr. DE811125281

MAN Truck & Bus AG
Postfach 44 02 5 90207 Nürnberg
Vogelweiherstraße 33 90441 Nürnberg
Telefon +49 911 420-0 oder -Durchwahl
Telefax +49 911 420 446522

Wagenladungen: Nbg.-Rbf.
Lkw-Sendungen: Nbg.-Vogelweiherstr. 33

www.man-mn.com
Ein Unternehmen der MAN Gruppe



Volvo Powertrain Corporation

STD 417-0002 approval request

Data supplied by requesting company

Company name:*	UAB "SCT Lubricants"
Brand name:*	Mannol TS-6 Eco UHPD 10W40
Oil code:	LBB 12719-F
Viscosity grade:	10W-40
Marketing area:	Asia; Commonwealth of Independent States
Other approvals:	ACEA E7-08
	API CI-4
	OEM MB228.5, MAN3277

*) As they shall appear in approved products lists

Date of submission 2012 08 29

Submitted by

Name: Renata Zubaite
Company: UAB "SCT Lubricants"

Return approval to:

Name: Renata Zubaite
e-mail: Renata@sct.lt

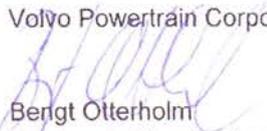
Approval

Volvo VDS-3 approval	Yes
Mack EO-N approval	Yes
Renault VI RLD-2 compliance	Yes

Approval date: September 3, 2012 **Approval #:** 417-0002-12-471

Validity: Approval expires two years after the approval date.
For approval extension, a complete and updated approval form must be submitted at the expiry date \pm two months.

Signed: Volvo Powertrain Corporation


Bengt Otterholm
Lubricants Coordinator

Disclaimer: This approval is solely based on information submitted by the applicant and no further quality check is made by Volvo. Hence, Volvo takes no responsibility to ensure that the quality of this product is continuously maintained. This is the sole responsibility of the Company (see above).



Volvo Powertrain Corporation

STD 417-0002 approval request

Data supplied by requesting company

Company name:*	UAB "SCT Lubricants"
Brand name:*	Mannol TS-5 UHPD 10W40
Oil code:	LBB 11566-F
Viscosity grade:	10W-40
Marketing area:	Europe; Asia; Commonwealth of Independent States
Other approvals:	ACEA E7-08
	API CI-4/SL
	OEM

*) As they shall appear in approved products lists

Date of submission 2012 02 09

Submitted by

Name: Renata Zubaitė
Company: UAB "SCT Lubricants"

Return approval to:

Name: Renata Zubaitė
e-mail: renata@sct.lt

Approval

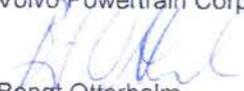
Volvo VDS-3 approval	Yes
Mack EO-N approval	Yes
Renault VI RLD-2 compliance	Yes

Approval date: February 9, 2012

Approval #: 417-0002-12-190

Validity: Approval expires two years after the approval date.
For approval extension, a complete and updated approval form must be submitted at the expiry date \pm two months.

Signed: Volvo Powertrain Corporation


Bengt Otterholm
Lubricants Coordinator

Disclaimer: This approval is solely based on information submitted by the applicant and no further quality check is made by Volvo. Hence, Volvo takes no responsibility to ensure that the quality of this product is continuously maintained. This is the sole responsibility of the Company (see above).



Volvo Group Trucks Technology

STD 417-0001 approval request

Data supplied by requesting company

Company name:*	UAB " SCT Lubricants"
Brand name:*	MN TS-7 UHPD Blue 10W40
Oil code:	(IME 1101669-U)
Viscosity grade:	10W-40
Marketing area:	Europe , Asia, Commonwealth of Independent States
Other approvals:	ACEA E4-08, E6-08, E7-08, E9-08
	API CJ-4
	OEM MB 228.51/228.31, MAN M 3477, M 3575, M3271-1, DQC IV-10 LA
	MTU Category 3.1/2.1, CES 20081

*) As they shall appear in approved products lists

Date of submission 2013 03 22

Submitted by

Name: Renata Zubaitė
Company: UAB " SCT Lubricants"

Return approval to:

Name: Renata Zubaitė
e-mail: renata@sct.lt

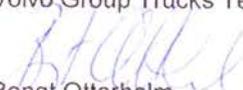
Approval

Volvo VDS-4 approval	Yes
Mack EO-O Premium Plus approval	Yes
Renault VI RLD-3 approval	Yes

Approval date: March 27, 2013 **Approval #:** 417-0001-13-513

Validity: Approval expires two years after the approval date.
For approval extension, a complete and updated approval form must be submitted at the expiry date \pm two months.

Signed: Volvo Group Trucks Technology


Bengt Otterholm
Lubricants Coordinator



Volvo Powertrain Corporation

STD 417-0002 approval request

Data supplied by requesting company

Company name:*	UAB "SCT Lubricants"
Brand name:*	Mannol TS-4 SHPD 15W40
Oil code:	LBB 11456-G
Viscosity grade:	15W-40
Marketing area:	Europe; Asia; Commonwealth of Independent States
Other approvals:	ACEA E7-08
	API CI-4
	OEM

*) As they shall appear in approved products lists

Date of submission 2012 02 08

Submitted by

Name: Renata Zubaitė
Company: UAB "SCT Lubricants"

Return approval to:

Name: Renata Zubaitė
e-mail: renata@sct.lt

Approval

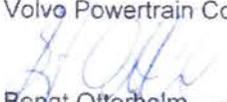
Volvo VDS-3 approval	Yes
Mack EO-N approval	Yes
Renault VI RLD-2 compliance	Yes

Approval date: February 9, 2012

Approval #: 417-0002-12-185

Validity: Approval expires two years after the approval date.
For approval extension, a complete and updated approval form must be submitted at the expiry date \pm two months.

Signed: Volvo Powertrain Corporation


Bengt Otterholm
Lubricants Coordinator

Disclaimer: This approval is solely based on information submitted by the applicant and no further quality check is made by Volvo. Hence, Volvo takes no responsibility to ensure that the quality of this product is continuously maintained. This is the sole responsibility of the Company (see above).



CHANGEONS DE VIE
CHANGEONS L'AUTOMOBILE

DREAM / DIMat / Service 68150 / TCR LAB 1 52
Technocentre – 1, avenue du Golf
78084 Guyancourt Cedex

Téléphone : +33 (0)1 76 89 78 08
Fax : +33 (0)1 76 89 08 41
Arnaud.Morizot@renault.com

API : FR TCR LAB 1 52
Grégory ALEXANDRE

Réf. 68150-2013-179

Le 15/05/2013

Attention: [Renata Zubaite](#)
Company: **UAB "SCT Lubricants"**

Address: Silutes pl. 119 – LT 95112
LITHUANIA

Objet : RN0700 Certification – SCT Lubricants.

Dear Mr. Zubaite,

I am pleased to send you the Renault certificate. Here you can find some details about your RN after sale engine oil :

Brand names : "Mannol Classic 10w-40"

- (IME0903810-A - 10w40 - A3/B4-10) : **RN0700-13-16**

The certification is effective for 4 years (until 14/05/2017).

Thank you for your cooperation.

Kind regards,

Arnaud MORIZOT
Chef de Service
« Matériaux polymères et fluides »

PJ : 1 Certificate.



Renault RN700 certificate

Identification		Supplier	SCT Lubricants
		Product name	Mannol Classic 10w-40 (IME0903810-A)
		ACEA	A3/B4-10
	1.1	Grade	10W-40

Lab performance		Kinematic viscosity (40°C)	98,06
		Kinematic viscosity (100°C)	14,34
	1.2	Shear stability	13,46
	1.3	HTHS	3,85
	1.4	Noack	12,8
		Calcium	2788
		Zinc	1936
		Magnesium	-
	1.5	Sulphur	0,77
	1.6	Phosphorus	1760
	1.7	Sulphated Ash	1,3
		Chlorine	70
		TAN	4,2
	1.9	TBN	10
		RE1 - FPM	PASS
		RE2/99 - ACM	PASS
1.10	RE3/04 - VMQ	PASS	
	RE4 - NBR	PASS	
	AEM - VAMAC	PASS	
	Foaming Seq1	0 / 0	
1.11	Foaming Seq2	20 / 0	
	Foaming Seq3	0 / 0	
1.12	Foaming Seq4	60 / 0	
1.13	CCS	6430 @ -25	
1.14	Pumping limit T* (MRV)	38196 @-30	
1.15	Density	876	
1.16	Open-vessel flash point	229	

Lab performance (continued)	1.17	Pour point	-39
	1.18	Copper corrosion	1a
	1.19	Anti-wear properties	< 0,5
	1.20	De-airing	29,5
	1.21	Water content	< 0,04
	1.22	Base oil type & ratio	59,5 % Gr I 20 % Gr III
	1.23	TOC	Classe 2
	1.24	MCT	6,6
	1.25	Auto-ignition T*	341

ACEA Engine tests performance	2.1	TU3JP high temperature deposits	Pass
	2.2	Seq VG low temperature sludge	Pass
	2.3	TU3M cam wear	Pass
	2.4	M111 black sludge	Pass
	2.5	M111 fuel economy	NR
	2.6	DV4TD dispersivity	Pass
	2.7	VW DI piston cleanliness & ring sticking	Pass
	2.8	DM04GLA	Pass

LLR	3.1	Renault LLR	NR
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Renault Registration Data (to be filled by Renault's delegate only)		
Registration	Final Technical data (dd/mm/yyyy)	28.03.2013
	Sample delivery (dd/mm/yyyy)	20.11.2012
	Renault lab serial registry (FLU)	-
Certificate	Certificate serial number	RN0700-13-16
	Delivered on (dd/mm/yyyy)	14.05.2013
	Valid till (dd/mm/yyyy)	14.05.2017
	Letter ref (NDS)	68150-2013-179

Renault: Date, Name, Signature

14/05/2013

Jean-Michel TRICHARD
Service 68160
TCR LAB 2 52
Tél. : 01.76.85.74.58
Fax : 01.76.89.08.85

Supplier commitment: Date, Name, Signature

I hereby certify that all data submitted in this form is correct and issues from Renault-approved independent or Renault-certified (self-agreement process) testing facilities

SCT Vertriebs GmbH
Feldstraße 154
22880 Wedel / Deutschland
08.05.2013
P. Glaser

Sudheimer Car Technik
Vertriebs GmbH
Feldstr. 154 • 22880 Wedel
Telefon 0 41 03 / 1 21 10
Telefax 0 41 03 / 1 21 11 16

VOLKSWAGEN

AKTIENGESELLSCHAFT

VOLKSWAGEN AKTIENGESELLSCHAFT 38436 WOLFSBURG DEUTSCHLAND

SCT-Vertriebs GmbH
Herr Glaser
Feldstraße 154

D-22880 Wedel

SK

06.09.2011
1437-pa-ca
9-73432
9-78095

IHRE ZEICHEN
IHRE NACHRICHT
UNSERE ZEICHEN
DURCHWAHL
TELEFAX
E-MAIL

15.09.2011

DATUM

Engine Oil

Dear Mr Glaser,

Analysis of the engine oil

Mannol Energy Combi LL SAE 5W-30 (Oil-Code OS 246239)

has shown that product in question meets the requirements in accordance with VW Standard 504 00 and VW Standard 507 00. This engine oil is therefore suitable for use in our vehicles with LongLife Service (petrol and diesel engines, including diesel engines with particulate traps without fuel borne catalyst) in accordance with the Owner's Literature for our products.

So that it is clear to both customers and workshops that this approval has been granted, containers should state:

“approved under VW Standard 504 00 and VW Standard 507 00”

This approval is only valid for the following production site:

UAB „SCT Lubricants“, Šilutės pl. 119, LT 95112, Kalaipėda, Lithuania

Please note that this approval expires after 36 months, at which point compliance with the then valid VW standards must be verified again.

The fee for this approval amounts to € 3 000,-.

Yours sincerely,

i.V. 

Dr. Achmus


i.A.

Panzer

VOLKSWAGEN AKTIENGESELLSCHAFT
38436 WOLFSBURG
DEUTSCHLAND
TELEFON +49-53 61-9-0
TELEFAX +49-53 61-9-2 82 82
VW@VOLKSWAGEN.DE

EHRENVORSITZENDER DES
AUF SICHTSRATS:
KLAUS LIESEN

VORSITZENDER DES AUF SICHTSRATS:
FERDINAND PIÉCH

VORSTAND:
MARTIN WINTERKORN –
VORSITZENDER

FRANCISCO J. GARCIA SANZ
JOCHEM HEIZMANN
CHRISTIAN KLINGLER
HORST NEUMANN
HANS DIETER PÖTSCH
RUPERT STADLER

VOLKSWAGEN AKTIENGESELLSCHAFT
SITZ: WOLFSBURG
AMTSGERICHT BRAUNSCHWEIG
HRB 100484