

HIGH TECHNOLOGY LUBRICANTS FOR MERCEDES-BENZ VEHICLES



TOTAL's innovation

Since 1990, the European Union has set up EURO standards which stipulate the maximum limits which should not be exceeded for polluting emissions by heavy goods vehicles of over 3.5 T. The EURO 4 standard has been compulsory since October 2006 and EURO 5 will come into effect as from October 2009.

AIM:

To meet the increasingly stringent requirements of the latest Euro norms by reduction of polluting emissions.

CHOICES IN TERMS OF DEPOLLUTION TECHNOLOGIES

SCR (Selective Catalyst Reduction)

System which enables conversion (through injection of Ad-Blue® within the exhaust system) of polluting emissions such as nitrous oxides (NOx) into non polluting products (nitrogen and water vapour).



TOTAL's OFFER

AdBlue® (an aqueous solution of synthetic urea)

- Available in the AS 24 and TOTAL network of service stations.
- From Total Lubricants in bulk, IBC (1000L), 208-litre drums, 10-litre cans.

EGR (Exhaust Gas Recirculation) + DPF* (Diesel Particulates Filter)

The EGR valve allows (by reintroducing a proportion of the exhaust gases to the air intake) the reduction of the combustion temperature which limits the formation of nitrous oxides (NOx) but at the same time produces high levels of many particulates.

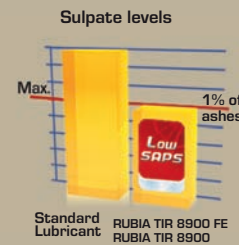
The EGR system is often associated with a Particulates Filter which prevents particulates (soot) from being emitted into the atmosphere.



For DPF:

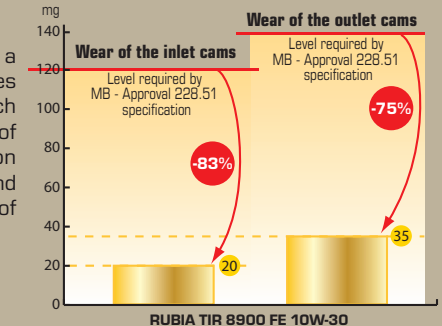
Low SAPS technology

Lubricant with low content in sulphated ashes, phosphorus and sulfur which helps avoid the clogging of the Diesel Particulates Filter sensitive to sulphur and sulphated ashes.



For EGR:

Total developed a technology of additives which helps to reach extraordinary levels of cleanliness, dispersion and anti-wear far beyond the requirements of Mercedes-Benz.

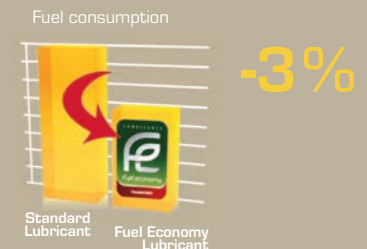


In conclusion, an offer of products corresponding to the needs of Mercedes-Benz.

As detailed in the products' chart recommendation, TOTAL products respond to the specific Mercedes-Benz norms (based on bench tests on Mercedes engines).

The advantages of TOTAL Fuel Economy (FE) technology:

- **Fuel economy:** on average 1 litre per per 100 km or 3 %* certified by independent organizations such as MILLBROOK, UTAC and TÜV - in august 2009 on product (1).
- **A reduction in CO₂ emissions** into the atmosphere of 3 tonnes per year per truck (based on an economy of 1 litre per 100 km, on a truck covering 120 000 km a year and whose average fuel consumption is 33 litres per 100 km). N.B. 1 litre of fuel = 2.7 kg of CO₂.







(*) if combined use of FE engine and transmission lubricants



Light commercial vehicle and HD with DPF*
Heavy Duty (HD)

TOTAL lubricants proposed for MERCEDES-BENZ vehicles

		Specific features	Specifications	Oil change interval	Cold starting	Composition	Applications
LUBRICANTS FOR ENGINES	 <p>Fuel Economy and Low Saps range</p>		RUBIA TIR 8900 FE 10W-30 NEW	MB-Approval 228.51	***	***	<ul style="list-style-type: none"> 100 % synthetic technology Latest generation lubricant which is both Fuel Economy (FE) and Low SAPS. Suitable for all engines (Euro 5 and previous) equipped or not with a Particulates Filter.
			RUBIA TIR 8900 10W-40	MB-Approval 228.51 MB-Approval 228.5	***	***	<ul style="list-style-type: none"> 100 % synthetic technology Adapted for every type of engine (Euro 5 and previous) equipped or not with a Particulates Filter.
			RUBIA TIR 8600 FE 10W-30	MB-Approval 228.5	***	***	<ul style="list-style-type: none"> 100 % synthetic technology Maximum protection for the engine. Recommended for all kinds of engines (Euro 5 and previous) without Particulates Filter.
			RUBIA TIR 7900 FE 10W-30 NEW	MB-Approval 228.31	**	***	<ul style="list-style-type: none"> Semi synthetic Lubricant of latest generation both FE and Low SAPS which is suited for all the engines equipped with Particulates Filter (standard drain interval).
LUBRICANTS FOR TRANSMISSIONS	Gearboxes - manual		TRANSMISSION XI 75W-90	MB-Approval 235.11	***	***	<ul style="list-style-type: none"> 100% synthetic Suitable for all manual automatic gearbox and box of transfer (with or without radiator oil). Exceptional stability for a very length interval of drain.
			EP 80W-85	MB-Approval 235.1	**	**	<ul style="list-style-type: none"> Mineral Standard extreme pressure oil for manual and automatic gearboxes, box of transfer and mechanisms of dismissal.
	- automatic		FLUIDE XLD FE NEW	MB-Approval 236.6 DEXRON® III H	***	***	<ul style="list-style-type: none"> Semi synthetic Fluid for automatic gearboxes heavy trucks Allison, ZF, Voith and power steering guaranteeing very extended oil drain intervals.
			FLUIDE G3	MB-Approval 236.9 DEXRON® III G	**	**	<ul style="list-style-type: none"> Base of synthesis Suitable for all automatic gearboxes applications (MB, ZF, Voith, Allison) equipping industrial vehicles and bus. Suitable for couplers and hydraulic converters.
	Retarders		RUBIA S 30 / RUBIA S 40	MB-Approval 228.0	**	NA	<ul style="list-style-type: none"> Mineral Also suitable for gearboxes, hydraulic couplers, torque converters.
	Axles & Differentials		TRANSMISSION SYN FE 75W-90	MB-Approval 235.8 API GL-4, GL-5 / MT-1 SAE J2360	***	***	<ul style="list-style-type: none"> 100% synthetic Recommended for hypoid differential and reducing conditions of severe lead. Excellent thermal stability for every elongate interval of drain.
			TRANSMISSION BM 75W-90	MB-Approval 235.8 API GL-5	***	***	<ul style="list-style-type: none"> 100% synthetic Recommended for differentials in extreme conditions of use (load, temperature). Elongate interval of drain.
TRANSMISSION XPM 80W-90		MB-Approval 235.20 API GL-5	**	**	<ul style="list-style-type: none"> Mineral Recommended for all Mercedes differentials in particular HL-6 requiring an approved lubricant 235.20. Elongate interval of drain. 		
SPECIAL PRODUCTS	Power steering	FLUIDE G3	MB-Approval 236.9 DEXRON® III G				<ul style="list-style-type: none"> Also suitable for cab tilts.
	Cooling systems	COOLELF AUTO SUPRA -37°C	MB-Approval 326.3 AFNOR NFR 15-601 ASTM D 3306 • ASTM D 4656 ASTM D 4985 • BS 6580				<ul style="list-style-type: none"> Excellent protection against corrosion and cavitation. Ready to use.
		GLACELF AUTO SUPRA	MB-Approval 325.3 AFNOR NFR 15-601 ASTM D 3306 • ASTM D 4656 ASTM D 4985 • BS 6580				<ul style="list-style-type: none"> Excellent protection against corrosion and cavitation. Anti-freeze, to dilute.
	Clutch	HBF 4	DOT 4 • SAE J 1704 ISO 4925				<ul style="list-style-type: none"> Recommended for brake and clutch systems.
LIGHT DUTY PRODUCTS		Specific features	Specifications	Engine	Oil-change interval	Composition	Applications
QUARTZ 9000 5W-40			MB-Approval 229.3 Retro-applicable on MB-Approval 229.1	Petrol and Diesel	***	<ul style="list-style-type: none"> 100 % synthetic technology 	<ul style="list-style-type: none"> Perfectly suitable for turbocharged, multi-valve and direct injection engines.
QUARTZ 9000 ENERGY 0W-30			MB-Approval 229.5 Retro-applicable on MB-Approval 229.1 and 229.3	without particulate filter	****	<ul style="list-style-type: none"> 100 % synthetic 	
QUARTZ INEO MC3 5W-30			MB-Approval 229.51, 229.31 Retro-applicability for Diesel engines on MB-Approval 229.1, 229.3 and 229.5	Diesel with or without particulate filter	****	<ul style="list-style-type: none"> 100 % synthetic technology 	<ul style="list-style-type: none"> Diesel Particulate Filters and other post-treatment systems.

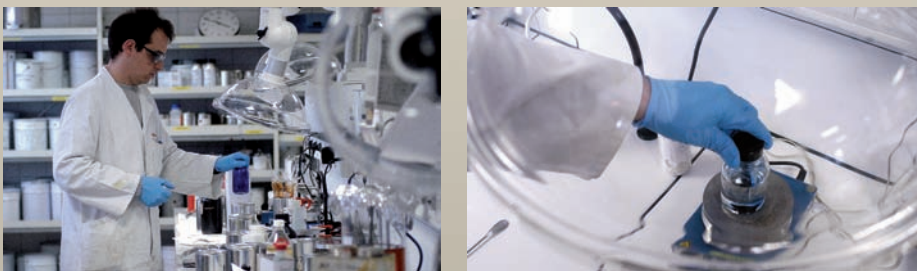
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- To retain your customers and increase your additional sales.
- To train and motivate your workshop and sales teams to promote lubricants.

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