

Approved by OEMs for the latest engines

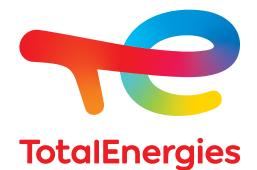


With over 200 approvals* from heavy vehicle manufacturers worldwide, it is an excellent choice for optimal engine protection. So when it comes to being on the road, trust Rubia Heavy Duty Engine Oil.

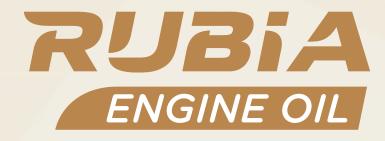
It's with you for the long run.

*For the Rubia Range in its entirety.





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Cutting edge R&D in lubricant innovation for over 60 years

TotalEnergies lubricants is a leading global manufacturer and marketer of lubricants. We have 41 production plants worldwide and more than 5,800 employees in 150 countries. TotalEnergies lubricants offers innovative, efficient and environmentally responsible products and services developed by more than 300 researchers at our R&D center. TotalEnergies lubricants is a partner of choice for the automotive, industrial and marine markets.

A leading global energy company

TotalEnergies' Marketing & Services business segment offers its professional and private customers a wide range of broad energy products and services - petroleum products, biofuels, charging and related services for electric vehicles, gas for road and maritime transportation – to support them in their mobility and help them reduce their carbon footprint. Every day, over 8 million customers visit our 16,000 service-stations all over the world. As the world's number four in lubricants, we design and sell high-performance products for the automotive, industrial and maritime sectors. We operate in 107 countries, where our 31,000 employees stand close to all of our customers.

TotalEnergies, a Company Full of Energies

TotalEnergies is a broad-energy company that produces and markets energies on a global scale: oil and biofuels, natural gas and green gases, renewables and electricity. Our 105,000 employees are committed to energy that is ever more affordable, clean, reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people.

Engine oil technology approved by truck manufacturers



RUBIA products are tested and approved more than 200 times by Major Heavy Vehicle Manufacturers

(Original Equipment Manufacturers -OEMs-)

These product approvals are guarantee certificates proving that products are 100% compatible with the engine technology of the related manufacturers.

Premium products and tailor-made solutions to increase your operational efficiency

TotalEnergies increases uptime and lower maintenance costs, thanks to its Rubia premium engine oil range, tested in real-world conditions during fleet tests and approved by Heavy Vehicle Manufacturers, and its LubAnac Fleet Management System, based on used oil analysis supported by its technical services team on the field.

TotalEnergies develops tailor-made lubricants in its state of the art R&D center in France. Products are developed in close collaboration with heavy vehicle manufacturers in order to match their sophisticated and most demanding technical requirements.



Rubia takes care of your engine



Engine Longevity: Protection against mechanical wear

Rubia products are developed with special molecules forming a strong film over metal surfaces, reducing mechanical wear in the presence of high-pressure and extreme temperatures, improving engine longevity.



Longer oil change intervals: Resistance against oxidation

Synthetic base oils with outstanding antioxidant additives increase Rubia products' resistance to oxidation, even under extreme temperatures, thus extending oil drain intervals.



Smoother and efficient engines: Better engine cleanliness

Rubia's advanced active molecules prevent formation of harmful deposits by keeping them dispersed. The products improve the longevity of the engine and make it run in a smoother and more efficient way.



Lower oil consumption: Better wear protection and engine cleanliness

Rubia products with special anti-wear additives minimize the amount of engine oil entering the combustion chamber and, by that, reduce oil consumption.



Equipment longevity, reduced maintenance costs: Compatibility with exhaust gas after treatment systems

With their "low-SAPS" (low sulphated ash, phosphorus and sulphur) technology, Rubia products prevent the clogging of diesel particulate filters (DPFs) and protect diesel engines equipped with post-treatment systems, reducing maintenance costs and protecting the environment.

Fuel economy properties: Excellent protection even with low viscosities

Engine oils can provide Fuel Economy (FE) gains via viscosity control and friction reduction. Lowering lubricant's viscosity reduces the overall friction in the engine, delivering FE benefits. Rubia FE range is approved by Heavy Vehicle Manufacturers for use in their engines to achieve their FE targets.

Rubia Optima with Inno-Boost Technology



Ready for the next chapter of engine technology

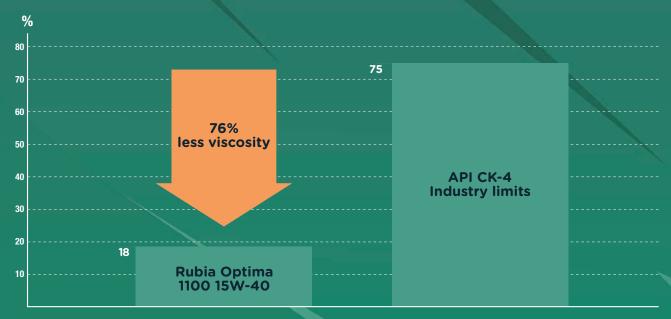
Rubia products offer excellent engine and after treatment systems protection, with extended drain intervals, for the latest, cleaner engines.

Benefits of using Rubia Optima with Inno-Boost technology

- Increased uptime and lower maintenance costs
- Exceed API CK-4 and FA-4 specifications
- Longer engine oil life
- Excellent equipment longevity

Rubia Optima products, formulated with Inno-Boost Technology, incorporate right combination of strong anti-oxidant molecules. These active molecules inhibit the radical formation and keep hydrocarbon chains intact. As a result, the engine oil viscosity remains stable and engine oil keeps its properties for longer time.

Up to 76% improvement against oil viscosity increase compared to API CK-4 Industry Limits. *



* Volvo T13 Test (KV 40 Viscosity Increase 300-360h)

Rubia product range





Rubia Optima with Inno-Boost technology

is engineered and approved for the latest technology engines and offers excellent engine longevity with extended oil drain intervals.

API CK-4 Specification:

- Newest API specification surpassing API CJ-4.
- Can be used as replacement of your current engine oil.

Product name	Base oil technology	Fuel Economy	Low SAPS	Specifications	OEM approvals	OEM meets the requirements of
Rubia Optima 4100 XFE 5W-30	FULLY SYNTHETIC	\checkmark	\checkmark	API FA-4	Volvo VDS-5, Renault Trucks RLD-5, Mack EO-S5, MB-Approval 228.61	
Rubia Optima 1100 15W-40 (Also suitable for CNG/LNG Engines)	CONVEN- TIONAL		~	ACEA E9/E7 API CK-4/CJ- 4/CI-4+/CI- 4/ CH-4/SN	Cummins CES 20086, DDC DFS 93K222, Mack EO-S 4.5, MB-Approval 228.31, Renault Trucks RLD-3, Volvo VDS-4.5, FORD WSS- M2C171-F1	DAF, Iveco

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Rubia TIR with Pro-Efficient Technology



Protection approved by professionals, for maximum efficiency

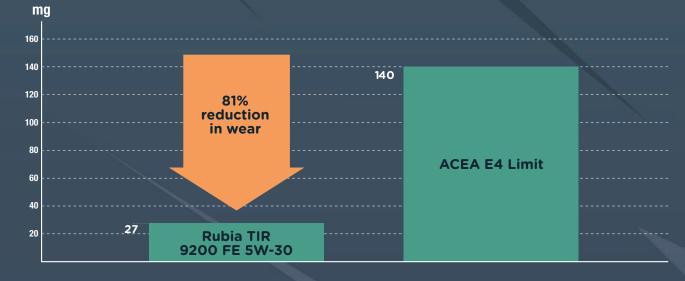
Rubia TIR products are approved by Heavy Vehicle Manufacturers for the great majority of the existing truck park, with a very wide coverage from most demanding EURO VI engines to conventional EURO III engines. The Pro-Efficient Technology, developed by TotalEnergies Research and Development teams, protects and improves the efficiency of professional engines by ensuring reduced mechanical wear and extended oil drain intervals. Meaning longer engine life, less breakdowns and reduced maintenance costs. In other words, increased efficiency and profitability for your business.

Benefits of using Rubia with Pro-Efficient technology

- Increased uptime and lower maintenance costs
- Outstanding protection against mechanical wear
- Longer engine life
- Lower oil consumption

Rubia TIR products with their Pro-Efficient technology form a strong protective layer on the metal surfaces avoiding direct contact in between moving engine parts thus minimizing mechanical wear. Pro-Efficient Technology thanks to its right combination of extra resistant anti-wear molecules and viscosity modifiers helps to maintain the oil film intact even under extreme conditions; resulting in improved engine longevity.

Up to 81% less mechanical wear compared to ACEA E4 Industry Limits. *



* OM 646LA Test (Cam Wear Outlet)



Rubia TIR with Pro-Efficient technology

was developed closely with professionals. It increases efficiency and profitability of your business by providing excellent engine protection for the majority of the existing truck park – from Euro VI to Euro III engines.



ENGINE OIL TECHNOLOGY

Rubia TIR low SAPS range

Product name	Base oil technology	Low SAPS	International specifications	OEM approvals	OEM meets the requirements of
Rubia TIR 8900 10W-40 (also suitable for CNG/LNG Engines)	SYNTHETIC TECHNOLOGY	~	ACEA E6/E7/E9 API CJ-4/CI-4/ CH-4	Mack EO-O Premium Plus, MB- Approval 228.51, Renault Trucks RLD-3, Volvo VDS-4, Scania Low Ash	MAN M 3477, M3271-1, DAF, IVECO TLSE9, Cummins CES 20081

Rubia TIR standard range

Product name	Base oil technology	International specifications	OEM approvals	OEM meets the requirements of
Rubia TIR 8600 10W-40	SYNTHETIC TECHNOLOGY	ACEA E4/E7 API CF	Mack EO-N, MAN M 3277, MB- Approval 228.5, Renault Trucks RXD/ RLD-2, Scania LDF-3, Volvo VDS-3, VOITH Class A	DAF, IVECO
Rubia TIR 7400 15W-40	CONVEN- TIONAL	ACEA E7 API CI-4/CH-4/SL	Cummins CES 20078, Mack EO-N, MB-Approval 228.3, Volvo VDS-3, Renault Trucks RLD-2	MAN M 3275, Caterpillar ECF-1a, DAF, IVECO T2E7, Scania, Isuzu

Rubia Fuel Economy

Rubia Fuel Economy (FE) products are specially formulated to maximize fuel economy properties without compromising on the engine protection.

Why would you choose Rubia TIR FE engine oil?

EURICENTE Fuel economy	Over 20 years of FE experience TotalEnergies has been developing FE products since the 1990's. Today, a third of TotalEnergies engine oils sold worldwide are formulated with FE technology.
	FE Partnerships with OEMs Rubia TIR FE range is developed in close cooperation with key OEMs. Therefore, the range is fully approved for use in their engines to achieve FE targets of the OEMs.
	FE lubricants for every application Our wide range of FE solutions are suited for every application, including engines, gearboxes and axles.
5	Tested on real Roads and certified for fuel savings FE lubricants are tested on actual fleets operating in real-world conditions, and certified by independent testing organizations such as TÜV Rheinland, UTAC, and Millbrook.

Rubia FE range

Product name	Base oil technology	Fuel Economy	Low SAPS	International Specifications	OEM Approvals	OEM Meets the requirements of
Rubia TIR 9200 FE 5W-30	FULLY SYNTHETIC	~		ACEA E4/E7	Mack EO-N, MAN M 3277, MB- Approval 228.5, Renault Trucks RLD-2, Scania LDF-3, Volvo VDS- 3, VOITH Class A, ISUZU	Cummins CES 20076/77, DAF, IVECO TFE



Rubia Gas with Anti-Nitration technology

uses a combination of high quality base oils and antioxidants in order to reduce nitrogen oxidation problems on CNG and LNG engines. high performance detergents help keep spark plugs clean and optimize engine durability.



ENGINE OIL TECHNOLOGY

Rubia Gas range

Product name	Base oil technology	Fuel Economy	Specifications	OEM approvals
Rubia Gas 9M 15W-40	CONVEN- TIONAL		API CK-4/SN	Cummins CES 20092/CES 20086 DDC DFS93K222 Volvo VDS-4.5 Renault Trucks RLD-3 Mack EO-S 4.5
Rubia Gas 9M FE 10W-30	CONVEN- TIONAL	~	API CK-4/SN	Cummins CES 20092/CES 20086 DDC DFS93K222 Volvo VDS-4.5 Renault Trucks RLD-3 Mack EO-S 4.5

LubAnac Pro HD

A preventive maintenance tool and fleet management system:

- ☑ Lifetime extension of your equipment park
- ☑ Reducing Total Cost of Ownership (TCO)
- ${}^{\scriptsize{ extsf{D}}}$ Optimising reliability and performance

What is the TotalEnergies LubAnac?

LubAnac is a preventive maintenance tool based on used oils analyses ensuring **a significant reduction of the TCO** of the customer by:

- preventing possible breakdowns,
- following regularly the condition of the lubricant and the wear of the mechanical components,
- reinforcing the lifetime and the reliability of the machines,
- optimizing the drain intervals safely.

Our professional clients are active in the automotive sector (road transport or non-road transport), industry and marine (internal and international markets).

The TotalEnergies LubAnac diagnostic service is provided worldwide by TotalEnergies subsidiaries to end users.

Preventive maintenance tool for your vehicle fleet

A single analysis to cover all of your needs by ensuring optimal technical performance.

Reduces downtime of your fleet. Prevention of possible mechanical breakdowns.



LubAnac Pro HD

How does LubAnac generate the

The diagnosis and related corrective

Pro HD system, which is based on:

Customer feedback on successful

to algorithms excluding variable

A comparison between the measured

parameters such as oil level or drain

values and the wear references thanks

remedial actions,

intervals.

measures are provided by the LubAnac

• 40 years of experience and contribution

to the LubAnac database, over 7 million

analyzes on 1 million monitoring organs,

diagnosis and propose remedial actions?

Increases the lifetime of your vehicle. Decrease of the risk

of excessive wear of the mechanical component.



Optimizes the maintenance. Control of your maintenance budget.



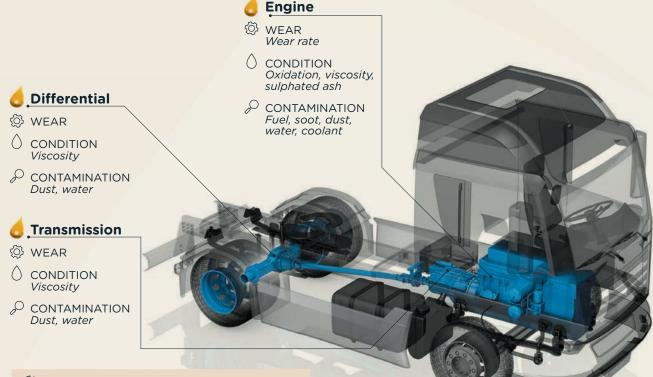
Reduces the Total Cost of Ownership (TCO).

Optimization of the amortization of your vehicle park.

ENGINE OIL TECHNOLOGY

LubAnac: Preventative maintenance technique

Used oil analysis



- ${}^{igodold{O}}$ Measurement of mechanical wear
- Condition monitoring of the lubricant
- ${}_{\!\!\mathcal{O}}$ Measurement of possible contaminations

Support and partnership

Thanks to our local implementation, we are committed to optimizing your productivity and reducing your maintenance costs.

A major actor

Our production facilities, our supply chain and our commercial presence in over 150 countries enable us to deliver a complete line of lubricants to meet all your needs.

Quality and environment

The ISO 9001 quality certification of TotalEnergies Lubrifiants guarantees a long-term commitment in this area. From creating a new product, our R&D teams develop formulations to minimize the risks of toxicity and the environmental impact.

Innovation and Research

TotalEnergies invests in cuttingedge technologies to find raw materials that always bring you more energy savings.

reasons to choose TotalEnergies

OEM and references

TotalEnergies Lubrifiants works with manufacturers and OEMs to create high-tech products, ensuring optimum performance and protection for your machines.



Technical product queries: lubricants-technical@totalenergies.com



Call centre: 0860 111 111



