### A major player

With our production, supply chain and commercial presence in more than 160 countries, we deliver a full range of lubricants.

# LubAnac off-road

## What is the **Lub Ana**lysis compared system of TotalEnergies?

LubAnac is a preventive maintenance tool and a fleet management system 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 in a safe way.

Our professional customers are active in the automotive (on-road or off-road), industrial and marine (Inland and international) sectors. LubAnac diagnosis service is sold worldwide by TotalEnergies affiliates to end-users.

## LubAnac is a specialist in **OFF-ROAD**

#### How does LubAnac generate the diagnosis and propose corrective actions?

The diagnosis and the corrective actions are generated by LubAnac off-road system based on:

- 40 years of experience and enrichment of the database LubAnac, more than 7 million analysis on 1 million monitored components,
- · Customer feedbacks on successful corrective actions,
- · A comparison between the measured values and the wear references thanks to algorithms excluding variable parameters such as oil top-ups or drain intervals.

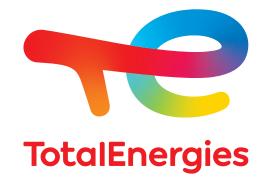
### References & OEMs

TotalEnergies Lubrifiants cooperates with equipment manufacturers to create high-technology products for optimal performance and production of your machinery.

# good reasons for choosing **TotalEnergies** Lubrifiants

### **Quality and environment**

TotalEnergies Lubrifiants ISO 9001 and 14001 certifications are the guarantee of a long term commitment to quality and environment. From the initial design stage, our R&D teams seek to develop products that minimize toxicity risks and environmental impact.





## Support and partnership

Thanks to local technical presence, we provide a high level of service to optimize your Total Cost of Ownership.



### Innovation & Research

TotalEnergies Lubrifiants invests in biotechnologies to find the most suitable components to reach energy efficiency through formulations designed in our Research Centers.

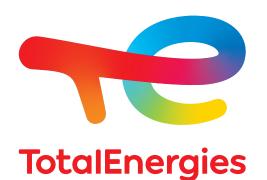


# LubAnac off-road

Let your oil do the talking

Preventive maintenance tool and fleet management system:

- ☑ Extend the lifetime of your machine park
- ☑ Reduce the Total Cost of Ownership (TCO)
- ☑ Optimize reliability and performance



lubricants.totalenergies.com/business/oil-diagnosis-lubanac

# LubAnac off-road



**Reduces downtime** of the entire machinery fleet.

Prevention of possible mechanical breakdowns.



**Increases the lifetime** of your machinery.

Decrease of the risk of excessive wear of the mechanical components.

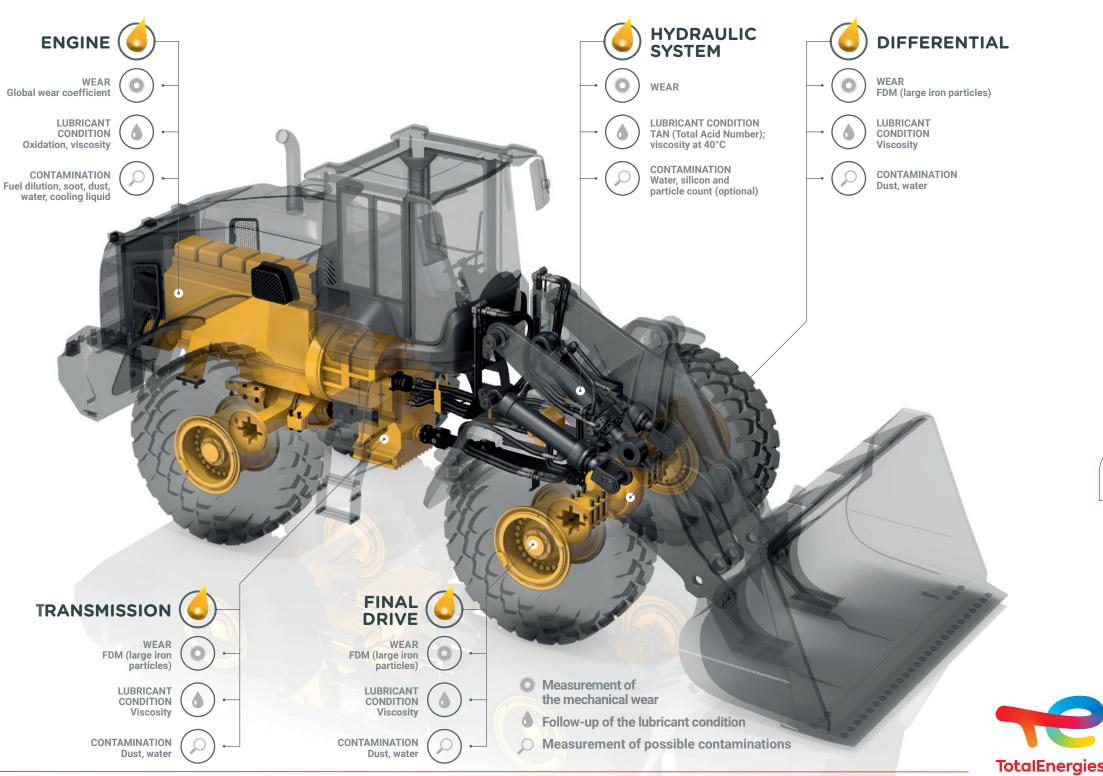


**Optimizes the** maintenance costs.

Control of your maintenance budget.

# A preventive maintenance tool for all the components of your machine park

One analysis to cover all of your needs ensuring an optimal technical performance.





### **Reduces the Total Cost** of Ownership (TCO). Optimization of the amortization of your machinery park.





### FDM (large iron particles)

Some mechanical components work in severe operating conditions and under high loads (original: under high load conditions and shocks) which can generate large wear particles of Iron (>5µm).

The FDM measurement makes it possible to detect their presence.

### TAN (Total Acid Number)

The hydraulic system is a key component for Off-Road machines.

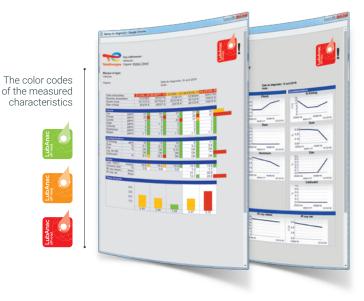
LubAnac off-road follows the evolution of the acidity of hydraulic oils in order to control its degradation over time This follow-up allows the safe optimization of the drain intervals.

## lubanac.totalenergies.com

# A simple and effective tool to manage your machinery fleet

A personalized and secure access to:

- consult new reports and previous sample results
- visualize the evolution of diagnoses and report colors
- go in depth with personalized requests
- download the results in excel or pdf format
- view under smartphones and tablets
- manage statistical modules
- pre-register data from new samples
- better understand through diagnostic assistance (CAPS) and Call back Button



Available also via LubAnac QR App and its QR code system.



# Our customers talk about us

### Sébastien C. Hardware Technical Inspector

#### **NGE Group - France**

Since LubAnac started monitoring our equipment, we have sharply cut machinery downtime, resulting in better availability. Efficient management of our lead times improves the profitability of our projects.

### **Guy Fredericks Global Fleet Director**

### SARENS - Belgium

We estimate that we've avoided up to 20 engines breakdowns a year since we introduced a new maintenance strategy based on LubAnac.