# LubAnac visio

The in-depth diagnostics system for hydraulic systems and other non-combustion type components.

**LubAnac VISIO** is an in-depth diagnostics system for non-combustion, driveline components (e.g. automatic and manual gearboxes, differentials, reduction cases) and hydraulic systems in automotive applications (e.g. construction equipment). It adds a microscopic examination of the particles in the oil to the analysis of the physico-chemical condition of the lubricant and the wear condition of the component.

### **LubAnac VISIO** is recommended for:

- In-depth follow-up of the mechanical wear, condition and contamination of the lubricants for hydraulic systems and non-combustion driveline components.
- Spot analysis and diagnosis in special cases (breakdowns, claims, expertise, ...)
- Optimisation of the oil drain intervals.

### Measured characteristics

### Mechanical wear:

Wear elements: Iron, Lead, Copper, Tin, Chromium, Aluminium, Nickel (ppm).

### **Contamination of the lubricant:**

Silicon (ppm) Water (%)

### **Characteristics of the lubricant:**

Kinematic viscosity (mm²/s) at 40°C and at 100°C, viscosity index (Extended). Acid Number TAN (mg KOH/g)

### Microscopic examination:

The oil is filtered at 5 microns. The filtrate containing particles from wear, contamination, sealings and friction material is examined under the microscope. A photograph is included in the report and is also available on the LubAnac website.

### **Optional:**

Lubricant additive elements Ca, Zn, P, Mg, Mo, Ba, V, Na, B, Ag

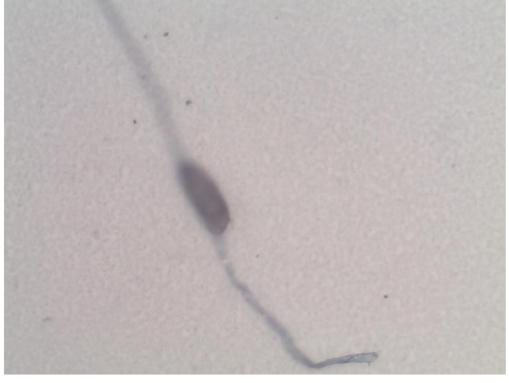


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## **⊘ Visual support on particles**

After filtration of the oil at 5 microns, the filtrate containing particles from wear, contamination, sealings and friction material is examined under the microscope. In the comment section of the report, further specifications on the type of the examined particles is given. The colour picture of the microscopic examination is added to the report. A scale indicates the particle size.



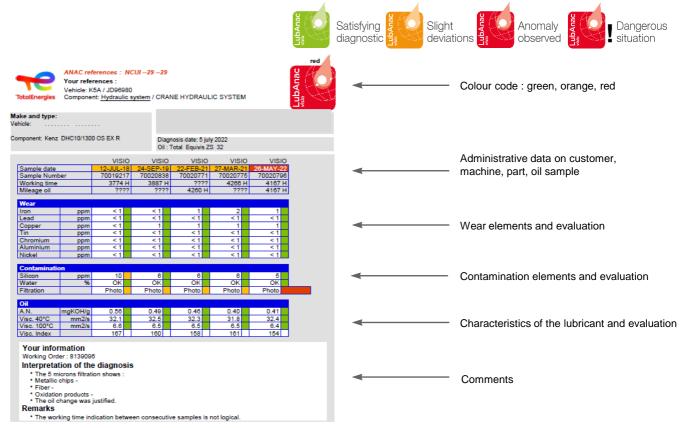




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## Presentation of results

The diagnosis report is available within 3 working days after reception of the oil sample in the lab and can be dispatched either by e-mail or can be consulted on a secured Internet portal.



The history of the 5 most recent diagnosis is displayed on the report. Reports are available in 19 languages. It is not possible to mix the history of LubAnac VISIO samples with other LubAnac routines.

### A website that helps to manage the park monitoring: lubanac.totalenergies.com A personal and secured access for:

- the consultation of new reports and history
- the possibility of making queries
- the management of diagnosis data
- the download of the data in Excel or pdf files

# compatibility with smartphones & tablets

### O Diagnosis and comments

The diagnosis and comments are established with the support of the LubAnac database of reference data on all current part types. The LubAnac technician, specialised in machine and lubricant technology, takes into account the usage conditions and possible remarks by the user. The LubAnac VISIO expert has a specific knowledge of ferrography to examine the colour, shape, size and number of the metallic and non-metallic particles in the oil. This leads to a detailed diagnosis on the source and severity of the wear and contamination of the system. Personalised responses on questions by the users are provided upon request.

