



# ADLIS Service



## What is ADLIS?

**ADLIS** (*Analysis and Diagnosis of Lubricants In Service*) is one of the most value-added services offered by our Technical Assistance and Development (ATD) team. This tool is designed to meet the most demanding market standards. It performs periodic analysis of lubricant in order to evaluate and anticipate possible damage to engines or machinery, without the need to disassemble them.

Specially designed for industrial and marine sectors, vehicle fleets, and civil engineering machinery, ADLIS analyses samples and their most significant parameters, tailoring tests to manufacturers' requirements.

Using the most advanced analytical techniques, and with the support of our team of expert engineers, a report is issued for each sample, detailing anomalous results, possible causes, recommendations for troubleshooting, and actions to avoid them in the future. Under circumstances, it offers suggestions for extending the time between oil changes.

## ADLIS Phases

For the smooth operation of **ADLIS** service, the following steps must be carried out in sequence:

- Request access to the web application (contact your sales manager for this service): If the user is a Repsol Lubricants customer, a password will be provided to access **ADLIS**. From the application, you will be able to manage the registration of your installations, modify contacts and the report list, register new machines and components or modify existing ones, and even register samples.
- Taking samples: You will receive a kit with bottles provided by your sales manager (currently available for Spain and Portugal only), which you must send to the laboratory by private courier for 1 liter containers or in the pre-paid envelopes for 125 ml containers.



Mobility



Marine



Stationary engines



Industry

- Once the samples have been received by the laboratories included in the **ADLIS** system, the lubricant samples will be analysed according to the different national and international standards included in each product's specifications. The oils are classified into 4 main groups or segments: mobility, marine, stationary engines, and industry.
- Once the results have been validated by the laboratory managers, the expert ADLIS system gives instructions, along with the ATD diagnostician's expertise, making a diagnosis of the oil's general condition. Recommendations are also made to help extend the machine's useful life. This expert system is fed with different sources: Repsol's own historical values, ATD department staff know-how, alert/alarm limits included in the different specifications issued by the equipment manufacturers (engines, compressors, turbines, etc.), different documents based on civil and military legislation, among others.
- The user will receive the results in an analysis report where they can see clearly, in the form of colour-coded pictograms, the general condition of the sample.



Correct




Alert



Alarm

The report is divided into three sections:

**ADLIS** Analysis and Diagnosis  
of Lubricant in Service



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**INFORMACIÓN**

**DATOS DEL CLIENTE**

Cliente:  

Equipo: Componente

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**DATOS DE LA MUESTRA**

Código de muestra: Horas Acute

Axite: Horas Equipon

Fecha toma de muestra: Volumen añadido (L)

Fecha análisis: FOTO

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**DIAGNÓSTICO Y RECOMENDACIONES**

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✔ Correcto   
 ⚠ Alerta   
 🚨 Alarma

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**RESULTADOS**

Código muestra	ACTUAL	105940851	105935179	105941613	105935189
Fecha toma	21/07/2020	27/08/2020	03/07/2020	18/06/2020	13/03/2020
Motor coche	2.0	2.0	2.0	2.0	2.0
Índice global	✔	✔	⚠	✔	✔
Índice desgaste	✔	✔	✔	✔	✔
Cromo, ppm	ASTM D 5185	n.f.	n.f.	n.f.	n.f.
Níquel, ppm	ASTM D 5185	0.28	0.32	0.26	0.25
Aluminio, ppm	ASTM D 5185	5	1.0	1.0	1.0
Níquel, ppm	ASTM D 5185	n.f.	n.f.	n.f.	n.f.
Plomo, ppm	ASTM D 5185	1.15	0.55	0.5	2.39
Cobalto, ppm	ASTM D 5185	n.f.	n.f.	n.f.	n.f.
Cobre, ppm	ASTM D 5185	1.82	1.1	0.1	2.54
Plata, ppm	ASTM D 5185	n.f.	n.f.	n.f.	n.f.
Vanadio, ppm	ASTM D 5185	n.f.	n.f.	n.f.	n.f.
Titanio, ppm	ASTM D 5185	n.f.	n.f.	n.f.	n.f.
Manganeso, ppm	ASTM D 5185	n.f.	n.f.	0.05	n.f.
Índice de degradación	✔	✔	✔	✔	✔
Viscosidad @100°C, cSt	ASTM D 445	13.64	13.51	14.39	13.7
Viscosidad @40°C, cSt	ASTM D 2602	2.7	4.1	2.7	5.3
Mixtura de Aluminio	ASTM E 2602	0.4	0.1	0.5	0.2

Customer information, installation, machine/component and lubricating oil.

Diagnosis and recommendations.

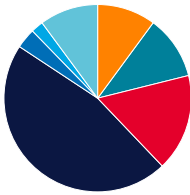
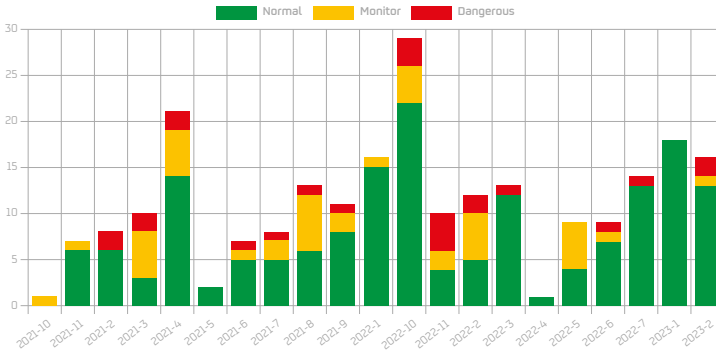
Test results and their evolution over time.

The information collected in the report will be available in the ADLIS application, and can be downloaded by the customer in various formats (.xls, .pdf, etc.) where they can make their own statistics, to optimise their preventive maintenance plan.

# Findings

## Sample status and evolution

The user will be able to see, on screen, the evolution of their machines by colour-coded pictograms indicating the general status of the submitted samples.



Number of samples per installation

- Centrifugal pump
- Alternating piston compressors
- Centrifugal compressors
- Generic industry
- Transformer
- Gas turbine
- Steam turbine

## Critical parameters / bug tracking

The user will be able to see a breakdown of the parameters of which machines are outside the marked limits, and be able to carry out a more thorough follow up of the anomalous results.

