

TOTAL ANAC VISIO



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

TOTAL ANAC 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.

TOTAL ANAC VISIO is recommended for:

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

Viscosity (mm²/s) at 40°C and 100°C , Viscosity Index
Acid Number TAN (mg KOH/g)

Microscopic examination:

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

Optional:

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

DIAGNOSIS AND COMMENTS

The diagnosis and comments are established by an TOTAL ANAC technician, specialised in machine and lubricant technology, supported by the TOTAL ANAC database of reference data on all current part types.

The TOTAL ANAC VISIO expert takes into account the specific knowledge on the usage conditions and possible remarks by the user.

Personalised answers on questions by the users are provided.

The specific knowledge of ferrography allows the TOTAL ANAC VISIO technician to examine the colour, shape 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.



DIAGNOSIS REPORT

The diagnosis report is available within 24 hours after reception in the lab and can be dispatched either by post or e-mail. It can also be consulted on the Internet. In urgent cases, the report will be faxed, as soon as the diagnosis is available.



-  Satisfying diagnostic
-  Slight deviations
-  Anomaly observed
-  Dangerous situation

ANAC, a service of the TOTAL group
ISO 9001:2008
 ANAC references : ANDC 0036 0036
 Your references :
 Machine: HYDRAULIC SYSTEM / 00-01-01 / CRANE #1 - HYDRAULICS

Diagnosis date: 30 April 2013
 Oil: Total Equiva ZS 46

	30 APR 13	26 FEB 11	13 JUN 11	24 SEP 11	24 FEB 13
Sample date	30 APR 13	26 FEB 11	13 JUN 11	24 SEP 11	24 FEB 13
Sample Number	70001543	70001543	70001543	70001543	70001543
Inform. sample	700	700	700	700	700
Working time	700 H	1400 H	2100 H	2800 H	3500 H
Manage oil	700 H	700 H	700 H	700 H	700 H

Wear

Element	Unit	30 APR 13	26 FEB 11	13 JUN 11	24 SEP 11	24 FEB 13
Iron	ppm	< 1	5	< 1	< 1	1
Lead	ppm	< 1	< 1	< 1	< 1	< 1
Copper	ppm	< 1	< 1	< 1	< 1	< 1
TiP	ppm	< 1	< 1	< 1	< 1	< 1
Chromium	ppm	< 1	< 1	< 1	< 1	< 1
Aluminium	ppm	< 1	< 1	< 1	< 1	< 1
Nickel	ppm	< 1	< 1	< 1	< 1	< 1

Contamination

Element	Unit	30 APR 13	26 FEB 11	13 JUN 11	24 SEP 11	24 FEB 13
Water	%	OK	OK	OK	OK	OK
Filtration	Photo	Photo	Photo	Photo	Photo	Photo

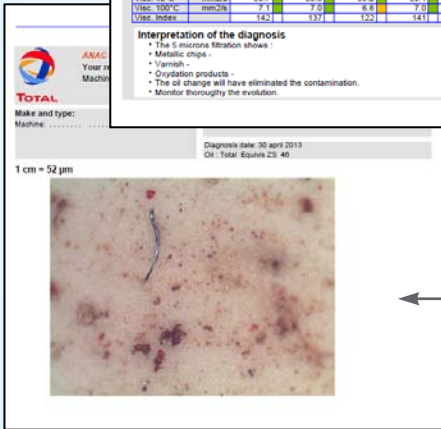
Oil

Parameter	Unit	30 APR 13	26 FEB 11	13 JUN 11	24 SEP 11	24 FEB 13
A.T.N.	mg/CFHS	0.8	0.5	0.4	0.0	0.50
Visc. 40°C	mm ² /s	39.7	39.8	39.2	39.1	41.9
Visc. 100°C	mm ² /s	7.0	7.0	6.8	7.0	7.4
Visc. Index		142	137	132	141	143

Interpretation of the diagnosis

- The 5 microns filtration shows:
 - Metals chips
 - Yamash -
 - Oxidation products
- The oil change will have eliminated the contamination.
- Monitor thoroughly the evolution.

- ← Colour code : green , orange, red
- ← Administrative data on customer, machine, part and oil sample
- ← Wear elements and evaluation (colour)
- ← Contamination elements and evaluation (colour)
- ← Evaluation of the microscopic examination
- ← Characteristics of the lubricant and evaluation (colour)
- ← Comments:
 - User memo
 - Diagnosis comments by the TOTAL ANAC expert
 - Remarks



The history of the 5 most recent diagnoses is displayed on the report.

Colour picture of the microscopic examination. A scale indicates the particle size

A website that helps to manage the park monitoring: www.anac-diagnosis.com

A personal and secured access allows:

- Consultation of new results and history
- On-line recording of data of new samples
- Picture of microscopic examination
- Mobile version for smartphones & tablets
- Graphical display of analyses results
- Queries
- Downloads of Excel and pdf files
- Statistics

Available in 7 languages



TOTAL ANAC MAKES A DIFFERENCE

- Diagnosis supported by a historical database.
- Comments by a specialised technician.
- Microscopic examination determines exact nature of wear and contamination.
- Reports available by post, e-mail, fax and Internet.
- Over 15 year of experience in ferrography.
- Reports available in 19 languages.

