

## What is ANAC?

It is a unique fleet management assistant tool for lubricant oils diagnoses offered by TOTAL Group. It is a diagnosis system for diesel engines and other driveline components, based on the analysis of used oil.

Other than the classical oil analysis, offered by most specialized labs, the ANAC system is not only looking for a diagnosis of the residual quality of the oil itself, but primarily focusing on the wear behavior of the engines, gearboxes, axles etc

## Advantages of ANAC

What makes ANAC system unique and different is its special advantages.

- **Accuracy and relevance of the diagnosis.**
  - I. It can be used as a fleet management assistant tool since it allows the customer to access database that includes the history of previous analyses for all equipments and parts. This will allow the customer to monitor changes in the condition of the machines, and Take decisions on the action required to avoid any failure.
  - II. By applying the General Wear Coefficient (G.W.C.) ratio, the customer can have information in the diagnoses about machines if they are wearing more or less than ratios and limits available in ANAC database.
  - III. ANAC has a unique database that had been collected through 30 years' experience and about 3 million diagnoses. This unique resource enabling ANAC to make accurate calculations of the wear coefficient of the mechanical parts. Currently, the ANAC database contains statistical references on approximately 11000 component types. ANAC is used by majority of importers in different countries and for the monitoring and follow-up of vehicles under maintenance contracts.
  - IV. Using a mathematical model known as COMPENSATION, ANAC identifies the deviation of wear metals if exists by comparing the lab results by reference database.
- **Reduces downtime.**
- **Prevention of mechanical failures.**
- **Longer servicing intervals.**
- **Extended equipment lifetime and added reliability.**
- **Increased workshop productivity.**
- **Main benefit to the customer is the long term financial benefits:**
  - I. Reduced operating costs by
    - Optimization of equipment service life and drains intervals.
    - Prevention of failures and down time.

Diagnoses for the purchase of used equipment.

Enhancement of equipment resale value

II. Optimized maintenance of your vehicle fleet and equipment

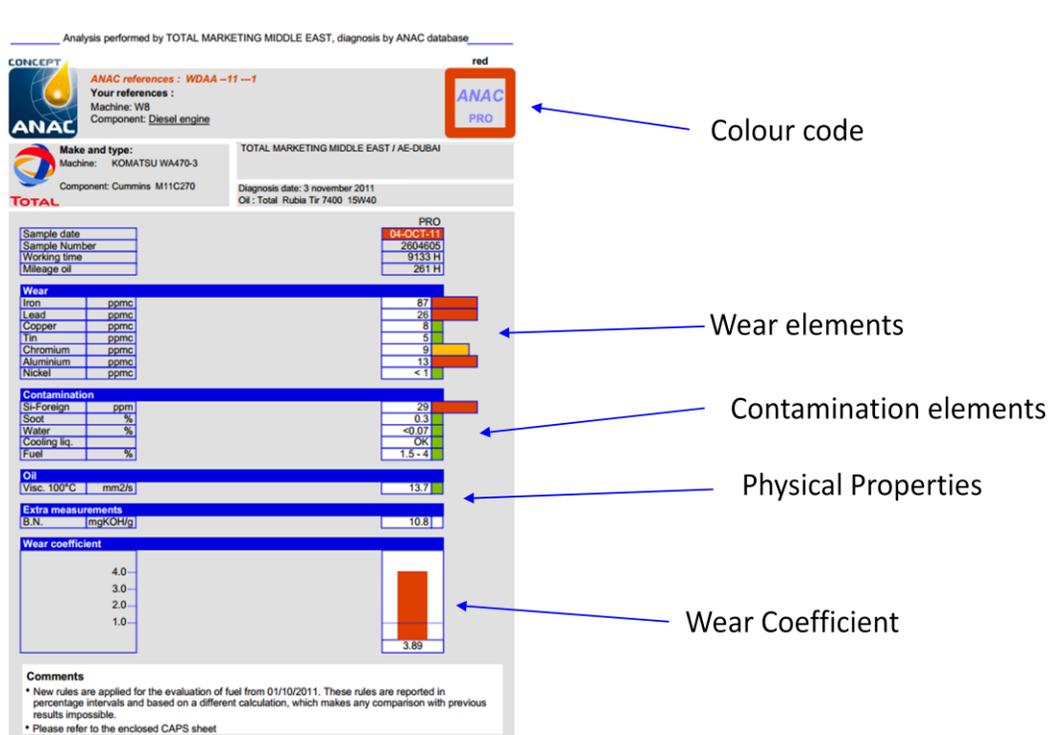
Prevention of failures and down time, justification of emergency servicing, and decision to keep a machine in or out of service, in addition to increasing the workshop efficiency.

## Reporting

Advanced reporting system for both oil analysis and management review reporting through online website.

### Oil analysis results reporting:

- Improved reports with advanced interpretation comment based on comparison with ANAC database: ANAC report contains more information than the regular reports.



**CAPS: Customer Assisted Prognosis System**

**Degree of intervention Importance**

**Final Comments**

Analysis performed by TOTAL MARKETING MIDDLE EAST, diagnosis by ANAC database

**CONCEPT ANAC** **red**  
ANAC references : **WDAA --11 ---1**  
Your references :  
Machine: W8  
Component: Diesel engine

**Make and type:**  
Machine: KOMATSU WA470-3  
Component: Cummins M11C270

TOTAL MARKETING MIDDLE EAST / AE-DUBAI  
Diagnosis date: 3 november 2011  
Oil : Total Rubia Tir 7400 15W40

**C. A. P. S.**

Customer Assisted Prognosis System:  
Based on the feedback from our customers, the percentage probability of the possible causes of this red diagnosis was calculated.

Possible causes	Prob
* Air intake system. Engine wear caused by penetration of sand or dust.	60 %
* Internal wear of the engine, not caused by the detected contamination of the oil.	26 %
* Service, usage and maintenance conditions.	8 %

**Evaluation**

DEGREE OF IMPORTANCE

0 10 20 30 40 50 60 70 80 90 100 %

**Comments**

- \* Abrasive wear of different parts of the engine.
- \* Wear of lead based parts, e.g. the bearings.

**General comments**

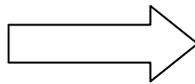
- \* A successful intervention is not always followed by a green diagnosis. In some cases the improvement of the results is not immediate.

Please always contact your ANAC consultant before repairing or dismantling the engine.  
This CAPS report is based on the engine type provided by you.

Smart Remarks

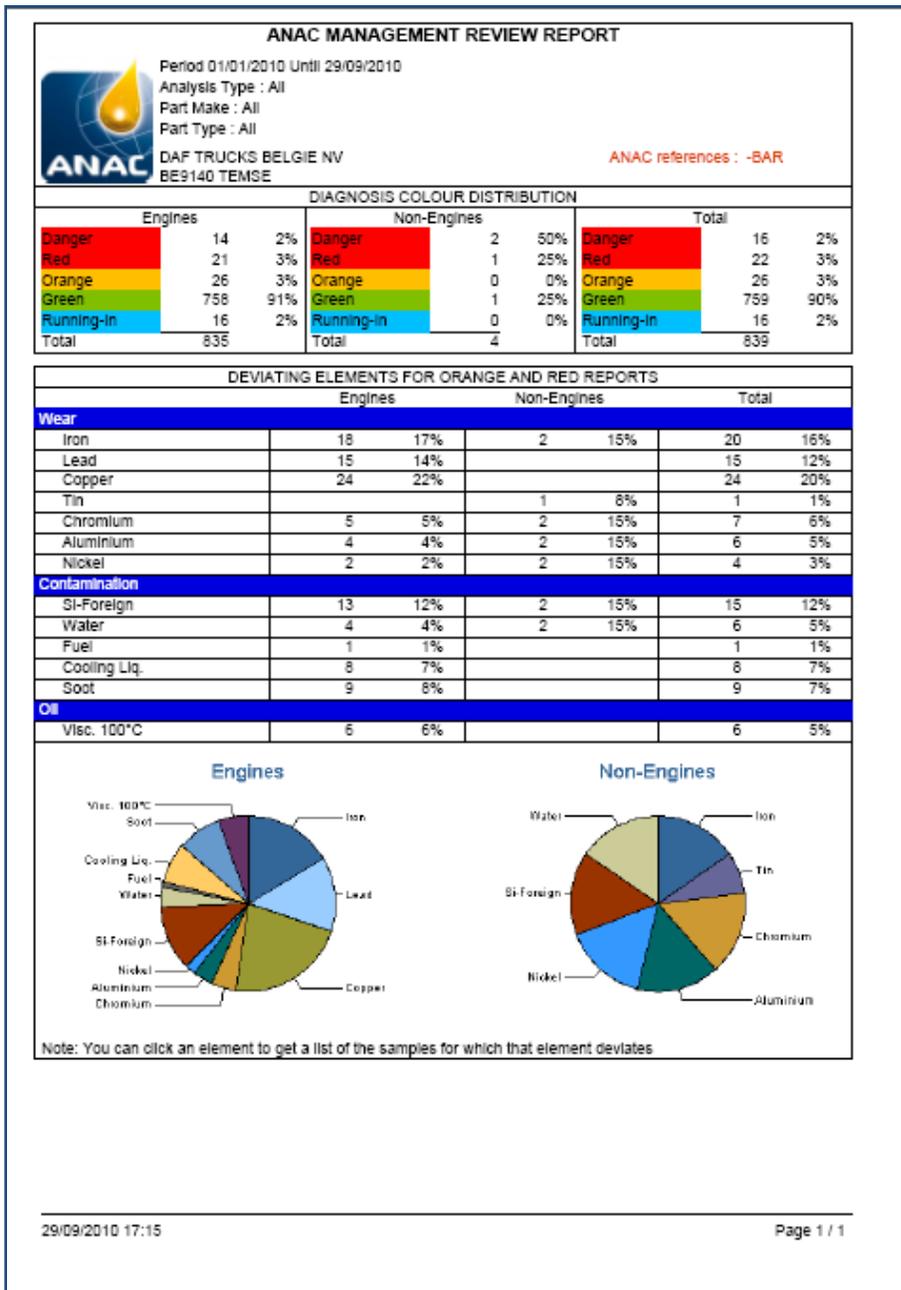
### Management Reporting:

Diversity of management reporting that can help you to take the right decisions to keep up your machines in the optimal operating condition





- Management Review Report



- Overview activity and color distribution

Statistic of performed diagnoses - Microsoft Internet Explorer provided by TOTAL

### Combustion engine - All

Anac Code :---A  
STACANV

[Click here to be able to save the statistics](#)

Engines	Running-in	green	orange	red	Total sum				
2008	13	20%	47	73%	2	3%	2	3%	64
2007	10	7%	119	83%	15	10%	0	0%	144
2006	9	6%	121	81%	11	7%	8	5%	149
2005	4	3%	129	82%	15	9%	10	6%	158
2004	3	2%	121	74%	19	12%	21	13%	164
2003	4	2%	141	79%	26	15%	8	4%	179
2002	2	1%	141	97%	1	1%	1	1%	145
2001	9	6%	125	89%	3	2%	3	2%	140
2000	0	0%	160	98%	1	1%	2	1%	163
1999	10	6%	152	93%	1	1%	1	1%	164

---A

Mileage	Colour	Actions
OS 3341		
44		
06.745 K	orange	Diagn. [Icons]
15		
94.464 K	green	Diagn. [Icons]
O 815		
16		
98.390 K	green	Diagn. [Icons]
14		
22		
41.949 K	green	Diagn. [Icons]
45		
34.787 K	orange	Diagn. [Icons]
O		
15		
99.052 K	orange	Diagn. [Icons]
46		
41.952 K	green	Diagn. [Icons]
O 1218		
17		
00.883 K	green	Diagn. [Icons]
26		
33.786 K	green	Diagn. [Icons]
46		
99.603 K	green	Diagn. [Icons]

## ANAC Web

ANAC WEB offers you a simple and direct access to oil diagnoses for ANAC users. In addition, ANAC web is available through smart phones and can be programmed to generate and read special QR codes for your equipments, where you can access your oil analysis results from anywhere.

The image displays three screenshots of the ANAC Diagnosis web application. The top screenshot shows the mobile app interface with a navigation menu and promotional banners. The middle screenshot shows the desktop version of the website with a search filter on the left and a table of machine analysis records. The bottom screenshot shows a detailed oil analysis report for a Mercedes-Benz vehicle, including a table of oil properties and a bar chart of engine parameters.

Customer	Machine Part	Info	Info	Make	Type	Total mileage	Colour	Actions
MDA...	...	...	...	Mercedes	HD32	...	...	...
MDA...	...	...	...	Mercedes	OU52LA	...	...	...
MDA...	...	...	...	Mercedes	OU512 A	...	...	...
MDA...	...	...	...	Mercedes	...	...	...	...
MDA...	...	...	...	Mercedes	...	...	...	...
MDA...	...	...	...	Mercedes	...	...	...	...
MDA...	...	...	...	Mercedes	...	...	...	...
MDA...	...	...	...	Mercedes	...	...	...	...
MDA...	...	...	...	Mercedes	...	...	...	...
MDA...	...	...	...	Mercedes	...	...	...	...

Sample	Oil	Oil	Oil	Oil	Oil
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
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The commercial web site is  
[www.anac-diagnosis.com](http://www.anac-diagnosis.com)

