



PERFORMANCE  
UNDER  
PRESSURE

OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**CATERPILLAR EMD CAT 3412**

Component  
**Diesel Engine**

Fluid  
**{not provided} (20 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RP034655</b>	RP033939	RP033940
Sample Date		Client Info		<b>02 Mar 2007</b>	24 Jan 2007	22 Dec 2006
Machine Age	hrs	Client Info		<b>5887</b>	4989	4269
Oil Age	hrs	Client Info		<b>898</b>	2382	1678
Filter Age	hrs	Client Info		<b>898</b>	720	878
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m		<b>58</b>	76	91
Chromium	ppm	ASTM D5185m		<b>3</b>	8	9
Nickel	ppm	ASTM D5185m		<b>2</b>	<1	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m		<b>7</b>	17	20
Lead	ppm	ASTM D5185m		<b>7</b>	17	11
Copper	ppm	ASTM D5185m		<b>48</b>	30	62
Tin	ppm	ASTM D5185m		<b>0</b>	2	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

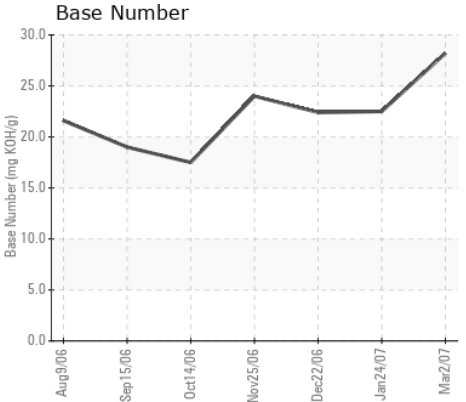
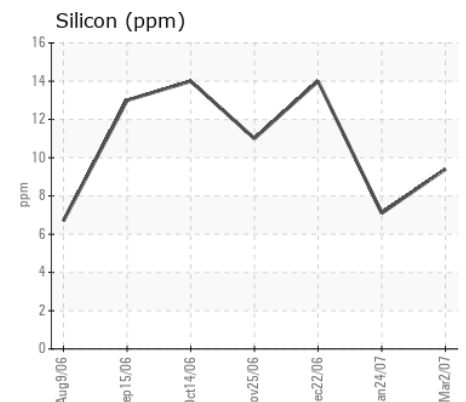
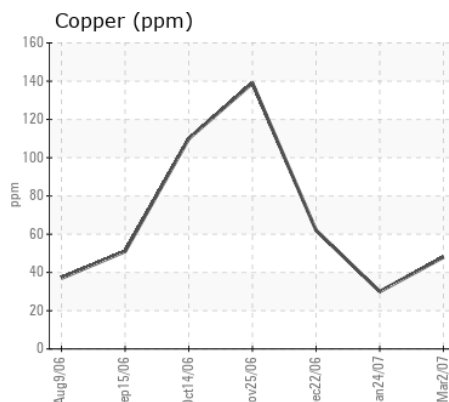
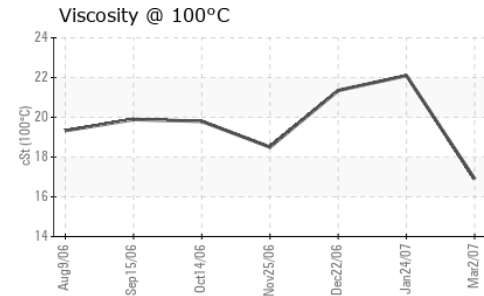
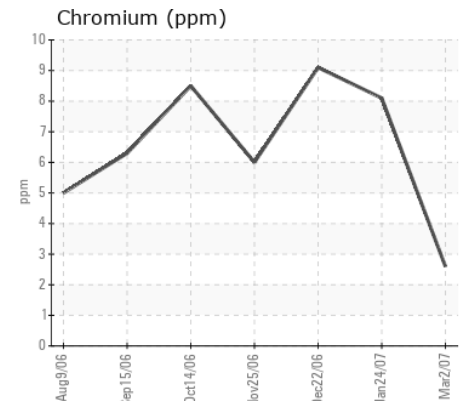
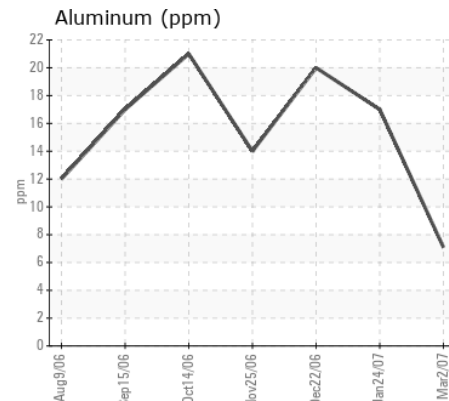
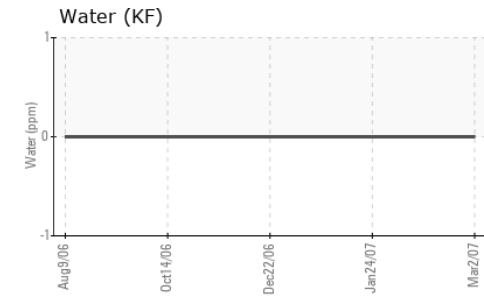
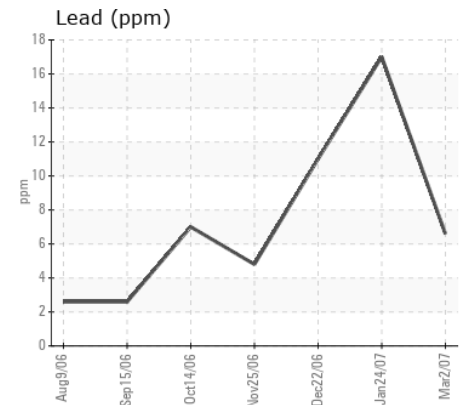
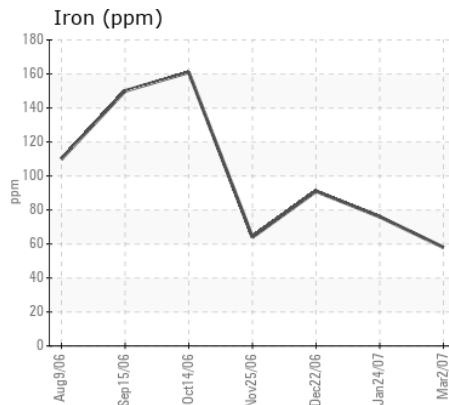
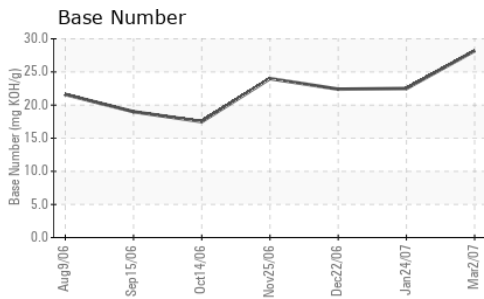
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m		<b>9</b>	7	14
Potassium	ppm	ASTM D5185m		<b>0</b>	<1	0
Fuel		WC Method		<b>&lt;1.0</b>	<1.0	<1.0
Water	%	ASTM D6304		<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.6</b>	1.8	▲ 2
Nitration	Abs/cm	*ASTM D7624		<b>17.</b>	19.	19.
Sulfation	Abs/.1mm	*ASTM D7415		<b>49.</b>	76.	78.
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The condition of oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>24</b>	6	7
Boron	ppm	ASTM D5185m		<b>1</b>	5	2
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>117</b>	155	182
Manganese	ppm	ASTM D5185m		<b>1</b>	3	2
Magnesium	ppm	ASTM D5185m		<b>3202</b>	3429	3952
Calcium	ppm	ASTM D5185m		<b>6426</b>	7500	7743
Phosphorus	ppm	ASTM D5185m		<b>959</b>	1096	1158
Zinc	ppm	ASTM D5185m		<b>1536</b>	1728	1864
Oxidation	Abs/.1mm	*ASTM D7414		<b>32.</b>	39.	39.
Base Number (BN)	mg KOH/g	ASTM D2896		<b>28.2</b>	22.5	22.4
Visc @ 100°C	cSt	ASTM D445		<b>16.9</b>	22.1	21.35



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP034655 **Received** : 15 Mar 2007  
**Lab Number** : 01925342 **Tested** : 16 Mar 2007  
**Unique Number** : 4049022 **Diagnosed** :  
**Test Package** : MOB 2 ( Additional Tests: KF )

**OILMAX S.A.S.**  
 AV 6 DICIEMBRE Y GASPAR CANTERO  
 QUITO-ECUADOR,

Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact: DANNY BARREIRO  
 oilmax.ec@gmail.com  
 T: (593)996-451694  
 F: x: