



PERFORMANCE  
UNDER  
PRESSURE

OIL ANALYSIS REPORT

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

Machine Id  
**CATERPILLAR EMD CAT 4601/AUCA SUR-01**

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>RP034960</b>	RP033589	RP033587
Sample Date		Client Info		<b>25 Mar 2006</b>	21 Dec 2005	20 Nov 2005
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>1478</b>	1451	709
Filter Age	hrs	Client Info		<b>730</b>	730	709
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
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>74</b>	55	37
Chromium	ppm	ASTM D5185m		<b>2</b>	2	1
Nickel	ppm	ASTM D5185m		<b>1</b>	1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m		<b>9</b>	8	9
Lead	ppm	ASTM D5185m		<b>3</b>	2	1
Copper	ppm	ASTM D5185m		<b>7</b>	6	4
Tin	ppm	ASTM D5185m		<b>0</b>	0	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**

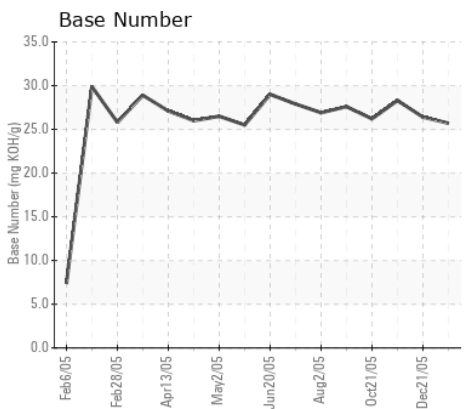
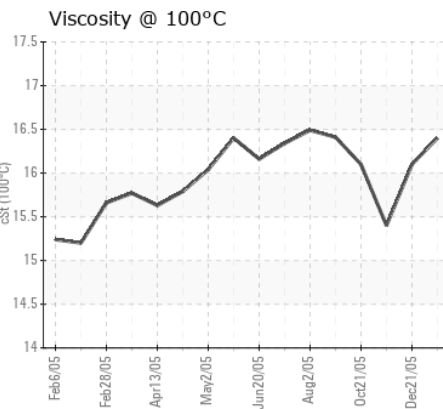
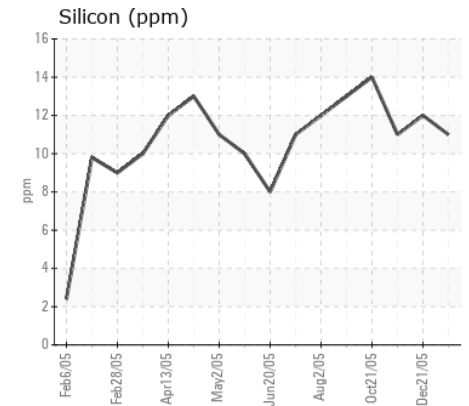
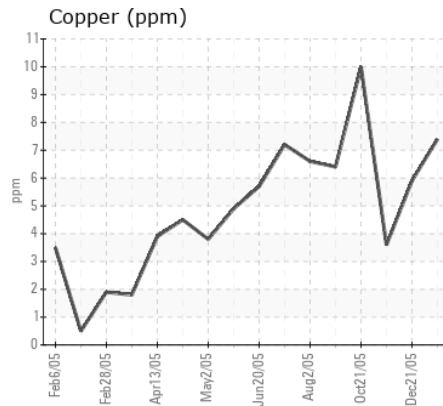
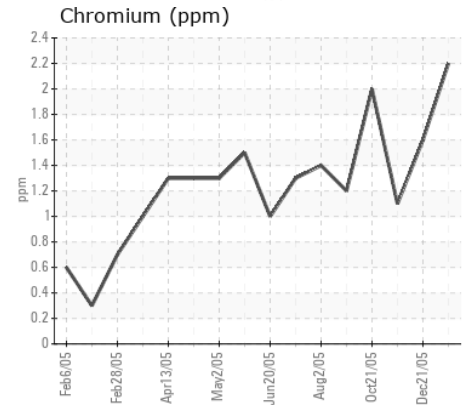
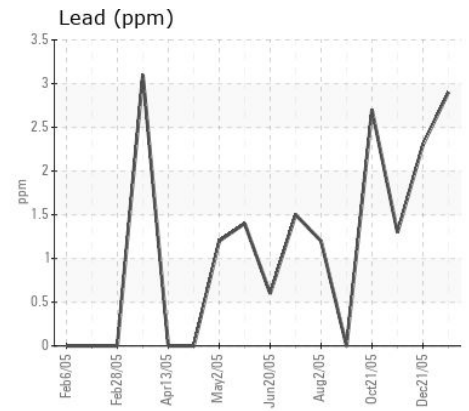
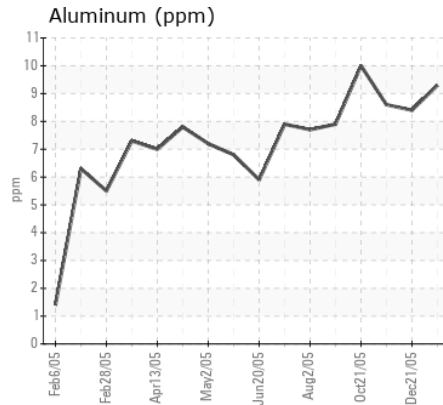
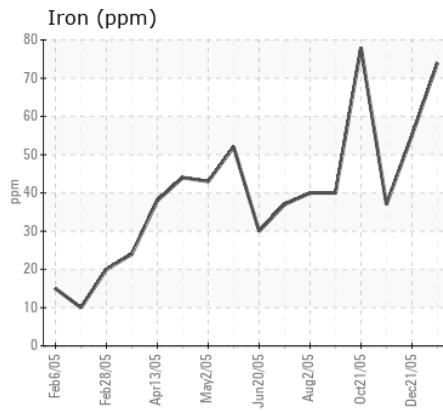
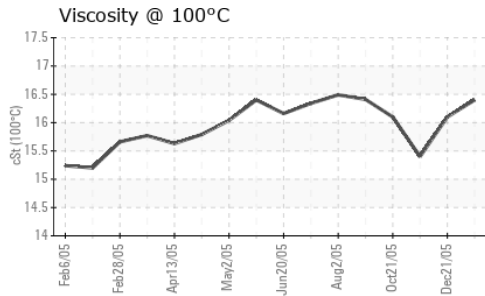
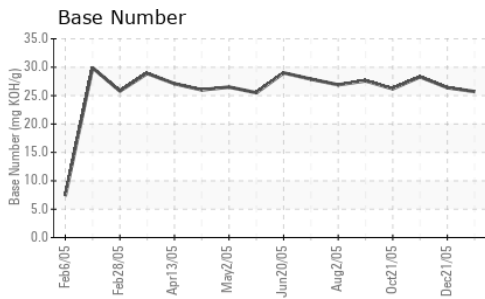
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m		<b>11</b>	12	11
Potassium	ppm	ASTM D5185m		<b>2</b>	0	0
Fuel		WC Method		<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method		<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.5</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624		<b>0.31</b>	0.26	0.22
Sulfation	Abs/.1mm	*ASTM D7415		<b>0.64</b>	0.56	0.45
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	▲ 0.5%

**FLUID CONDITION**

The condition of oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	5	5
Boron	ppm	ASTM D5185m		<b>1</b>	2	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>138</b>	135	131
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>3428</b>	3324	3250
Calcium	ppm	ASTM D5185m		<b>6651</b>	6468	6335
Phosphorus	ppm	ASTM D5185m		<b>1032</b>	1017	1013
Zinc	ppm	ASTM D5185m		<b>1537</b>	1474	1444
Oxidation	Abs/.1mm	*ASTM D7414		<b>0.77</b>	0.76	0.72
Base Number (BN)	mg KOH/g	ASTM D2896		<b>25.7</b>	26.4	28.3
Visc @ 100°C	cSt	ASTM D445		<b>16.4</b>	16.1	15.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP034960  
**Lab Number** : 01711416  
**Unique Number** : 3697673  
**Test Package** : MOB 2

**Received** : 24 May 2006  
**Tested** : 25 May 2006  
**Diagnosed** : 25 May 2006 - Doug Bogart

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

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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)

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