



PERFORMANCE  
UNDER  
PRESSURE

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**CATERPILLAR EMD CAT 4111**

Component  
**Diesel Engine**

Fluid  
**{not provided} (12 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RP025614</b>	RP034961	---
Sample Date		Client Info		<b>16 May 2007</b>	25 Apr 2007	---
Machine Age	hrs	Client Info		<b>11827</b>	11325	---
Oil Age	hrs	Client Info		<b>502</b>	374	---
Filter Age	hrs	Client Info		<b>502</b>	374	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m		<b>22</b>	16	---
Chromium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Aluminum	ppm	ASTM D5185m		<b>5</b>	2	---
Lead	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m		<b>62</b>	37	---
Tin	ppm	ASTM D5185m		<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

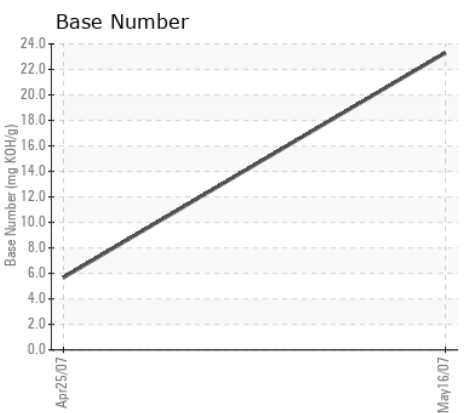
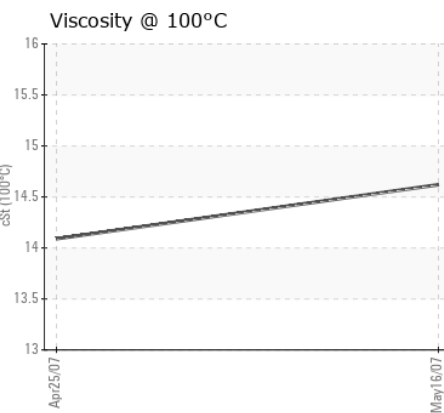
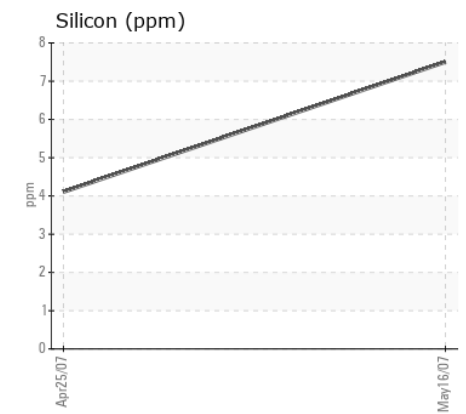
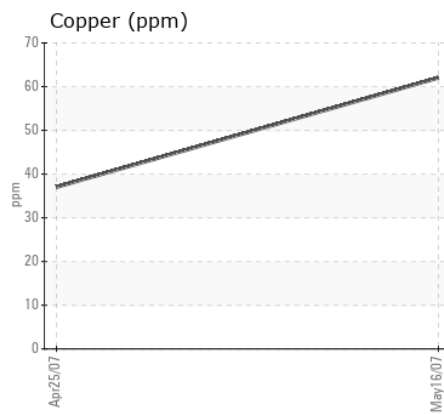
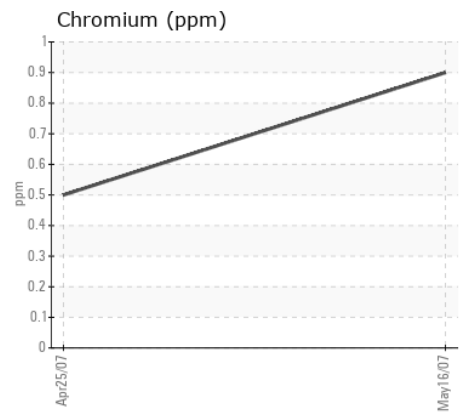
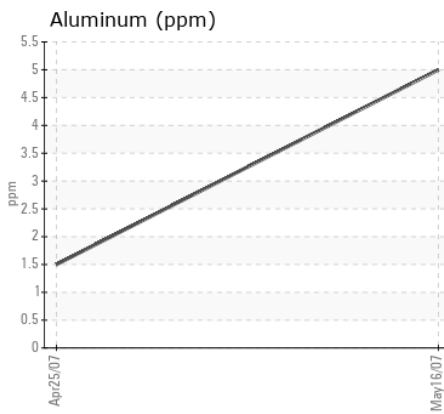
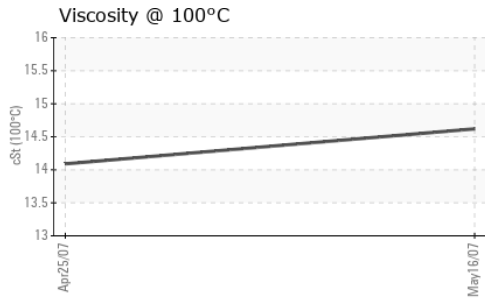
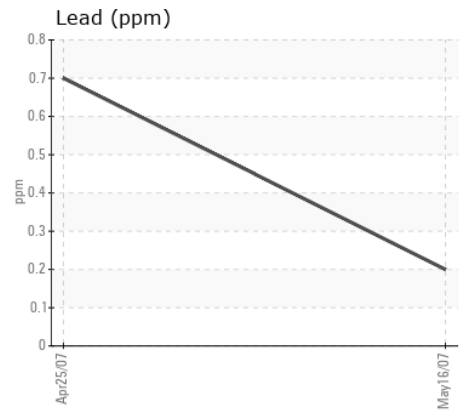
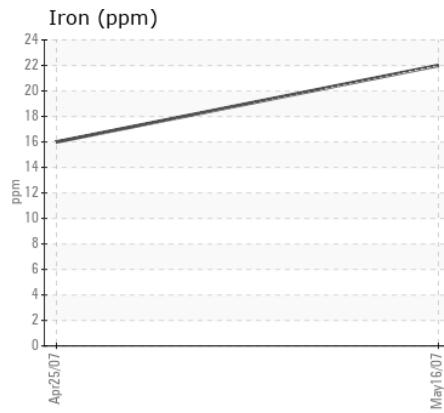
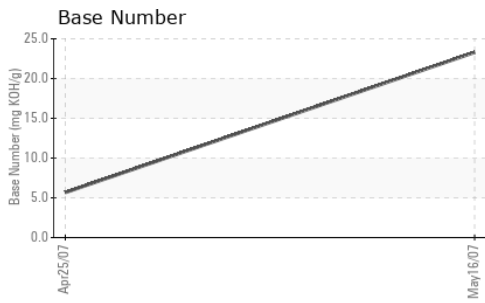
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m		<b>8</b>	4	---
Potassium	ppm	ASTM D5185m		<b>0</b>	0	---
Fuel		WC Method		<b>&lt;1.0</b>	<1.0	---
Water		WC Method		<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844		<b>0.3</b>	0	---
Nitration	Abs/cm	*ASTM D7624		<b>10.</b>	3.	---
Sulfation	Abs/.1mm	*ASTM D7415		<b>28.</b>	12.	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual		<b>NEG</b>	NEG	---

**FLUID CONDITION**

The condition of oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>22</b>	57	---
Boron	ppm	ASTM D5185m		<b>2</b>	1	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>88</b>	39	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>2178</b>	286	---
Calcium	ppm	ASTM D5185m		<b>4869</b>	1966	---
Phosphorus	ppm	ASTM D5185m		<b>848</b>	667	---
Zinc	ppm	ASTM D5185m		<b>1239</b>	832	---
Oxidation	Abs/.1mm	*ASTM D7414		<b>19.</b>	4.	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>23.3</b>	5.67	---
Visc @ 100°C	cSt	ASTM D445		<b>14.62</b>	14.09	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : RP025614

**Lab Number** : 01963080

**Unique Number** : 4111775

**Test Package** : MOB 2

**Received** : 21 May 2007

**Tested** : 22 May 2007

**Diagnosed** : 23 May 2007 - Doug Bogart

**OILMAX S.A.S.**  
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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)