



PERFORMANCE  
UNDER  
PRESSURE

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**CATERPILLAR EMD 3406**  
Component  
**Diesel Engine**  
Fluid  
**ROYAL PURPLE MOTOR OIL 15W40 (10 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RP034964</b>	RP034973	RP033930
Sample Date		Client Info		<b>05 Apr 2007</b>	02 Mar 2007	24 Jan 2007
Machine Age	hrs	Client Info		<b>11036</b>	10224	9339
Oil Age	hrs	Client Info		<b>812</b>	2536	1651
Filter Age	hrs	Client Info		<b>812</b>	885	720
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	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>86	<b>43</b>	55	76
Chromium	ppm	ASTM D5185m	>3	<b>2</b>	7	3
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	1	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>7</b>	16	8
Lead	ppm	ASTM D5185m	>16	<b>4</b>	14	15
Copper	ppm	ASTM D5185m	>250	<b>53</b>	26	22
Tin	ppm	ASTM D5185m	>2	<b>0</b>	0	1
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**

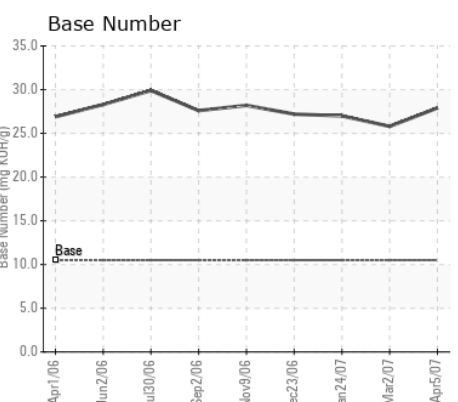
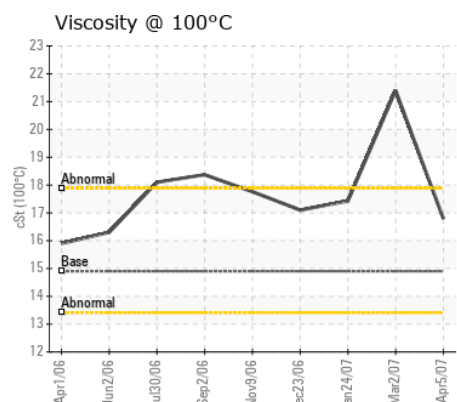
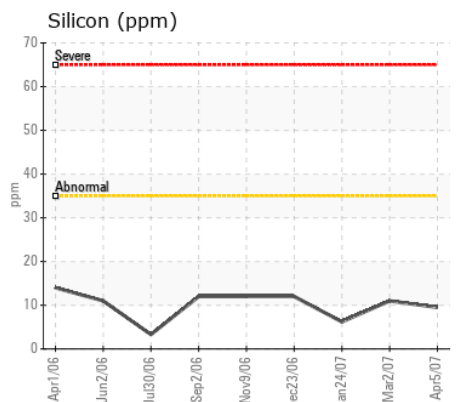
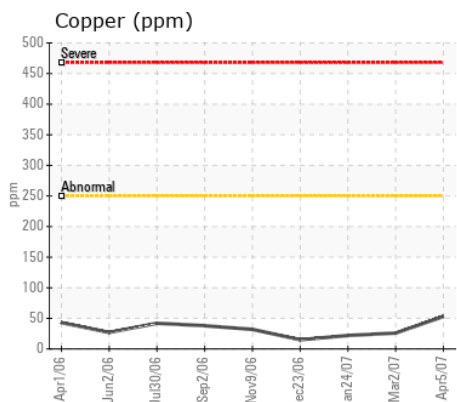
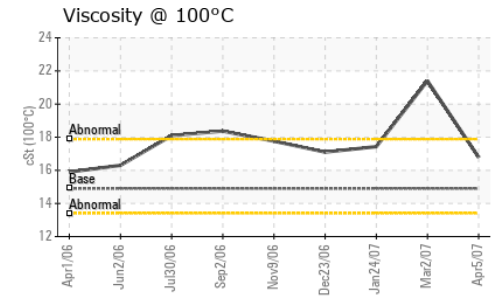
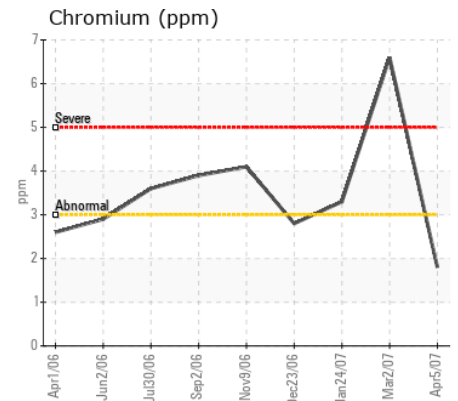
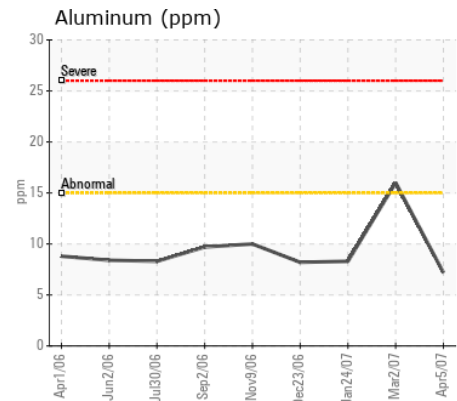
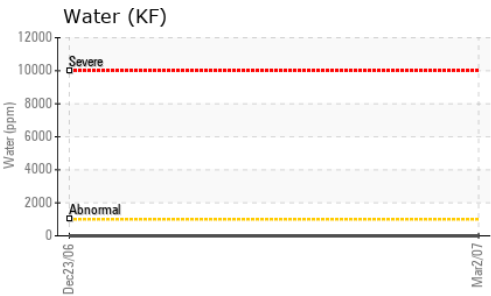
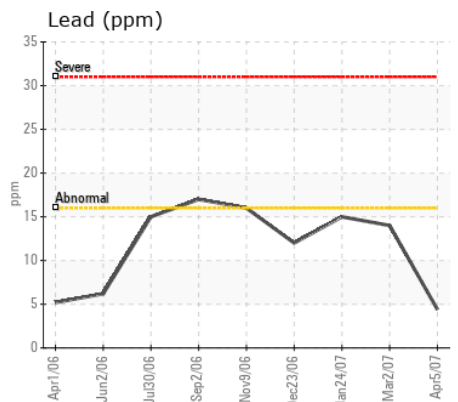
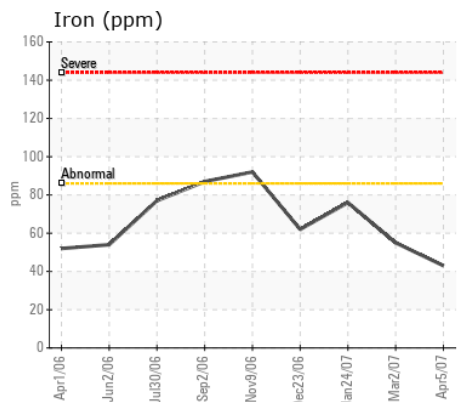
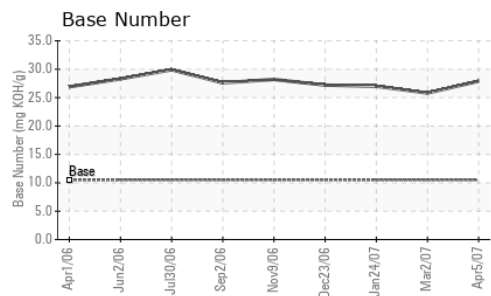
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>35	<b>10</b>	11	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	%	ASTM D6304	>0.1	<b>NEG</b>	▲ 0.102	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0</b>	0.9	0.3
Nitration	Abs/cm	*ASTM D7624		<b>3.</b>	15.	9.
Sulfation	Abs/.1mm	*ASTM D7415		<b>14.</b>	54.	29.
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	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The condition of oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>10</b>	19	7
Boron	ppm	ASTM D5185m	0	<b>2</b>	2	5
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	100	<b>122</b>	138	142
Manganese	ppm	ASTM D5185m		<b>1</b>	1	3
Magnesium	ppm	ASTM D5185m	60	<b>3181</b>	3787	3056
Calcium	ppm	ASTM D5185m	3050	<b>6511</b>	7497	6774
Phosphorus	ppm	ASTM D5185m	1050	<b>988</b>	1023	1034
Zinc	ppm	ASTM D5185m	1200	<b>1562</b>	1737	1539
Oxidation	Abs/.1mm	*ASTM D7414		<b>6.</b>	29.	16.
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>27.9</b>	25.8	27.0
Visc @ 100°C	cSt	ASTM D445	14.9	<b>16.79</b>	▲ 21.4	17.43



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP034964 **Received** : 20 Apr 2007  
**Lab Number** : 01946154 **Tested** : 23 Apr 2007  
**Unique Number** : 4084839 **Diagnosed** : 23 Apr 2007 - Doug Bogart  
**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: