



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>RP034558</b>	RP034683	RP034943
Sample Date		Client Info		<b>30 Jul 2006</b>	02 Jun 2006	01 Apr 2006
Machine Age	hrs	Client Info		<b>5250</b>	0	0
Oil Age	hrs	Client Info		<b>2148</b>	760	1459
Filter Age	hrs	Client Info		<b>700</b>	760	730
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
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		<b>77</b>	54	52
Chromium	ppm	ASTM D5185m		<b>4</b>	3	3
Nickel	ppm	ASTM D5185m		<b>2</b>	2	1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m		<b>8</b>	8	9
Lead	ppm	ASTM D5185m		<b>15</b>	6	5
Copper	ppm	ASTM D5185m		<b>42</b>	27	43
Tin	ppm	ASTM D5185m		<b>2</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**

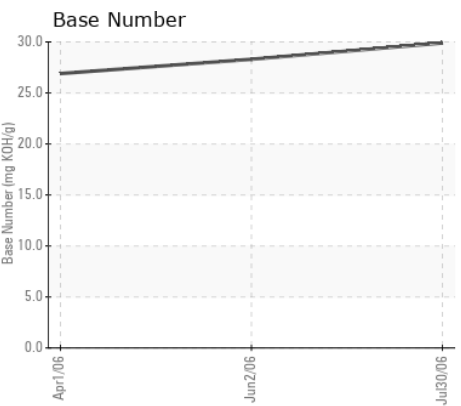
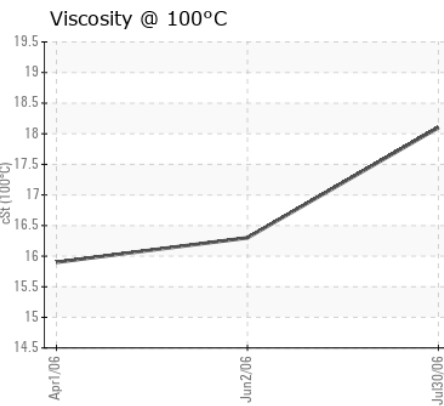
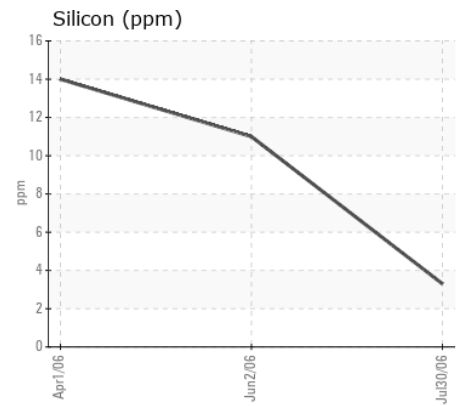
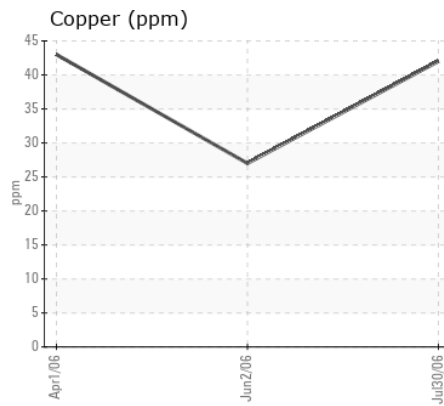
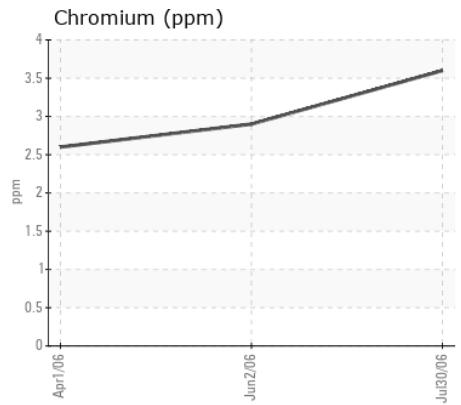
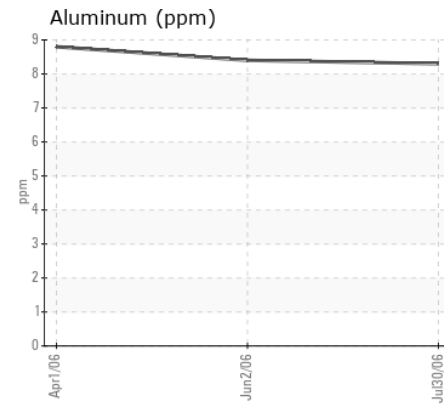
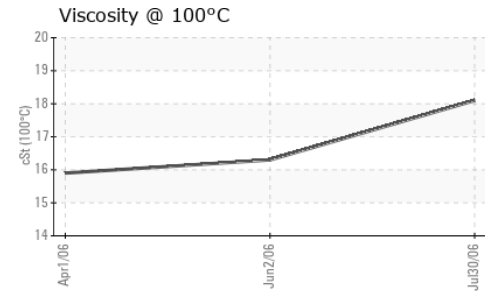
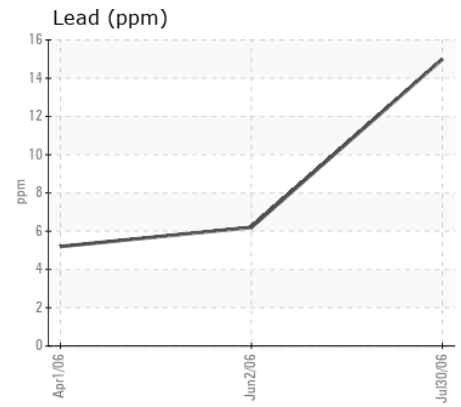
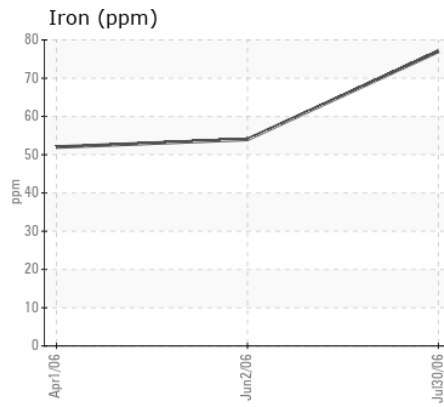
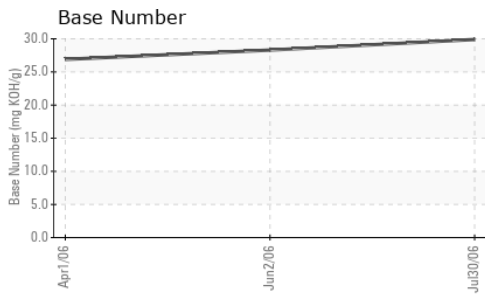
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m		<b>3</b>	11	14
Potassium	ppm	ASTM D5185m		<b>&lt;1</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>0.2</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624		<b>0.11</b>	0.26	0.22
Sulfation	Abs/.1mm	*ASTM D7415		<b>0.16</b>	0.54	0.47
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>5</b>	3	5
Boron	ppm	ASTM D5185m		<b>3</b>	1	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	6
Molybdenum	ppm	ASTM D5185m		<b>137</b>	130	128
Manganese	ppm	ASTM D5185m		<b>2</b>	1	1
Magnesium	ppm	ASTM D5185m		<b>2889</b>	3134	3229
Calcium	ppm	ASTM D5185m		<b>6400</b>	6357	6378
Phosphorus	ppm	ASTM D5185m		<b>939</b>	1034	982
Zinc	ppm	ASTM D5185m		<b>1446</b>	1571	1476
Oxidation	Abs/.1mm	*ASTM D7414		<b>0.15</b>	0.73	0.70
Base Number (BN)	mg KOH/g	ASTM D2896		<b>29.9</b>	28.3	26.9
Visc @ 100°C	cSt	ASTM D445		<b>18.1</b>	16.3	15.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP034558  
**Lab Number** : 01827826  
**Unique Number** : 3885656  
**Test Package** : MOB 2

**Received** : 05 Sep 2006  
**Tested** : 06 Sep 2006  
**Diagnosed** : 06 Sep 2006 - Doug Bogart

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

Contact: DANNY BARREIRO  
 oilmax.ec@gmail.com

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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