



**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 | | RP034961 | --- | --- |
| Sample Date | | Client Info | | 25 Apr 2007 | --- | --- |
| Machine Age | hrs | Client Info | | 11325 | --- | --- |
| Oil Age | hrs | Client Info | | 374 | --- | --- |
| Filter Age | hrs | Client Info | | 374 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185m | | 16 | --- | --- |
| Chromium | ppm | ASTM D5185m | | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m | | 0 | --- | --- |
| Silver | ppm | ASTM D5185m | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | | 2 | --- | --- |
| Lead | ppm | ASTM D5185m | | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | | 37 | --- | --- |
| Tin | ppm | ASTM D5185m | | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

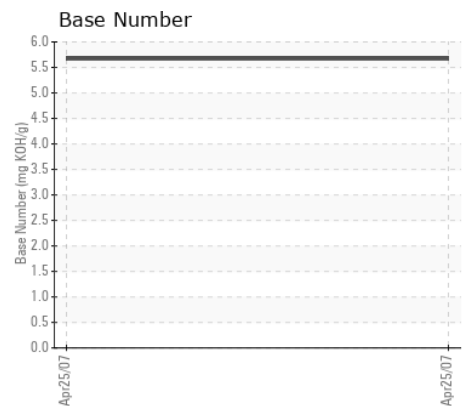
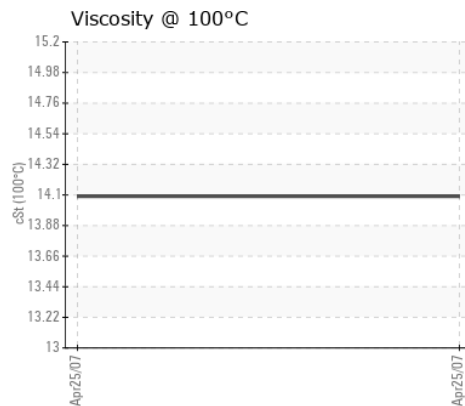
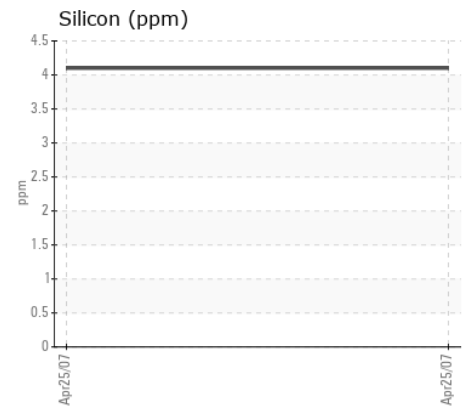
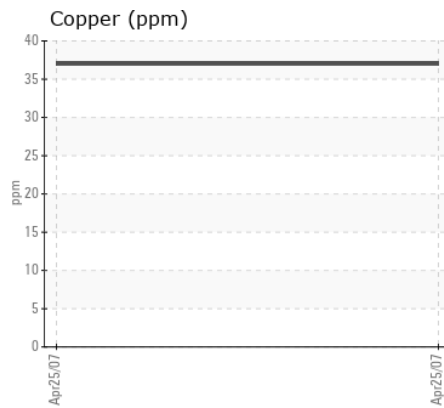
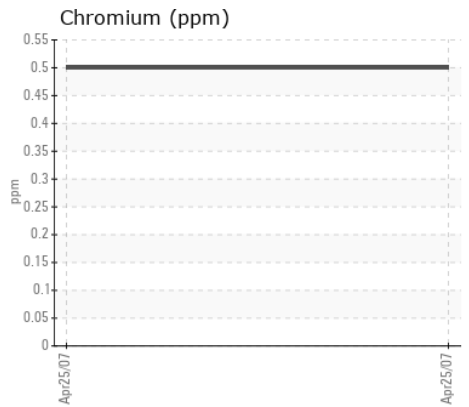
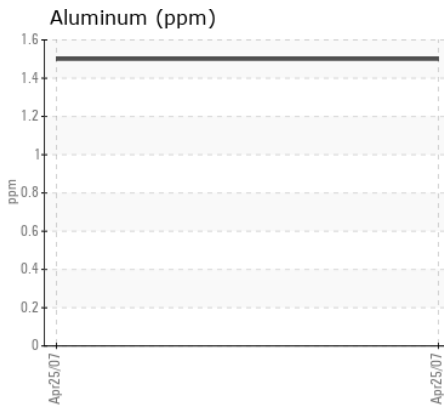
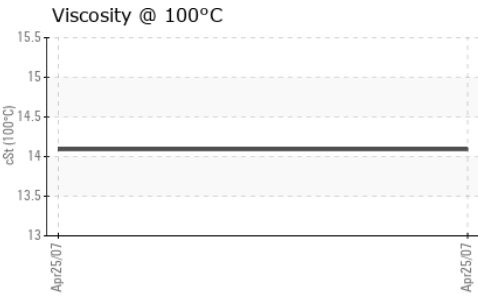
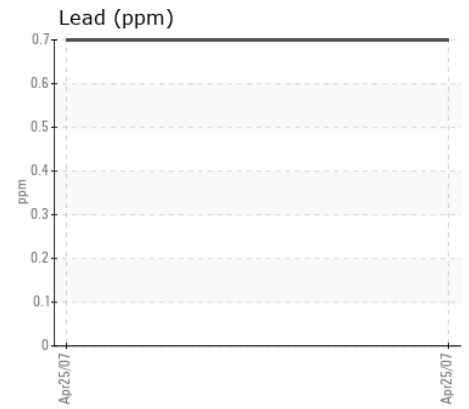
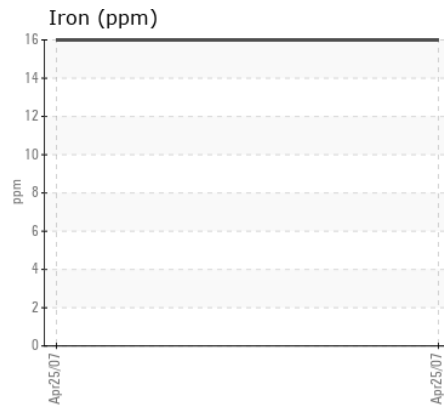
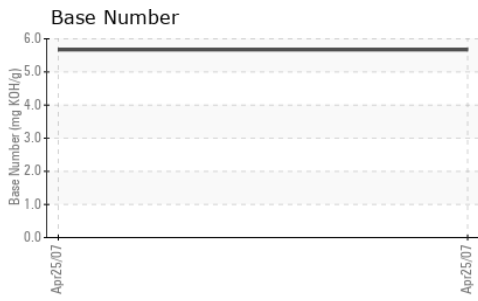
There is no indication of any contamination in the component.

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

FLUID CONDITION

The condition of oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|--|--------------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 57 | --- | --- |
| Boron | ppm | ASTM D5185m | | 1 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 39 | --- | --- |
| Manganese | ppm | ASTM D5185m | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 286 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 1966 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 667 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 832 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | | 4. | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 5.67 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | 14.09 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP034961
Lab Number : 01955119
Unique Number : 4098813
Test Package : MOB 2

Received : 04 May 2007
Tested : 07 May 2007
Diagnosed : 09 May 2007 - Doug Bogart

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

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

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)

F: x: