



OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
CATERPILLAR 330D 125
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0917101 | WC0878759 | WC0517493 |
| Sample Date | | Client Info | | 28 May 2024 | 24 Jan 2024 | 14 Aug 2023 |
| Machine Age | hrs | Client Info | | 768 | 8396 | 7962 |
| Oil Age | hrs | Client Info | | 250 | 396 | 0 |
| Filter Age | hrs | Client Info | | 250 | 396 | 0 |
| Oil Changed | | Client Info | | Not Chngd | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 7 | 12 | 9 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | 1 | 9 | 68 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 1 | <1 | 3 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 3 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 0 | 1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

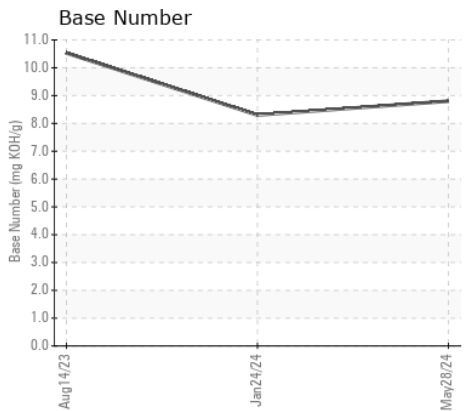
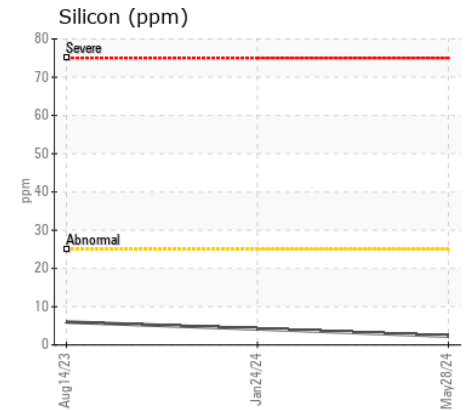
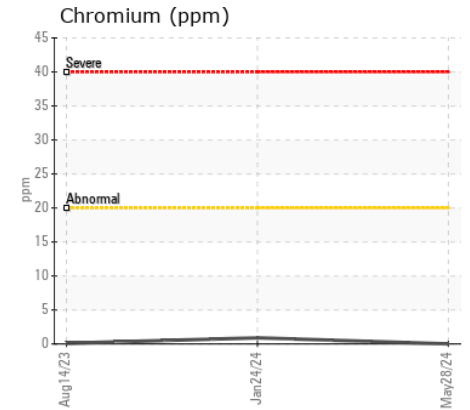
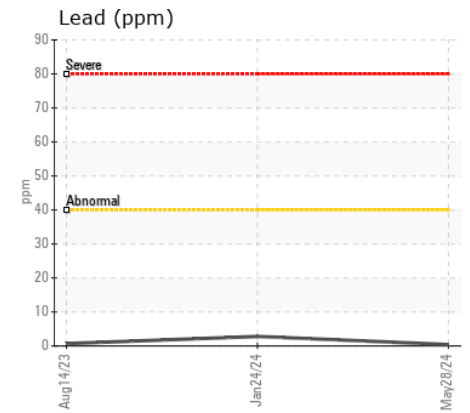
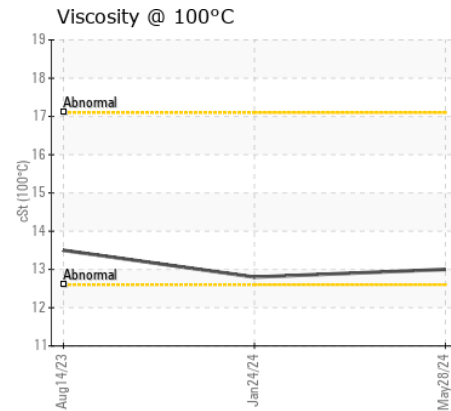
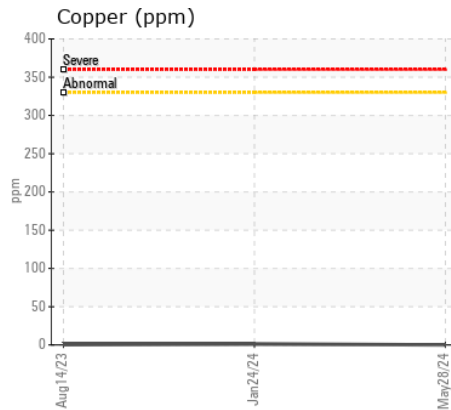
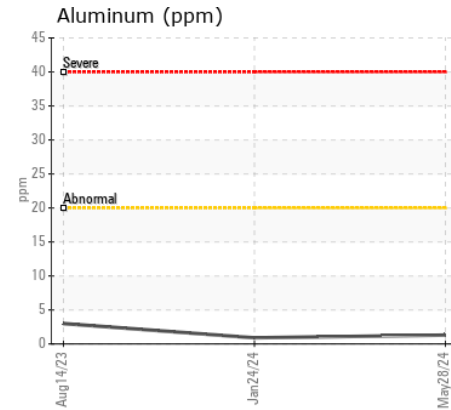
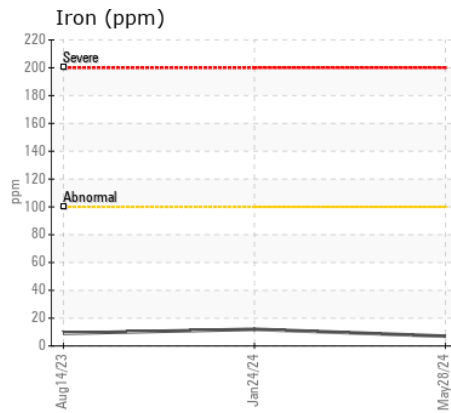
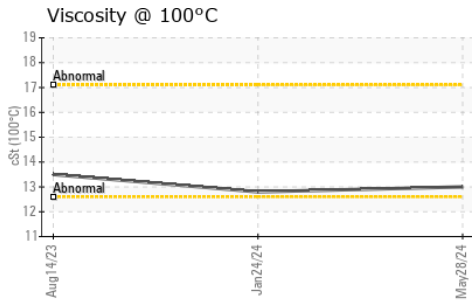
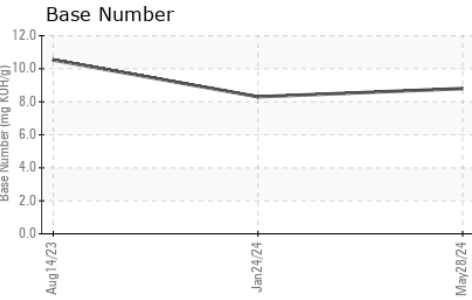
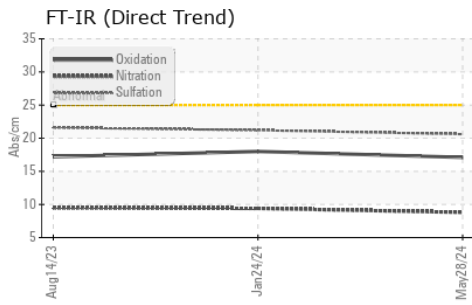
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 2 | 4 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 4 | 4 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.3 | 0.3 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.8 | 9.4 | 9.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.6 | 21.2 | 21.6 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|-----|--------------|------|-------|
| Sodium | ppm | ASTM D5185m | | 2 | 0 | <1 |
| Boron | ppm | ASTM D5185m | | 5 | 14 | 110 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 59 | 62 | 24 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 970 | 965 | 306 |
| Calcium | ppm | ASTM D5185m | | 1085 | 1198 | 2035 |
| Phosphorus | ppm | ASTM D5185m | | 1062 | 995 | 1056 |
| Zinc | ppm | ASTM D5185m | | 1282 | 1344 | 1215 |
| Sulfur | ppm | ASTM D5185m | | 3545 | 3296 | 3963 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.1 | 18.0 | 17.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 8.8 | 8.3 | 10.53 |
| Visc @ 100°C | cSt | ASTM D445 | | 13.0 | 12.8 | 13.5 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0917101 **Received** : 27 Jun 2024
Lab Number : 06222151 **Tested** : 28 Jun 2024
Unique Number : 11100348 **Diagnosed** : 28 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

C.L. BENTON & SONS INC
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 MYRTLE BEACH, SC
 US 29577
 Contact: JAMIE HUCKS
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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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