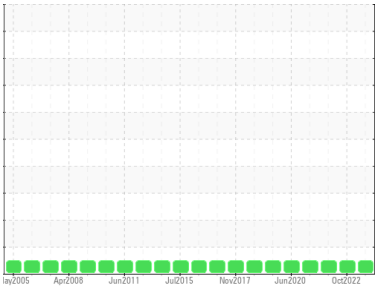
# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
## KEN DIESEL (S/N 4RG01618)
Component
**Diesel Engine**
Fluid
**CAT DIESEL ENGINE OIL 15W40 (34 LTR)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the oil.

**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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0455727** | WC0445195 | WC0445330 |
| Sample Date | | Client Info | | **07 Jun 2023** | 19 Oct 2022 | 03 Mar 2022 |
| Machine Age | hrs | Client Info | | **0** | 718 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | Not Changd | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >100 | **42** | 41 | 46 |
| Chromium | ppm | ASTM D5185(m) | >20 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | **1** | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | >2 | **<1** | <1 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >25 | **2** | 2 | 2 |
| Lead | ppm | ASTM D5185(m) | >40 | **4** | 3 | 4 |
| Copper | ppm | ASTM D5185(m) | >330 | **18** | 18 | 20 |
| Tin | ppm | ASTM D5185(m) | >15 | **2** | 2 | 2 |
| Antimony | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | | **33** | 30 | 34 |
| Barium | ppm | ASTM D5185(m) | | **2** | 2 | 3 |
| Molybdenum | ppm | ASTM D5185(m) | | **23** | 19 | 16 |
| Manganese | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | **651** | 650 | 657 |
| Calcium | ppm | ASTM D5185(m) | | **1672** | 1569 | 1562 |
| Phosphorus | ppm | ASTM D5185(m) | | **1026** | 1018 | 1005 |
| Zinc | ppm | ASTM D5185(m) | 1460 | **1140** | 1137 | 1176 |
| Sulfur | ppm | ASTM D5185(m) | | **3228** | 3256 | 3276 |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | 0 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **7** | 7 | 8 |
| Sodium | ppm | ASTM D5185(m) | | **6** | 6 | 6 |
| Potassium | ppm | ASTM D5185(m) | >20 | **1** | 1 | 1 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0.3** | 0.2 | 0.2 |
| Nitration | Abs/cm | ASTM D7624* | >20 | **8.0** | 8.6 | 8.3 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **22.2** | 22.4 | 23.5 |

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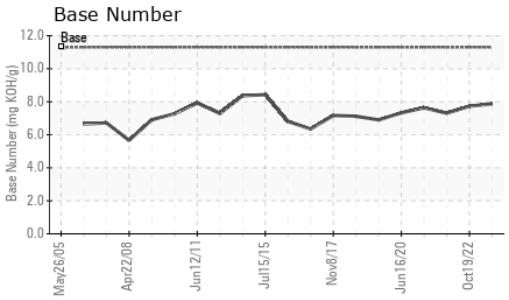
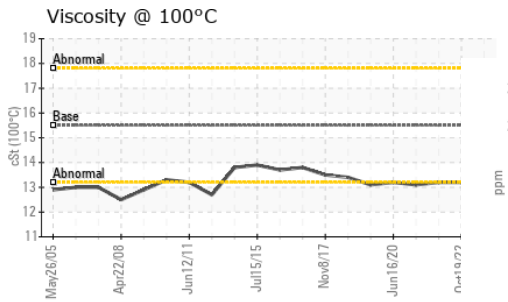


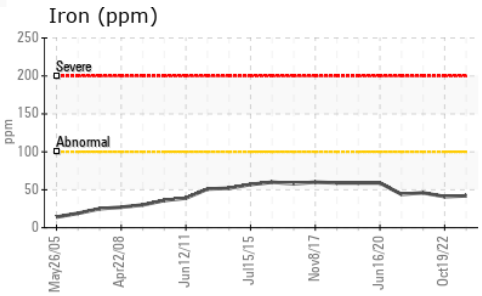



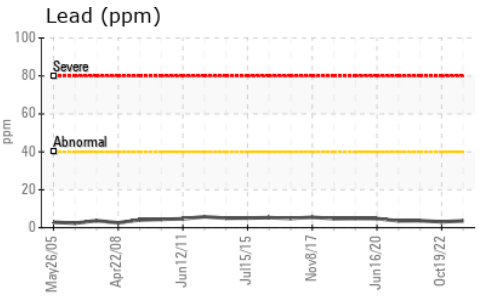

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **16.4** | 16.7 | 16.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 11.3 | **7.88** | 7.73 | 7.31 |

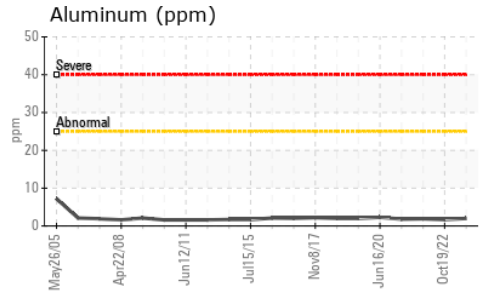
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | Visual* | | **NEG** | NEG | NEG |

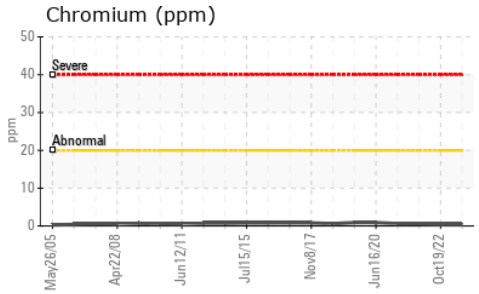
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.5 | **13.1** | 13.2 | 13.2 |

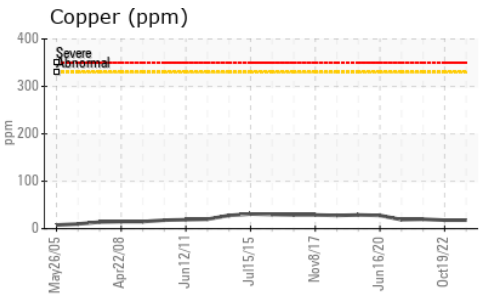
## GRAPHS

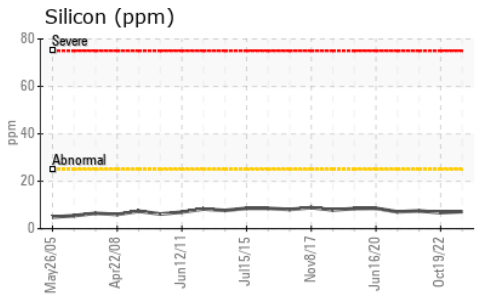


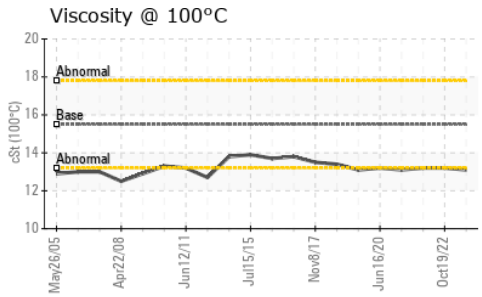



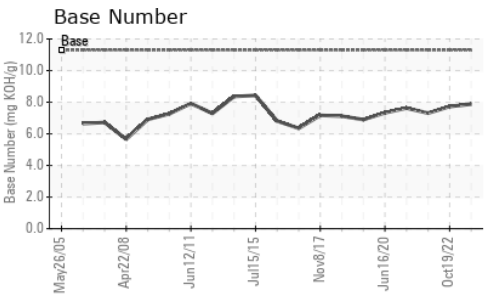




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0455727
**Lab Number** : 02563090
**Unique Number** : 5592131
**Test Package** : MOB 2

**Received** : 09 Jun 2023
**Diagnosed** : 09 Jun 2023
**Diagnostician** : Wes Davis

*To discuss this sample report, contact Customer Service at 1-800-268-2131.*
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*
*Validity of results and interpretation are based on the sample and information as supplied.*

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