MOB II

WEAR CHECK

OIL ANALYSIS REPORT

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

Machine Id
**QC230725MOB2**
Component
**Diesel Engine**
Fluid
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Please specify the component make and model with your next sample.

## WEAR

All component wear rates are normal.

## CONTAMINATION

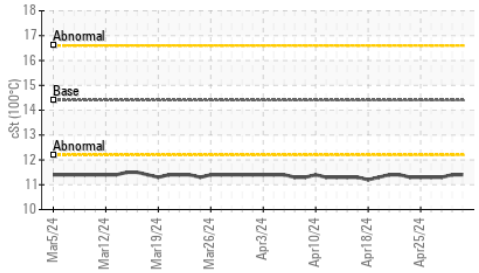
Light fuel dilution occurring. There is a trace of moisture present in the oil. No other contaminants were detected in the oil.

## FLUID CONDITION

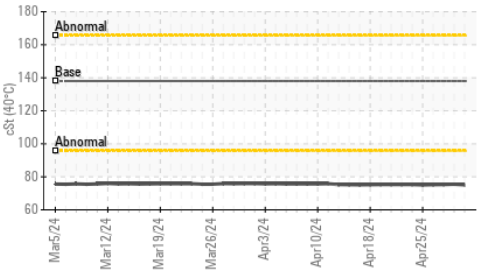
The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | WC0936542 | WC0925458 | WC0925457 |
| Sample Date | | Client Info | | 01 May 2024 | 30 Apr 2024 | 29 Apr 2024 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185(m) | >100 | 19 | 20 | 20 |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >4 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 3 | 3 | 3 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 4 | 4 | 4 |
| Lead | ppm | ASTM D5185(m) | >40 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >330 | 9 | 9 | 9 |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silicon | ppm | ASTM D5185(m) | >25 | 5 | 5 | 6 |
| Potassium | ppm | ASTM D5185(m) | >20 | ▲ 14 | ▲ 14 | ▲ 15 |
| Fuel | % | ASTM D7593* | >5 | ▲ 4.9 | ▲ 4.9 | ▲ 5 |
| Water | % | ASTM D6304* | >0.2 | ▲ 0.186 | ▲ 0.179 | ▲ 0.243 |
| ppm Water | ppm | ASTM D6304* | >2000 | ▲ 1863 | ▲ 1795 | ▲ 2431 |
| Glycol | % | ASTM D7922* | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >3 | 0.3 | 0.3 | 0.3 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 9.9 | 9.8 | 9.9 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 20.8 | 20.8 | 20.7 |
| Emulsified Water | scalar | Visual* | >0.2 | ▲ .2% | NEG | ▲ .2% |
| Sodium | ppm | ASTM D5185(m) | >216 | ● 61 | ● 61 | ● 64 |
| Boron | ppm | ASTM D5185(m) | 250 | 32 | 31 | 41 |
| Barium | ppm | ASTM D5185(m) | 10 | <1 | <1 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 100 | 47 | 47 | 48 |
| Manganese | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 450 | 619 | 619 | 622 |
| Calcium | ppm | ASTM D5185(m) | 3000 | 1450 | 1500 | 1505 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 851 | 867 | 866 |
| Zinc | ppm | ASTM D5185(m) | 1350 | 1005 | 1020 | 1018 |
| Sulfur | ppm | ASTM D5185(m) | 4250 | 2575 | 2541 | 2598 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 16.1 | 16.1 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 8.5 | 9.21 | 8.16 | 8.95 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 138 | ▲ 75.1 | ▲ 75.5 | ▲ 75.3 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.4 | ▲ 11.4 | ▲ 11.4 | ▲ 11.3 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 102 | 143 | 143 | 141 |

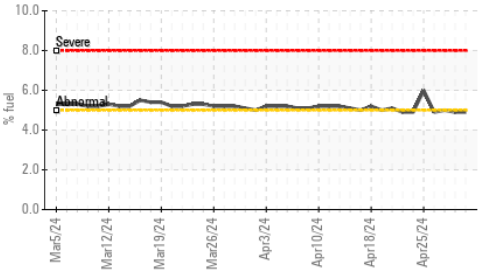
Viscosity @ 100°C



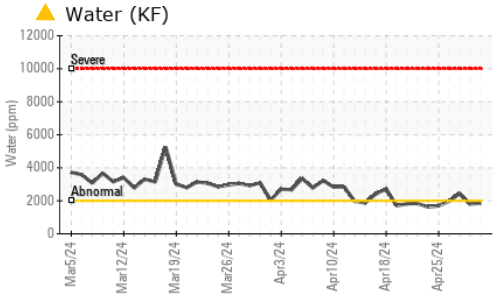

Viscosity @ 40°C



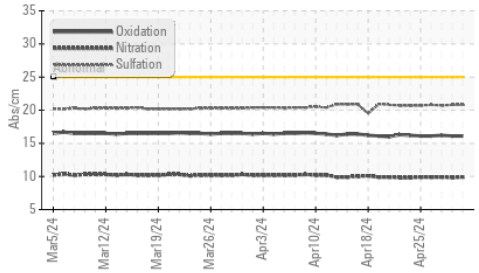

Fuel Dilution



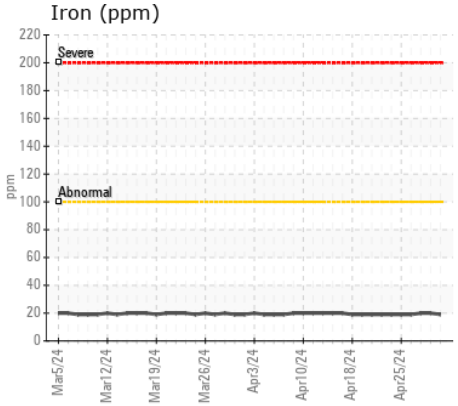

Water (KF)



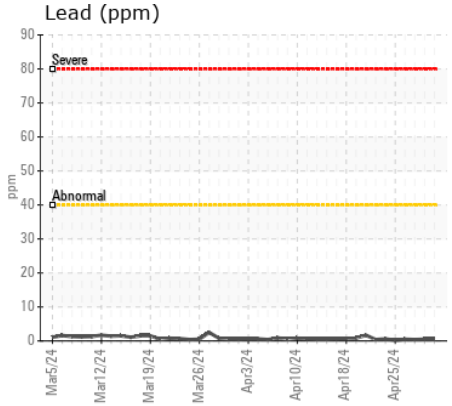

FT-IR (Direct Trend)



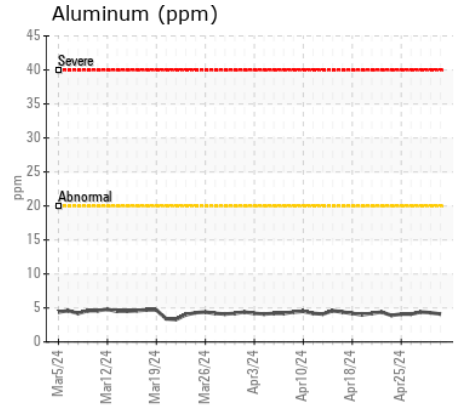

Iron (ppm)



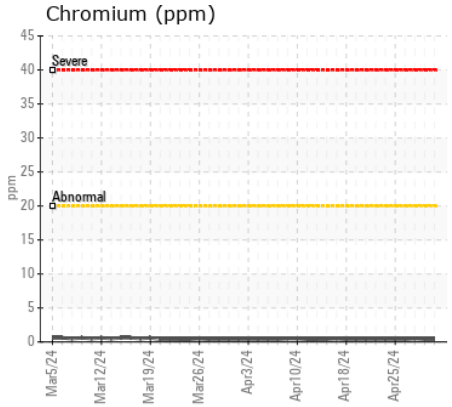

Lead (ppm)



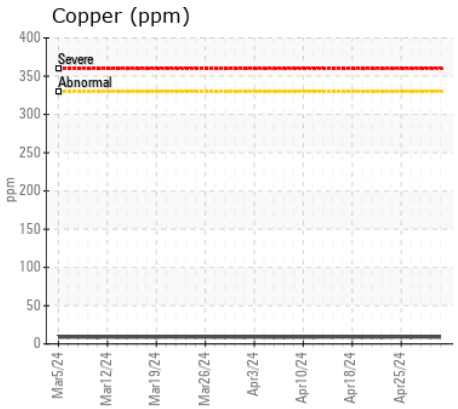

Aluminum (ppm)



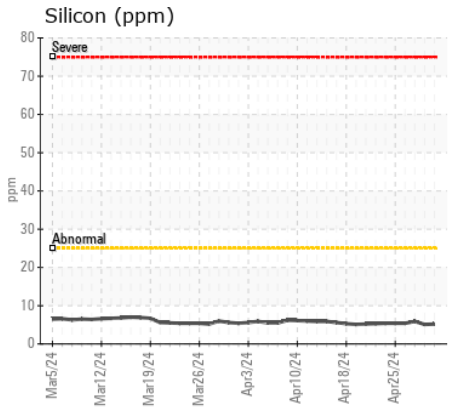

Chromium (ppm)



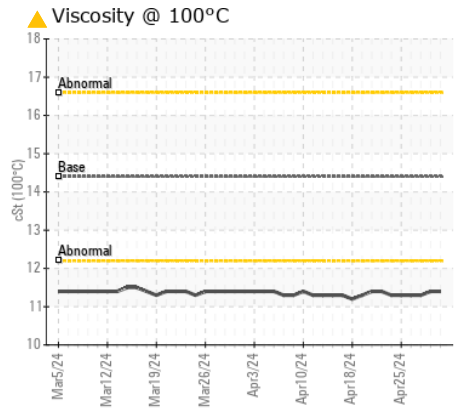

Copper (ppm)



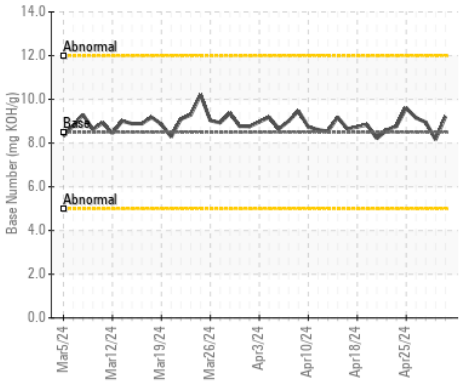

Silicon (ppm)




Viscosity @ 100°C




Base Number





CALA
ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **WearCheck Quality Control Sample Results**
**Sample No.** : WC0936542 **Received** : 01 May 2024
**Lab Number** : 02632468 **Tested** : 02 May 2024 Burlington, ON
**Unique Number** : 5773621 **Diagnosed** : 02 May 2024 - Kevin Marson CA
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, Glycol, KF, KV40, PercentFuel, VI ) Contact: Dorian Anderson


*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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