



OIL ANALYSIS REPORT

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

Machine Id
BUS 724
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | DC0035438 | DC0026842 | DC0022488 |
| Sample Date | | Client Info | | 23 Mar 2024 | 13 Nov 2023 | 01 Aug 2022 |
| Machine Age | mls | Client Info | | 234598 | 217822 | 201423 |
| Oil Age | mls | Client Info | | 0 | 0 | 0 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 25 | 9 | 22 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | 0 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | 1 | 4 |
| Lead | ppm | ASTM D5185m | >40 | 4 | 0 | 2 |
| Copper | ppm | ASTM D5185m | >330 | 2 | <1 | 1 |
| Tin | ppm | ASTM D5185m | >15 | 1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

Elemental level of silicon (Si) above normal.

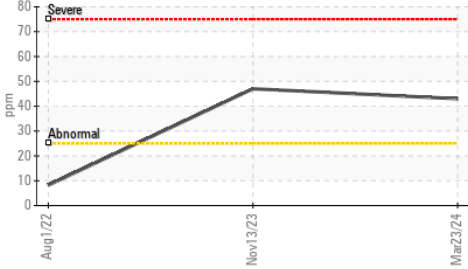
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | ▲ 43 | ▲ 47 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | <1 | 0 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.6 | 0.1 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.9 | 7.2 | 10.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.1 | 20.6 | 25.2 |
| 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

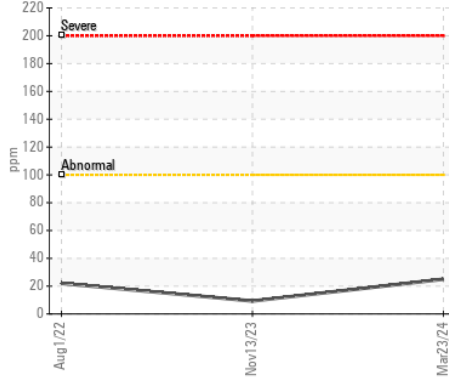
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 3 | 10 | 5 |
| Boron | ppm | ASTM D5185m | | 230 | 57 | 261 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 85 | 48 | 91 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 410 | 730 | 450 |
| Calcium | ppm | ASTM D5185m | | 1405 | 1112 | 1455 |
| Phosphorus | ppm | ASTM D5185m | 1200 | 957 | 715 | 985 |
| Zinc | ppm | ASTM D5185m | 1300 | 1194 | 839 | 1237 |
| Sulfur | ppm | ASTM D5185m | 3200 | 3283 | 2238 | 3105 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.1 | 16.7 | 18.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.6 | 5.9 | 9.0 | 7.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.7 | 13.2 | 13.3 | 13.2 |

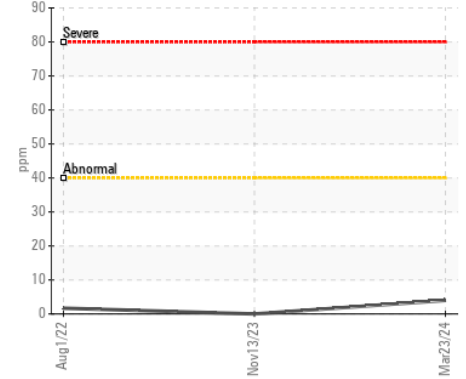
▲ Silicon (ppm)



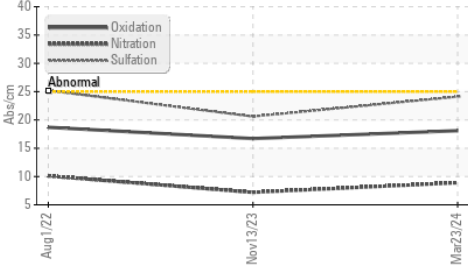
Iron (ppm)



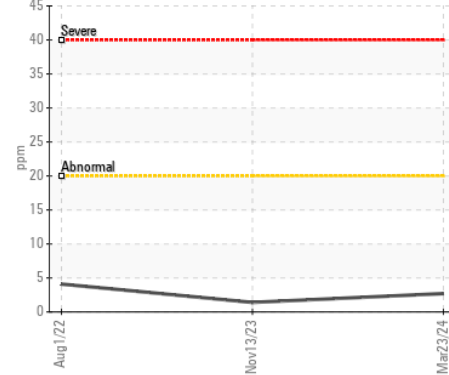
Lead (ppm)



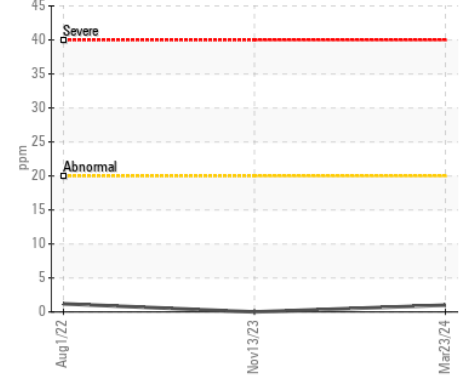
FT-IR (Direct Trend)



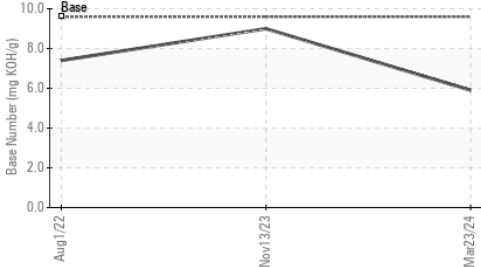
Aluminum (ppm)



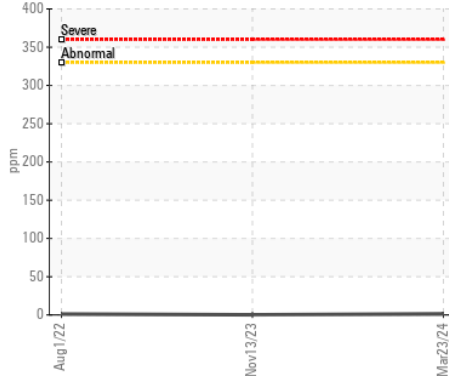
Chromium (ppm)



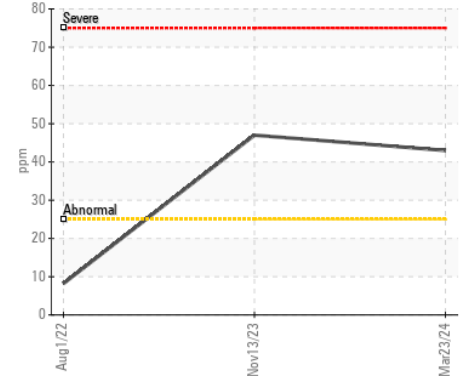
Base Number



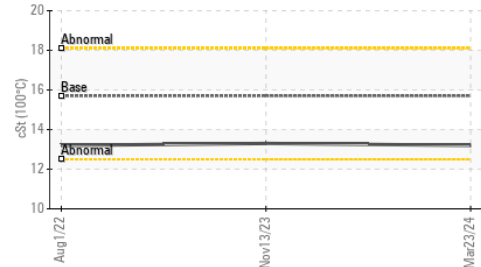
Copper (ppm)



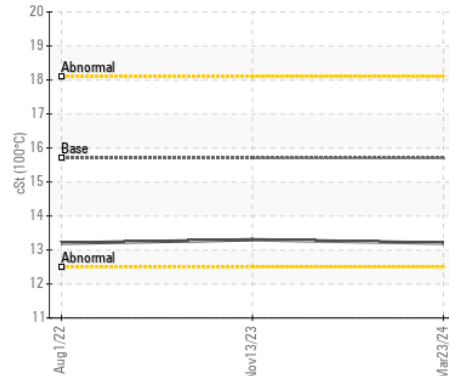
▲ Silicon (ppm)



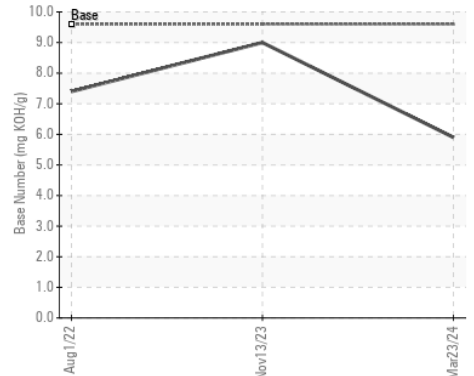
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0035438 **Received** : 13 May 2024
Lab Number : 06178068 **Tested** : 14 May 2024
Unique Number : 11029394 **Diagnosed** : 15 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

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 US 20601
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 F:

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)