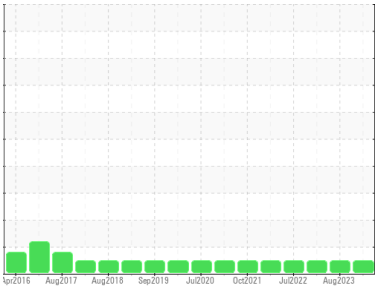
# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
## INTERNATIONAL 799
Component
**Diesel Engine**
Fluid
**CHEVRON DELO 400 XLE 10W30 (40 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 | | **WC0851828** | WC0733109 | WC0733068 |
| Sample Date | | Client Info | | **11 Jan 2024** | 31 Aug 2023 | 25 Apr 2023 |
| Machine Age | mls | Client Info | | **185238** | 16501 | 410075 |
| Oil Age | mls | Client Info | | **0** | 400 | 400 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >2.0 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >100 | **10** | 11 | 17 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | **1** | 1 | 2 |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **2** | 1 | 5 |
| Lead | ppm | ASTM D5185m | >40 | **<1** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | **6** | 2 | 5 |
| Tin | ppm | ASTM D5185m | >15 | **<1** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **37** | 50 | 19 |
| Barium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **3** | 5 | 71 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | **713** | 764 | 446 |
| Calcium | ppm | ASTM D5185m | 2900 | **1281** | 1493 | 1872 |
| Phosphorus | ppm | ASTM D5185m | 1100 | **776** | 800 | 1020 |
| Zinc | ppm | ASTM D5185m | 1200 | **784** | 939 | 1216 |
| Sulfur | ppm | ASTM D5185m | 4000 | **3260** | 3928 | 4275 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **8** | 7 | 9 |
| Sodium | ppm | ASTM D5185m | | **29** | 18 | 15 |
| Potassium | ppm | ASTM D5185m | >20 | **17** | 10 | 6 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.5** | 0.4 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **10.7** | 10.0 | 11.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **20.1** | 19.2 | 20.7 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **16.3** | 14.9 | 17.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.3 | **8.73** | 9.92 | 9.13 |

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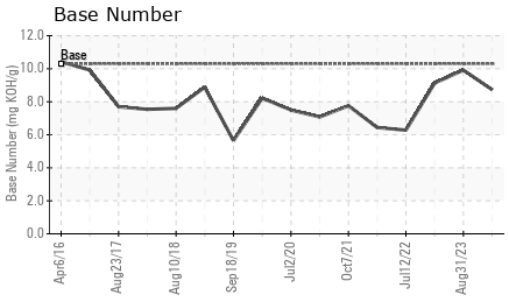
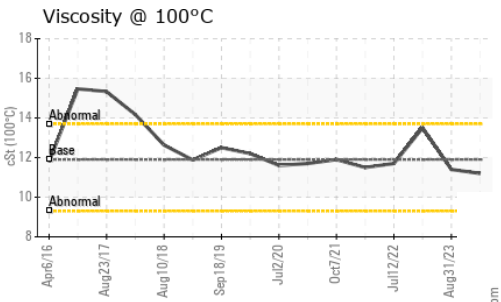
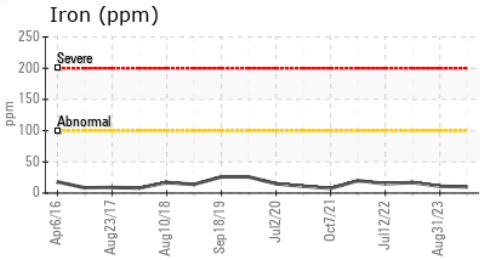


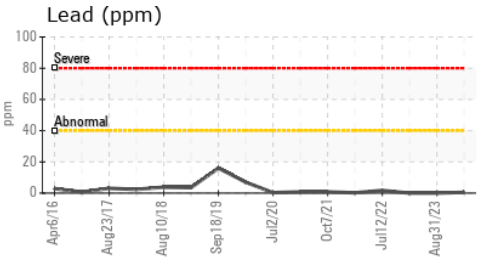



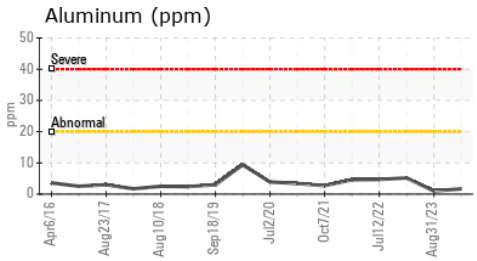

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

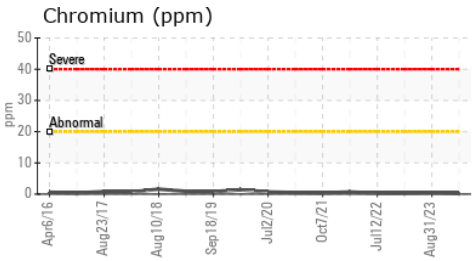
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 11.9 | **11.2** | 11.4 | 13.5 |

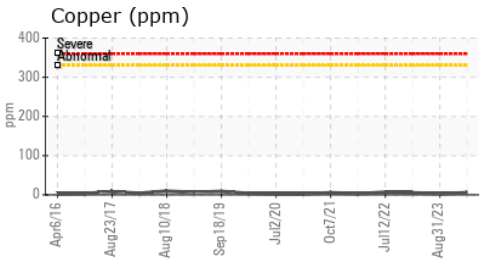
## GRAPHS

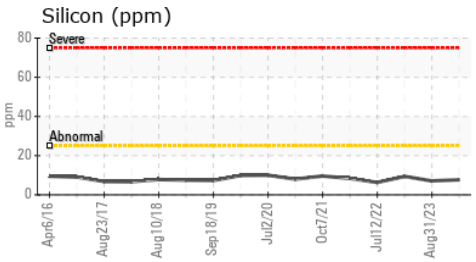


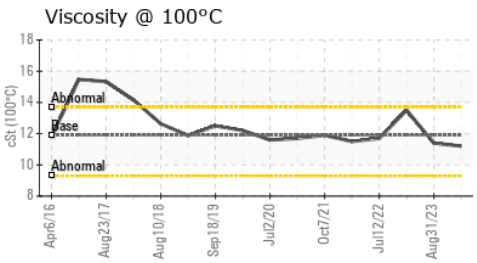



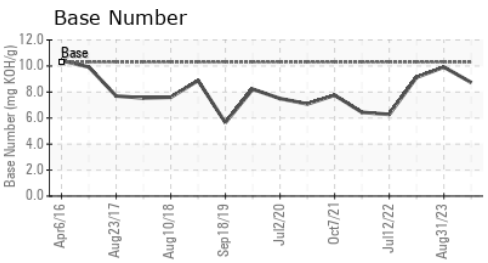




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0851828
**Lab Number** : 06065112
**Unique Number** : 10836494
**Test Package** : MOB 2

**Recieved** : 18 Jan 2024
**Diagnosed** : 22 Jan 2024
**Diagnostician** : Sean Felton

Certificate L2367

*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)*


**LYNDEN TRANSPORT - SPRUCE GROVE**
27340 ACHESON RD, ACHESON INDUSTRIAL PARK
ACHESON, AB
CA T7X 6B1
Contact: Mathieu Carby
mcarby@lynden.com
T:
F: