# OIL ANALYSIS REPORT

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

Machine Id
**857-4910**
Component
**Diesel Engine**
Fluid
**CHEVRON DELO 400 SAE 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

## WEAR

All component wear rates are normal.

## CONTAMINATION

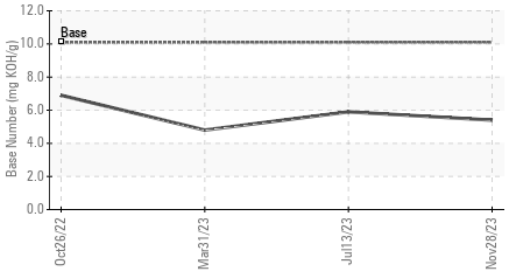
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

## FLUID CONDITION

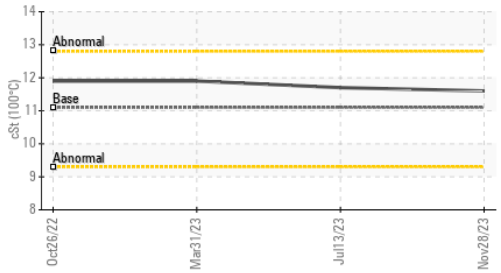
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | RPL0014593 | RPL0010339 | RPL0010535 |
| Sample Date | | Client Info | | 28 Nov 2023 | 13 Jul 2023 | 31 Mar 2023 |
| Machine Age | hrs | Client Info | | 1581 | 28419 | 19568 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | Changed |
| Filter Changed | | Client Info | | N/A | N/A | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | 44 | 32 | 67 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 34 | 15 | 119 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 24 | 8 | 43 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 11 | 12 | 17 |
| Potassium | ppm | ASTM D5185m | >20 | 88 | 49 | 264 |
| 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 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.7 | 11.4 | 9.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.3 | 23.1 | 20.6 |
| 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 |
| Sodium | ppm | ASTM D5185m | | 4 | 4 | 6 |
| Boron | ppm | ASTM D5185m | | 19 | 20 | 31 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 14 | 12 | 6 |
| Manganese | ppm | ASTM D5185m | | 0 | 2 | 2 |
| Magnesium | ppm | ASTM D5185m | | 750 | 805 | 792 |
| Calcium | ppm | ASTM D5185m | | 1384 | 1555 | 1476 |
| Phosphorus | ppm | ASTM D5185m | 1260 | 764 | 771 | 728 |
| Zinc | ppm | ASTM D5185m | 1400 | 882 | 924 | 897 |
| Sulfur | ppm | ASTM D5185m | | 3213 | 3766 | 3751 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.7 | 18.5 | 16.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.1 | 5.4 | 5.9 | 4.8 |
| Visc @ 100°C | cSt | ASTM D445 | 11.1 | 11.6 | 11.7 | 11.9 |

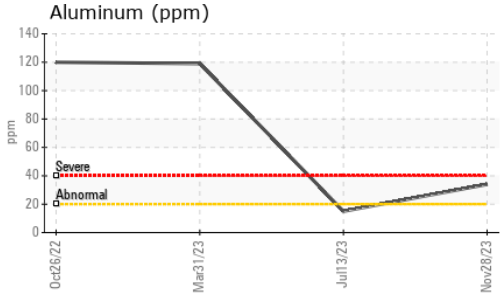
Base Number



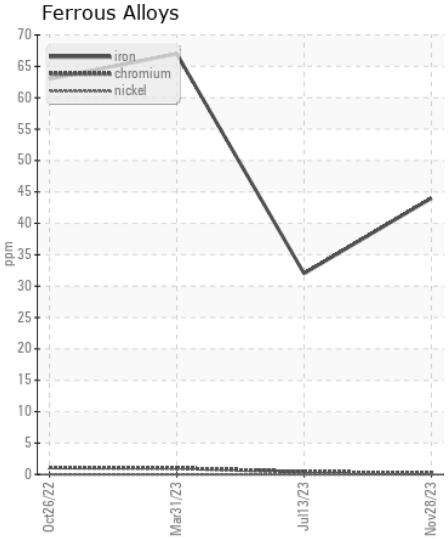

Viscosity @ 100°C



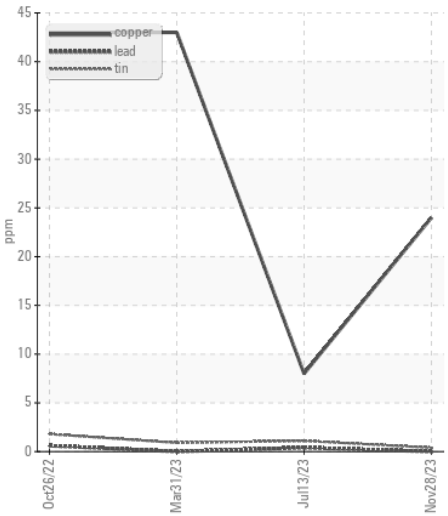

Aluminum (ppm)



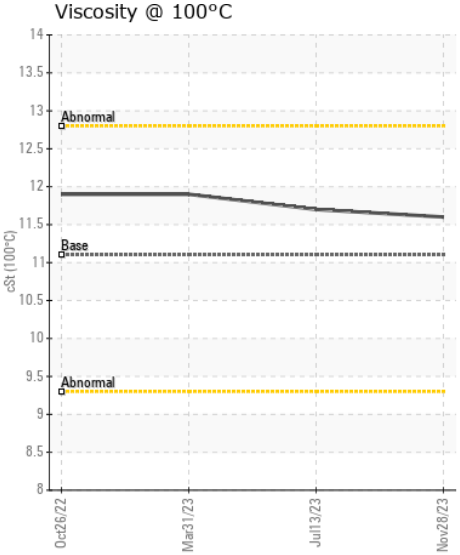

Ferrous Alloys



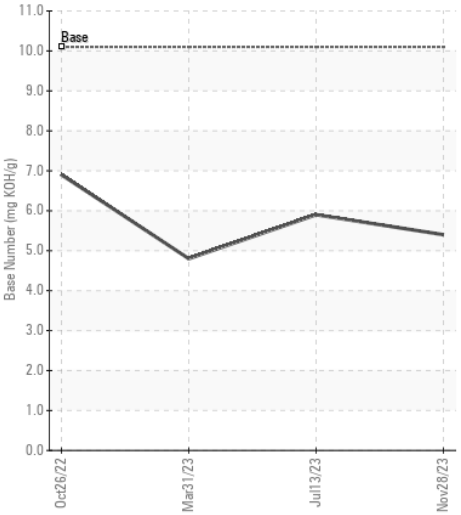

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : RPL0014593
**Lab Number** : 06056146
**Unique Number** : 10822095
**Test Package** : FLEET

**Recieved** : 10 Jan 2024
**Diagnosed** : 11 Jan 2024
**Diagnostician** : Wes Davis

*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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