



OIL ANALYSIS REPORT

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

Machine Id
139-446
Component
Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

RECOMMENDATION

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

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | RPL0016771 | RPL0014879 | RPL0007797 |
| Sample Date | | Client Info | | 12 Apr 2024 | 06 Oct 2023 | 28 Mar 2023 |
| Machine Age | mls | Client Info | | 329000 | 313316 | 271586 |
| Oil Age | mls | Client Info | | 15684 | 41730 | 3125 |
| Filter Age | mls | Client Info | | 0 | 41730 | 3125 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | Changed | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 23 | 44 | 11 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 2 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 2 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 10 | ▲ 21 | 3 |
| Lead | ppm | ASTM D5185m | >40 | 1 | 2 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 0 | 1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

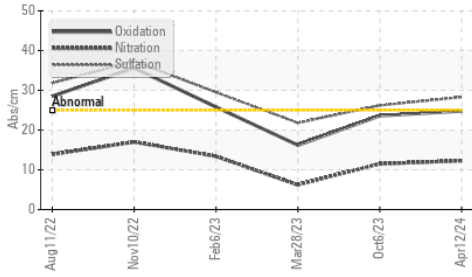
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 9 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 9 | 16 | 16 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 1.1 | 0.7 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 12.3 | 11.5 | 6.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 28.3 | 26.2 | 21.8 |
| 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

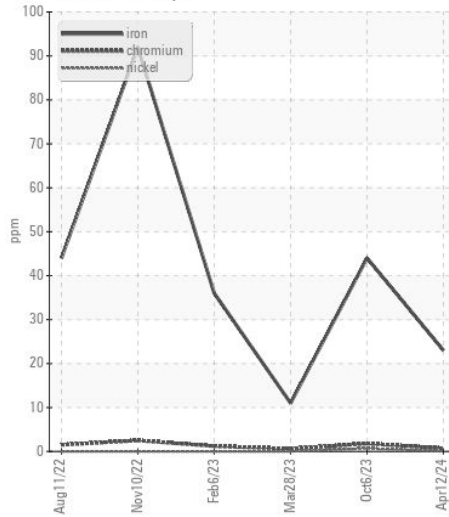
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 0 | 3 | 0 |
| Boron | ppm | ASTM D5185m | | 101 | 64 | 364 |
| Barium | ppm | ASTM D5185m | | 0 | 2 | 2 |
| Molybdenum | ppm | ASTM D5185m | | 123 | 146 | 155 |
| Manganese | ppm | ASTM D5185m | | 0 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 721 | 811 | 597 |
| Calcium | ppm | ASTM D5185m | | 1682 | 1715 | 1439 |
| Phosphorus | ppm | ASTM D5185m | 1360 | 727 | 813 | 652 |
| Zinc | ppm | ASTM D5185m | 1480 | 870 | 1039 | 810 |
| Sulfur | ppm | ASTM D5185m | | 2826 | 3207 | 2452 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 24.8 | 23.6 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 12.2 | 6.7 | 5.3 | 7.9 |
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 14.3 | 14.1 | 14.0 |

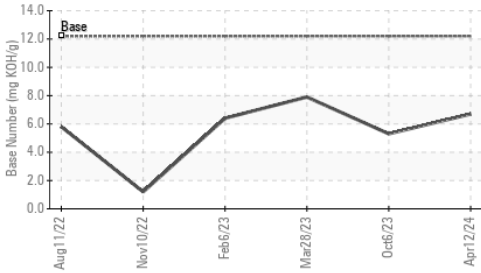
FT-IR (Direct Trend)



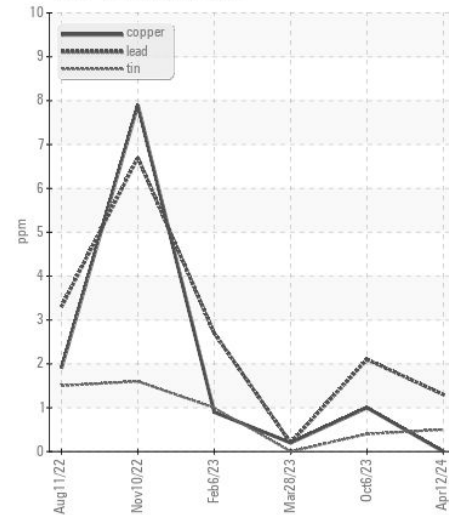
Ferrous Alloys



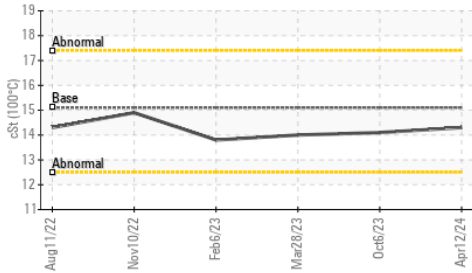
Base Number



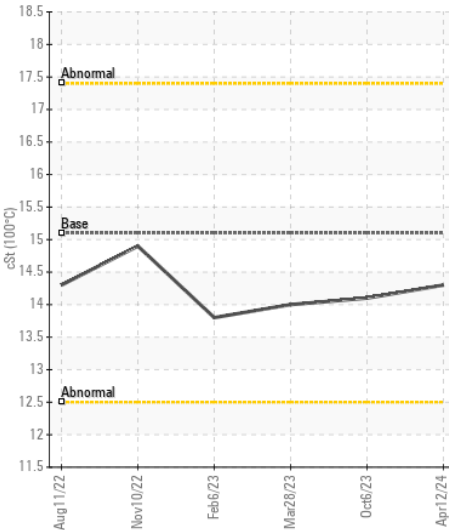
Non-ferrous Metals



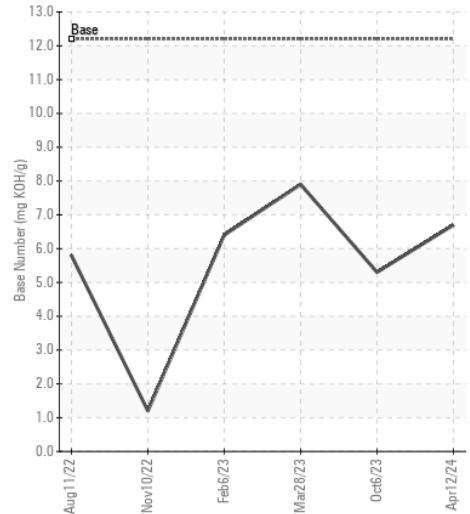
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : RPL0016771

Lab Number : 06151671

Unique Number : 10981749

Test Package : FLEET

Received : 17 Apr 2024

Tested : 18 Apr 2024

Diagnosed : 18 Apr 2024 - Wes Davis

RTL PACLEASE - 7005 - Arlington

1900 E Division

Arlington, TX

US 76011

Contact: Richard Ronquillo

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T: (469)203-8171

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)