



# OIL ANALYSIS REPORT

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

Machine Id  
**8573995**  
 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.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>RPL0018901</b>  | RPL0014714  | RPL0011014  |
| Sample Date    |     | Client Info |           | <b>10 Jun 2024</b> | 17 Oct 2023 | 25 Aug 2023 |
| Machine Age    | hrs | Client Info |           | <b>11120</b>       | 10363       | 10205       |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

## WEAR

All component wear rates are normal.

|              |        |             |      |              |      |       |
|--------------|--------|-------------|------|--------------|------|-------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>90</b>    | 47   | ▲ 112 |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>4</b>     | 2    | 6     |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>0</b>     | 0    | <1    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | <1    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0    | 0     |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>6</b>     | 4    | 13    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>14</b>    | <1   | 14    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>2</b>     | <1   | 2     |
| Tin          | ppm    | ASTM D5185m | >15  | <b>&lt;1</b> | 0    | 1     |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0     |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE  |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE  |

## CONTAMINATION

There is no indication of any contamination in the oil.

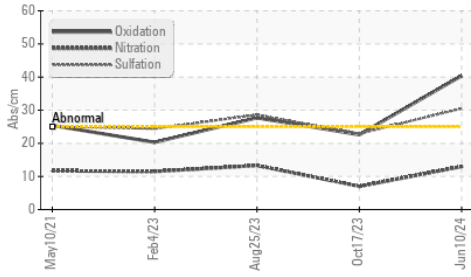
|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>20</b>      | 15    | 22    |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>5</b>       | 5     | 26    |
| Fuel             |          | WC Method   | >5    | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.4</b>     | 0.1   | 0.6   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>13.0</b>    | 7.0   | 13.3  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>30.5</b>    | 22.9  | 28.6  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | NEG   |

## FLUID CONDITION

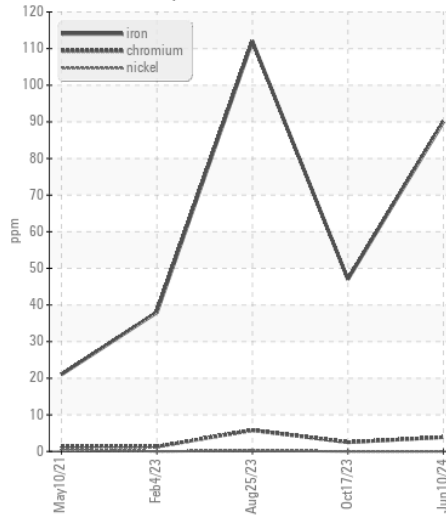
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>4</b>     | 2    | 7    |
| Boron            | ppm      | ASTM D5185m |      | <b>22</b>    | 53   | 18   |
| Barium           | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 2    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>37</b>    | 38   | 18   |
| Manganese        | ppm      | ASTM D5185m |      | <b>2</b>     | 0    | 2    |
| Magnesium        | ppm      | ASTM D5185m |      | <b>462</b>   | 490  | 654  |
| Calcium          | ppm      | ASTM D5185m |      | <b>1659</b>  | 1547 | 1366 |
| Phosphorus       | ppm      | ASTM D5185m | 1260 | <b>676</b>   | 672  | 677  |
| Zinc             | ppm      | ASTM D5185m | 1400 | <b>863</b>   | 852  | 825  |
| Sulfur           | ppm      | ASTM D5185m |      | <b>2727</b>  | 2677 | 2654 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>40.4</b>  | 22.6 | 27.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.1 | <b>3.8</b>   | 9.3  | 4.1  |
| Visc @ 100°C     | cSt      | ASTM D445   | 11.1 | <b>9.7</b>   | 10.7 | 11.5 |

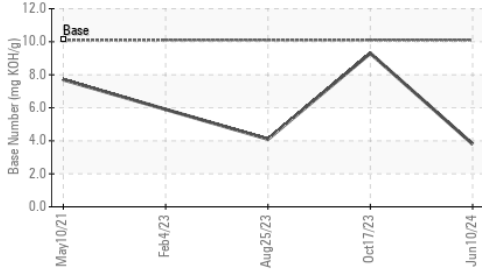
**FT-IR (Direct Trend)**



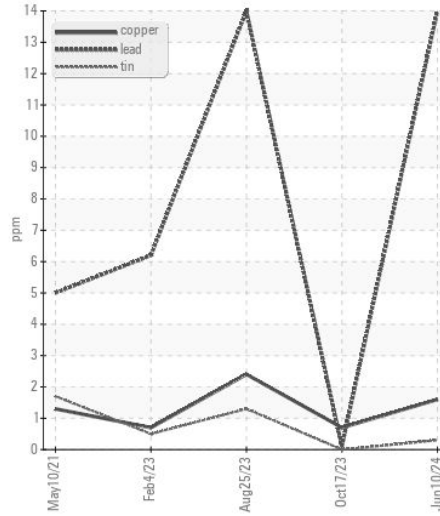
**Ferrous Alloys**



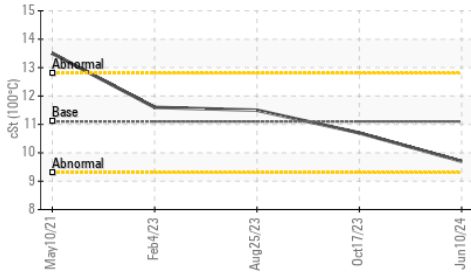
**Base Number**



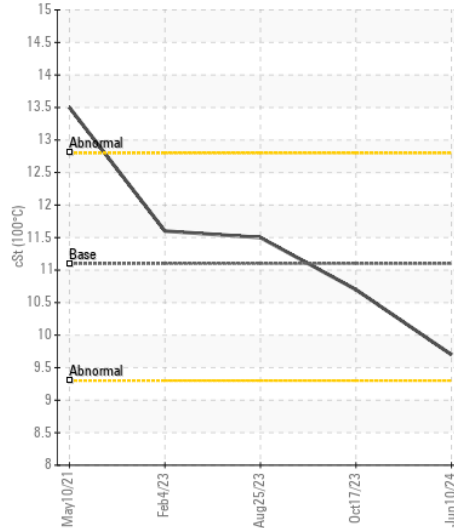
**Non-ferrous Metals**



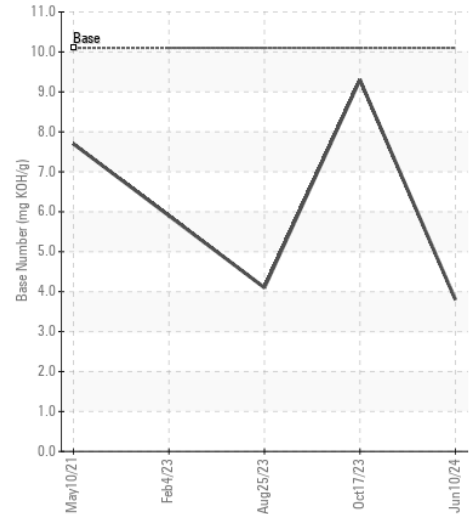
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RPL0018901  
**Lab Number** : 06215264  
**Unique Number** : 11088128  
**Test Package** : FLEET

**Received** : 20 Jun 2024  
**Tested** : 21 Jun 2024  
**Diagnosed** : 21 Jun 2024 - Sean Felton

**RTL PACLEASE - 7001 - Houston**  
 6300 N. Loop East  
 Houston, TX  
 US 77026  
 Contact: RODNEY BRIGGS  
 briggs@rushenterprises.com

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)

T:  
F: