

Limit/Abn **Current** 

History1

History2

Test

UOM

Method

## Machine Id 857-4990 Component Diesel Engine Fluid CHEVRON DELO 400 XLE 10W30 (--- GAL)

|  | DA |  |  |  |
|--|----|--|--|--|
|  |    |  |  |  |
|  |    |  |  |  |

No corrective action is recommended at this time. Resample at the next service interval to monitor.

## **WEAR**

All component wear rates are normal.

## CONTAMINATION

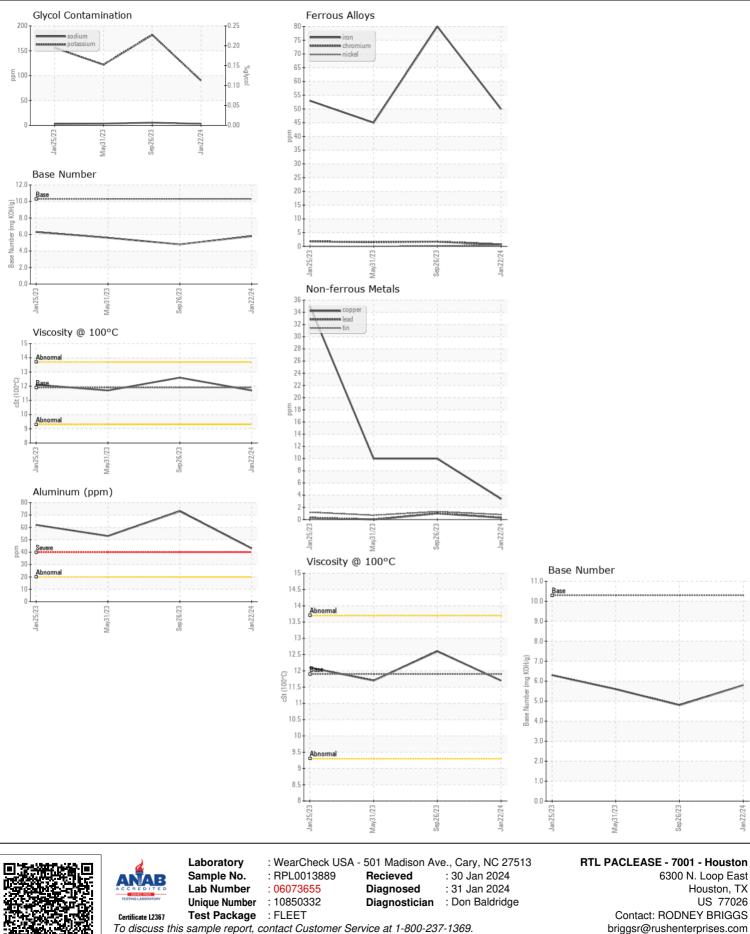
**FLUID CONDITION** 

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. No other contaminants were detected in the oil.

The BN result indicates that there is suitable alkalinity remaining in the

oil. The condition of the oil is suitable for further service.

|  | lest             | UOM      | Method      | Limit/Abn | Current     | History1    | History2    |  |
|--|------------------|----------|-------------|-----------|-------------|-------------|-------------|--|
|  | Sample Number    |          | Client Info |           | RPL0013889  | RPL0010854  | RPL0010126  |  |
|  | Sample Date      |          | Client Info |           | 22 Jan 2024 | 26 Sep 2023 | 31 May 2023 |  |
|  | Machine Age      | hrs      | Client Info |           | 34114       | 2489        | 1654        |  |
|  | Oil Age          | hrs      | Client Info |           | 0           | 0           | 0           |  |
|  | Filter Age       | hrs      | Client Info |           | 0           | 0           | 0           |  |
|  | Oil Changed      |          | Client Info |           | Not Changd  | Changed     | Not Changd  |  |
|  | Filter Changed   |          | Client Info |           | Not Changd  | Changed     | Not Changd  |  |
|  | Sample Status    |          |             |           | NORMAL      | NORMAL      | NORMAL      |  |
|  |                  |          |             |           |             |             |             |  |
|  | Iron             | ppm      | ASTM D5185m | >100      | 50          | 80          | 45          |  |
|  | Chromium         | ppm      | ASTM D5185m | >20       | <1          | 2           | 2           |  |
|  | Nickel           | ppm      | ASTM D5185m | >4        | <1          | <1          | 0           |  |
|  | Titanium         | ppm      | ASTM D5185m |           | 0           | <1          | <1          |  |
|  | Silver           | ppm      | ASTM D5185m | >3        | <1          | 0           | <1          |  |
|  | Aluminum         | ppm      | ASTM D5185m | >20       | 43          | 73          | 53          |  |
|  | Lead             | ppm      | ASTM D5185m | >40       | <1          | 1           | 0           |  |
|  | Copper           | ppm      | ASTM D5185m | >330      | 3           | 10          | 10          |  |
|  | 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        |  |
|  |                  |          |             |           |             |             |             |  |
|  | Silicon          | ppm      | ASTM D5185m | >25       | 14          | 14          | 12          |  |
|  | Potassium        | ppm      | ASTM D5185m | >20       | 90          | 182         | 122         |  |
|  | 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         | 0.5         | 0.4         |  |
|  | Nitration        | Abs/cm   | *ASTM D7624 | >20       | 13.6        | 13.5        | 11.5        |  |
|  | Sulfation        | Abs/.1mm | *ASTM D7415 | >30       | 25.8        | 27.4        | 25.8        |  |
|  | 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         |  |
|  | Sodium           | ppm      | ASTM D5185m |           | 3           | 5           | 4           |  |
|  | Boron            | ppm      | ASTM D5185m |           | 14          | 28          | 20          |  |
|  | Barium           | ppm      | ASTM D5185m |           | 0           | 0           | 0           |  |
|  | Molybdenum       | ppm      | ASTM D5185m |           | 40          | 18          | 12          |  |
|  | Manganese        | ppm      | ASTM D5185m |           | 1           | 2           | 2           |  |
|  | Magnesium        | ppm      | ASTM D5185m |           | 571         | 623         | 805         |  |
|  | Calcium          | ppm      | ASTM D5185m | 2900      | 1758        | 1677        | 1460        |  |
|  | Phosphorus       | ppm      | ASTM D5185m | 1100      | 815         | 759         | 761         |  |
|  | Zinc             | ppm      | ASTM D5185m | 1200      | 978         | 940         | 917         |  |
|  | Sulfur           | ppm      | ASTM D5185m | 4000      | 2437        | 2913        | 3699        |  |
|  | Oxidation        | Abs/.1mm | *ASTM D7414 | >25       | 27.0        | 23.9        | 21.1        |  |
|  | Base Number (BN) | mg KOH/g | ASTM D2896  | 10.3      | 5.8         | 4.8         | 5.6         |  |
|  | Visc @ 100°C     | cSt      | ASTM D445   | 11.9      | 11.7        | 12.6        | 11.7        |  |
|  |                  |          | •           | -         |             |             |             |  |



\* - 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)

Contact/Location: RODNEY BRIGGS - PAC7001

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F: