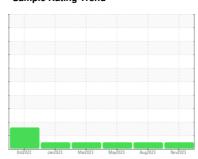


## **OIL ANALYSIS REPORT**

**Sample Rating Trend** 







# Machine Id 2311 Component Diesel Engine

**CHEVRON 15W40 (--- GAL)** 

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### 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.

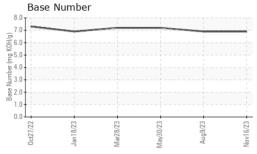
### **Fluid Condition**

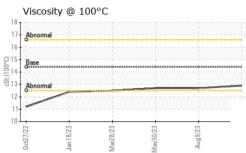
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          | 0ct2022     | Jan2023 Mar2023 | May2023 Aug2023 | Nov2023     |             |
|------------------|----------|-------------|-----------------|-----------------|-------------|-------------|
| SAMPLE INFORM    | MATION   | method      | limit/base      | current         | history1    | history2    |
| Sample Number    |          | Client Info |                 | WC0859256       | WC0829021   | PCA0085447  |
| Sample Date      |          | Client Info |                 | 16 Nov 2023     | 09 Aug 2023 | 30 May 2023 |
| Machine Age      | mls      | Client Info |                 | 112527          | 95136       | 75974       |
| Oil Age          | mls      | Client Info |                 | 0               | 0           | 0           |
| Oil Changed      |          | Client Info |                 | Changed         | Changed     | Changed     |
| Sample Status    |          |             |                 | NORMAL          | NORMAL      | NORMAL      |
| CONTAMINATION    | V        | method      | limit/base      | current         | history1    | history2    |
| Fuel             |          | WC Method   | >3.0            | <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 | >90             | 15              | 17          | 18          |
| Chromium         | ppm      | ASTM D5185m | >20             | 2               | 2           | 2           |
| Nickel           | ppm      | ASTM D5185m | >2              | <1              | <1          | <1          |
| Titanium         | ppm      | ASTM D5185m | >2              | 0               | 0           | 0           |
| Silver           | ppm      | ASTM D5185m | >2              | 0               | <1          | 0           |
| Aluminum         | ppm      | ASTM D5185m | >20             | 13              | 19          | 14          |
| Lead             | ppm      | ASTM D5185m | >40             | 3               | 4           | 3           |
| Copper           | ppm      | ASTM D5185m | >330            | <1              | 1           | 1           |
| Tin              | ppm      | ASTM D5185m | >15             | <1              | 1           | <1          |
| Vanadium         | ppm      | ASTM D5185m |                 | <1              | <1          | 0           |
| Cadmium          | ppm      | ASTM D5185m |                 | 0               | 0           | 0           |
| ADDITIVES        |          | method      | limit/base      | current         | history1    | history2    |
| Boron            | ppm      | ASTM D5185m |                 | 167             | 138         | 164         |
| Barium           | ppm      | ASTM D5185m |                 | 0               | 0           | 0           |
| Molybdenum       | ppm      | ASTM D5185m |                 | 124             | 121         | 120         |
| Manganese        | ppm      | ASTM D5185m |                 | 1               | 1           | <1          |
| Magnesium        | ppm      | ASTM D5185m |                 | 670             | 661         | 631         |
| Calcium          | ppm      | ASTM D5185m |                 | 1492            | 1549        | 1614        |
| Phosphorus       | ppm      | ASTM D5185m |                 | 680             | 707         | 668         |
| Zinc             | ppm      | ASTM D5185m |                 | 841             | 867         | 823         |
| Sulfur           | ppm      | ASTM D5185m |                 | 2408            | 3013        | 2879        |
| CONTAMINANTS     |          | method      | limit/base      | current         | history1    | history2    |
| Silicon          | ppm      | ASTM D5185m | >25             | 9               | 9           | 9           |
| Sodium           | ppm      | ASTM D5185m | >50             | 2               | 2           | 3           |
| Potassium        | ppm      | ASTM D5185m | >20             | 27              | 38          | 30          |
| INFRA-RED        |          | method      | limit/base      | current         | history1    | history2    |
| Soot %           | %        | *ASTM D7844 | >6              | 0.4             | 0.4         | 0.4         |
| Nitration        | Abs/cm   | *ASTM D7624 | >20             | 9.9             | 9.8         | 9.7         |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30             | 24.9            | 24.8        | 25.4        |
| FLUID DEGRADA    | TION     | method      | limit/base      | current         | history1    | history2    |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25             | 20.7            | 20.0        | 20.9        |
| Base Number (BN) | mg KOH/g | ASTM D2896  |                 | 6.9             | 6.9         | 7.2         |
|                  |          |             |                 |                 |             |             |



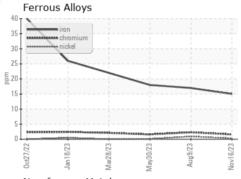
## **OIL ANALYSIS REPORT**

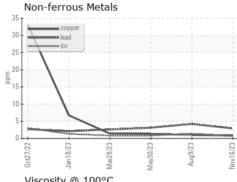


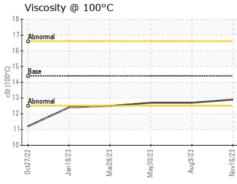


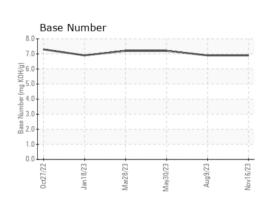
| VISUAL           |        | method  | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual | NONE       | 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 PROPER | HES | metnoa    | ilmit/base | current | nistory i | nistory2 |
|--------------|-----|-----------|------------|---------|-----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 14.4       | 12.9    | 12.7      | 12.7     |













Certificate L2367

Laboratory Sample No. Lab Number

Unique Number : 10754838 Test Package : FLEET

: WC0859256 : 06015694

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

: 22 Nov 2023 Diagnostician : Wes Davis

: 26 Nov 2023

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)

Ergon Trucking Inc. - MAG601

11337 State Route 800 Magnolia, OH US 44643

Contact: Eddy Smith

eddy.smith@ergon.com

T: F:

Report Id: ERGMAG601 [WUSCAR] 06015694 (Generated: 11/26/2023 17:33:25) Rev: 1