



# OIL ANALYSIS REPORT

|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |

Machine Id  
**GODWIN 001972**  
Component  
**Diesel Engine**  
Fluid  
**CASTROL VECTON 15W40 CK4 (2 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0800405</b>   | WC0800383   | WC0800519   |
| Sample Date    |     | Client Info |           | <b>15 Feb 2024</b> | 06 Feb 2024 | 04 Dec 2023 |
| Machine Age    | hrs | Client Info |           | <b>14137</b>       | 13962       | 13662       |
| Oil Age        | hrs | Client Info |           | <b>175</b>         | 300         | 290         |
| Filter Age     | hrs | Client Info |           | <b>175</b>         | 300         | 290         |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >80  | <b>5</b>     | 8    | 9    |
| Chromium     | ppm    | ASTM D5185m | >6   | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | <1   | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | <1   | <1   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>3</b>     | 3    | 3    |
| Lead         | ppm    | ASTM D5185m | >95  | <b>0</b>     | 0    | <1   |
| Copper       | ppm    | ASTM D5185m | >85  | <b>&lt;1</b> | <1   | <1   |
| Tin          | ppm    | ASTM D5185m | >9   | <b>&lt;1</b> | <1   | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

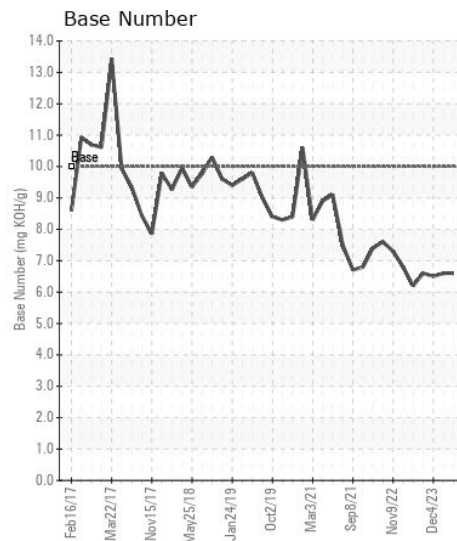
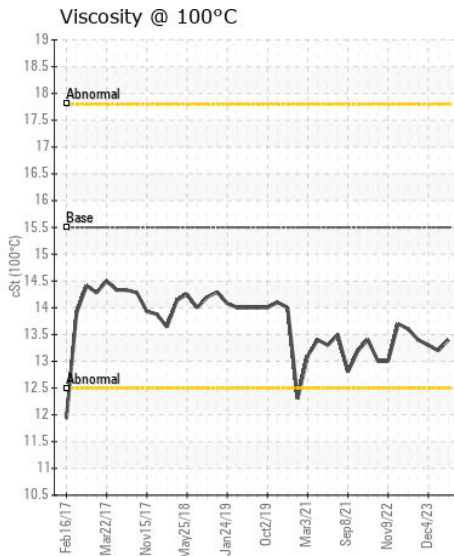
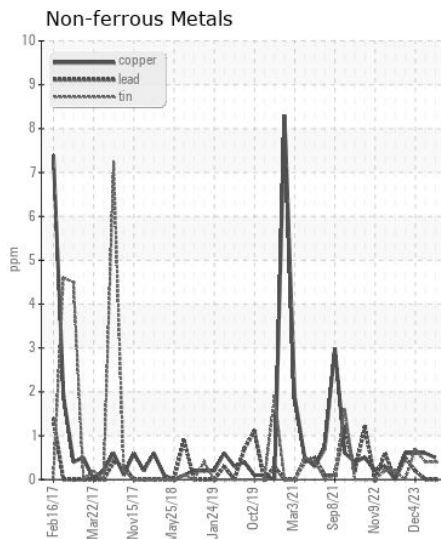
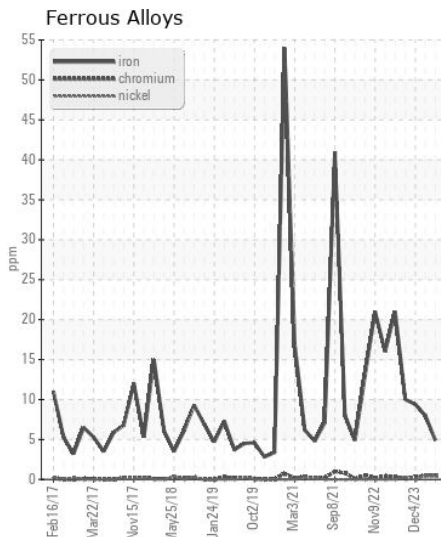
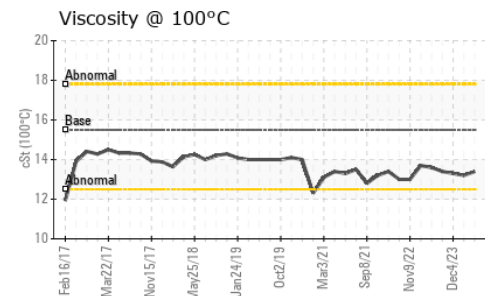
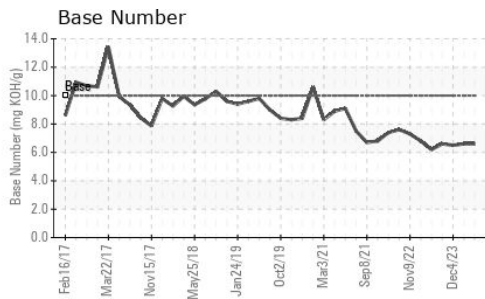
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>9</b>       | 9     | 7     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>6</b>       | 2     | 0     |
| Fuel             |          | WC Method   | >4.0  | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.1  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 |       | <b>0.1</b>     | 0.1   | 0.1   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>7.8</b>     | 8.8   | 8.8   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>16.4</b>    | 16.9  | 17.2  |
| 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     | >0.1  | <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>2</b>     | <1   | 3    |
| Boron            | ppm      | ASTM D5185m |      | <b>67</b>    | 65   | 73   |
| Barium           | ppm      | ASTM D5185m |      | <b>1</b>     | <1   | <1   |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>86</b>    | 83   | 86   |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m |      | <b>82</b>    | 84   | 76   |
| Calcium          | ppm      | ASTM D5185m |      | <b>1858</b>  | 1820 | 1926 |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>942</b>   | 931  | 1037 |
| Zinc             | ppm      | ASTM D5185m |      | <b>1058</b>  | 1057 | 1161 |
| Sulfur           | ppm      | ASTM D5185m |      | <b>3544</b>  | 3579 | 3598 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>12.7</b>  | 13.8 | 13.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10   | <b>6.6</b>   | 6.6  | 6.5  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.5 | <b>13.4</b>  | 13.2 | 13.3 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0800405 **Received** : 27 Feb 2024  
**Lab Number** : 06102253 **Tested** : 28 Feb 2024  
**Unique Number** : 10900483 **Diagnosed** : 28 Feb 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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)