

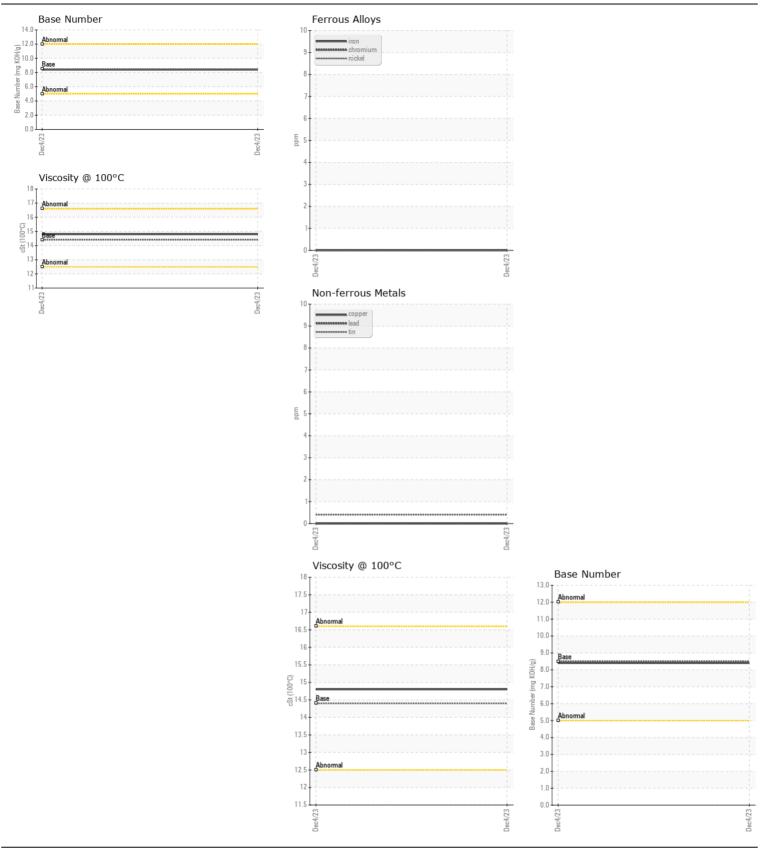
## Machine Id **CEDAR RIDGE** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

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|---|------------------|----------|-------------|-----------|-------------|----------|----------|
| RECOMMENDATION  | Test             | UOM      | Method      | Limit/Abn | Current     | History1 | History2 |
| Resample at the next service interval to monitor.   | Sample Number    |          | Client Info |           | PE0001751   |          |          |
|   | Sample Date      |          | Client Info |           | 04 Dec 2023 |          |          |
|   | Machine Age      | hrs      | Client Info |           | 421         |          |          |
|   | Oil Age          | hrs      | Client Info |           | 0           |          |          |
|   | Filter Age       | hrs      | Client Info |           | 0           |          |          |
|   | Oil Changed      |          | Client Info |           | N/A         |          |          |
|   | Filter Changed   |          | Client Info |           | N/A         |          |          |
|   | Sample Status    |          |             |           | NORMAL      |          |          |
| WEAD  |                  |          |             | 100       | •           |          |          |
| WEAR  | Iron             | ppm      | ASTM D5185m |           | 0           |          |          |
| All component wear rates are normal.  | Chromium         | ppm      | ASTM D5185m |           | 0           |          |          |
|   | Nickel           | ppm      | ASTM D5185m | >4        | 0           |          |          |
|   | Titanium         | ppm      | ASTM D5185m | 0         | 0           |          |          |
|   | Silver           | ppm      | ASTM D5185m |           | 0           |          |          |
|   | Aluminum         | ppm      | ASTM D5185m |           | <1          |          |          |
|   | Lead             | ppm      | ASTM D5185m |           | 0           |          |          |
|   | Copper           | ppm      | ASTM D5185m |           | 0           |          |          |
|   | Tin              | ppm      | ASTM D5185m | >15       | <1          |          |          |
|   | Vanadium         | ppm      | ASTM D5185m |           | <1          |          |          |
|   | White Metal      | scalar   | *Visual     | NONE      | NONE        |          |          |
|   | Yellow Metal     | scalar   | *Visual     | NONE      | NONE        |          |          |
| CONTAMINATION   | Silicon          | ppm      | ASTM D5185m | >25       | 4           |          |          |
| CONTAMINATION   | Potassium        | ppm      | ASTM D5185m |           | 8           |          |          |
| There is no indication of any contamination in the oil.   | Fuel             | ppin     |             | >5        | <1.0        |          |          |
|   | Water            |          | WC Method   |           | NEG         |          |          |
|   | Glycol           |          | WC Method   | 20.L      | NEG         |          |          |
|   | Soot %           | %        | *ASTM D7844 | >3        | 0           |          |          |
|   | Nitration        | Abs/cm   | *ASTM D7624 | >20       | 5.0         |          |          |
|   | Sulfation        | Abs/.1mm | *ASTM D7415 |           | 19.9        |          |          |
|   | Silt             | scalar   | *Visual     | NONE      | NONE        |          |          |
|   | Debris           | scalar   | *Visual     | NONE      | NONE        |          |          |
|   | Sand/Dirt        | scalar   | *Visual     | NONE      | NONE        |          |          |
|   | Appearance       | scalar   | *Visual     | NORML     | NORML       |          |          |
|   | Odor             | scalar   | *Visual     | NORML     | NORML       |          |          |
|   | Emulsified Water | scalar   | *Visual     | >0.2      | NEG         |          |          |
|   |                  | ooului   |             |           |             |          |          |
| FLUID CONDITION   | Sodium           | ppm      | ASTM D5185m | >158      | 1           |          |          |
|   | Boron            | ppm      | ASTM D5185m | 250       | 181         |          |          |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service. | Barium           | ppm      | ASTM D5185m |           | 0           |          |          |
|   | Molybdenum       | ppm      | ASTM D5185m | 100       | 0           |          |          |
|   | Manganese        | ppm      | ASTM D5185m |           | <1          |          |          |
|   | Magnesium        | ppm      | ASTM D5185m | 450       | 48          |          |          |
|   | Calcium          | ppm      | ASTM D5185m |           | 1952        |          |          |
|   | Phosphorus       | ppm      | ASTM D5185m |           | 905         |          |          |
|   | Zinc             | ppm      | ASTM D5185m | 1350      | 1089        |          |          |
|   | Sulfur           | ppm      | ASTM D5185m |           | 3335        |          |          |
|   | Oxidation        | Abs/.1mm | *ASTM D7414 |           | 15.7        |          |          |
|   | Base Number (BN) |          |             |           | 8.4         |          |          |
|   |                  | 0 - 0    |             |           |             |          |          |

Visc @ 100°C cSt

ASTM D445 14.4

14.8



PetroCard - Salem Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : PE0001751 Recieved : 20 Dec 2023 1977 Claxter Road NE Lab Number : 06040416 Diagnosed : 21 Dec 2023 Salem, OR : 10795645 Unique Number Diagnostician : Don Baldridge US 97301 Test Package : FLEET (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN) Contact: Donovan Bresko Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dbresko@petrocard.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (800)950-3835 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

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