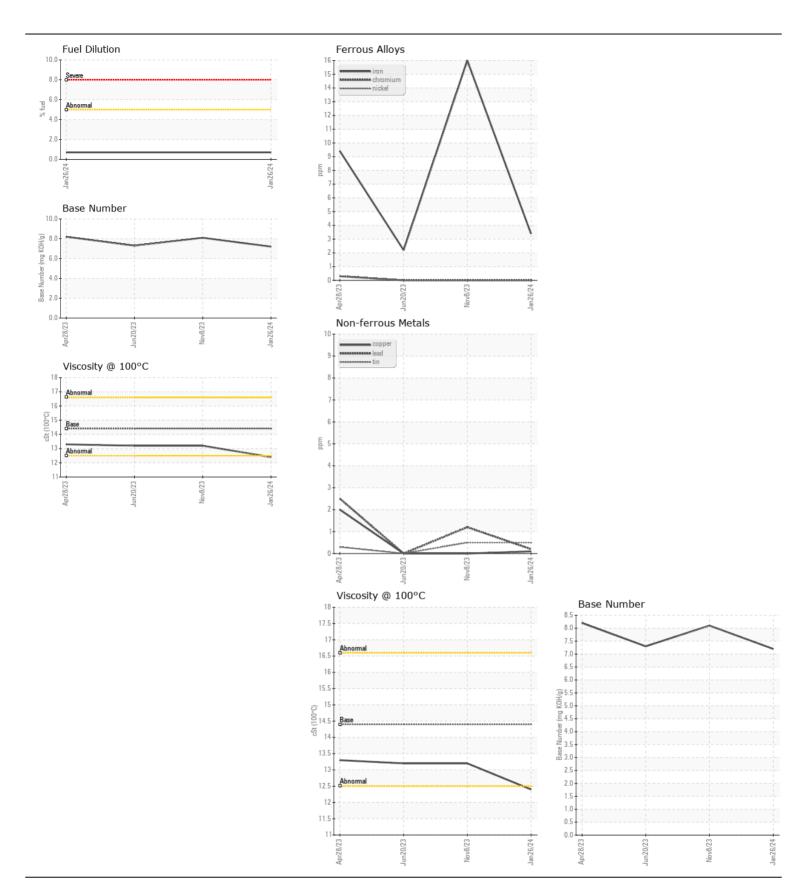
**WEAR** CONTAMINATION **FLUID CONDITION**  **NORMAL NORMAL NORMAL** 

Machine Id

2602

Component

| Component Diesel Engine  |                         |          |                           |           |             |             |             |
|--|-------------------------|----------|---------------------------|-----------|-------------|-------------|-------------|
| CHEVRON 15W40 ( GAL)   |                         |          |                           |           |             |             |             |
|  |                         |          |                           |           |             |             |             |
| RECOMMENDATION   | Test                    | UOM      | Method                    | Limit/Abn | Current     | History1    | History2    |
| No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample. | Sample Number           |          | Client Info               |           | WC0846769   | WC0846327   | WC0810059   |
|  | Sample Date             |          | Client Info               |           | 26 Jan 2024 | 08 Nov 2023 | 20 Jun 2023 |
|  | Machine Age             | hrs      | Client Info               |           | 1693        | 1396        | 6350        |
|  | Oil Age                 | hrs      | Client Info               |           | 750         | 564         | 0           |
|  | Filter Age              | hrs      | Client Info               |           | 750         | 564         | 0           |
|  | Oil Changed             |          | Client Info               |           | Changed     | Changed     | Changed     |
|  | Filter Changed          |          | Client Info               |           | Changed     | Changed     | Changed     |
|  | Sample Status           |          |                           |           | NORMAL      | ABNORMAL    | NORMAL      |
| WEAR   | Iron                    | ppm      | ASTM D5185m               | >100      | 3           | 16          | 2           |
|  | Chromium                | ppm      | ASTM D5185m               | >20       | 0           | 0           | 0           |
| All component wear rates are normal.   | Nickel                  | ppm      | ASTM D5185m               | >4        | 0           | 0           | 0           |
|  | Titanium                | ppm      | ASTM D5185m               |           | <1          | 1           | 0           |
|  | Silver                  | ppm      | ASTM D5185m               | >3        | 0           | 0           | 0           |
|  | Aluminum                | ppm      | ASTM D5185m               | >20       | 1           | <b>1</b> 5  | 10          |
|  | Lead                    | ppm      | ASTM D5185m               | >40       | <1          | 1           | 0           |
|  | Copper                  | ppm      | ASTM D5185m               | >330      | <1          | 0           | 0           |
|  | Tin                     | ppm      | ASTM D5185m               | >15       | <1          | <1          | 0           |
|  | Vanadium                | ppm      | ASTM D5185m               |           | 0           | 0           | 0           |
|  | White Metal             | scalar   | *Visual                   | NONE      | NONE        | NONE        | NONE        |
|  | Yellow Metal            | scalar   | *Visual                   | NONE      | NONE        | NONE        | NONE        |
| CONTAMINATION  | Ciliana                 |          | ACTM DE105                | 05        |             | A 07        |             |
| CONTAMINATION  | Silicon                 | ppm      |                           | >25       | 8<br>5      | <u>4</u> 27 | 6           |
| Fuel content negligible. There is no indication of any contamination in the oil.   | Potassium<br>Fuel       | ppm      | ASTM D5185m<br>ASTM D3524 |           | 0.7         |             | <1.0        |
|  | Water                   | %        | WC Method                 |           | 0.7<br>NEG  | <1.0<br>NEG | NEG         |
|  | Glycol                  |          | WC Method                 | >0.2      | NEG         | NEG         | NEG         |
|  | Soot %                  | %        | *ASTM D7844               | ~3        | 0           | 0           | 0.1         |
|  | Nitration               | Abs/cm   | *ASTM D7624               | >20       | 5.0         | 4.6         | 4.7         |
|  | Sulfation               | Abs/.1mm | *ASTM D7415               |           | 18.1        | 18.5        | 19.0        |
|  | 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       |
|  | <b>Emulsified Water</b> | scalar   | *Visual                   | >0.2      | NEG         | NEG         | NEG         |
|  |                         |          |                           |           |             |             |             |
| FLUID CONDITION  | Sodium                  | ppm      | ASTM D5185m               | >50       | 6           | 1           | 1           |
| The BN result indicates that there is suitable alkalinity remaining in the   | Boron                   | ppm      | ASTM D5185m               |           | 384         | 416         | 430         |
| oil. The condition of the oil is suitable for further service.   | Barium                  | ppm      | ASTM D5185m               |           | 0           | 0           | 0           |
|  | Molybdenum              | ppm      | ASTM D5185m               |           | 87          | 84          | 78          |
|  | Manganese               | ppm      | ASTM D5185m               |           | 0           | <1          | 0           |
|  | Magnesium               | ppm      | ASTM D5185m               |           | 390         | 399         | 452         |
|  | Calcium                 | ppm      | ASTM D5185m               |           | 1247        | 1304        | 1464        |
|  | Phosphorus              | ppm      | ASTM D5185m               |           | 965         | 1051        | 1024        |
|  | Zinc                    | ppm      | ASTM D5185m               |           | 1113        | 1224        | 1271        |
|  | Sulfur                  | ppm      | ASTM D5185m               | 05        | 3140        | 3281        | 4024        |
|  | Oxidation               | Abs/.1mm | *ASTM D7414               | >25       | 12.0        | 12.5        | 14.0        |
|  | Base Number (BN)        |          |                           | 1 / /     | 7.2         | 8.1         | 7.3         |
|  | Visc @ 100°C            | cSt      | ASTM D445                 | 14.4      | 12.4        | 13.2        | 13.2        |







Certificate L2367

Laboratory Sample No.

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

Lab Number : 06077505 Unique Number: 10859596

: WC0846769

Received : 01 Feb 2024 : 05 Feb 2024 **Tested** Diagnosed

: 05 Feb 2024 - Wes Davis

Test Package : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

US 27560 Contact: SCOTT SULLIVAN ssullivan@sullivaneastern.com

**SULLIVAN EASTERN INC** 

2860 C SLATER RD

MORRISVILLE, NC

T: (919)484-8993 F: (919)484-2136

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)