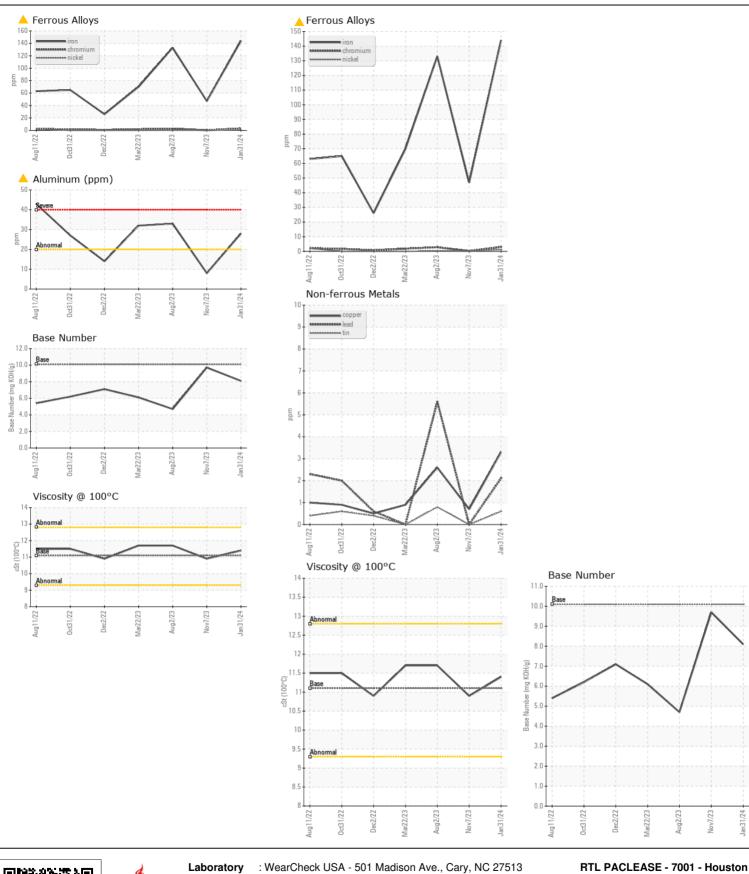


**WEAR** CONTAMINATION **FLUID CONDITION** 

**ABNORMAL** NORMAL **NORMAL** 

Machine Id **857-4289** 

| Component Diesel Engine  |                     |                  |             |           |              |              |             |
|--|---------------------|------------------|-------------|-----------|--------------|--------------|-------------|
| CHEVRON DELO 400 SAE 10W30 ( GAL)  |                     |                  |             |           |              |              |             |
| RECOMMENDATION   | Test                | UOM              | Method      | Limit/Abn | Current      | History1     | History2    |
| Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. We recommend an early resample to monitor this condition.  | Sample Number       |                  | Client Info |           | RPL0014209   | RPL0014659   | RPL0010259  |
|  | Sample Date         |                  | Client Info |           | 31 Jan 2024  | 07 Nov 2023  | 02 Aug 2023 |
|  | Machine Age         | hrs              | Client Info |           | 1193         | 11641        | 321924      |
|  | Oil Age             | hrs              | Client Info |           | 0            | 0            | 0           |
|  | Filter Age          | hrs              | Client Info |           | 0            | 0            | 0           |
|  | Oil Changed         |                  | Client Info |           | Changed      | N/A          | Changed     |
|  | Filter Changed      |                  | Client Info |           | Changed      | N/A          | Changed     |
|  | Sample Status       |                  |             |           | ABNORMAL     | NORMAL       | ABNORMAL    |
| WEAR   | Iron                | ppm              | ASTM D5185m | >100      | <b>144</b>   | 47           | <u> </u>    |
|  | Chromium            | ppm              | ASTM D5185m |           | 3            | <1           | 3           |
| Piston, ring and cylinder wear is indicated.   | Nickel              | ppm              | ASTM D5185m |           | 1            | 0            | <1          |
|  | Titanium            | ppm              | ASTM D5185m |           | <1           | 0            | 0           |
|  | Silver              | ppm              | ASTM D5185m | >3        | 0            | 0            | 0           |
|  | Aluminum            | ppm              | ASTM D5185m |           | <u>^</u> 28  | 8            | 33          |
|  | Lead                | ppm              | ASTM D5185m | >40       | 2            | 0            | 6           |
|  | Copper              | ppm              | ASTM D5185m | >330      | 3            | <1           | 3           |
|  | Tin                 | ppm              | ASTM D5185m | >15       | <1           | 0            | <1          |
|  | Vanadium            | ppm              | ASTM D5185m |           | 0            | 0            | 0           |
|  | White Metal         | scalar           | *Visual     | NONE      | NONE         | NONE         | NONE        |
|  | Yellow Metal        | scalar           | *Visual     | NONE      | NONE         | NONE         | NONE        |
|  |                     |                  |             |           |              |              |             |
| CONTAMINATION  | Silicon             | ppm              | ASTM D5185m |           | 12           | 8            | 8           |
| There is no indication of any contamination in the oil.  | Potassium           | ppm              | ASTM D5185m |           | 17           | 7            | 29          |
|  | Fuel                |                  |             | >5        | <1.0         | <1.0         | <1.0        |
|  | Water               |                  | WC Method   | >0.2      | NEG          | NEG          | NEG         |
|  | Glycol              | 21               | WC Method   | 0         | NEG          | NEG          | NEG         |
|  | Soot %              | %                | *ASTM D7844 |           | 0.8          | 0.4          | 0.9         |
|  | Nitration           | Abs/cm           | *ASTM D7624 | >20       | 11.8         | 7.9          | 13.0        |
|  | Sulfation           | Abs/.1mm         | *ASTM D7415 |           | 23.4<br>NONE | 22.5         | 27.3        |
|  | Silt                | scalar           | *Visual     | NONE      | NONE<br>NONE | NONE<br>NONE | NONE        |
|  | Debris<br>Sand/Dirt | scalar           | *Visual     | NONE      | NONE         | NONE         | NONE        |
|  | Appearance          | scalar<br>scalar | *Visual     | NORML     | NORML        | NORML        | NORML       |
|  | Odor                | scalar           | *Visual     | NORML     | NORML        | NORML        | NORML       |
|  | Emulsified Water    |                  | *Visual     | >0.2      | NEG          | NEG          | NEG         |
|  |                     |                  |             |           |              |              | IVLG        |
| FLUID CONDITION  | Sodium              | ppm              | ASTM D5185m |           | 0            | 1            | 5           |
| The DN second in Proceedings that the contract is a Stability of the Profession of the stability of the second in t | Boron               | ppm              | ASTM D5185m |           | 32           | 56           | 10          |
| 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            | 0            | 0           |
|  | Molybdenum          | ppm              | ASTM D5185m |           | 46           | 41           | 9           |
|  | Manganese           | ppm              | ASTM D5185m |           | 2            | 0            | 2           |
|  | Magnesium           | ppm              | ASTM D5185m |           | 561          | 522          | 774         |
|  | Calcium             | ppm              | ASTM D5185m |           | 1650         | 1584         | 1430        |
|  | Phosphorus          | ppm              | ASTM D5185m |           | 792          | 762          | 735         |
|  | Zinc                | ppm              | ASTM D5185m | 1400      | 969          | 887          | 857         |
|  | Sulfur              | ppm              | ASTM D5185m |           | 2464         | 2590         | 3711        |
|  | Oxidation           | Abs/.1mm         | *ASTM D7414 |           | 23.0         | 20.4         | 23.7        |
|  | Base Number (BN)    | 0 0              |             | 10.1      | 8.1          | 9.7          | 4.7         |
|  | Visc @ 100°C        | cSt              | ASTM D445   | 11.1      | 11.4         | 10.9         | 11.7        |







Certificate L2367

Sample No.

Lab Number : 06085315 Unique Number: 10872760 Test Package : FLEET

Received : 09 Feb 2024 : RPL0014209 **Tested** : 12 Feb 2024

: 12 Feb 2024 - Don Baldridge Diagnosed

6300 N. Loop East Houston, TX US 77026

Contact: RODNEY BRIGGS briggsr@rushenterprises.com

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)

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