



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

Machine Id  
**RICHARD RILEY (S/N 73280853)**  
Component  
**Port Genset**  
Fluid  
**CHEVRON DELO 710 LS (7 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>MW0062193</b>   | MW0062115   | MW0062106   |
| Sample Date    |     | Client Info |           | <b>30 Apr 2024</b> | 11 Apr 2024 | 19 Mar 2024 |
| Machine Age    | hrs | Client Info |           | <b>3093</b>        | 2810        | 25061       |
| Oil Age        | hrs | Client Info |           | <b>258</b>         | 306         | 242         |
| Filter Age     | hrs | Client Info |           | <b>258</b>         | 306         | 242         |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | Changed     | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | Changed     | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>5</b>     | 5    | 5    |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| Silver       | ppm    | ASTM D5185m | >5   | <b>&lt;1</b> | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >12  | <b>&lt;1</b> | <1   | 2    |
| Lead         | ppm    | ASTM D5185m | >17  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >70  | <b>&lt;1</b> | 2    | <1   |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>     | <1   | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | <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.

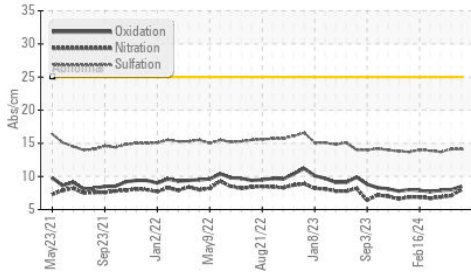
|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>1</b>       | 2     | 3     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>0</b>       | <1    | 2     |
| 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>8.0</b>     | 7.1   | 6.9   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>14.1</b>    | 14.1  | 13.7  |
| 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**

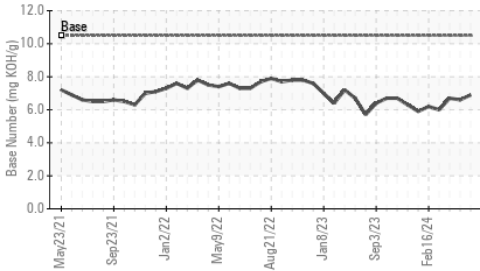
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>5</b>     | 2    | 1    |
| Boron            | ppm      | ASTM D5185m |      | <b>53</b>    | 49   | 48   |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 1    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>44</b>    | 45   | 43   |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 1    | <1   |
| Magnesium        | ppm      | ASTM D5185m |      | <b>11</b>    | 17   | 17   |
| Calcium          | ppm      | ASTM D5185m |      | <b>3329</b>  | 3492 | 3170 |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>0</b>     | 2    | 8    |
| Zinc             | ppm      | ASTM D5185m |      | <b>2</b>     | 7    | 6    |
| Sulfur           | ppm      | ASTM D5185m |      | <b>2140</b>  | 2541 | 2086 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>8.5</b>   | 8.0  | 7.9  |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.5 | <b>6.9</b>   | 6.6  | 6.7  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.5 | <b>13.0</b>  | 13.3 | 13.1 |

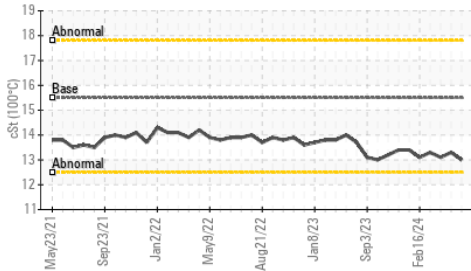
**FT-IR (Direct Trend)**



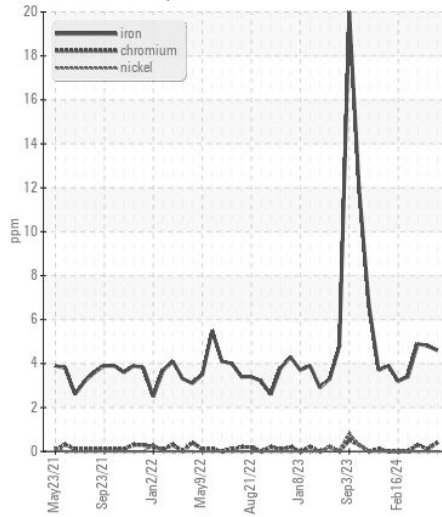
**Base Number**



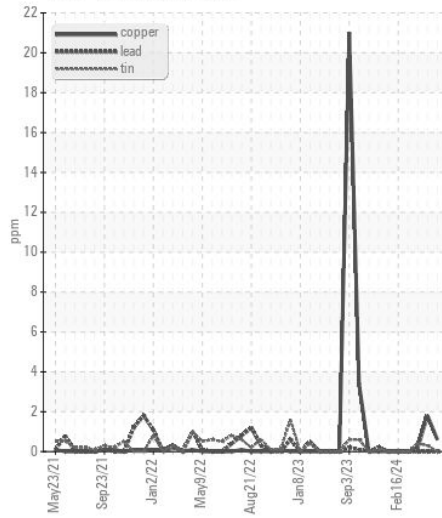
**Viscosity @ 100°C**



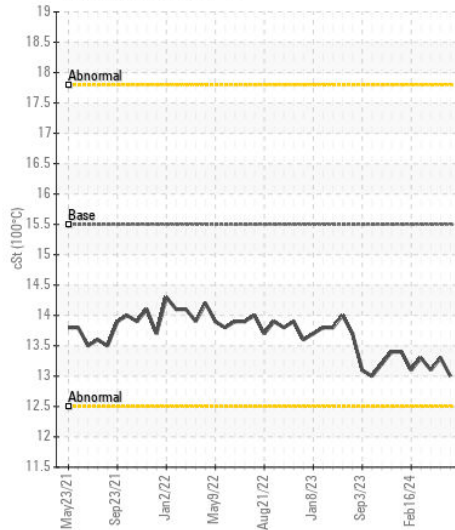
**Ferrous Alloys**



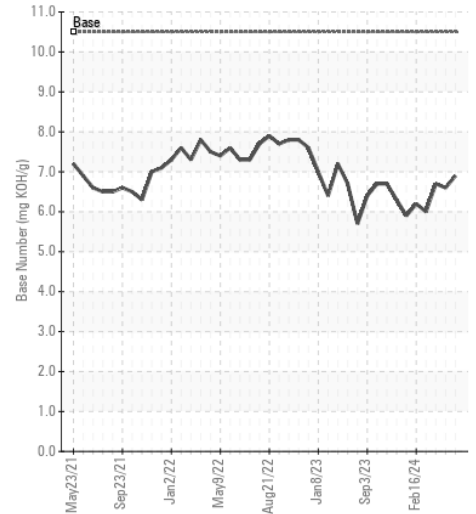
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0062193  
**Lab Number** : 06228326  
**Unique Number** : 11111819  
**Test Package** : MAR 2

**Received** : 05 Jul 2024  
**Tested** : 08 Jul 2024  
**Diagnosed** : 08 Jul 2024 - Wes Davis

**AMERICAN COMMERCIAL LINES**  
 PO BOX 610, 1701 E. MARKET STREET  
 JEFFERSONVILLE, IN  
 US 47130  
 Contact: RONALD SCHNEIDER  
 ronald.schneider@bargeacbl.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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