

### **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

## A208770001

Diesel Engine Fluid {not provided} (--- GAL)

#### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

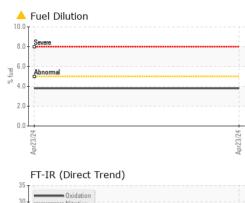
### Fluid Condition

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

|               | IATION   | method      | limit/base | current            | history1 | history2 |
|---------------|----------|-------------|------------|--------------------|----------|----------|
| Sample Number |          | Client Info |            | WC0911380          |          |          |
| Sample Date   |          | Client Info |            | 23 Apr 2024        |          |          |
| Machine Age   | hrs      | Client Info |            | 0                  |          |          |
| Oil Age       | hrs      | Client Info |            | 0                  |          |          |
| Oil Changed   |          | Client Info |            | Not Changd         |          |          |
| Sample Status |          |             |            | MARGINAL           |          |          |
| CONTAMINATION | J        | method      | limit/base | current            | history1 | history2 |
| Water         |          | WC Method   | >0.2       | NEG                |          |          |
| Glycol        |          | WC Method   |            | NEG                |          |          |
| WEAR METALS   |          | method      | limit/base | current            | history1 | history2 |
| Iron          | ppm      | ASTM D5185m | >100       | 6                  |          |          |
| Chromium      | ppm      | ASTM D5185m | >20        | <1                 |          |          |
| Nickel        | ppm      | ASTM D5185m | >4         | 0                  |          |          |
| Titanium      | ppm      | ASTM D5185m |            | 0                  |          |          |
| Silver        | ppm      | ASTM D5185m | >3         | 0                  |          |          |
| Aluminum      | ppm      | ASTM D5185m | >20        | <1                 |          |          |
| Lead          | ppm      | ASTM D5185m | >40        | 1                  |          |          |
| Copper        | ppm      | ASTM D5185m | >330       | 18                 |          |          |
| Tin           | ppm      | ASTM D5185m | >15        | 0                  |          |          |
| Vanadium      | ppm      | ASTM D5185m |            | <1                 |          |          |
| Cadmium       | ppm      | ASTM D5185m |            | <1                 |          |          |
| ADDITIVES     |          | method      | limit/base | current            | history1 | history2 |
| Boron         | ppm      | ASTM D5185m |            | 0                  |          |          |
| Barium        | ppm      | ASTM D5185m |            | 0                  |          |          |
| Molybdenum    | ppm      | ASTM D5185m |            | 11                 |          |          |
| Manganese     | ppm      | ASTM D5185m |            | 0                  |          |          |
| Magnesium     | ppm      | ASTM D5185m |            | 384                |          |          |
| Calcium       | ppm      | ASTM D5185m |            | 2422               |          |          |
| Phosphorus    | ppm      | ASTM D5185m |            | 1115               |          |          |
| Zinc          | ppm      | ASTM D5185m |            | 1303               |          |          |
| Sulfur        | ppm      | ASTM D5185m |            | 4946               |          |          |
| CONTAMINANTS  |          | method      | limit/base | current            | history1 | history2 |
| Silicon       | ppm      | ASTM D5185m | >25        | 3                  |          |          |
| Sodium        | ppm      | ASTM D5185m |            | 2                  |          |          |
| Potassium     | ppm      | ASTM D5185m | >20        | 0                  |          |          |
| Fuel          | %        | ASTM D3524  | >5         | <mark>/</mark> 3.8 |          |          |
| INFRA-RED     |          | method      | limit/base | current            | history1 | history2 |
| Soot %        | %        | *ASTM D7844 | >3         | 0.2                |          |          |
| Nitration     | Abs/cm   | *ASTM D7624 | >20        | 5.3                |          |          |
| Sulfation     | Abs/.1mm | *ASTM D7415 | >30        | 16.2               |          |          |
| FLUID DEGRADA | TION     | method      | limit/base | current            | history1 | history2 |
|               |          |             |            |                    |          |          |
| Oxidation     | Abs/.1mm | *ASTM D7414 | >25        | 12.3               |          |          |

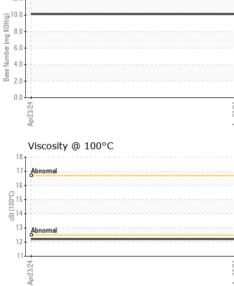


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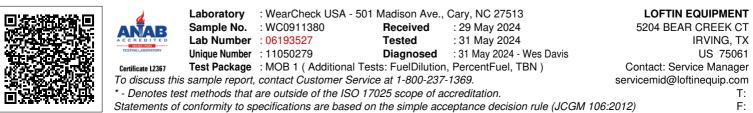




Base Number



| VISUAL                |        | method    | limit/base   | current       | history1 | history2 |
|-----------------------|--------|-----------|--|---------------|----------|----------|
| White Metal           | scalar | *Visual   | NONE   | NONE          |          |          |
| Yellow Metal          | scalar | *Visual   | NONE   | NONE          |          |          |
| Precipitate           | scalar | *Visual   | NONE   | NONE          |          |          |
| 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           |          |          |
| Free Water            | scalar | *Visual   |  | NEG           |          |          |
| FLUID PROPER          | TIES   | method    | limit/base   | current       | history1 | history2 |
| Visc @ 100°C          | cSt    | ASTM D445 |  | 12.2          |          |          |
| GRAPHS                |        |           |  |               |          |          |
| Iron (ppm)            |        |           |  | Lead (ppm)    |          |          |
| Severe                |        |           | 80.  | Severe        |          |          |
| 50                    |        |           | 60   |               |          |          |
| 00 Abnormal           |        |           | 40   | Abnormal      |          |          |
| 50 -                  |        |           | 20-  |               |          |          |
|                       |        |           |  |               |          |          |
| Apr23/24              |        |           | Apr23/24   | Apr23/24      |          |          |
|                       |        |           | Ap   |               |          |          |
| Aluminum (ppm)        |        |           | 50·  | Chromium (p   | pm)      |          |
| 40 - Severe           |        |           | 40   | Severe        |          |          |
| 30                    |        |           | = <sup>30</sup>  |               |          |          |
| 30 -<br>20 - Abnormal |        |           | 20-  | Abnormal      |          |          |
| 10-                   |        |           | 10.  |               |          |          |
| 24                    |        |           | - 24   | 24            |          |          |
| Apr23/24              |        |           | Apr23/24   | Apr23/24      |          |          |
| Copper (ppm)          |        |           |  | Silicon (ppm) |          |          |
| 00 Severe             |        |           | 80   | Sincon (ppin) |          |          |
|                       |        |           | 60·  |               |          |          |
| 00 -                  |        |           | <u>특</u> 40·   |               |          |          |
|                       |        |           |  | Abnormal      |          |          |
| 00-                   |        |           | 20.  |               |          |          |
| 0<br>47<br>124        |        |           | -0-<br>-0-   | /24           |          |          |
| Apr23/24              |        |           | Apr23/24   | Apr23/24      |          |          |
| Viscosity @ 100°C     | 2      |           |  | Base Number   |          |          |
| Abnormal              |        |           |  |               |          |          |
| 16                    |        |           | H 10.0   |               |          |          |
| 14 - Abnormal         |        |           | ຍີ່ 0.0<br>ມີ 6.0  |               |          |          |
| Abnormal              |        |           | (0)<br>HOX<br>Bu<br>Momper<br>Momper<br>HOX<br>Base<br>R<br>Base<br>Base<br>Base<br>Base<br>Base<br>Base<br>Base<br>Base |               |          |          |
|                       |        |           | 巖 2.0·   |               |          |          |
|                       |        |           |  |               |          |          |
| 10<br>4bi23/24        |        |           | - 0.0  | Apr23/24      |          |          |



Contact/Location: Service Manager - LOFIRV Page 2 of 2