

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

FREIGHTLINER 1229

Component Diesel Engine Fluid MOBIL 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

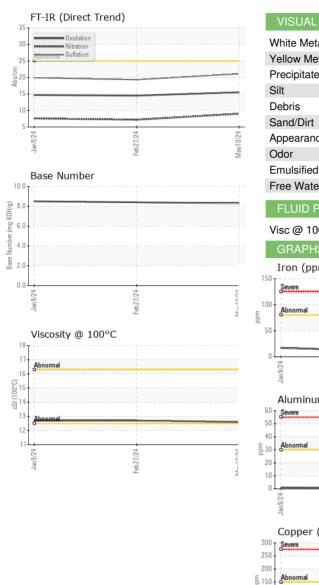
Fluid Condition

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

| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|------------------|----------|-------------|------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | WC0917235 | WC0909299 | WC0878835 |
| Sample Date | | Client Info | | 10 May 2024 | 27 Feb 2024 | 09 Jan 2024 |
| Machine Age | mls | Client Info | | 285460 | 268885 | 260835 |
| Oil Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINATION | ٧ | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >80 | 23 | 11 | 17 |
| Chromium | ppm | ASTM D5185m | >5 | 2 | 1 | 2 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | 2 | <1 | 1 |
| Lead | ppm | ASTM D5185m | >30 | 6 | 2 | 3 |
| Copper | ppm | ASTM D5185m | >150 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >5 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 4 | 1 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 59 | 54 | 54 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | | 907 | 874 | 957 |
| Calcium | ppm | ASTM D5185m | | 1051 | 1006 | 1042 |
| Phosphorus | ppm | ASTM D5185m | | 1100 | 914 | 999 |
| Zinc | ppm | ASTM D5185m | | 1250 | 1059 | 1159 |
| Sulfur | ppm | ASTM D5185m | | 2962 | 3188 | 2945 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >20 | 6 | 2 | 3 |
| Sodium | ppm | ASTM D5185m | >118 | <1 | 3 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 0 | <1 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | >3 | 1.4 | 0.7 | 1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.0 | 7.2 | 7.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.1 | 19.3 | 19.9 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.5 | 14.5 | 14.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 8.3 | 8.4 | 8.5 |
| | | | | | | |



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| nd) | VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|------------|-----------|---|----------------|----------------|-----------------------|
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| *************************************** | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| 7/24 - | | scalar | *Visual | NORML | NORML | NORML | NORML |
| Feb27/24 | Appearance Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |
| | Free Water | scalar | *Visual | | NEG | NEG | NEG |
| | FLUID PROPER | | method | limit/base | | history1 | |
| | | | | IIIIII/Dase | current | | history2 |
| | Visc @ 100°C GRAPHS | cSt | ASTM D445 | | 12.6 | 12.7 | 12.7 |
| | | | | | Load (nnm) | | |
| | Iron (ppm) | | | 80 | Lead (ppm) | | |
| 7/24 - | Severe | | | 60 | Severe | | |
| Feb27/24 | Abnormal | | | | | | |
| | | | | 튭.40 | Abnormal | | |
| | | | | 20 |) | | |
| | 0 | + | | | | + | |
| | Jan 9/24 | Feb27/24 | | May10/24 | Jan 9/24 | Feb 27/24 | |
| | Aluminum (ppm) | | | Ma | Chromium (p | — | |
| | 60 Severe | / | | 12 | I same | , | |
| | 50 | | | 10 | , - | | ********************* |
| 4 | Abnormal | | | udd 6 | Abnormal | | |
| Feb 27/24 | 20- | | | 4 | +- | | |
| La. | 2 10 | | | 2 | 2 | | |
| | 0 + + | 1/24 - | | 0/24 | | - 1/24 - | |
| | Jan | Feb27/24 | | May10/24 | Jan 9/24 | Feb27/24 | |
| | Copper (ppm) | | | 40 | Silicon (ppm) |) | |
| | 300 Severe | | | | Severe | | |
| | 200- | | | 30 |) | | |
| | 톱 150 - Abnormal | | | 틀 20 | Abnormal | 1 | |
| | 100 | | | 10 | | | |
| | 50 | | | | | | |
| | Jan 9/24 | Feb27/24 - | | 0/24 | Jan 9/24 | Feb27/24 - | |
| | Jan | Feb 2 | | May10/24 | | | |
| | Viscosity @ 100° | С | | 10.0 | Base Numbe | r | |
| | Abnormal | | | (b)H0,8.0 (b)H0,9 (b)H0,9 (b)H0,8.0 (b)H0,8.0 (b)H0,8.0 (c)H0,8.0 | | · | |
| | 다. 00114 전 Abnormal | | | Ē 6.0 |) | | |
| | Abnormal | | | - ²⁰ g 4.0 |)+ | | |
| | 12- | | | 2.0 |) | | |
| | 10 | + | | 0.0 | | | |
| | Jan 9/24 | Feb27/24 | | May10/24 | Jan 9/24 | Feb27/24 | |
| | 7 | E | | Ma | 7 | æ | |
| Laborato | ory : WearCheck USA - 5 | 01 Madico | | / NC 27513 | CONC | RETE SERVICE C | |
| | | Rece | | 9 Jun 2024 | CONC | | JILDERS BLV |
| Lab Num | nber : 06214245 | Teste | ed : 20 |) Jun 2024 | | | TTEVILLE, N |
| | mber : 11087109 | | |) Jun 2024 - W | les Davis | _ | US 2830 |
| | kage : MOB 1 (Additional T | | | 0 | | Contact: BRY | |
| | eport, contact Customer Ser | | | | | bryanvanniman | |
| | that are outside of the ISO to specifications are based | | | | rule (JCGM 10 | | (800)326-919 F |
|] 06214245 (Generated: 06/2 | | 2 010 011 | | | | BRYAN VANNIN | |
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Report Id: CONFAY [WUSCAR] 06214245 (Generated: 06/21/2024 12:57:30) Rev: 1

Contact/Location: BRYAN VANNIMAN - CONFAY