



OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
FREIGHTLINER 1229
Component
Diesel Engine
Fluid
MOBIL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | 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 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| 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 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

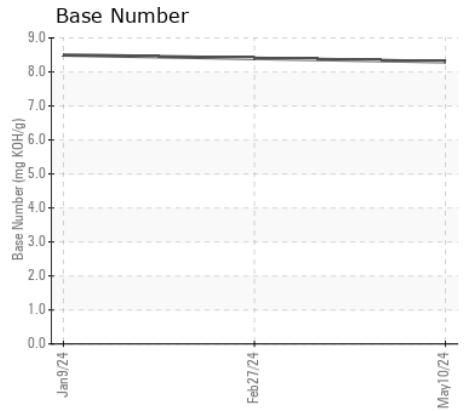
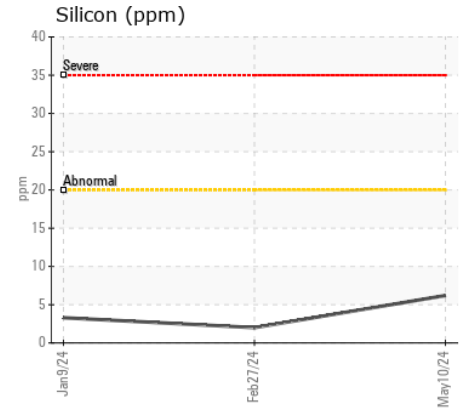
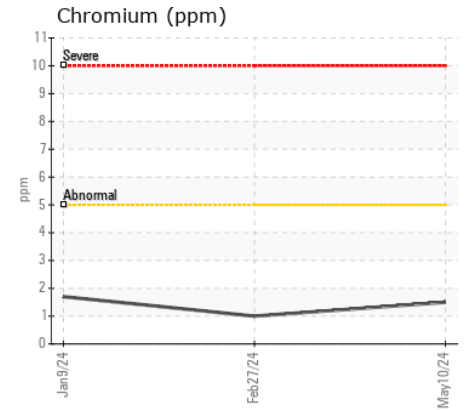
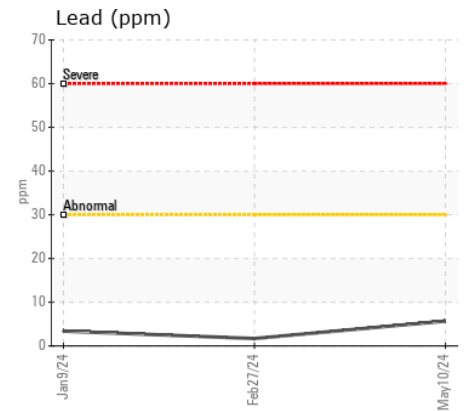
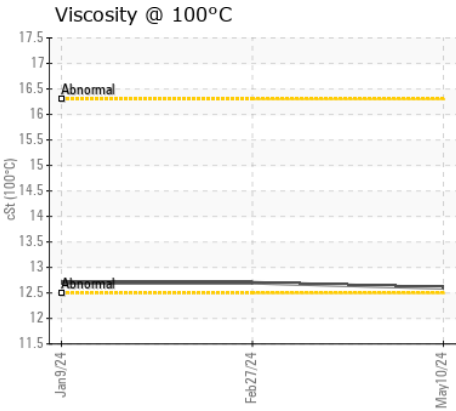
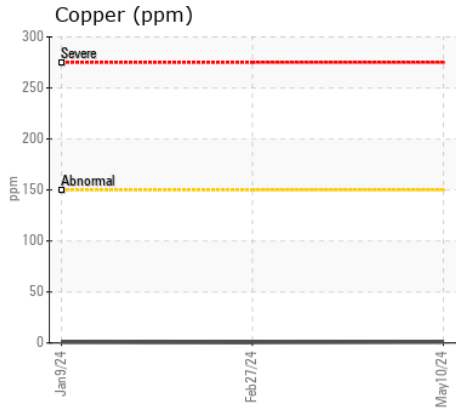
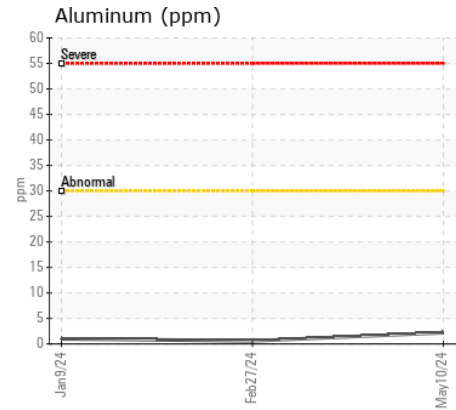
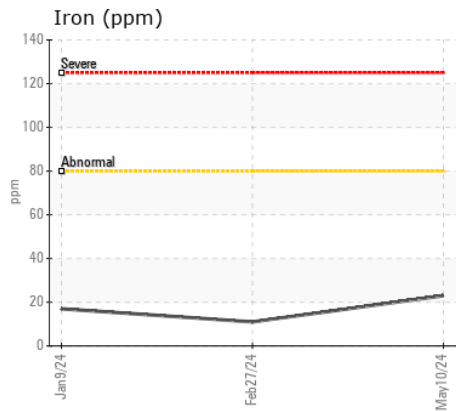
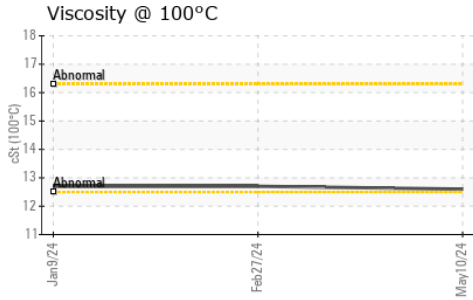
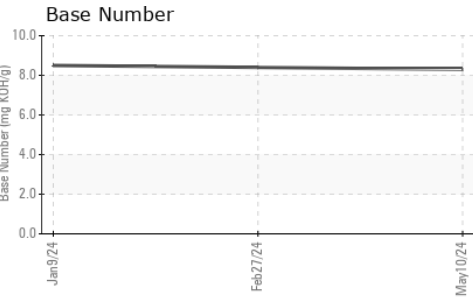
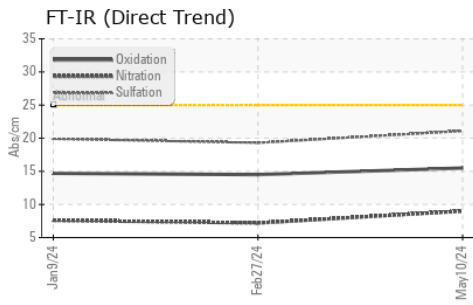
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 6 | 2 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 0 | <1 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| 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 |
| 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 |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | 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 | >118 | <1 | 3 | 1 |
| 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 |
| 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 |
| Visc @ 100°C | cSt | ASTM D445 | | 12.6 | 12.7 | 12.7 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0917235 **Received** : 19 Jun 2024
Lab Number : 06214245 **Tested** : 20 Jun 2024
Unique Number : 11087109 **Diagnosed** : 20 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

CONCRETE SERVICE CO - FAY BLOCK
 161 BUILDERS BLVD
 FAYETTEVILLE, NC
 US 28301
 Contact: BRYAN VANNIMAN
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 F:

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)