

## Machine Id FREIGHTLINER CLASSIC 12 Component Diesel Engine

## MCMILLAN 14W40 (10 GAL)

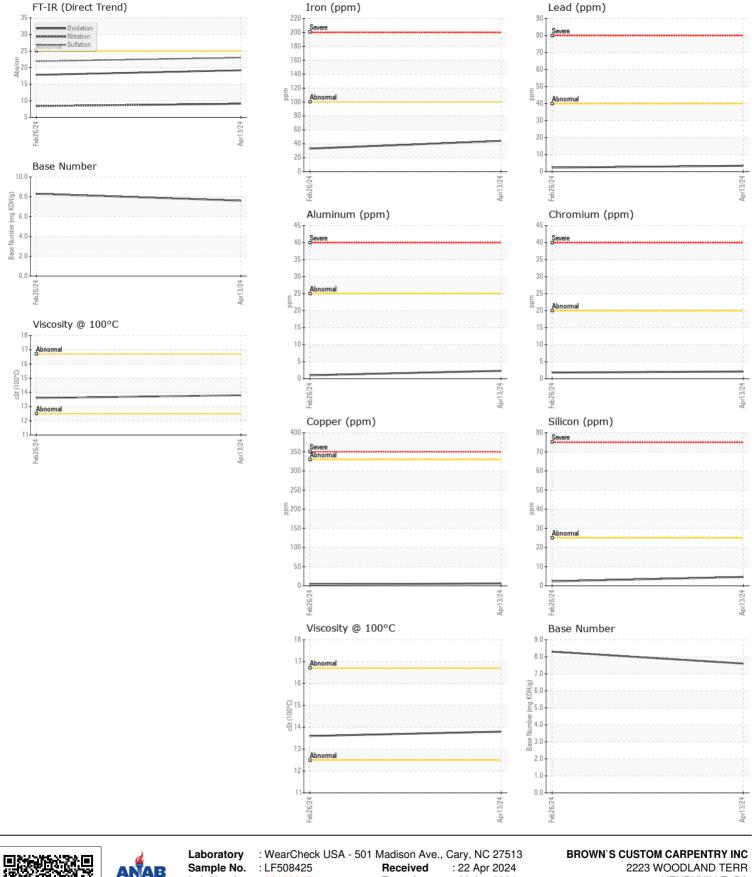
| RECOMMENDATION  | Test             | UOM          | Method                     | Limit/Abn | Current     | History1    | History2 |
|---|------------------|--------------|----------------------------|-----------|-------------|-------------|----------|
| Resample at the next service interval to monitor.   | Sample Number    |              | Client Info                |           | LF508425    | LF509564    |          |
|   | Sample Date      |              | Client Info                |           | 13 Apr 2024 | 26 Feb 2024 |          |
|   | Machine Age      | mls          | Client Info                |           | 90000       | 80000       |          |
|   | Oil Age          | mls          | Client Info                |           | 15000       | 15000       |          |
|   | Filter Age       | mls          | Client Info                |           | 15000       | 15000       |          |
|   | Oil Changed      |              | Client Info                |           | Changed     | Changed     |          |
|   | Filter Changed   |              | Client Info                |           | N/A         | N/A         |          |
|   | Sample Status    |              |                            |           | NORMAL      | NORMAL      |          |
| WEAR  | Iron             | ppm          | ASTM D5185m                | >100      | 44          | 33          |          |
| WEAR  | Chromium         | ppm          | ASTM D5185m                |           | 2           | 2           |          |
| All component wear rates are normal.  | Nickel           | ppm          | ASTM D5185m                |           | 2           | 2           |          |
|   | Titanium         | ppm          | ASTM D5185m                |           | <1          | 0           |          |
|   | Silver           |              | ASTM D5185m                |           | 0           | 0           |          |
|   | Aluminum         | ppm<br>ppm   | ASTM D5185m                |           | 2           | 1           |          |
|   | Lead             |              | ASTM D5185m                |           | 3           | 2           |          |
|   | Copper           | ppm<br>ppm   | ASTM D5185m                |           | 6           | 4           |          |
|   | Tin              | ppm          | ASTM D5185m                |           | 1           | <1          |          |
|   | Vanadium         | ppm          | ASTM D5185m                | 210       | ،<br><1     | <1          |          |
|   | White Metal      | scalar       | *Visual                    | NONE      | NONE        | NONE        |          |
|   | Yellow Metal     | scalar       | *Visual                    | NONE      | NONE        | NONE        |          |
|   |                  |              |                            |           |             |             |          |
| CONTAMINATION   | Silicon          | ppm          | ASTM D5185m                |           | 5           | 2           |          |
| There is no indication of any contamination in the oil.   | Potassium        | ppm          | ASTM D5185m                |           | 4           | <1          |          |
|   | Fuel             |              | WC Method                  |           | <1.0        | <1.0        |          |
|   | Water            |              | WC Method                  | >0.2      | NEG         | NEG         |          |
|   | Glycol<br>Soot % | %            | WC Method                  | . 0       | NEG<br>1.3  | NEG         |          |
|   | Nitration        | 70<br>Abs/cm | *ASTM D7844<br>*ASTM D7624 |           | 9.1         | 0.8<br>8.4  |          |
|   | Sulfation        | Abs/.1mm     | *ASTM D7624                |           | 23.0        | 21.9        |          |
|   | Silt             | scalar       | *Visual                    | NONE      | NONE        | NONE        |          |
|   | Debris           | scalar       | *Visual                    | NONE      | NONE        | NONE        |          |
|   | Sand/Dirt        | scalar       | *Visual                    | NONE      | NONE        | NONE        |          |
|   | Appearance       | scalar       | *Visual                    | NORML     | NORML       | NORML       |          |
|   | Odor             | scalar       | *Visual                    | NORML     | NORML       | NORML       |          |
|   | Emulsified Water | scalar       | *Visual                    | >0.2      | NEG         | NEG         |          |
| FLUID CONDITION<br>The BN result indicates that there is suitable alkalinity remaining in the<br>oil. The condition of the oil is suitable for further service. |                  |              |                            |           |             |             |          |
|   | Sodium           | ppm          | ASTM D5185m                |           | 2           | <1          |          |
|   | Boron            | ppm          | ASTM D5185m                |           | 3           | 1           |          |
|   | Barium           | ppm          | ASTM D5185m                |           | <1          | 0           |          |
|   | Molybdenum       | ppm          | ASTM D5185m                |           | 63          | 63          |          |
|   | Manganese        | ppm          | ASTM D5185m                |           | <1          | <1          |          |
|   | Magnesium        | ppm          | ASTM D5185m                |           | 988         | 1079        |          |
|   | Calcium          | ppm          | ASTM D5185m                |           | 1099        | 1154        |          |
|   | Phosphorus       | ppm          | ASTM D5185m                |           | 1029        | 1144        |          |
|   | Zinc             | ppm          | ASTM D5185m                |           | 1274        | 1420        |          |
|   | Sulfur           | ppm          | ASTM D5185m                |           | 3125        | 3388        |          |
|   | Oxidation        | Abs/.1mm     | *ASTM D7414                | >25       | 19.2        | 17.8        |          |
|   | Base Number (BN) | mg KOH/g     | ASTM D2896                 |           | 7.6         | 8.3         |          |

Visc @ 100°C cSt

ASTM D445

13.6

13.8



Lab Number : 06156647 Tested HENRYVILLE, PA : 23 Apr 2024 Unique Number : 10992070 Diagnosed : 24 Apr 2024 - Sean Felton US 18332 Test Package : MOB 1 (Additional Tests: TBN) Contact: TOM Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. integritybr@yahoo.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (570)629-4602 F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)