**WEAR** CONTAMINATION **FLUID CONDITION** 

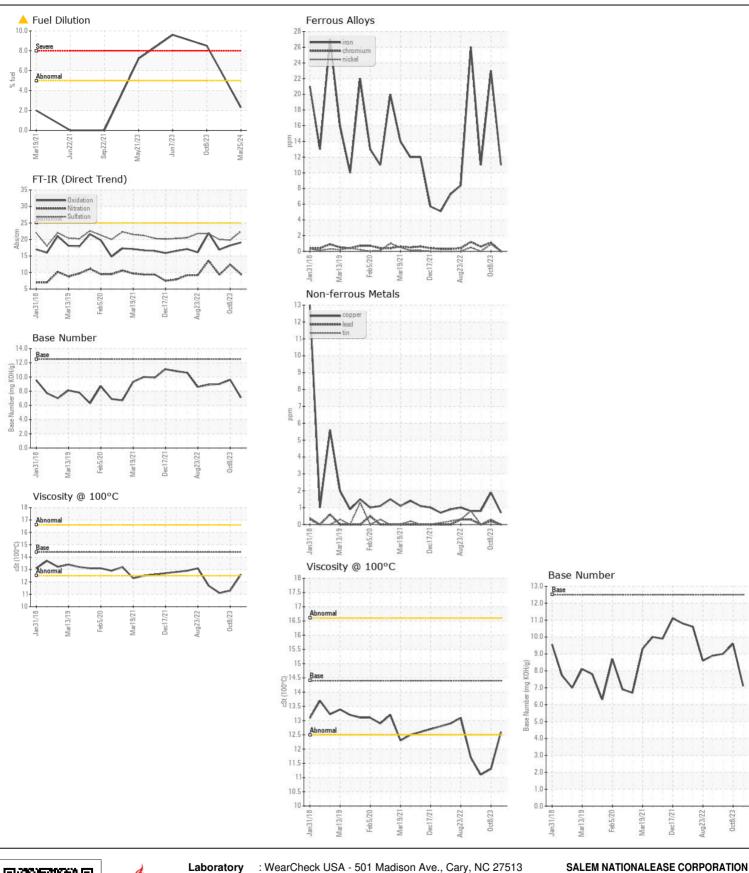
**NORMAL MARGINAL NORMAL** 

Machine Id

## **FREIGHTLINER 255483**

Component
Diesel Fngine

| RECOMMENDATION   | Test               | UOM      | Method                     | Limit/Abn | Current     | History1     | History2   |
|--|--------------------|----------|----------------------------|-----------|-------------|--------------|------------|
|  | Sample Number      |          | Client Info                |           | WC0881763   | -            | WC0774519  |
| The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. | Sample Date        |          | Client Info                |           | 25 Mar 2024 | 08 Oct 2023  | 07 Jun 202 |
|  | Machine Age        | mls      | Client Info                |           | 112106      | 224771       | 0          |
|  | Oil Age            | mls      | Client Info                |           | 13468       | 0            | 0          |
|  | Filter Age         | mls      | Client Info                |           | 13468       | 0            | 0          |
|  | Oil Changed        |          | Client Info                |           | Changed     | Changed      | N/A        |
|  | Filter Changed     |          | Client Info                |           | Changed     | Changed      | N/A        |
|  | Sample Status      |          |                            |           | MARGINAL    | SEVERE       | SEVERE     |
| MEAD   | Iron               | nnm      | ASTM D5185m                | . 00      | 44          | 23           | 11         |
| VEAR   | Iron               | ppm      |                            |           | 11<br>0     | 23<br>1      | 11         |
| All component wear rates are normal.   | Chromium<br>Nickel | ppm      | ASTM D5185m<br>ASTM D5185m |           | 0           | <1           | <1         |
|  | Titanium           | ppm      | ASTM D5185m                | >८        | 0           | <1           | <1         |
|  | Silver             | ppm      | ASTM D5185m                | . 2       | 0           | 0            | 0          |
|  | Aluminum           | ppm      | ASTM D5185m                |           | 2           | 2            | <1         |
|  | Lead               | ppm      | ASTM D5185m                |           | 0           | <1           | 0          |
|  | Copper             | ppm      | ASTM D5185m                |           | <1          | 2            | <1         |
|  | Tin                | ppm      | ASTM D5185m                |           | 0           | <1           | 0          |
|  | Vanadium           | ppm      | ASTM D5185m                | /5        | 0           | 0            | 0          |
|  | White Metal        | scalar   | *Visual                    | NONE      | NONE        | NONE         | NONE       |
|  | Yellow Metal       | scalar   | *Visual                    | NONE      | NONE        | NONE         | NONE       |
|  |                    |          |                            |           |             |              |            |
| CONTAMINATION  | Silicon            | ppm      | ASTM D5185m                | >20       | 5           | 8            | 5          |
| ight fuel dilution accurring. No other conteminants were detected in   | Potassium          | ppm      | ASTM D5185m                | >20       | 0           | 4            | <1         |
| Light fuel dilution occurring. No other contaminants were detected in the oil.   | Fuel               | %        | ASTM D3524                 | >5        | <b>2.3</b>  | <b>▲</b> 8.5 | <b>9.6</b> |
|  | Water              |          | WC Method                  | >0.2      | NEG         | NEG          | NEG        |
|  | Glycol             |          | WC Method                  |           | NEG         | NEG          | NEG        |
|  | Soot %             | %        | *ASTM D7844                |           | 0.3         | 0.4          | 0.2        |
|  | Nitration          | Abs/cm   | *ASTM D7624                | >20       | 9.5         | 12.4         | 9.3        |
|  | Sulfation          | Abs/.1mm | *ASTM D7415                |           | 22.5        | 19.8         | 20.0       |
|  | 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        | NORM       |
|  | Odor               | scalar   | *Visual                    | NORML     | NORML       | NORML        | NORM       |
|  | Emulsified Water   | scalar   | "VISUAI                    | >0.2      | NEG         | NEG          | NEG        |
| LUID CONDITION   | Sodium             | ppm      | ASTM D5185m                |           | 1           | 0            | <1         |
|  | Boron              | ppm      | ASTM D5185m                | 151       | 157         | 5            | 4          |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.                        | Barium             | ppm      | ASTM D5185m                | 0.4       | 0           | 1            | 0          |
|  | Molybdenum         | ppm      | ASTM D5185m                | 250       | 82          | 56           | 56         |
|  | Manganese          | ppm      | ASTM D5185m                |           | 0           | <1           | <1         |
|  | Magnesium          | ppm      | ASTM D5185m                | 0         | 679         | 823          | 883        |
|  | Calcium            | ppm      | ASTM D5185m                | 2046      | 1334        | <b>△</b> 986 | 1036       |
|  | Phosphorus         | ppm      | ASTM D5185m                | 1043      | 1087        | 896          | 911        |
|  | Zinc               | ppm      | ASTM D5185m                | 943       | 1302        | 1071         | 1143       |
|  | Sulfur             | ppm      | ASTM D5185m                | 5012      | 3807        | 3227         | 3695       |
|  | Oxidation          | Abs/.1mm | *ASTM D7414                | >25       | 19.1        | 18.2         | 16.9       |
|  | Base Number (BN)   | mg KOH/g | ASTM D2896                 | 12.5      | 7.1         | 9.6          | 9.0        |
|  |                    |          |                            | 14.4      |             |              |            |







Certificate L2367

Laboratory Sample No.

: WC0881763 Lab Number : 06159740 Unique Number: 10995163

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received **Tested** Diagnosed Test Package: FLEET (Additional Tests: PercentFuel)

: 24 Apr 2024 : 29 Apr 2024

: 29 Apr 2024 - Wes Davis

198 PARK PLAZA DRIVE WINSTON SALEM, NC

US 27105 Contact: Audrey Hopkins Audrey.Hopkins@salemcorp.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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