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

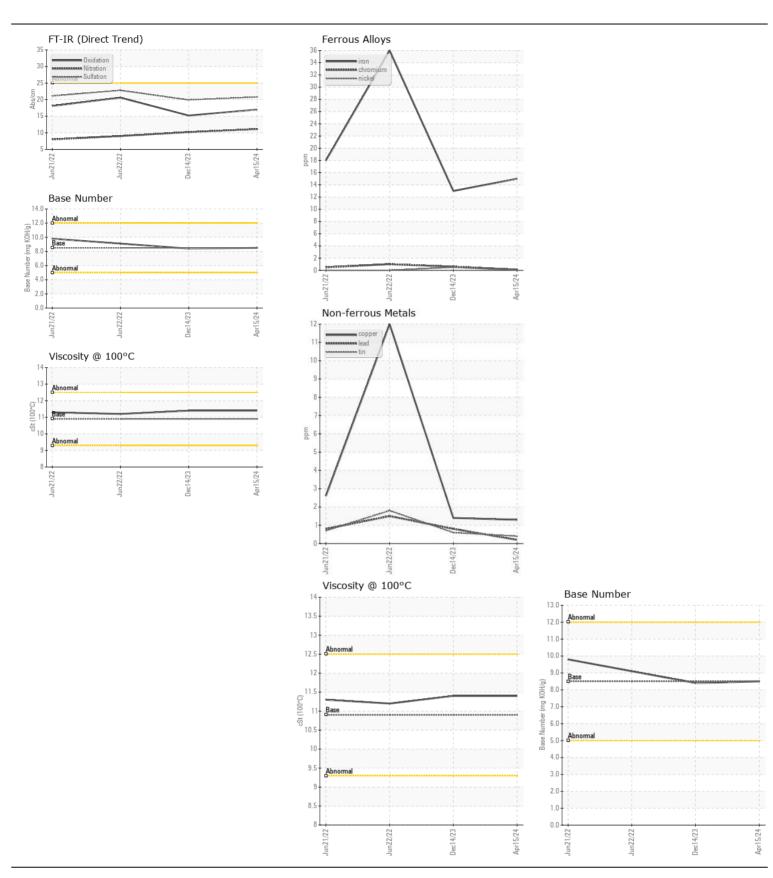
**NORMAL NORMAL NORMAL** 

Machine Id

4920817

## Component Diesel Engine

| DIESEL ENGINE OIL SAE 10W30 ( GAL)   |                            |          |             |           | .,          |             |             |
|--|----------------------------|----------|-------------|-----------|-------------|-------------|-------------|
| RECOMMENDATION   | Test                       | UOM      | Method      | Limit/Abn | Current     | History1    | History2    |
| Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. | Sample Number              |          | Client Info |           | IL06150009  |             | IL05574702  |
|  | Sample Date                |          | Client Info |           | 15 Apr 2024 | 14 Dec 2023 | 22 Jun 2022 |
|  | Machine Age                | mls      | Client Info |           | 0           | 0           | 0           |
|  | Oil Age                    | mls      | Client Info |           | 0           | 0           | 0           |
|  | Filter Age                 | mls      | Client Info |           | 0           | 0           | 0           |
|  | Oil Changed                |          | Client Info |           | N/A         | N/A         | N/A         |
|  | Filter Changed             |          | Client Info |           | N/A         | N/A         | N/A         |
|  | Sample Status              |          |             |           | NORMAL      | NORMAL      | NORMAL      |
| WEAR   | Iron                       | ppm      | ASTM D5185m | >100      | 15          | 13          | 36          |
| All component wear rates are normal.   | Chromium                   | ppm      | ASTM D5185m | >20       | <1          | <1          | 1           |
|  | Nickel                     | ppm      | ASTM D5185m | >4        | 0           | <1          | 0           |
|  | Titanium                   | ppm      | ASTM D5185m |           | 0           | <1          | 0           |
|  | Silver                     | ppm      | ASTM D5185m | >3        | 0           | 0           | <1          |
|  | Aluminum                   | ppm      | ASTM D5185m | >20       | 5           | 3           | 8           |
|  | Lead                       | ppm      | ASTM D5185m | >40       | <1          | <1          | 2           |
|  | Copper                     | ppm      | ASTM D5185m | >330      | 1           | 1           | 12          |
|  | Tin                        | ppm      | ASTM D5185m | >15       | <1          | <1          | 2           |
|  | Vanadium                   | ppm      | ASTM D5185m |           | 0           | 0           | 0           |
|  | White Metal                | scalar   | *Visual     | NONE      | NONE        | NONE        | NONE        |
|  | Yellow Metal               | scalar   | *Visual     | NONE      | NONE        | NONE        | NONE        |
| CONTAMINATION  | Silicon                    | ppm      | ASTM D5185m | >25       | 6           | 6           | 15          |
| There is no indication of any contamination in the oil.  | Potassium                  | ppm      | ASTM D5185m | >20       | 0           | 3           | 6           |
|  | Fuel                       |          | WC Method   | >5        | <1.0        | <1.0        | 0.3         |
|  | Water                      |          | WC Method   | >0.2      | NEG         | NEG         | NEG         |
|  | Glycol                     |          | WC Method   |           | NEG         | NEG         | NEG         |
|  | Soot %                     | %        | *ASTM D7844 | >3        | 1.2         | 1           | 0.7         |
|  | Nitration                  | Abs/cm   | *ASTM D7624 | >20       | 11.1        | 10.2        | 9.0         |
|  | Sulfation                  | Abs/.1mm | *ASTM D7415 | >30       | 20.8        | 19.9        | 22.8        |
|  | 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  | Sodium                     | ppm      | ASTM D5185m |           | 3           | <1          | 2           |
|  | Boron                      | ppm      | ASTM D5185m | 250       | 47          | 41          | 52          |
| 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 | 10        | 0           | 12          | 0           |
|  | Molybdenum                 | ppm      | ASTM D5185m | 100       | 79          | 82          | 41          |
|  | Manganese                  | ppm      | ASTM D5185m |           | <1          | <1          | 1           |
|  | Magnesium                  | ppm      | ASTM D5185m | 450       | 222         | 123         | 443         |
|  | Calcium                    | ppm      | ASTM D5185m | 3000      | 2168        | 2043        | 1591        |
|  | Phosphorus                 | ppm      | ASTM D5185m | 1150      | 1062        | 940         | 728         |
|  | Zinc                       | ppm      | ASTM D5185m | 1350      | 1192        | 1128        | 940         |
|  | Sulfur                     | ppm      | ASTM D5185m | 4250      | 3962        | 3527        | 2318        |
|  |                            |          | *ACTM D7444 | 0.5       | 170         | 150         | 20.6        |
|  | Oxidation                  | Abs/.1mm | *ASTM D7414 | >25       | 17.0        | 15.2        | 20.0        |
|  | Oxidation Base Number (BN) |          | ASTM D2896  |           | 8.5         | 8.4         | 9.1         |







Certificate L2367

Laboratory Sample No.

: IL06150009 Lab Number : 06150009 Unique Number : 10980087 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Apr 2024

**Tested** : 17 Apr 2024 Diagnosed : 17 Apr 2024 - Wes Davis **IDEALEASE-NORCROSS** 

4571 NORTH BUFORD HWY NORCROSS, GA US 30071-2808

Contact: RICK MARKS

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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