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

**NORMAL NORMAL NORMAL** 

Machine Id 813076

Component
Diesel Engine

| RECOMMENDATION  | Test              | UOM      | Method        | Limit/Abn | Current     | History1    | History2 |
|---|-------------------|----------|---------------|-----------|-------------|-------------|----------|
| Resample at the next service interval to monitor.               | Sample Number     |          | Client Info   |           | GFL0105885  | GFL0076473  |          |
|   | Sample Date       |          | Client Info   |           | 02 Apr 2024 | 10 Apr 2023 |          |
|   | Machine Age       | kms      | Client Info   |           | 45187       | 862         |          |
|   | Oil Age           | kms      | Client Info   |           | 0           | 351         |          |
|   | Filter Age        | kms      | Client Info   |           | 0           | 351         |          |
|   | Oil Changed       |          | Client Info   |           | Changed     | Changed     |          |
|   | Filter Changed    |          | Client Info   |           | N/A         | Changed     |          |
|   | Sample Status     |          |               |           | NORMAL      | NORMAL      |          |
| VEAR  | Iron              | ppm      | ASTM D5185(m) | >80       | 6           | 16          |          |
| Metal levels are typical for a new component breaking in.       | Chromium          | ppm      | ASTM D5185(m) | >5        | 0           | 0           |          |
|   | Nickel            | ppm      | ASTM D5185(m) | >2        | <1          | <1          |          |
|   | Titanium          | ppm      | ASTM D5185(m) |           | <1          | <1          |          |
|   | Silver            | ppm      | ASTM D5185(m) | >3        | 0           | 0           |          |
|   | Aluminum          | ppm      | ASTM D5185(m) | >30       | 3           | 2           |          |
|   | Lead              | ppm      | ASTM D5185(m) | >30       | 0           | 0           |          |
|   | Copper            | ppm      | ASTM D5185(m) | >150      | <1          | 2           |          |
|   | Tin               | ppm      | ASTM D5185(m) | >5        | 0           | <1          |          |
|   | Vanadium          | ppm      | ASTM D5185(m) |           | 0           | 0           |          |
| CONTAMINATION   | Ciliana           |          | ACTM DE10E()  | 00        | 4           | 4           |          |
| CONTAININATION  | Silicon           | ppm      | ASTM D5185(m) |           | 4           | 4           |          |
| There is no indication of any contamination in the oil.         | Potassium<br>Fuel | ppm      | ASTM D5185(m) |           | <1          | 0           |          |
|   | Water             |          | WC Method     |           | <1.0<br>NEG | <1.0        |          |
|   |                   |          | WC Method     | >0.2      | NEG         | NEG<br>NEG  |          |
|   | Glycol Soot %     | %        | ASTM D7844*   | ~ 2       | 0.1         | 0           |          |
|   | Nitration         | Abs/cm   | ASTM D7644*   | >20       | 7.5         | 6.2         |          |
|   | Sulfation         | Abs/.1mm | ASTM D7415*   |           | 19.8        | 19.8        |          |
|   | Emulsified Water  | scalar   | Visual*       | >0.2      | NEG         | NEG         |          |
| LUID CONDITION  | Sodium            | nnm      | ASTM D5185(m) |           | 3           | 5           |          |
| The condition of the oil is acceptable for the time in service. | Boron             | ppm      | ASTM D5185(m) |           | 4           | 124         |          |
|   | Barium            | ppm      | ASTM D5185(m) |           | 0           | 0           |          |
|   | Molybdenum        | ppm      | ASTM D5185(m) |           | 301         | 10          |          |
|   | Manganese         | ppm      | ASTM D5185(m) |           | <1          | <1          |          |
|   | Magnesium         | ppm      | ASTM D5185(m) |           | 1032        | 77          |          |
|   | Calcium           | ppm      | ASTM D5185(m) |           | 1120        | 2340        |          |
|   | Phosphorus        | ppm      | ASTM D5185(m) |           | 1192        | 1072        |          |
|   | Zinc              | ppm      | ASTM D5185(m) |           | 1263        | 1200        |          |
|   | Sulfur            | ppm      | ASTM D5185(m) |           | 2851        | 3062        |          |
|   | Oxidation         | Abs/.1mm | ASTM D7414*   | >25       | 15.9        | 11.8        |          |
|   |                   |          |               | -         |             |             |          |





ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

 Sample No.
 : GFL0105885
 Received
 : 11 Apr 2024

 Lab Number
 : 02628094
 Tested
 : 11 Apr 2024

 Unique Number
 : 5761226
 Diagnosed
 : 11 Apr 2024 - Wes Davis

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test Package : MOB 1

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

GFL Environmental - 348 1027 Kirk Lline East Bracebridge, ON CA P1L 0A1

Contact: Royce Reid roycereid@gflenv.com

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Submitted By: Tamara Denney