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

Machine Id

OE633
Component
Diesel Engine

| RECOMMENDATION  | Test             | UOM      | Method        | Limit/Abn | Current     | History1 | History2 |
|---|------------------|----------|---------------|-----------|-------------|----------|----------|
| Resample at the next service interval to monitor.               | Sample Number    |          | Client Info   |           | GFL0107900  |          |          |
|   | Sample Date      |          | Client Info   |           | 09 Apr 2024 |          |          |
|   | Machine Age      | hrs      | Client Info   |           | 15584       |          |          |
|   | Oil Age          | hrs      | Client Info   |           | 0           |          |          |
|   | Filter Age       | hrs      | Client Info   |           | 0           |          |          |
|   | Oil Changed      |          | Client Info   |           | Changed     |          |          |
|   | Filter Changed   |          | Client Info   |           | N/A         |          |          |
|   | Sample Status    |          |               |           | NORMAL      |          |          |
| WEAR  | Iron             | nnm      | ASTM D5185(m) | × 100     | 4           |          |          |
| VLAN  | Chromium         | ppm      | ASTM D5185(m) |           | 0           |          |          |
| All component wear rates are normal.                            | Nickel           | ppm      | ASTM D5185(m) |           | 0           |          |          |
|   | Titanium         | ppm      | ASTM D5185(m) | >4        | 0           |          |          |
|   | Silver           |          | ASTM D5185(m) | ~3        | 0           |          |          |
|   | Aluminum         | ppm      | ASTM D5185(m) |           | <1          |          |          |
|   | Lead             | ppm      | ASTM D5185(m) |           | 0           |          |          |
|   | Copper           | ppm      | ASTM D5185(m) |           | <1          |          |          |
|   | Tin              | ppm      | ASTM D5185(m) |           | 0           |          |          |
|   | Vanadium         | ppm      | ASTM D5185(m) | 7.0       | 0           |          |          |
|   | White Metal      | scalar   | Visual*       | NONE      | NONE        |          |          |
|   | Yellow Metal     | scalar   | Visual*       | NONE      | NONE        |          |          |
|   |                  |          |               |           |             |          |          |
| CONTAMINATION   | Silicon          | ppm      | ASTM D5185(m) | >25       | 2           |          |          |
| There is no indication of any contamination in the oil.         | Potassium        | ppm      | ASTM D5185(m) | >20       | 0           |          |          |
|   | Fuel             |          | WC Method     |           | <1.0        |          |          |
|   | Water            |          | WC Method     | >0.2      | NEG         |          |          |
|   | Glycol           |          | WC Method     |           | NEG         |          |          |
|   | Soot %           | %        | ASTM D7844*   | >3        | 0           |          |          |
|   | Nitration        | Abs/cm   | ASTM D7624*   | >20       | 5.5         |          |          |
|   | Sulfation        | Abs/.1mm | ASTM D7415*   |           | 17.6        |          |          |
|   | Silt             | scalar   | Visual*       | NONE      | NONE        |          |          |
|   | Debris           | scalar   | Visual*       | NONE      | VLITE       |          |          |
|   | Sand/Dirt        | scalar   | Visual*       | NONE      | NONE        |          |          |
|   | Appearance       | scalar   | Visual*       | NORML     | NORML       |          |          |
|   | Odor             | scalar   | Visual*       | NORML     | NORML       |          |          |
|   | Emulsified Water | scalar   | Visual*       | >0.2      | NEG         |          |          |
| FLUID CONDITION   | Sodium           | ppm      | ASTM D5185(m) |           | 1           |          |          |
|   | Boron            | ppm      | ASTM D5185(m) | 1         | 12          |          |          |
| The condition of the oil is acceptable for the time in service. | Barium           | ppm      | ASTM D5185(m) |           | 0           |          |          |
|   | Molybdenum       | ppm      | ASTM D5185(m) |           | 59          |          |          |
|   | Manganese        | ppm      | ASTM D5185(m) |           | 0           |          |          |
|   | Magnesium        | ppm      | ASTM D5185(m) |           | 950         |          |          |
|   | Calcium          | ppm      | ASTM D5185(m) |           | 1068        |          |          |
|   | Phosphorus       | ppm      | ASTM D5185(m) |           | 955         |          |          |
|   | Zinc             | ppm      | ASTM D5185(m) |           | 1148        |          |          |
|   | Sulfur           | ppm      | ASTM D5185(m) | 3903      | 2482        |          |          |
|   | Oxidation        | Abs/.1mm | ASTM D7414*   | >25       | 13.5        |          |          |
|   | Visc @ 100°C     | cSt      | ASTM D7279(m) | 11.4      | 11.1        |          |          |





CALA ISO 17025:2017 Accredited Laboratory

Sample No.

Laboratory

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 310 - Winnipeg : GFL0107900 Lab Number : 02630079

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

Received **Tested** Unique Number : 5763211 Diagnosed Test Package : MOB 1 (Additional Tests: Visual)

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.

: 19 Apr 2024 : 19 Apr 2024 - Kevin Marson

#360 - 555 Hervo Street, : 19 Apr 2024

Winnipeg, MB CA R3T 3L6 Contact: Joshua Lourenco jlourenco@gflenv.com T: (204)987-9600