WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

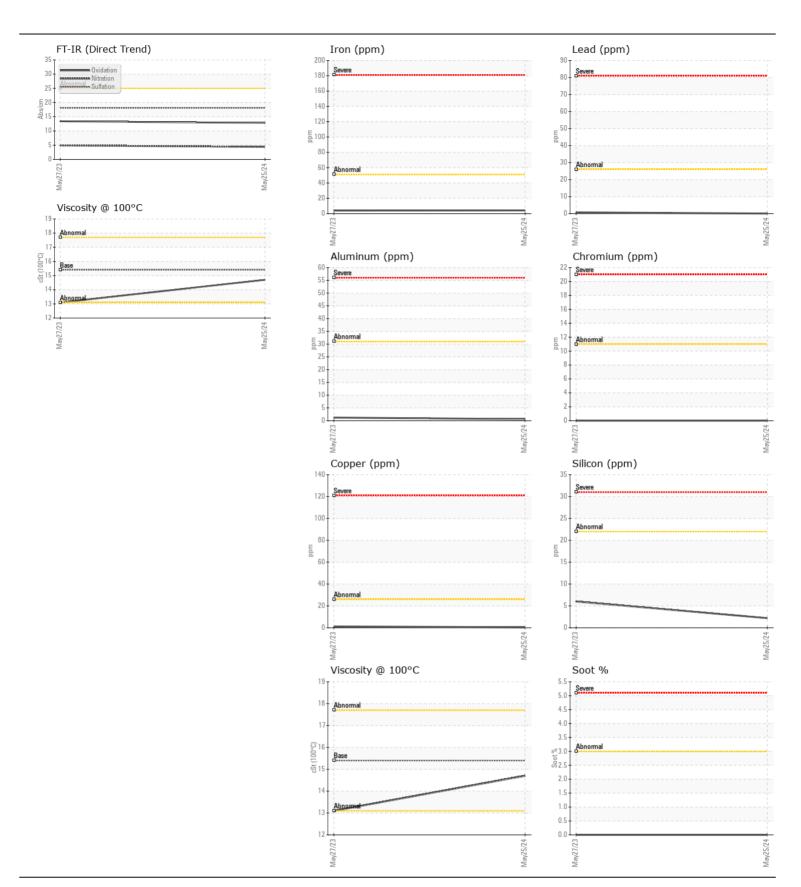
[86486]

## **155 UNIVERSITY AVE TORONTO GWL GWL**

**Rear Diesel Engine** 

**ESSO XD-3 EXTRA 15W40 (35 LTR)** 

| DECOMMENDATION  | Toot                  | LIOM             | Mothod                                  | Limit/Ahn | Cumant               | Listand               | Lioton/2 |
|---|-----------------------|------------------|---|-----------|----------------------|-----------------------|----------|
| RECOMMENDATION  | Test<br>Sample Number | UOM              | Method<br>Client Info                   | Limit/Abn | Current<br>PN0006112 | History1<br>PN0004789 | History2 |
| Resample at the next service interval to monitor.               | Sample Date           |                  | Client Info                             |           | 25 May 2024          | 27 May 2023           |          |
|   | Machine Age           | hrs              | Client Info                             |           | 89                   | 61                    |          |
|   | Oil Age               | hrs              | Client Info                             |           | 61                   | 0                     |          |
|   | Filter Age            | hrs              | Client Info                             |           | 61                   | 0                     |          |
|   | Oil Changed           | 1110             | Client Info                             |           | Not Changd           | Changed               |          |
|   | Filter Changed        |                  | Client Info                             |           | Not Changd           | Not Changd            |          |
|   | Sample Status         |                  |   |           | NORMAL               | NORMAL                |          |
| NEAD.   |                       |                  | 40TM D5405( )                           |           |                      |                       |          |
| WEAR  | Iron                  | ppm              | ASTM D5185(m)                           |           | 4                    | 4                     |          |
| Metal levels are typical for a new component breaking in.       | Chromium              | ppm              | ASTM D5185(m)                           |           | 0                    | 0                     |          |
|   | Nickel                | ppm              | ASTM D5185(m)                           | >5        | 0                    | 0                     |          |
|   | Titanium              | ppm              | ASTM D5185(m)                           | 0         | 0                    | <1                    |          |
|   | Silver                | ppm              | ASTM D5185(m)                           |           | 0                    | 0                     |          |
|   | Aluminum              | ppm              | ASTM D5185(m)                           |           | <1                   | - 1                   |          |
|   | Lead                  | ppm              | ASTM D5185(m)                           | >26       | 0                    | <1                    |          |
|   | Copper<br>Tin         | ppm              | ASTM D5185(m)                           |           | <1                   | 0                     |          |
|   | Vanadium              | ppm              | ASTM D5185(m) ASTM D5185(m)             | >4        | 0                    | 0                     |          |
|   | White Metal           | ppm              | Visual*                                 | NONE      | VLITE                |                       |          |
|   | Yellow Metal          | scalar<br>scalar | Visual*                                 | NONE      | NONE                 |                       |          |
|   |                       |                  | • | TONE      | ····                 |                       |          |
| CONTAMINATION   | Silicon               | ppm              | ASTM D5185(m)                           |           | 2                    | 6                     |          |
| There is no indication of any contamination in the oil.         | Potassium             | ppm              | ASTM D5185(m)                           |           | <1                   | <1                    |          |
|   | Fuel                  |                  | WC Method                               |           | <1.0                 | <1.0                  |          |
|   | Water                 |                  | WC Method                               | >0.21     | NEG                  | NEG                   |          |
|   | Glycol                |                  | WC Method                               |           | NEG                  | NEG                   |          |
|   | Soot %                | %                | ASTM D7844*                             |           | 0                    | 0                     |          |
|   | Nitration             | Abs/cm           | ASTM D7624*                             | >20       | 4.4                  | 4.9                   |          |
|   | Sulfation             | Abs/.1mm         | ASTM D7415*                             | >30       | 18.1                 | 18.1                  |          |
|   | 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                | NORML                 |          |
| <u></u>   | Emulsified Water      | scalar           | Visual*                                 | >0.21     | NEG                  | NEG                   |          |
| FLUID CONDITION   | Sodium                | ppm              | ASTM D5185(m)                           | >192      | 1                    | 2                     |          |
| The condition of the oil is acceptable for the time in service. | Boron                 | ppm              | ASTM D5185(m)                           |           | 6                    | 52                    |          |
|   | Barium                | ppm              | ASTM D5185(m)                           |           | 0                    | 0                     |          |
|   | Molybdenum            | ppm              | ASTM D5185(m)                           |           | 59                   | 76                    |          |
|   | Manganese             | ppm              | ASTM D5185(m)                           |           | 0                    | <1                    |          |
|   | Magnesium             | ppm              | ASTM D5185(m)                           |           | 924                  | 666                   |          |
|   | Calcium               | ppm              | ASTM D5185(m)                           | 3780      | 1062                 | 1349                  |          |
|   | Phosphorus            | ppm              | ASTM D5185(m)                           | 1370      | 1008                 | 985                   |          |
|   | Zinc                  | ppm              | ASTM D5185(m)                           | 1500      | 1156                 | 1025                  |          |
|   | Sulfur                | ppm              | ASTM D5185(m)                           | 3800      | 2564                 | 2588                  |          |
|   | Oxidation             | Abs/.1mm         | ASTM D7414*                             | >25       | 12.8                 | 13.4                  |          |
|   | Visc @ 100°C          | cSt              | ASTM D7279(m)                           | 15.4      | 14.7                 | 13.1                  |          |





CALA ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Sample No. : PN0006112 Received

: 30 May 2024 Lab Number : 02638816 **Tested** : 30 May 2024 Unique Number : 5787978 Diagnosed : 30 May 2024 - Wes Davis

Test Package : MOB 1 (Additional Tests: Visual) To discuss this sample report, contact Customer Service at 1-800-268-2131.

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.

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