## **I POWER Station POWER GENERATION PRODUCTS**OIL ANALYSIS REPORT

## Machine Id 259 QUEENS QUAY W TORONTO CITY OF TORONTO CITY OF TORONTO Component

## Left Diesel Engine

## ESSO XD-3 EXTRA 15W40 (30 LTR)

|   | _                |          |               |           |             |             |             |
|---|------------------|----------|---------------|-----------|-------------|-------------|-------------|
| Resample at the next service interval to monitor.               | Test             | UOM      | Method        | Limit/Abn | Current     | History1    | History2    |
|   | Sample Number    |          | Client Info   |           | PN0006095   | PN0004723   | PN0003532   |
|   | Sample Date      |          | Client Info   |           | 18 Apr 2024 | 27 Apr 2023 | 27 Apr 2022 |
|   | Machine Age      | hrs      | Client Info   |           | 290         | 277         | 249         |
|   | Oil Age          | hrs      | Client Info   |           | 13          | 0           | 0           |
|   | Filter Age       | hrs      | Client Info   |           | 13          | 0           | 0           |
|   | Oil Changed      |          | Client Info   |           | Changed     | Changed     | Changed     |
|   | Filter Changed   |          | Client Info   |           | Changed     | Changed     | Changed     |
|   | Sample Status    |          |               |           | NORMAL      | NORMAL      | NORMAL      |
| WEAR  | Iron             | ppm      | ASTM D5185(m) | >100      | 2           | 3           | 2           |
| Metal levels are typical for a new component breaking in.       | Chromium         | ppm      | ASTM D5185(m) | >20       | 0           | 0           | 0           |
|   | Nickel           | ppm      | ASTM D5185(m) | >4        | 0           | 0           | 0           |
|   | Titanium         | ppm      | ASTM D5185(m) |           | 0           | <1          | 0           |
|   | Silver           | ppm      | ASTM D5185(m) | >3        | 0           | 0           | 0           |
|   | Aluminum         | ppm      | ASTM D5185(m) | >20       | <1          | 2           | 2           |
|   | Lead             | ppm      | ASTM D5185(m) | >40       | 0           | <1          | <1          |
|   | Copper           | ppm      | ASTM D5185(m) |           | <1          | 1           | 1           |
|   | Tin              | ppm      | ASTM D5185(m) | >15       | 0           | <1          | <1          |
|   | Vanadium         | ppm      | ASTM D5185(m) |           | 0           | 0           | 0           |
| CONTAMINATION   | Silicon          | ppm      | ASTM D5185(m) | >25       | 2           | 7           | 9           |
| There is no indication of any contamination in the oil.         | Potassium        | ppm      | ASTM D5185(m) | >20       | 0           | 0           | 1           |
|   | Fuel             |          | WC Method     | >5        | <1.0        | <1.0        | <1.0        |
|   | Water            |          | WC Method     | >0.2      | NEG         | NEG         | NEG         |
|   | Glycol           |          | WC Method     |           | NEG         | NEG         | NEG         |
|   | Soot %           | %        | ASTM D7844*   | >3        | 0           | 0           | 0           |
|   | Nitration        | Abs/cm   | ASTM D7624*   | >20       | 4.6         | 7.2         | 3.6         |
|   | Sulfation        | Abs/.1mm | ASTM D7415*   | >30       | 17.8        | 17.4        | 14.1        |
|   | Emulsified Water | scalar   | Visual*       | >0.2      | NEG         | NEG         | NEG         |
| FLUID CONDITION   | Sodium           | ppm      | ASTM D5185(m) | >192      | 1           | 3           | 2           |
| The condition of the oil is acceptable for the time in service. | Boron            | ppm      | ASTM D5185(m) |           | 7           | 67          | 74          |
|   | Barium           | ppm      | ASTM D5185(m) |           | 0           | 0           | 0           |
|   | Molybdenum       | ppm      | ASTM D5185(m) |           | 60          | 78          | 77          |
|   | Manganese        | ppm      | ASTM D5185(m) |           | 0           | <1          | 0           |
|   | Magnesium        | ppm      | ASTM D5185(m) |           | 895         | 121         | 76          |
|   | Calcium          | ppm      | ASTM D5185(m) | 3780      | 1121        | 2163        | 2075        |
|   | Phosphorus       | ppm      | ASTM D5185(m) | 1370      | 1005        | 1061        | 1009        |
|   | Zinc             | ppm      | ASTM D5185(m) | 1500      | 1155        | 1115        | 1090        |
|   | Sulfur           | ppm      | ASTM D5185(m) | 3800      | 2646        | 3112        | 3025        |
|   | Oxidation        | Abs/.1mm | ASTM D7414*   | >25       | 13.0        | 13.6        | 5.7         |

Visc@100°C cSt

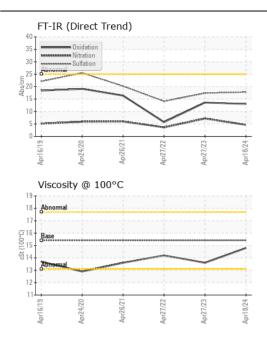
ASTM D7279(m) 15.4

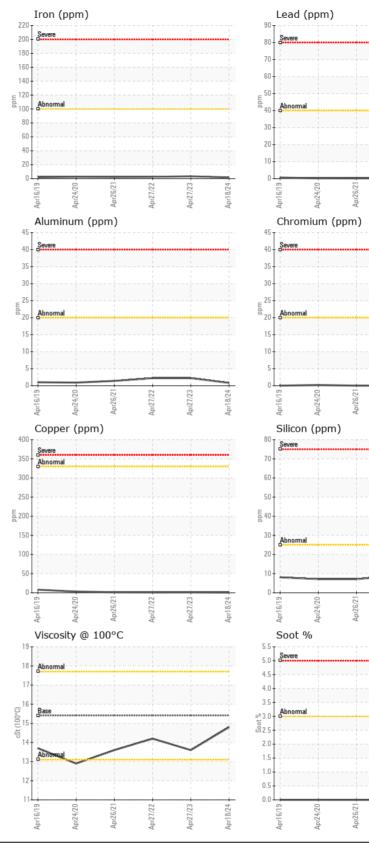
Contact/Location: Brett Kinkley - POWMIS

13.6

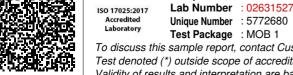
14.8

14.2





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**Test Package** : MOB 1 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.

: PN0006095

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

Received

Diagnosed

Tested

: 26 Apr 2024

: 26 Apr 2024

: 26 Apr 2024 - Wes Davis

F: (905)565-8544 Contact/Location: Brett Kinkley - POWMIS

CALA

Laboratory

Sample No.

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