

## **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id **3C** Component **Compressor** Fluid **{not provided} (--- GAL)** 

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION |     | method        | limit/base | current     | history1 | history2 |  |  |  |  |  |
|--------------------|-----|---------------|------------|-------------|----------|----------|--|--|--|--|--|
| Sample Number      |     | Client Info   |            | WC22095495  |          |          |  |  |  |  |  |
| Sample Date        |     | Client Info   |            | 15 Mar 2024 |          |          |  |  |  |  |  |
| Machine Age        | hrs | Client Info   |            | 0           |          |          |  |  |  |  |  |
| Oil Age            | hrs | Client Info   |            | 0           |          |          |  |  |  |  |  |
| Oil Changed        |     | Client Info   |            | N/A         |          |          |  |  |  |  |  |
| Sample Status      |     |               |            | NORMAL      |          |          |  |  |  |  |  |
| WEAR METALS        |     | method        | limit/base | current     | history1 | history2 |  |  |  |  |  |
| PQ                 |     | ASTM D8184*   |            | 0           |          |          |  |  |  |  |  |
| Iron               | ppm | ASTM D5185(m) | >50        | <1          |          |          |  |  |  |  |  |
| Chromium           | ppm | ASTM D5185(m) | >10        | 0           |          |          |  |  |  |  |  |
| Nickel             | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Titanium           | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Silver             | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Aluminum           | ppm | ASTM D5185(m) | >25        | 0           |          |          |  |  |  |  |  |
| Lead               | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Copper             | ppm | ASTM D5185(m) | >50        | <1          |          |          |  |  |  |  |  |
| Tin                | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Antimony           | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Vanadium           | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Beryllium          | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Cadmium            | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
|                    | ррш |               |            |             |          |          |  |  |  |  |  |
| ADDITIVES          |     | method        | limit/base | current     | history1 | history2 |  |  |  |  |  |
| Boron              | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Barium             | ppm | ASTM D5185(m) |            | <1          |          |          |  |  |  |  |  |
| Molybdenum         | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Manganese          | ppm | ASTM D5185(m) |            | 0           |          |          |  |  |  |  |  |
| Magnesium          | ppm | ASTM D5185(m) |            | 2           |          |          |  |  |  |  |  |
| Calcium            | ppm | ASTM D5185(m) |            | 163         |          |          |  |  |  |  |  |
| Phosphorus         | ppm | ASTM D5185(m) |            | 434         |          |          |  |  |  |  |  |
| Zinc               | ppm | ASTM D5185(m) |            | 97          |          |          |  |  |  |  |  |
| Sulfur             | ppm | ASTM D5185(m) |            | 888         |          |          |  |  |  |  |  |
| Lithium            | ppm | ASTM D5185(m) |            | <1          |          |          |  |  |  |  |  |
| CONTAMINANTS       |     | method        | limit/base | current     | history1 | history2 |  |  |  |  |  |
| Silicon            | ppm | ASTM D5185(m) | >25        | 0           |          |          |  |  |  |  |  |
| Sodium             | ppm | ASTM D5185(m) |            | 6           |          |          |  |  |  |  |  |
| Potassium          | ppm | ASTM D5185(m) | >20        | 0           |          |          |  |  |  |  |  |
| Water              | %   | ASTM D6304*   | >0.1       | 0.003       |          |          |  |  |  |  |  |
| ppm Water          | ppm | ASTM D6304*   | >1000      | 27          |          |          |  |  |  |  |  |
| FLUID CLEANLIN     | ESS | method        | limit/base | current     | history1 | history2 |  |  |  |  |  |
| Particles >4µm     |     | ASTM D7647    | >10000     | 596         |          |          |  |  |  |  |  |
| Particles >6µm     |     | ASTM D7647    | >2500      | 136         |          |          |  |  |  |  |  |
| Particles >14µm    |     | ASTM D7647    | >320       | 11          |          |          |  |  |  |  |  |
| Particles >21µm    |     | ASTM D7647    | >80        | 3           |          |          |  |  |  |  |  |
| Particles >38µm    |     | ASTM D7647    | >20        | 1           |          |          |  |  |  |  |  |
| Particles >71µm    |     | ASTM D7647    |            | 1           |          |          |  |  |  |  |  |
| Oil Cleanliness    |     | ISO 4406 (c)  | >20/18/15  | 16/14/11    |          |          |  |  |  |  |  |
| 9:38:58) Rev: 1    |     |               |            |             |          |          |  |  |  |  |  |

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| Water (KF)   | F  | LUID DEGRADA                                   | TION  | method   |  |                      |  | history2   |
|--|--|--|---|--|--|----------------------|--|--|
| 12000 - Severe   | Aci  | d Number (AN)                                  | mg KOH/g  | ASTM D974*   |  | 0.19                 |  |  |
| Ē. 8000  | V  | ISUAL  |   | method   | limit/base   | current              | history1   | history2   |
| e douo   |  | ite Metal                                      | scalar  | Visual*  | NONE   | NONE                 |  |  |
| 2000   | Yel  | low Metal                                      | scalar  | Visual*  | NONE   | NONE                 |  |  |
| 2000 Abnormal  | Pre  | cipitate                                       | scalar  | Visual*  | NONE   | NONE                 |  |  |
| Mar15/24   | Silt Del   |  | scalar  | Visual*  | NONE   | NONE                 |  |  |
| Mari   |  |  | scalar  | Visual*  | NONE   | NONE                 |  |  |
| PQ   |  | nd/Dirt  | scalar  | Visual*  | NONE   | NONE                 |  |  |
| 250 T  |  | bearance                                       | scalar  | Visual*  | NORML  | NORML                |  |  |
| 200 - Severe   | Od   | ulsified Water                                 | scalar<br>scalar                                  | Visual*<br>Visual*   | NORML  | NORML<br>NEG         |  |  |
| 150  |  | e Water  | scalar  | Visual*  | >0.1   | NEG                  |  |  |
| 2<br>100 - Abnormal  |  | LUID PROPERT                                   |   | method   | limit/base   | current              | history1   | history2   |
| 50   |  | c @ 40°C                                       | cSt   | ASTM D7279(m)  |  | 54.1                 |  |  |
| Mart 5/24 0  | Mar15/24   | AMPLE IMAGES                                   | ;   | method   | limit/base   | current              | history1   | history2   |
| Mart   | Marl   |  |   |  |  |                      |  |  |
| Particle Trend   | Col  | or   |   |  |  |                      | no image   | no image   |
| <sup>2</sup> παποστησειά<br><sup>2</sup> παποστησειά<br><sup>2</sup> μμη<br><sup>2</sup> μ |  |  |   |  |  |                      |  |  |
| <sup>±</sup> / <sub>20</sub> 8k - μ  |  |  |   |  |  |                      |  |  |
| ed 6k  | Bot  | tom  |   |  |  |                      | no image   | no image   |
| appined for the second  |  |  |   |  |  |                      |  |  |
| 2.1  | G  | RAPHS  |   |  |  |                      |  |  |
| 0k 74421574  | 4  | errous Alloys                                  |   |  |  | Particle Count       |  |  |
| Mart   | <sup>10</sup>  | iron   |   |  | 491,52   | )<br>]               |  | 1 <sup>26</sup>  |
| PQ   | ud 5- 🕶  | chromium<br>nickel                             |   |  | 122,880  | Severe               |  | -24  |
| 250  |  | )  |   |  | 30,72  |                      |  | -22  |
| 200 - Severe   |  |  |   |  | ま 定 7,680  | Abnormal             |  | -20 😨  |
| 150  | Mar15/24   |  |   |  | Mar15/24<br>s {per 1 m]  |                      |  | -20 ISO 4406:<br>-18 -19 99 0  |
| 린<br>100 <mark>Abnormal</mark>   |  | on-ferrous Metals                              | -   |  | Mar15/24<br>156'1 ml)<br>189'/   |                      |  | 1999 0   |
| 50 -   | 10 T   |  |   |  | to to  |                      |  | -16 Cleanline<br>-14 re  |
| 0  |  | copper<br>lead                                 |   |  | unuper 2   |                      |  | 62   |
| Mar15/24   | mqq 2  | tin  |   |  | 31   |                      |  | -12 G  |
| War  |  |  |   |  | -  | 3                    |  | -10  |
| Particle Trend   | Mar15/24   |  |   |  | Mar15/24   | 2-                   |  | -8   |
| 12k 4µm  |  |  |   |  | Mar M  | 44 64 1              | 4μ 21μ   | 38µ 71µ  |
| $\overline{\epsilon}^{10k}$  |  | iscosity @ 40°C                                |   |  |  | Acid Number          |  |  |
| bk   | 55-  | hormal   |   |  | (D)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2<br>B)HO2 | 1                    |  |  |
| ie 6k  | ()-0+) 50 - 4<br>tg 45 - 4   | bnormal  |   |  | E<br>5 0.10  | j.                   |  |  |
|  | 40 40 A  | bnormal  |   |  |  |                      |  |  |
|  | 35   |  |   |  |  | )                    |  |  |
| 15/24  | -1 с. л. <b>Е</b><br>Mar15/24                                      |  |   |  | Mar15/24   | Mar15/24             |  | Mar15/24   |
| Mar  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~                            |  |   |  | 2  | 2                    |  | 2  |
| Accredited Unique Nun  | Io. : WC2   ber : 0262   nber : 5748   age : IND :   port, contact | 837<br>2 ( Additional Tes<br>at Customer Servi | Recei<br>Teste<br>Diagn<br>ts: KF, P<br>ce at 1-8 | ved : 21<br>d : 22<br>osed : 22<br>Q, PrtCount<br>00-268-213 | Mar 2024<br>2 Mar 2024<br>Mar 2024 - Kev<br>)<br>1.  | 167 BUR<br>in Marson | WOOD RD, P.<br>THUN<br>Contact: E<br>bruce.david | er Generation<br>O. BOX 10159<br>IDER BAY, ON<br>CA P7B 6T7<br>Bruce Davidson<br>Ison@opg.com<br>(807)346-3919 |