## WEAR CHELK

## EAR FALLS GS FP1G1

Component

## Thrust Bearing

ESSO TERESSO ISO 46 (--- GAL)

## DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor.
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## Wear

All component wear rates are normal.

## Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. 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 Rating Trend


| SAMPLE INFORMATION |  | method | limitbase | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Number |  | Client Info |  | WC0686263 | WC0560615 | WC0481694 |
| Sample Date |  | Client Info |  | 11 Jul 2022 | 03 May 2021 | 07 Jul 2020 |
| Machine Age | hrs | Client Info |  | 0 | 0 | 0 |
| Oil Age | hrs | Client Info |  | 0 | 0 | 0 |
| Oil Changed |  | Client Info |  | N/A | N/A | N/A |
| Sample Status |  |  |  | NORMAL | NORMAL | ATTENTION |


| CONTAMINATION |  | method | limitbase | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Water |  | WC Method | >2 | NEG | NEG | NEG |
| WEAR METALS |  | method | limitbase | current | history 1 | history2 |
| Iron | ppm | ASTM D5185(m) | >85 | <1 | <1 | <1 |
| Chromium | ppm | ASTM D5185(m) |  | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) |  | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185(m) |  | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) |  | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | $>40$ | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185(m) | >60 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | $>7$ | 1 | 2 | 2 |
| Tin | ppm | ASTM D5185(m) | >40 | <1 | <1 | <1 |
| Antimony | ppm | ASTM D5185(m) |  | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) |  | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) |  | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) |  | 0 | 0 | 0 |


| ADDITIVES |  | method | limitbase | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boron | ppm | ASTM D5185(m) | 0 | 0 | <1 | <1 |
| Barium | ppm | ASTM D5185(m) |  | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) |  | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 0 | 0 | <1 | <1 |
| Calcium | ppm | ASTM D5185(m) | 0 | <1 | $<1$ | $<1$ |
| Phosphorus | ppm | ASTM D5185(m) | 2.4 | 2 | 2 | 3 |
| Zinc | ppm | ASTM D5185(m) | 0 | 3 | 4 | 4 |
| Sulfur | ppm | ASTM D5185(m) |  | 669 | 681 | 677 |
| Lithium | ppm | ASTM D5185(m) |  | <1 | <1 | <1 |
| CONTAMINANTS |  | method | limitbase | current | history1 | history2 |
| Silicon | ppm | ASTM D5185(m) | >20 | <1 | 1 | 1 |
| Sodium | ppm | ASTM D5185(m) |  | <1 | $<1$ | $<1$ |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | <1 | <1 |


| FLUID CLEANLINESS | method | limitbase | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Particles $>4 \mu \mathrm{~m}$ | ASTM D7647 | >10000 | 2749 | 1661 | 4855 |
| Particles $>6 \mu \mathrm{~m}$ | ASTM D7647 | >2500 | 636 | 144 | 1354 |
| Particles $>14 \mu \mathrm{~m}$ | ASTM D7647 | >160 | 41 | 5 | 153 |
| Particles $>21 \mu \mathrm{~m}$ | ASTM D7647 | $>40$ | 7 | 2 | $\triangle 62$ |
| Particles $>38 \mu \mathrm{~m}$ | ASTM D7647 | $>10$ | 1 | 0 | 3 |
| Particles $>71 \mu \mathrm{~m}$ | ASTM D7647 | >3 | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >20/18/14 | 19/16/13 | 18/14/10 | 19/18/14 |

## OIL ANALYSIS REPORT



| FLUID DEGRADATION |  | method | limitbase | current | history1 | history2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Acid Number (AN) | $\mathrm{mg} \mathrm{KOH/g}$ | ASTM D974* | 0.02 | 0.10 | 0.03 | 0.08 |
| VISUAL |  | method | limitbase | current | history1 | history2 |
| White Metal | scalar | Visual* | NONE | NONE | NONE | $\triangle$ VLITE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | $\triangle$ VLITE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >2 | NEG | NEG | NEG |
| Free Water | scalar | Visual* |  | NEG | NEG | NEG |


| FLUID PROPERTIES | method | limitbase | current | history1 | history2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Visc @ $40^{\circ} \mathrm{C}$ | cSt | ASTM D7279 (m) | 46 | $\mathbf{4 5 . 6}$ | 45.9 | 45.3 |
| SAMPLE IMAGES | method | limitbase | current | history1 | history2 |  |

Color




## CALA ISO 17025:2017 Accredited Laboratory

 Laboratory Sample No. Lab Number: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
$\begin{array}{lll}: \text { WC0686263 } & \text { Received } & : 12 \text { Jul } 2022 \\ : 02499216 & \text { Diagnosed } & : 14 \text { Jul } 2022\end{array}$ Ontario Power Generation
KENORA PRODUCTION CENTRE, 200-60 FOURTEENTH STN. KENORA, ON Unique Number : 5424176 Diagnostician : Kevin Marson CA P9N 4M9 Test Package : IND 2 ( Additional Tests: BottomAnalysis, FilterPatch, PrtCount, TAN Man) Contact: Josh Robinson To discuss this sample report, contact Customer Service at 1-800-268-2131. josh.robinson@opg.com
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.

