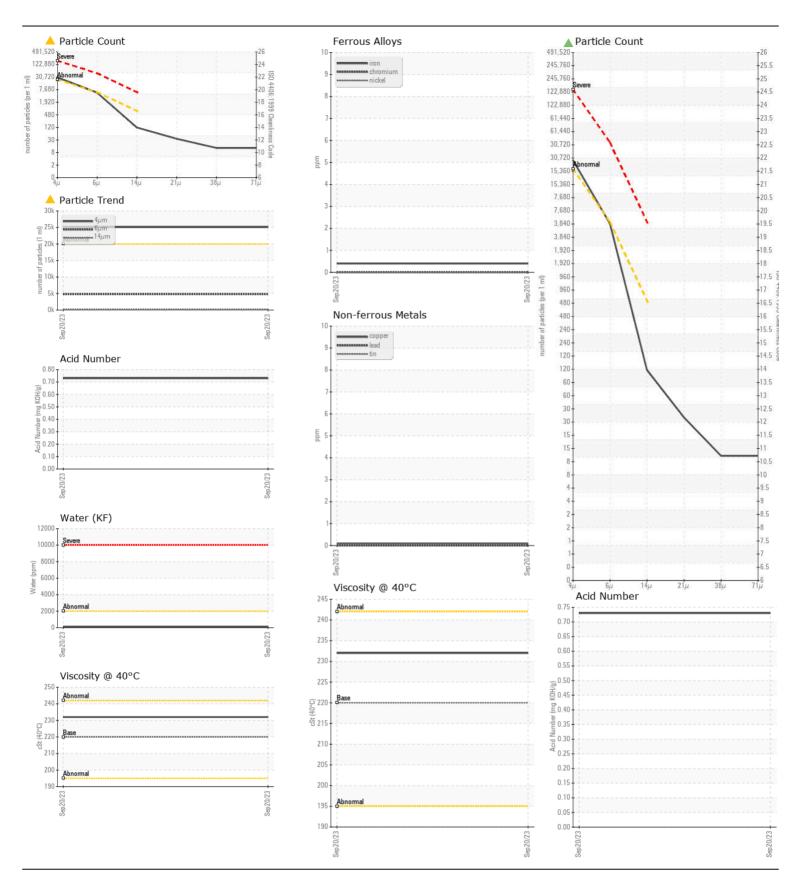
WEAR CONTAMINATION **FLUID CONDITION**

NORMAL ABNORMAL NORMAL

FA8-8G1 HEAD GATE

Component Gearbox

| | _ | | | | (| | |
|--|-------------------------|----------|-------------------|-----------|--------------|----------|----------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| We recommend you service the filters on this component. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. | Sample Number | | Client Info | | WC0785273 | | |
| | Sample Date | | Client Info | | 20 Sep 2023 | | |
| | Machine Age | hrs | Client Info | | 0 | | |
| | Oil Age | hrs | Client Info | | 0 | | |
| | Filter Age | hrs | Client Info | | 0 | | |
| | Oil Changed | | Client Info | | N/A | | |
| | Filter Changed | | Client Info | | N/A | | |
| | Sample Status | | | ABNORMAL | | | |
| WEAR | PQ | | ASTM D8184* | | 0 | | |
| | Iron | ppm | ASTM D5185(m) | >200 | <1 | | |
| All component wear rates are normal. | Chromium | ppm | ASTM D5185(m) | | 0 | | |
| | Nickel | ppm | ASTM D5185(m) | | 0 | | |
| | Titanium | ppm | ASTM D5185(m) | >10 | 0 | | |
| | Silver | ppm | ASTM D5185(m) | | 0 | | |
| | Aluminum | ppm | ASTM D5185(m) | >25 | <1 | | |
| | Lead | ppm | ASTM D5185(m) | | 0 | | |
| | Copper | ppm | ASTM D5185(m) | >200 | <1 | | |
| | Tin | ppm | ASTM D5185(m) | | <1 | | |
| | Vanadium | ppm | ASTM D5185(m) | 725 | 0 | | |
| | White Metal | scalar | Visual* | NONE | NONE | | |
| | Yellow Metal | scalar | Visual* | NONE | NONE | | |
| <u></u> | | Scalai | v isuai | INOINL | INOINE | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185(m) | >50 | 16 | | |
| | Potassium | ppm | ` ' | >20 | <1 | | |
| There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible. | Water | % | ASTM D6304* | >0.2 | 0.012 | | |
| | ppm Water | ppm | ASTM D6304* | >2000 | 121 | | |
| | Particles >4µm | | ASTM D7647 | | 25089 | | |
| | Particles >6µm | | ASTM D7647 | >5000 | 4767 | | |
| | Particles >14µm | | ASTM D7647 | >640 | 104 | | |
| | Particles >21µm | | ASTM D7647 | >160 | 30 | | |
| | Particles >38µm | | ASTM D7647 | | 11 | | |
| | Particles >71μm | | ASTM D7647 | | 11 | | |
| | Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | | | |
| | Silt | scalar | Visual* | NONE | NONE | | |
| | Debris | scalar | Visual* | NONE | NONE | | |
| | Sand/Dirt | scalar | Visual* | NONE | NONE | | |
| | Appearance | scalar | Visual* | NORML | ▲ HAZY | | |
| | Odor | scalar | Visual* | NORML | NORML | | |
| | Emulsified Water | scalar | Visual* | >0.2 | NEG | | |
| | | | | | | | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185(m) | | 0 | | |
| The AN level is acceptable for this fluid. | Boron | ppm | ASTM D5185(m) | | <1 | | |
| | Barium | ppm | ASTM D5185(m) | | 0 | | |
| | Molybdenum | ppm | ASTM D5185(m) | | 0 | | |
| | Manganese | ppm | ASTM D5185(m) | | 0 | | |
| | Magnesium | ppm | ASTM D5185(m) | | <1 | | |
| | Calcium | ppm | ASTM D5185(m) | | 1 | | |
| | Phosphorus | ppm | ASTM D5185(m) | | 387 | | |
| | Zinc | ppm | ASTM D5185(m) | | 8 | | |
| | Sulfur | ppm | ASTM D5185(m) | | 2056 | | |
| | Acid Number (AN) | mg KOH/g | ASTM D974* | | 0.73 | | |
| | Visc @ 40°C | cSt | ASTM D7279(m) | 220 | 232 | | |





CALA ISO 17025:2017 Accredited

Laboratory

Laboratory Sample No.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : WC0785273 Lab Number : 02616793

Unique Number : 5733903

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

Received **Tested** Diagnosed Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

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.

: 20 Feb 2024 : 22 Feb 2024

: 22 Feb 2024 - Kevin Marson

801 MOUNTJOY ST S, BOX 966 TIMMINS, ON CA P4N 7H1

Contact: Joey De Pinto joey.depinto@opg.com T: (705)363-0268 F:

Ontario Power Generation - Northeast Operations