

# **OIL ANALYSIS REPORT**

# [172617] **ELECTRIC GOV**

Component Pump Fluid

ESSO TERESSO ISO 68 (--- GAL)

# Sample Rating Trend



### 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.

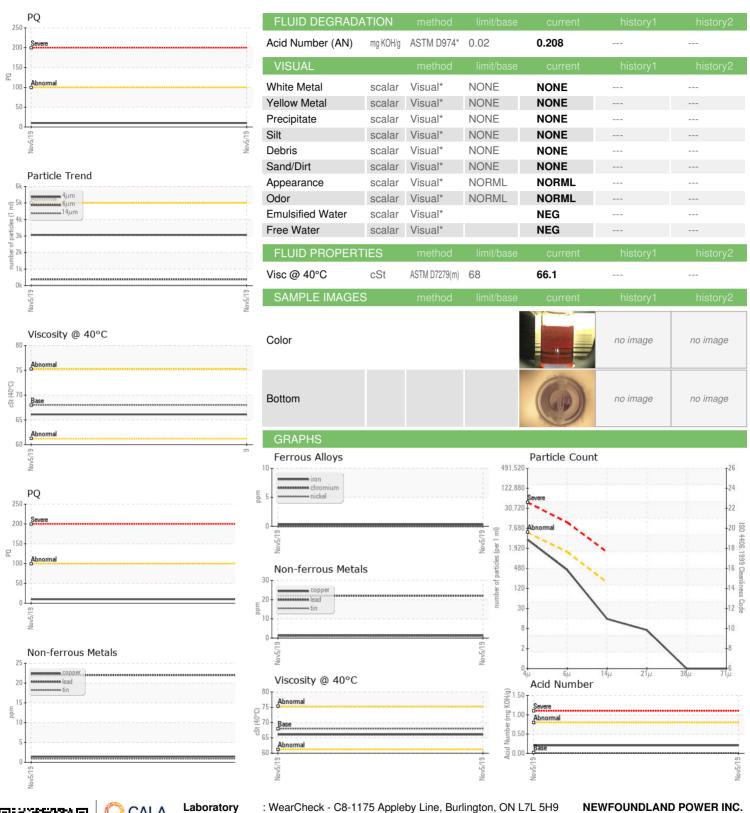
### **Fluid Condition**

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

|   |   | 1   | 1  | Nov2019   |                                  |                   |
|---|---|---|--|---|----------------------------------|-------------------|
| SAMPLE INFORM   | MATION  | method  | limit/base   | current   | history1                         | history2          |
| Sample Number   |   | Client Info   |  | WC0316955   |                                  |                   |
| Sample Date   |   | Client Info   |  | 05 Nov 2019   |                                  |                   |
| 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*   |  | 10  |                                  |                   |
| Iron  | ppm   | ASTM D5185(m)   | >90  | <1  |                                  |                   |
| Chromium  | ppm   | ASTM D5185(m)   |  | 0   |                                  |                   |
| Nickel  | ppm   | ASTM D5185(m)   |  | 0   |                                  |                   |
| Titanium  | ppm   | ASTM D5185(m)   |  | 0   |                                  |                   |
| Silver  | ppm   | ASTM D5185(m)   |  | <1  |                                  |                   |
| Aluminum  | ppm   | ASTM D5185(m)   | >7   | <1  |                                  |                   |
| Lead  | ppm   | . ,   | >12  | 22  |                                  |                   |
| Copper  | ppm   | ASTM D5185(m)   | >30  | 1   |                                  |                   |
| Tin   | ppm   | ASTM D5185(m)   |  | -<br><1   |                                  |                   |
| Antimony  | ppm   | ASTM D5185(m)   | 70   | <1  |                                  |                   |
| Vanadium  | ppm   | ASTM D5185(m)   |  | 0   |                                  |                   |
| Beryllium   | ppm   | ASTM D5185(m)   |  | 0   |                                  |                   |
| Cadmium   | ppm   | ASTM D5185(m)   |  | 0   |                                  |                   |
| Caumum  | ppiii   | A0110100(111)   |  | U   |                                  |                   |
|   |   |   |  |   |                                  |                   |
| ADDITIVES   |   | method  | limit/base   | current   | history1                         | history2          |
| ADDITIVES<br>Boron  | ppm   | method<br>ASTM D5185(m)   | limit/base 4.5   | current   | history1                         | history2          |
|   | ppm   |   |  |   | history1                         | history2<br>      |
| Boron   |   | ASTM D5185(m)   | 4.5  | <1  |                                  |                   |
| Boron<br>Barium   | ppm   | ASTM D5185(m)<br>ASTM D5185(m)  | 4.5<br>0.4   | <1<br><1  |                                  |                   |
| Boron<br>Barium<br>Molybdenum   | ppm<br>ppm  | ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)   | 4.5<br>0.4   | <1<br><1<br>0   |                                  |                   |
| Boron<br>Barium<br>Molybdenum<br>Manganese  | ppm<br>ppm  | ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | 4.5<br>0.4<br>0  | <1<br><1<br>0   |                                  |                   |
| Boron Barium Molybdenum Manganese Magnesium   | ppm<br>ppm<br>ppm   | ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)   | 4.5<br>0.4<br>0  | <1<br><1<br>0<br>0<br><1  |                                  |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium   | ppm<br>ppm<br>ppm<br>ppm                                    | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0   | <1<br><1<br>0<br>0<br>0<br><1<br><1                                 |                                  |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                      | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0<br>0  | <1<br><1<br>0<br>0<br>0<br><1<br><1<br><1<br>8                      |                                  |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                      | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0<br>0.7  | <1<br><1<br>0<br>0<br>0<br><1<br><1<br>8                            |                                  |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0<br>0.7  | <1 <1 0 0 <1 <1 <1 8 3 2052   |                                  |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0<br>0.7<br>0<br>1315   | <1 <1 0 0 <1 <1 <1 8 3 2052 <1                                      |                                  |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0<br>0.7<br>0<br>1315   | <1 <1 0 0 <1 <1 <1 8 3 2052 <1 current                              | <br><br><br><br><br><br>history1 |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0<br>0.7<br>0<br>1315   | <1 <1 0 0 0 <1 <1 <1 8 3 2052 <1 current                            | history1                         |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0.7<br>0<br>1315<br>limit/base  | <1 <1 0 0 0 <1 <1 8 3 2052 <1 current <1 0                          | history1                         | history2          |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0.7<br>0<br>1315<br>limit/base<br>>60   | <1 <1 0 0 0 <1 <1 8 3 2052 <1  current <1 0 <1                      | history1                         |                   |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium  CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)  MASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0<br>0.7<br>0<br>1315<br>limit/base<br>>60<br>>20   | <1 <1 0 0 0 0 <1 <1 8 3 2052 <1 current <1 0 <1 current current     | history1                         | history2          |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm                                  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)   | 4.5<br>0.4<br>0<br>0<br>0<br>0.7<br>0<br>1315<br>limit/base<br>>60<br>>20<br>limit/base                                  | <1 <1 0 0 0 <1 <1 <1 8 3 2052 <1 current <1 0 <1 current 3066       | history1 history1                | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm Particles >14µm                  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)  MASTM D5185(m) ASTM D7647 ASTM D7647 | 4.5<br>0.4<br>0<br>0<br>0<br>0.7<br>0<br>1315<br>limit/base<br>>60<br>>20<br>limit/base<br>>5000<br>>1300                | <1 <1 0 0 0 <1 <1 8 3 2052 <1 current <1 0 <1 current 3066 378 13   | history1 history1                | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium  CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)  MASTM D5185(m) ASTM D5185(m)         | 4.5<br>0.4<br>0<br>0<br>0<br>0.7<br>0<br>1315<br>limit/base<br>>60<br>>20<br>limit/base<br>>5000<br>>1300<br>>160<br>>40 | <1 <1 0 0 0 <1 <1 8 3 2052 <1 current <1 0 <1 current 3066 378      | history1 history1                | history2 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm Particles >14µm                  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m)  MASTM D5185(m)  MASTM D5185(m)  MASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647                            | 4.5 0.4 0 0 0 0 0.7 0 1315  limit/base >60 >20 limit/base >5000 >1300 >160   | <1 <1 0 0 0 <1 <1 8 3 2052 <1 current <1 0 <1 current 3066 378 13 6 | history1 history1                | history2 history2 |



## **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited

Laboratory

Laboratory Sample No. Lab Number **Unique Number** 

: 4966838

: WC0316955 : 02323540

Received : 28 Nov 2019 Diagnosed Diagnostician

: 01 Dec 2019 : Kevin Marson

Test Package : IND 2 ( Additional Tests: PrtCount ) 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.

**NEWFOUNDLAND POWER INC.** 

50 DUFFY PLACE, PO BOX 8910 ST. JOHNS, NL CA A1B 3P6

Contact: Paul Martin pmartin@newfoundlandpower.com

Contact/Location: Paul Martin - NEWSTJ

F: (709)737-2926

T: