



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**Inland Iron and Metal - 888041**  
 Machine Id  
**AG231-RC**  
 Component  
**Hydraulic System**  
 Fluid  
**AW HYDRAULIC OIL ISO 46 (--- GAL)**

## DIAGNOSIS

### Recommendation

This is a baseline read-out on the submitted sample.

### Wear

Copper ppm levels are noted.

### Contamination

{not applicable}

### Fluid Condition

{not applicable}

## SAMPLE INFORMATION

|                  | method      | limit/base  | current            | history1 | history2 |
|------------------|-------------|-------------|--------------------|----------|----------|
| Department       | Client Info |             | <b>Sales</b>       | ---      | ---      |
| Sample From      | Client Info |             | <b>Machine</b>     | ---      | ---      |
| Production Stage | Client Info |             | <b>Lab Reclaim</b> | ---      | ---      |
| Sent to WC       | Client Info |             | <b>01/16/2024</b>  | ---      | ---      |
| Sample Number    | Client Info |             | <b>E30001157</b>   | ---      | ---      |
| Sample Date      | Client Info |             | <b>16 Jan 2024</b> | ---      | ---      |
| Machine Age      | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Age          | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed      | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status    |             |             | <b>NORMAL</b>      | ---      | ---      |

## WEAR METALS

|           | method | limit/base        | current      | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Iron      | ppm    | ASTM D5185(m) >20 | <b>6</b>     | ---      | ---      |
| Chromium  | ppm    | ASTM D5185(m) >20 | <b>&lt;1</b> | ---      | ---      |
| Nickel    | ppm    | ASTM D5185(m) >20 | <b>&lt;1</b> | ---      | ---      |
| Titanium  | ppm    | ASTM D5185(m)     | <b>0</b>     | ---      | ---      |
| Silver    | ppm    | ASTM D5185(m)     | <b>0</b>     | ---      | ---      |
| Aluminum  | ppm    | ASTM D5185(m) >20 | <b>&lt;1</b> | ---      | ---      |
| Lead      | ppm    | ASTM D5185(m) >20 | <b>9</b>     | ---      | ---      |
| Copper    | ppm    | ASTM D5185(m) >20 | <b>12</b>    | ---      | ---      |
| Tin       | ppm    | ASTM D5185(m) >20 | <b>0</b>     | ---      | ---      |
| Antimony  | ppm    | ASTM D5185(m)     | <b>0</b>     | ---      | ---      |
| Vanadium  | ppm    | ASTM D5185(m)     | <b>0</b>     | ---      | ---      |
| Beryllium | ppm    | ASTM D5185(m)     | <b>0</b>     | ---      | ---      |
| Cadmium   | ppm    | ASTM D5185(m)     | <b>0</b>     | ---      | ---      |

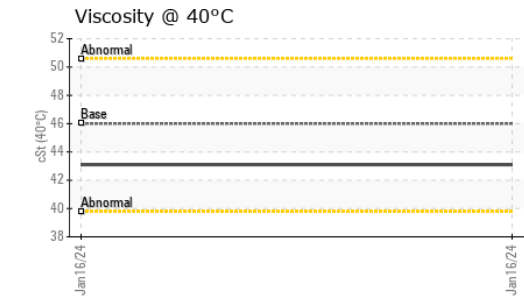
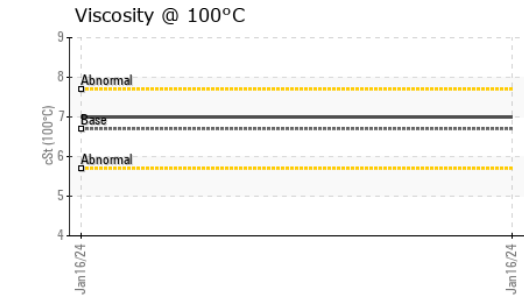
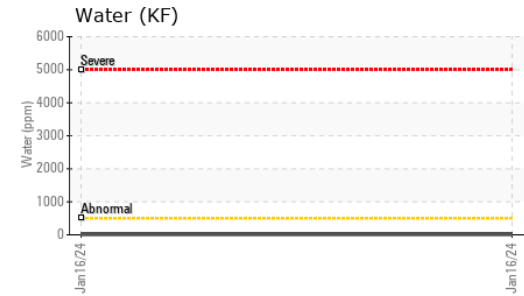
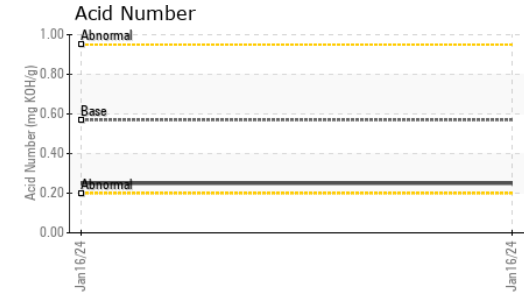
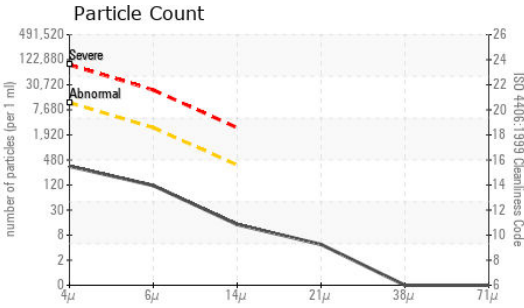
## ADDITIVES

|            | method | limit/base         | current      | history1 | history2 |
|------------|--------|--------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185(m) 5    | <b>0</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185(m) 5    | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185(m) 5    | <b>0</b>     | ---      | ---      |
| Manganese  | ppm    | ASTM D5185(m)      | <b>0</b>     | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185(m) 25   | <b>1</b>     | ---      | ---      |
| Calcium    | ppm    | ASTM D5185(m) 200  | <b>6</b>     | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185(m) 300  | <b>286</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185(m) 370  | <b>183</b>   | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185(m) 2500 | <b>1427</b>  | ---      | ---      |
| Lithium    | ppm    | ASTM D5185(m)      | <b>&lt;1</b> | ---      | ---      |

## CONTAMINANTS

|           | method | limit/base        | current      | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185(m) >15 | <b>5</b>     | ---      | ---      |
| Sodium    | ppm    | ASTM D5185(m)     | <b>0</b>     | ---      | ---      |
| Potassium | ppm    | ASTM D5185(m) >20 | <b>1</b>     | ---      | ---      |
| Water     | %      | ASTM D6304* >0.05 | <b>0.001</b> | ---      | ---      |
| ppm Water | ppm    | ASTM D6304* >500  | <b>10</b>    | ---      | ---      |

# OIL ANALYSIS REPORT



| FLUID CLEANLINESS | method       | limit/base | current         | history1 | history2 |
|-------------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm    | ASTM D7647   | >10000     | <b>298</b>      | ---      | ---      |
| Particles >6µm    | ASTM D7647   | >2500      | <b>103</b>      | ---      | ---      |
| Particles >14µm   | ASTM D7647   | >320       | <b>12</b>       | ---      | ---      |
| Particles >21µm   | ASTM D7647   | >80        | <b>4</b>        | ---      | ---      |
| Particles >38µm   | ASTM D7647   | >20        | <b>0</b>        | ---      | ---      |
| Particles >71µm   | ASTM D7647   | >4         | <b>0</b>        | ---      | ---      |
| Oil Cleanliness   | ISO 4406 (c) | >20/18/15  | <b>15/14/11</b> | ---      | ---      |

| FLUID DEGRADATION | method   | limit/base | current | history1    | history2 |     |
|-------------------|----------|------------|---------|-------------|----------|-----|
| Acid Number (AN)  | mg KOH/g | ASTM D974* | 0.57    | <b>0.25</b> | ---      | --- |

| VISUAL           | method | limit/base | current | history1     | history2 |     |
|------------------|--------|------------|---------|--------------|----------|-----|
| White Metal      | scalar | Visual*    | NONE    | <b>NONE</b>  | ---      | --- |
| Yellow Metal     | scalar | Visual*    | NONE    | <b>NONE</b>  | ---      | --- |
| Precipitate      | scalar | Visual*    | NONE    | <b>NONE</b>  | ---      | --- |
| Silt             | scalar | Visual*    | NONE    | <b>NONE</b>  | ---      | --- |
| Debris           | scalar | Visual*    | NONE    | <b>NONE</b>  | ---      | --- |
| Sand/Dirt        | scalar | Visual*    | NONE    | <b>NONE</b>  | ---      | --- |
| Appearance       | scalar | Visual*    | NORML   | <b>NORML</b> | ---      | --- |
| Odor             | scalar | Visual*    | NORML   | <b>NORML</b> | ---      | --- |
| Emulsified Water | scalar | Visual*    | >0.05   | <b>NEG</b>   | ---      | --- |
| Free Water       | scalar | Visual*    |         | <b>NEG</b>   | ---      | --- |

| FLUID PROPERTIES     | method | limit/base    | current | history1    | history2 |     |
|----------------------|--------|---------------|---------|-------------|----------|-----|
| Visc @ 40°C          | cSt    | ASTM D7279(m) | 46      | <b>43.1</b> | ---      | --- |
| Visc @ 100°C         | cSt    | ASTM D7279(m) | 6.7     | <b>7</b>    | ---      | --- |
| Viscosity Index (VI) | Scale  | ASTM D2270*   | 97      | <b>121</b>  | ---      | --- |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         | no image | no image |
| Bottom        |        |            |         | no image | no image |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : E30001157 **Received** : 17 Jan 2024  
**Lab Number** : **02609335** **Diagnosed** : 19 Jan 2024  
**Unique Number** : 5710421 **Diagnostician** : Tatiana Sorkina  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, VI )

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To discuss this sample report, contact Customer Service at 1-905-372-2251.  
 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.