

## **OIL ANALYSIS REPORT**

### Area Integrity - 888065 A2312112

Component Hydraulic System Fluid AW HYDRAULIC OIL ISO 46 (--- GAL)

#### DIAGNOSIS

Recommendation

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

Wear

{not applicable} Contamination

{not applicable}

Fluid Condition {not applicable}





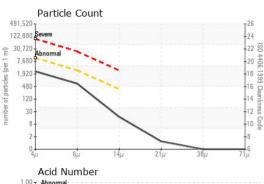
NORMAL

| SAMPLE INFORM    | IATION | method        | limit/base | current     | history1 | history2 |
|------------------|--------|---------------|------------|-------------|----------|----------|
| Batch #          |        | Client Info   |            | Mobile      |          |          |
| Department       |        | Client Info   |            | Production  |          |          |
| Sample From      |        | Client Info   |            | Machine     |          |          |
| Production Stage |        | Client Info   |            | Final       |          |          |
| Sent to WC       |        | Client Info   |            | 12/22/2023  |          |          |
| Sample Number    |        | Client Info   |            | E30001052   |          |          |
| Sample Date      |        | Client Info   |            | 20 Dec 2023 |          |          |
| 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 |
| Iron             | ppm    | ASTM D5185(m) | >20        | <1          |          |          |
| Chromium         | ppm    | ASTM D5185(m) | >20        | 0           |          |          |
| Nickel           | ppm    | ASTM D5185(m) | >20        | <1          |          |          |
| Titanium         | ppm    | ASTM D5185(m) |            | 0           |          |          |
| Silver           | ppm    | ASTM D5185(m) |            | 0           |          |          |
| Aluminum         | ppm    | ASTM D5185(m) | >20        | <1          |          |          |
| Lead             | ppm    | ASTM D5185(m) | >20        | <1          |          |          |
| Copper           | ppm    | ASTM D5185(m) | >20        | 1           |          |          |
| Tin              | ppm    | ASTM D5185(m) | >20        | 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           |          |          |
| ADDITIVES        |        | method        | limit/base | current     | history1 | history2 |
| Boron            | ppm    | ASTM D5185(m) | 5          | <1          |          |          |
| Barium           | ppm    | ASTM D5185(m) | 5          | 0           |          |          |
| Molybdenum       | ppm    | ASTM D5185(m) | 5          | 0           |          |          |
| Manganese        | ppm    | ASTM D5185(m) |            | 0           |          |          |
| Magnesium        | ppm    | ASTM D5185(m) | 25         | 3           |          |          |
| Calcium          | ppm    | ASTM D5185(m) | 200        | 56          |          |          |
| Phosphorus       | ppm    | ASTM D5185(m) | 300        | 327         |          |          |
| Zinc             | ppm    | ASTM D5185(m) | 370        | 401         |          |          |
| Sulfur           | ppm    | ASTM D5185(m) | 2500       | 813         |          |          |
| Lithium          | ppm    | ASTM D5185(m) |            | <1          |          |          |
| CONTAMINANTS     |        | method        | limit/base | current     | history1 | history2 |
| Silicon          | ppm    | ASTM D5185(m) | >15        | 0           |          |          |
| Sodium           | ppm    | ASTM D5185(m) |            | <1          |          |          |
| Potassium        | ppm    | ASTM D5185(m) | >20        | 0           |          |          |
| Water            | %      | ASTM D6304*   | >0.05      | 0.004       |          |          |
| ppm Water        | ppm    | ASTM D6304*   | >500       | 49          |          |          |

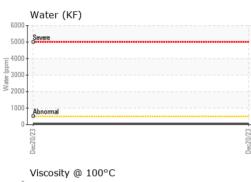
#### Sample Rating Trend

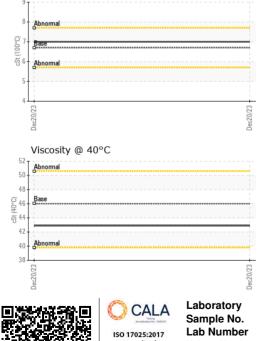


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|                      | ESS      | method        | limit/base | current  | history1 | history2 |
|----------------------|----------|---------------|------------|----------|----------|----------|
| Particles >4µm       |          | ASTM D7647    | >10000     | 2249     |          |          |
| Particles >6µm       |          | ASTM D7647    | >2500      | 581      |          |          |
| Particles >14µm      |          | ASTM D7647    | >320       | 15       |          |          |
| Particles >21µm      |          | ASTM D7647    | >80        | 1        |          |          |
| Particles >38µm      |          | ASTM D7647    | >20        | 0        |          |          |
| Particles >71µm      |          | ASTM D7647    | >4         | 0        |          |          |
| Oil Cleanliness      |          | ISO 4406 (c)  | >20/18/15  | 18/16/11 |          |          |
| FLUID DEGRADATION    |          | method        | limit/base | current  | history1 | history2 |
| Acid Number (AN)     | mg KOH/g | ASTM D974*    | 0.57       | 0.39     |          |          |
| VISUAL               |          | method        | limit/base | current  | history1 | history2 |
| White Metal          | scalar   | Visual*       | NONE       | NONE     |          |          |
| Yellow Metal         | scalar   | Visual*       | NONE       | NONE     |          |          |
| Precipitate          | scalar   | Visual*       | NONE       | NONE     |          |          |
| Silt                 | scalar   | Visual*       | NONE       | NONE     |          |          |
| Debris               | scalar   | Visual*       | NONE       | NONE     |          |          |
| Sand/Dirt            | scalar   | Visual*       | NONE       | NONE     |          |          |
| Appearance           | scalar   | Visual*       | NORML      | NORML    |          |          |
| Odor                 | scalar   | Visual*       | NORML      | NORML    |          |          |
| Emulsified Water     | scalar   | Visual*       | >0.05      | NEG      |          |          |
| Free Water           | scalar   | Visual*       |            | NEG      |          |          |
| FLUID PROPERT        | IES      | method        | limit/base | current  | history1 | history2 |
| Visc @ 40°C          | cSt      | ASTM D7279(m) | 46         | 42.9     |          |          |
| Visc @ 100°C         | cSt      | ASTM D7279(m) | 6.7        | 7        |          |          |
| Viscosity Index (VI) | Scale    | ASTM D2270*   | 97         | 122      |          |          |
| SAMPLE IMAGES        | \$       | method        | limit/base | current  | history1 | history2 |
| Color                |          |               |            |          | no image | no image |
|                      |          |               |            |          | no image | no image |

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Environmental 360 Solutions Ltd. : E30001052 Recieved : 28 Dec 2023 640 Victoria Street : 02605549 Diagnosed : 02 Jan 2024 Cobourg, ON Accredited Laboratory Unique Number : 5698634 Diagnostician : Tatiana Sorkina CA K9A 5H5 Test Package : IND 2 (Additional Tests: KF, KV100, VI) Contact: Tatiana Sorkina To discuss this sample report, contact Customer Service at 1-905-372-2251. tsorkina@e360s.ca T: (800)263-3939 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. F: (905)373-4950