

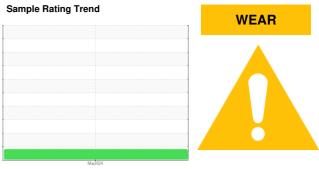
OIL ANALYSIS REPORT

Graphic Packaging - G05600 A2403067

Component

Hydraulic System

AW HYDRAULIC OIL ISO 46 (--- GAL)



DIAGNOSIS

Recommendation

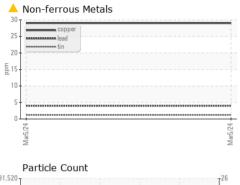
We certify this oil to be clean, that the additives are at acceptable levels and the oil is suitable for use.

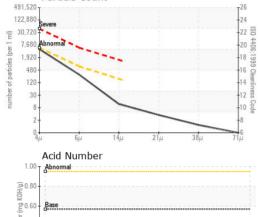
Copper ppm levels are noted.

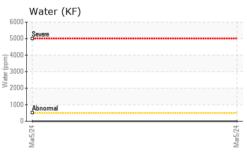
| | | | | Mar2024 | | |
|------------------|--------|---------------|------------|-------------|----------|----------|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Machine ID | | Client Info | | Press Roll | | |
| Department | | Client Info | | Sales | | |
| Sample From | | Client Info | | Machine | | |
| Production Stage | | Client Info | | Initial | | |
| Sent to WC | | Client Info | | 03/11/2024 | | |
| Sample Number | | Client Info | | E30001572 | | |
| Sample Date | | Client Info | | 05 Mar 2024 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | ABNORMAL | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | >20 | <1 | | |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | | |
| 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 | 4 | | |
| Copper | ppm | ASTM D5185(m) | >20 | <u>^</u> 29 | | |
| Tin | ppm | ASTM D5185(m) | >20 | 1 | | |
| 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 | 2 | | |
| Barium | ppm | ASTM D5185(m) | 5 | 5 | | |
| Molybdenum | ppm | ASTM D5185(m) | 5 | <1 | | |
| Manganese | ppm | ASTM D5185(m) | | 0 | | |
| Magnesium | ppm | ASTM D5185(m) | 25 | 6 | | |
| Calcium | ppm | ASTM D5185(m) | 200 | 45 | | |
| Phosphorus | ppm | ASTM D5185(m) | 300 | 400 | | |
| Zinc | ppm | ASTM D5185(m) | | 480 | | |
| Sulfur | ppm | ASTM D5185(m) | 2500 | 1198 | | |
| Lithium | ppm | ASTM D5185(m) | | <1 | | |
| CONTAMINANTS | 3 | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185(m) | >15 | <1 | | |
| Sodium | ppm | ASTM D5185(m) | | 0 | | |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | | |
| Water | % | ASTM D6304* | >0.05 | 0.00 | | |
| ppm Water | ppm | ASTM D6304* | >500 | 0 | | |

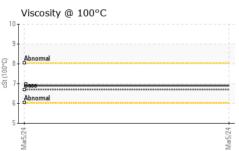


OIL ANALYSIS REPORT









| FLUID CLEANLIN | ESS | method | limit/base | current | history1 | history2 |
|----------------------|----------|---------------|------------|----------|----------|----------|
| Particles >4µm | | ASTM D7647 | >5000 | 4273 | | |
| Particles >6µm | | ASTM D7647 | >640 | 258 | | |
| Particles >14µm | | ASTM D7647 | >160 | 10 | | |
| Particles >21µm | | ASTM D7647 | >40 | 3 | | |
| Particles >38µm | | ASTM D7647 | >10 | 1 | | |
| Particles >71µm | | ASTM D7647 | >3 | 0 | | |
| Oil Cleanliness | | ISO 4406 (c) | >19/16/14 | 19/15/10 | | |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.57 | 0.42 | | |
| 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 | 43.3 | | |
| Visc @ 100°C | cSt | ASTM D7279(m) | 6.7 | 6.9 | | |
| Viscosity Index (VI) | Scale | ASTM D2270* | 97 | 116 | | |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
| Color | | | | | no image | no image |
| Bottom | | | | | no image | no image |



0.00

CALA ISO 17025:2017 Accredited

Laboratory

Laboratory Sample No.

Unique Number : 5746881

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : E30001572 Lab Number : 02621762

Received **Tested** Diagnosed : 13 Mar 2024

: 14 Mar 2024

: 15 Mar 2024 - Tatiana Sorkina

Test Package: IND 2 (Additional Tests: KF, KV100, VI) 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.

Environmental 360 Solutions Ltd.

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F: (905)373-4950