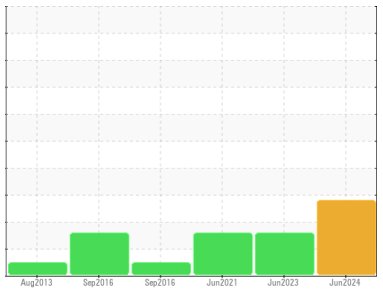
# OIL ANALYSIS REPORT

Sample Rating Trend




**DIRT**

Machine Id
## PRESS #8 BACK OF COLD SAW (S/N 972861)
Component
**Hydraulic System**
Fluid
**AW HYDRAULIC OIL ISO 46 (250 GAL)**

## DIAGNOSIS

**Recommendation**
We advise that you check all areas where dirt can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

**Wear**
All component wear rates are normal.

**Contamination**
There is a light amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of dirt present in the oil.

**Fluid Condition**
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PC0087732** | PC0076124 | PC0043692 |
| Sample Date | | Client Info | | **11 Jun 2024** | 02 Jun 2023 | 23 Jun 2021 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.05 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >40 | **4** | 4 | 4 |
| Chromium | ppm | ASTM D5185(m) | >4 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >20 | **<1** | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >4 | **<1** | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >10 | **<1** | 1 | 2 |
| Copper | ppm | ASTM D5185(m) | >60 | **28** | 27 | 30 |
| Tin | ppm | ASTM D5185(m) | >4 | **0** | <1 | <1 |
| Antimony | ppm | ASTM D5185(m) | | **0** | <1 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 5 | **4** | 4 | 5 |
| Barium | ppm | ASTM D5185(m) | 5 | **1** | <1 | 1 |
| Molybdenum | ppm | ASTM D5185(m) | 5 | **0** | 0 | <1 |
| Manganese | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 25 | **38** | 35 | 44 |
| Calcium | ppm | ASTM D5185(m) | 200 | **112** | 111 | 121 |
| Phosphorus | ppm | ASTM D5185(m) | 300 | **363** | 395 | 401 |
| Zinc | ppm | ASTM D5185(m) | 370 | **455** | 443 | 466 |
| Sulfur | ppm | ASTM D5185(m) | 2500 | **1711** | 1706 | 1902 |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >20 | ▲ **32** | ▲ 30 | ▲ 29 |
| Sodium | ppm | ASTM D5185(m) | | **12** | 10 | 10 |
| Potassium | ppm | ASTM D5185(m) | >20 | **3** | <1 | <1 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ● **8073** | 3300 | 525 |
| Particles >6µm | | ASTM D7647 | >1300 | ● **1957** | 910 | 109 |
| Particles >14µm | | ASTM D7647 | >160 | **122** | 68 | 7 |
| Particles >21µm | | ASTM D7647 | >40 | **36** | 16 | 1 |
| Particles >38µm | | ASTM D7647 | >10 | **3** | 1 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **1** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ● **20/18/14** | 19/17/13 | 16/14/10 |

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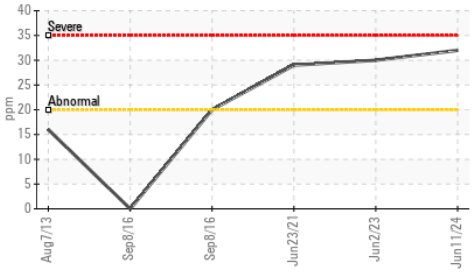
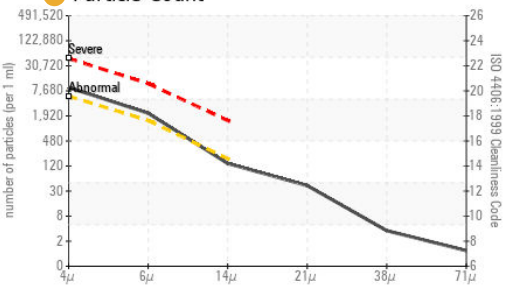
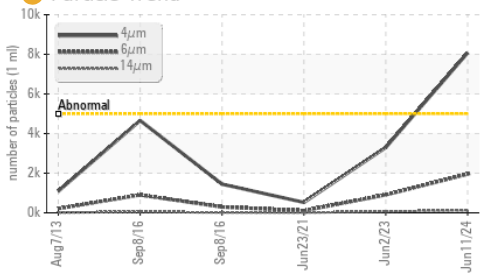
Silicon (ppm)



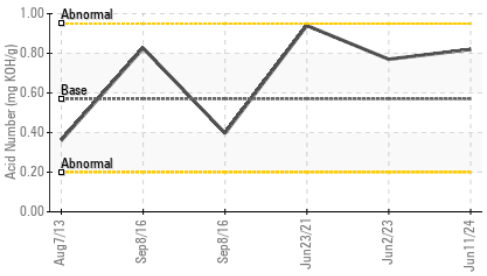

Particle Count



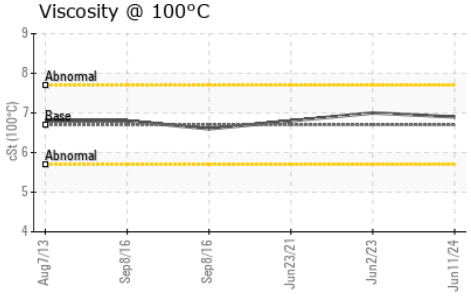

Particle Trend




Acid Number



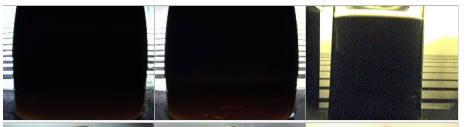

Viscosity @ 100°C




| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.57 | **0.82** | 0.77 | 0.94 |

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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 46 | **46.0** | 45.8 | 46.3 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 6.7 | **6.9** | 7 | 6.8 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 97 | **105** | 110 | 100 |

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

ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PC0087732 **Received** : 11 Jun 2024
**Lab Number** : 02641130 **Tested** : 12 Jun 2024
**Unique Number** : 5798669 **Diagnosed** : 12 Jun 2024 - Kevin Marson
**Test Package** : IND 2 ( Additional Tests: KV100, VI )

*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.*


**EXTRUDEX ALUMINIUM**
411 CHRISLEA ROAD
WOODBRIDGE, ON
CA L4L 8N4
Contact: Daljeet Munday
dmunday@extrudex.com
T: (416)745-4444
F: (416)745-0925