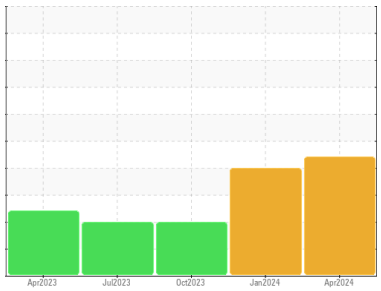
# OIL ANALYSIS REPORT

Sample Rating Trend




**WATER**

Area
**FP-010**
Machine Id
**B73645 - AUGER CONVEYOR ENGINEERING RAW MATERIAL TRANSFER KSI #8**
Component
**Auger**
Fluid
**PETRO CANADA SYNDURO SHB ISO 460 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition. There is too much water present in this sample to perform a particle count.

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

**Contamination**
There is a moderate concentration of water present in the oil. Free water present.

**Fluid Condition**
Viscosity of sample indicates oil is within ISO 320 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0907957** | WC0880537 | WC0850180 |
| Sample Date | | Client Info | | **09 Apr 2024** | 09 Jan 2024 | 08 Oct 2023 |
| 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** | SEVERE | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >150 | **60** | ▲ 113 | 8 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **0** | 2 | 0 |
| Lead | ppm | ASTM D5185m | >100 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **0** | 2 | <1 |
| Tin | ppm | ASTM D5185m | >10 | **<1** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Barium | ppm | ASTM D5185m | 5.0 | **0** | 2 | 1 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **2** | 3 | <1 |
| Magnesium | ppm | ASTM D5185m | 5.0 | **0** | <1 | 3 |
| Calcium | ppm | ASTM D5185m | 5.0 | **4** | 15 | 7 |
| Phosphorus | ppm | ASTM D5185m | 60 | **393** | 179 | 140 |
| Zinc | ppm | ASTM D5185m | 5.0 | **25** | 22 | 41 |
| Sulfur | ppm | ASTM D5185m | 1900 | **1064** | 3658 | 3306 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **7** | 9 | 4 |
| Sodium | ppm | ASTM D5185m | | **5** | 9 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **8** | 22 | 0 |
| Water | % | ASTM D6304 | >0.1 | ▲ **0.489** | ▲ 2.66 | --- |
| ppm Water | ppm | ASTM D6304 | >1000 | ▲ **4890** | ▲ 26600 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | **---** | --- | ▲ 95115 |
| Particles >6µm | | ASTM D7647 | >2500 | **---** | --- | ▲ 17137 |
| Particles >14µm | | ASTM D7647 | >320 | **---** | --- | ▲ 506 |
| Particles >21µm | | ASTM D7647 | >80 | **---** | --- | 80 |
| Particles >38µm | | ASTM D7647 | >20 | **---** | --- | 4 |
| Particles >71µm | | ASTM D7647 | >4 | **---** | --- | 3 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | **---** | --- | ▲ 24/21/16 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.3 | **0.42** | 0.96 | 0.23 |

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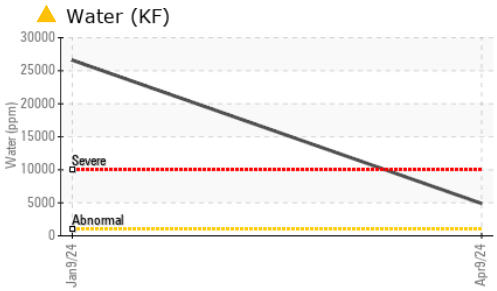
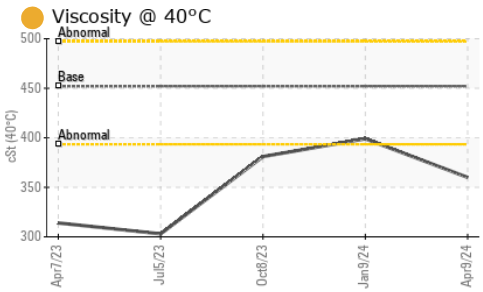
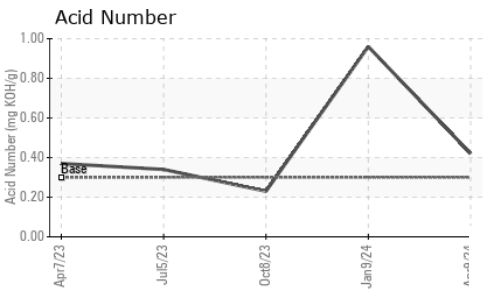


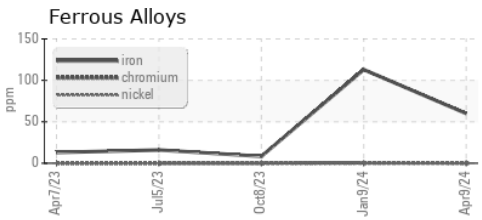



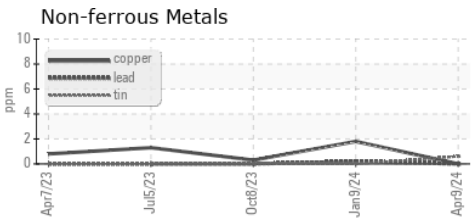

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | **HAZY** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.1 | **0.2%** | 0.2% | NEG |
| Free Water | scalar | *Visual | | **2.0** | NEG | NEG |

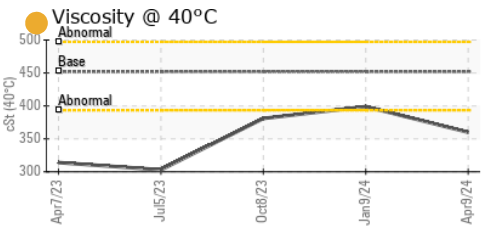
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 452 | **360** | 399 | 381 |

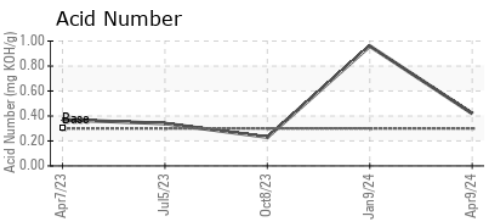
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0907957 **Received** : 16 Apr 2024
**Lab Number** : 06150314 **Tested** : 18 Apr 2024
**Unique Number** : 10980392 **Diagnosed** : 18 Apr 2024 - Don Baldridge
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

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