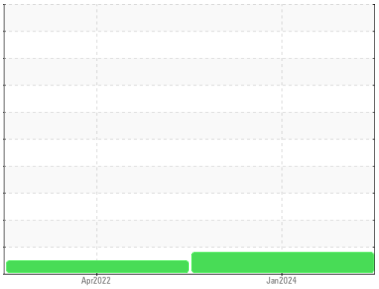
# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Machine Id
## QUINTUS QIH-60 (S/N BTI-F-005)
Component
**Hydraulic System**
Fluid
**HAYDEN Q8 ISO AW 46 (300 LTR)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

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

**Contamination**
There is a moderate amount of silt (particulates < 14 microns in size) 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 | | **WC0895785** | WC0690609 | --- |
| Sample Date | | Client Info | | **09 Jan 2024** | 07 Apr 2022 | --- |
| Machine Age | hrs | Client Info | | **0** | 500 | --- |
| Oil Age | hrs | Client Info | | **800** | 500 | --- |
| Oil Changed | | Client Info | | **Filtered** | Changed | --- |
| Sample Status | | | | **ABNORMAL** | NORMAL | --- |

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

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

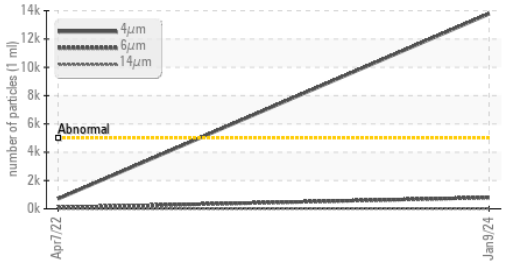
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | | **2** | 2 | --- |
| Barium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Magnesium | ppm | ASTM D5185(m) | | **42** | 37 | --- |
| Calcium | ppm | ASTM D5185(m) | | **59** | 63 | --- |
| Phosphorus | ppm | ASTM D5185(m) | | **313** | 316 | --- |
| Zinc | ppm | ASTM D5185(m) | | **384** | 392 | --- |
| Sulfur | ppm | ASTM D5185(m) | | **800** | 764 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >15 | **12** | 14 | --- |
| Sodium | ppm | ASTM D5185(m) | | **2** | 1 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **8** | 4 | --- |

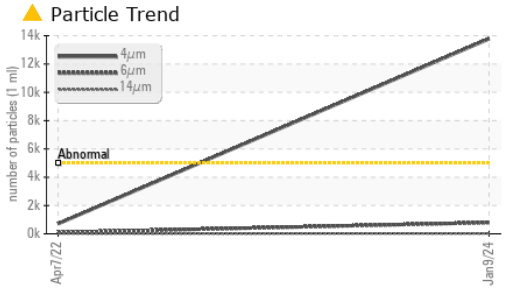
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **13779** | 706 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **796** | 97 | --- |
| Particles >14µm | | ASTM D7647 | >160 | **16** | 10 | --- |
| Particles >21µm | | ASTM D7647 | >40 | **6** | 2 | --- |
| Particles >38µm | | ASTM D7647 | >10 | **1** | 0 | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **21/17/11** | 17/14/10 | --- |

# OIL ANALYSIS REPORT

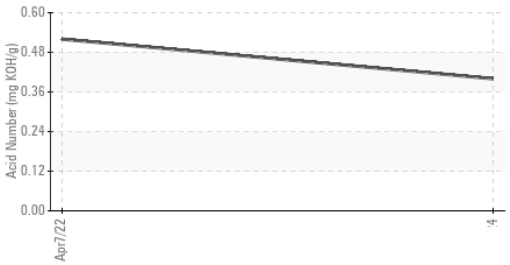
Particle Trend



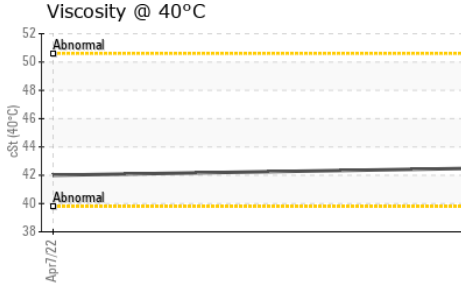

Particle Trend




Acid Number



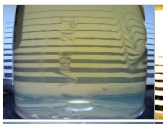
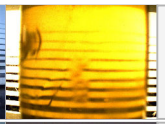

Viscosity @ 40°C




| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | | **0.40** | 0.52 | --- |

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

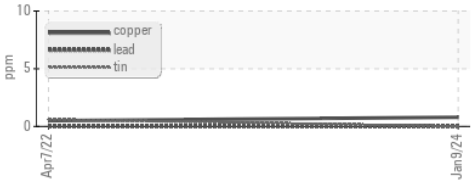
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | | **42.5** | 42.0 | --- |

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

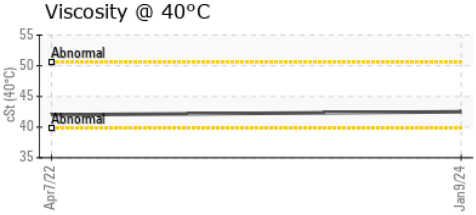
## GRAPHS

Ferrous Alloys

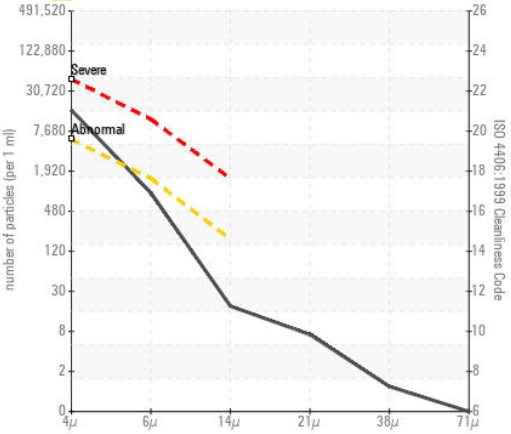

Non-ferrous Metals



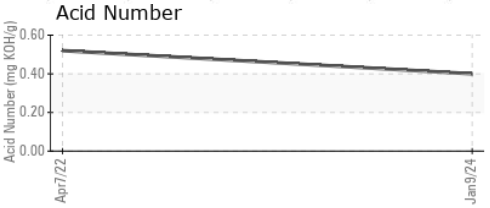

Viscosity @ 40°C




Particle Count




Acid Number




ISO 17025:2017 Accredited Laboratory

| | | | |
|---|---|---|---|
| **Laboratory** | : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 | | |
| **Sample No.** | : WC0895785 | **Recieved** | : 11 Jan 2024 |
| **Lab Number** | : 02608181 | **Diagnosed** | : 16 Jan 2024 |
| **Unique Number** | : 5709267 | **Diagnostician** | : Kevin Marson |
| **Test Package** | : IND 2 | | |

*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.*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