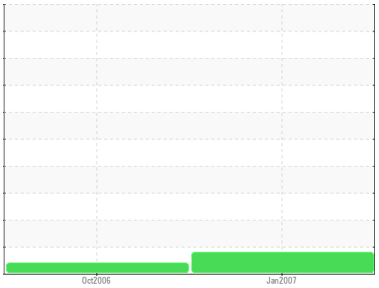
# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Area
**Hydraulics**
Machine Id
**INJECTION MOULD #65**
Component
**Hydraulic System**
Fluid
**{not provided} (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend either performing an oil change or oil filtration. We cannot recommend specific action as we have limited information with regards to reservoir capacity and/or lubricant type.

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

**Contamination**
There is a moderate amount of particulates (5 to 100 microns in size) present in the oil.

**Fluid Condition**
The condition of oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC22056071** | WC22053373 | --- |
| Sample Date | | Client Info | | **31 Jan 2007** | 24 Oct 2006 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | | **7** | 7 | --- |
| Chromium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Nickel | ppm | ASTM D5185(m) | | **<1** | 0 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| Lead | ppm | ASTM D5185(m) | | **1** | 2 | --- |
| Copper | ppm | ASTM D5185(m) | | **21** | 21 | --- |
| Tin | ppm | ASTM D5185(m) | | **<1** | 1 | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Barium | ppm | ASTM D5185(m) | | **1** | 1 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Manganese | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Magnesium | ppm | ASTM D5185(m) | | **55** | 59 | --- |
| Calcium | ppm | ASTM D5185(m) | | **90** | 91 | --- |
| Phosphorus | ppm | ASTM D5185(m) | | **557** | 524 | --- |
| Zinc | ppm | ASTM D5185(m) | | **597** | 598 | --- |
| Sulfur | ppm | ASTM D5185(m) | | **2215** | 2188 | --- |

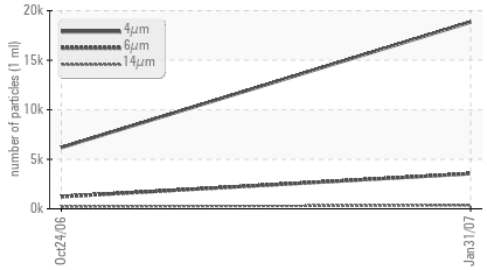
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | | **3** | 4 | --- |
| Sodium | ppm | ASTM D5185(m) | | **5** | 1 | --- |
| Potassium | ppm | ASTM D5185(m) | | **<1** | 0 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **18855** | 6184 | --- |
| Particles >6µm | | ASTM D7647 | | ▲ **3551** | 1229 | --- |
| Particles >14µm | | ASTM D7647 | | ▲ **347** | ▲ 216 | --- |
| Particles >21µm | | ASTM D7647 | | **102** | 65 | --- |
| Particles >38µm | | ASTM D7647 | | **5** | 5 | --- |
| Particles >71µm | | ASTM D7647 | | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | | ▲ **21/19/16** | ▲ 20/17/15 | --- |

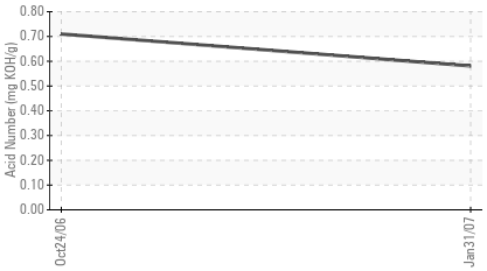
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | | **0.581** | 0.71 | --- |

# OIL ANALYSIS REPORT

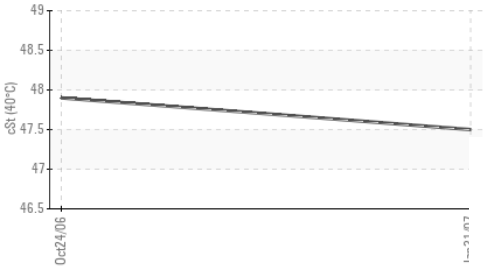
Particle Trend




Acid Number

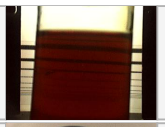
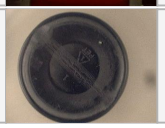



Viscosity @ 40°C



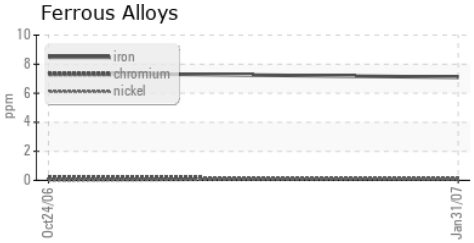

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Silt | 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* | | **NEG** | NEG | --- |
| Free Water | scalar | Visual* | | **NEG** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | | **47.5** | 47.9 | --- |

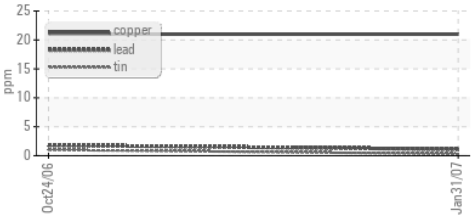
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | no image |  | no image |
| Bottom | | | no image |  | no image |

GRAPHS

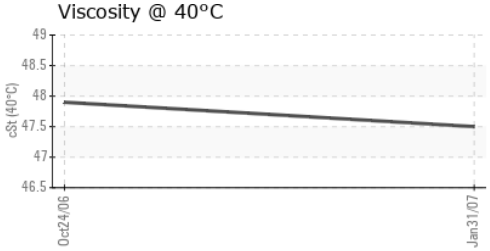
Ferrous Alloys



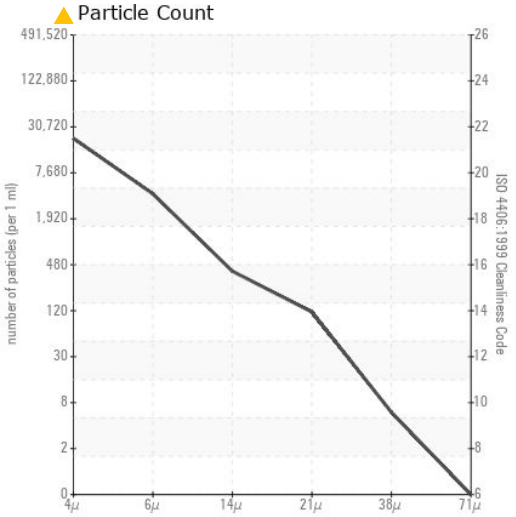

Non-ferrous Metals



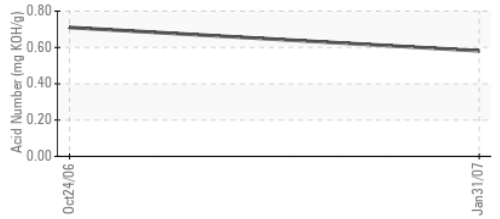

Viscosity @ 40°C




Particle Count




Acid Number




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC22056071 **Received** : 31 Jan 2007
**Lab Number** : 01359033 **Tested** : 02 Feb 2007
**Unique Number** : 2385431 **Diagnosed** :
**Test Package** : IND 2 ( Additional Tests: SCREEN, TAN Man )

*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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