

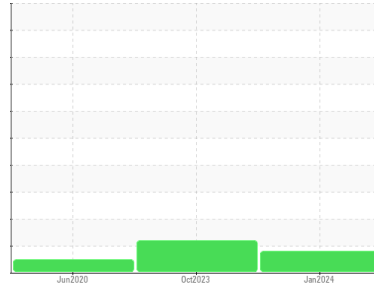


OIL ANALYSIS REPORT



Area
[02609826]
 Machine Id
komatsu PC138 ENTLV56
 Component
Hydraulic System
 Fluid
SINTO MULTIGRADE BIO (--- GAL)

Sample Rating Trend



ADDITIVES



DIAGNOSIS

▲ Recommendation

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

Wear

Les taux d'usure de tous les composants sont normaux.

Contamination

Il n'y a pas d'huile minérale présente dans le fluide. Il n'y a aucune indication de contamination dans le composant (non confirmée).

▲ Fluid Condition

L'état de l'huile est acceptable pour la durée de service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | PP | PP | PP |
| Sample Date | Client Info | | 17 Jan 2024 | 25 Oct 2023 | 16 Jun 2020 |
| Machine Age | hrs | Client Info | 9857 | 9830 | 6980 |
| Oil Age | hrs | Client Info | 918 | 2300 | 3 |
| Oil Changed | Client Info | | N/A | N/A | Not Changd |
| Sample Status | | | ATTENTION | ABNORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) >20 | 0 | --- | 13 |
| Chromium | ppm | ASTM D5185(m) >10 | 0 | --- | <1 |
| Nickel | ppm | ASTM D5185(m) >10 | <1 | --- | 0 |
| Titanium | ppm | ASTM D5185(m) | 0 | --- | <1 |
| Silver | ppm | ASTM D5185(m) | 0 | --- | 0 |
| Aluminum | ppm | ASTM D5185(m) >10 | <1 | --- | <1 |
| Lead | ppm | ASTM D5185(m) >10 | 0 | --- | 2 |
| Copper | ppm | ASTM D5185(m) >75 | 0 | --- | 3 |
| Tin | ppm | ASTM D5185(m) >10 | 0 | --- | <1 |
| Antimony | ppm | ASTM D5185(m) | 0 | --- | <1 |
| 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) 1 | <1 | --- | 4 |
| Barium | ppm | ASTM D5185(m) 0 | 0 | --- | 0 |
| Molybdenum | ppm | ASTM D5185(m) 0 | 0 | --- | <1 |
| Manganese | ppm | ASTM D5185(m) 0 | 0 | --- | <1 |
| Magnesium | ppm | ASTM D5185(m) 0 | 8 | --- | 3 |
| Calcium | ppm | ASTM D5185(m) 8 | ▲ 195 | --- | 35 |
| Phosphorus | ppm | ASTM D5185(m) 1325 | 1230 | --- | 1234 |
| Zinc | ppm | ASTM D5185(m) 6 | ▲ 66 | --- | 15 |
| Sulfur | ppm | ASTM D5185(m) 2400 | 2485 | --- | 2432 |
| Lithium | ppm | ASTM D5185(m) | <1 | --- | <1 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >20 | 4 | --- | 4 |
| Sodium | ppm | ASTM D5185(m) | <1 | --- | <1 |
| Potassium | ppm | ASTM D5185(m) >20 | <1 | --- | <1 |

INFRA-RED

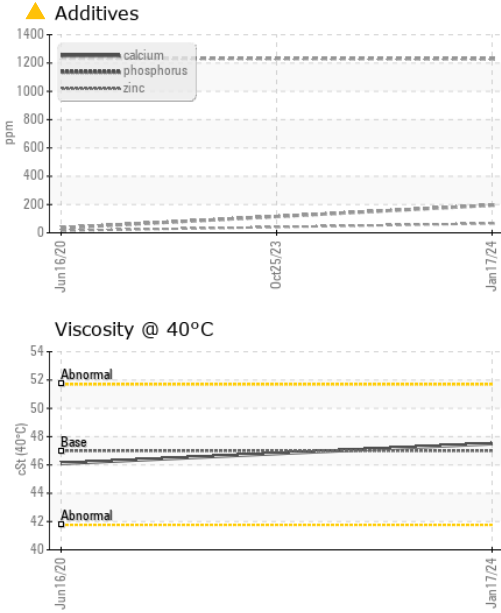
| | method | limit/base | current | history1 | history2 |
|---------------------|----------|-------------|--------------|----------|----------|
| Soot % | % | ASTM D7844* | 0 | 0 | --- |
| Nitration | Abs/cm | ASTM D7624* | 4.0 | 5.7 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | 150.8 | 154.1 | --- |
| Mineral Oil Content | % | ASTM D7418* | 0.0 | ▲ 5.2 | 2.6 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-------------|--------------|----------|----------|
| Oxidation | Abs/.1mm | ASTM D7414* | 160.6 | 145.1 | --- |



OIL ANALYSIS REPORT

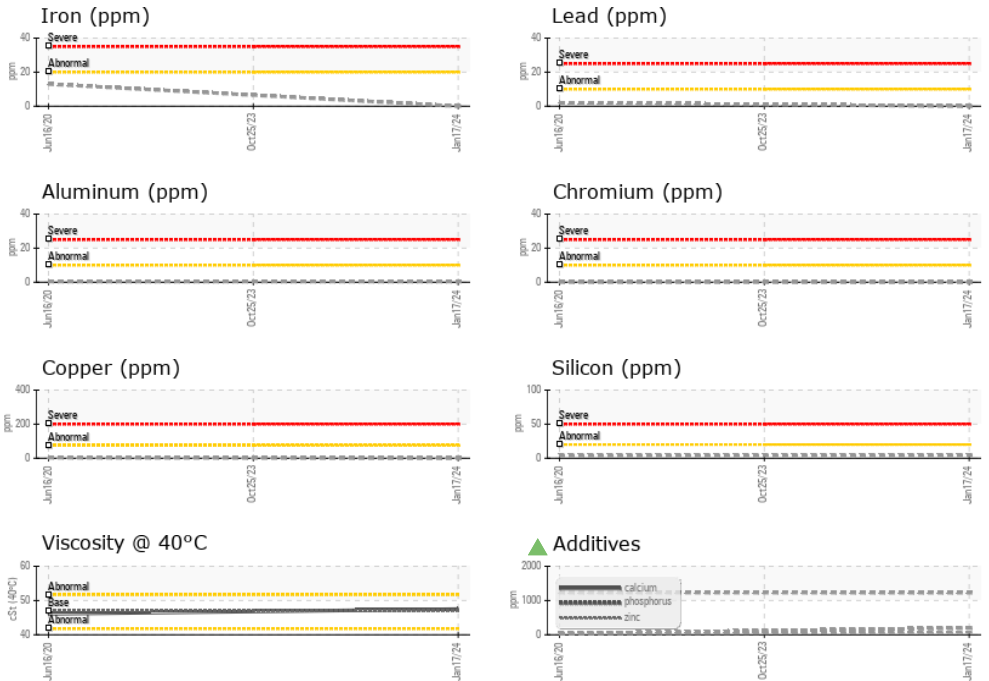


| PROPERTY | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | 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* | >0.1 | --- | NEG |
| Free Water | scalar | Visual* | --- | --- | NEG |

| PROPERTY | method | limit/base | current | history1 | history2 | |
|------------------|--------|---------------|---------|----------|----------|------|
| FLUID PROPERTIES | | | | | | |
| Visc @ 40°C | cSt | ASTM D7279(m) | 47.0 | 47.5 | --- | 46.1 |

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP **Received** : 18 Jan 2024
Lab Number : 02609827 **Diagnosed** : 22 Jan 2024
Unique Number : 5710913 **Diagnostician** : Bill Quesnel
Test Package : MOB 1 (Additional Tests: FT-IR, Mineral Oil Content)

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.

SINTO INC
 3750, 14 AVE WEST
 SAINT-GEORGES DE BEAUCES, QC
 CA G5Y 8E3
 Contact: Jimmie Roy
 j.roy@sinto.ca
 T: (418)227-6442
 F: (418)228-5592



MINERAL OIL CONTENT REPORT

PASS



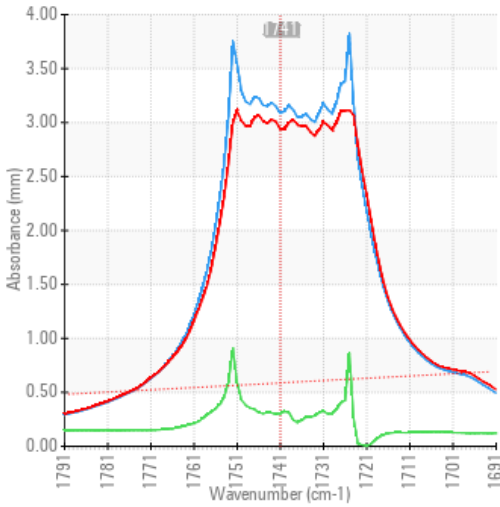
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 Fluid
SINTO MULTIGRADE BIO (--- GAL)



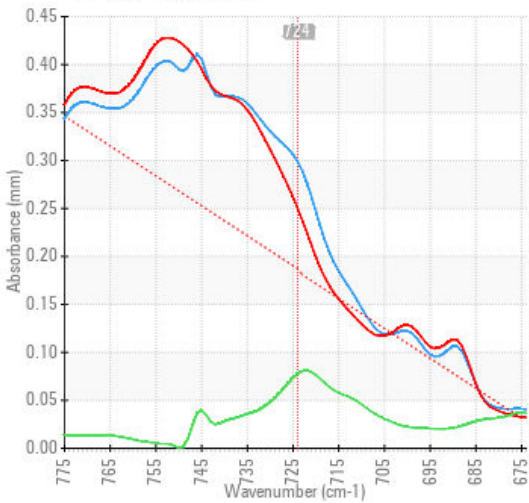
SPECTRAL ANALYSIS

| | | method | limit/base | current | history1 | history2 |
|---------------------|-----|---------------|------------|---------|----------|----------|
| Zinc | ppm | ASTM D5185(m) | 6 | ▲ 66 | --- | 15 |
| Mineral Oil Content | % | ASTM D7418* | <5.0% | ● 0.0 | ▲ 5.2 | 2.6 |

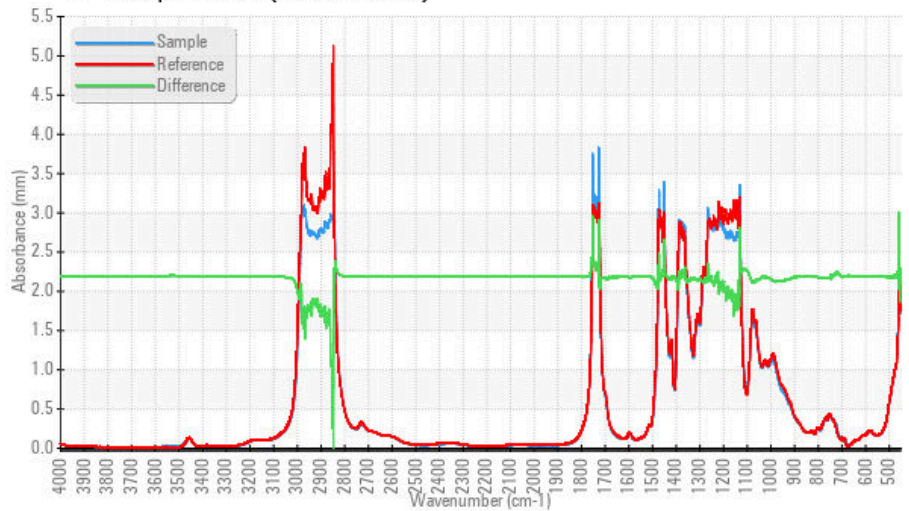
FT-IR - Esters I



FT-IR - Esters II



FT-IR Spectrum (Absorbance)



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Unique Number : 5710913
Test Package : MOB 1 (Additional Tests: FT-IR, Mineral Oil Content)

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