

Machine Id
123001

Component
Hydraulic System

Fluid
HYDRAULIC OIL FG ISO 46 (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | PC0070437 | PC0070188 | PC0070229 |
| Sample Date | Client Info | | | 10 Aug 2023 | 08 Jun 2023 | 05 Apr 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 | | | | NORMAL | NORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) | >20 | 2 | 2 | 2 |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >20 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | <1 | <1 | 0 |
| Lead | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185(m) | >20 | <1 | 0 | 0 |
| Tin | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | 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 |

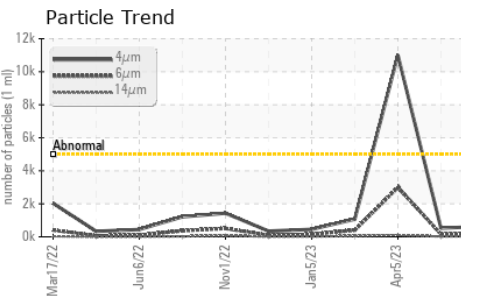
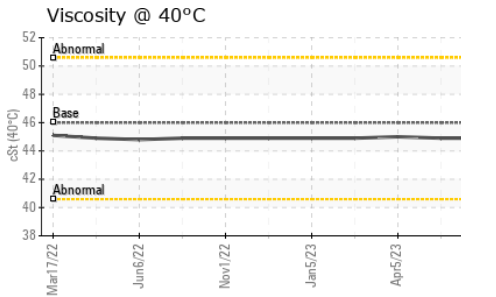
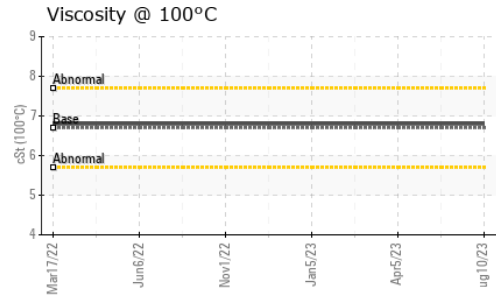
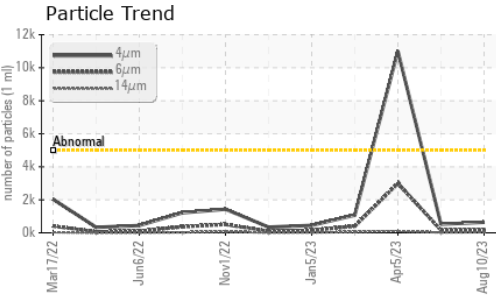
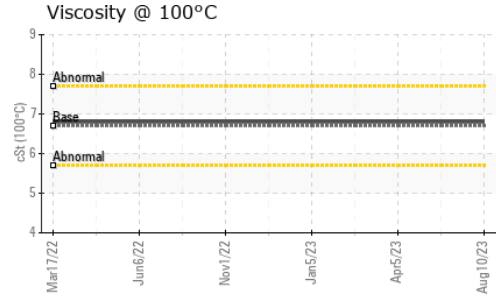
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|---------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) | 5 | <1 | <1 | 0 |
| Barium | ppm | ASTM D5185(m) | 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 5 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 5 | 0 | 0 | <1 |
| Calcium | ppm | ASTM D5185(m) | 12 | <1 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185(m) | 400 | 463 | 473 | 462 |
| Zinc | ppm | ASTM D5185(m) | 12 | 2 | <1 | 1 |
| Sulfur | ppm | ASTM D5185(m) | 650 | 519 | 561 | 547 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|---------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) | >15 | <1 | <1 | <1 |
| Sodium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | <1 | 0 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|------------|
| Particles >4µm | | ASTM D7647 | >5000 | 637 | 521 | ▲ 11006 |
| Particles >6µm | | ASTM D7647 | >1300 | 185 | 168 | ▲ 2988 |
| Particles >14µm | | ASTM D7647 | >160 | 35 | 18 | 105 |
| Particles >21µm | | ASTM D7647 | >40 | 15 | 6 | 13 |
| Particles >38µm | | ASTM D7647 | >10 | 1 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 16/15/12 | 16/15/11 | ▲ 21/19/14 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.50 | 0.05 | 0.06 | 0.08 |

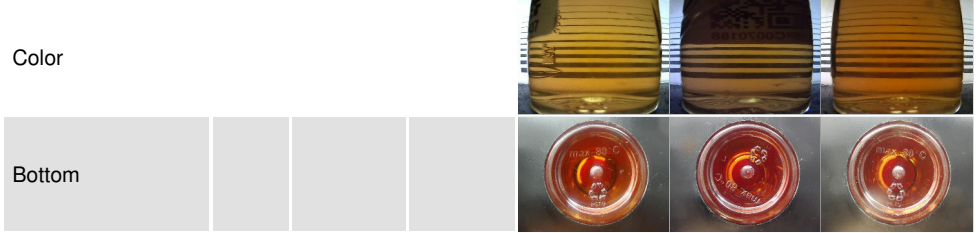
OIL ANALYSIS REPORT



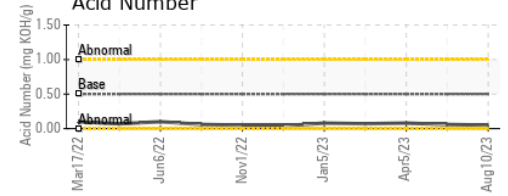
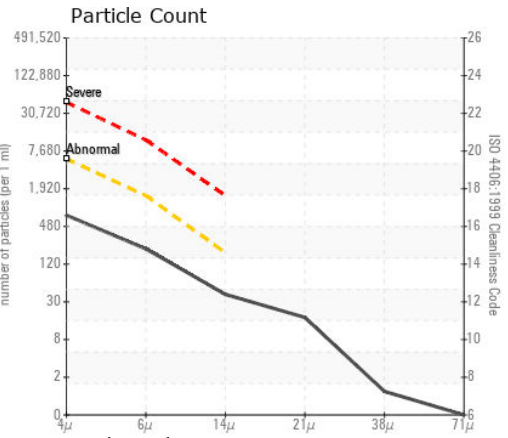
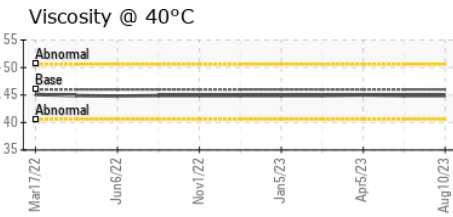
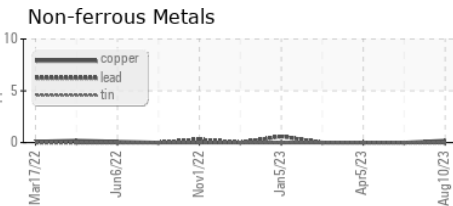
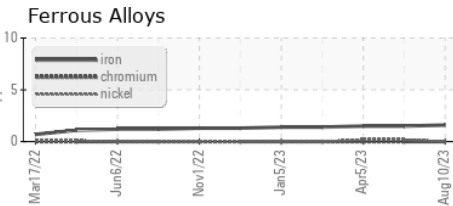
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | 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) | 46 | 44.9 | 45.0 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 6.7 | 6.8 | 6.8 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 97 | 105 | 105 |

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



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0070437 **Received** : 11 Aug 2023
Lab Number : 02575380 **Diagnosed** : 14 Aug 2023
Unique Number : 5620431 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: KV100, TAN Man, VI)

Domtar Inc.
 Box 3001, 1 Duke Street
 Dryden, ON
 CA P8N 2Z7
 Contact: Yvon St. Laurent
 yvon.stlaurent@domtar.com
 T: (807)223-9838
 F: (807)223-9176

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.