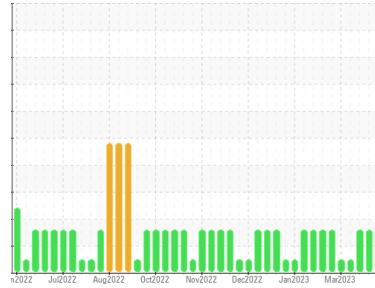




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
GZJ00403
Component
Biogas Engine
Fluid
PETRO CANADA SENTRON CG 40 (--- GAL)

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Total oil added 89 gallons)

Wear

All component wear rates are normal.

▲ Contamination

Fuel content negligible. Elemental level of silicon (Si) above normal.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. 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 | | WC0699074 | WC0699067 | WC0699020 |
| Sample Date | Client Info | | 03 Apr 2023 | 27 Mar 2023 | 20 Mar 2023 |
| Machine Age | hrs | Client Info | 113379 | 113211 | 113046 |
| Oil Age | hrs | Client Info | 761 | 593 | 428 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |

CONTAMINATION

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

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|----------|--------|-------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185m | >45 | 10 | 8 | 5 |
| Chromium | ppm | ASTM D5185m | >2 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >5 | 1 | 1 | 0 |
| Copper | ppm | ASTM D5185m | >14 | 2 | 2 | 1 |
| Tin | ppm | ASTM D5185m | >13 | 5 | 4 | 1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|-------------|---------|--------------|----------|------|
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 1 | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 2 | 2 | 1 | 1 |
| Manganese | ppm | ASTM D5185m | 1 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 9 | 19 | 16 | 13 |
| Calcium | ppm | ASTM D5185m | 2712 | 3054 | 2898 | 2685 |
| Phosphorus | ppm | ASTM D5185m | 292 | 302 | 279 | 249 |
| Zinc | ppm | ASTM D5185m | 342 | 377 | 352 | 317 |
| Sulfur | ppm | ASTM D5185m | 2575 | 4106 | 3938 | 3588 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|-------------|---------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m | >200 | ▲ 369 | ▲ 284 | ▲ 205 |
| Sodium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| Fuel | % | ASTM D3524 | >4.0 | 0.3 | 0.4 | 0.3 |

INFRA-RED

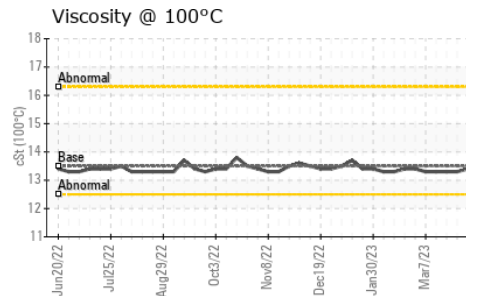
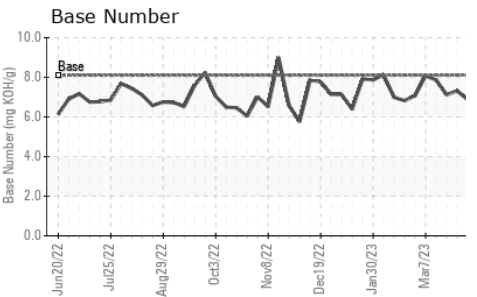
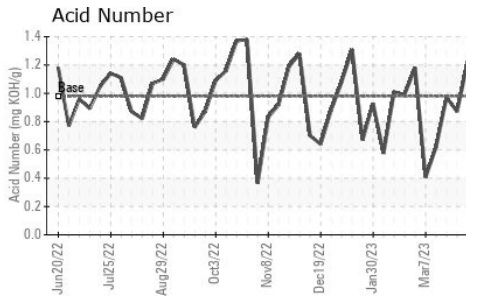
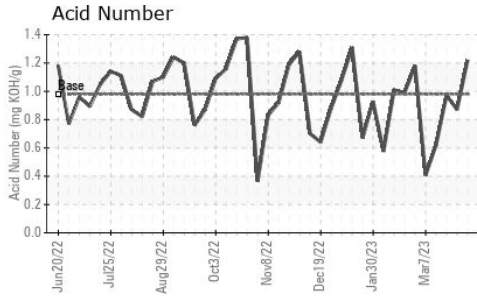
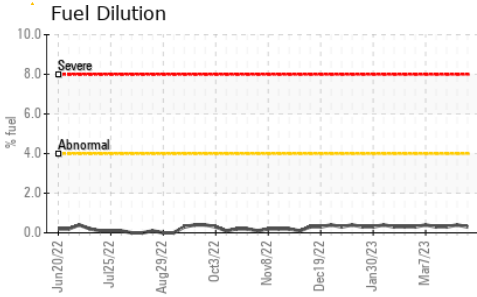
| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | *ASTM D7844 | | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 5.5 | 5.2 | 5.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.7 | 19.7 | 18.4 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 | |
|------------------|----------|-------------|---------|-------------|----------|------|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 11.5 | 10.7 | 9.8 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.98 | 1.22 | 0.87 | 0.97 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.1 | 6.88 | 7.31 | 7.12 |



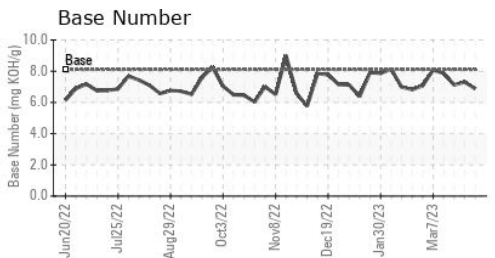
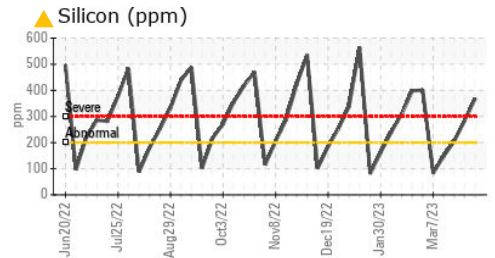
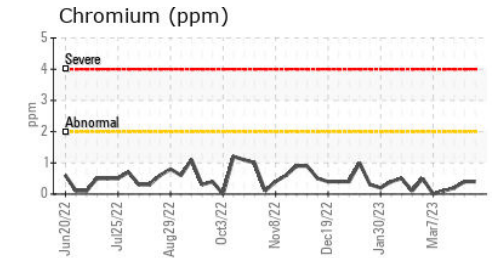
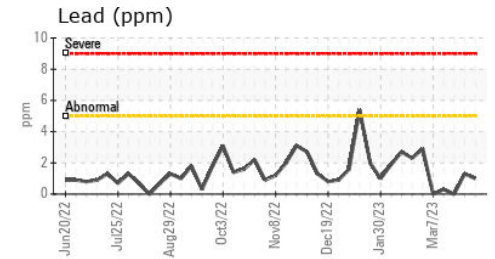
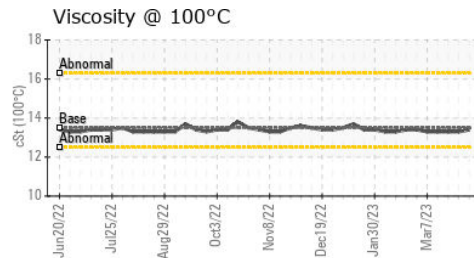
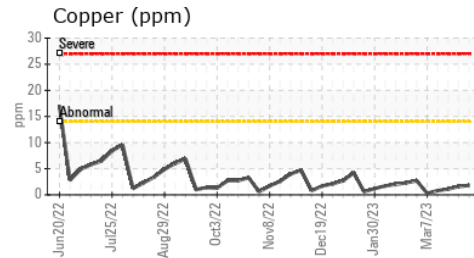
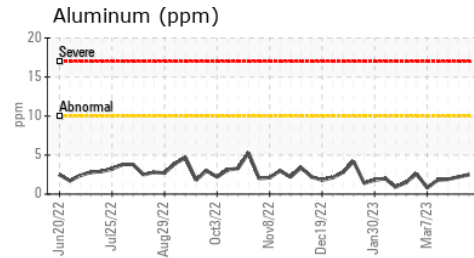
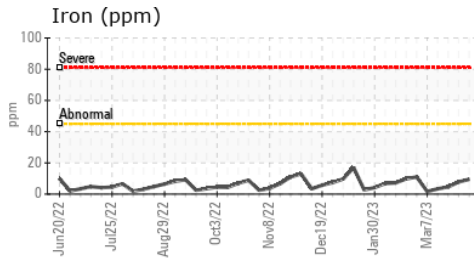
OIL ANALYSIS REPORT



| 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 | >0.1 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 13.5 | 13.4 | 13.3 |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0699074
 Lab Number : 05813530
 Unique Number : 10416322
 Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 06 Apr 2023
 Tested : 11 Apr 2023
 Diagnosed : 11 Apr 2023 - Don Baldrige

FINLEY BIOENERGY
 74265 Bombing Range Road
 Boardman, OR
 US 97818
 Contact: Blain Middleton
 bmiddleton@archaea.energy
 T: (541)481-3232

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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