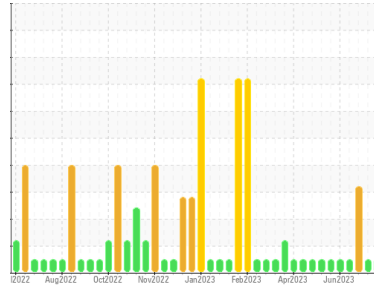




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
Grand Blanc CAT 5 GBLM05BE
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 6500 LFG GAS ENGINE OIL (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: 400hr Oil Sample)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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 | | WC0825014 | WC0825002 | WC0824952 |
| Sample Date | Client Info | | 19 Jul 2023 | 08 Jul 2023 | 22 Jun 2023 |
| Machine Age | hrs | Client Info | 53800 | 53541 | 53197 |
| Oil Age | hrs | Client Info | 451 | 211 | 842 |
| Oil Changed | Client Info | | Not Chngd | Changed | Not Chngd |
| Sample Status | | | NORMAL | NORMAL | ABNORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Glycol | WC Method | | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >15 | 6 | 3 | 10 |
| Chromium | ppm | ASTM D5185m >4 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m >2 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >6 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185m >9 | 5 | 2 | ▲ 10 |
| Copper | ppm | ASTM D5185m >14 | 1 | <1 | 3 |
| Tin | ppm | ASTM D5185m >4 | 2 | 1 | ▲ 4 |
| 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 | 1 | 2 | 9 |
| Barium | ppm | ASTM D5185m | 2 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 4 | 4 | 4 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 13 | 14 | 20 |
| Calcium | ppm | ASTM D5185m | 2017 | 1820 | 1963 |
| Phosphorus | ppm | ASTM D5185m | 288 | 270 | 289 |
| Zinc | ppm | ASTM D5185m | 367 | 328 | 388 |
| Sulfur | ppm | ASTM D5185m | 3458 | 2913 | 3916 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|------------|----------|----------|
| Silicon | ppm | ASTM D5185m >181 | 143 | 79 | ▲ 202 |
| Sodium | ppm | ASTM D5185m | 0 | 5 | 0 |
| Potassium | ppm | ASTM D5185m >20 | 1 | 2 | 2 |

INFRA-RED

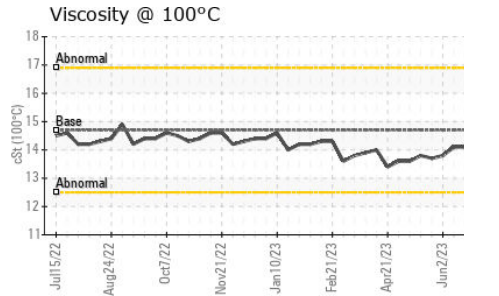
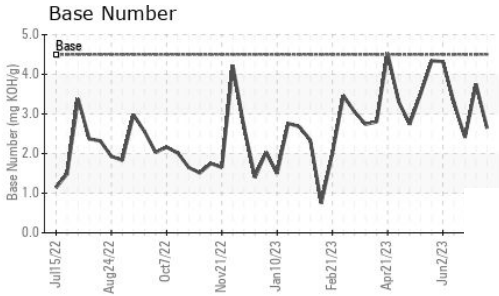
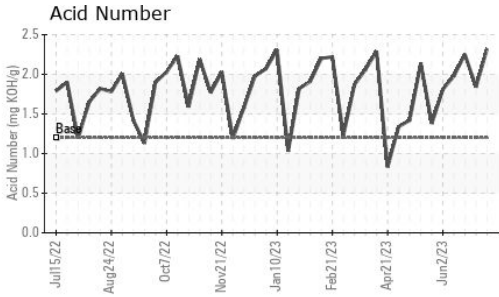
| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 >20 | 6.4 | 6.3 | 6.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 24.3 | 21.1 | 26.9 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 15.9 | 12.8 | 17.5 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 1.2 | 2.32 | 1.84 | 2.25 |
| Base Number (BN) | mg KOH/g | ASTM D2896 4.5 | 2.64 | 3.75 | 2.41 |



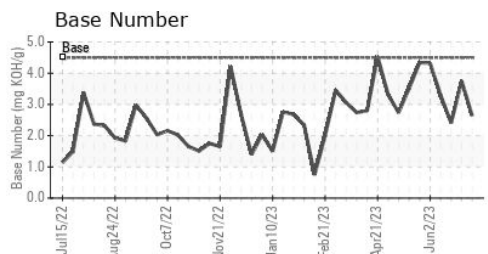
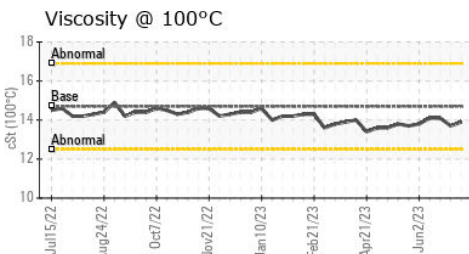
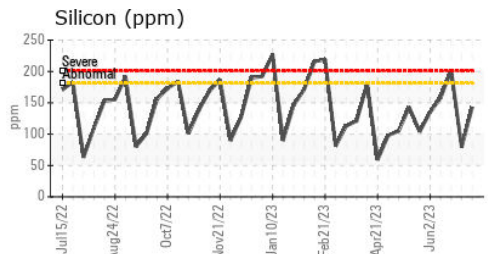
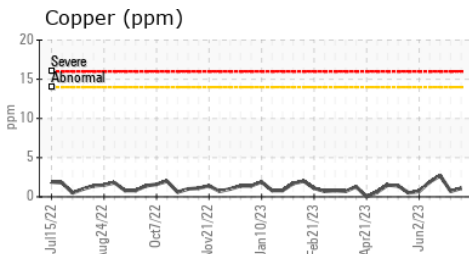
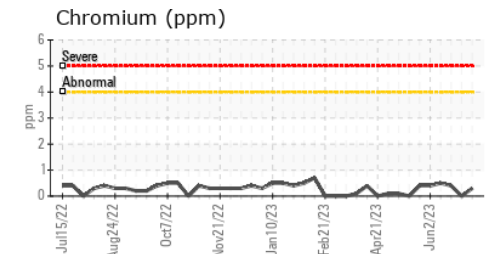
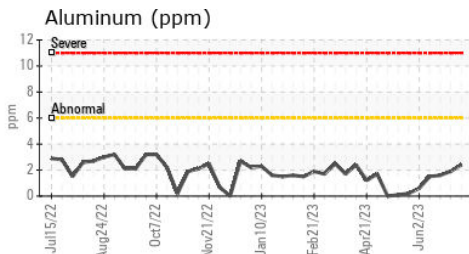
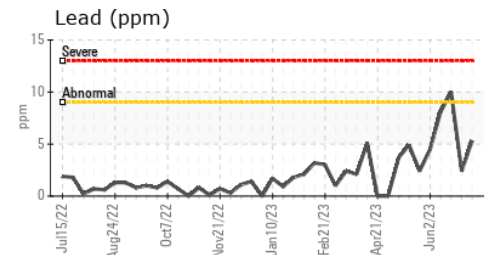
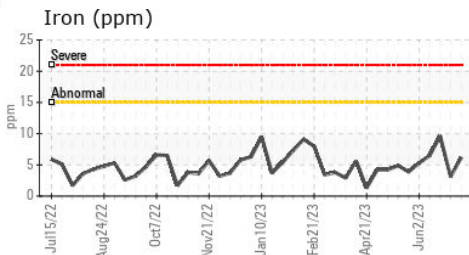
OIL ANALYSIS REPORT



| 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 | 14.7 | 13.9 | 13.7 | 14.1 |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0825014 **Received** : 21 Jul 2023
Lab Number : 05904505 **Diagnosed** : 25 Jul 2023
Unique Number : 10565861 **Diagnostician** : Angela Borella
Test Package : MOB 2

EDL NA Recips-Grand Blanc
 Grand Blanc Powerstation, 2361 West Grand Blanc Road
 Grand Blanc, MI
 US 48439
 Contact: Tony Saint Marie
 tony.saintmarie@edlenergy.com
 T:
 F:

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)