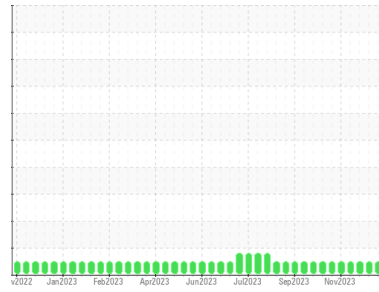




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CAPTIS ENERGY ENG 1
 Component
Natural Gas Engine
 Fluid
MAHLER Q8 Mahler G8 SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 | | | WC0914337 | WC0914342 | WC0835565 |
| Sample Date | Client Info | | | 15 Apr 2024 | 08 Apr 2024 | 06 Dec 2023 |
| Machine Age | hrs | Client Info | | 20715 | 20560 | 17977 |
| Oil Age | hrs | Client Info | | 107 | 4540 | 1945 |
| Oil Changed | Client Info | | | Changed | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >.2 | NEG | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | 4 | 5 | 0 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >15 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >20 | 1 | 2 | 0 |
| Copper | ppm | ASTM D5185m | >15 | 2 | 1 | 0 |
| Tin | ppm | ASTM D5185m | >5 | <1 | 1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 3 | 0 | <1 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 4 | 3 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 10 | 10 | 12 |
| Calcium | ppm | ASTM D5185m | | 2342 | 2531 | 2301 |
| Phosphorus | ppm | ASTM D5185m | | 426 | 477 | 456 |
| Zinc | ppm | ASTM D5185m | | 484 | 521 | 549 |
| Sulfur | ppm | ASTM D5185m | | 2529 | 2638 | 2451 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m | >200 | 3 | 3 | 5 |
| Sodium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | 0 |

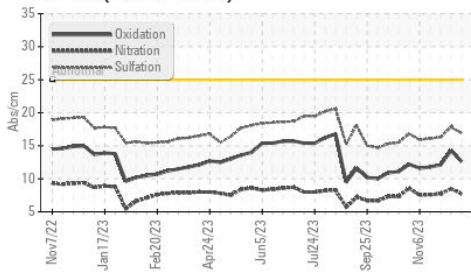
| INFRA-RED | | method | limit/base | current | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 | >2 | 0 | 0 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.7 | 8.5 | 7.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >20 | 16.9 | 17.8 | 16.3 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-------------|------------|--------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 | >20 | 12.6 | 14.3 | 12.1 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 1.774 | 0.90 | 0.90 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.0 | 7.03 | 6.12 | 6.72 |

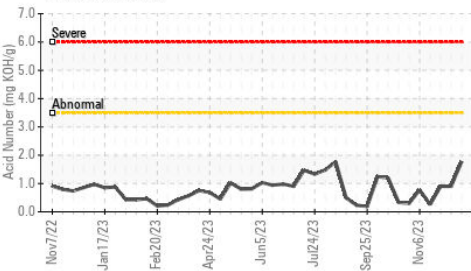


OIL ANALYSIS REPORT

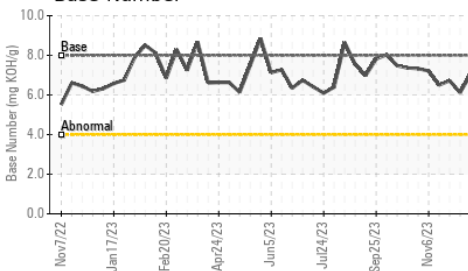
FT-IR (Direct Trend)



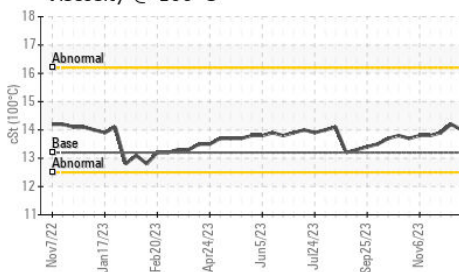
Acid Number



Base Number



Viscosity @ 100°C

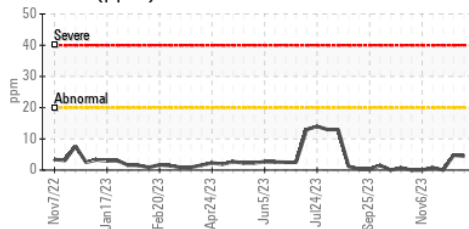


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 | >.2 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

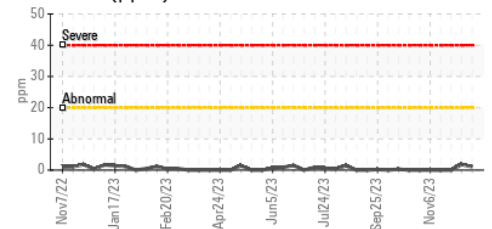
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|-------------|----------|------|
| Visc @ 100°C | cSt | ASTM D445 | 13.2 | 14.0 | 14.2 | 13.9 |

GRAPHS

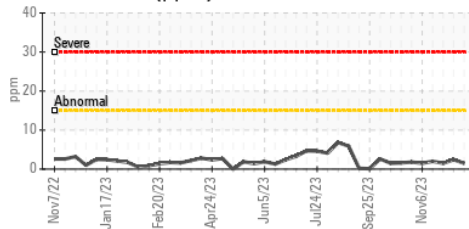
Iron (ppm)



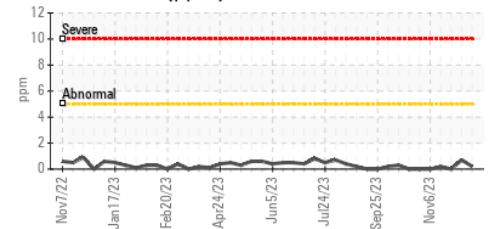
Lead (ppm)



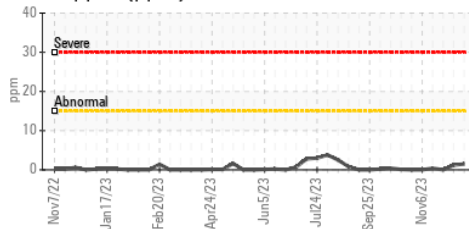
Aluminum (ppm)



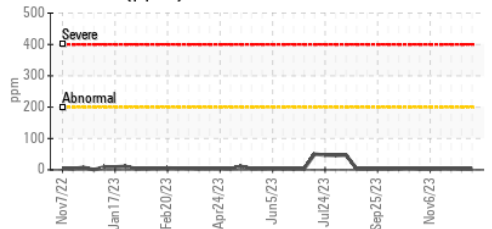
Chromium (ppm)



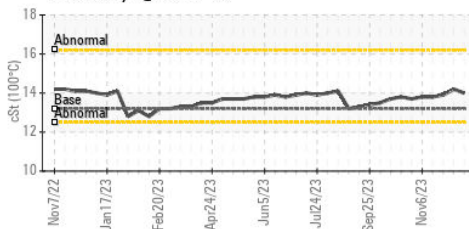
Copper (ppm)



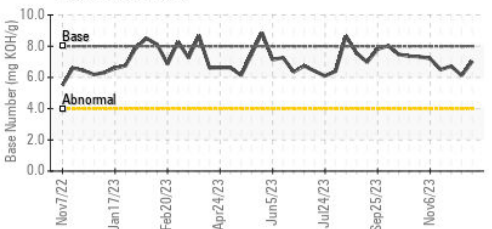
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0914337
 Lab Number : 06155249
 Unique Number : 10990672
 Test Package : MOB 2

Received : 19 Apr 2024
 Tested : 22 Apr 2024
 Diagnosed : 22 Apr 2024 - Wes Davis

CUBE DISTRICT ENERGY
 1000 WINDWARD CONCOURSE SUITE 150
 ALPHARETTA, GA
 US 30005
 Contact: ED LEWIS
 ed.lewis@cubedistrictenergy.com

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)

T:
F: