

OIL ANALYSIS REPORT

Sample Rating Trend

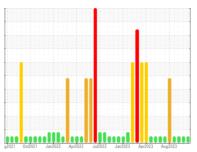
NORMAL



COVM06BE (S/N GZJ00183)

Component
Biogas Engine

CHEVRON HDAX 6500 LFG GAS ENGINE OIL (141 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

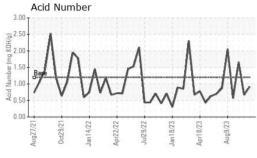
Fluid Condition

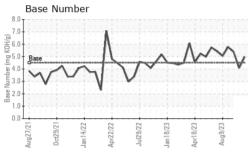
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

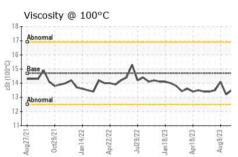
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
|---|--|---|---|---|--|---|
| Sample Number | | Client Info | | WC0816136 | WC0816138 | WC0816134 |
| Sample Date | | Client Info | | 21 Sep 2023 | 15 Sep 2023 | 06 Sep 2023 |
| Machine Age | hrs | Client Info | | 127278 | 127218 | 127093 |
| Oil Age | hrs | Client Info | | 433 | 373 | 227 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Filtered |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINATION | V | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Glycol | | WC Method | 74.0 | NEG | NEG | NEG |
| , | | | | | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >15 | 2 | 2 | 2 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >6 | 4 | 2 | 4 |
| Lead | ppm | ASTM D5185m | >9 | 2 | 1 | 2 |
| Copper | ppm | ASTM D5185m | >6 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >4 | 2 | 1 | 1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| ADDITIVES | | | Para Stiller and a | | 111 | la i a ta uu . O |
| RODITIVEO | | method | | | | history2 |
| Boron | ppm | ASTM D5185m | limit/base | current 6 | history1 6 | 6 |
| | | | ilmit/base | | | |
| Boron Barium | ppm | ASTM D5185m | limit/base | 6 | 6 | 6 |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m | Ilmit/base | 6 2 | 6 | 6 |
| Boron Barium | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | IIMII/base | 6 2 2 | 6 0 4 | 6 0 5 |
| Boron Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | IImit/base | 6 2 2 <1 | 6 0 4 <1 | 6 0 5 <1 29 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | IIMII//base | 6 2 2 <1 32 | 6 0 4 <1 31 | 6 0 5 <1 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | Ilmitroase | 6 2 2 <1 32 1785 | 6 0 4 <1 31 1885 | 6 0 5 <1 29 1765 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | Ilmitroase | 6 2 2 <1 32 1785 284 | 6 0 4 <1 31 1885 294 | 6 0 5 <1 29 1765 277 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 6 2 2 <1 32 1785 284 368 | 6 0 4 <1 31 1885 294 356 | 6 0 5 <1 29 1765 277 353 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 6 2 2 <1 32 1785 284 368 2062 | 6 0 4 <1 31 1885 294 356 2071 | 6 0 5 <1 29 1765 277 353 1972 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | limit/base | 6 2 2 <1 32 1785 284 368 2062 current | 6 0 4 <1 31 1885 294 356 2071 history1 | 6 0 5 <1 29 1765 277 353 1972 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | limit/base >181 | 6 2 2 <1 32 1785 284 368 2062 current | 6 0 4 <1 31 1885 294 356 2071 history1 | 6 0 5 <1 29 1765 277 353 1972 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | limit/base >181 | 6 2 2 <1 32 1785 284 368 2062 current 122 0 | 6 0 4 <1 31 1885 294 356 2071 history1 | 6 0 5 <1 29 1765 277 353 1972 history2 99 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | limit/base >181 >20 | 6 2 2 <1 32 1785 284 368 2062 current 122 0 1 | 6 0 4 <1 31 1885 294 356 2071 history1 112 0 3 | 6 0 5 <1 29 1765 277 353 1972 history2 99 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m | limit/base >181 >20 limit/base | 6 2 2 <1 32 1785 284 368 2062 current 122 0 1 current 0 | 6 0 4 <1 31 1885 294 356 2071 history1 112 0 3 history1 0.1 | 6 0 5 <1 29 1765 277 353 1972 history2 99 0 1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base >181 >20 limit/base | 6 2 2 2 <1 32 1785 284 368 2062 current 122 0 1 current | 6 0 4 <1 31 1885 294 356 2071 history1 112 0 3 history1 | 6 0 5 <1 29 1765 277 353 1972 history2 99 0 1 history2 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base >181 >20 limit/base >20 | 6 2 2 <1 32 1785 284 368 2062 current 122 0 1 current 0 5.8 | 6 0 4 <1 31 1885 294 356 2071 history1 112 0 3 history1 0.1 5.6 | 6 0 5 <1 29 1765 277 353 1972 history2 99 0 1 history2 0 6.0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method | limit/base >181 >20 limit/base >20 >30 limit/base | 6 2 2 <1 32 1785 284 368 2062 current 122 0 1 current 0 5.8 17.1 current | 6 0 4 <1 31 1885 294 356 2071 history1 112 0 3 history1 0.1 5.6 16.7 history1 | 6 0 5 <1 29 1765 277 353 1972 history2 99 0 1 history2 0 6.0 16.1 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method *ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method *ASTM D7414 | limit/base >181 >20 limit/base >20 >30 limit/base >25 | 6 2 2 2 <1 32 1785 284 368 2062 current 122 0 1 current 0 5.8 17.1 current 10.5 | 6 0 4 <1 31 1885 294 356 2071 history1 112 0 3 history1 0.1 5.6 16.7 history1 10.0 | 6 0 5 <1 29 1765 277 353 1972 history2 99 0 1 history2 0 6.0 16.1 history2 9.5 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m method *ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method *ASTM D7414 | limit/base >181 >20 limit/base >20 >30 limit/base | 6 2 2 <1 32 1785 284 368 2062 current 122 0 1 current 0 5.8 17.1 current | 6 0 4 <1 31 1885 294 356 2071 history1 112 0 3 history1 0.1 5.6 16.7 history1 | 6 0 5 <1 29 1765 277 353 1972 history2 99 0 1 history2 0 6.0 16.1 history2 |



OIL ANALYSIS REPORT





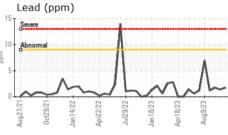


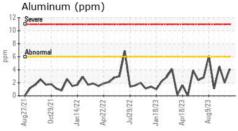
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

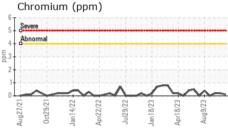
| FLUID PROPER | THES | method ilmit/base | | | nistory i | nistory2 |
|--------------|------|-------------------|------|------|-----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 14.7 | 13.6 | 13.5 | 13.5 |

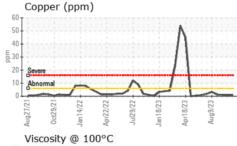
| Iroi 50 | n (ppi | m) | | | | | | |
|------------|----------|----------|----------|----------|----------|----------|---------|--|
| 40 | | | | | | | | |
| Seve | re | | | | 1 | 1 | | |
| 10- | ~ | ~^ | | ^ |] | 4 | 1 | |
| Aug27/21 | 0ct29/21 | Jan14/22 | Apr22/22 | Jul29/22 | Jan18/23 | Apr18/23 | Aug9/23 | |
| | | | | | | | | |

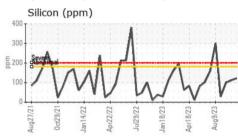
GRAPHS

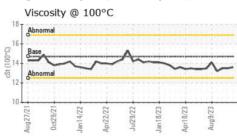


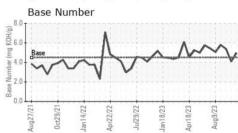
















Certificate L2367

Report Id: ENESANTX [WUSCAR] 05960767 (Generated: 09/27/2023 21:39:08) Rev: 1

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 2

: WC0816136 : 05960767 : 10661980

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 25 Sep 2023 : 27 Sep 2023 Diagnostician : Don Baldridge

EDL NA Recips-Covel COVEL GARDENS POWER STATION, 8611 COVEL ROAD

SAN ANTONIO, TX US 78252

Contact: ARIEL CARRION ariel.carrion@edlenergy.com T:

* - 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)

F: