



| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Area
EILEEN BIGELOW
Machine Id
[EILEEN BIGELOW] 002 588445-2
Component
Center Main Engine
Fluid
CHEVRON DELO 710 LE (300 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW06055521 | MW05980639 | MW05955997 |
| Sample Date | | Client Info | | 01 Dec 2023 | 01 Oct 2023 | 01 Aug 2023 |
| Machine Age | hrs | Client Info | | 4257 | 2959 | 2250 |
| Oil Age | hrs | Client Info | | 4257 | 2959 | 2250 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|------|------|
| Iron | ppm | ASTM D5185m | >75 | 21 | 23 | 24 |
| Chromium | ppm | ASTM D5185m | >8 | 2 | 2 | 2 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >15 | 2 | 2 | <1 |
| Lead | ppm | ASTM D5185m | >18 | 7 | 10 | 9 |
| Copper | ppm | ASTM D5185m | >80 | 21 | 17 | 25 |
| Tin | ppm | ASTM D5185m | >14 | 10 | 11 | 10 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

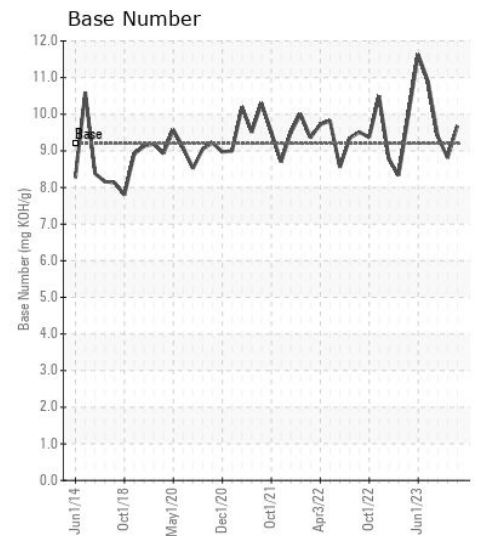
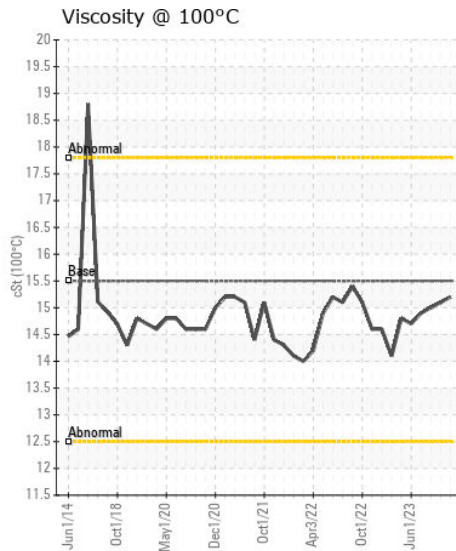
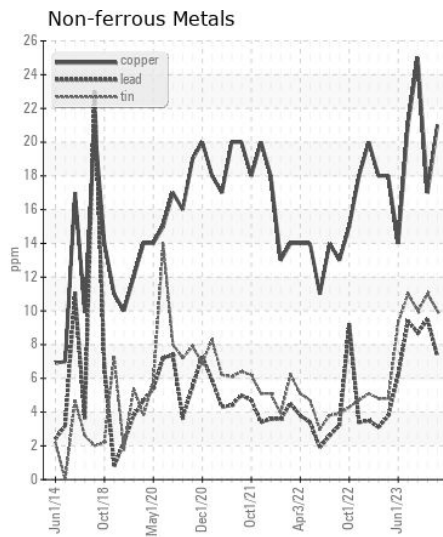
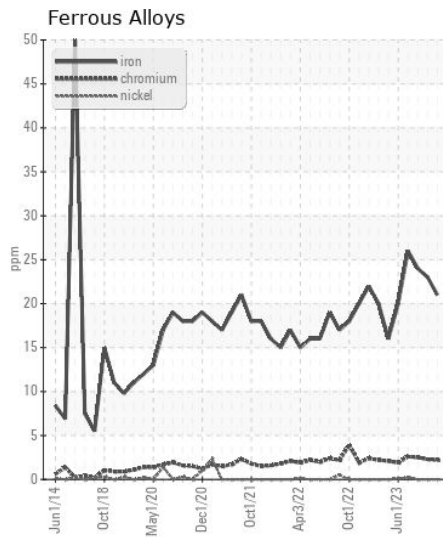
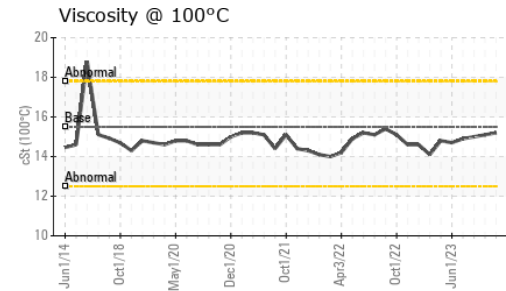
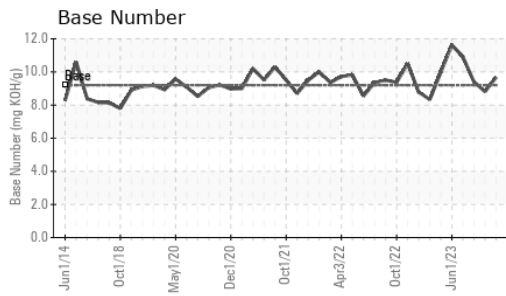
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 5 | 6 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 3 | 4 |
| Fuel | | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.9 | 0.7 | 0.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.7 | 8.2 | 8.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.2 | 16.5 | 15.9 |
| 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 |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | >75 | 2 | 1 | 1 |
| Boron | ppm | ASTM D5185m | | 37 | 38 | 41 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 44 | 47 | 46 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 12 | 0 | 12 |
| Calcium | ppm | ASTM D5185m | | 3485 | 3702 | 3592 |
| Phosphorus | ppm | ASTM D5185m | | 4 | 0 | 8 |
| Zinc | ppm | ASTM D5185m | 10 | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | | 2268 | 2636 | 2576 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 8.6 | 8.0 | 8.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.2 | 9.68 | 8.81 | 9.40 |
| Visc @ 100°C | cSt | ASTM D445 | 15.5 | 15.2 | 15.1 | 15.0 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06055521 **Received** : 09 Jan 2024
Lab Number : 06055521 **Diagnosed** : 10 Jan 2024
Unique Number : 10821470 **Diagnostician** : Don Baldrige
Test Package : MAR 2

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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