



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

Area
MARK DULEY
Machine Id
[MARK DULEY] 001 298357-1
Component
Port Main Engine
Fluid
CHEVRON DELO 710 LS (240 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW0064405 | MW0064260 | MW0064262 |
| Sample Date | | Client Info | | 01 Mar 2024 | 06 Feb 2024 | 14 Jan 2024 |
| Machine Age | hrs | Client Info | | 42561 | 41995 | 41436 |
| Oil Age | hrs | Client Info | | 1731 | 965 | 418 |
| 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 | 10 | 4 | 3 |
| Chromium | ppm | ASTM D5185m | >8 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >15 | 2 | 2 | 1 |
| Lead | ppm | ASTM D5185m | >18 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >80 | <1 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >14 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

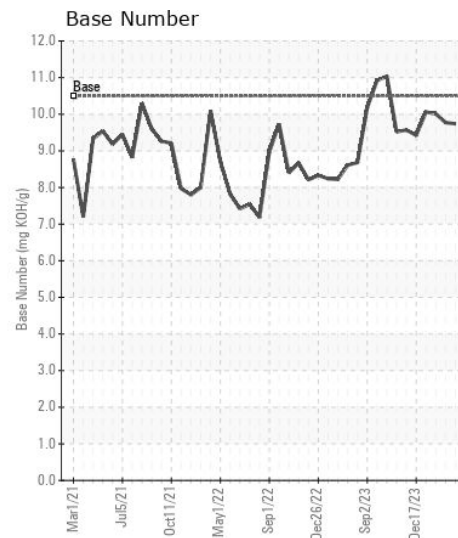
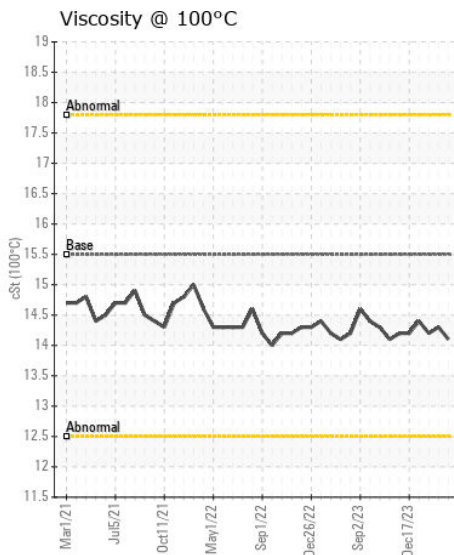
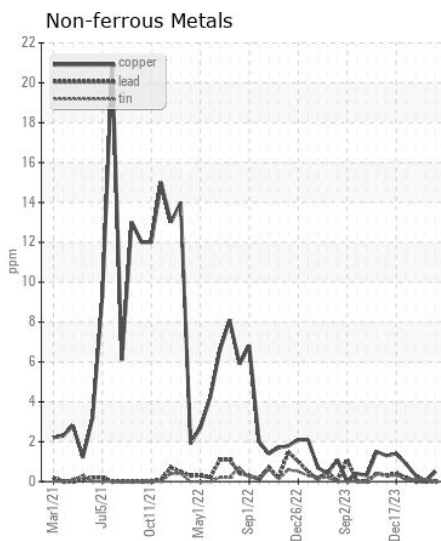
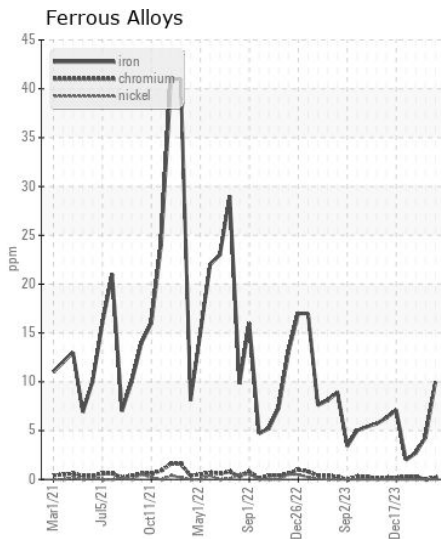
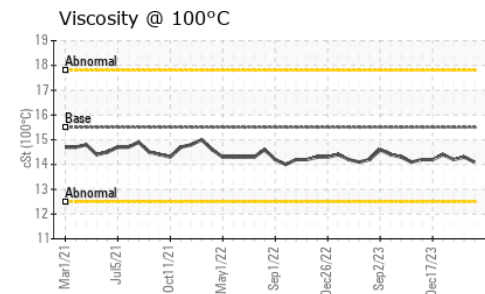
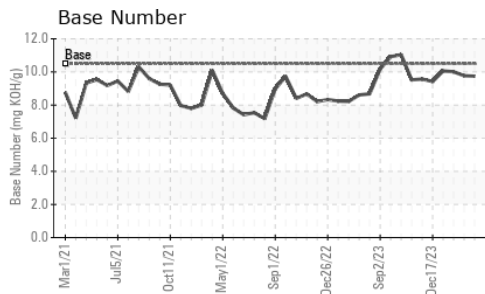
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 4 | 4 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| 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 | | 0.3 | 0.2 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.2 | 6.6 | 5.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 14.1 | 13.9 | 13.7 |
| 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 | | 45 | 41 | 40 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 47 | 42 | 41 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 15 | 9 | 10 |
| Calcium | ppm | ASTM D5185m | | 3273 | 3222 | 3182 |
| Phosphorus | ppm | ASTM D5185m | | 10 | <1 | <1 |
| Zinc | ppm | ASTM D5185m | | 4 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | | 2454 | 2180 | 2111 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 7.7 | 7.2 | 6.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.5 | 9.74 | 9.77 | 10.01 |
| Visc @ 100°C | cSt | ASTM D445 | 15.5 | 14.1 | 14.3 | 14.2 |



Certificate L2367

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

Sample No. : MW0064405

Lab Number : 06123251

Unique Number : 10937402

Test Package : MAR 2

Received : 19 Mar 2024

Tested : 20 Mar 2024

Diagnosed : 20 Mar 2024 - Wes Davis

INGRAM BARGE

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: JUSTIN WHEELER

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T:

F: (615)695-3697

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)