MAR II

WEAR CHECK Inland Marine Oil Analysis Program

# OIL ANALYSIS REPORT

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

Area
## CHIP LACEY
Machine Id
## [CHIP LACEY] 007 529830-7
Component
## Port Genset
Fluid
## CHEVRON DELO 400 XLE 15W40 (--- GAL)

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

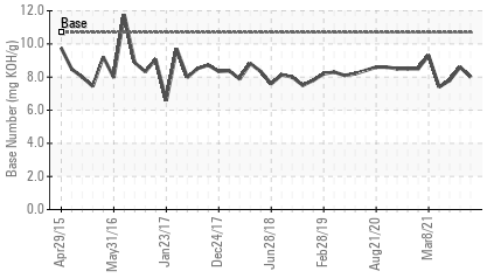
There is no indication of any contamination in the oil.

## FLUID CONDITION

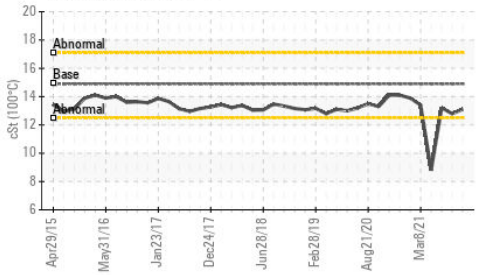
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | MW06089375 | MW0009321 | MW0014987 |
| Sample Date | | Client Info | | 01 Feb 2024 | 01 Nov 2022 | 12 Jul 2021 |
| Machine Age | hrs | Client Info | | 39551 | 38857 | 38181 |
| Oil Age | hrs | Client Info | | 199 | 204 | 419 |
| Filter Age | hrs | Client Info | | 0 | 204 | 419 |
| Oil Changed | | Client Info | | N/A | N/A | Changed |
| Filter Changed | | Client Info | | N/A | N/A | Changed |
| Sample Status | | | | NORMAL | NORMAL | MARGINAL |
| Iron | ppm | ASTM D5185m | >50 | 5 | 6 | 7 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 7 | 15 | 18 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >12 | 2 | 1 | 0 |
| Lead | ppm | ASTM D5185m | >17 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >70 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 5 | 4 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | <1 | 2 |
| Fuel | | WC Method | >4.0 | <1.0 | <1.0 | ▲ 2.9 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.4 | 9.3 | 9.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.5 | 20.1 | 19.2 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | LIGHT |
| 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 |
| Sodium | ppm | ASTM D5185m | | <1 | <1 | 2 |
| Boron | ppm | ASTM D5185m | | 208 | 93 | 71 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 78 | 33 | 35 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 707 | 703 | 708 |
| Calcium | ppm | ASTM D5185m | | 1486 | 1591 | 1667 |
| Phosphorus | ppm | ASTM D5185m | 760 | 717 | 693 | 746 |
| Zinc | ppm | ASTM D5185m | 830 | 834 | 815 | 845 |
| Sulfur | ppm | ASTM D5185m | 2770 | 2822 | 3603 | 2753 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.1 | 14.4 | 14.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.7 | 8.0 | 8.6 | 7.8 |
| Visc @ 100°C | cSt | ASTM D445 | 14.9 | 13.1 | 12.8 | 13.2 |

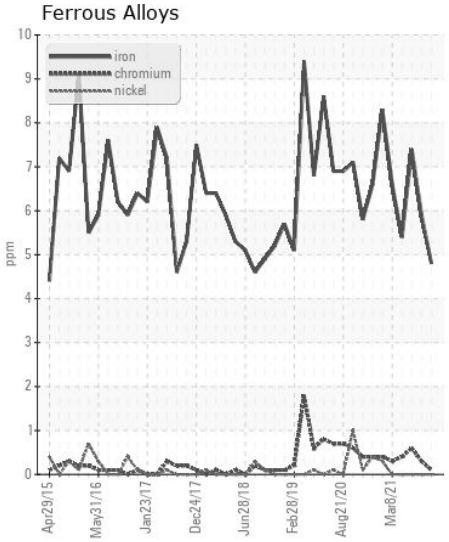
Base Number



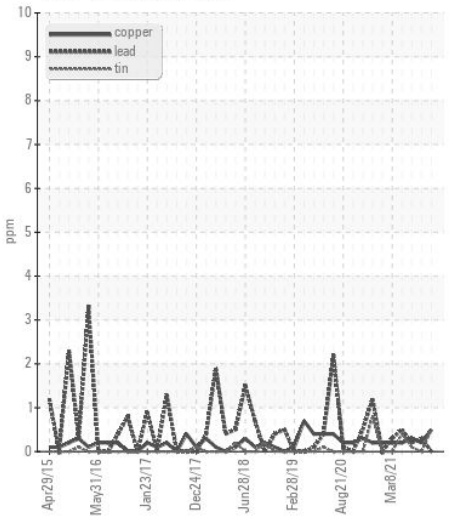

Viscosity @ 100°C



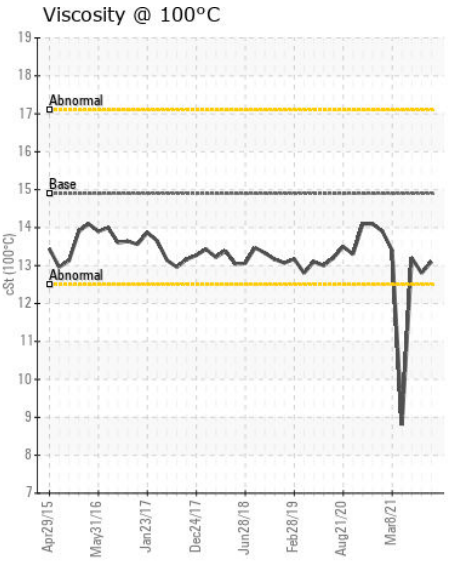

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C




Base Number


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : MW06089375
**Lab Number** : 06089375
**Unique Number** : 10876820
**Test Package** : MAR 2

**Received** : 14 Feb 2024
**Tested** : 15 Feb 2024
**Diagnosed** : 15 Feb 2024 - Wes Davis

*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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