MAR II

WEAR CHECK Inland Marine Oil Analysis Program

# OIL ANALYSIS REPORT

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

Area
**JOHN M DONNELLY**
Machine Id
**[JOHN M DONNELLY] 007 621298-7**
Component
**Port Genset**
Fluid
**CHEVRON DELO 400 LE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

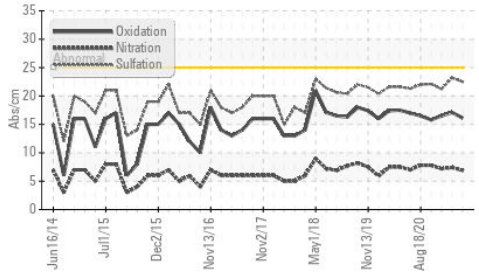
There is no indication of any contamination in the oil.

## FLUID CONDITION

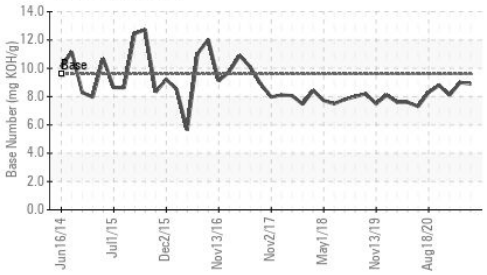
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | MW0071056 | MW0051402 | MW0033963 |
| Sample Date | | Client Info | | 01 Jul 2024 | 24 Feb 2023 | 24 Jan 2023 |
| Machine Age | hrs | Client Info | | 6000 | 0 | 0 |
| Oil Age | hrs | Client Info | | 500 | 368 | 395 |
| Filter Age | hrs | Client Info | | 500 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | MARGINAL | NORMAL |
| Iron | ppm | ASTM D5185m | >50 | 6 | 6 | 7 |
| Chromium | ppm | ASTM D5185m | >4 | 0 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >12 | 3 | 3 | 2 |
| Lead | ppm | ASTM D5185m | >17 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >70 | 5 | 14 | 29 |
| Tin | ppm | ASTM D5185m | >15 | 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 |
| Silicon | ppm | ASTM D5185m | >25 | 5 | 7 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | 1 |
| Fuel | | WC Method | >4.0 | <1.0 | ▲ 2.1 | 1.5 |
| 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 | 6.9 | 7.4 | 7.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.5 | 23.2 | 21.2 |
| 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 |
| Sodium | ppm | ASTM D5185m | | 2 | 1 | 2 |
| Boron | ppm | ASTM D5185m | | 252 | 298 | 297 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 122 | 122 | 112 |
| Manganese | ppm | ASTM D5185m | | 4 | 1 | 2 |
| Magnesium | ppm | ASTM D5185m | | 607 | 696 | 598 |
| Calcium | ppm | ASTM D5185m | | 1742 | 1641 | 1334 |
| Phosphorus | ppm | ASTM D5185m | 1200 | 708 | 672 | 573 |
| Zinc | ppm | ASTM D5185m | 1300 | 828 | 866 | 716 |
| Sulfur | ppm | ASTM D5185m | 3200 | 2863 | 2763 | 2339 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.1 | 17.1 | 16.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.6 | 8.9 | 9.0 | 8.1 |
| Visc @ 100°C | cSt | ASTM D445 | 15.7 | 13.1 | ▲ 12.3 | 12.4 |

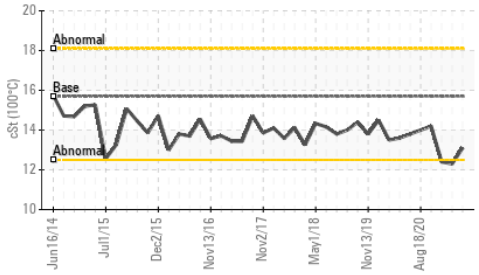
FT-IR (Direct Trend)



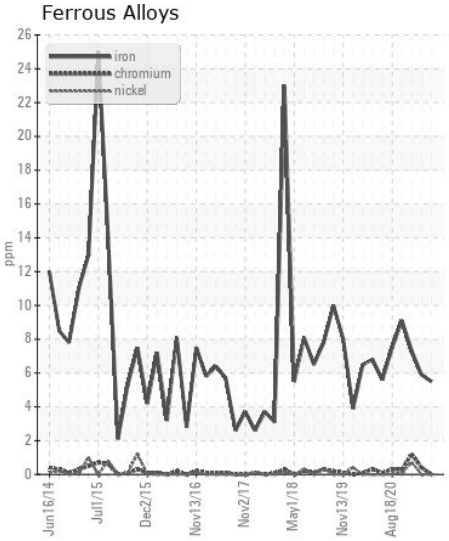

Base Number



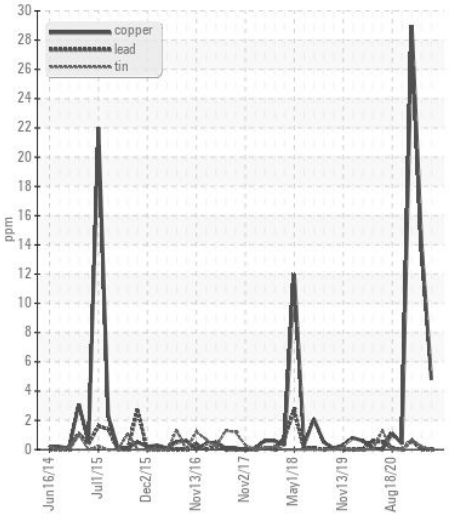

Viscosity @ 100°C



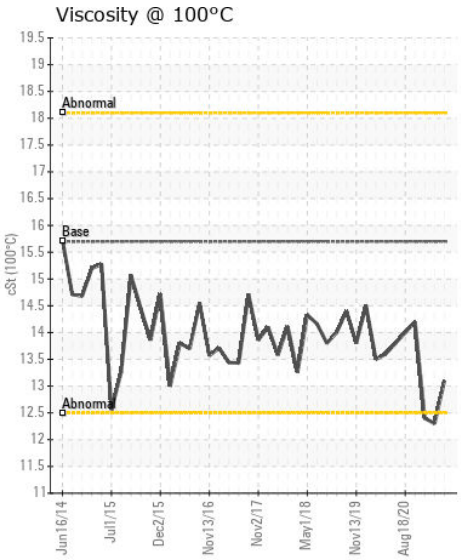

Ferrous Alloys



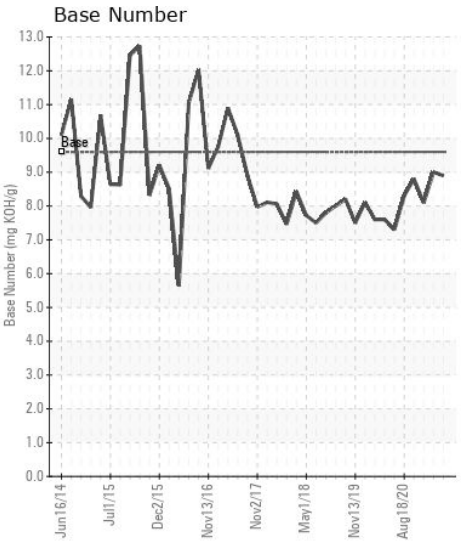

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : MW0071056
**Lab Number** : 06234319
**Unique Number** : 11123153
**Test Package** : MAR 2

**Received** : 11 Jul 2024
**Tested** : 12 Jul 2024
**Diagnosed** : 12 Jul 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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