



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

Area

LEE SYNNOTT

Machine Id

[LEE SYNNOTT] 008 523550-8

Component

Starboard Genset

Fluid

CHEVRON DELO 400 XLE 15W40 (18 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW0068608 | MW0060125 | MW0060117 |
| Sample Date | | Client Info | | 01 Apr 2024 | 06 Mar 2024 | 02 Jan 2024 |
| Machine Age | hrs | Client Info | | 22801 | 22577 | 21894 |
| Oil Age | hrs | Client Info | | 224 | 408 | 389 |
| Filter Age | hrs | Client Info | | 224 | 408 | 0 |
| Oil Changed | | Client Info | | Not Changd | Changed | N/A |
| Filter Changed | | Client Info | | Not Changd | Changed | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 5 | 9 | 5 |
| Chromium | ppm | ASTM D5185m | >4 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >12 | 3 | 4 | 1 |
| Lead | ppm | ASTM D5185m | >17 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >70 | 2 | <1 | <1 |
| 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 |

CONTAMINATION

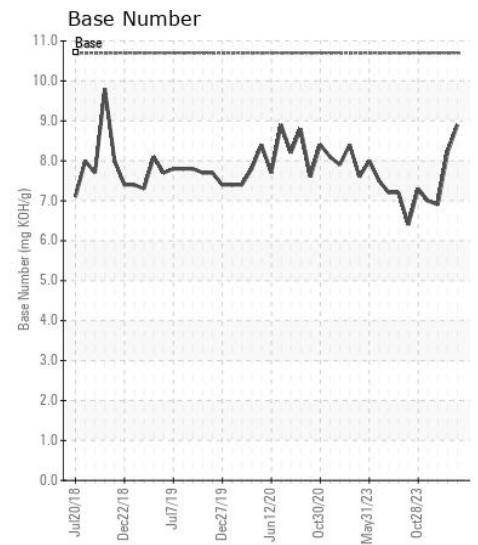
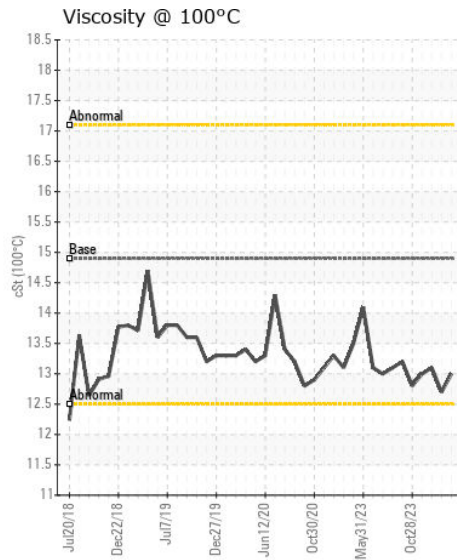
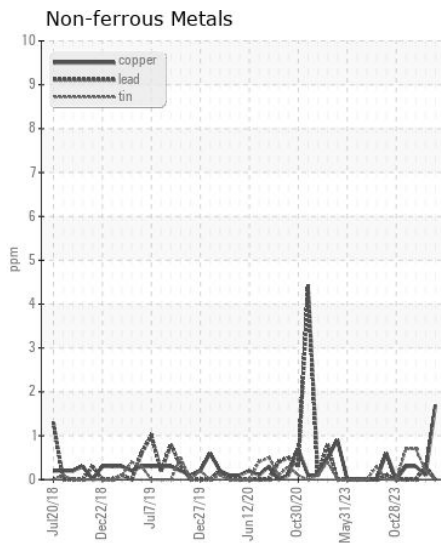
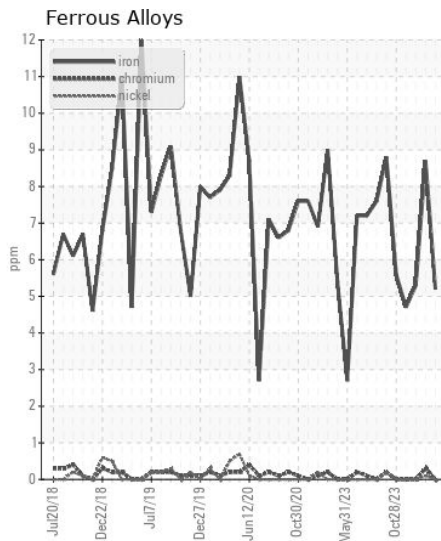
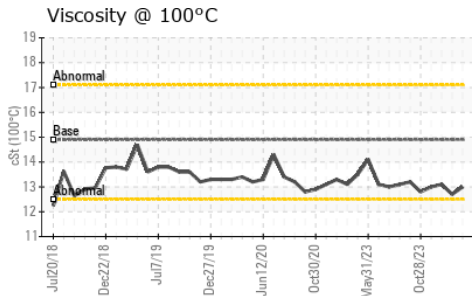
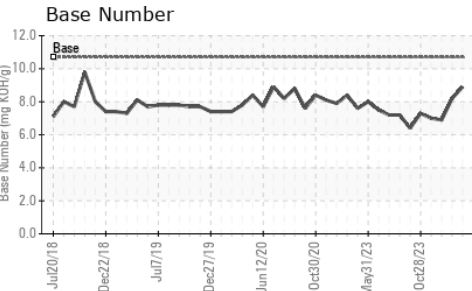
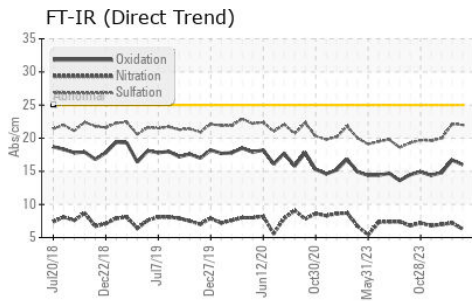
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 5 | 7 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| 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 | | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.3 | 7.2 | 7.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.0 | 22.1 | 20.0 |
| 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 | | 1 | 1 | 2 |
| Boron | ppm | ASTM D5185m | | 391 | 383 | 373 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 113 | 117 | 63 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 608 | 571 | 281 |
| Calcium | ppm | ASTM D5185m | | 1690 | 1755 | 1787 |
| Phosphorus | ppm | ASTM D5185m | 760 | 843 | 872 | 1016 |
| Zinc | ppm | ASTM D5185m | 830 | 978 | 1041 | 1259 |
| Sulfur | ppm | ASTM D5185m | 2770 | 3357 | 3158 | 3520 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.0 | 16.7 | 14.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.7 | 8.9 | 8.2 | 6.9 |
| Visc @ 100°C | cSt | ASTM D445 | 14.9 | 13.0 | 12.7 | 13.1 |



Certificate L2367

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

Sample No. : MW0068608

Lab Number : 06146505

Unique Number : 10976583

Test Package : MAR 2

Received : 11 Apr 2024

Tested : 12 Apr 2024

Diagnosed : 12 Apr 2024 - Wes Davis

INGRAM BARGE

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: JEFF BISHOP

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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)