



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

Machine Id
Capt. Carl Page (S/N 60352408)
Component
Starboard Genset
Fluid
CHEVRON DELO 710 LS (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW0066256 | MW0066296 | MW0047728 |
| Sample Date | | Client Info | | 21 May 2024 | 04 May 2024 | 21 Mar 2024 |
| Machine Age | hrs | Client Info | | 2798 | 2553 | 2027 |
| Oil Age | hrs | Client Info | | 235 | 253 | 238 |
| Filter Age | hrs | Client Info | | 235 | 253 | 238 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | N/A | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 9 | 8 | 8 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >12 | 2 | 2 | 1 |
| Lead | ppm | ASTM D5185m | >17 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >70 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m | >15 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| 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.

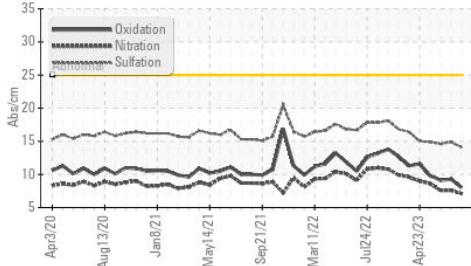
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 2 | 3 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | 0 |
| Fuel | | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0.1 | 0.2 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.1 | 7.6 | 7.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 14.1 | 14.9 | 14.6 |
| 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

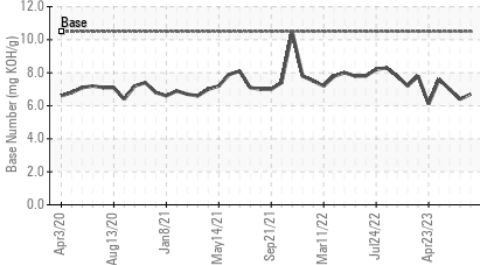
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | <1 | 0 | 1 |
| Boron | ppm | ASTM D5185m | | 41 | 45 | 40 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 42 | 44 | 44 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 21 | 5 | 11 |
| Calcium | ppm | ASTM D5185m | | 3209 | 3263 | 3186 |
| Phosphorus | ppm | ASTM D5185m | | 33 | 0 | 4 |
| Zinc | ppm | ASTM D5185m | | 24 | 0 | 14 |
| Sulfur | ppm | ASTM D5185m | | 2057 | 2389 | 2498 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 8.0 | 9.3 | 9.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.5 | 6.7 | 6.4 | 7.0 |
| Visc @ 100°C | cSt | ASTM D445 | 15.5 | 13.6 | 13.5 | 13.5 |

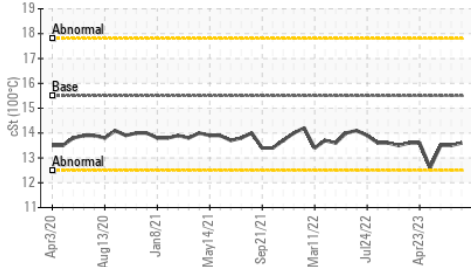
FT-IR (Direct Trend)



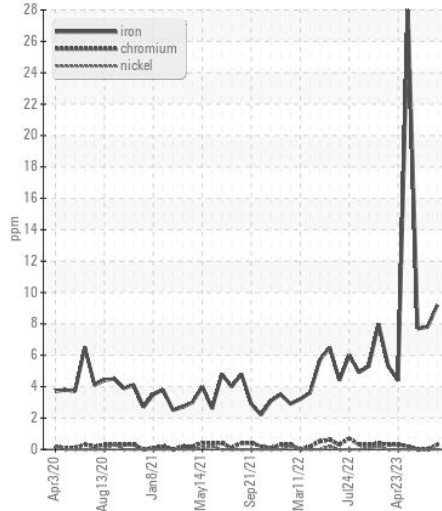
Base Number



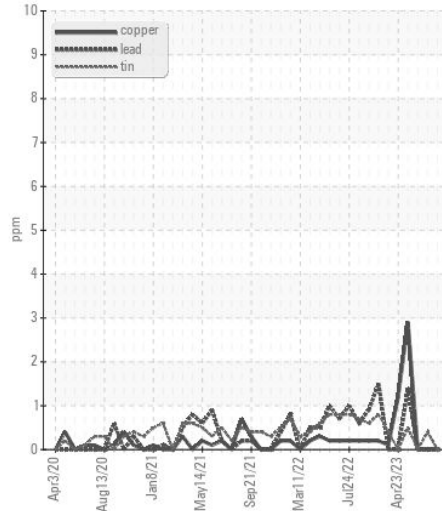
Viscosity @ 100°C



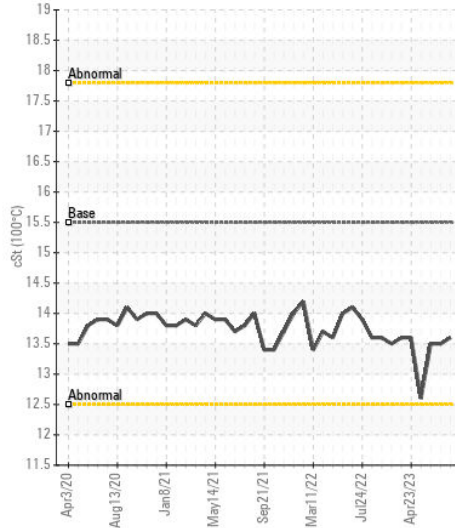
Ferrous Alloys



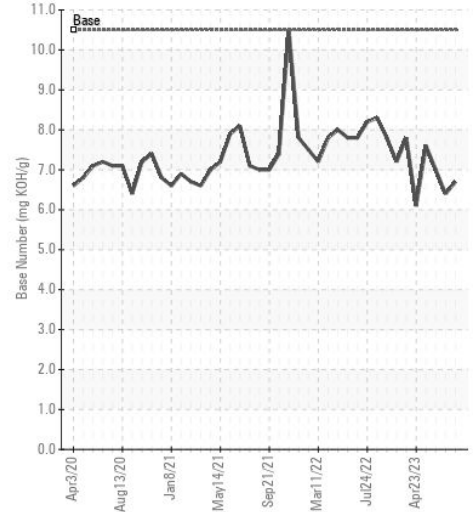
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0066256
Lab Number : 06227125
Unique Number : 11110618
Test Package : MAR 2

Received : 03 Jul 2024
Tested : 05 Jul 2024
Diagnosed : 05 Jul 2024 - Wes Davis

AMERICAN COMMERCIAL LINES
 PO BOX 610, 1701 E. MARKET STREET
 JEFFERSONVILLE, IN
 US 47130
 Contact: RONALD SCHNEIDER
 ronald.schneider@bargaeacbl.com

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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