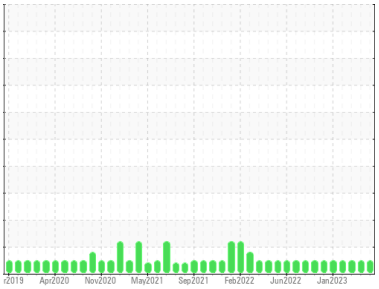
# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
**Speedway**
Machine Id
## [Speedway] Oil - Aft Genset
Component
**Aft Genset**
Fluid
**MOBIL 15W40 (35 GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. ( Customer Sample Comment: Jd Ridout )

**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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0735398** | WC0735743 | WC0735682 |
| Sample Date | | Client Info | | **05 Jul 2023** | 10 Jun 2023 | 09 Apr 2023 |
| Machine Age | hrs | Client Info | | **9571** | 9054 | 8466 |
| Oil Age | hrs | Client Info | | **9453** | 8936 | 8314 |
| Oil Changed | | Client Info | | **Filtered** | Oil Added | Filtered |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >4.0 | **<1.0** | <1.0 | <1.0 |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >25 | **54** | 26 | 75 |
| Chromium | ppm | ASTM D5185m | >5 | **1** | 1 | 2 |
| Nickel | ppm | ASTM D5185m | >5 | **<1** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Silver | ppm | ASTM D5185m | >5 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **1** | 1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | **<1** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >20 | **3** | <1 | 5 |
| Tin | ppm | ASTM D5185m | >5 | **<1** | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Cadmium | ppm | ASTM D5185m | | **0** | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **10** | 10 | 10 |
| Barium | ppm | ASTM D5185m | | **2** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **71** | 69 | 74 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **1578** | 1723 | 1739 |
| Calcium | ppm | ASTM D5185m | | **1293** | 1342 | 1326 |
| Phosphorus | ppm | ASTM D5185m | | **1149** | 1200 | 1230 |
| Zinc | ppm | ASTM D5185m | | **1429** | 1524 | 1525 |
| Sulfur | ppm | ASTM D5185m | | **3472** | 4238 | 3039 |

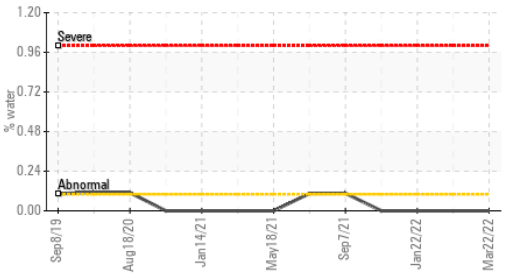
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **8** | 7 | 12 |
| Sodium | ppm | ASTM D5185m | >118 | **12** | 8 | 17 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 3 | 2 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | | **0.4** | 0.2 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **14.3** | 12.6 | 14.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **23.1** | 22.8 | 22.8 |

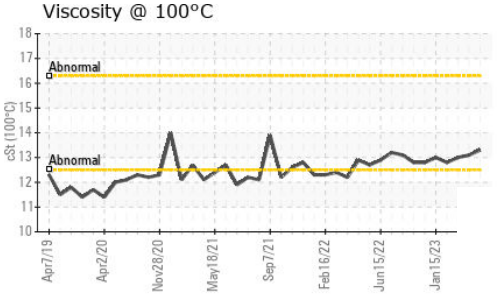
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **25.1** | 24.8 | 27.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **9.99** | 13.2 | 13.22 |

# OIL ANALYSIS REPORT

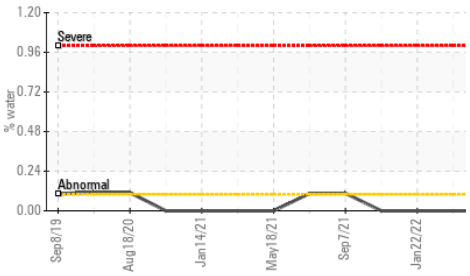
Water




Viscosity @ 100°C




Water

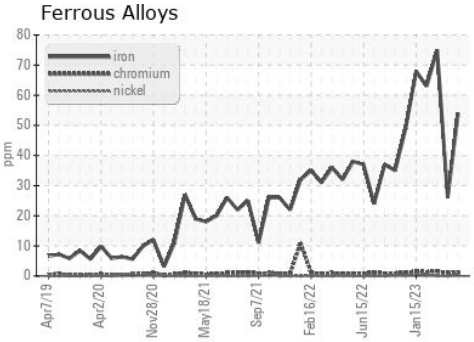



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

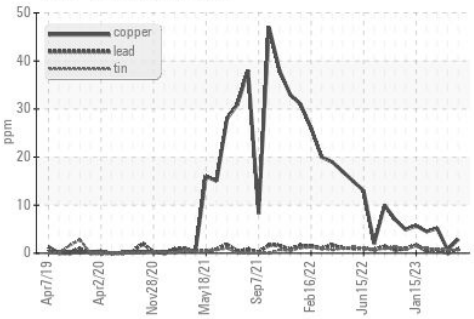
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | | **13.3** | 13.1 | 13.0 |

## GRAPHS

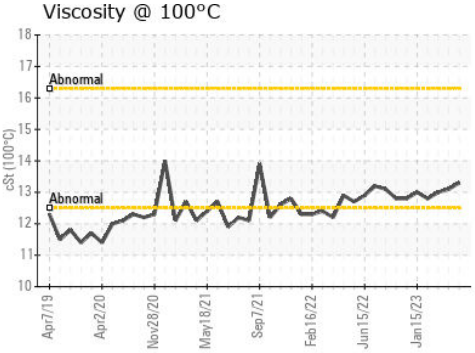
Ferrous Alloys



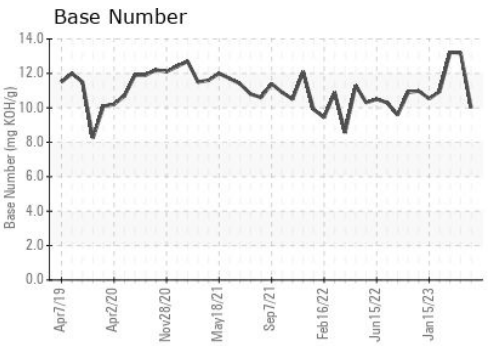

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0735398 **Received** : 21 Jul 2023
**Lab Number** : 05904529 **Diagnosed** : 01 Aug 2023
**Unique Number** : 10565885 **Diagnostician** : Doug Bogart
**Test Package** : IND 2 ( Additional Tests: KF )

*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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