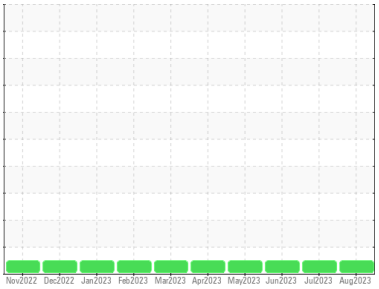
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
## West Virginia
Machine Id
## [West Virginia] Oil - Port Genset
Component
**Port Genset**
Fluid
**MARATHON 15W40 (8 GAL)**

## DIAGNOSIS

**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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0769035** | WC0769148 | WC0769152 |
| Sample Date | | Client Info | | **06 Aug 2023** | 10 Jul 2023 | 06 Jun 2023 |
| Machine Age | hrs | Client Info | | **25219** | 24929 | 24619 |
| Oil Age | hrs | Client Info | | **110** | 1329 | 1004 |
| Oil Changed | | Client Info | | **Not Changd** | N/A | Not Changd |
| 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 | **8** | 14 | 10 |
| Chromium | ppm | ASTM D5185m | >5 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Silver | ppm | ASTM D5185m | >5 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **2** | 1 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **<1** | <1 | 1 |
| Copper | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >5 | **<1** | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **40** | 47 | 55 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **69** | 83 | 83 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **1181** | 1077 | 1067 |
| Calcium | ppm | ASTM D5185m | | **1320** | 1679 | 1696 |
| Phosphorus | ppm | ASTM D5185m | | **966** | 909 | 937 |
| Zinc | ppm | ASTM D5185m | | **1171** | 1163 | 1156 |
| Sulfur | ppm | ASTM D5185m | | **4066** | 4362 | 4330 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **3** | 3 | 3 |
| Sodium | ppm | ASTM D5185m | | **3** | 6 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | | **0.1** | 0.2 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **9.0** | 12.3 | 11.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **19.7** | 22.8 | 21.2 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **16.9** | 22.1 | 19.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **12.74** | 10.35 | 9.47 |

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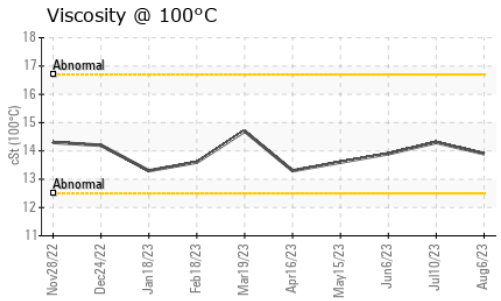
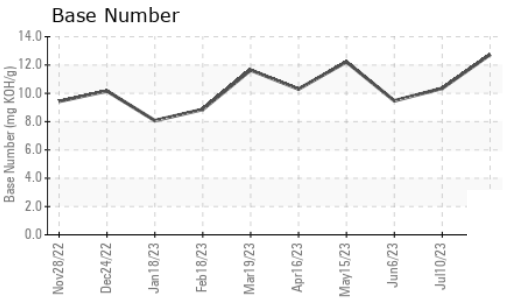
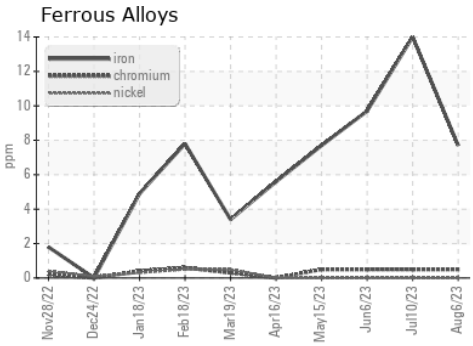


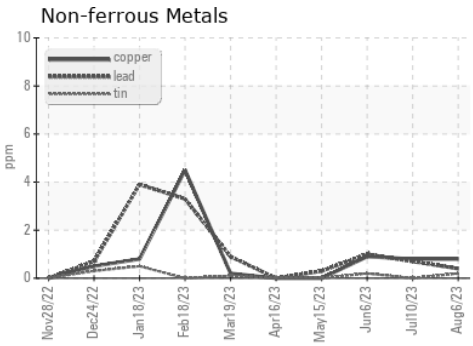



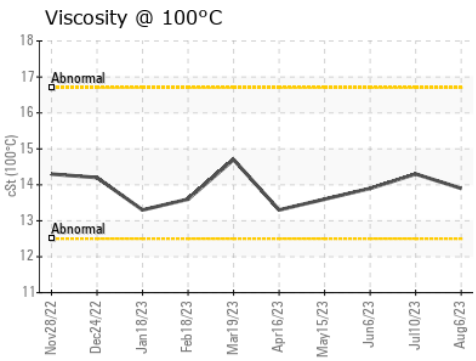

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

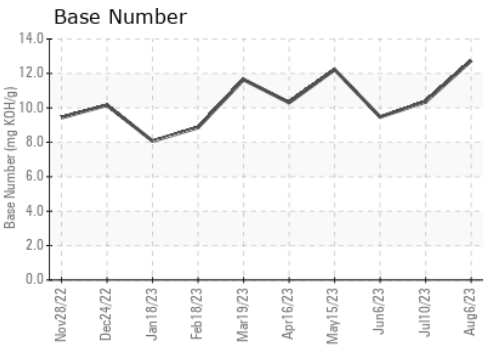
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | | **13.9** | 14.3 | 13.9 |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0769035
**Lab Number** : 05927448
**Unique Number** : 10607395
**Test Package** : IND 2

**Received** : 17 Aug 2023
**Diagnosed** : 18 Aug 2023
**Diagnostician** : Angela Borella

*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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