



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

Machine Id
727128
Component
Diesel Engine
Fluid
MOBIL 15W40 (6 GAL)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | GFL0066173 | GFL0066212 | --- |
| Sample Date | | Client Info | | 19 Dec 2023 | 18 Oct 2023 | --- |
| Machine Age | hrs | Client Info | | 14482 | 500 | --- |
| Oil Age | hrs | Client Info | | 500 | 500 | --- |
| Filter Age | hrs | Client Info | | 500 | 500 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | ABNORMAL | SEVERE | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >110 | 36 | 92 | --- |
| Chromium | ppm | ASTM D5185m | >4 | 2 | 3 | --- |
| Nickel | ppm | ASTM D5185m | >2 | <1 | <1 | --- |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | --- |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 7 | --- |
| Lead | ppm | ASTM D5185m | >45 | 0 | 2 | --- |
| Copper | ppm | ASTM D5185m | >85 | 1 | 9 | --- |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

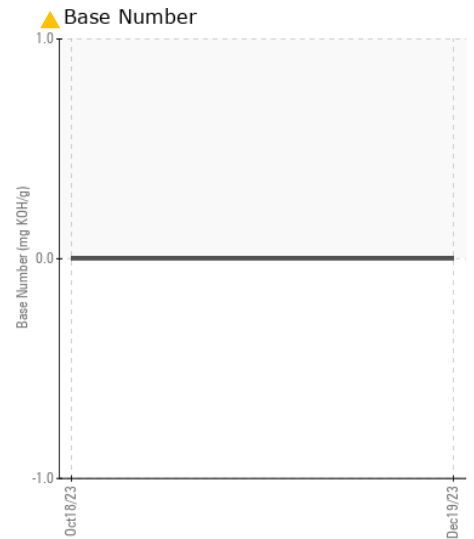
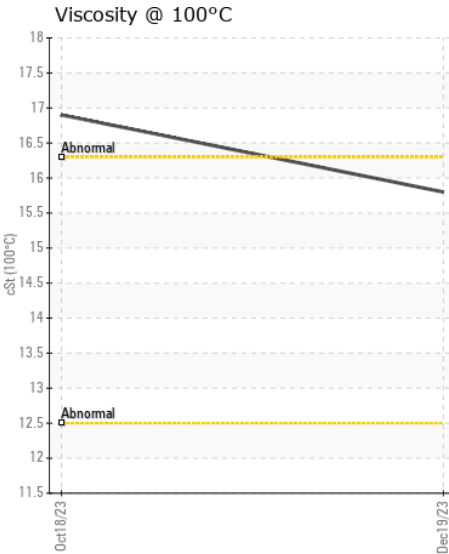
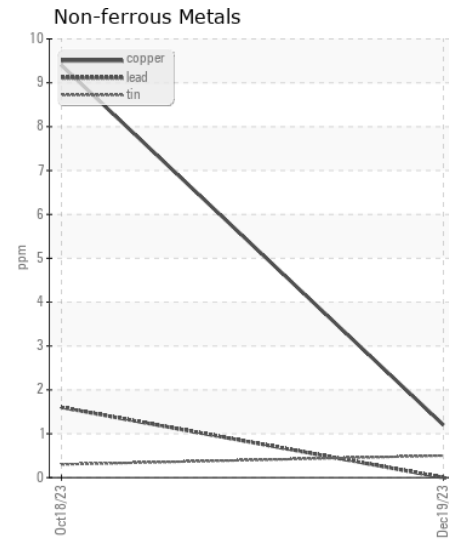
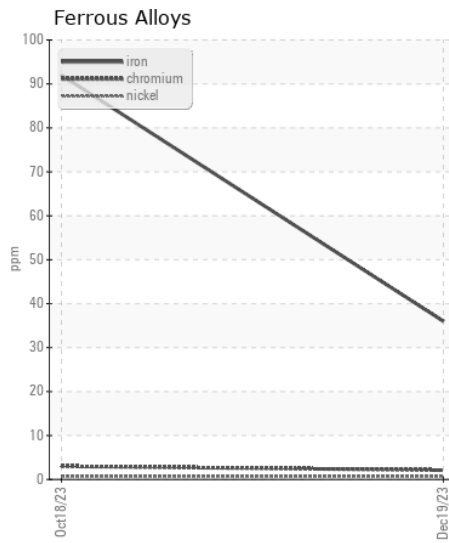
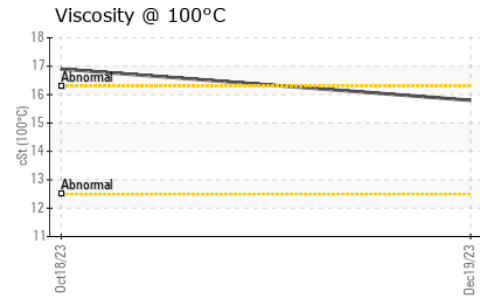
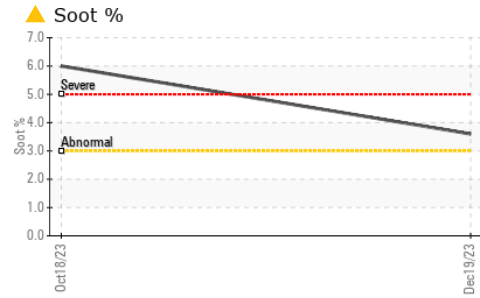
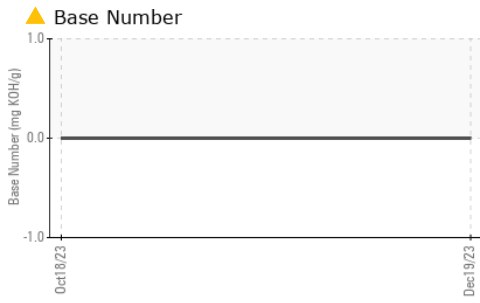
There is an abnormal amount of solids and carbon present in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >30 | 9 | 8 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 16 | --- |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >3 | 3.6 | 6 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.6 | 17.0 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 25.6 | 33.6 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | --- |

FLUID CONDITION

The BN level is low.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|-----|
| Sodium | ppm | ASTM D5185m | >118 | 4 | 8 | --- |
| Boron | ppm | ASTM D5185m | | 6 | 6 | --- |
| Barium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | 53 | 55 | --- |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | --- |
| Magnesium | ppm | ASTM D5185m | | 824 | 822 | --- |
| Calcium | ppm | ASTM D5185m | | 991 | 1065 | --- |
| Phosphorus | ppm | ASTM D5185m | | 931 | 891 | --- |
| Zinc | ppm | ASTM D5185m | | 1116 | 1118 | --- |
| Sulfur | ppm | ASTM D5185m | | 2694 | 2808 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.0 | 28.0 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 0.0 | 0.0 | --- |
| Visc @ 100°C | cSt | ASTM D445 | | 15.8 | 16.9 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066173
Lab Number : 06098137
Unique Number : 10896367
Test Package : FLEET
Received : 23 Feb 2024
Tested : 25 Feb 2024
Diagnosed : 26 Feb 2024 - Don Baldrige

GFL Environmental - 904B - Menomonie
 1706 MIDWAY RD
 MENOMONIE, WI
 US 54751
 Contact: ANDY KANE

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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