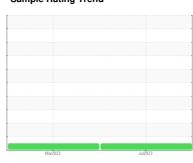


# **OIL ANALYSIS REPORT**

**Sample Rating Trend** 



NORMAL



Machine Id **426115** 

Component **Diesel Engine** 

MOBIL 15W40 (--- GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

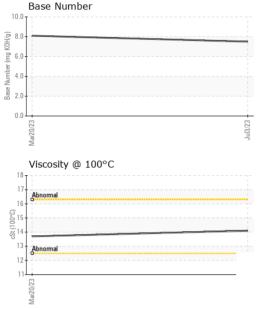
#### **Fluid Condition**

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

|                  |          |             | Mar2023    | Jul2023     |             |          |
|------------------|----------|-------------|------------|-------------|-------------|----------|
| SAMPLE INFORM    | MATION   | method      | limit/base | current     | history1    | history2 |
| Sample Number    |          | Client Info |            | GFL0066195  | GFL0060361  |          |
| Sample Date      |          | Client Info |            | 03 Jul 2023 | 20 Mar 2023 |          |
| Machine Age      | hrs      | Client Info |            | 500         | 500         |          |
| Oil Age          | hrs      | Client Info |            | 500         | 500         |          |
| Oil Changed      | 1110     | Client Info |            | Changed     | Changed     |          |
| Sample Status    |          |             |            | NORMAL      | NORMAL      |          |
| CONTAMINATI      | ON       | method      | limit/base | current     | history1    | history2 |
| Fuel             |          | WC Method   | >5         | <1.0        | <1.0        |          |
| Glycol           |          | WC Method   |            | NEG         | NEG         |          |
| WEAR METALS      | 3        | method      | limit/base | current     | history1    | history2 |
| Iron             | ppm      | ASTM D5185m | >110       | 35          | 32          |          |
| Chromium         | ppm      | ASTM D5185m | >4         | 1           | <1          |          |
| Nickel           | ppm      | ASTM D5185m | >2         | 0           | 0           |          |
| Titanium         | ppm      | ASTM D5185m |            | 0           | 0           |          |
| Silver           | ppm      | ASTM D5185m | >2         | 0           | 0           |          |
| Aluminum         | ppm      | ASTM D5185m | >25        | <1          | 1           |          |
| Lead             | ppm      | ASTM D5185m | >45        | 2           | 1           |          |
| Copper           | ppm      | ASTM D5185m | >85        | 3           | 22          |          |
| Tin              | ppm      | ASTM D5185m | >4         | 0           | 0           |          |
| Vanadium         | ppm      | ASTM D5185m |            | 0           | 0           |          |
| Cadmium          | ppm      | ASTM D5185m |            | 0           | 0           |          |
| ADDITIVES        | ''       | method      | limit/base | current     | history1    | history2 |
| Boron            | ppm      | ASTM D5185m |            | 10          | 13          |          |
| Barium           | ppm      | ASTM D5185m |            | 0           | 0           |          |
| Molybdenum       | ppm      | ASTM D5185m |            | 67          | 59          |          |
| Manganese        | ppm      | ASTM D5185m |            | 0           | <1          |          |
| Magnesium        | ppm      | ASTM D5185m |            | 1033        | 825         |          |
| Calcium          | ppm      | ASTM D5185m |            | 1164        | 1090        |          |
| Phosphorus       | ppm      | ASTM D5185m |            | 1065        | 864         |          |
| Zinc             | ppm      | ASTM D5185m |            | 1350        | 1065        |          |
| Sulfur           | ppm      | ASTM D5185m |            | 3593        | 2410        |          |
| CONTAMINAN       | ΓS       | method      | limit/base | current     | history1    | history2 |
| Silicon          | ppm      | ASTM D5185m | >30        | 2           | 4           |          |
| Sodium           | ppm      | ASTM D5185m |            | 2           | 2           |          |
| Potassium        | ppm      | ASTM D5185m | >20        | 0           | 0           |          |
| INFRA-RED        |          | method      | limit/base | current     | history1    | history2 |
| Soot %           | %        | *ASTM D7844 | >3         | 0.4         | 0.4         |          |
| Nitration        | Abs/cm   | *ASTM D7624 | >20        | 10.3        | 9.9         |          |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30        | 24.0        | 22.9        |          |
| FLUID DEGRAD     | ATION    | method      | limit/base | current     | history1    | history2 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25        | 23.2        | 21.1        |          |
| Base Number (BN) | mg KOH/g | ASTM D2896  |            | 7.5         | 8.1         |          |
| (DIV)            | g Noring |             |            |             | 0.1         |          |



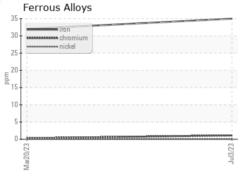
## **OIL ANALYSIS REPORT**

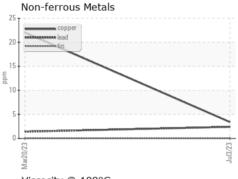


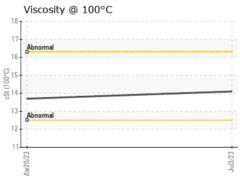
| VISUAL                  |        | method  | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal             | scalar | *Visual | NONE       | NONE    | NONE     |          |
| Yellow Metal            | scalar | *Visual | NONE       | NONE    | NONE     |          |
| Precipitate             | scalar | *Visual | NONE       | NONE    | NONE     |          |
| 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    |          |
| <b>Emulsified Water</b> | scalar | *Visual | >0.2       | NEG     | NEG      |          |
| Free Water              | scalar | *Visual |            | NEG     | NEG      |          |
|                         |        |         |            |         |          |          |

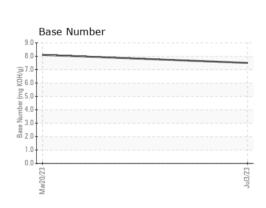
| FLUID FROF   | LULIES | memou     |      | HISTOLYT | HISTOLYZ |
|--------------|--------|-----------|------|----------|----------|
| Visc @ 100°C | cSt    | ASTM D445 | 14.1 | 13.7     |          |

## **GRAPHS**











Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10551831 Test Package : FLEET

: GFL0066195 : 05896021

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 12 Jul 2023 Diagnosed : 13 Jul 2023

Diagnostician : Wes Davis

GFL Environmental - 904 - Chippewa Falls HC

11888 & 11863 30th Avenue Chippewa Falls, WI US 54729

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)

T: (715)202-3420 F: