FLEET LUBE 360 OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

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

Machine Id
**222027-995**
Component
**Diesel Engine**
Fluid
**DIESEL ENGINE OIL (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

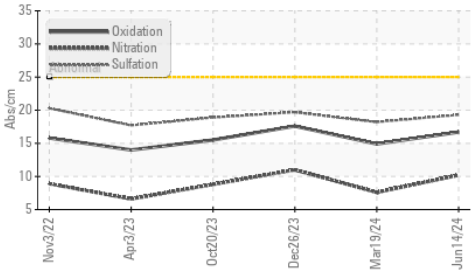
There is no indication of any contamination in the oil.

## FLUID CONDITION

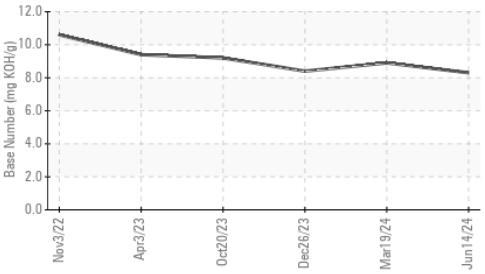
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | GFL0122081 | GFL0111901 | GFL0098227 |
| Sample Date | | Client Info | | 14 Jun 2024 | 19 Mar 2024 | 26 Dec 2023 |
| Machine Age | mls | Client Info | | 196076 | 191584 | 188090 |
| Oil Age | mls | Client Info | | 196076 | 191584 | 188090 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | N/A |
| Filter Changed | | Client Info | | Changed | Not Changd | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | 11 | 9 | 18 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 1 | 1 | 1 |
| Aluminum | ppm | ASTM D5185m | >20 | 6 | 7 | 7 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 3 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 2 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 6 | 9 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 4 | 0 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.7 | 0.4 | 0.9 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.2 | 7.6 | 11.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.3 | 18.2 | 19.7 |
| 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 | >0.2 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185m | >75 | 4 | 0 | 2 |
| Boron | ppm | ASTM D5185m | | 10 | 14 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 59 | 59 | 59 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 960 | 935 | 954 |
| Calcium | ppm | ASTM D5185m | | 1164 | 1192 | 1062 |
| Phosphorus | ppm | ASTM D5185m | | 1158 | 1157 | 1021 |
| Zinc | ppm | ASTM D5185m | | 1312 | 1261 | 1256 |
| Sulfur | ppm | ASTM D5185m | | 3929 | 3488 | 2990 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.7 | 14.9 | 17.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 8.3 | 8.9 | 8.4 |
| Visc @ 100°C | cSt | ASTM D445 | | 13.1 | 13.5 | 13.3 |

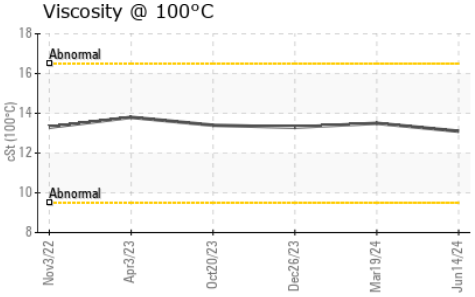
FT-IR (Direct Trend)



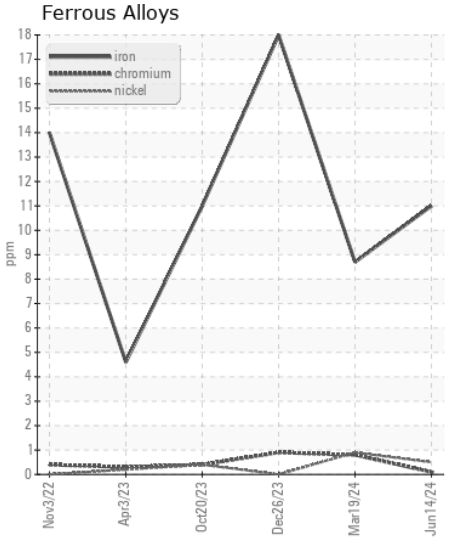

Base Number



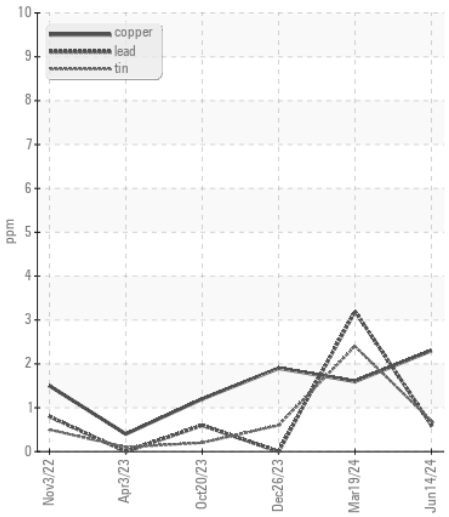

Viscosity @ 100°C



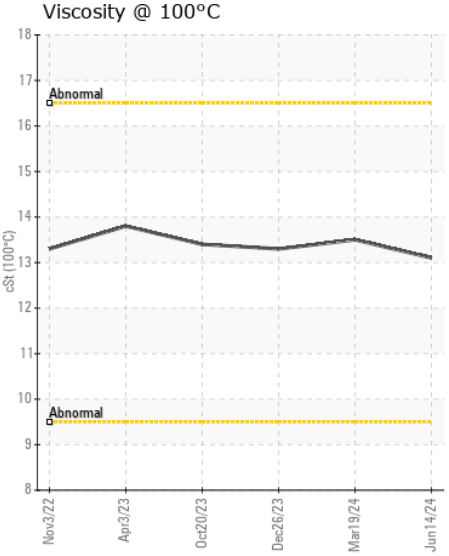

Ferrous Alloys




Non-ferrous Metals




Viscosity @ 100°C

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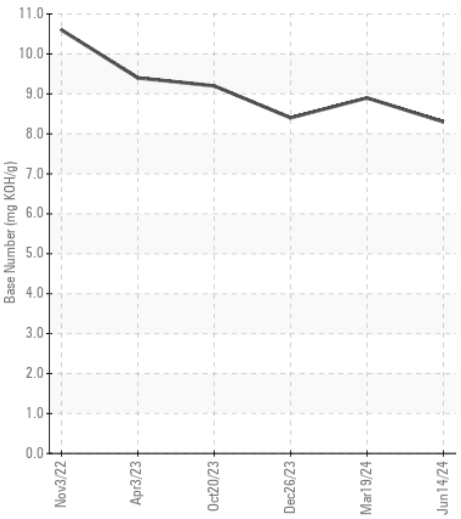


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : GFL0122081
**Lab Number** : 06213256
**Unique Number** : 11086120
**Test Package** : FLEET

**Received** : 18 Jun 2024
**Tested** : 19 Jun 2024
**Diagnosed** : 20 Jun 2024 - Sean Felton

*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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