

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id **724034** Component **Diesel Engine** Fluid **NOT GIVEN (--- GAL)**

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

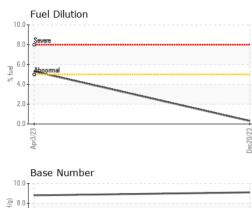
Fluid Condition

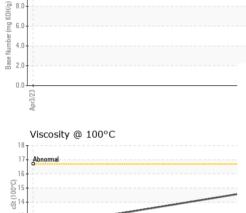
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

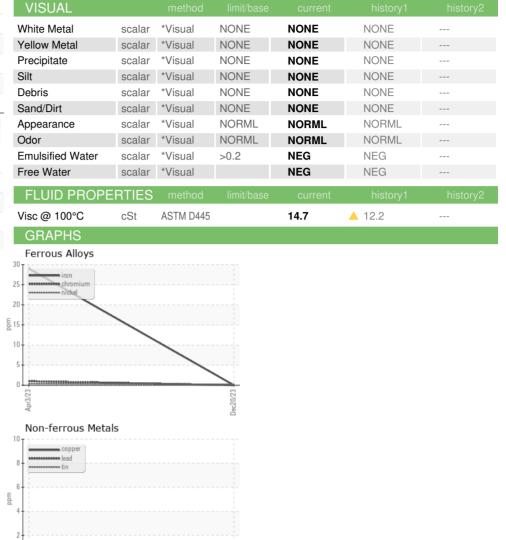
| SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
|--|---|--|--|---|---|--|
| Sample Number | | Client Info | | GFL0105851 | GFL0071041 | |
| Sample Date | | Client Info | | 20 Dec 2023 | 03 Apr 2023 | |
| Machine Age | hrs | Client Info | | 26829 | 26335 | |
| Oil Age | hrs | Client Info | | 26335 | 0 | |
| Oil Changed | | Client Info | | Not Changd | Changed | |
| Sample Status | | | | NORMAL | ABNORMAL | |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.2 | NEG | NEG | |
| Glycol | | WC Method | | NEG | NEG | |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 0 | 29 | |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 1 | |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >20 | <1 | 4 | |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | |
| Copper | ppm | ASTM D5185m | >330 | <1 | <1 | |
| Tin | ppm | ASTM D5185m | >15 | 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 | | 4 | 23 | |
| | ppin | | | • | 10 | |
| Barium | ppm | ASTM D5185m | | 0 | 0 | |
| Barium Molybdenum | | | | | | |
| | ppm | ASTM D5185m | | 0 | 0 | |
| Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m | | 0 59 | 0 64 | |
| Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | | 0 59 <1 | 0 64 <1 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 59 <1 948 1026 1129 | 0 64 <1 854 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 59 <1 948 1026 1129 1286 | 0 64 <1 854 1164 991 1213 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 59 <1 948 1026 1129 | 0 64 <1 854 1164 991 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 0 59 <1 948 1026 1129 1286 | 0 64 <1 854 1164 991 1213 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 59 <1 948 1026 1129 1286 3251 | 0 64 <1 854 1164 991 1213 3637 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 59 <1 948 1026 1129 1286 3251 current | 0 64 <1 854 1164 991 1213 3637 history1 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 0 59 <1 948 1026 1129 1286 3251 current 5 | 0 64 <1 854 1164 991 1213 3637 history1 3 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >25 >20 | 0 59 <1 948 1026 1129 1286 3251 current 5 2 | 0 64 <1 854 1164 991 1213 3637 history1 3 7 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >25 >20 | 0 59 <1 948 1026 1129 1286 3251 current 5 2 0 | 0 64 <1 854 1164 991 1213 3637 history1 3 7 4 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m | >25 >20 >5 | 0 59 <1 948 1026 1129 1286 3251 <u>current</u> 5 2 0 0 0.3 | 0 64 <1 854 1164 991 1213 3637 history1 3 7 4 4 ► 5.3 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm | ASTM D5185m ASTM D5185m | >25 >20 >5 limit/base >3 | 0 59 <1 948 1026 1129 1286 3251 current 5 2 0 0 0.3 current | 0 64 <1 854 1164 991 1213 3637 history1 3 7 4 5.3 history1 | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm % | ASTM D5185m ASTM D5824 ASTM D3524 | >25 >20 >5 limit/base >3 | 0 59 <1 948 1026 1129 1286 3251 current 5 2 0 0 0.3 0.3 | 0 64 <1 854 1164 991 1213 3637 history1 3 7 4 5.3 history1 1.1 | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5824 ASTM D3524 | >25 >20 >5 limit/base >3 >20 | 0 59 <1 948 1026 1129 1286 3251 current 5 2 0 0 0.3 0 0.3 0 current 0 4.2 | 0 64 <1 854 1164 991 1213 3637 history1 3 7 4 5.3 history1 1.1 8.8 | history2 history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | >25 >20 >5 limit/base >3 >20 >30 | 0 59 <1 948 1026 1129 1286 3251 <i>current</i> 5 2 0 0 0.3 <i>current</i> 0 4.2 17.2 | 0 64 <1 854 1164 991 1213 3637 history1 3 7 4 5.3 history1 1.1 8.8 20.1 | history2 history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D3524 ASTM D3524 ASTM D78444 *ASTM D7624 *ASTM D7624 | >25 >20 >5 limit/base >3 >20 >30 | 0 59 <1 948 1026 1129 1286 3251 current 5 2 0 0 0.3 current 0 4.2 17.2 current | 0 64 <1 854 1164 991 1213 3637 history1 3 7 4 ≤ 5.3 history1 1.1 8.8 20.1 history1 | history2 history2 history2 history2 |



OIL ANALYSIS REPORT







Base Number

10.1 (B/HOX 6.1 6.1

Base Number (mg)

0.0

Apr3/23

Dec20/23

: 22 Dec 2023

: 27 Dec 2023



12

Apr3/23

 Unique Number
 : 10804460
 Diagnostician
 : Wes Davis

 Certificate L2367
 Test Package
 : FLEET (Additional Tests: PercentFuel)

 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)

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Recieved

Diagnosed

Viscosity @ 100°C

18

16

12.

Laboratory

Sample No.

Lab Number

Apr3/23

: GFL0105851

: 06043852

cSt (100°C)

GFL Environmental - 415 - Michigan East 6200 Elmridge Sterling Heights, MI US 48313 Contact: Frank Wolak fwolak@gflenv.com T: (586)825-9514 06:2012) F: