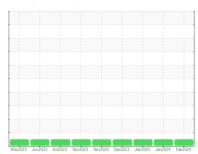


OIL ANALYSIS REPORT

Sample Rating Trend









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

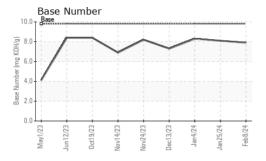
Fluid Condition

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

| Client Info | N 30P 13W40 (| - GAL) | May2023 Ju | 2023 Oct2023 Nov2023 | Nov2023 Dec2023 Jan2024 Jan20 | 24 Feb2024 | |
|--|------------------|----------|-------------|----------------------|-------------------------------|-------------|-------------|
| Client Info | SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
| Machine Age hrs Client Info 2417 2317 2180 2018 Age hrs Client Info 0 0 0 0 0 0 0 0 0 | Sample Number | | Client Info | | GFL0107941 | GFL0107965 | GFL0107948 |
| Oil Age | Sample Date | | Client Info | | 08 Feb 2024 | 25 Jan 2024 | 04 Jan 2024 |
| Oil Changed Client Info Not Changd Northal Nor | Machine Age | hrs | Client Info | | 2417 | 2317 | 2180 |
| NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 NEG N | Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| CONTAMINATION method limit/base current history1 history2 | - | | Client Info | | Not Changd | Not Changd | Not Changd |
| Fuel | Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 6 4 2 Chromium ppm ASTM D5185m >20 <1 | CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| WEAR METALS | Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 6 4 2 Chromium ppm ASTM D5185m >20 <1 | Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Chromium | Glycol | | WC Method | | NEG | NEG | NEG |
| Chromium | WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Nickel | Iron | ppm | ASTM D5185m | >120 | 6 | 4 | 2 |
| Titanium | Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Silver | Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Aluminum | Titanium | ppm | ASTM D5185m | >2 | <1 | <1 | <1 |
| Lead | Silver | ppm | ASTM D5185m | >2 | <1 | 0 | 0 |
| Copper ppm ASTM D5185m >330 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 | Aluminum | ppm | ASTM D5185m | >20 | 4 | 3 | 3 |
| Tin | Lead | ppm | ASTM D5185m | >40 | <1 | 0 | <1 |
| Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 <1 2 Barium ppm ASTM D5185m 0 133 0 0 Molybdenum ppm ASTM D5185m 0 13 0 0 Molybdenum ppm ASTM D5185m 0 <1 0 0 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 946 922 953 Calcium ppm ASTM D5185m 1070 1098 1067 1045 Phosphorus ppm ASTM D5185m 1270 1242 1213 1221 Sulfur ppm ASTM D5185m 2060 3600 3206 | Copper | ppm | ASTM D5185m | >330 | 1 | <1 | <1 |
| Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 | Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| ADDITIVES | Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Boron | Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Barium | ADDITIVES | | method | limit/base | current | history1 | history2 |
| Molybdenum ppm ASTM D5185m 60 62 59 57 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 946 922 953 Calcium ppm ASTM D5185m 1070 1098 1067 1045 Phosphorus ppm ASTM D5185m 1150 1019 904 1095 Zinc ppm ASTM D5185m 1270 1242 1213 1221 Sulfur ppm ASTM D5185m 2060 3600 3206 3180 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m >20 10 9 4 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7624 >20< | Boron | ppm | ASTM D5185m | 0 | <1 | <1 | 2 |
| Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 946 922 953 Calcium ppm ASTM D5185m 1070 1098 1067 1045 Phosphorus ppm ASTM D5185m 1150 1019 904 1095 Zinc ppm ASTM D5185m 1270 1242 1213 1221 Sulfur ppm ASTM D5185m 2060 3600 3206 3180 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m >20 10 9 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cmm *ASTM D7 | Barium | ppm | ASTM D5185m | 0 | 13 | 0 | 0 |
| Magnesium ppm ASTM D5185m 1010 946 922 953 Calcium ppm ASTM D5185m 1070 1098 1067 1045 Phosphorus ppm ASTM D5185m 1150 1019 904 1095 Zinc ppm ASTM D5185m 1270 1242 1213 1221 Sulfur ppm ASTM D5185m 2060 3600 3206 3180 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m >20 10 9 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.1 6.1 Sulfation Abs/.1mm < | Molybdenum | ppm | ASTM D5185m | 60 | 62 | 59 | 57 |
| Calcium ppm ASTM D5185m 1070 1098 1067 1045 Phosphorus ppm ASTM D5185m 1150 1019 904 1095 Zinc ppm ASTM D5185m 1270 1242 1213 1221 Sulfur ppm ASTM D5185m 2060 3600 3206 3180 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m >20 10 9 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.1 6.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.5 18.1 17.6 FLUID DEGRADATION | Manganese | ppm | ASTM D5185m | 0 | <1 | 0 | 0 |
| Phosphorus ppm ASTM D5185m 1150 1019 904 1095 Zinc ppm ASTM D5185m 1270 1242 1213 1221 Sulfur ppm ASTM D5185m 2060 3600 3206 3180 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m >0 0 <1 | Magnesium | ppm | ASTM D5185m | 1010 | 946 | 922 | 953 |
| Zinc ppm ASTM D5185m 1270 1242 1213 1221 Sulfur ppm ASTM D5185m 2060 3600 3206 3180 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m 0 0 <1 | Calcium | ppm | ASTM D5185m | 1070 | 1098 | 1067 | 1045 |
| Sulfur ppm ASTM D5185m 2060 3600 3206 3180 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m 0 0 <1 | Phosphorus | ppm | ASTM D5185m | 1150 | 1019 | 904 | 1095 |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m 0 0 <1 | Zinc | ppm | ASTM D5185m | 1270 | 1242 | 1213 | 1221 |
| Silicon ppm ASTM D5185m >25 4 2 3 Sodium ppm ASTM D5185m 0 0 <1 Potassium ppm ASTM D5185m >20 10 9 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.1 6.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.5 18.1 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.5 13.3 | Sulfur | ppm | ASTM D5185m | 2060 | 3600 | 3206 | 3180 |
| Sodium ppm ASTM D5185m 0 0 <1 Potassium ppm ASTM D5185m >20 10 9 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.1 6.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.5 18.1 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.5 13.3 | CONTAMINAN | TS | method | limit/base | current | history1 | history2 |
| Potassium ppm ASTM D5185m >20 10 9 4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.1 6.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.5 18.1 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.5 13.3 | Silicon | ppm | ASTM D5185m | >25 | 4 | 2 | 3 |
| INFRA-RED | Sodium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 7.1 6.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.5 18.1 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.5 13.3 | Potassium | ppm | ASTM D5185m | >20 | 10 | 9 | 4 |
| Nitration Abs/cm *ASTM D7624 >20 8.0 7.1 6.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.5 18.1 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.5 13.3 | INFRA-RED | | method | limit/base | current | history1 | history2 |
| Sulfation Abs/.1mm *ASTM D7415 >30 18.5 18.1 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.9 14.5 13.3 | Soot % | % | *ASTM D7844 | >4 | 0.2 | 0.2 | 0.1 |
| FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm 'ASTM D7414 >25 14.9 14.5 13.3 | Nitration | Abs/cm | *ASTM D7624 | >20 | 8.0 | 7.1 | 6.1 |
| Oxidation | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.5 | 18.1 | 17.6 |
| | FLUID DEGRA | OATION | method | limit/base | current | history1 | history2 |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.9 | 14.5 | 13.3 |
| | Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.9 | 8.1 | 8.3 |



OIL ANALYSIS REPORT

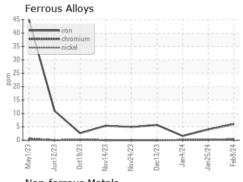


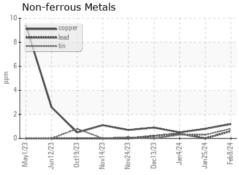
| 19 T 7 | , | @ 10 | | | | | | |
|---------------|---------|----------|----------|----------|----------|--------|----------------------|---|
| 18 - Abn | ormal | | | | | | | - |
| 17- | | | | | | | | |
| 16 Base | | | | | | | | - |
| 16 Base 15 | | | | | | | | |
| 14 | | | | | | | | - |
| 13 - Abn | emal | | | | | | | |
| 12- | | | | | | | | |
| 114 | | · · | | · · | | - | - | - |
| May1/23 | Jun12/2 | Oct19/23 | Nov14/2: | Nov24/2: | Dec13/2: | Jan4/2 | Jan25/2 [,] | |
| /ai | 5 | 75 | 2 | | .8 | - Ja | a, | |

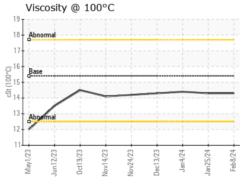
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate |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

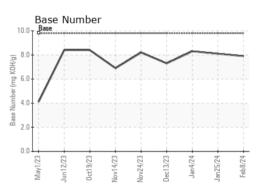
| FLUID PROP | ERTIES | method | | | | history2 |
|--------------|--------|-----------|------|------|------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.3 | 14.3 | 14.4 |

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06086544 Unique Number: 10873989 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0107941 Received : 12 Feb 2024

Tested : 13 Feb 2024 Diagnosed : 13 Feb 2024 - Wes Davis

GFL Environmental - 892 - Pauls Valley Hauling

405 East Airport Industrial Road Pauls Valley, OK US 73075

Contact: Tony Graham tgraham2@wcamerica.com

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:

F: