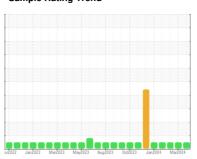


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 933021

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (--- GAL)

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.

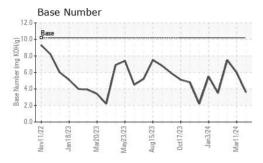
Fluid Condition

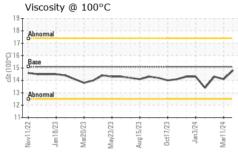
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION method limit/base current history1 history2 | (GAL) | | | | | | |
|--|------------------|----------|-------------|------------|-------------|-------------|-------------|
| Sample Date Citient Info 28 Mar 2024 11 Mar 2024 09 Feb 2024 Machine Age hrs Citient Info 0 0 34 Oil Age hrs Citient Info 0 0 0 34 Oil Changed Citient Info Not Changd Not Changd Nort Changd Nort Changd NORMAL NOR | SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
| Machine Age hrs Client Info 2048 3932 3732 Oil Age hrs Client Info 0 0 34 Oil Changed Client Info Not Changd Not Changd Not Changd Sample Status method Immibbase current history MISTAM DELEMINATION Water WC Method >0.1 NEG NEG WEAR METALS method limit/base current history Iron ppm ASTM D5185m >50 27 3 3 Chromium ppm ASTM D5185m >50 27 3 3 Chromium ppm ASTM D5185m >4 2 <1 <1 Nickel ppm ASTM D5185m >3 0 0 0 Titatinium ppm ASTM D5185m >3 0 0 0 Alleria ppm ASTM D5185m >30 5 <1 0 Copper <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>GFL0114085</th> <th>GFL0114011</th> <th>GFL0108082</th> | Sample Number | | Client Info | | GFL0114085 | GFL0114011 | GFL0108082 |
| Oil Age hrs Client Info Not Changd Not Changd Not Changd Not Changd Not Changd Not Changd NorMAL Not Changd NorMAL Not Changd NorMAL | Sample Date | | Client Info | | 28 Mar 2024 | 11 Mar 2024 | 09 Feb 2024 |
| Oil Changed Sample Status Client Info Not Changd NORMAL | | hrs | Client Info | | 2048 | 3932 | 3732 |
| NORMAL NORMAL NORMAL NORMAL | Oil Age | hrs | Client Info | | 0 | 0 | 34 |
| CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 27 3 3 Chromium ppm ASTM D5185m >4 2 1 <1 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 8 3 2 Lead ppm ASTM D5185m >30 5 <1 0 Copper ppm ASTM D5185m >30 5 <1 0 Cadenium ppm ASTM D5185m >30 5 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 | Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 27 3 3 Chromium ppm ASTM D5185m >2 2 0 0 Nickel ppm ASTM D5185m >2 2 0 0 Titanium ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 8 3 2 Lead ppm ASTM D5185m >30 5 <1 | Sample Status | | | | NORMAL | NORMAL | NORMAL |
| WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 27 3 3 Chromium ppm ASTM D5185m >4 2 <1 <1 Nickel ppm ASTM D5185m >2 2 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 8 3 2 Lead ppm ASTM D5185m >3 5 5 1 1 1 Copper ppm ASTM D5185m >4 2 <td< th=""><th>CONTAMINAT</th><th>ION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<> | CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Iron | Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Chromium ppm ASTM D5185m >4 2 <1 | WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Nickel | Iron | ppm | ASTM D5185m | >50 | 27 | 3 | 3 |
| Description | Chromium | ppm | ASTM D5185m | >4 | 2 | <1 | <1 |
| Silver | Nickel | ppm | ASTM D5185m | >2 | 2 | 0 | 0 |
| Aluminum | Titanium | ppm | ASTM D5185m | | | | 0 |
| Lead | Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Copper ppm ASTM D5185m >35 5 1 <1 Tin ppm ASTM D5185m >4 2 <1 | Aluminum | ppm | ASTM D5185m | >9 | 8 | 3 | 2 |
| Tin | Lead | ppm | ASTM D5185m | >30 | 5 | <1 | 0 |
| Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 7 15 26 Barium ppm ASTM D5185m 50 0 0 0 Molybdenum ppm ASTM D5185m 50 65 46 42 Manganese ppm ASTM D5185m 50 65 46 42 Magnesium ppm ASTM D5185m 560 662 520 491 Calcium ppm ASTM D5185m 1510 1958 1515 1465 Phosphorus ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m >+100 11 6 | Copper | ppm | ASTM D5185m | >35 | 5 | 1 | <1 |
| Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 7 15 26 Barium ppm ASTM D5185m 50 0 0 0 Molybdenum ppm ASTM D5185m 50 65 46 42 Manganese ppm ASTM D5185m 50 662 520 491 Calcium ppm ASTM D5185m 560 662 520 491 Calcium ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 70 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 | Tin | ppm | ASTM D5185m | >4 | 2 | <1 | <1 |
| ADDITIVES | Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Boron | Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 65 46 42 Manganese ppm ASTM D5185m 50 65 46 42 Magnesium ppm ASTM D5185m 560 662 520 491 Calcium ppm ASTM D5185m 1510 1958 1515 1465 Phosphorus ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th> | ADDITIVES | | method | limit/base | current | history1 | history2 |
| Molybdenum ppm ASTM D5185m 50 65 46 42 Manganese ppm ASTM D5185m 0 2 <1 <1 Magnesium ppm ASTM D5185m 560 662 520 491 Calcium ppm ASTM D5185m 1510 1958 1515 1465 Phosphorus ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7624 >20 | Boron | ppm | ASTM D5185m | 50 | 7 | 15 | 26 |
| Manganese ppm ASTM D5185m 0 2 <1 <1 Magnesium ppm ASTM D5185m 560 662 520 491 Calcium ppm ASTM D5185m 1510 1958 1515 1465 Phosphorus ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20< | Barium | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Magnesium ppm ASTM D5185m 560 662 520 491 Calcium ppm ASTM D5185m 1510 1958 1515 1465 Phosphorus ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m 8 4 6 Potassium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 | Molybdenum | ppm | ASTM D5185m | 50 | 65 | 46 | 42 |
| Calcium ppm ASTM D5185m 1510 1958 1515 1465 Phosphorus ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION *ASTM D7414 >25 <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>2</th> <td><1</td> <td><1</td> | Manganese | ppm | ASTM D5185m | 0 | 2 | <1 | <1 |
| Phosphorus ppm ASTM D5185m 780 831 724 687 Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/ | Magnesium | ppm | ASTM D5185m | 560 | 662 | 520 | 491 |
| Zinc ppm ASTM D5185m 870 1162 888 728 Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m 8 4 6 Potassium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >2 | Calcium | ppm | ASTM D5185m | 1510 | 1958 | 1515 | 1465 |
| Sulfur ppm ASTM D5185m 2040 2859 2515 2124 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m 8 4 6 Potassium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Phosphorus | ppm | ASTM D5185m | 780 | 831 | 724 | 687 |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m 8 4 6 Potassium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Zinc | ppm | ASTM D5185m | 870 | 1162 | 888 | 728 |
| Silicon ppm ASTM D5185m >+100 11 6 5 Sodium ppm ASTM D5185m 8 4 6 Potassium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Sulfur | ppm | ASTM D5185m | 2040 | 2859 | 2515 | 2124 |
| Sodium ppm ASTM D5185m 8 4 6 Potassium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | CONTAMINAN | ITS | method | limit/base | current | history1 | history2 |
| Potassium ppm ASTM D5185m >20 6 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Silicon | ppm | | >+100 | 11 | | 5 |
| INFRA-RED | Sodium | ppm | ASTM D5185m | | 8 | 4 | 6 |
| Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Potassium | ppm | ASTM D5185m | >20 | 6 | 0 | 0 |
| Nitration Abs/cm *ASTM D7624 >20 12.5 10.1 8.3 Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | INFRA-RED | | method | limit/base | current | history1 | history2 |
| Sulfation Abs/.1mm *ASTM D7415 >30 26.5 19.9 19.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Soot % | % | *ASTM D7844 | | 0 | 0 | 0.1 |
| FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Nitration | Abs/cm | *ASTM D7624 | >20 | 12.5 | 10.1 | 8.3 |
| Oxidation Abs/.1mm *ASTM D7414 >25 21.5 17.5 16.7 | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 26.5 | 19.9 | 19.8 |
| | FLUID DEGRA | OATION | method | limit/base | current | history1 | history2 |
| Base Number (BN) mg KOH/g ASTM D2896 10.2 3.6 6.0 7.5 | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 21.5 | 17.5 | 16.7 |
| | Base Number (BN) | mg KOH/g | ASTM D2896 | 10.2 | 3.6 | 6.0 | 7.5 |



OIL ANALYSIS REPORT

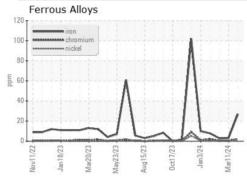


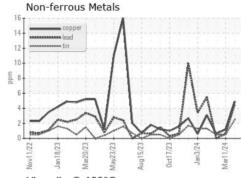


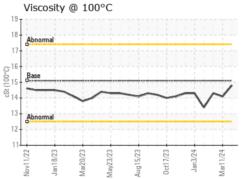
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | 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 | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

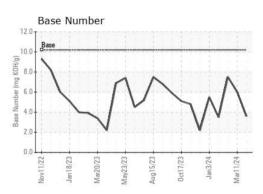
| FLUID PROPE | ERTIES | method | | | | history2 |
|--------------|--------|-----------|------|------|------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 14.8 | 14.1 | 14.3 |

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06134699 Unique Number : 10954164 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0114085 Received : 01 Apr 2024

Tested : 02 Apr 2024 Diagnosed : 03 Apr 2024 - Don Baldridge

GFL Environmental - 836 - Kansas City Hauling

7801 East Truman Road Kansas City, MO US 64126

Contact: Loyce Stewart loyce.stewart@gflenv.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: