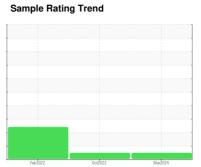


OIL ANALYSIS REPORT



Machine Id 731126 Component
Natural Gas Engine

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





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

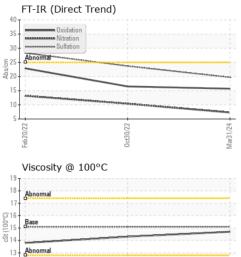
The condition of the oil is acceptable for the time in service.

| 0.4401-5-4150 | | | | | | |
|--|---|---|--|--|---|---|
| SAMPLE INFOR | RMATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | GFL0080096 | GFL0044747 | GFL0021656 |
| Sample Date | | Client Info | | 31 Mar 2024 | 30 Oct 2022 | 20 Feb 2022 |
| Machine Age | hrs | Client Info | | 6377 | 3512 | 2149 |
| Oil Age | hrs | Client Info | | 600 | 1200 | 600 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |
| CONTAMINA | TION | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| WEAR META | LS | method | limit/base | current | history1 | history2 |
| ron | ppm | ASTM D5185(m) | >50 | 5 | 23 | 73 |
| Chromium | ppm | ASTM D5185(m) | >4 | 0 | 2 | 3 |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | 1 | 2 |
| Γitanium | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >9 | <1 | 3 | 5 |
| _ead | ppm | ASTM D5185(m) | >30 | <1 | 2 | 5 |
| Copper | ppm | ASTM D5185(m) | >35 | <1 | 3 | 14 |
| - īn | ppm | ASTM D5185(m) | >4 | 0 | <1 | 3 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| /anadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185(m) | 50 | 33 | 2 | 9 |
| Parium | | ASTM D5185(m) | 5 | 0 | 0 | 1 |
| Jailuili | ppm | 70 TW D3 T03(III) | | | - | |
| | ppm | ASTM D5185(m) | 50 | 49 | 72 | 83 |
| Molybdenum | | , , | 50 | 49 <1 | | 83 8 |
| Molybdenum Manganese | ppm | ASTM D5185(m) | | | 72 | |
| Molybdenum Manganese Magnesium | ppm | ASTM D5185(m) ASTM D5185(m) | 0 | <1 | 72 1 | 8 |
| Molybdenum Manganese Magnesium Calcium | ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 0 560 | <1 526 | 72 1 1048 | 8 726 |
| Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 0 560 1510 | <1 526 1507 | 72 1 1048 1288 | 8 726 1535 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm | ASTM D5185(m) | 0 560 1510 780 870 2040 | <1 526 1507 713 | 72 1 1048 1288 1080 | 8 726 1535 879 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Gulfur | ppm ppm ppm ppm ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 0 560 1510 780 870 2040 | <1 526 1507 713 857 | 72 1 1048 1288 1080 1351 | 8 726 1535 879 1030 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Gulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | 0 560 1510 780 870 2040 | <1 526 1507 713 857 1965 <1 | 72 1 1048 1288 1080 1351 2544 | 8 726 1535 879 1030 2219 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINA | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | 0 560 1510 780 870 2040 | <1 526 1507 713 857 1965 <1 | 72 1 1048 1288 1080 1351 2544 | 8 726 1535 879 1030 2219 <1 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINA | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | 0 560 1510 780 870 2040 | <1 526 1507 713 857 1965 <1 current | 72 1 1048 1288 1080 1351 2544 <1 | 8 726 1535 879 1030 2219 <1 |
| Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINA Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | 0 560 1510 780 870 2040 | <1 526 1507 713 857 1965 <1 current | 72 1 1048 1288 1080 1351 2544 <1 history1 | 8 726 1535 879 1030 2219 <1 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Gulfur Lithium CONTAMINA | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 0 560 1510 780 870 2040 limit/base | <1 526 1507 713 857 1965 <1 current 4 5 | 72 1 1048 1288 1080 1351 2544 <1 history1 4 | 8 726 1535 879 1030 2219 <1 history2 21 6 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAL Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | 0 560 1510 780 870 2040 limit/base >+100 >20 | <1 526 1507 713 857 1965 <1 current 4 5 <1 | 72 1 1048 1288 1080 1351 2544 <1 history1 4 3 | 8 726 1535 879 1030 2219 <1 history2 21 6 3 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAL Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) | 0 560 1510 780 870 2040 limit/base >+100 >20 | <1 526 1507 713 857 1965 <1 current 4 5 <1 current | 72 1 1048 1288 1080 1351 2544 <1 history1 4 3 0 history1 | 8 726 1535 879 1030 2219 <1 history2 3 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINA Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) | 0 560 1510 780 870 2040 limit/base >+100 >20 | <1 526 1507 713 857 1965 <1 current 4 5 <1 current 0 | 72 1 1048 1288 1080 1351 2544 <1 history1 4 3 0 history1 0 | 8 726 1535 879 1030 2219 <1 history2 21 6 3 history2 0 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAL Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm | ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7824* ASTM D7624* ASTM D76124* | 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base | <1 526 1507 713 857 1965 <1 current 4 5 <1 current 0 7.3 | 72 1 1048 1288 1080 1351 2544 <1 history1 4 3 0 history1 0 10.4 | 8 726 1535 879 1030 2219 <1 history2 3 history2 0 13.2 |



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OIL ANALYSIS REPORT



| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------------|------------|---------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | | |
| Yellow Metal | scalar | Visual* | NONE | NONE | | |
| Precipitate | scalar | Visual* | NONE | NONE | | |
| Silt | scalar | Visual* | NONE | NONE | | |
| Debris | scalar | Visual* | NONE | VLITE | | |
| Sand/Dirt | scalar | Visual* | NONE | NONE | | |
| Appearance | scalar | Visual* | 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 | RTIES | method | limit/base | current | history1 | history2 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.1 | 14.7 | 14.3 | 13.8 |

| Visc @ 100°C | cSt | ASTM D7279(m) | 15.1 | 14.7 | 14.3 | 13.8 |
|--|------------------|---|------------|---|--|--|
| GRAPHS | | | | | | |
| Iron (ppm) | | | | Lead (ppm) | | |
| Severe 80 | | | | 50 Severe | | |
| Abnormal | | | | Abnormal | | |
| 40 | | | | 20 | | |
| 20 | | | | 10 | | |
| Feb20/22 - | Oct30/22 . | | Mar31/24 - | , Feb20/22 - | Oct30/22 · | Mar31/24 - |
| | | | Mar | _ | | Mar |
| Aluminum (ppm |) | | | Chromium (| (ppm) | |
| 15 - Severe | | *************************************** | - | G - Severe | | |
| Abnormal | | | | Abnormal | | *************************************** |
| 5 | | | | 2- | | |
| 0 | 2 | | - | 0 10 | 2 | 4 |
| Feb 20/22 | 0ct30/22 | | Mar31/24 | Feb20/22 | 0ct30/22 | Mar31/24 |
| _ | | | _ | | _ | 2 |
| Severe | | | | 200 - Severe | | |
| 60 | | | | 150 | | |
| 1 | | | | | | |
| 20 | | | | 50 | | |
| | 1757 | | 1/24 | | 3/22 | - 62/ |
| Feb2(| 0ct3(| | Mar3 | Feb20 | 0ct3(| Mar31/24 |
| Viscosity @ 100° | C | | | Additives | | |
| 18 - Abnormal | | | | 1400 - calcium | orus | |
| 00 16 - Base | | | | E 1200 - | | |
| | | | | NAMES OF TAXABLE PARTY. | MADOWER STREET, S. | The state of the s |
| 12 | | | | 600 | | The state of the s |
| | :130/22 | | rr31/24 | 0.1 | :130/22 | ar31/24 |
| Viscosity @ 100° No. 100 100° Abnormal 20 Viscosity @ 100° Abnormal Base Abnormal | 0c30/22 Oct30/22 | | Mar31/24 | Additives Additives 1600 1400 1200 1200 800 | 0430)22 - 0430)22 | |



CALA ISO 17025:2017 Accredited Laboratory

Sample No. Lab Number : 02636844 Unique Number : 5786006

: GFL0080096

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 577 - First Class Received Tested

: 22 May 2024 : 22 May 2024 Diagnosed : 22 May 2024 - Wes Davis

8540 Chilliwack Mountain Rd, Chilliwack, BC

CA V2R 3W8 Contact: Derek Jessop djessop@gflenv.com T: (604)798-5301

Test Package : MOB 1 (Additional Tests: Visual) To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.