

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

732007 Component Natural Gas Engine Fluid

PETRO CANADA DURON SHP 15W40 (28 QTS)

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.

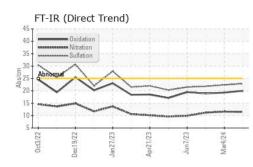
Fluid Condition

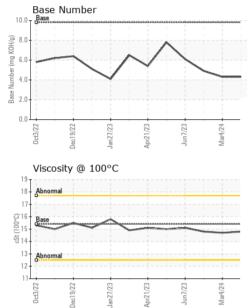
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
|---|---|--|---|--|--|--|
| Sample Number | | Client Info | | GFL0106829 | GFL0106771 | GFL0092084 |
| Sample Date | | Client Info | | 14 May 2024 | 04 Mar 2024 | 18 Dec 2023 |
| Machine Age | hrs | Client Info | | 6229 | 6110 | 5489 |
| Oil Age | hrs | Client Info | | 47152 | 600 | 600 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >50 | 11 | 9 | 8 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | 1 | 2 | 1 |
| Lead | ppm | ASTM D5185m | >30 | 2 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >35 | 1 | <1 | 2 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 1 | 5 | 12 |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | 0 | 1 0 | 5 0 | 12 <1 |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 60 | 1 0 60 | 5 0 53 | 12 <1 58 |
| Boron Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 60 0 | 1 0 60 <1 | 5 0 53 1 | 12 <1 58 <1 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 60 0 1010 | 1 0 60 <1 607 | 5 0 53 1 552 | 12 <1 58 <1 601 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 60 0 1010 1070 | 1 0 60 <1 607 1923 | 5 0 53 1 552 1696 | 12 <1 58 <1 601 1775 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 60 0 1010 1070 1150 | 1 0 60 <1 607 1923 777 | 5 0 53 1 552 1696 722 | 12 <1 58 <1 601 1775 809 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 60 0 1010 1070 1150 1270 | 1 0 60 <1 607 1923 777 1043 | 5 0 53 1 552 1696 722 994 | 12 <1 58 <1 601 1775 809 1063 |
| Boron Barium 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 0 60 0 1010 1070 1150 1270 2060 | 1 0 60 <1 607 1923 777 1043 2900 | 5 0 53 1 552 1696 722 994 2316 | 12 <1 58 <1 601 1775 809 1063 2593 |
| Boron Barium 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 0 60 1010 1070 1150 1270 2060 | 1 0 60 <1 607 1923 777 1043 2900 current | 5 0 53 1 552 1696 722 994 2316 history1 | 12 <1 58 <1 601 1775 809 1063 2593 history2 |
| Boron Barium 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 ASTM D5185m | 0 0 60 0 1010 1070 1150 1270 2060 | 1 0 60 <1 607 1923 777 1043 2900 current 5 | 5 0 53 1 552 1696 722 994 2316 history1 3 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | 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 | 0 0 60 0 1010 1070 1150 1270 2060 kimit/base >+100 | 1 0 60 <1 607 1923 777 1043 2900 current 5 8 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m | 0 0 60 0 1010 1070 1150 1270 2060 limit/base >+100 | 1 0 60 <1 607 1923 777 1043 2900 current 5 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 3 0 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm | ASTM D5185m ASTM D5185m | 0 0 60 0 1010 1070 1150 1270 2060 kimit/base >+100 | 1 0 60 <1 607 1923 777 1043 2900 current 5 8 0 0 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 0 history1 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 <1 ×1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 1010 1070 1150 1270 2060 >timit/base >+100 >20 Imit/base | 1 0 60 <1 607 1923 777 1043 2900 current 5 8 0 0 current 0.1 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 0 history1 0 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 <1 + |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 1010 1070 1150 1270 2060 >timit/base >+100 >20 Imit/base | 1 0 60 <1 607 1923 777 1043 2900 current 5 8 0 current 0.1 11.5 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 3 0 history1 0 history1 0 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 <1 9 <1 history2 0 11.2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 1010 1070 1150 1270 2060 >timit/base >+100 >20 Imit/base | 1 0 60 <1 607 1923 777 1043 2900 current 5 8 0 0 current 0.1 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 0 history1 0 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 <1 + |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >+100 <i>limit/base</i> | 1 0 60 <1 607 1923 777 1043 2900 current 5 8 0 current 0.1 11.5 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 3 0 history1 0 history1 0 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 <1 9 <1 history2 0 11.2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 1010 1070 1150 1270 2060 Imit/base >+100 20 Imit/base >20 Imit/base | 1 0 60 <1 607 1923 777 1043 2900 <u>current</u> 5 8 0 <u>current</u> 0.1 11.5 22.9 | 5 0 53 1 552 1696 722 994 2316 history1 3 3 3 0 history1 0 history1 0 11.6 22.4 | 12 <1 58 <1 601 1775 809 1063 2593 history2 4 9 <1 history2 0 11.2 21.8 |



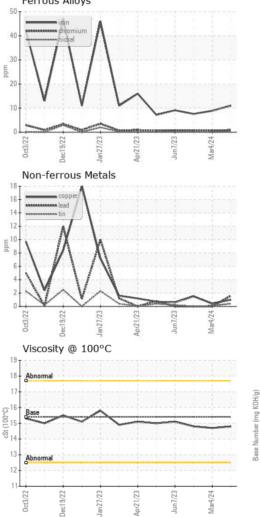
OIL ANALYSIS REPORT

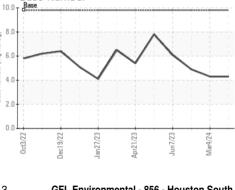




| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *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 | RTIES | method | limit/base | current | history1 | history2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.8 | 14.7 | 14.8 |
| GRAPHS | | | | | | |

Ferrous Alloys





Base Number

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 856 - Houston South Sample No. : GFL0106829 Received : 23 May 2024 8515 Highway 6 South Lab Number : 06188812 Tested : 24 May 2024 Houston, TX Unique Number : 11045564 Diagnosed : 28 May 2024 - Don Baldridge US 77083 Test Package : FLEET Contact: Apolinar Zacarias Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. pzacariascano@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: GFL856 [WUSCAR] 06188812 (Generated: 05/28/2024 13:35:19) Rev: 1

Submitted By: Apolinar Zacarias Page 2 of 2