

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **10719** Component **Transmission (Auto)**

Fluid PETRO CANADA DuraDrive HD Synthetic 668 (--- 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 fluid.

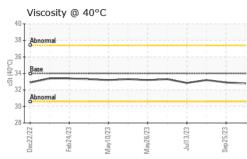
Fluid Condition

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

| SAMPLE INFORM | NATION | method | | | | history2 |
|---|--|--|--|--|--|---|
| Sample Number | | Client Info | | GFL0097874 | GFL0094282 | GFL0091387 |
| Sample Date | | Client Info | | 15 Nov 2023 | 25 Sep 2023 | 28 Aug 2023 |
| Machine Age | hrs | Client Info | | 10696 | 10563 | 10462 |
| Oil Age | hrs | Client Info | | 695 | 10563 | 10462 |
| Oil Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINATI | ON | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| WEAR METALS | 6 | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >160 | 61 | 54 | 50 |
| Chromium | ppm | ASTM D5185m | >5 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >50 | 19 | 19 | 21 |
| Lead | ppm | ASTM D5185m | >50 | <1 | 2 | 2 |
| Copper | ppm | ASTM D5185m | >225 | 11 | 13 | 10 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 3 | 2 |
| 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 | | 102 | 92 | 95 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 2 | 1 |
| Magnesium | ppm | ASTM D5185m | | 3 | 4 | 1 |
| Calcium | ppm | ASTM D5185m | | 128 | 131 | 125 |
| Phosphorus | ppm | ASTM D5185m | | 266 | 269 | 271 |
| | | | | | | |
| | | ASTM D5185m | | 9 | 5 | 0 |
| | ppm ppm | ASTM D5185m ASTM D5185m | | 9 1682 | 5 1868 | 0 2314 |
| Zinc | ppm ppm | | limit/base | | | |
| Zinc Sulfur | ppm ppm | ASTM D5185m | | 1682 | 1868 | 2314 |
| Zinc Sulfur CONTAMINAN | ppm ppm TS ppm | ASTM D5185m method | | 1682 current | 1868 history1 | 2314 history2 |
| Zinc Sulfur CONTAMINAN ^T Silicon | ppm ppm TS | ASTM D5185m method ASTM D5185m | >20 | 1682 current 8 | 1868 history1 9 | 2314 history2 8 |
| Zinc Sulfur CONTAMINAN ^T Silicon Sodium | ppm ppm TS ppm ppm | ASTM D5185m method ASTM D5185m ASTM D5185m | >20 | 1682 current 8 5 | 1868 history1 9 8 | 2314 history2 8 4 |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm TS ppm ppm | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m | >20 >20 | 1682 current 8 5 0 | 1868 history1 9 8 3 | 2314 history2 8 4 1 |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal | ppm ppm TS ppm ppm ppm | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method | >20 >20 limit/base | 1682 current 8 5 0 current | 1868 history1 9 8 3 history1 | 2314 history2 8 4 1 history2 |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal | ppm ppm TS ppm ppm ppm scalar | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *Visual | >20 >20 limit/base NONE | 1682 current 8 5 0 current NONE | 1868 history1 9 8 3 history1 NONE | 2314 history2 8 4 1 history2 NONE |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate | ppm ppm TS ppm ppm ppm ppm scalar scalar | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual | >20 >20 limit/base NONE NONE | 1682 current 8 5 0 current NONE NONE | 1868 history1 9 8 3 history1 NONE NONE | 2314 history2 8 4 1 history2 NONE NONE |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt | ppm ppm TS ppm ppm ppm ppm scalar scalar scalar | ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE | 1682 current 8 5 0 current NONE NONE NONE | 1868 history1 9 8 3 history1 NONE NONE NONE | 2314 history2 8 4 1 history2 NONE NONE NONE |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris | ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar | ASTM D5185m method ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE | 1682 current 8 5 0 current NONE NONE NONE NONE NONE NONE | 1868 history1 9 8 3 history1 NONE NONE NONE NONE NONE NONE | 2314 history2 8 4 1 history2 NONE NONE NONE NONE NONE |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt | ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar | ASTM D5185m method ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE | 1682 current 8 5 0 current NONE NONE NONE NONE | 1868 history1 9 8 3 history1 NONE NONE NONE NONE | 2314 history2 8 4 1 history2 NONE NONE NONE NONE |
| Zinc Sulfur CONTAMINAN ^T Silicon Sodium Potassium VISUAL | ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON | 1682 current 8 5 0 current NONE NONE NONE NONE NONE NONE NONE NON | 1868 history1 9 8 3 history1 NONE NONE NONE NONE NONE NONE NONE NON | 2314 history2 8 4 1 NONE NONE NONE NONE NONE NONE NONE NO |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance | ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar scalar | ASTM D5185m method ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NONE NONE | 1682 current 8 5 0 current NONE NONE NONE NONE NONE NONE NONE NON | 1868 history1 9 8 3 history1 NONE NONE NONE NONE NONE NONE NONE NON | 2314 history2 8 4 1 NONE NONE NONE NONE NONE NONE NONE NO |
| Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor | ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON | 1682 current 8 5 0 current NONE NONE NONE NONE NONE NONE NONE NON | 1868 history1 9 8 3 history1 NONE NONE NONE NONE NONE NONE NONE NON | 2314 history2 8 4 1 NONE NONE NONE NONE NONE NONE NONE NO |



OIL ANALYSIS REPORT



| | FLUID PRO | PERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--|---|---------------------------------|---|----------|------------------|--|
| | Visc @ 40°C | cSt | ASTM D445 | | 32.8 | 32.9 | 33.2 |
| | SAMPLE IM | AGES | method | limit/base | current | history1 | history2 |
| 13 | Color | | | | no image | no image | no image |
| Jul13/23 Sep25/23 | Bottom | | | | no image | no image | no image |
| | | May10/23 | Juli3/23 | Sep25/23 | | | |
| | Non-ferrous Me | Mar/1023 | Pull3/23 | Sep25/23 | | | |
| | Abnormal 37 36 35 34 33 32 34 Abnormal 35 34 33 32 34 Abnormal 35 34 35 34 Abnormal 35 34 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 35 34 Abnormal 32 34 Abnormal 32 Abnormal 33 Abnormal Ab | May10/23 + | Juli3/23 | Sep25/23 | | | |
| | : WearCheck USA : GFL0097874 : 06013592 : 10752736 : FLEET contact Customer So re outside of the ISO | Received Diagnose Diagnosti ervice at 1-80 | i : 20 ed : 23 ician : Do | 0 Nov 2023 3 Nov 2023 on Baldridge 59. | 3 GFL En | S Contact: JO | 0 - Stockbridge Creek Parkway tockbridge, GA US 30281 SHUA TINKER er@gflenv.com T: |



Test Certificate L2367 To discuss this same * - 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:

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