

OIL ANALYSIS REPORT

Sample Rating Trend





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 oil.

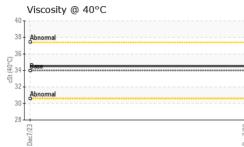
Fluid Condition

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

| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
|--|---|--|--|---|---|--|
| Sample Number | | Client Info | | GFL0092086 | | |
| Sample Date | | Client Info | | 07 Dec 2023 | | |
| Machine Age | hrs | Client Info | | 1152 | | |
| Oil Age | hrs | Client Info | | 600 | | |
| Oil Changed | | Client Info | | Changed | | |
| Sample Status | | | | NORMAL | | |
| | | | 11 11 11 | | | |
| CONTAMINAT Water | ION | method WC Method | limit/base | current | history1 | history2 |
| WEAR METAL | 0 | | | - | historyd | |
| | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >160 | <1 | | |
| Chromium | ppm | ASTM D5185m | | 0 | | |
| Nickel | ppm | ASTM D5185m | >5 | 0 | | |
| Titanium | ppm | ASTM D5185m | | 0 | | |
| Silver | ppm | ASTM D5185m | >5 | 0 | | |
| Aluminum | ppm | | >50 | 0 | | |
| Lead | ppm | ASTM D5185m | >50 | 0 | | |
| Copper | ppm | ASTM D5185m | >225 | 1 | | |
| Tin | ppm | ASTM D5185m | >10 | 0 | | |
| Vanadium | ppm | ASTM D5185m | | <1 | | |
| Cadmium | ppm | ASTM D5185m | | 0 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 67 | | |
| | | | | | | |
| Barium | ppm | ASTM D5185m | | 0 | | |
| | ppm ppm | ASTM D5185m ASTM D5185m | | 0 <1 | | |
| Molybdenum | | | | - | | |
| Molybdenum Manganese | ppm | ASTM D5185m | | <1 | | |
| Molybdenum Manganese | ppm ppm | ASTM D5185m ASTM D5185m | | <1 0 | | |
| Molybdenum Manganese Magnesium Calcium | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | | <1 0 0 | | |
| Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | <1 0 0 153 | | |
| Molybdenum Manganese Magnesium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | <1 0 0 153 202 | | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | <1 0 0 153 202 39 | | |
| 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 | | <1 0 0 153 202 39 1609 | | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method | | <1 0 0 153 202 39 1609 current | | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | >20 | <1 0 0 153 202 39 1609 current 2 | | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm ypm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m | >20 | <1 0 0 153 202 39 1609 current 2 2 2 | | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ypm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >20 >20 | <1 0 0 153 202 39 1609 <u>current</u> 2 2 0 | history1 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal | ppm ppm ppm ppm ppm ppm ppm ppm VTS | ASTM D5185m ASTM D5185m | >20 >20 limit/base | <1 0 0 153 202 39 1609 current 2 2 2 0 0 | history1 history1 | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal | ppm ppm ppm ppm ppm ppm ppm ypm yTS | ASTM D5185m ASTM D5185m | >20 >20 limit/base NONE | <1 0 0 153 202 39 1609 <u>current</u> 2 2 2 0 <u>current</u> NONE | history1 history1 history1 | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate | ppm ppm ppm ppm ppm ppm ppm VTS | ASTM D5185m ASTM D5185m XW Sual | >20 >20 limit/base NONE NONE | <1 0 0 153 202 39 1609 <u>current</u> 2 2 2 0 <u>current</u> NONE NONE | history1 history1 | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt | ppm ppm ppm ppm ppm ppm ppm ypm ypm ppm p | ASTM D5185m ASTM D5185m Yisual | >20 >20 limit/base NONE NONE NONE | <1 0 0 153 202 39 1609 <u>current</u> 2 2 2 0 <u>current</u> NONE NONE NONE | history1 history1 history1 | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal | ppm ppm ppm ppm ppm ppm ppm ppm ypm ppm p | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE | <1 0 0 153 202 39 1609 <u>current</u> 2 2 2 0 <u>current</u> NONE NONE NONE NONE | history1 history1 history1 | history2 history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris | ppm ppm ppm ppm ppm ppm ppm ppm ypm ppm p | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Yisual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE | <1 0 0 153 202 39 1609 current 2 2 2 0 current NONE NONE NONE NONE NONE NONE | history1 history1 history1 | history2 history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance | ppm ppm ppm ppm ppm ppm ppm ppm ypm ppm p | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE | <1 0 0 153 202 39 1609 Current 2 2 0 Current NONE NONE NONE NONE NONE NONE NONE NONE | history1 history1 - | history2 history2 - |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE NONE NONE | <1 0 0 153 202 39 1609 Current 2 2 2 0 Current NONE NONE NONE NONE NONE NONE NONE NON | history1 history1 - | history2 history2 - |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual | >20 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NONE | <1 0 0 153 202 39 1609 <u>current</u> 2 2 2 0 <u>current</u> NONE NONE NONE NONE NONE NONE NONE NON | history1 history1 - | history2 history2 |



OIL ANALYSIS REPORT



| | FLUID PROPE | | method | limit/base | current | history1 | history2 |
|---|--|--|---|------------|----------|----------|-------------------------------------|
| | Visc @ 40°C | cSt | ASTM D445 | | 34.5 | | |
| | SAMPLE IMA | GES | method | limit/base | current | history1 | history2 |
| 23 | Color | | | | no image | no image | no image |
| Dec7/23 | Bottom | | | | no image | no image | no image |
| | GRAPHS | | | L | | | |
| | Ferrous Alloys | | | | | | |
| | 10 9 8 7 6 | | | | | | |
| E d | 4 3 2 | | | | | | |
| | Non-ferrous Meta | | | Dec7/23 | | | |
| | copper s a a a a a b a b a b a b a b a b a b a | 115 | | | | | |
| Ę | 6 | | | | | | |
| | | | | Dec7/23 | | | |
| | Viscosity @ 40°C | | | | | | |
| | 38 Abnormal 37 - 36 - | | | | | | |
| | 35 34 Base 33 | | | | | | |
| | 32 - 31 - Abnormal 30 - | | | | | | |
| | PS29 + 29 + 20 + 20 + 20 + 20 + 20 + 20 + | | | Dec7/23 + | | | |
| Sample No. Lab Number Unique Number | : WearCheck USA - : GFL0092086 : 06032018 : 10781809 | son Ave., Ca 1 : 11 ed : 14 i cian : Dor | 8515 Highway 6 Sou Houston, T US 7708 | | | | |
| | | vice at 1-8 | 00-237-1369 |). | | | olinar Zacaria no@gflenv.co T |

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