

# **OIL ANALYSIS REPORT**

Sample Rating Trend



# Machine Id 731119 Component

**Transmission (Auto)** Fluic

PETRO CANADA DuraDrive HD Synthetic 668 (--- GAL)

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal for time on oil.

#### Contamination

There is no indication of any contamination in the component.

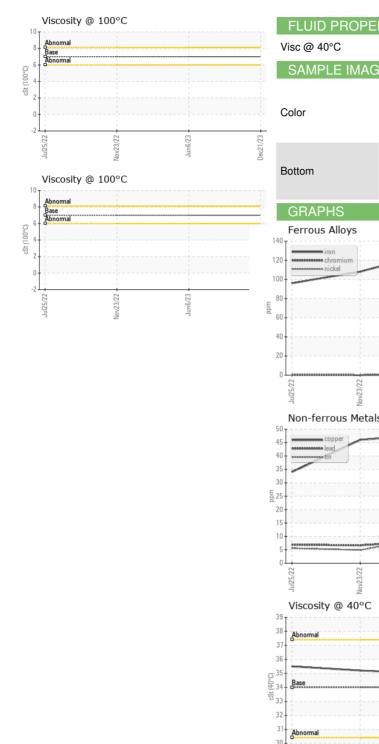
## Fluid Condition

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

SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0103358	GFL0083731	GFL0055657
Sample Date		Client Info		21 Dec 2023	06 Jun 2023	23 Nov 2022
Machine Age	hrs	Client Info		6906	5704	0
Oil Age	hrs	Client Info		6906	5704	1200
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>160	118	127	108
Chromium	ppm	ASTM D5185m	>5	0	<1	0
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>50	47	54	34
Lead	ppm	ASTM D5185m	>50	6	8	7
Copper	ppm	ASTM D5185m		43	48	46
Tin	ppm	ASTM D5185m		7	10	5
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		70	82	99
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Manganese	ppm	ASTM D5185m		2	3	3
Magnesium	ppm	ASTM D5185m		8	1	0
	pp					
•	mag	ASTM D5185m		85	63	52
Calcium	ppm ppm	ASTM D5185m		85 225	63 251	52 257
Calcium Phosphorus	ppm	ASTM D5185m		225	251	257
Calcium						
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base	225 19	251 5 1103	257 5 989
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	225 19 907	251 5	257 5
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm ppm ppm FS	ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m		225 19 907 current 6	251 5 1103 history1 6	257 5 989 history2 6
Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	>20	225 19 907 current	251 5 1103 history1	257 5 989 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm ppm ppm <b>FS</b> ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	>20	225 19 907 current 6 11 1	251 5 1103 history1 6 10	257 5 989 history2 6 0
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm <b>FS</b> ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m ASTM D5185m	>20 >20	225 19 907 current 6 11 1	251 5 1103 history1 6 10 4	257 5 989 history2 6 0 0
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL	ppm ppm ppm <b>FS</b> ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	>20 >20 limit/base	225 19 907 current 6 11 1 1 current	251 5 1103 history1 6 10 4 history1	257 5 989 history2 6 0 0 0 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm <b>S</b> ppm ppm ppm scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *Visual	>20 >20 limit/base NONE	225 19 907 current 6 11 1 1 current NONE	251 5 1103 history1 6 10 4 history1 NONE	257 5 989 history2 6 0 0 0 history2 NONE
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm <b>S</b> ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *Visual	>20 >20 limit/base NONE NONE	225 19 907 current 6 11 1 1 current NONE NONE	251 5 1103 history1 6 10 4 history1 NONE NONE	257 5 989 history2 6 0 0 0 history2 NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm S ppm ppm ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE	225 19 907 current 6 11 1 current NONE NONE NONE	251 5 1103 history1 6 10 4 history1 NONE NONE NONE NONE	257 5 989 history2 6 0 0 0 history2 NONE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm S ppm ppm ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE NONE	225 19 907 current 6 11 1 1 current NONE NONE NONE NONE	251 5 1103 6 10 4 <u>history1</u> NONE NONE NONE NONE NONE	257 5 989 history2 6 0 0 history2 NONE NONE NONE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm pm S Ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE NONE NONE	225 19 907 current 6 11 1 1 current NONE NONE NONE NONE NONE	251 5 1103 6 10 4 <u>history1</u> NONE NONE NONE NONE NONE NONE	257 5 989 history2 6 0 0 history2 NONE NONE NONE NONE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm <b>FS</b> ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 >20 Iimit/base NONE NONE NONE NONE NONE NONE NONE NORE	225 19 907 current 6 11 1 1 current NONE NONE NONE NONE NONE NONE NONE NON	251 5 1103 6 10 4 <u>history1</u> NONE NONE NONE NONE NONE NONE NONE NON	257 5 989 history2 6 0 0 0 history2 NONE NONE NONE NONE NONE NONE NONE NON
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm <b>S</b> ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	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	225 19 907 current 6 11 1 1 current NONE NONE NONE NONE NONE NONE	251 5 1103 history1 6 10 4 4 history1 NONE NONE NONE NONE NONE NONE NONE	257 5 989 history2 6 0 0 0 history2 NONE NONE NONE NONE NONE NONE NONE
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm ppm S ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 >20 Imit/base NONE NONE NONE NONE NONE NONE NONE NON	225 19 907 current 6 11 1 1 current NONE NONE NONE NONE NONE NONE NONE NON	251 5 1103 history1 6 10 4 history1 NONE NONE NONE NONE NONE NONE NONE NON	257 5 989 history2 6 0 0 0 history2 NONE NONE NONE NONE NONE NONE NONE NON



# **OIL ANALYSIS REPORT**



	FLUID PROP	PERTIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	34	34.96	35.0	35.2
	SAMPLE IM	AGES	method	limit/base	current	history1	history2
23	Color				no image	no image	no image
Dec21/23	Bottom				no image	no image	no image
	GRAPHS						
-	Ferrous Alloys						
mqq	Non-ferrous Me Non-ferrous Me Non-ferrous Me		Pun623	Dec21/23			
	Jul25/22		Jun6/23	Dec21/23			
58r 140°C)	Viscosity @ 40°	PC					
Laboratory Sample No. Lab Number	29		d : 26	ry, NC 2751 Dec 2023 Dec 2023	3 GFL Env		<b>ansas City Hauling</b> t Truman Roac ansas City, MC
Unique Number	: 10805064 : ELEET ( Addition	Diagnos	tician : Jon	athan Heste	r		US 6412



 Unique Number
 : 10805064
 Diagnostician
 : Jonathan Hester

 Certificate 12367
 Test Package
 : FLEET (Additional Tests: FT-IR, KV100)

 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)

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Contact/Location: See also GFL823, 834, 837, 840 - Robert Hart - GFL836

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