

# **OIL ANALYSIS REPORT**

Sample Rating Trend

# SEDIMENT

## Machine Id 749012-310059

Component Transmission (Auto)

Fluic

PETRO CANADA DuraDrive HD Synthetic 668 (32 QTS)

## DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

## Wear

All component wear rates are normal.

#### Contamination

There is a moderate amount of visible silt present in the sample.

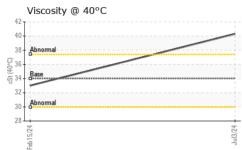
#### Fluid Condition

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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0121886	GFL0092064	
Sample Date		Client Info		03 Jul 2024	15 Feb 2024	
Machine Age	hrs	Client Info		16254	15036	
Oil Age	hrs	Client Info		605	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status		-		ABNORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>325	8	59	
Chromium	ppm	ASTM D5185m	>2	0	0	
Nickel	ppm	ASTM D5185m	>2	0	0	
Titanium	ppm	ASTM D5185m	>3	0	0	
Silver	ppm	ASTM D5185m	>5	0	0	
Aluminum	ppm	ASTM D5185m	>75	6	37	
Lead	ppm	ASTM D5185m	>40	0	1	
		ASTM D5185m	>40 >50	2	15	
Copper Tin	ppm	ASTM D5185m		0	2	
	ppm		>10	-		
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		48	61	
Barium	ppm	ASTM D5185m		0	<1	
Molybdenum	ppm	ASTM D5185m		0	<1	
-	ppm ppm	ASTM D5185m ASTM D5185m		0 <1	<1 <1	
Manganese						
Manganese Magnesium	ppm	ASTM D5185m		<1	<1	
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m		<1 4	<1 6	
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		<1 4 112	<1 6 41	
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 4 112 266	<1 6 41 195	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 4 112 266 133	<1 6 41 195 0	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >20	<1 4 112 266 133 1754	<1 6 41 195 0 997	  
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 4 112 266 133 1754 current	<1 6 41 195 0 997 history1	    history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m		<1 4 112 266 133 1754 current 3	<1 6 41 195 0 997 history1 7	   history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20	<1 4 112 266 133 1754 <u>current</u> 3 2	<1 6 41 195 0 997 history1 7 6	   history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >20	<1 4 112 266 133 1754 <u>current</u> 3 2 1	<1 6 41 195 0 997 history1 7 6 3	   history2 
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >20 limit/base	<1 4 112 266 133 1754 current 3 2 1 current	<1 6 41 195 0 997 history1 7 6 3 3 history1	    history2   history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m XSTM D5185m	>20 >20 limit/base NONE	<1 4 112 266 133 1754 current 3 2 1 current NONE	<1 6 41 195 0 997 history1 7 6 3 3 history1 NONE	   history2   history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Yisual	>20 >20 limit/base NONE NONE	<1 4 112 266 133 1754 current 3 2 1 current NONE NONE NONE	<1 6 41 195 0 997 history1 7 6 3 3 history1 NONE NONE	   history2   history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual	>20 >20 limit/base NONE NONE NONE	<1 4 112 266 133 1754 current 3 2 1 current NONE NONE NONE NONE	<1 6 41 195 0 997 history1 7 6 3 3 history1 NONE NONE NONE NONE	   history2   history2
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 ppm scalar scalar scalar scalar	ASTM D5185m 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	<1 4 112 266 133 1754  Current 3 2 1 Current NONE NONE NONE NONE MODER	<1 6 41 195 0 997 history1 7 6 3 3 history1 NONE NONE NONE NONE NONE	   history2  history2  history2
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 scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE NONE NONE	<1 4 112 266 133 1754  Current 3 2 1  Current  NONE NONE NONE NONE NONE NONE NONE NO	<1 6 41 195 0 997 history1 7 6 3 7 6 3 3 history1 NONE NONE NONE NONE NONE NONE	<ul> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li> <li>history2</li> <li></li> <li></li></ul>
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 TS ppm ppm ppm scalar scalar scalar scalar scalar scalar	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 Imit/base NONE NONE NONE NONE NONE NONE NONE NON	<1 4 112 266 133 1754	<1 6 41 195 0 997 history1 7 6 3 history1 NONE NORML NORML NORML NORML NORML NORML NORML NORME NORML NORME NORML NORME NORML NORML NORME NORME NORML NORML	   history2   history2  history2
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 TS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	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 *Visual	>20 >20 Iimit/base NONE NONE NONE NONE NONE NONE NONE NONE NONE	<1 4 112 266 133 1754  Current 3 2 1 Current 3 2 1 Current NONE NONE NONE NONE NONE NONE NONE NON	<1 6 41 195 0 997 history1 7 6 3 history1 NONE NORML NO	    history2   history2  history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar	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 Imit/base NONE NONE NONE NONE NONE NONE NONE NON	<1 4 112 266 133 1754	<1 6 41 195 0 997 history1 7 6 3 history1 NONE NORML NORML NORML NORML NORML NORML NORML NORME NORML NORME NORML NORME NORML NORML NORME NORME NORML NORML	history2



# **OIL ANALYSIS REPORT**



FLUID PROPE	ERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	34	40.3	33.0	
SAMPLE IMA	GES	method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image
GRAPHS						
Ferrous Alloys						
50 - iron chromium						
40						
Ē_30 -	$\searrow$					
20						
10						
Feb15/24			Jul3/24 .			
 Non-ferrous Meta	als		,			
16 copper 1						
14 12						
10-						
Ed 8-						
6						
2						
	*******	Construction Charles Vicely	24			
Feb15/24			Jul3/24			
Viscosity @ 40°C						
40						
38 - Abnormal						
()- 36 36 34 - <b>B</b> ase						
32 -						
30 - Abnormal						
28 + + 2%			Jul3/24 +			
Feb 15/24			Jul			
WaarChaak USA E	01 Madiaa		NO 07512	CEL En	vironmental - 856	Houston So
: WearCheck USA - 50 : GFL0121886	Recei	ved : 05	5 Jul 2024			ighway 6 Soι
: <mark>06229015</mark> : 11112508	Teste Diagn		Jul 2024 Jul 2024 - Se	an Felton		Houston, 7
			JUI 2024 - 0P			US 7708

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)

Certificate L2367

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