

## **OIL ANALYSIS REPORT**

#### Area MP-105 Machine Id B51036 - PUMP VACUUM BUSCH RA0630 TOPPINGS MULTIVAC (S/N U081602621) Component Pump

Pump Fluid

### PETRO CANADA PURITY FG SYNTHETIC 100 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

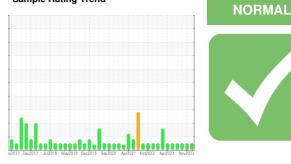
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

#### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



Sample Rating Trend

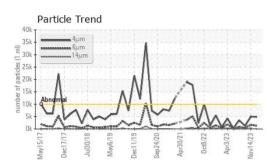
SAMPLE INFORM	<b>NATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0880578	WC0856073	WC0808567
Sample Date		Client Info		09 Jan 2024	14 Nov 2023	26 Sep 2023
Machine Age	wks	Client Info		0	0	0
Oil Age	wks	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	M	method	limit/base		history1	history2
Water	N	WC Method	>.1	NEG	NEG	NEG
			limit/base	-		
WEAR METALS		method		current	history1	history2
Iron	ppm	ASTM D5185m	>90	0	0	0
Chromium	ppm	ASTM D5185m	>5	0	0	0
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm		>3	0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm		>7	1	<1	0
Lead	ppm	ASTM D5185m	>12	0	0	0
Copper	ppm	ASTM D5185m	>30	<1	0	<1
Tin	ppm	ASTM D5185m	>9	0	<1	0
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		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m		0 0	0 0	0
				-	0 <1	
Molybdenum	ppm	ASTM D5185m		0	0 <1 1	0
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m		0	0 <1 1 8	0
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1	0 <1 1	0 0 <1
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 <1	0 <1 1 8	0 0 <1 0
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 <1 449	0 <1 1 8 451	0 0 <1 0 442
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	0 0 <1 <1 449 0	0 <1 1 8 451 0	0 0 <1 0 442 0
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		0 0 <1 <1 449 0 1200	0 <1 1 8 451 0 1242	0 0 <1 0 442 0 1244
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	>60	0 0 <1 <1 449 0 1200 current	0 <1 1 8 451 0 1242 history1	0 0 <1 0 442 0 1244 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	>60	0 0 <1 <1 449 0 1200 current 4	0 <1 1 8 451 0 1242 history1 4	0 0 <1 0 442 0 1244 history2 4
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	>60	0 0 <1 <1 449 0 1200 current 4 <1	0 <1 1 8 451 0 1242 history1 4 <1	0 0 <1 0 442 0 1244 history2 4 <1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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	>60 >20	0 0 <1 <1 449 0 1200 current 4 <1 <1	0 <1 1 8 451 0 1242 history1 4 <1 <1	0 0 <1 0 442 0 1244 <u>history2</u> 4 <1 <1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>60 >20 limit/base	0 0 <1 <1 449 0 1200 current 4 <1 <1 <1 current	0 <1 1 8 451 0 1242 history1 4 <1 <1 <1 history1	0 0 <1 0 442 0 1244 history2 4 <1 <1 <1 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>60 >20 limit/base >10000	0 0 <1 <1 449 0 1200 current 4 <1 <1 <1 current 4818	0 <1 1 8 451 0 1242 history1 4 <1 <1 <1 history1 5002	0 0 <1 0 442 0 1244 history2 4 <1 <1 <1 <1 history2 1201
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>60 >20 limit/base >10000 >2500	0 0 <1 <1 449 0 1200 current 4 <1 <1 <1 current 4818 1265	0 <1 1 8 451 0 1242 history1 4 <1 <1 <1 history1 5002 1704	0 0 <1 0 442 0 1244 history2 4 <1 <1 <1 history2 1201 273
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	>60 >20 <b>limit/base</b> >10000 >2500 >320	0 0 <1 <1 449 0 1200 <u>current</u> 4 <1 <1 <1 <1 <u>current</u> 4818 1265 66	0 <1 1 8 451 0 1242 history1 4 <1 <1 <1 5002 1704 146	0 0 <1 0 442 0 1244 history2 4 <1 <1 <1 <1 1201 273 12
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Potassium Particles >4μm Particles >14μm Particles >21μm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>60 >20 <b>limit/base</b> >10000 >2500 >320 >80	0 0 <1 <1 449 0 1200 current 4 <1 <1 <1 current 4818 1265 66 12	0 <1 1 8 451 0 1242 history1 4 <1 <1 5002 1704 146 33	0 0 <1 0 442 0 1244 history2 4 <1 <1 <1 history2 1201 273 12 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>60 >20 <b>limit/base</b> >10000 >2500 >320 >80 >20	0 0 <1 <1 449 0 1200 current 4 <1 <1 <1 current 4818 1265 66 12 12 1	0 <1 1 8 451 0 1242 history1 4 <1 <1 5002 1704 146 33 4	0 0 <1 0 442 0 1244 history2 4 <1 <1 <1 history2 1201 273 12 2 2 0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium PtLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>60 >20 limit/base >10000 >2500 >320 >80 >20 >4	0 0 <1 <1 449 0 1200 current 4 <1 <1 <1 current 4818 1265 66 12 12 1 0 19/17/13	0 <1 1 8 451 0 1242 history1 4 <1 <1 5002 1704 146 33 4 1	0 0 41 0 442 0 1244 history2 4 <1 <1 <1 1201 273 12 1201 273 12 2 0 0 0

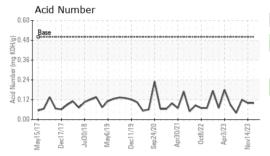
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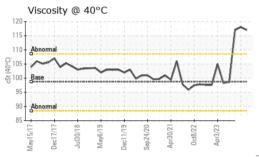
Contact/Location: RYAN LOWE - HORAUS



# **OIL ANALYSIS REPORT**

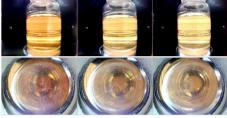






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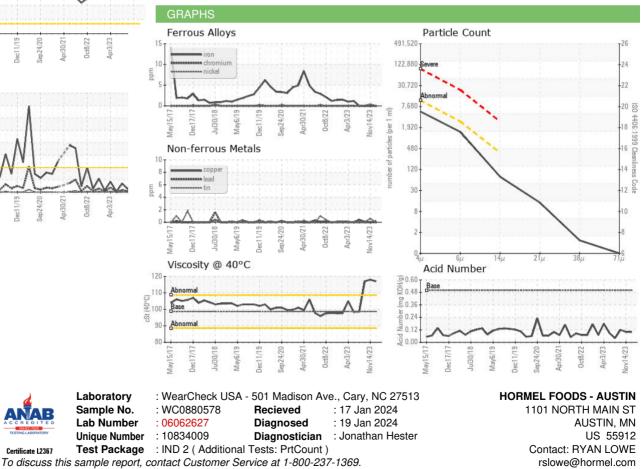
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	98.7	117	118	117
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						



Bottom

\* - 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)



Particle Trend

40 351

mber of particles (1 ml) 30k 12k 12k 12k

5

0

May15/ PC

Certificate L2367

Contact/Location: RYAN LOWE - HORAUS

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