

# **OIL ANALYSIS REPORT**

### Area MP-105 Machine Id B38945 - PUMP VACUUM BUSCH RA0630 HAM LINE 2 (BOTTOM) (S/N C6190) Component

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.

# NORMAL

Sample Rating Trend

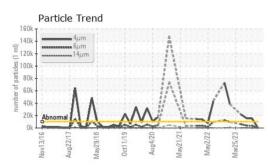
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0880585	WC0838655	WC0820612
Sample Date		Client Info		09 Jan 2024	04 Sep 2023	13 Jul 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ATTENTION	ATTENTION
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	11	12	9
Chromium	ppm	ASTM D5185m	>5	0	0	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		1	0	2
Lead	ppm	ASTM D5185m	>12	0	0	0
Copper	ppm	ASTM D5185m	>30	<1	0	<1
Tin	ppm	ASTM D5185m	>9	0	0	0
Vanadium		ASTM D5185m	20	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ppm			U	-	-
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	1	0
Calcium	ppm	ASTM D5185m		<1	0	0
Phosphorus	ppm	ASTM D5185m		621	426	454
Zinc	ppm	ASTM D5185m		0	5	5
Sulfur	ppm	ASTM D5185m		1505	1336	1375
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	4	3	3
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
FLUID CLEANLIN Particles >4µm	ESS	method ASTM D7647	limit/base >10000	current 967	history1 ▲ 15277	history2
	ESS	ASTM D7647	>10000			
Particles >4μm Particles >6μm	ESS	ASTM D7647	>10000	967	▲ 15277	▲ 15629
Particles >4µm	ESS	ASTM D7647 ASTM D7647	>10000 >2500 >320	967 232	<ul><li>▲ 15277</li><li>▲ 3707</li></ul>	<ul><li>15629</li><li>3771</li></ul>
Particles >4μm Particles >6μm Particles >14μm Particles >21μm	ESS	ASTM D7647 ASTM D7647 ASTM D7647	>10000 >2500 >320	967 232 35	<ul> <li>▲ 15277</li> <li>▲ 3707</li> <li>110</li> </ul>	<ul> <li>▲ 15629</li> <li>▲ 3771</li> <li>▲ 332</li> </ul>
Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ESS	ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>10000 >2500 >320 >80 >20	967 232 35 10	<ul> <li>15277</li> <li>3707</li> <li>110</li> <li>15</li> </ul>	<ul> <li>▲ 15629</li> <li>▲ 3771</li> <li>▲ 332</li> <li>32</li> </ul>
Particles >4μm Particles >6μm Particles >14μm Particles >21μm	ESS	ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>10000 >2500 >320 >80 >20	967 232 35 10 1	<ul> <li>15277</li> <li>3707</li> <li>110</li> <li>15</li> <li>1</li> </ul>	<ul> <li>15629</li> <li>3771</li> <li>332</li> <li>32</li> <li>0</li> </ul>
Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm		ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>10000 >2500 >320 >80 >20 >4	967 232 35 10 1 0	<ul> <li>15277</li> <li>3707</li> <li>110</li> <li>15</li> <li>1</li> <li>0</li> </ul>	<ul> <li>▲ 15629</li> <li>▲ 3771</li> <li>▲ 332</li> <li>32</li> <li>0</li> <li>0</li> </ul>
Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm Oil Cleanliness		ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ISO 4406 (c)	>10000 >2500 >320 >80 >20 >4 >20/18/15	967 232 35 10 1 0 17/15/12	<ul> <li>15277</li> <li>3707</li> <li>110</li> <li>15</li> <li>1</li> <li>0</li> <li>21/19/14</li> </ul>	<ul> <li>▲ 15629</li> <li>▲ 3771</li> <li>▲ 332</li> <li>32</li> <li>0</li> <li>0</li> <li>▲ 21/19/16</li> </ul>

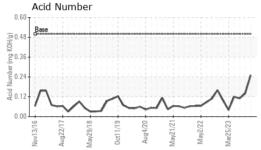
Report Id: HORAUS [WUSCAR] 06062626 (Generated: 01/19/2024 15:07:34) Rev: 1

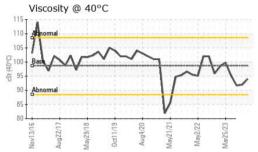
Contact/Location: RYAN LOWE - HORAUS

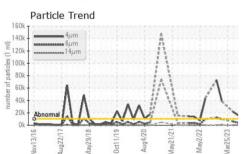


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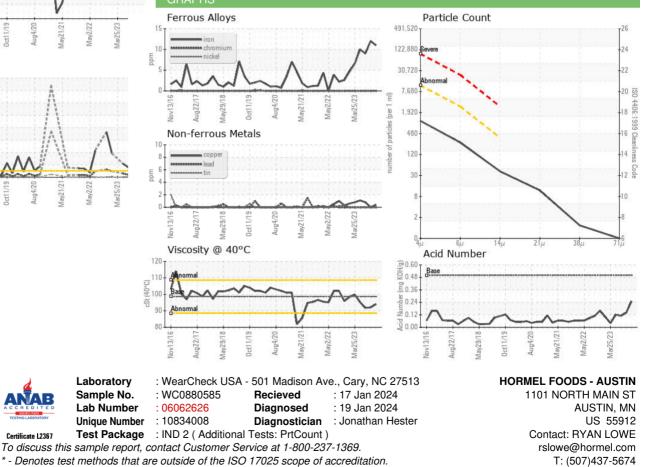


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	94.0	92.0	91.7
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				•		
					11/2	

Bottom



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



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Certificate L2367

Contact/Location: RYAN LOWE - HORAUS

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