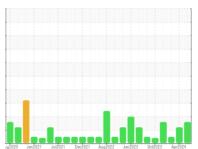


OIL ANALYSIS REPORT

Sample Rating Trend



ISO

MP-105

FB08375 - VACUUM PUMP BUSCH RAU630 CRYOVAC LINE 3 BOTTOM (S/N 400455.1)

Component
Bottom Pump

PETRO CANADA PURITY FG SYNTHETIC 100 (--- GAL

DIAGNOSIS

Recommendation

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 particulates present in the oil.

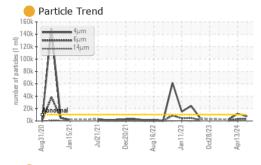
Fluid Condition

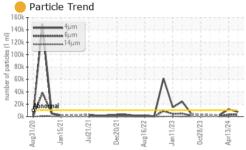
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

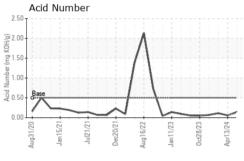
100 (GAL)		ug2020 Jan2	021 Jul2021 Dec2021	Aug2022 Jan2023 Oct2023	Apr2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0930464	WC0907982	WC0894901
Sample Date		Client Info		07 Jun 2024	13 Apr 2024	12 Mar 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ATTENTION	NORMAL
CONTAMINATION	1	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	1	0	2
Chromium	ppm	ASTM D5185m	>5	0	0	<1
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	>7	<1	<1	<1
Lead	ppm	ASTM D5185m	>12	0	0	0
Copper	ppm	ASTM D5185m	>30	0	1	1
Tin	ppm	ASTM D5185m	>9	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES						
ADDITIVEO		memou	mmb base	Current	Thistory	111010172
Boron	ppm	ASTM D5185m	mmbasc	0	0	0
	ppm ppm					
Boron	• •	ASTM D5185m		0	0	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m		0 0	0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 0 0	0 0 0	0 0 <1
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 0	0 0 0 <1	0 0 <1 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 0 0	0 0 0 <1 <1	0 0 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 0 0 0	0 0 0 <1 <1 <1	0 0 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 0 0 0 0 0 540	0 0 0 <1 <1 <1 <1 517	0 0 <1 <1 0 0 553
Boron Barium 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 ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 0 0 0 540	0 0 0 <1 <1 <1 517	0 0 <1 <1 0 0 553
Boron Barium 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 ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 0 0 0 540 4 1698	0 0 0 <1 <1 <1 517 0 1661 history1	0 0 <1 <1 0 0 0 553 0
Boron Barium 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 ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 0 0 540 4 1698	0 0 0 <1 <1 <1 <1 517 0 1661 history1	0 0 <1 <1 0 0 553 0 1678
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >60	0 0 0 0 0 0 540 4 1698 current	0 0 0 <1 <1 <1 517 0 1661 history1	0 0 <1 <1 0 0 0 553 0 1678 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >60	0 0 0 0 0 0 540 4 1698 current	0 0 0 <1 <1 <1 517 0 1661 history1	0 0 <1 <1 0 0 553 0 1678 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >60 >20	0 0 0 0 0 0 540 4 1698 current 0 3	0 0 0 <1 <1 <1 517 0 1661 history1 0 4	0 0 <1 <1 0 0 553 0 1678 history2 0 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >60 >20 limit/base	0 0 0 0 0 0 540 4 1698 current 0 3 0	0 0 0 <1 <1 <1 517 0 1661 history1 0 4	0 0 <1 <1 0 0 0 553 0 1678 history2 0 4 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >60 >20 limit/base >10000	0 0 0 0 0 0 540 4 1698 current 0 3 0	0 0 0 <1 <1 <1 <1 517 0 1661 history1 0 4 2 history1 11871 3239 260	0 0 <1 <1 <1 0 0 553 0 1678 history2 0 4 0 history2 2262 890 137
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	limit/base >60 >20 limit/base >10000 >2500	0 0 0 0 0 0 540 4 1698 current 0 3 0 current 7480	0 0 0 <1 <1 <1 <1 517 0 1661 history1 0 4 2 history1 11871 3239	0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	limit/base >60 >20 limit/base >10000 >2500 >320	0 0 0 0 0 0 540 4 1698 current 0 3 0 current 7480 3368 510	0 0 0 <1 <1 <1 <1 517 0 1661 history1 0 4 2 history1 11871 3239 260	0 0 <1 <1 <1 0 0 553 0 1678 history2 0 4 0 history2 2262 890 137
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >5µm Particles >14µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >60 >20 limit/base >10000 >2500 >320 >80	0 0 0 0 0 0 540 4 1698 current 0 3 0 current 7480 3368 510 162	0 0 0 <1 <1 <1 <1 517 0 1661 history1 0 4 2 history1 11871 3239 260 67 3 0	0 0 -(1) -(1) 0 0 553 0 1678 history2 0 4 0 history2 2262 890 137 46
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >60 >20 limit/base >10000 >2500 >320 >80 >20	0 0 0 0 0 0 0 540 4 1698 current 0 3 0 current 7480 3368 510 162 11	0 0 0 <1 <1 <1 <1 517 0 1661 history1 0 4 2 history1 11871 3239 260 67 3	0 0 -(1 -(1 0 0 0 553 0 1678 history2 0 4 0 history2 2262 890 137 46 3

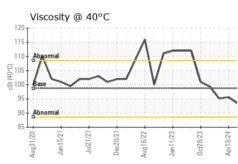


OIL ANALYSIS REPORT





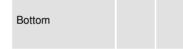


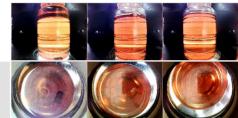


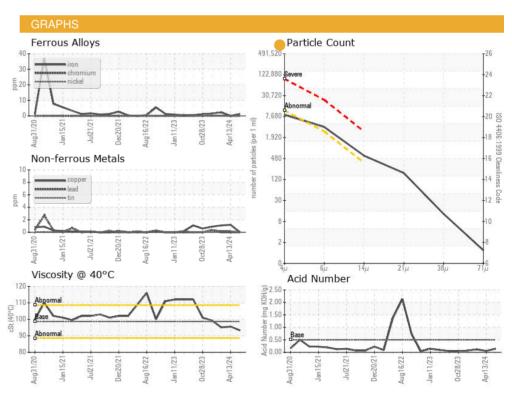
VISUAL						
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	98.7	93.3	95.6	95.1
SAMPLE IMAGES						

SAMPLE IMAGES			

Color











Laboratory Sample No.

: WC0930464 Lab Number : 06208686 Unique Number : 11076147

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 13 Jun 2024 **Tested** : 14 Jun 2024

Diagnosed : 15 Jun 2024 - Don Baldridge

Test Package : IND 2 (Additional Tests: PrtCount) Certificate 12367 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)

AUSTIN, MN US 55912

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F: (507)437-9805 Contact/Location: RYAN LOWE - HORAUS