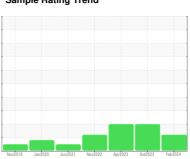


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



MAX 10 HEATER 2

Component **Hydraulic System**

PETRO CANADA CALFLO AF (22 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 silt (particulates < 14 microns in size) present in the oil.

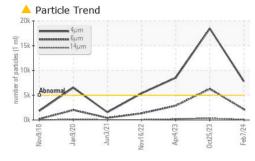
Fluid Condition

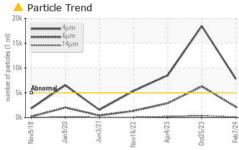
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

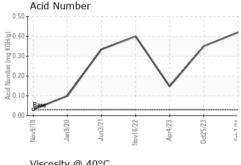
		Nov2018	Jan2020 Jun2021	Nov2022 Apr2023 Oct2023	Feb2024	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0111459	PCA0096795	PCA0088491
Sample Date		Client Info		07 Feb 2024	25 Oct 2023	04 Apr 2023
Machine Age	mths	Client Info		12	8	2
Oil Age	mths	Client Info		12	8	2
Oil Changed		Client Info		N/A	N/A	Changed
Sample Status				ATTENTION	ABNORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	0	0
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	<1	0
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	<1	<1	0
Tin	ppm	ASTM D5185m	>20	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron		AOTAL DELOS	0	0	0	0
DOTOTI	ppm	ASTM D5185m	U			U
Barium	ppm		0	0	20	0
		ASTM D5185m ASTM D5185m	0	0	20	
Barium Molybdenum	ppm	ASTM D5185m	0	0	20	0
Barium Molybdenum Manganese Magnesium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	0 0 <1 0	20 0 0 0	0 0 <1 1
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	0 0 <1 0	20 0	0 0 <1 1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 0 270	0 0 <1 0 0 180	20 0 0 0 0 0 204	0 0 <1 1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 0 270	0 0 <1 0	20 0 0 0 0	0 0 <1 1
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	0 0 0 0 0 0 270	0 0 <1 0 0 180	20 0 0 0 0 0 204	0 0 <1 1 0 131
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	0 0 0 0 0 0 270 0 10	0 0 <1 0 0 180	20 0 0 0 0 0 204 20	0 0 <1 1 0 131
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	0 0 0 0 0 0 270 0 10	0 0 <1 0 0 180 0	20 0 0 0 0 0 204 20	0 0 <1 1 0 131 0 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 0 270 0 10	0 0 -<1 0 0 180 0 0 current	20 0 0 0 0 0 204 20 0 history1	0 0 <1 1 0 131 0 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 0 0 270 0 10 limit/base	0 0 0 <1 0 0 180 0 0 current	20 0 0 0 0 0 204 20 0 history1	0 0 -<1 1 0 131 0 -<1 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 0 0 270 0 10 limit/base	0 0 0 <1 0 0 180 0 0 current <1	20 0 0 0 0 204 20 0 history1	0 0 <1 1 0 131 0 <1 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base	0 0 180 0 180 0 current <1 <1 0 current 7795	20 0 0 0 0 204 20 0 history1 1 2 0 history1	0 0 0 <1 1 1 0 131 0 <1 history2 0 0 0 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >1300	0 0 0 <1 0 0 180 0 0 current <1 <1 0	20 0 0 0 0 204 20 0 history1 1 2 0 history1 1 8456 6286	0 0 0 11 1 0 131 0 <1 history2 0 0 0 history2 4 8502 4 2879
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647	0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 <1 0 0 180 0 0 current <1 <1 <1 0 current ✓1 <1 0	20 0 0 0 0 204 20 0 history1 1 2 0 history1 18456 6286 355	0 0 0 131 0 131 0 <1 history2 0 0 history2 2879 203
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 <1 0 0 180 0 0 current <1 <1 <1 0 current ▲ 7795 ▲ 2155	20 0 0 0 0 204 20 0 history1 1 2 0 history1 1 8456 6286 355 69	0 0 0 11 1 0 131 0 <1 history2 0 0 0 history2 4 8502 4 2879
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >160 >40 >10	0 0 0 180 0 180 0 current <1 <1 0 current 1 7795 2155 97 19 0	20 0 0 0 0 204 20 0 history1 1 2 0 history1 1 8456 6286 355 69 1	0 0 0 11 1 0 131 0 <1 history2 0 0 0 0 history2 ▲ 8502 ▲ 2879 ▲ 203 ▲ 52 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >160 >40 >10	0 0 0 -<1 0 0 180 0 0 current <1 <1 0 current ▲ 7795 ▲ 2155 97 19 0	20 0 0 0 0 204 20 0 history1 1 2 0 history1 1 8456 6286 355 69 1 0	0 0 0 <1 1 1 0 131 0 <1 history2 0 0 0 0 history2 ▲ 8502 ▲ 2879 ▲ 203 ▲ 52
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >160 >40 >10	0 0 0 180 0 180 0 current <1 <1 0 current 1 7795 2155 97 19 0	20 0 0 0 0 204 20 0 history1 1 2 0 history1 1 8456 6286 355 69 1	0 0 0 <1 1 0 131 0 <1 history2 0 0 0 0 history2 ▲ 8502 ▲ 2879 ▲ 203 ▲ 52 2

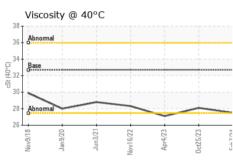


OIL ANALYSIS REPORT









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	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	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID FROF	EULIES	method			HISTOLAL	HISTORYZ
Visc @ 40°C	cSt	ASTM D445	32.7	27.5	28.1	27.1

	SAMP	LE IMAGES	
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Color

Bottom





GRAPHS Particle Count Ferrous Alloys 491 520 122,88 30,72 Feb7/24 (per 1 Non-ferrous Metals 480 120 Viscosity @ 40°C Acid Number ® 0.50 H 0.40 cSt (40°C) Ĕ 0.30 흔 0.20 0.00 Acid Num 0.00





Certificate L2367

Laboratory Sample No.

Lab Number : 06090102 Unique Number: 10882955

Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0111459

Received **Tested**

Diagnosed

: 15 Feb 2024 : 16 Feb 2024

: 17 Feb 2024 - Don Baldridge

GALLAGHER CORPORATION 3908 MORRISON DR GURNEE, IL

US 60031 Contact: BRAD CLIFF bcliff@gallaghercorp.com

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)

F: (847)249-3473 Contact/Location: BRAD CLIFF - GALGURIL

T: (847)249-3440