

## **OIL ANALYSIS REPORT**





Component **Hydraulic System** PETRO CANADA CALFLO AF (23 GAL)

### DIAGNOSIS

Machine Id MAX 3

#### A Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is a high amount of particulates present in the oil.

#### Fluid Condition

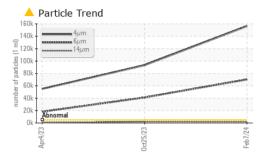
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

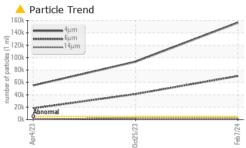
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0111451	PCA0096788	PCA0088483
Sample Date		Client Info		07 Feb 2024	25 Oct 2023	04 Apr 2023
Machine Age	mths	Client Info		14	10	3
Oil Age	mths	Client Info		14	10	3
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATI	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	NEG
WEAR METALS	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		<1	<1	0
Tin	ppm	ASTM D5185m	>20	<1	<1	0
Vanadium	ppm	ASTM D5185m	200	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	0	0	20	0
		ASTM D5185m	0	0	0	0
Molybdenum	ppm					
Molybdenum Manganese	ppm ppm		0	<1	0	<1
Manganese	ppm	ASTM D5185m	0	<1 0		<1
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m		0	0	
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	0 0	0 0 0 0	1 <1
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 270	0 0 132	0 0 0 158	1 <1 95
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	0 0	0 0 0 0	1 <1
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 270 0	0 0 132 0	0 0 0 158 19	1 <1 95 0
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 0 270 0 10 limit/base	0 0 132 0 <1 current	0 0 158 19 0 history1	1 <1 95 0 4 history2
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 <b>method</b> ASTM D5185m	0 0 270 0 10 limit/base	0 0 132 0 <1 current 0	0 0 158 19 0 history1 0	1 <1 95 0 4 history2 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 270 0 10 limit/base >15	0 0 132 0 <1 current	0 0 158 19 0 history1	1 <1 95 0 4 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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	0 0 270 0 10 limit/base >15	0 0 132 0 <1 <u>current</u> 0 0	0 0 158 19 0 history1 0 3	1 <1 95 0 4 <u>history2</u> 0 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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	0 0 270 0 10 limit/base >15 >20	0 0 132 0 <1 <u>current</u> 0 0 0	0 0 158 19 0 history1 0 3 0	1 <1 95 0 4 history2 0 0 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL	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	0 0 270 0 10 limit/base >15 >20 limit/base	0 0 132 0 <1 current 0 0 0 0 0 0 current	0 0 158 19 0 history1 0 3 0 0 history1	1 <1 95 0 4 history2 0 0 0 0 0 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm	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 ASTM D5185m	0 0 270 0 10 limit/base >15 >20 limit/base >5000	0 0 132 0 <1 current 0 0 0 0 0 current 156330	0 0 158 19 0 history1 0 3 0 0 history1 ▲ 93277	1 <1 95 0 4 history2 0 0 0 0 0 0 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D7647	0 0 270 0 10 10 >15 >20 limit/base >20 limit/base >5000 >1300	0 0 132 0 <1 current 0 0 0 0 0 current 156330 ▲ 156330	0 0 158 19 0 history1 0 3 0 0 history1 0 3 0 0 4 41174	1 <1 95 0 4 history2 0 0 0 0 0 history2 0 0 0 55017 ▲ 55017
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm	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 ASTM D7647 ASTM D7647 ASTM D7647	0 0 270 0 10 10 >15 >15 >20 limit/base >5000 >1300 >160	0 0 132 0 <1 current 0 0 0 0 0 current 156330 ▲ 156330 ▲ 70317 ▲ 2126	0 0 158 19 0 history1 0 3 0 0 history1 0 3 0 4 1174 ▲ 2172	1 <1 95 0 4 history2 0 0 0 0 0 history2 0 55017 ▲ 18147 ▲ 599
Manganese Magnesium Calcium Phosphorus Zinc Sulfur <b>CONTAMINAN</b> Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >14µm Particles >21µm	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 ASTM D7647 ASTM D7647 ASTM D7647	0 0 270 0 10 10 >15 >20 20 1imit/base >20 >15 >5000 >1300 >160 >40 >40 >10	0 0 132 0 <1 current 0 0 0 0 0 current 156330 ▲ 156330 ▲ 70317 ▲ 2126 ▲ 260	0 0 158 19 0 history1 0 3 0 history1 0 3 0 4 1174 ▲ 93277 ▲ 41174	1 <1 95 0 4 history2 0 0 0 0 0 bistory2 ▲ 55017 ▲ 18147 ▲ 599 ▲ 84
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >21µm Particles >38µm	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 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 270 0 10 10 >15 >20 20 1imit/base >20 >15 >5000 >1300 >160 >40 >40 >10	0 0 132 0 <1 current 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 158 19 0 history1 0 3 0 history1 ▲ 93277 ▲ 41174 ▲ 2172 ▲ 324 4	1 <1 95 0 4 history2 0 0 0 0 history2 ▲ 55017 ▲ 18147 ▲ 599 ▲ 84 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 270 0 10 10 >15 >20 <u>limit/base</u> >20 <u>limit/base</u> >5000 >1300 >1300 >160 >40 >10 >3	0 0 132 0 <1 current 0 0 0 0 0 current 156330 ▲ 156330 ▲ 70317 ▲ 2126 ▲ 260 3 0	0 0 158 19 0 history1 0 3 0 history1 ▲ 93277 ▲ 41174 ▲ 2172 ▲ 324 4 0	1 <195 0 4 history2 0 0 0 0 history2 ▲ 55017 ▲ 18147 ▲ 599 ▲ 84 1 0 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >4µm Particles >14µm Particles >38µm Particles >38µm Particles >71µm Oil Cleanliness	ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 270 0 10 10 >15 >20 20 20 20 20 20 20 20 20 20 20 20 20 2	0 0 132 0 <1 current 0 0 0 0 0 current 156330 ▲ 156330 ▲ 156330 ▲ 2126 ▲ 260 3 0 3 0 24/23/18	0 0 158 19 0 history1 0 3 0 history1 0 3 0 4 1174 4 1174 4 2172 4 324 4 0 2172 4 324 4 0	1 <195 0 4 history2 0 0 0 bistory2 ↓ 55017 ↓ 18147 ↓ 599 ▲ 84 1 0 0 ↓ 84 1 0 ↓ 84 1 0 ↓ 84 1 0 ↓ 84 1 0 0 ↓ 84 1 0 0 ↓ 84 1 0 0 ↓ 84 1 0 0 ↓ 84 ↓ 84 ↓ 84 ↓ 84 ↓ 84 ↓ 84 ↓ 84 ↓ 84 ↓ 85

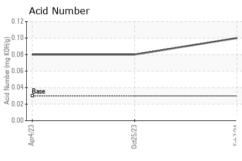
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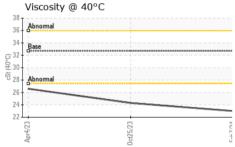


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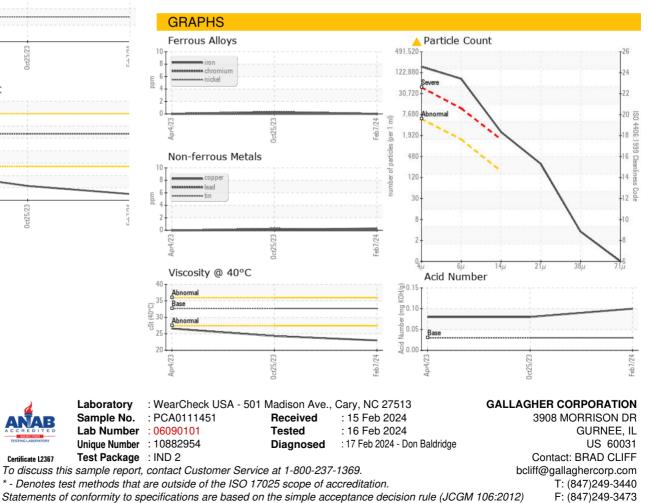






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.7	23.0	24.3	26.6
SAMPLE IMAG	ES	method	limit/base	current	history1	history2
Color						

Bottom



Certificate L2367

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Contact/Location: BRAD CLIFF - GALGURIL