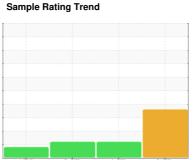


# **PROBLEM SUMMARY**



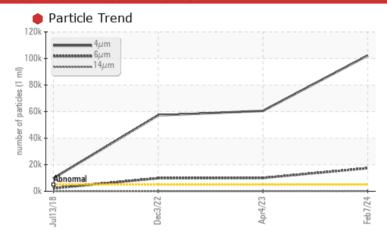


# MAX 4 Component

**Hydraulic System** 

PETRO CANADA CALFLO AF (18 GAL)

## **COMPONENT CONDITION SUMMARY**



## RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TE	ST RESULTS			
Sample Status		SEVERE	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647 >	5000 • 102229	<u>▲</u> 60548	<u></u> 57202
Particles >6µm	ASTM D7647 >	1300 <b>• 17382</b>	▲ 10002	<u> </u>
Oil Cleanliness	ISO 4406 (c) >	19/17/14 <b>24/21/14</b>	A 23/21/14	A 23/20/13

Customer Id: GALGURIL Sample No.: PCA0111452 Lab Number: 06090098 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

#### **RECOMMENDED ACTIONS** Action **Status** Date Done By Description ? Change Filter We recommend you service the filters on this component. Resample Resample in 30-45 days to monitor this situation. The air breather requires service. If unrated, we recommend that you replace with a **Check Breathers** ? suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather Check Seals Check seals and/or filters for points of contaminant entry.

## HISTORICAL DIAGNOSIS

## 04 Apr 2023 Diag: Doug Bogart



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



## 03 Dec 2022 Diag: Don Baldridge



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



#### 13 Jul 2018 Diag: Jonathan Hester





Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





# **OIL ANALYSIS REPORT**

MAX 4 Component

**Hydraulic System** 

PETRO CANADA CALFLO AF (18 GAL)

# Sample Rating Trend

## **DIAGNOSIS**

### Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

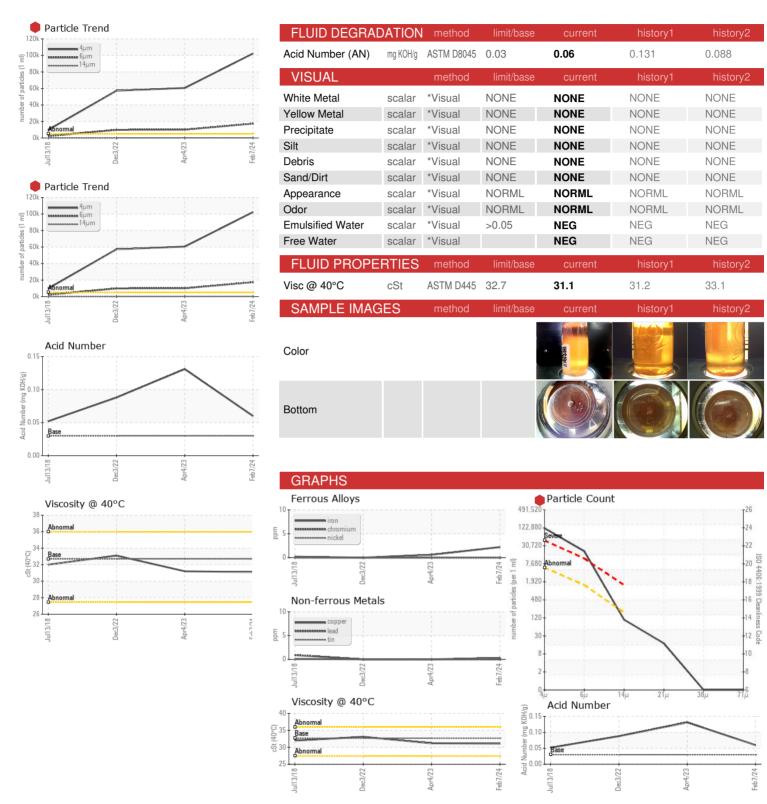
## **Fluid Condition**

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

		Jul2011	3 Dec2022	Apr2023 Fe	b2024	
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0111452	PCA0088484	PCA0067935
Sample Date		Client Info		07 Feb 2024	04 Apr 2023	03 Dec 2022
Machine Age	yrs	Client Info		6	5	5
Oil Age	yrs	Client Info		6	5	5
Oil Changed		Client Info		N/A	N/A	Not Changd
Sample Status				SEVERE	ABNORMAL	ABNORMAL
CONTAMINAT	TION	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	2	<1	0
Chromium	ppm	ASTM D5185m	>20	0	0	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	0	0
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	<1	0	0
Tin	ppm	ASTM D5185m	>20	<1	0	0
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
	ppm					
Boron Barium		ASTM D5185m ASTM D5185m ASTM D5185m	0	0	0	0
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	0	0	0	0
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	0 0 0	0 0 0	0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0	0 0 0 <1 0	0 0 0 <1 <1 <1	0 0 0 0 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 0 270	0 0 0 <1 0 224	0 0 0 <1 <1 <1 <1 239	0 0 0 0 0 0 0 236
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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 0 270	0 0 0 <1 0 0 224	0 0 0 <1 <1 <1 239	0 0 0 0 0 0 0 236 <1
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	0 0 0 0 0 0 0 270 0	0 0 0 <1 0 224	0 0 0 <1 <1 <1 <1 239	0 0 0 0 0 0 0 236 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 0 0 0 270	0 0 0 <1 0 0 224 3 16	0 0 0 <1 <1 <1 239 0 3	0 0 0 0 0 0 236 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 0 0 0 270 0	0 0 0 <1 0 0 224 3 16 current	0 0 0 <1 <1 <1 <1 239 0 3 history1	0 0 0 0 0 0 236 <1 0 history2
Boron 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 0 224 3 16 current	0 0 0 <1 <1 <1 239 0 3 history1	0 0 0 0 0 0 0 236 <1 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 0 0 0 270 0 10	0 0 0 <1 0 0 224 3 16 current	0 0 0 <1 <1 <1 <1 239 0 3 history1	0 0 0 0 0 0 236 <1 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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 0 224 3 16 current	0 0 0 <1 <1 <1 239 0 3 history1	0 0 0 0 0 0 0 236 <1 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEAN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  MEthod ASTM D5185m	0 0 0 0 0 0 270 0 10 limit/base >20 limit/base	0 0 0 0 <1 0 0 224 3 16 current 3 0 0 102229	0 0 0 <1 <1 <1 239 0 3 history1 3 0 0 history1 ▲ 60548	0 0 0 0 0 0 236 <1 0 history2 3 <1 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEAN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	0 0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >1300	0 0 0 0 <1 0 0 224 3 16 current 3 0 0 current 102229 17382	0 0 0 <1 <1 <1 239 0 3 history1 3 0 0 history1 △ 60548 △ 10002	0 0 0 0 0 0 236 <1 0 history2 3 <1 0 history2 ^ 57202 ↑ 9856
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEAN Particles >4µm Particles >14µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m ASTM D7647 ASTM D7647	0 0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 0 <1 0 0 224 3 16 current 3 0 0 current 102229 17382 92	0 0 0 <1 <1 <1 239 0 3 history1 3 0 0 history1 △ 60548 △ 10002 87	0 0 0 0 0 0 0 236 <1 0 history2 3 <1 0 history2 △ 57202 △ 9856 69
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEAN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  MEthod ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 0 270 0 10 limit/base >15 >20 limit/base >5000 >1300 >160 >40	0 0 0 0 <li>0 0 21 0 0 224 3 16 current 3 0 0 current 102229 17382 92 15</li>	0 0 0 <1 <1 <1 239 0 3 history1 3 0 0 history1 △ 60548 △ 10002 87 19	0 0 0 0 0 0 236 <1 0 history2 3 <1 0 history2 △ 57202 △ 9856 69 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEAN Particles >4µm Particles >6µm Particles >21µm Particles >38µm	ppm	ASTM D5185m  Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 0 0 0 0 0 0 0 0 10 0 10 15 > 15 >	0 0 0 0 21 0 0 224 3 16 current 3 0 0 current 102229 17382 92 15 0	0 0 0 <1 <1 <1 239 0 3 history1 3 0 0 history1 ▲ 60548 ▲ 10002 87 19 1	0 0 0 0 0 0 0 236 <1 0 history2 3 <1 0 history2 △ 57202 △ 9856 69 5 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEAN Particles >4µm Particles >14µm Particles >21µm	ppm	ASTM D5185m  MEthod ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 0 0 0 0 0 0 0 0 10 0 10 15 > 15 >	0 0 0 0 <li>0 0 21 0 0 224 3 16 current 3 0 0 current 102229 17382 92 15</li>	0 0 0 <1 <1 <1 239 0 3 history1 3 0 0 history1 △ 60548 △ 10002 87 19	0 0 0 0 0 0 236 <1 0 history2 3 <1 0 history2 △ 57202 △ 9856 69 5



# OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number

: PCA0111452 : 06090098 **Unique Number** : 10882951 Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested** 

Diagnosed

: 15 Feb 2024

: 16 Feb 2024

: 16 Feb 2024 - Wes Davis

Certificate L2367 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)

**GALLAGHER CORPORATION** 

3908 MORRISON DR GURNEE, IL US 60031

Contact: BRAD CLIFF bcliff@gallaghercorp.com

T: (847)249-3440 F: (847)249-3473

Report Id: GALGURIL [WUSCAR] 06090098 (Generated: 02/16/2024 14:40:25) Rev: 1

Contact/Location: BRAD CLIFF - GALGURIL