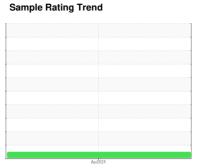


# **OIL ANALYSIS REPORT**

# Système de commande de gouvernail 12G02HPU2 - HPU2

Hydraulic System

PETRO CANADA HYDREX AW 32 (--- GAL)





## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### Wear

All component wear rates are normal.

## Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

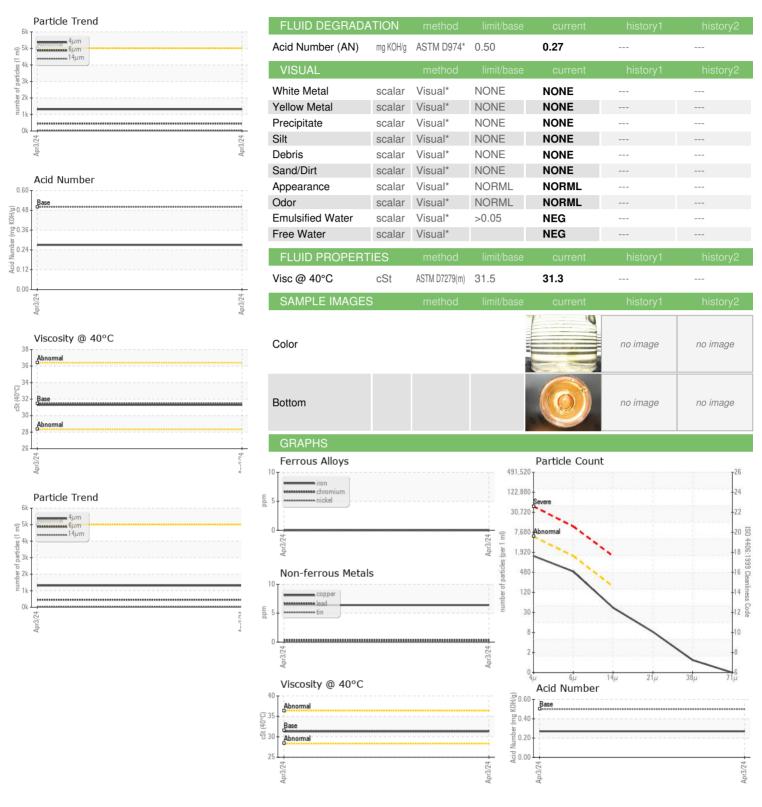
#### **Fluid Condition**

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

				Apr2024		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
	WATION		IIIIII/Dase			HISTOLYZ
Sample Number		Client Info		WC0866054		
Sample Date		Client Info		03 Apr 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		1500		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>20	0		
Chromium	ppm	ASTM D5185(m)	>10	0		
lickel	ppm	ASTM D5185(m)	>10	0		
itanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Numinum	ppm	ASTM D5185(m)	>10	0		
.ead	ppm	ASTM D5185(m)	>20	<1		
Copper	ppm	ASTM D5185(m)	>20	6		
in	ppm	ASTM D5185(m)	>10	0		
Intimony		ASTM D5185(m)	710	0		
anumony /anadium	ppm	ASTM D5185(m)		0		
	ppm	. ,		0		
Beryllium	ppm	ASTM D5185(m)		-		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
				_		
Boron	ppm	ASTM D5185(m)	0	0		
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0		
Barium		. ,				
Barium Molybdenum	ppm	ASTM D5185(m)	0	0		
Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m)	0	0		
Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	0 0 0		
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	0 0 0 1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 50	0 0 0 1 49		
Barium Molybdenum Manganese Magnesium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 50 330	0 0 0 1 49 312		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 50 330 430	0 0 0 1 49 312 401		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 50 330 430	0 0 0 1 49 312 401 680		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Linc Gulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 50 330 430 760	0 0 0 1 49 312 401 680 <1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 50 330 430 760	0 0 0 1 49 312 401 680 <1	     history1	    history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 50 330 430 760	0 0 0 1 49 312 401 680 <1	     history1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm	ASTM D5185(m)	0 0 0 50 330 430 760	0 0 0 1 49 312 401 680 <1 current	history1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm	ASTM D5185(m)	0 0 0 0 50 330 430 760 limit/base >15	0 0 0 1 49 312 401 680 <1 current 0 <1	history1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Godium Potassium FLUID CLEANLIF	ppm	ASTM D5185(m)	0 0 0 50 330 430 760 limit/base >15	0 0 0 1 49 312 401 680 <1 current 0 <10 0	history1 history1	history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Particles >4µm Particles >6µm	ppm	ASTM D5185(m)  method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 50 330 430 760 limit/base >15 >20 limit/base	0 0 0 1 49 312 401 680 <1 current 0 current 1310	history1 history1	history2
Barium Molybdenum Manganese Magnesium Phosphorus Zinc Bulfur Lithium CONTAMINANTS Silicon Sodium Potassium Particles >4µm Particles >6µm Particles >14µm	ppm	ASTM D5185(m)  METHOD  ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 1 49 312 401 680 <1 current 0 <1 0 current 1310 450 37	history1 history1	history2 history2
Barium Molybdenum Manganese Magnesium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Particles >4µm Particles >14µm Particles >21µm	ppm	ASTM D5185(m)  METHOD  ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >5000 >1300 >160 >40	0 0 0 1 49 312 401 680 <1 current 0 <1 0 current 1310 450 37 7	history1 history1	history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185(m)  METHOD  ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 1 49 312 401 680 <1 current 0 <1 0 current 1310 450 37	history1 history1	history2 history2



## **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited Laboratory

Report Id: PIERRERAD [WCAMIS] 02630589 (Generated: 04/23/2024 09:29:45) Rev: 1

Laboratory Sample No.

Test Package : MAR 2

: WC0866054 Lab Number : 02630589

Unique Number : 5763721

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 22 Apr 2024

Tested : 23 Apr 2024 Diagnosed : 23 Apr 2024 - Kevin Marson

CCGS Pierre Radisson, 101 Boul. Champlain

Quebec, QC CA G1K 7Y7 Contact: Pierre Radisson

**Canadian Coast Guard** 

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. PierreRadissonCE@ccgs-ngcc.gc.ca T: (418)563-1737

Validity of results and interpretation are based on the sample and information as supplied.

Contact/Location: Pierre Radisson - PIERRERAD