

## **OIL ANALYSIS REPORT**

Sample Rating Trend





931027 Component Hydraulic System

### PETRO CANADA HYDREX MV 32 (--- GAL)

# DIAGNOSIS

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation.

Machine Id

#### Wear

All component wear rates are normal.

#### Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

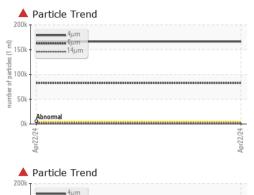
#### Fluid Condition

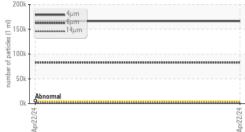
The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

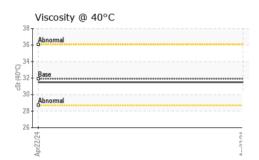
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0112702		
Sample Date		Client Info		22 Apr 2024		
Machine Age	kms	Client Info		71800		
Oil Age	kms	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				SEVERE		
CONTAMINAT	TION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	16		
Chromium	ppm	ASTM D5185(m)	>10	0		
Nickel	ppm	ASTM D5185(m)	>4	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>5	<1		
Lead	ppm	ASTM D5185(m)	>4	0		
Copper	ppm	ASTM D5185(m)	>15	1		
Tin	ppm	ASTM D5185(m)	>4	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base 0	current 0	history1	history2
Boron Barium	ppm ppm		0			
Boron		ASTM D5185(m)	0	0		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0	0 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	0 0 0		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 1	0 0 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330	0 0 0 <1 50 320		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 1 0 50 330 430	0 0 0 <1 50 320 405	  	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330	0 0 0 <1 50 320 405 744	   	
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760	0 0 0 <1 50 320 405	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 1 0 50 330 430	0 0 0 <1 50 320 405 744	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	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)	0 0 1 0 50 330 430 760	0 0 0 <1 50 320 405 744 <1 <b>current</b> 1		
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAM Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760	0 0 0 <1 50 320 405 744 <1	       history1	       history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760	0 0 0 <1 50 320 405 744 <1 <b>current</b> 1	       history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 50 330 430 760 Iimit/base >15	0 0 0 <1 50 320 405 744 <1 <b>Current</b> 1 3	       history1	       history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAM Silicon Sodium Potassium FLUID CLEAN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 1 50 330 430 760 760 <b>Imit/base</b> >15 >20 <b>Imit/base</b> >5000	0 0 0 4 1 50 320 405 744 <1	       history1  	        history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 1 50 330 430 760 <b>imit/base</b> >15 >20 <b>imit/base</b>	0 0 0 <1 50 320 405 744 <1 current 1 3 <1 current	      history1   history1	       history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760 760 500 5 5 5 0 5 0 5 0 0 0 0 0 0 0 0 0 0	0 0 0 2 3 50 320 405 744 <1 0 0 0 1 3 <1 1 3 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	      history1   history1 	      history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 1 50 330 430 430 760 50 50 50 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0 0 0 3 1 50 320 405 744 <1	      history1   history1   history1	        history2  history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Patticles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 1 50 330 430 760 760 500 >15 >15 >20 <b>limit/base</b> >20 <b>limit/base</b> >5000 >1300 >160 >40 >40	0 0 0 3 1 50 320 405 744 <1 Current 1 3 <1 Current 1 3 <1 1 3 <1 0 2224 ▲ 2227 5	       history1  history1	       history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEAN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 1 50 330 430 760 760 500 >15 >15 >20 <b>limit/base</b> >20 <b>limit/base</b> >5000 >1300 >160 >40 >40	0 0 0 3 1 50 320 405 744 <1	       history1  history1	         history2  history2

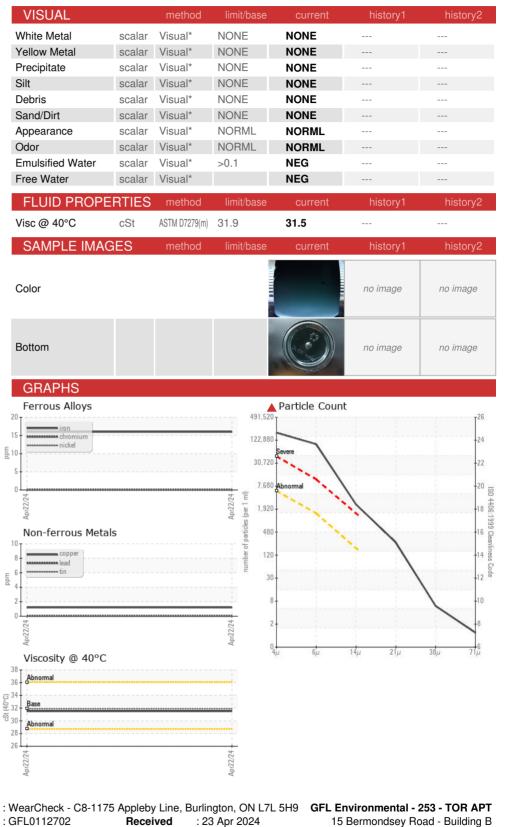


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Lab Number : 02630978 Tested : 23 Apr 2024 ISO 17025:2017 Accredited Laboratory Unique Number : 5772131 Diagnosed : 23 Apr 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: PrtCount) To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

CA M4B 1Y9 Contact: Natalia Stalynska nstalynska@gflenv.com Т: F: Submitted By: ?

Report Id: GFL253 [WCAMIS] 02630978 (Generated: 04/23/2024 17:33:35) Rev: 1

CALA

Laboratory

Sample No.

Toronto, ON