

# **OIL ANALYSIS REPORT**

Sample Rating Trend

## Machine Id T001374 (S/N 24-M-01-2605)

Component Hydraulic System

## PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)

### DIAGNOSIS

#### Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

#### Wear

All component wear rates are normal.

#### Contamination

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

#### Fluid Condition

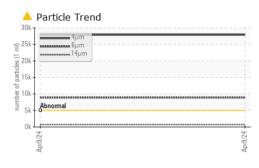
The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

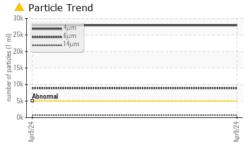


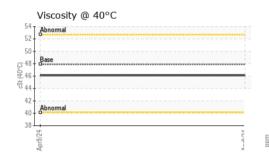
SAMPLE INFORM	/IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0910011		
Sample Date		Client Info		09 Apr 2024		
Machine Age	hrs	Client Info		80		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
	NI	mathad	limit/base	ourroat	biotom	history 0
CONTAMINATIO	N	method		current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	<1		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>20	0		
Lead	ppm	ASTM D5185(m)	>20	0		
Copper	ppm	ASTM D5185(m)	>20	2		
Tin	ppm	ASTM D5185(m)	>20	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
Boron	ppm	method ASTM D5185(m)	limit/base	current 0	history1	history2
	ppm ppm				history1  	
Boron		ASTM D5185(m)	0	0	history1  	
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0	0 0	history1   	
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	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 1 0	0 0 0 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	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 1 0 100	0 0 0 <1 105	  	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 0 100 670	0 0 0 <1 105 648	   	
Boron Barium Molybdenum Manganese Magnesium Calcium 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) ASTM D5185(m)	0 0 1 0 100 670 850	0 0 0 <1 105 648 860	    	
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 0 100 670 850	0 0 0 <1 105 648 860 1546	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	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 0 100 670 850 1600	0 0 0 <1 105 648 860 1546 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	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 1 0 100 670 850 1600	0 0 0 <1 105 648 860 1546 <1 current	      history1	       history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 limit/base >15	0 0 0 <1 105 648 860 1546 <1 <i>current</i>	     history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 limit/base >15	0 0 0 <1 105 648 860 1546 <1 <b>current</b> <1 <1	       history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 1 0 100 670 850 1600 Imit/base >15 >20	0 0 0 <1 105 648 860 1546 <1 <b>current</b> <1 <1 <1 <1	       history1  	       history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 1 0 100 670 850 1600 1600 1 1600 1 1600 1 1 100 1 100 1 100 1 100 1 100 1 100 1 100 1 100 1 100 1 100 1 1000000	0 0 0 <1 105 648 860 1546 <1 current <1 <1 <1 <1 <1 <1 <1	      history1   history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 1 0 100 670 850 1600 1600 1600 15 515 >20 1imit/base >20	0 0 0 4 1 105 648 860 1546 <1 € urrent <1 <1 <1 <1 <1 <1 <1 <1 27888	      history1   history1	      history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 1 0 670 850 1600 imit/base >15 >20 imit/base >20 >1300 >160	0 0 0 10 <1 105 648 860 1546 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <2 888 €0 27888 €0 0 27888 €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 CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D76477 ASTM D7647	0 0 0 1 0 670 850 1600 imit/base >15 >20 imit/base >20 >1300 >160	0 0 0 1 105 648 860 1546 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <2 888 €0 1546 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	       history1  history1	       history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 1 1 0 100 670 850 1600 1600 1000 1000 1000 1000 1000 10	0 0 0 4 1 105 648 860 1546 4 1546 4 1546 4 1 4 1 4 1 4 1 4 1 4 2 1 4 1 4 27888 ▲ 8900 ▲ 732 ▲ 188 ● 17		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 1 1 0 100 670 850 1600 1600 1000 1000 1000 1000 1000 10	0 0 0 3 3 4 105 648 860 1546 3 4 1546 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 3 4 3 3 4 3 3 4 3 3 4 3 4 3 3 4 5 4 5	history1 history1	

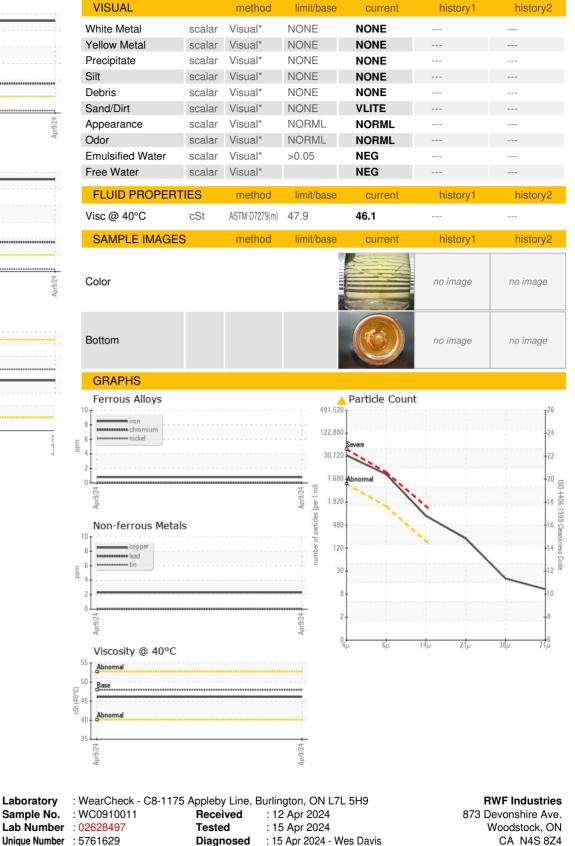


# **OIL ANALYSIS REPORT**









Test Package : MOB 2 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.

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Laboratory

Sample No.

CA N4S 8Z4 Contact: Tami Arnold tamia@rwfbron.com T: F: (519)421-0028

Report Id: RWFWOO [WCAMIS] 02628497 (Generated: 04/15/2024 08:51:08) Rev: 1

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Contact/Location: Tami Arnold - RWFWOO Page 2 of 2