

OIL ANALYSIS REPORT

Sample Rating Trend

Machine Id M01536 (S/N OFTX30023D007) Component

Hydraulic System

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

DIAGNOSIS

A Recommendation

We advise that you check for visible metal particles in the oil. 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.

A Wear

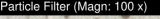
Light concentration of visible metal present.

Contamination

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

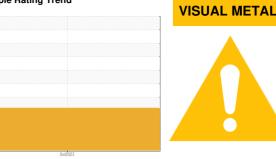
Fluid Condition

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





Report Id: RWFWOO [WCAMIS] 02604442 (Generated: 12/22/2023 09:44:31) Rev: 1

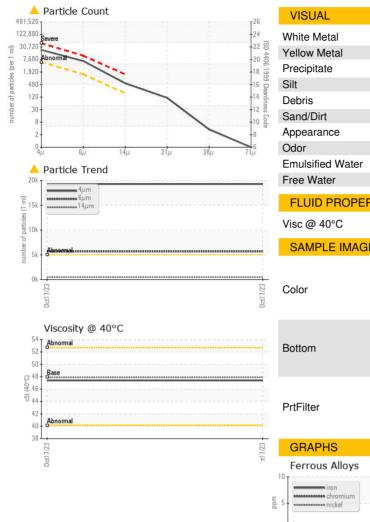


/DRAULIC OIL (-	GAL)			0ct2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0848452		
Sample Date		Client Info		17 Oct 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
CONTAMINATIO	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	<1		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	<1		
Fitanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>20	<1		
_ead	ppm	ASTM D5185(m)	>20	0		
Copper	ppm	ASTM D5185(m)	>20	<1		
Fin	ppm	ASTM D5185(m)	>20	0		
Antimony	ppm	ASTM D5185(m)		0		
/anadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
	~~~~	ASTM D5185(m)	0	0		
Boron	ppm					
	ppm ppm	ASTM D5185(m)	0	0		
Barium	ppm	. ,	0	0		
Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m)				
Barium Nolybdenum Nanganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0	0		
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0	0 0		
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 1 0	0 0 1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 1 0 100	0 0 1 102		
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)	0 1 0 100 670	0 0 1 102 643		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 1 0 100 670 850	0 0 1 102 643 821	  	   
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)	0 1 0 100 670 850	0 0 1 102 643 821 1618 <1	  	   
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)	0 1 0 100 670 850 1600	0 0 1 102 643 821 1618 <1	    	   
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) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 1 0 100 670 850 1600 limit/base	0 0 1 102 643 821 1618 <1 current	     history1	     history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	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) ASTM D5185(m)	0 1 0 100 670 850 1600 limit/base	0 0 1 102 643 821 1618 <1 current <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) 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 1 0 100 670 850 1600 limit/base >15	0 0 1 102 643 821 1618 <1 current <1 <1 <1 <1 <1	     history1 	     history2 
Barium Aolybdenum Aanganese Aagnesium Calcium Phosphorus Zinc Sulfur Sulfur Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 1 0 100 670 850 1600 limit/base >15 >20	0 0 1 102 643 821 1618 <1 current <1 <1 <1 <1 <1	      history1  	     history2  
Barium Aolybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 1 0 100 670 850 1600 limit/base >15 >20 limit/base	0 0 1 102 643 821 1618 <1	     history1   history1	     history2   history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 1 0 100 670 850 1600 limit/base >15 >20 limit/base >5000	0 0 1 102 643 821 1618 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	     history1   history1 	     history2   history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D76477 ASTM D7647	0 1 0 100 670 850 1600 limit/base >15 >20 limit/base >5000 >1300	0 0 1 102 643 821 1618 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	      history1   history1	     history2  history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Soulfur Soulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm Particles >21μm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 1 0 100 670 850 1600 1600 1600 2 5 5 0 5 20 10 10 10 10 2 10 2 10 2	0 0 1 102 643 821 1618 <1 current <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	     history1  history1  history1	     history2  history2
Barium Aolybdenum Aanganese Aagnesium Calcium Phosphorus Zinc Soulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >14μm Particles >21μm Particles >38μm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 1 0 100 670 850 1600 1600 1600 >15 >20 1imit/base >5000 >1300 >160 >40 >10	0 0 1 102 643 821 1618 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 19286 ▲ 19286 ▲ 5654 ▲ 487 ▲ 98	      history1   history1	     history2  history2  history2
Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 1 0 100 670 850 1600 1600 1600 >15 >20 1imit/base >5000 >1300 >160 >40 >10	0 0 1 102 643 821 1618 <1 current <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	       history1  history1   	      history2  history2  history2

Contact/Location: Tami Arnold - RWFWOO



# **OIL ANALYSIS REPORT**



<b>T</b> 26	VISUAL		method	limit/base	current	history1	history2
-24	White Metal	scalar	Visual*	NONE			
-22 8	Yellow Metal	scalar	Visual*	NONE	NONE		
-20 Cleanlines -16 Cleanlines -14 Inc. -12 State	Precipitate	scalar	Visual*	NONE	NONE		
-16 0	Silt	scalar	Visual*	NONE	NONE		
-14 1	Debris	scalar	Visual*	NONE	NONE		
-12 s -10 od	Sand/Dirt	scalar	Visual*	NONE	NONE		
-8	Appearance	scalar	Visual*	NORML	NORML		
38µ 71µ	Odor	scalar	Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>0.05	NEG		
	Free Water	scalar	Visual*		NEG		
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D7279(m)	47.9	47.4		
	SAMPLE IMAGES	6	method	limit/base	current	history1	history2
0ct17/23	Color					no image	no image
	Bottom					no image	no image
	PrtFilter					no image	no image
±17/23	GRAPHS						
22	Ferrous Alloys				article Filter (Ma	ap: 100 x	
	Non-ferrous Metals	5		0ct17/23			
aboratory ample No. ab Number Inique Number est Package	: WearCheck - C8-117 : WC0848452 F : 02604442 E	Recieved Diagnos Diagnost	d : 20   ed : 22   tician : Kev	Dec 2023 Dec 2023 rin Marson		873 E	<b>IWF Industries</b> Devonshire Ave. Woodstock, ON CA N4S 8Z4 ct: Tami Arnold

CALA

ISO 17025:2017 Accredited Laboratory

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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