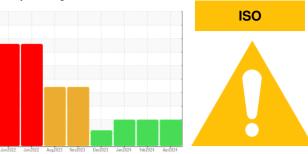


### **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# MAIN PRESS 4

Hydraulic System Fluid PETRO CANADA HYDREX AW 46 (13000 LTR)

#### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

#### Wear

All component wear rates are normal.

#### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

#### Fluid Condition

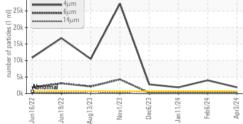
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

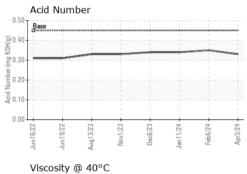
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		WC0921560	WC0899901	WC	
Sample Date		Client Info		03 Apr 2024	06 Feb 2024	11 Jan 2024	
Machine Age	mths	Client Info		0	0	0	
Oil Age	mths	Client Info		0	0	0	
Oil Changed		Client Info		N/A	N/A	N/A	
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL	
CONTAMINATION	N	method	limit/base	current	history1	history2	
Water		WC Method	>0.05	NEG	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	10	11	11	
Chromium	ppm	ASTM D5185(m)	>20	1	1	1	
Nickel	ppm	ASTM D5185(m)	>20	0	0	<1	
Titanium	ppm	ASTM D5185(m)		0	0	0	
Silver	ppm	ASTM D5185(m)		0	0	0	
Aluminum	ppm	ASTM D5185(m)	>20	0	<1	<1	
Lead	ppm	ASTM D5185(m)	>20	0	<1	<1	
Copper	ppm	ASTM D5185(m)	>20	4	5	5	
Tin	ppm	ASTM D5185(m)	>20	0	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
ADDITIVES		methou	initity base	current	Thistory I	inotory 2	
Boron	ppm	ASTM D5185(m)	0.0	<1	<1	<1	
	ppm ppm						
Boron		ASTM D5185(m)	0.0	<1	<1	<1	
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0	<1 0	<1 0	<1 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.1	<1 0 0	<1 0 0	<1 0 0	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.0 0.0 0.1 0.0	<1 0 0 0	<1 0 0 0	<1 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 0.0 0.1 0.0 0.3	<1 0 0 0 2	<1 0 0 0 2	<1 0 0 0 2	
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 0.0 0.1 0.0 0.3 50	<1 0 0 2 53	<1 0 0 2 53	<1 0 0 2 54	
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 0.0 0.1 0.0 0.3 50 315	<1 0 0 2 53 335	<1 0 0 2 53 339	<1 0 0 2 54 342	
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 0.0 0.1 0.0 0.3 50 315 411	<1 0 0 2 53 335 391	<1 0 0 2 53 339 389	<1 0 0 2 54 342 394	
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 0.0 0.1 0.0 0.3 50 315 411	<1 0 0 2 53 335 391 730	<1 0 0 2 53 339 389 797	<1 0 0 2 54 342 394 773	
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) ASTM D5185(m)	0.0 0.0 0.1 0.0 0.3 50 315 411 712	<1 0 0 2 53 335 391 730 <1 current	<1 0 0 2 53 339 389 797 <1	<1 0 0 2 54 342 394 773 <1	
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 0.0 0.1 0.0 0.3 50 315 411 712	<1 0 0 2 53 335 391 730 <1 current 0	<1 0 0 2 53 339 389 797 <1 history1	<1 0 0 2 54 342 394 773 <1 history2	
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) ASTM D5185(m)	0.0 0.0 0.1 0.0 0.3 50 315 411 712	<1 0 0 2 53 335 391 730 <1 current	<1 0 0 2 53 339 389 797 <1 history1 0	<1 0 0 2 54 342 394 773 <1 history2 <1	
Boron 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)	0.0 0.0 0.1 0.0 0.3 50 315 411 712 limit/base >15	<1 0 0 2 53 335 391 730 <1 current 0 1	<1 0 0 2 53 339 389 797 <1 history1 0 1	<1 0 0 2 54 342 394 773 <1 history2 <1 1	
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 0.0 0.1 0.0 0.3 50 315 411 712 limit/base >15 >20	<1 0 0 2 53 335 391 730 <1 current 0 1 1	<1 0 0 2 53 339 389 797 <1 history1 0 1 2	<1 0 0 2 54 342 394 773 <1 history2 <1 1 1 1 2	
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 0.0 0.1 0.0 50 315 411 712 imit/base >20 imit/base	<1 0 0 0 2 53 335 391 730 <1 0 0 1 1 1 current	<1 0 0 2 53 339 389 797 <1 <b>history1</b> 0 1 2 <b>history1</b>	<1 0 0 2 54 342 394 773 <1 history2 <1 1 1 12 history2	
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 0.0 0.1 0.0 50 315 411 712 limit/base >15 >20 limit/base >640	<1 0 0 0 2 53 335 391 730 <1 0 0 1 0 1 1 0 0 1 1 1 0 0 1891	<1 0 0 2 53 339 389 797 <1 • • • • • • • • • • • • • • • • • •	<1 0 0 2 54 342 394 773 <1 • • • • • • • • • • • • • • • • • •	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium 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)	0.0 0.0 0.1 0.0 0.3 50 315 411 712 /////////////////////////////////	<1 0 0 2 53 335 391 730 <1 Current 0 1 1 1 Current 1 8 1891 ▲ 1891	<1 0 0 2 53 339 389 797 <1 • • • • • • • • • • • • • • • • • •	<1 0 0 2 54 342 394 773 <1 history2 <1 1 12 history2 ∧ 1882 ∧ 1882 ∧ 439	
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 0.0 0.1 0.0 0.3 50 315 411 712 /////////////////////////////////	<1 0 0 2 53 335 391 730 <1 current 0 1 1 1 current 1 8 1891 ▲ 1891 ▲ 355 ● 36	<1 0 0 0 2 53 339 389 797 <1  history1 0 1 2 history1 4 4010 4 99 27	<1 0 0 2 54 342 394 773 <1 history2 <1 1 12 history2 1882 1882 1882 439 49	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium 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 D76477 ASTM D76477 ASTM D76477	0.0 0.0 0.1 0.3 50 315 411 712 <b>imit/base</b> >15 >20 <b>imit/base</b> >640 >20 >20 >20 >4 >3	<1 0 0 0 2 53 335 391 730 <1 0 0 1 0 1 1 0 1 1 0 1 1 0 0 1 1 1 0 0 1 1 0 0 1 1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0	<1 0 0 2 53 339 389 797 <1 history1 0 1 2 history1 4010 499 27 9	<1 0 0 0 2 54 342 394 773 <1 history2 <1 1 12 history2 182 1882 1882 1882 <16 10 10 10 10 10 10 10 10 10 10 10 10 10	
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 ASTM D7647	0.0 0.0 0.1 0.3 50 315 411 712 <b>imit/base</b> >15 >20 <b>imit/base</b> >640 >20 >20 >20 >4 >3	<1 0 0 2 53 335 391 730 <1 Current 0 1 1 1 Current 1 8 1891 ▲ 355 ● 36 ● 10 1 1	<1 0 0 2 53 339 389 797 <1 history1 0 1 2 history1 4 0 1 2 history1 4 9 1 1	<1 0 0 2 54 342 394 773 <1 history2 <1 1 12 history2  439  439 	

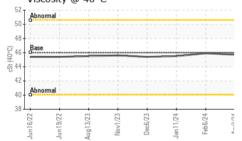


## **OIL ANALYSIS REPORT**

Part 30k 125k 120k 10k 10k 0k 0k 0k 0k 0k 0k 0k 0k 0k	ticle Tr 4μm 6μm 14μm		$\bigwedge$				
Jun16/22 -	Jun19/22 -	Aug13/23 -	Nov1/23 -	Dec6/23 -	Jan11/24 -	Feb6/24 -	Apr3/24 -
A Part	ticle Tr	end	^				I

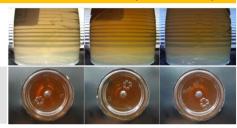




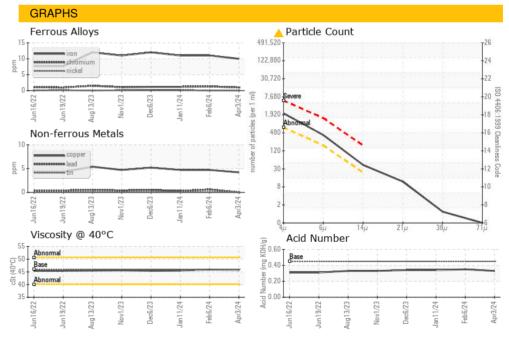


FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.45	0.33	0.35	0.34
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.0	45.7	45.9	45.5
SAMPLE IMAGES	6	method	limit/base	current	history1	history2

Color



Bottom



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA : WC0921560 Sample No. Received : 05 Apr 2024 Lab Number : 02626974 Tested : 08 Apr 2024 ISO 17025:2017 Accredited Unique Number : 5760106 Diagnosed : 08 Apr 2024 - Wes Davis Laboratory Test Package : IND 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. Hydro Extrusion North 5675 Kennedy Road

Mississauga, ON CA L4Z 2H9 Contact: Harsh Murria Harsh.murria@hydro.com T: (819)462-0479 F: (866)462-6478

Report Id: INDMIS [WCAMIS] 02626974 (Generated: 04/08/2024 08:49:06) Rev: 1

Contact/Location: Harsh Murria - INDMIS Page 2 of 2