

OIL ANALYSIS REPORT

Sample Rating Trend

Machine Id M01537 (S/N OFTX30023D008) Component

Hydraulic System

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

DIAGNOSIS

Recommendation

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.

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.

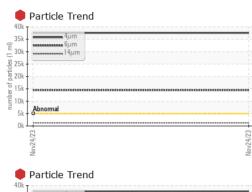
DRAULIC OIL (- GAL)			Nov2023		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0832173		
Sample Date		Client Info		24 Nov 2023		
Aachine Age	hrs	Client Info		0		
Dil Age	hrs	Client Info		0		
Dil Changed	1110	Client Info		N/A		
Sample Status				SEVERE		
CONTAMINATION	٧	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		
lickel	ppm	ASTM D5185(m)	>20	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>20	<1		
_ead	ppm	ASTM D5185(m)	>20	0		
Copper	ppm	ASTM D5185(m)		<1		
Fin	ppm	ASTM D5185(m)	>20	0		
Antimony	ppm	ASTM D5185(m)	20	0		
•				-		
/anadium				0		
/anadium Beryllium	ppm ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Beryllium Cadmium		ASTM D5185(m) ASTM D5185(m)	limit/base	0		
Beryllium Cadmium ADDITIVES	ppm ppm	ASTM D5185(m) ASTM D5185(m) method	limit/base	0 0 current	 history1	 history2
Beryllium Cadmium ADDITIVES Boron	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	0	0 0 current 1	 history1	 history2
Beryllium Cadmium ADDITIVES Boron Barium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	0	0 0 current 1 <1	 history1 	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) Method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	0 0 current 1 <1 0	 history1 	 history2
Beryllium Cadmium ADDITIVES Boron Barium Aolybdenum Aanganese	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 1	0 0 current 1 <1 0 0	 history1 	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	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 0 1 0	0 0 <u>current</u> 1 <1 0 0 0 <1	 history1 	history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	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	0 0 current 1 <1 0 0 0 <1 107	 history1 	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 0 100 670	0 0 current 1 <1 0 0 0 <1 107 662	 history1 	history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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 0 100 670 850	0 0 current 1 <1 0 0 <1 107 662 880	 history1 	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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 0 1 0 100 670	0 0 current 1 <1 0 0 <1 107 662 880 1577	 history1 -	 history2
Beryllium Cadmium ADDITIVES 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) ASTM D5185(m)	0 0 1 0 100 670 850	0 0 current 1 <1 0 0 <1 107 662 880	 history1 	history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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 0 1 0 100 670 850	0 0 current 1 <1 0 0 <1 107 662 880 1577	 history1 -	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Maganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600	0 0 current 1 <1 0 0 <1 107 662 880 1577 <1	 history1 -	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 1 0 100 670 850 1600	0 0 current 1 <1 0 0 <1 107 662 880 1577 <1 current	 history1 -	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 1 0 100 670 850 1600	0 0 current 1 <1 0 0 0 <1 107 662 880 1577 <1 current <1	 history1 -	 history2 history2 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 limit/base >15	0 0 current 1 <1 0 0 0 <1 107 662 880 1577 <1 577 <1 <i>current</i> <1 <1	 history1 -	 history2 history2 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Contaminant CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4μm	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 binit/base >15 >20	0 0 current 1 <1 0 0 0 <1 107 662 880 1577 <1 577 <1 current <1 <1 <1 0	 history1 -	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Calcium Phosphorus Calcium Phosphorus Cinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	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 15 2 15 20 20 1 1 101/base	0 0 current 1 <1 0 0 <1 107 662 880 1577 <1 current <1 <1 <1 0 <i>current</i>	history1 history1 history1 history1	 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Contaminant CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 1 0 100 670 850 1600 1600 1600 10 10 10 20 20 10 10 20 20 10 10 20 20 20 20 20 20 20 20	0 0 0 current 1 <1 0 0 <1 107 662 880 1577 <1 <1 <1 <1 <1 <1 0 0 current 0 2 0 2 2 37569	 history1 history1 history1 history1	 history2 history2 history2 history2 history2 history2 history2
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 1600 1 1600 1 1600 1 100 2 1 2 1 2 2 0 1 100 2 1 2 1 3 2 0 2 1 3 1 3 0 2 1 3 0 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	0 0 current 1 <1 0 0 <1 107 662 880 1577 <1 577 <1 current <1 <1 0 0 current 0 37569 ● 14479	i history1 history1 history1	i history2 i
Beryllium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647	0 0 1 0 100 670 850 1600 binit/base >15 >20 binit/base >5000 >1300 >160	0 0 0 current 1 <10 0 0 <1 107 662 880 1577 <1 577 <1 0 current 0	history1 history1 history1	initial control interpretation into a control in
Beryllium Cadmium ADDITIVES Boron Barium Aolybdenum Aanganese Aagnesium Calcium Phosphorus Calcium Phosphorus Calcium Phosphorus Calcium ContAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 1 0 100 670 850 1600 imit/base >15 >20 imit/base >5000 >1300 >160 >40	0 0 0 current 1 <1 0 0 0 <1 107 662 880 1577 <1 577 <1 0 current <1 <1 0 0 current 0 37569 ● 14479 ▲ 1269 ▲ 226	history1 history1 history1	i history2 i

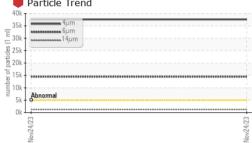
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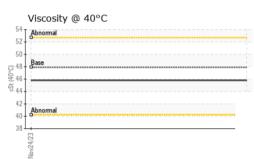
ISO



OIL ANALYSIS REPORT







VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Ddor	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
/isc @ 40°C	cSt	ASTM D7279(m)	47.9	45.8		
SAMPLE IMAGES	8	method	limit/base	current	history1	history2
Color					no image	no image
Bottom				0	no image	no image
GRAPHS Ferrous Alloys			491,520	Particle Count		
Non-ferrous Metals	5		122,880 30,720 7,680 (Per 1, 30) 500 (Per 4, 10, 20) 480 10 argument 30 88 20 20 20 480 120 30 30 480 30 20 480 30 20 480 30 20 480 30 20 480 30 20 480 30 20 480 30 20 480 30 480 30 480 480 30 480 480 30 480 480 30 480 480 30 480 480 480 480 480 480 480 480 480 48	Abnormal H 6µ	14μ 21μ	-24 -22 -20 -18 -16 -14 -14 -12 -10
Abnormal			-			

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.

T: F: (519)421-0028

CALA

ISO 17025:2017 Accredited Laboratory

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Laboratory

Sample No.

Lab Number

Unique Number Test Package