

OIL ANALYSIS REPORT

Sample Rating Trend



HP1 Component

Hydraulic System

PETRO CANADA HYDREX AW 46 (--- GAL

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

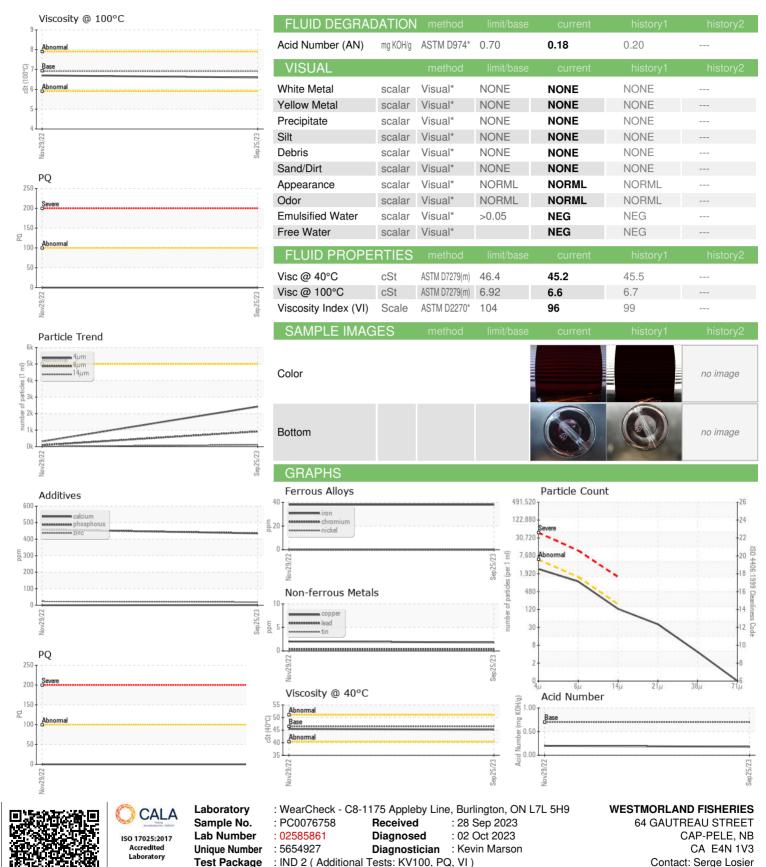
Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

		,	Nov2022	Sep 2023	,	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0076758	PC0029860	
Sample Date		Client Info		25 Sep 2023	29 Nov 2022	
Machine Age	mths	Client Info		66	56	
Oil Age	mths	Client Info		0	56	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
WEAR METAL	S	method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	
Iron	ppm	ASTM D5185(m)	>20	38	38	
Chromium	ppm	ASTM D5185(m)	>20	0	0	
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		0	0	
Aluminum	ppm	ASTM D5185(m)	>20	0	<1	
Lead	ppm	ASTM D5185(m)	>20	<1	<1	
Copper	ppm	ASTM D5185(m)	>20	2	2	
Tin	ppm	ASTM D5185(m)	>20	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
	ppm	method ASTM D5185(m)	limit/base	current	history1 <1	history2
Boron	ppm ppm		0			
Boron Barium		ASTM D5185(m)	0	<1	<1	
Boron Barium Molybdenum	ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 <1	<1 0	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 <1 0	<1 0 0	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 <1 0	<1 0 0 0 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0	<1 <1 0 0	<1 0 0 0 <1 0	
Boron 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) ASTM D5185(m)	0 0 0 0 0 0 50	<1 <1 0 0 0	<1 0 0 0 <1 0	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 0 50 330	<1 <1 0 0 0 1 435	<1 0 0 0 <1 0 0 458	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 0 0 50 330 430	<1 <1 0 0 0 0 1 435 19	<1 0 0 0 <1 0 0 458 23	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 0 0 50 330 430	<1 <1 0 0 0 0 1 435 19 824	<1 0 0 0 <1 0 0 458 23 876	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 0 50 330 430 760	<1 <1 0 0 0 1 435 19 824 <1	<1 0 0 <1 0 0 458 23 876 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm	ASTM D5185(m)	0 0 0 0 0 50 330 430 760	<1 <1 0 0 0 1 435 19 824 <1 current	<1 0 0 <1 0 0 458 23 876 <1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m)	0 0 0 0 0 50 330 430 760	<1 <1 0 0 0 1 435 19 824 <1 current	<1 0 0 <1 0 0 458 23 876 <1 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm	ASTM D5185(m)	0 0 0 0 50 330 430 760	<1 <1 0 0 0 1 435 19 824 <1 current 5	<1 0 0 0 <1 0 458 23 876 <1 history1 3 2	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185(m)	0 0 0 0 0 50 330 430 760	<1 <1 0 0 0 1 435 19 824 <1 current 5 2 <1	<1 0 0 0 <1 0 0 458 23 876 <1 history1 3 2 <1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm	ppm	ASTM D5185(m) METHOD ASTM D5185(m)	0 0 0 0 0 50 330 430 760 limit/base >15 >20	<1 <1 0 0 0 1 435 19 824 <1 current 5 2 <1 current	<1 0 0 0 <1 0 458 23 876 <1 history1 3 2 <1 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm	ppm	ASTM D5185(m)	0 0 0 0 0 50 330 430 760 limit/base >20 limit/base	<1 <1 0 0 0 1 435 19 824 <1 current 5 2 <1 current 2428	<1 0 0 0 <1 0 458 23 876 <1 history1 3 2 <1 history1 318	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >14µm	ppm	ASTM D5185(m) METHOD 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) ASTM D7647 ASTM D7647	0 0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >5000 >1300 >160	<1 <1 0 0 0 1 435 19 824 <1 current 5 2 <1 current 2428 918	<1 0 0 0 <1 0 458 23 876 <1 history1 3 2 <1 history1 318 95	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	ASTM D5185(m) METHOD ASTM D5185(m)	0 0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >5000 >1300 >160	<1 <1 0 0 0 1 435 19 824 <1 current 5 2 <1 current 2428 918 111	<1 0 0 0 <1 0 458 23 876 <1 history1 3 2 <1 history1 318 95	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >160 >10 >10 >10 >10 >10	<1 <1 0 0 0 1 435 19 824 <1 current 5 2 <1 current 2428 918 111 34	<1 0 0 0 <1 0 458 23 876 <1 history1 3 2 <1 history1 318 95 10 3	history2 history2



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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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