

OIL ANALYSIS REPORT



Machine Id 250004

Component Hydraulic System Fluid PETRO CANADA HYDREX MV 32 (--- GAL)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. We recommend that you drain the oil from the component if this has not already been done. 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. There is a moderate concentration of water present in the oil. Free water present.

Fluid Condition

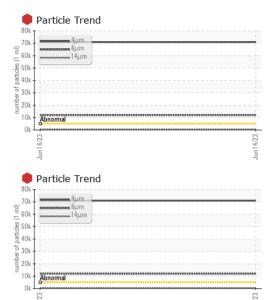
The oil is no longer serviceable due to the presence of contaminants.

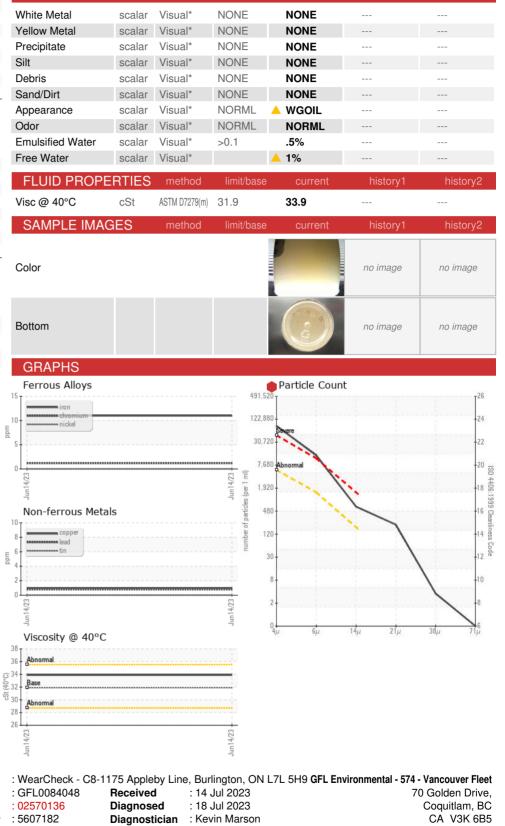
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0084048		
Sample Date		Client Info		14 Jun 2023		
Machine Age	hrs	Client Info		10994		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				SEVERE		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	11		
Chromium	ppm	ASTM D5185(m)	>10	1		
Nickel	ppm	ASTM D5185(m)	>10	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>10	1		
Lead	ppm	ASTM D5185(m)	>10	<1		
Copper	ppm	ASTM D5185(m)		1		
Tin	ppm	ASTM D5185(m)	>10	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		
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ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1		
Barium	ppm ppm	ASTM D5185(m)		<1		
		. /				
Barium	ppm	ASTM D5185(m)	0 0	<1		
Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0	<1 0		
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1	<1 0 0		
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0	<1 0 0 <1		
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)	0 0 1 0 50	<1 0 0 <1 20		
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)	0 0 1 0 50 330	<1 0 0 <1 20 347		
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 50 330 430	<1 0 0 <1 20 347 406	 	
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 50 330 430	<1 0 <1 20 347 406 733	 	
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 50 330 430 760	<1 0 0 <1 20 347 406 733 <1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	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 50 330 430 760 Iimit/base >20	<1 0 0 <1 20 347 406 733 <1 <i>current</i>		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	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 50 330 430 760 Iimit/base >20	<1 0 0 <1 20 347 406 733 <1 <i>current</i> 2		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760 Iimit/base >20	<1 0 0 <1 20 347 406 733 <1 <i>current</i> 2 <1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D5185(m)	0 0 1 50 330 430 760 limit/base >20	<1 0 0 <1 20 347 406 733 <1 <i>current</i> 2 <1 <1 <1	 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D5185(m)	0 0 1 50 330 430 760 Imit/base >20 >20 Imit/base	<1 0 0 <1 20 347 406 733 <1 <i>current</i> 2 <1 <1 <1 <i>current</i>	 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D5185(m)	0 0 1 50 330 430 760 bimit/base >20 bimit/base >20	<1 0 0 <1 20 347 406 733 <1 <i>current</i> 2 <1 <1 <1 <1 <i>current</i>	 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D5185(m)	0 0 1 50 330 430 760 imit/base >20 imit/base >20 imit/base >20	<1 0 0 <1 20 347 406 733 <1 <u>current</u> 2 <1 <u>current</u> 2 <1 <u>current</u> 0 <u>current</u> 1 <u>current</u> 0 0 0 0 0 0 0 0 0 0 0 0 0	 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANU Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 1 0 50 330 430 760 b b b b b b b b b b	<1 0 0 <1 20 347 406 733 <1 Current 2 <1 2 <1 <1 Current 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 5 <1 2 <1 2 <1 2 <1 5 <1 2 <1 5 <1 2 <1 5 <1 5 5 5 5 5 5 5 5 5 5 5 5 5	 history1 history1 	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 1 0 1 0 5 0 3 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 0 4	<1 0 0 <1 20 347 406 733 <1 <u>current</u> 2 <1 <1 <u>current</u> 9 70974 12030 ▲ 554 ▲ 187	 history1 history1 	 history2 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4μm Particles >14μm Particles >21μm Particles >38μm	ppm ppm ppm ppm ppm ppm ppm ppm ppm T S	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 1 0 1 0 5 0 3 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 0 4	<1 0 0 <1 20 347 406 733 <1 <u>current</u> 2 <1 <1 <u>current</u> 2 <1 1 2 <1 1 2 554 187 3	 history1 history1 	 history2 history2



OIL ANALYSIS REPORT

VISUAL





Viscosity @ 40°C 38 36 3 (0°0+) 35 Ba ŝ 3 Abnorm 28 26 4/23 Jun1

CALA

ISO 17025:2017 Accredited Laboratory

Laboratory

Sample No.

Lab Number

Unique Number

Test Package : MOB 1 (Additional Tests: PrtCount)

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.

To discuss this sample report, contact Customer Service at 1-800-268-2131.

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