

OIL ANALYSIS REPORT



Machine Id 200253

Component Hydraulic System Fluid

PETRO CANADA HYDREX MV 32 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

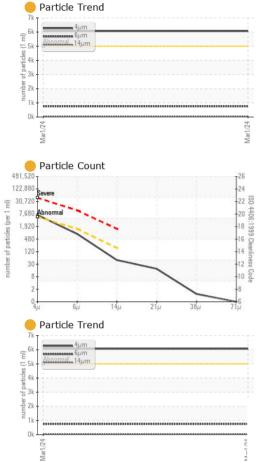
Viscosity of sample indicates oil is within ISO 22 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORM						
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0107878		
Sample Date		Client Info		01 Mar 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
CONTAMINATIO	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG		
WEAR METALS	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	2		
Chromium	ppm	ASTM D5185(m)	>10	0		
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)		2		
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		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1		
Barium	ppm	ASTM D5185(m)	0	0		
Molybdenum	ppm	ASTM D5185(m)	0	0		
Manganese	ppm	ASTM D5185(m)	1	0		
	1.					
Magnesium	ppm	ASTM D5185(m)	0	<1		
-	mqq mqq	ASTM D5185(m) ASTM D5185(m)		<1 59		
Calcium	ppm	ASTM D5185(m)	50	59		
Calcium Phosphorus	ppm ppm	ASTM D5185(m) ASTM D5185(m)	50 330	59 319		
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 330 430	59 319 394		
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 330	59 319 394 836		
Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 330 430 760	59 319 394 836 <1	 	
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	50 330 430 760 limit/base	59 319 394 836 <1 current	 history1	 history2
Silicon	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 330 430 760	59 319 394 836 <1 current 0	 history1	 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium	ppm ppm ppm ppm ppm FS ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 330 430 760 Iimit/base >20	59 319 394 836 <1 <u>current</u> 0 0	 history1 	 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 330 430 760 limit/base >20	59 319 394 836 <1 <u>current</u> 0 0 <1	 history1 	 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANL	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)	50 330 430 760 Iimit/base >20 S20 Iimit/base	59 319 394 836 <1 <u>current</u> 0 0 <1 current	 history1 	 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANL Particles >4µm	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)	50 330 430 760 Iimit/base >20 S20 Iimit/base >5000	59 319 394 836 <1 <u>current</u> 0 0 <1 <1 <u>current</u>	 history1 	 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm	ppm	ASTM D5185(m) ASTM D7647	50 330 430 760 Iimit/base >20 S20 Iimit/base	59 319 394 836 <1 current 0 0 <1 current 0 6067 745	 history1 history1	 history2 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm	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 D7647 ASTM D7647	50 330 430 760 Imit/base >20 S20 Imit/base >5000 >1300 >160	59 319 394 836 <1 current 0 0 <1 current 0 6067 745 42	 history1 history1 history1	 history2 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm Particles >21µm	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 D7647 ASTM D7647 ASTM D7647	50 330 430 760 Imit/base >20 S20 Imit/base >5000 >1300 >160	59 319 394 836 <1 current 0 0 <1 current 42 16	 history1 history1 	 history2 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647	50 330 430 760 Imit/base >20 S20 Imit/base >5000 >1300 >160	59 319 394 836 <1 current 0 0 <1 current 6067 745 42 16 1	 history1 history1 history1	 history2 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm Particles >21µm	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 D7647 ASTM D7647 ASTM D7647	50 330 430 760 Iimit/base >20 20 Iimit/base >5000 >1300 >160 >40	59 319 394 836 <1 current 0 0 <1 current 42 16	 history1 history1 	 history2 history2 history2

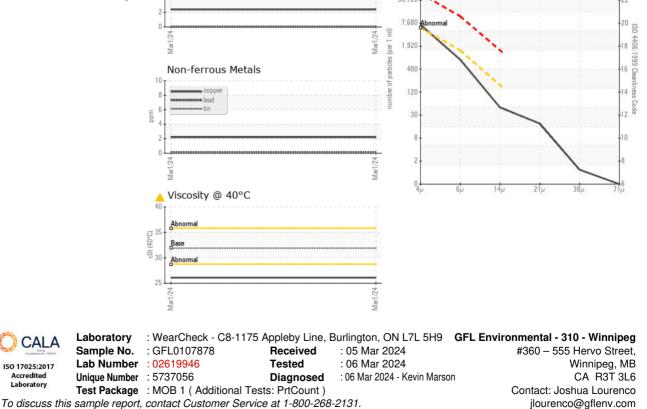
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VISUAL		method	limit/base	current	history1	history2
Vhite Metal	scalar	Visual*	NONE	NONE		
ellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
ppearance	scalar	Visual*	NORML	NORML		
Ddor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.1	NEG		
ree Water	scalar	Visual*	20.1	NEG		
		visuai		NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
/isc @ 40°C	cSt	ASTM D7279(m)	31.9	A 26.1		
SAMPLE IMAG	ies	method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image
GRAPHS						
Ferrous Alloys				Particle Count	t	
			491,5			T ²⁶
iron chromium			122,8	30.1		-24
nickel			1	Severe		21
			30,7	20		-22
			7.6	30 Abnormal		20
24			24 ml)	Apnormal		-20
Mar1/24			Mar1/24 number of particles (per 1 ml)	20-		-18
			Cles (I	1.		
Non-ferrous Metal	S		tiped 4	30		-16
copper			for of	20-		-14
nananananan lead						-12
				30 -		-12
			-	8-		10
Mar1/24			Mar1/24	2-		-8
Mar			Mai	0		
Viscosity @ 40°C				0. 4 μ 6 μ	14µ 21µ	38µ 71µ
Abnormal						
·						
Base						
Abnormal						
			-			
Mar1/24			Mar1/24			
W			Ma			
earCheck - C8-1175				'L 5H9 GFL Er	vironmental - 3	
L0107878	Rece		5 Mar 2024 6 Mar 2024		#360 – 55	5 Hervo Stree Winnipeg, M
619946	Teste					



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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CALA

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