

OIL ANALYSIS REPORT

Sample Rating Trend



EX0357

Component

Rear Hydraulic System

PETRO CANADA HYDREX AW 46 (220 LTF

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF). We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. (Customer Sample Comment: Hytran ultra oil at the moment)

Wear

Iron ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

Contamination

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

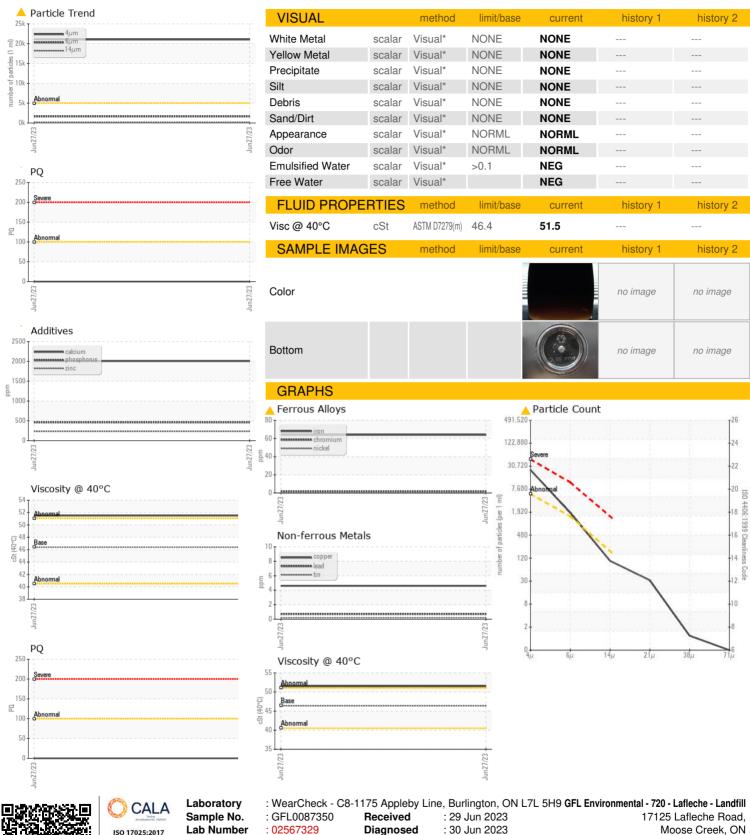
Fluid Condition

Viscosity of sample indicates oil is within SAE 20 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

2)						
•				Jun 2023		
SAMPLE INFOR	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0087350		
Sample Date		Client Info		27 Jun 2023		
Machine Age	hrs	Client Info		19957		
Oil Age	hrs	Client Info		2000		
Oil Changed		Client Info		Not Changd		
Sample Status				ABNORMAL		
WEAR METAL	.S	method	limit/base	current	history 1	history 2
PQ		ASTM D8184*		0		
Iron	ppm	ASTM D5185(m)	>20	<u>^</u> 64		
Chromium	ppm	ASTM D5185(m)	>10	2		
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)	>75	5		
Tin	ppm	ASTM D5185(m)	>10	<1		
Antimony	ppm	ASTM D5185(m)		<1		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 16	history 1	history 2
	ppm ppm					
Boron		ASTM D5185(m)	0	16		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0	16 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	16 0 <1		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	16 0 <1 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0	16 0 <1 <1 8		
Boron Barium Molybdenum Manganese Magnesium Calcium	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	16 0 <1 <1 8 2006		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 0 50 330	16 0 <1 <1 8 2006 460		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 0 0 50 330 430	16 0 <1 <1 8 2006 460 233		
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	16 0 <1 <1 8 2006 460 233 2154		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 0 0 0 50 330 430 760	16 0 <1 <1 8 2006 460 233 2154		
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	16 0 <1 <1 8 2006 460 233 2154 <1	 history 1	history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm	ASTM D5185(m) method ASTM D5185(m)	0 0 0 0 0 50 330 430 760	16 0 <1 <1 8 2006 460 233 2154 <1 current	history 1	history 2
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	16 0 <1 <1 8 2006 460 233 2154 <1 current 4	history 1	history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185(m)	0 0 0 0 50 330 430 760	16 0 <1 <1 8 2006 460 233 2154 <1 current 4 3	history 1	history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEAN	ppm	ASTM D5185(m) METHOD ASTM D5185(m)	0 0 0 0 0 50 330 430 760 limit/base >20	16 0 <1 <1 8 2006 460 233 2154 <1 current 4 3 3	history 1 history 1	history 2 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm	ppm	ASTM D5185(m)	0 0 0 0 0 50 330 430 760 limit/base >20 limit/base >5000	16 0 <1 <1 8 2006 460 233 2154 <1 current 4 3 3 current 21040	history 1 history 1	history 2 history 2
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 >5000 >1300	16 0 <1 <1 8 2006 460 233 2154 <1 current 4 3 3 current 21040 1624	history 1 history 1	history 2 history 2
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 D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 50 330 430 760 limit/base >20 limit/base >5000 >1300 >160	16 0 <1 <1 8 2006 460 233 2154 <1 current 4 3 3 current 21040 1624 90	history 1 history 1	history 2 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >14µm Particles >21µm	ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 50 330 430 760 limit/base >20 >20 limit/base >5000 >1300 >160 >40	16 0 <1 <1 8 2006 460 233 2154 <1 current 4 3 3 current 21040 1624 90 28	history 1 history 1	history 2 history 2



OIL ANALYSIS REPORT





ISO 17025:2017 Accredited

Laboratory

Lab Number **Unique Number**

: 30 Jun 2023 Diagnostician : Kevin Marson

CA K0C 1W0 Contact: Charles Bergeron cbergeron@gflenv.com T: (613)538-4853

Test Package : MOB 1 (Additional Tests: PQ, PrtCount) To discuss this sample report, contact Customer Service at 1-800-268-2131.

: 5604375

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.