

OIL ANALYSIS REPORT







Machine Id **312** Component New (Unused) Oil Fluid PETRO CANADA HYDREX MV 32 (--- GAL)

DIAGNOSIS

Recommendation

This is the baseline readout on this new (unused) oil. The fluid is suitable for service.

Wear

{not applicable}

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. There is no indication of any contamination in the new (unused) oil.

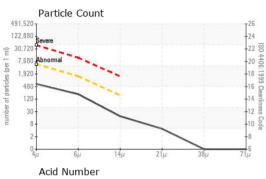
Fluid Condition

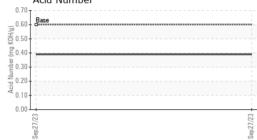
The AN level is acceptable for this fluid. The condition of the oil is suitable for service.

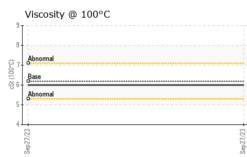
SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0080890		
Sample Date		Client Info		27 Sep 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)		0		
Chromium	ppm	ASTM D5185(m)		0		
Nickel	ppm	ASTM D5185(m)		0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)		0		
Lead	ppm	ASTM D5185(m)		0		
Copper	ppm	ASTM D5185(m)		<1		
Tin	ppm	ASTM D5185(m)		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
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current	history1	history2
	ppm ppm		0			
Boron		ASTM D5185(m)	0	<1		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 <1		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 <1 0		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 1	<1 <1 0 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 1 0	<1 <1 0 0 0 55 315		
Boron 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) ASTM D5185(m)	0 0 1 0 50	<1 <1 0 0 0 55	 	
Boron 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) ASTM D5185(m)	0 0 0 1 0 50 330	<1 <1 0 0 0 55 315	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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 1 0 50 330 430	<1 <1 0 0 0 55 315 404	 	
Boron 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 <1 0 0 55 315 404 727	 	
Boron 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)	0 0 1 0 50 330 430 760	<1 <1 0 0 55 315 404 727 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	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 50 330 430 760	<1 <1 0 0 0 55 315 404 727 <1 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	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 50 330 430 760	<1 <1 0 0 0 55 315 404 727 <1 current 0	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760	<1 <1 0 0 0 55 315 404 727 <1 current 0 <1	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760 Iimit/base	<1 <1 0 0 0 55 315 404 727 <1 current 0 <1 0 <1 0 0 <1 0 0 <1 0 0 0 0 0 0 0 0	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760 Iimit/base	<1 <1 0 0 0 55 315 404 727 <1 current 0 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm i ppm i	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 50 330 430 760 Iimit/base	<1 <1 0 0 0 55 315 404 727 <1 0 0 <1 0 0 <1 0 0 0 0 0 0 0 0 0 0 0	 history1 history1 history1	 history2 history2 history2

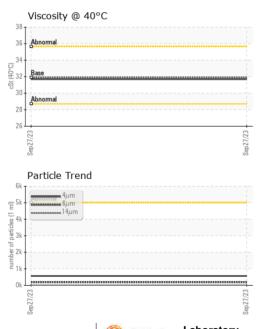


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FLUID CLEANL	INESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	564		
Particles >6µm		ASTM D7647	>1300	181		
Particles >14µm		ASTM D7647	>160	16		
Particles >21µm		ASTM D7647	>40	4		
Particles >38µm		ASTM D7647	>10	0		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	16/15/11		
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		8.7		
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.39		
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		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*		NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	31.7		
Visc @ 100°C	cSt	ASTM D7279(m)	6.19	6		
Viscosity Index (VI)	Scale	ASTM D2270*	147	137		
SAMPLE IMAG	ES	method	limit/base	current	history1	history2

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

	CALA	Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9			PETRONOR INC
	According to 1006219	Sample No.	: PC0080890	Received	: 04 Oct 2023	2920 RTE 111 EST
	ISO 17025:2017	Lab Number	: 02586742	Diagnosed	: 05 Oct 2023	AMOS, QC
	Accredited Unique Num	Unique Number	: 5655808	Diagnostician	: Kevin Marson	CA J9T 3A1
Laboratory	Test Package	: IND 2 (Additional	I Tests: FT-IR, IC	P-NewOil, KV100, PrtCount, VI)	Contact: Gaston	
	To discuss this	entretien@petronor.ca				
	Test denoted (T: (819)732-5334				
	Validity of resu	ilts and interpreta	tion are based on th	e sample and info	ormation as supplied.	F: