

OIL ANALYSIS REPORT

(YA180902) 833000

Component

Natural Gas Engine

PETRO CANADA 15W40 (8 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

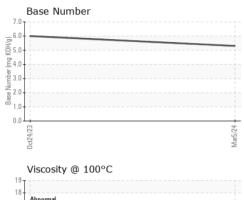
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

			Oct2023	Mar2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0090009	GFL0089971	
Sample Date		Client Info		05 Mar 2024	24 Oct 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Not Changd	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	7	7	
Chromium	ppm	ASTM D5185m	>4	0	<1	
Nickel	ppm	ASTM D5185m	>2	0	<1	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m		1	2	
Lead	ppm	ASTM D5185m	>30	0	<1	
Copper	ppm	ASTM D5185m		2	<1	
Tin	ppm	ASTM D5185m	>4	_ <1	<1	
Vanadium	ppm	ASTM D5185m	7 7	0	0	
Cadmium	ppm	ASTM D5185m		0	<1	
	ррпп		limit/base		history1	history2
						nistory
ADDITIVES		method	IIIIII/Dase	current		
Boron	ppm	ASTM D5185m	IIIIIIVDase	13	11	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	IIIIII/Dase	13 0	11	
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	IIIIIIIIIII	13 0 47	11 3 54	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII/Dase	13 0 47 1	11 3 54 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII/Dase	13 0 47 1 548	11 3 54 <1 524	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII/Dase	13 0 47 1 548 1444	11 3 54 <1 524 1585	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII/Dase	13 0 47 1 548 1444 701	11 3 54 <1 524 1585 742	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII/Dase	13 0 47 1 548 1444 701 888	11 3 54 <1 524 1585 742 937	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIIIII/Dase	13 0 47 1 548 1444 701	11 3 54 <1 524 1585 742	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	13 0 47 1 548 1444 701 888	11 3 54 <1 524 1585 742 937	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	13 0 47 1 548 1444 701 888 2211	11 3 54 <1 524 1585 742 937 2467	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	13 0 47 1 548 1444 701 888 2211	11 3 54 <1 524 1585 742 937 2467 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >+100	13 0 47 1 548 1444 701 888 2211 current 6	11 3 54 <1 524 1585 742 937 2467 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >+100	13 0 47 1 548 1444 701 888 2211 current 6 5	11 3 54 <1 524 1585 742 937 2467 history1 4	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >+100 >20	13 0 47 1 548 1444 701 888 2211 current 6 5	11 3 54 <1 524 1585 742 937 2467 history1 4 4	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >+100 >20 limit/base	13 0 47 1 548 1444 701 888 2211 current 6 5 0	11 3 54 <1 524 1585 742 937 2467 history1 4 2	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >+100 >20 limit/base >20	13 0 47 1 548 1444 701 888 2211 current 6 5 0 current	11 3 54 <1 524 1585 742 937 2467 history1 4 2 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >+100 >20 limit/base >20	13 0 47 1 548 1444 701 888 2211 current 6 5 0 current 0 10.8	11 3 54 <1 524 1585 742 937 2467 history1 4 4 2 history1 0 11.0	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >+100	13 0 47 1 548 1444 701 888 2211 current 6 5 0 current 0 10.8 19.5	11 3 54 <1 524 1585 742 937 2467 history1 4 2 history1 0 11.0 20.2	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m MEthod *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m METHOd *ASTM D7844 *ASTM D7624 *ASTM D7415 METHOD	limit/base >+100 >20 limit/base >20 >30 limit/base	13 0 47 1 548 1444 701 888 2211 current 6 5 0 current 0 10.8 19.5 current	11 3 54 <1 524 1585 742 937 2467 history1 4 4 2 history1 0 11.0 20.2 history1	history2 history2



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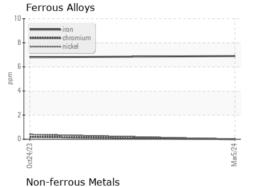


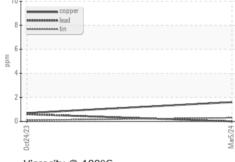
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

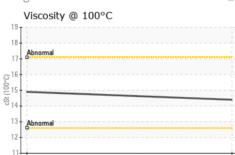
FLUID PROPE	RHES	method		history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	14.9	

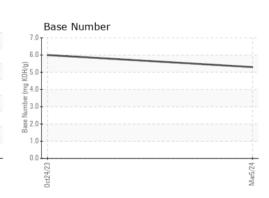
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GRAPHS













Certificate L2367

Laboratory Sample No.

: GFL0090009 Lab Number : 06109980

Unique Number: 10913477 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 06 Mar 2024 **Tested**

: 07 Mar 2024 Diagnosed : 07 Mar 2024 - Wes Davis

GFL Environmental - 018 - Fayetteville

4621 Marracco Drive Hope Mills, NC US 28348

Contact: Robert Carter robert.carter@gflenv.com T: (910)596-1170

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: GFL018 [WUSCAR] 06109980 (Generated: 03/07/2024 09:58:12) Rev: 1