

OIL ANALYSIS REPORT

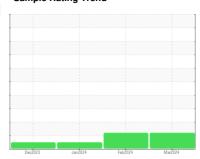
Sample Rating Trend

DEGRADATION



934037 Component **Diesel Engine**

PETRO CANADA 15W40 (--- GAL)





DIAGNOSIS

Recommendation

The oil is near the end of it's useful service life. recommend schedule an oil change. Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

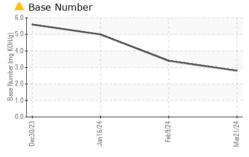
▲ Fluid Condition

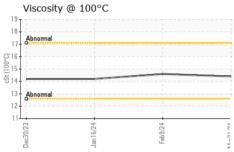
The BN level is low.

SAMPLE INFORMATION method limit/base current history1 history2	,	Dec2023 Jun2024 Feb2024 Mar2024						
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Machine Age	Sample Number		Client Info		GFL0111814	GFL0108254	GFL0108318	
Oil Age hrs Client Info 836 538 344 Oil Changed Client Info Not Changd Not Changd	Sample Date		Client Info		21 Mar 2024	09 Feb 2024	16 Jan 2024	
Oil Changed Sample Status Client Info Not Changd ABNORMAL Not Changd ABNORMAL Not Changd ABNORMAL Not Changd ABNORMAL Not Changd NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method 3-0.0 < 1.0 < 1.0 < 1.0 Water WC Method 3-0.2 NEG NEG NEG Glycol WC Method 5-0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 65 47 60 Chromium ppm ASTM D5185m >20 1 <1 1 Iron ppm ASTM D5185m >20 1 <1 0 Silver ppm ASTM D5185m >20 9 5 6 Lead ppm ASTM D5185m >20 9 5 6 Copper ppm ASTM D5185m	Machine Age	hrs	Client Info		836	538	344	
ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2	Oil Age	hrs	Client Info		836	538	344	
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0	Oil Changed		Client Info		Not Changd	Not Changd	Not Changd	
Fuel	Sample Status				ABNORMAL	ABNORMAL	NORMAL	
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 65 47 60 Chromium ppm ASTM D5185m >20 1 <1 1 Nickel ppm ASTM D5185m >2 0 <1 <1 0 Silver ppm ASTM D5185m >2 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	CONTAMINATI	ON	method	limit/base	current	history1	history2	
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Titanium	Nickel						1	
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Sulfur ppm ASTM D5185m 2592 2532 2592 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 29 28 39 Sodium ppm ASTM D5185m 5 1 6 Potassium ppm ASTM D5185m >20 21 18 30 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0 0 0 Nitration Abs/cm *ASTM D7624 >20 12.7 11.7 12.2 Sulfation Abs/.1mm *ASTM D7415 >30 26.8 23.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 25.0 20.8 19.4		ppm						
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Silicon ppm ASTM D5185m >25 29 28 39 Sodium ppm ASTM D5185m 5 1 6 Potassium ppm ASTM D5185m >20 21 18 30 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0 0 0 Nitration Abs/cm *ASTM D7624 >20 12.7 11.7 12.2 Sulfation Abs/.1mm *ASTM D7415 >30 26.8 23.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 25.0 20.8 19.4	Sulfur	ppm	ASTM D5185m		2592	2532	2592	
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INFRA-RED	Sodium	ppm	ASTM D5185m		5	1	6	
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Sulfation Abs/.1mm *ASTM D7415 >30 26.8 23.2 21.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 25.0 20.8 19.4	Soot %	%	*ASTM D7844	>6	0	0	0	
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Oxidation Abs/.1mm *ASTM D7414 >25 25.0 20.8 19.4	Sulfation	Abs/.1mm	*ASTM D7415	>30				
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	25.0	20.8	19.4	
	Base Number (BN)	mg KOH/g	ASTM D2896		△ 2.8	△ 3.4	5.0	



OIL ANALYSIS REPORT

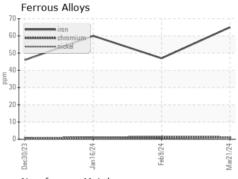


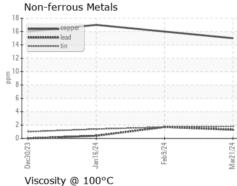


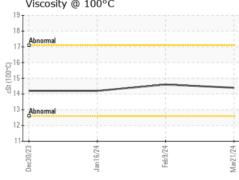
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

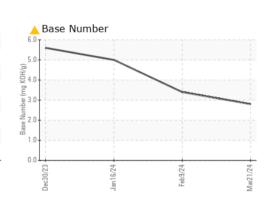
FLUID FROF	ENTIES	memou	IIIIII/Dase	Current	HISTOLAL	HISTORYZ
Visc @ 100°C	cSt	ASTM D445		14.4	14.6	14.2

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06126330 Unique Number : 10940481

: GFL0111814 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Mar 2024 **Tested** : 26 Mar 2024

Diagnosed : 26 Mar 2024 - Angela Borella

GFL Environmental - 652 - Fredericksburg Hauling

10954 Houser Drive Fredericksburg, VA US 22408

Contact: WILLIAM MILO wmilo@gflenv.com

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: GFL652 [WUSCAR] 06126330 (Generated: 03/26/2024 10:30:38) Rev: 1

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