

## **OIL ANALYSIS REPORT**

Sample Rating Trend



44 Component Natural Gas Engine Fluid PETRO CANADA SENTRON LD 3000 (--- GAL)

### DIAGNOSIS

Machine Id

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

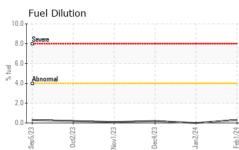
#### Fluid Condition

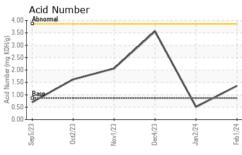
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

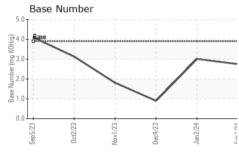
AL)		Sep2023	Oct2023 Nov2023	Dec2023 Jan2024	Feb2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117167	PCA0103428	PCA0111956
Sample Date		Client Info		01 Feb 2024	02 Jan 2024	04 Dec 2023
Machine Age	hrs	Client Info		10347	102769	102073
Oil Age	hrs	Client Info		1063	357	2454
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	1	2
Chromium	ppm	ASTM D5185m	>4	0	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	2	<1
Lead	ppm	ASTM D5185m	>30	<1	0	0
Copper	ppm	ASTM D5185m	>35	<1	<1	0
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm	ASTM D5185m	2	0	1	0
Manganese	ppm	ASTM D5185m	1	<1	0	0
Magnesium	ppm	ASTM D5185m	5	9	8	24
Calcium	ppm	ASTM D5185m	1220	1249	1565	1389
Phosphorus	ppm	ASTM D5185m	298	292	378	290
Zinc	ppm	ASTM D5185m	350	339	399	369
Sulfur	ppm	ASTM D5185m	1995	2270	3107	2206
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	1	2	4
Sodium	ppm	ASTM D5185m		2	0	0
Potassium	ppm	ASTM D5185m	>20	2	1	0
Fuel	%	ASTM D3524	>4.0	0.3	0.0	0.2
INFRA-RED		method	limit/base	current	history1	history2
Coot 9/	%	*ASTM D7844		0	0	0
5001 %		+ + + + + + + + + + + + + + + + + + + +	. 00	<u> </u>	4.9	13.8
	Abs/cm	*ASTM D7624	>20	6.8	4.9	10.0
Nitration	Abs/cm Abs/.1mm	*ASTM D7624 *ASTM D7415		6.8 15.5	13.7	21.8
Nitration	Abs/.1mm	*ASTM D7415				
Nitration Sulfation FLUID DEGRAD	Abs/.1mm	*ASTM D7415	>30	15.5	13.7	21.8
Soot % Nitration Sulfation FLUID DEGRAD Oxidation Acid Number (AN)	Abs/.1mm DATION	*ASTM D7415 method	>30 limit/base >25	15.5 current	13.7 history1	21.8 history2

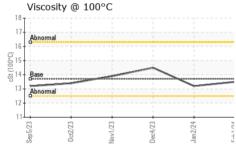


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	VISUAL		method	limit/base	e current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Jan 2/24 - Feb 1/24 -	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Jan Feb	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	13.7	13.5	13.2	14.5
	GRAPHS						
	Iron (ppm)				Lead (ppm	)	
/24 -	Severe 80 -				50 Severe		
Jan2/24 Feb1/24	E 60 Abnormal				40 30 - Abnormal		
	Abnormal 40				30 - Abnormal 20 -	I I I I	I I
	20-				10		
	0		4	4			* *
	Sep5/23 0ct2/23	Dec4/23	Jan 2/24	Feb1/24	Sep 5/23 0ct2/23	Nov1/23	Jan 2/24 Feb 1/24
	Aluminum (ppm)		,		Chromium		
	<sup>20</sup> T				<sup>8</sup> T	(ppin)	
	15 - Severe				6 - Severe		1
	E 10 - Abnormal				Abnormal		
Jan2/24							
	5				2-		
	23	/23 -	/24-	Feb1/24	<sup>23</sup>	/23	Jan2/24
	Sep5/23 0ct2/23	Dec4/23	Jan 2/24	Feb1	Sep5/23 0ct2/23	Nov1/23 Dec4/23	Jan2/24 Feb1/24
	Copper (ppm)			2	Silicon (pp	m)	
	<sup>80</sup> Severe				00 Severe		
	60-				50		
	E 40 - Abnormal				00 - Abnormal		
	20 -				50 -		
Jan2/24			4	+	0	m m	
, –	Sep5/23 0ct2/23	Dec4/23	Jan2/24	Feb1/24	Sep 5/23 0ct2/23	Nov1/23 Dec4/23	Jan 2/24 Feb 1/24
	Viscosity @ 100°C		,	_	Base Numl		, _
	<sup>18</sup>		· · · · · · · · · · · · · · · · · · ·		5.0 T		· · · · · · · · · · · · · · · · · · ·
	Abnormal			Base Number (mg KOH/g)	4.0 - Base	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	-
	GD 14 Base Abnormal			er (mg	3.0	<hr/>	
	ぞう Abnormal			Numb	2.0		
				ase E	1.0	$\sim$	
	Sep 5/23 + 0 0ct2/23 + 0	Dec4/23 -	Jan 2/24 +	Feb1/24	Sep 5/23 - 00	Nov1/23 - Dec4/23 -	Jan2/24 +
	Sep! Nov1	Dect	Jani	Feb	Sep	Nov	Febi
Laboratory Sample No. Lab Number Unique Number Test Package		Receiv Testec Diagno	ved : 16 i : 20 osed : 20	Feb 2024 Feb 2024 Feb 2024 -			ING - WATKINS HOLLOW ROAD GRUNDY, VA US 24614 Service Manager
	contact Customer Serv					5011401.0	



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)

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Contact/Location: Service Manager - ENEGRUW