

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id Wampler Ridge 4 Component

Natural Gas Engine

PETRO CANADA SENTRON LD 3000 (--- GAL

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

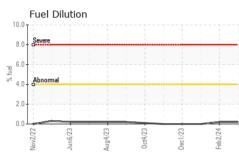
Fluid Condition

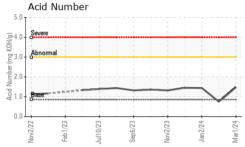
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

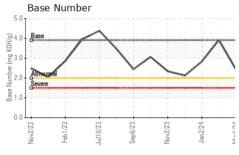
AL)		Nov2022	Feb2023 Jul2023	Sep2023 Nov2023 Jan2024	M#2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117128	PCA0111970	PCA0103418
Sample Date		Client Info		01 Mar 2024	02 Feb 2024	02 Jan 2024
Machine Age	hrs	Client Info		127110	126437	125710
Oil Age	hrs	Client Info		21833	36298	124938
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	3	<1	6
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	2	2	2
Lead	ppm	ASTM D5185m	>30	14	<1	15
Copper	ppm	ASTM D5185m	>35	2	0	2
Гin	ppm	ASTM D5185m	>4	<1	<1	<1
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	<1
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm	ASTM D5185m	2	1	0	2
Manganese	ppm	ASTM D5185m	1	<1	<1	0
Magnesium	ppm	ASTM D5185m	5	18	11	15
Calcium	ppm	ASTM D5185m	1220	1430	1200	1533
Phosphorus	ppm	ASTM D5185m	298	309	290	356
Zinc	ppm	ASTM D5185m	350	407	338	399
Sulfur	ppm	ASTM D5185m	1995	2285	2284	2525
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	TS ppm	ASTM D5185m	>+100	current 1	1	3
Silicon Sodium		ASTM D5185m ASTM D5185m	>+100 >20	current 1 2	1 2	3 0
Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>+100 >20 >20	current 1 2 2	1 2 2	3 0 2
Silicon Sodium Potassium Fuel	ppm ppm	ASTM D5185m ASTM D5185m	>+100 >20	current 1 2	1 2	3 0
Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>+100 >20 >20	current 1 2 2	1 2 2	3 0 2
Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	>+100 >20 >20 >4.0	current 1 2 2 0.2 current 0	1 2 2 0.2 history1 0	3 0 2 0.0
Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method	>+100 >20 >20 >4.0 limit/base	current 1 2 2 0.2 current	1 2 2 0.2 history1 0 3.5	3 0 2 0.0 history2 0 5.6
Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844	>+100 >20 >20 >4.0 limit/base	current 1 2 2 0.2 current 0	1 2 2 0.2 history1 0	3 0 2 0.0 history2 0
Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7824 *ASTM D7624	>+100 >20 >20 >4.0 limit/base	current 1 2 0.2 current 0 5.7	1 2 2 0.2 history1 0 3.5	3 0 2 0.0 history2 0 5.6
Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7824 *ASTM D7624	>+100 >20 >20 >4.0 limit/base >15 >25	current 1 2 0.2 current 0 5.7 19.1	1 2 2 0.2 history1 0 3.5 13.8	3 0 2 0.0 history2 0 5.6 19.0
Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm % % Abs/cm Abs/cm Abs/10N	ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	>+100 >20 >20 >4.0 limit/base >15 >25 limit/base	current 1 2 2 0.2 current 0 5.7 19.1 current	1 2 2 0.2 history1 0 3.5 13.8 history1	3 0 2 0.0 history2 0 5.6 19.0 history2

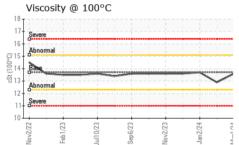


OIL ANALYSIS REPORT









Decl/23 Feb2/24	VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	scalar scalar scalar scalar	wethor *Visual *Visual *Visual		limit/bas NONE NONE	se	CU NON NON			history ⁻ IONE IONE		histor NONE NONE	
Deci/23	Yellow Metal Precipitate Silt Debris Sand/Dirt	scalar scalar scalar	*Visual *Visual		NONE		-						
Deci/23	Precipitate Silt Debris Sand/Dirt	scalar scalar	*Visual				NON	E	Ν	IONE		NONE	
Ueci/23	Silt Debris Sand/Dirt	scalar			NONE							TIONE	
Dec 1/23	Debris Sand/Dirt		*1.7		NONE		NON	E	Ν	JONE		NONE	
Heb/1/4	Sand/Dirt	coolor	*Visual		NONE		NON	E	Ν	JONE		NONE	
Feb2/24		scalar	*Visual		NONE		NON	Е	Ν	IONE		NONE	
Dec 1/23 Feb 2/24		scalar	*Visual		NONE		NON	E	Ν	IONE		NONE	
Feb	Appearance	scalar	*Visual		NORML		NOR	ML	Ν	JORML		NORM	1L
	Odor	scalar	*Visual		NORML		NOR	ML	Ν	JORML		NORM	1L
	Emulsified Water	scalar	*Visual		>0.1		NEG		Ν	IEG		NEG	
	Free Water	scalar	*Visual				NEG		Ν	IEG		NEG	
	FLUID PROPE	RTIES	methc	bd	limit/bas	se	cu	rrent		history		histo	ry2
	Visc @ 100°C	cSt	ASTM D		13.7		13.6		1	2.9		13.7	5
	GRAPHS												
\frown	Iron (ppm)						Lead ((ppm)					
	100 Severe					⁶⁰ T	Severe						
Jan2/24 Mar1/24	80 - 9					50-							
Jan Mai	60 - Abnormal					40 - Ed 30 -	Abnorma				1		
1	40					20-							
	20-					10						~	1
	23	23 -	23	24 +	24	0	22	23	23 -	23	23	24	24
	Nov2/22 Feb1/23 Jul10/23	Sep6/23	Nov2/23	Jan2/24 .	Mar1/24		Nov2/22	Feb1/23	Jul10/23	Sep6/23	Nov2/23	Jan2/24	Mar1/24
	Aluminum (ppm)						Chron	nium (j	-				
	²⁰					8							
	15 - Severe					6 -	Severe						
724	and Abnormal					۳đ4	Abnorma				1		
Jan2/24	5					2 -							
	0			-		0		-	-		_		
	Nov2/22 Feb1/23 Jul10/23	Sep6/23	Nov2/23	Jan2/24	Mar1/24		Nov2/22	Feb1/23	Jul10/23	Sep 6/23	Nov2/23	Jan2/24	Mar1/24
	-	Sej	No	Jai	Ma					Sel	No	Jai	Ma
	Copper (ppm)					200 -	Silicon	(ppm)				
	Severe						0				1		
\sim	60-					150-	Abnorma						
	40 - Abnormal				l	100	Contonna						
et e	20-					50-							
Jan2/24				-		0							
	Nov2/22 Feb1/23 Jul10/23	Sep6/23	Nov2/23	Jan2/24	Mar1/24		Nov2/22	Feb1/23 -	Jul10/23	Sep 6/23	Nov2/23	Jan 2/24	Mar1/24
	No Jul	Se	No	Ja	Ma		No	E	Jul	S	No	na L	Ma
	Viscosity @ 100°C						Base I	Numbe	r				
	18 Severe				191	6 ^{5.0}	Base		~				
ŝ	16					(B/HOY BW) Jagumn aseg	0					7	
0	Abnormal 14 Base Abnormal			~		-) -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0	Abnorpra				1		
ć	1/					UN 2.0	Severe				-		
	10 Severe					20.0 ²							
	Nov2/22	Sep6/23 -	Nov2/23 -	Jan2/24 -	Mar1/24 -	0.0	Nov2/22	Feb1/23 -	Jul10/23 -	Sep6/23 -	Nov2/23 -	Jan2/24 -	Mar1/24 -
	Nov. Feb	Sep	Nov	Jan	Mar		Nov	Feb	Jult	Sep	Nov	Jan	Mar

Unique Number : 10917202 : 12 Mar 2024 - Sean Felton Diagnosed Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel) 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)

US 24237

Certificate L2367

Submitted By: Lee Hammons Page 2 of 2

Contact: Service Manager