

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

Banner 1

Component Natural Gas Engine Fluid PETRO CANADA SENTRON LD 3000 (341 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2		
Sample Number		Client Info		PCA0117192	PCA0117188	PCA0117142		
Sample Date		Client Info		01 May 2024	02 Apr 2024	04 Mar 2024		
Machine Age	hrs	Client Info		131053	130362	129692		
Oil Age	hrs	Client Info		131053	130362	129692		
Dil Changed		Client Info		Not Changd	Not Changd	Not Changd		
Sample Status				NORMAL	NORMAL	NORMAL		
CONTAMINAT	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	7	6	5		
Chromium	ppm	ASTM D5185m	>4	<1	<1	0		
Nickel	ppm	ASTM D5185m	>2	<1	1	<1		
Titanium	ppm	ASTM D5185m		<1	<1	0		
Silver	ppm	ASTM D5185m	>3	0	0	0		
Aluminum	ppm	ASTM D5185m	>9	<1	1	1		
Lead	ppm	ASTM D5185m	>30	30	30	30		
Copper	ppm	ASTM D5185m	>35	3	3	1		
Tin	ppm	ASTM D5185m	>4	1	2	1		
Vanadium	ppm	ASTM D5185m		<1	<1	0		
Cadmium	ppm	ASTM D5185m		<1	<1	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	3	3	2		
Manganese	ppm	ASTM D5185m	1	<1	<1	<1		
Magnesium	ppm	ASTM D5185m	5	15	16	16		
Calcium	ppm	ASTM D5185m	1220	1357	1402	1310		
Phosphorus	ppm	ASTM D5185m	298	309	330			
Zinc	ppm				000	294		
- ···	ppiii	ASTM D5185m	350	385	384	294 381		
Sulfur	ppm	ASTM D5185m ASTM D5185m	350 1995	385 2603				
CONTAMINAN	ppm				384	381		
	ppm	ASTM D5185m	1995 limit/base	2603	384 2615	381 2206		
CONTAMINAN	ppm TS	ASTM D5185m method	1995 limit/base >+100	2603 current	384 2615 history1	381 2206 history2		
CONTAMINAN Silicon	ppm TS ppm	ASTM D5185m method ASTM D5185m	1995 limit/base >+100	2603 current 2	384 2615 history1 2	381 2206 history2 2		
CONTAMINAN Silicon Sodium	ppm TS ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	1995 limit/base >+100 >20	2603 current 2 0	384 2615 history1 2 0	381 2206 history2 2 2		
CONTAMINAN Silicon Sodium Potassium	ppm TS ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1995 limit/base >+100 >20 >20	2603 current 2 0 3	384 2615 history1 2 0 2	381 2206 history2 2 2 2		
CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm TS ppm ppm ppm %	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	1995 limit/base >+100 >20 >20 >20 >4.0	2603 current 2 0 3 0.0 current	384 2615 history1 2 0 2 0.0 history1	381 2206 history2 2 2 2 0.1 history2		
CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm TS ppm ppm ppm %	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	1995 limit/base >+100 >20 >20 >20 >4.0 limit/base	2603 current 2 0 3 0.0 current 0	384 2615 history1 2 0 2 0.0 2 0.0 history1 0	381 2206 history2 2 2 2 2 0.1 history2 0		
CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm TS ppm ppm ppm %	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844	1995 limit/base >+100 >20 >20 >20 >4.0 limit/base	2603 current 2 0 3 0.0 current	384 2615 history1 2 0 2 0.0 history1	381 2206 history2 2 2 2 0.1 history2		
CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm TS ppm ppm ppm % 4bs/cm Abs/cm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7624 *ASTM D7615	1995 imit/base >+100 >20 >20 >4.0 imit/base >15	2603 current 2 0 3 0.0 current 0 5.6	384 2615 history1 2 0 2 0.0 2 0.0 history1 0 5.6	381 2206 history2 2 2 2 2 2 0.1 history2 0 5.5		
CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm TS ppm ppm ppm % % Abs/cm Abs/cm Abs/1mm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D3524 Method *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7624	1995 imit/base >+100 >20 >20 >4.0 imit/base >15 >25 imit/base	2603 current 2 0 3 0.0 current 0 5.6 18.1 current	384 2615 history1 2 0 2 0.0 history1 0 5.6 18.3 history1	381 2206 history2 2 2 2 2 0.1 history2 0 5.5 18.2 history2		
CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm TS ppm ppm ppm % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 ASTM D3524 *ASTM D78244 *ASTM D7624 *ASTM D7415 method *ASTM D7414	1995 imit/base >+100 >20 >20 >4.0 imit/base >25 imit/base >20	2603 current 2 0 3 0.0 current 0 5.6 18.1 current 13.3	384 2615 history1 2 0 2 0.0 history1 0 5.6 18.3 history1 13.5	381 2206 history2 2 2 2 2 0.1 history2 0 5.5 18.2 history2 13.2		
CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm TS ppm ppm ppm % % Abs/cm Abs/cm Abs/1mm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D3524 Method *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7624	1995 imit/base >+100 >20 >20 >4.0 imit/base >15 >25 imit/base	2603 current 2 0 3 0.0 current 0 5.6 18.1 current	384 2615 history1 2 0 2 0.0 history1 0 5.6 18.3 history1	381 2206 history2 2 2 2 2 0.1 history2 0 5.5 18.2 history2		



OIL ANALYSIS REPORT

scalar

scalar

scalar

*Visual

*Visual

*Visual

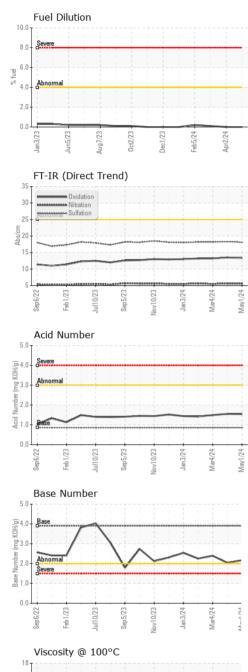
NONE

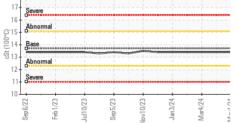
VISUAL

White Metal

Yellow Metal

Precipitate







					ilt ebris			calar calar	*Visual *Visual		NONE			ONE		NON			IONE		
0ct2/23	Dec1/23	Feb5/24	Apr2/24		and/Dir ppearai			calar calar	*Visual *Visual		NONE NORM	L		ONE ORML		NON NOR			IONE	L	
end)	De	æ	Ar	E	dor mulsifie ree Wat	ed Water ter	S	calar calar calar	*Visual *Visual *Visual	I	NORM >0.1	L	N	orml Eg Eg		NOR NEG NEG		Ν	IORMI IEG IEG	L	
					FLUIC) PROF	PERT	FIES	metho	od	limit/b	ase		currer	nt	hist	ory1		histor	y2	
	+			Vi	isc @ 1	00°C	C	St	ASTM D	0445	13.7		13	3.4		13.4		1	3.4		
Ball Street Street					GRAF	PHS															
				100 -	Iron (p	pm)						60		d (pp	m)						
Sep5/23	Nov10/23	Jan3/24	Mar4/24	80 - 60 - Ed 40 -	Abnormal							50 40 톱 30 20	- Abno								
				20	Sep6/22	Jul10/23	Sep5/23	Nov10/23	Jan3/24 +	Mar4/24	May1/24	10 0	Sep 6/22	Feb1/23	Jul10/23	Sep5/23	Nov10/23	Jan3/24	Mar4/24	May1/24 +	
						um (ppn		Nov	Ja	Ma	Ma	8	Chr		⊐ n (ppr		Nov	Ъ	W	Ma	
Sep5/23	Nov1 0/23	Jan3/24 -	Mar4/24		Apnormal							6 Ed. 4 2	Abno								
				ο1	Sep6/22	Jul10/23	Sep5/23	Nov10/23	Jan3/24	Mar4/24 -	May1/24	0	Sep6/22 -	Feb1/23 -	Jul10/23 -	Sep5/23 -	Nov10/23	Jan3/24	Mar4/24	May1/24	
\bigvee	\sim	\sim	~	80 60	Copper Severe	r (ppm)						200 150	Seve	con (p	pm)						
Sep5/23	Nov10/23	Jan3/24	Mar4/24	봅 40 20- 0	Abnormal							톱 100 50 0		ormal							
°C	Nov1	Jar	Ma		Sep6/22	ty @ 100	Sep5/23.	Nov10/23 -	Jan3/24 -	Mar4/24 -	May1/24 -	ŭ	Sep6/22	Feb1/23.	Jul10/23	Sep5/23 -	Nov10/23 -	Jan3/24 -	Mar4/24 -	May1/24	
1 1 1				¹⁸ T	1	ty @ 100						5.0		e Nun	nber						
				(2001) (2001) (100-01)	Severe Abnormal Base Abnormal				****			(B/H04.0 3.0 1.0 1.0	Abno	ma		\checkmark	$\overline{}$		<u> </u>		
					Severe							ag 1.0									
Sep5/23	Nov10/23	Jan3/24 -	Mar4/24		Sep 6/22 - Feh 1/23 -	Jul10/23	Sep5/23 -	Nov10/23 -	Jan 3/24 -	Mar4/24 -	May1/24 -	0.0	Sep6/22	Feb1/23 -	Jul10/23 -	Sep 5/23 -	Nov10/23 -	Jan3/24 -	Mar4/24 -	May1/24 -	
Laboratory Sample No. Lab Number Unique Number				: PC : 061 : 110 : MC	A01171 1 <mark>74041</mark> 020094 0B 2 (A	192 Idditional	Tests	Tested Diagnosed ests: FuelDilution, I			09 May 2024 15 May 2024 15 May 2024 - Don Baldridge ercentFuel)					ERVEST OPERATING - BANNER 5210 CHIMNEY SWIFT ROAD COEBURN, VA US 24230 Contact: Service Manager					
* - De State	enotes t ements d	est me of confo	thods that ormity to sp ed: 05/16/202	are o oecific	utside c cations	of the ISC are base	0 1702	25 sco	pe of ac	ccred	itation.	ision	rule ((JCGN		2012) ubmitte	ed Rv	Adam	ı Kimh	T: F: perlin	

F: Submitted By: Adam Kimberlin

Report Id: ENECOEB [WUSCAR] 06174041 (Generated: 05/16/2024 14:01:04) Rev: 1

Page 2 of 2