

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

Hatchet

Component Natural Gas Engine Fluid PETRO CANADA SENTRON LD 3000 (--- 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.

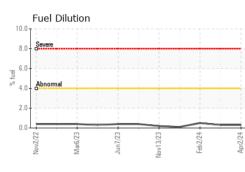
Fluid Condition

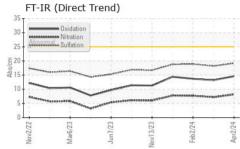
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

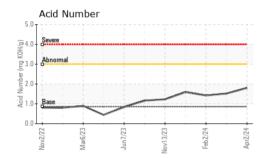
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117123	PCA0117120	PCA0117119
Sample Date		Client Info		02 Apr 2024	04 Mar 2024	02 Feb 2024
Machine Age	hrs	Client Info		159395	158727	157983
Oil Age	hrs	Client Info		7998	7330	6586
Oil Changed		Client Info		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	10	5	6
Chromium	ppm	ASTM D5185m	>4	<1	0	0
Nickel	ppm	ASTM D5185m	>2	1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	2
Lead	ppm	ASTM D5185m	>30	3	2	3
Copper	ppm	ASTM D5185m	>35	2	<1	1
Tin	ppm	ASTM D5185m	>4	2	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		1	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	6	5	5
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	5	9	9	11
Calcium	ppm	ASTM D5185m	1220	1588	1427	1469
Phosphorus	ppm	ASTM D5185m	298	367	319	346
Zinc	ppm	ASTM D5185m	350	425	407	409
Sulfur	ppm	ASTM D5185m	1995	2862	2357	2444
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	2	2	2
Sodium	ppm	ASTM D5185m	>20	0	1	2
Potassium	ppm	ASTM D5185m	>20	2	<1	1
Fuel	%	ASTM D3524	>4.0	0.3	0.3	0.5
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624	>15	8.2	7.2	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>25	19.2	18.2	18.9
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>20	14.6	13.2	13.7
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	1.80	1.52	1.42
Base Number (BN)	mg KOH/g	ASTM D2896	3.9	2.71	2.85	2.81
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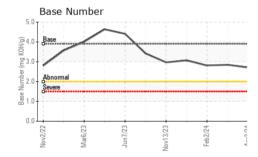


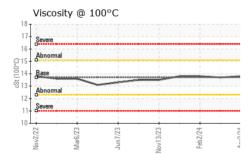
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VISUAL		method	limit/base	current	histo	ory1	histo	ry2
Vhite Metal	scalar	*Visual	NONE	NONE	NONE	=	NONE	
ellow Metal	scalar	*Visual	NONE	NONE	NONE	-	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE		NONE	
Silt	scalar	*Visual	NONE	NONE	NONE		NONE	
Debris	scalar	*Visual	NONE	NONE	NONE			
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE		NONE	
ppearance	scalar	*Visual	NORML	NORML	NORM		NORML	
Ddor	scalar	*Visual	NORML	NORML	NORM		NORML	
mulsified Water	scalar	*Visual	>0.1	NEG	NEG		NEG	
ree Water	scalar	*Visual		NEG	NEG		NEG	
FLUID PROPE	RTIES	method	limit/base	current	histo	ory1	histo	ry2
/isc @ 100°C	cSt	ASTM D445	13.7	13.8	13.7		13.8	
GRAPHS								
Iron (ppm)			60	Lead (ppm)			
Severe			50	Severe				
			40					
Abnormal		I	<u>특</u> 30	Abnormal		1		
			20	1				
Nov2/22 Mar6/23	Nov13/23	Feb2/24	Apr2/24	Nov2/22 Mar6/23	Jun7/23	Nov13/23	Feb2/24	
	Nov	Fet	Ap			Nov	Fet	
Aluminum (ppm)			8	Chromium	(ppm)			
Severe			6	Severe		1		
Abnormal			Ę.4	Abnormal				
Abnormal			<u>d</u> ⁴			1		
			2					
		4		3	m m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	4	_
Nov2/22 Mar6/23 Jun7/23	Vov13/23	Feb2/24	Apr2/24 -	Nov2/22 Mar6/23	Jun7/23	Vov13/23	Feb2/24	
	Noi	Ľ.	4			Nor	Ľ.	
Copper (ppm)			200	Silicon (ppi	m)			
Severe				ŭ				
			150					
Abnormal			톮 100	- O				
			50					
Nov2/22 Mar6/23 Jun7/23	Nov13/23	Feb2/24	Apr2/24	Nov2/22 Mar6/23	Jun7/23	Vov13/23	Feb2/24	
	Nov	Fel	Ap	Ma	ηη	Nov	Fel	
Viscosity @ 100°C			5.0	Base Numl	ber			
Severe			(B)H	Base	\frown			
Abnormal			94.0 200		and the second second			
Base			(0)HOY HOY bus and	Abnormal				_
Abnormal			E 2.0	Severe		-		
Severe			8 1.0 8 0.0					
Nov2/22 - Mar6/23 -	Vov13/23 +	Feb2/24 -	Apr2/24	Nov2/22	Jun7/23 +	Nov13/23 +	Feb2/24 +	
5 5 5	m	2	5.4	N 0	Pm	~	2	0



Laboratory Sample No. Lab Number : 06146036 : 16 Apr 2024 DANTE, VA Tested US 24237 Unique Number : 10976114 Diagnosed : 16 Apr 2024 - Jonathan Hester Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel) Contact: Service Manager Certificate 12367 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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Submitted By: RANDY SMITH Page 2 of 2

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