

OIL ANALYSIS REPORT

LONGHORN C Machine Id LONGHORN C (S/N 1645612)

Component Natural Gas Engine

PETRO CANADA SENTRON LD 3000 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

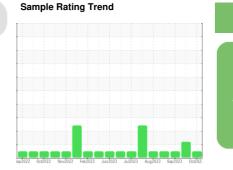
All component wear rates are normal.

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.



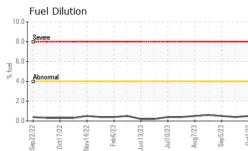


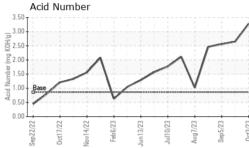
NORMAL

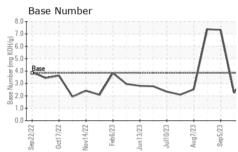
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0080857	PCA0080861	PCA0080856
Sample Date		Client Info		03 Oct 2023	20 Sep 2023	05 Sep 2023
Machine Age	hrs	Client Info		5462	5155	4807
Oil Age	hrs	Client Info		3521	3214	2866
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	12	10	10
Chromium	ppm	ASTM D5185m	>4	0	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	3	<1
Lead	ppm	ASTM D5185m	>30	2	<1	1
Copper	ppm	ASTM D5185m	>35	2	1	1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	2	0	0
Barium	ppm	ASTM D5185m	1	2	0	0
Molybdenum	ppm	ASTM D5185m	2	1	<1	<1
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	5	8	6	18
Calcium	ppm	ASTM D5185m	1220	1321	1332	1467
Phosphorus	ppm	ASTM D5185m	298	305	301	307
Zinc	ppm	ASTM D5185m	350	371	363	374
Sulfur	ppm	ASTM D5185m	1995	2646	2101	2454
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	4	3	4
Sodium	ppm	ASTM D5185m		<1	6	6
Potassium	ppm	ASTM D5185m	>20	2	0	<1
Fuel	%	ASTM D3524	>4.0	0.5	0.4	0.5
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	12.2	12.2	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	20.4	20.0
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.2	21.0	19.4
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	3.28	2.65	2.56
Base Number (BN)	mg KOH/g	ASTM D2896	3.85	3.91	2.24	7.32

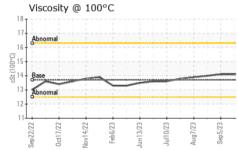


OIL ANALYSIS REPORT









	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		*Visual	NONE	NONE	NONE	NONE
	Debris		*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt		*Visual	NONE	NONE	NONE	NONE
Aug7/23 - Sep5/23 - 0ct3/23 -			*Visual	NORML	NORML	NORML	NORML
Sep 0ct	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
$\sqrt{\Gamma}$	Visc @ 100°C	cSt	ASTM D445	13.7	14.2	14.1	14.1
V	GRAPHS						
	Iron (ppm)			6	Lead (ppm)		
Aug7/23 - Sep5/23 - Oct3/23 -	80 - Severe			5	i0 -		
Sep	60 - Abnormal			4 53	0 - Abnormal		
	² 40				10		
	20			1	0		
\square	22	23-	23	23		23	23
	Sep22/22 0ct17/22 Nov14/22 Feb6/23	Jun13/23	Aug7/23 - Sep5/23 -	0ct3/23	Sep22/22 0ct17/22 Nov14/22	Feb6/23 Jun13/23 Jul10/23	Aug7/23 Sep5/23 Oct3/23
-/\	Aluminum (ppm)	7			Chromium (p	-	
$\int $	²⁰ T				⁸ T		
	15 - Severe				6 - Severe		
	E 10 - Abnormal			E d	Abnormal		
Aug7/23 Sep5/23							
Au Se	5-			~	2		
		73	23			23	/23 /23
	Sep22/22 0ct17/22 Nov14/22 Feb6/23	Jun13/23	Aug7/23 Sep5/23	0ct3/23	Sep22/22 0ct17/22 Nov14/22	Feb6/23 Jun13/23 Jul10/23	Aug7/23 Sep5/23 Oct3/23
	Copper (ppm)			20	Silicon (ppm)		
	Severe						
	60-			15			
+	E 40 - Abnormal			튵 10	0 - Abnormal		
	20 -			5	0		
Aug7/23 Sep5/23						3 3 3	
4	Sep22/22 Oct17/22 Nov14/22	Jun 13/23	Juli U/23 Aug7/23 Sep5/23	0ct3/23	Sep22/22 Oct17/22 Nov14/22	Feb6/23 Jun13/23 Jul10/23	Aug7/23 Sep5/23 Oct3/23
	S O S	, , , , , , , , , , , , , , , , , , ,	N A S	0	_	~	S S
	Viscosity @ 100°C				Base Numbe	r 	
	Abnormal			(B) HOX HOX Bull Jack Bull	0-		\square
				(Bm)	Base		
	Contraction of the second seco			aquir 4		~	
	12			N 2.	.0-		-
				0.	0	· · · · ·	
	Sep22/22 Oct17/22 Nov14/22 Feb6/23	Jun13/23	Jul10/23 Aug7/23 Sep5/23	0ct3/23	Sep22/22 0ct17/22 Nov14/22	Feb6/23 Jun13/23 Jul10/23	Aug7/23 Sep5/23 Oct3/23
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Laboratory	: WearCheck USA - 5	01 Madi	son Ave., Ca	ry, NC 2751	3 DIVERS	IFIED OIL & GAS -	CURWENSVILLE
Sample No.	: PCA0080857	Received	d : 10 (Oct 2023	_	325 W	ALNUT ST FL2
Lab Number		Diagnos		Oct 2023		CURW	ENSVILLE, PA
Unique Number		Diagnost		s Davis		Contact: 7	US 16833
Test Package	: MOB 2 (Additional]						

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)

Certificate L2367

zmcgary@dgoc.com

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