

Area  
**LONGHORN C**  
Machine Id  
**LONGHORN C (S/N 1645612)**  
Component  
**Natural Gas Engine**  
Fluid  
**PETRO CANADA SENTRON LD 3000 (--- GAL)**

**RECOMMENDATION**

We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. ( Customer Sample Comment: Top Up Amount: 10 GAL )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PCA0096595</b>	PCA0096588	PCA0096596
Sample Date		Client Info		<b>09 Jan 2024</b>	27 Dec 2023	11 Dec 2023
Machine Age	hrs	Client Info		<b>7633</b>	7334	6989
Oil Age	hrs	Client Info		<b>1790</b>	1491	1146
Filter Age	hrs	Client Info		<b>1790</b>	1491	1146
Oil Changed		Client Info		<b>Oil Added</b>	N/A	N/A
Filter Changed		Client Info		<b>Not Changd</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>4</b>	4	5
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>1</b>	<1	2
Lead	ppm	ASTM D5185m	>30	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>35	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

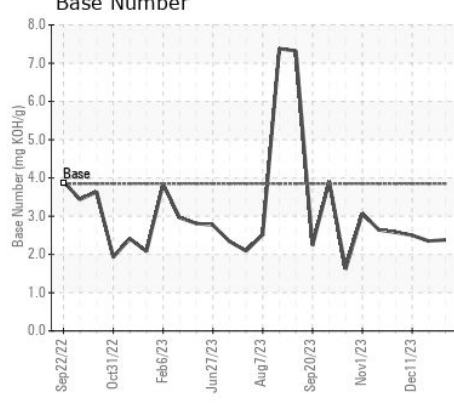
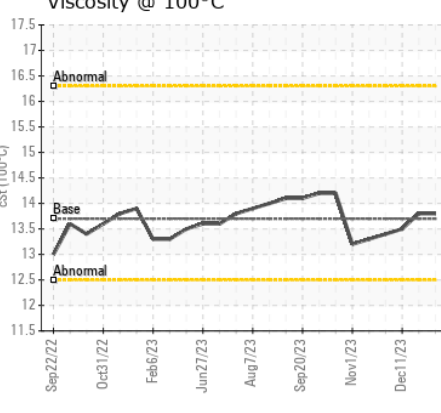
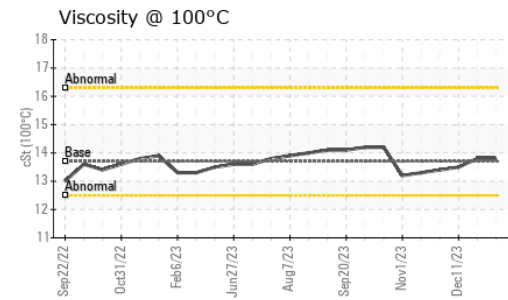
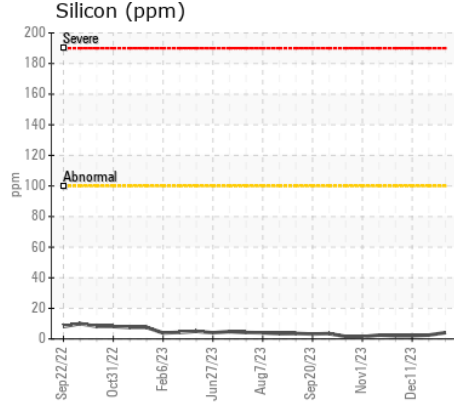
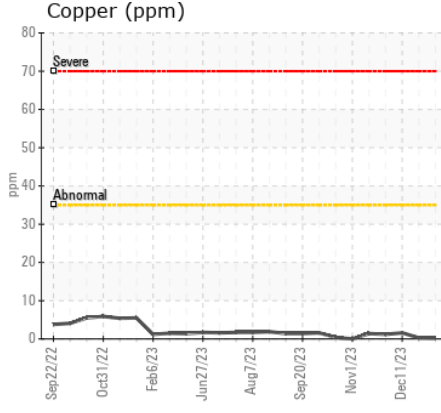
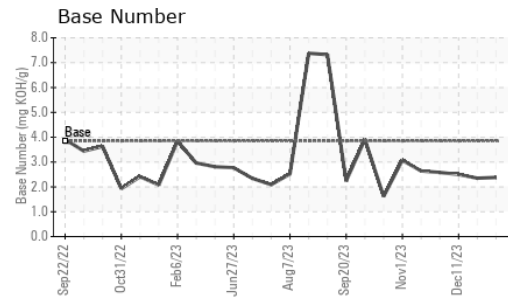
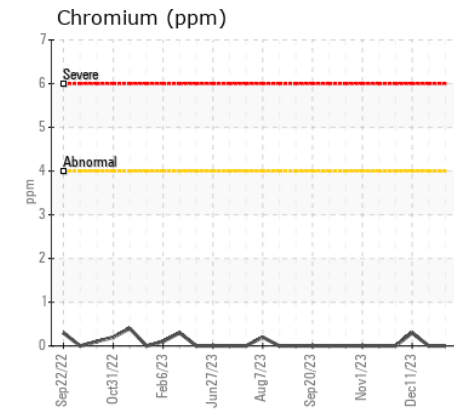
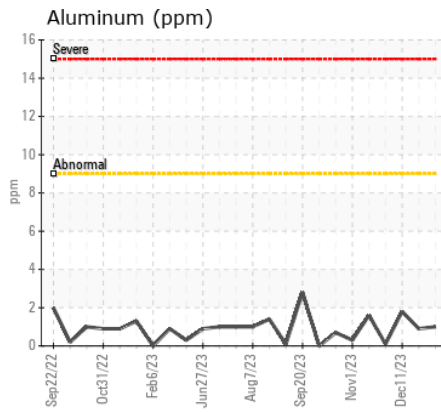
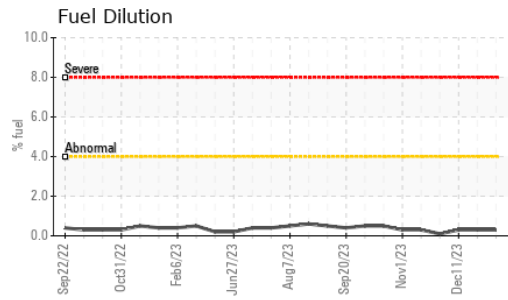
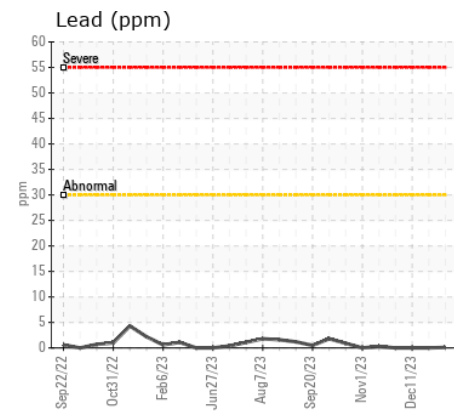
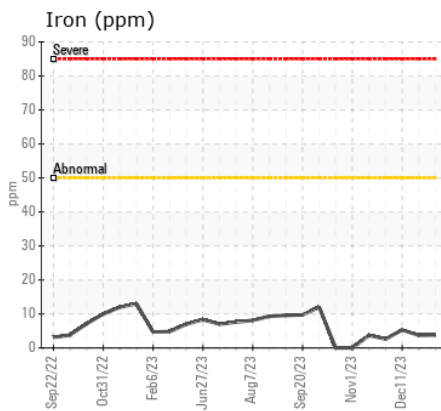
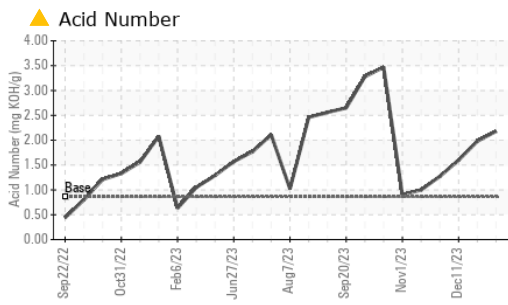
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	<b>4</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	2
Fuel	%	ASTM D3524	>4.0	<b>0.3</b>	0.3	0.3
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.8</b>	10.3	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	19.0	17.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is at the top-end of the recommended limit.

Sodium	ppm	ASTM D5185m		<b>1</b>	1	0
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	2	<b>0</b>	<1	1
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	5	<b>7</b>	11	8
Calcium	ppm	ASTM D5185m	1220	<b>1292</b>	1284	1384
Phosphorus	ppm	ASTM D5185m	298	<b>304</b>	311	337
Zinc	ppm	ASTM D5185m	350	<b>358</b>	366	370
Sulfur	ppm	ASTM D5185m	1995	<b>2114</b>	2183	2345
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.2</b>	17.2	14.5
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	<b>▲ 2.18</b>	1.98	1.60
Base Number (BN)	mg KOH/g	ASTM D2896	3.85	<b>2.38</b>	2.35	2.50
Visc @ 100°C	cSt	ASTM D445	13.7	<b>13.8</b>	13.8	13.5



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0096595 **Received** : 12 Jan 2024  
**Lab Number** : 06060390 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831772 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**DIVERSIFIED ENERGY - CURWENSVILLE**  
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 T:  
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Certificate L2367  
 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)