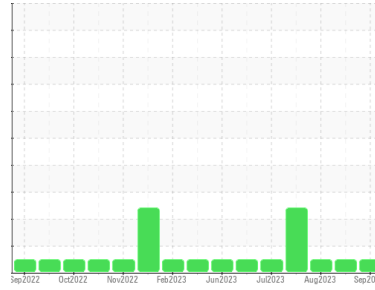


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
LONGHORN C
Machine Id
LONGHORN C (S/N 1645612)
Component
Natural Gas Engine
Fluid
PETRO CANADA SENTRON LD 3000 (190 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0080856	PCA0080862	PCA0080855
Sample Date	Client Info		05 Sep 2023	23 Aug 2023	07 Aug 2023
Machine Age	hrs	Client Info	4807	4559	4202
Oil Age	hrs	Client Info	2866	2618	2261
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	10	9	8
Chromium	ppm	ASTM D5185m >4	0	0	<1
Nickel	ppm	ASTM D5185m >2	0	<1	0
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	<1	1	1
Lead	ppm	ASTM D5185m >30	1	2	2
Copper	ppm	ASTM D5185m >35	1	2	2
Tin	ppm	ASTM D5185m >4	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	0	0	0
Barium	ppm	ASTM D5185m 1	0	1	0
Molybdenum	ppm	ASTM D5185m 2	<1	1	<1
Manganese	ppm	ASTM D5185m 1	<1	<1	<1
Magnesium	ppm	ASTM D5185m 5	18	8	12
Calcium	ppm	ASTM D5185m 1220	1467	1438	1408
Phosphorus	ppm	ASTM D5185m 298	307	306	299
Zinc	ppm	ASTM D5185m 350	374	393	359
Sulfur	ppm	ASTM D5185m 1995	2454	2497	2414

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	4	4	4
Sodium	ppm	ASTM D5185m	6	2	6
Potassium	ppm	ASTM D5185m >20	<1	2	2
Fuel	%	ASTM D3524 >4.0	0.5	0.6	0.5

INFRA-RED

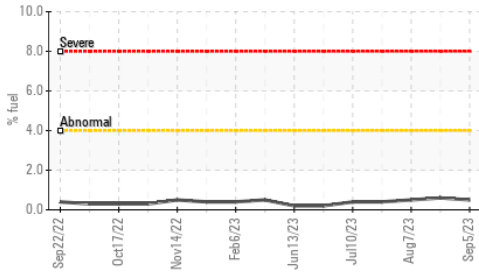
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624 >20	11.5	11.6	11.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.0	20.2	19.5

FLUID DEGRADATION

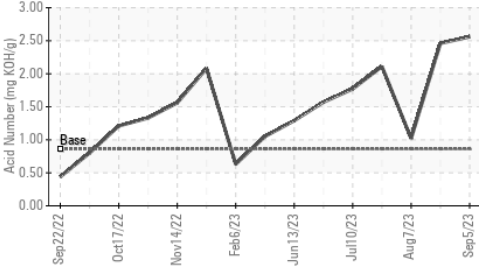
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.4	19.5	18.4
Acid Number (AN)	mg KOH/g	ASTM D8045 0.86	2.56	2.46	1.02
Base Number (BN)	mg KOH/g	ASTM D2896 3.85	7.32	7.38	2.52

OIL ANALYSIS REPORT

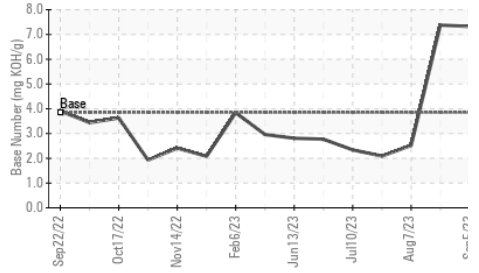
Fuel Dilution



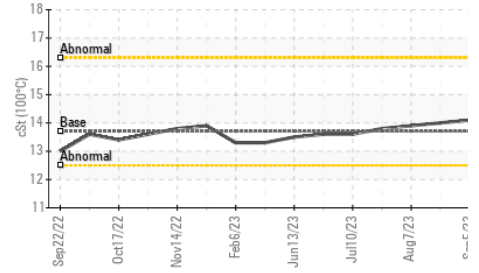
Acid Number



Base Number



Viscosity @ 100°C



VISUAL

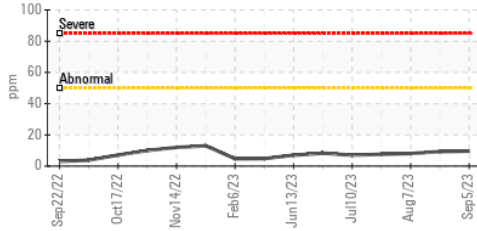
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES

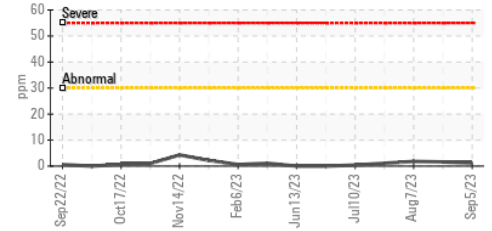
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.7	14.1	14.0

GRAPHS

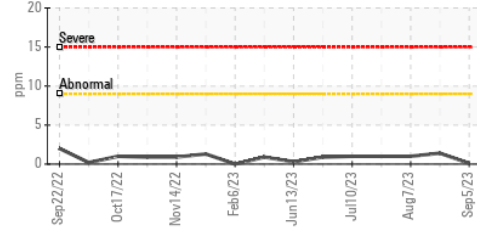
Iron (ppm)



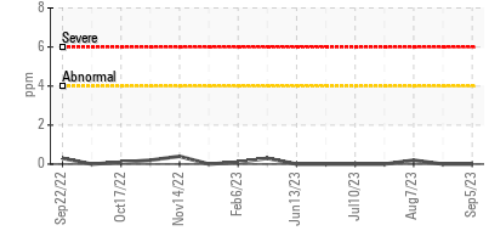
Lead (ppm)



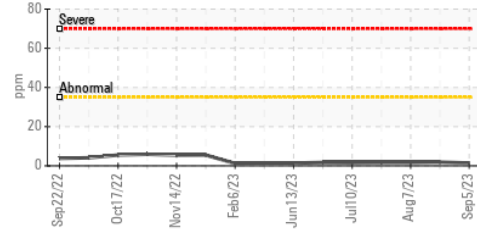
Aluminum (ppm)



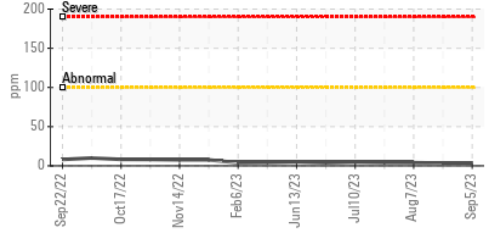
Chromium (ppm)



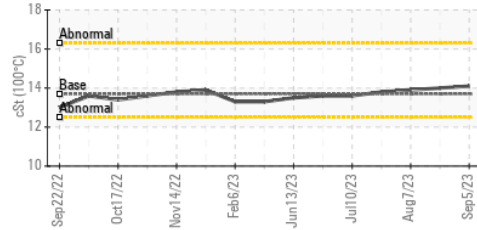
Copper (ppm)



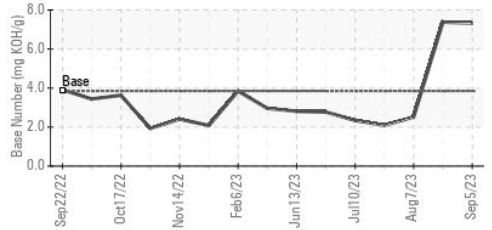
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0080856

Lab Number : 05948200

Unique Number : 10644159

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 12 Sep 2023

Tested : 18 Sep 2023

Diagnosed : 18 Sep 2023 - Jonathan Hester

DIVERSIFIED ENERGY - CURWENSVILLE

325 WALNUT ST FL2

CURWENSVILLE, PA

US 16833

Contact: ZACH MCGARY

zmcgary@dgoc.com

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)

T:

F: