

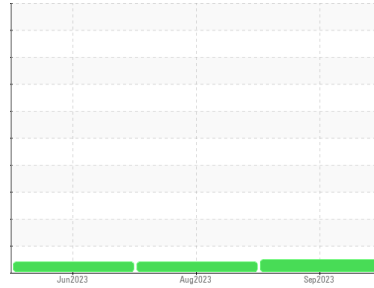


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR 330C HOE 121
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0822240	WC0517492	WC0822335
Sample Date	Client Info		22 Sep 2023	07 Aug 2023	20 Jun 2023
Machine Age	hrs	Client Info	8920	8725	8473
Oil Age	hrs	Client Info	245	252	263
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	ATTENTION	MARGINAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	0.2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	11	10	15
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	<1	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	<1	2	1
Lead	ppm	ASTM D5185m >40	<1	<1	0
Copper	ppm	ASTM D5185m >330	2	1	1
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	5	12
Barium	ppm	ASTM D5185m	3	0	0
Molybdenum	ppm	ASTM D5185m	61	65	62
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	908	951	968
Calcium	ppm	ASTM D5185m	1083	1163	1237
Phosphorus	ppm	ASTM D5185m	954	1086	1094
Zinc	ppm	ASTM D5185m	1151	1273	1361
Sulfur	ppm	ASTM D5185m	2780	3296	3946

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	6	10
Sodium	ppm	ASTM D5185m	2	0	1
Potassium	ppm	ASTM D5185m >20	0	1	0

INFRA-RED

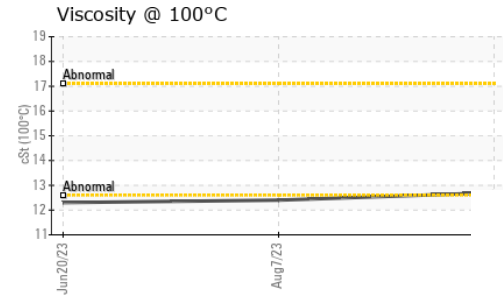
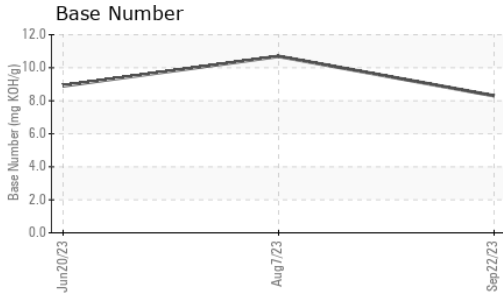
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.2	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	6.5	6.6	6.7
Sulfation	Abs.1mm	*ASTM D7415 >30	18.2	18.8	19.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs.1mm	*ASTM D7414 >25	14.0	14.3	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.3	10.69	8.9



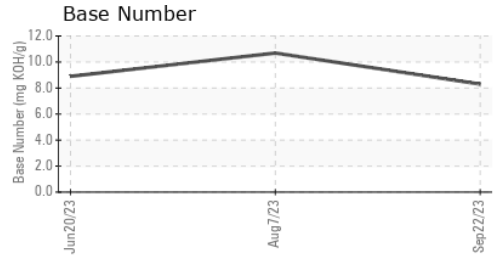
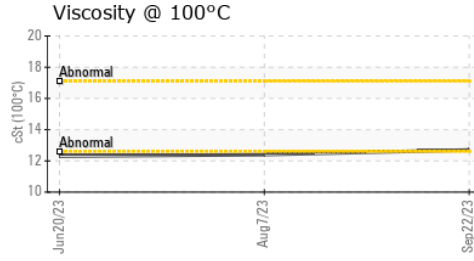
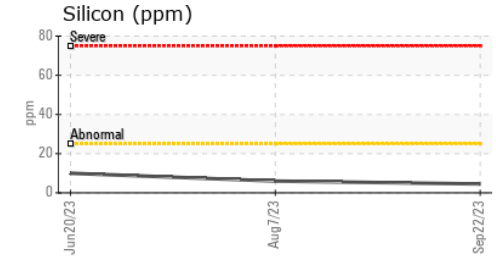
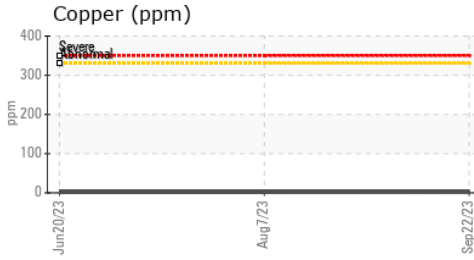
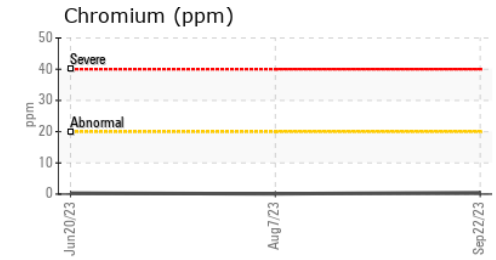
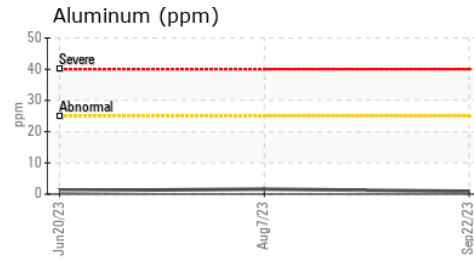
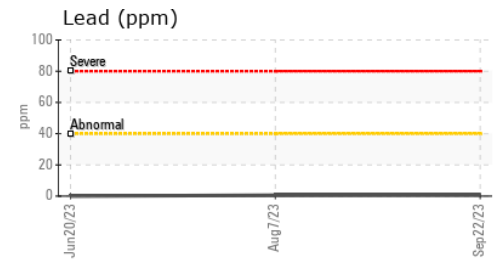
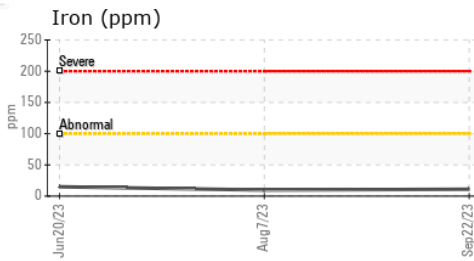
OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.7	▲ 12.4	▲ 12.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0822240 **Received** : 16 Oct 2023
Lab Number : 05980231 **Diagnosed** : 17 Oct 2023
Unique Number : 10697526 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

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 706 38TH AVE N
 MYRTLE BEACH, SC
 US 29577
 Contact: NEIL
 neil@clbenton.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)

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