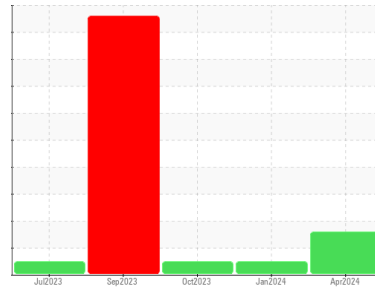




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
CATERPILLAR 345 122
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a light concentration of water present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0893846	WC0879015	WC0868153
Sample Date	Client Info			12 Apr 2024	13 Jan 2024	28 Oct 2023
Machine Age	hrs	Client Info		21213	20936	20657
Oil Age	hrs	Client Info		277	279	256
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>5	<1.0	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	9	14
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	<1	1
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	2	4	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		3	0	9
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		60	60	62
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		971	933	956
Calcium	ppm	ASTM D5185m		1062	996	1070
Phosphorus	ppm	ASTM D5185m		1021	1035	1035
Zinc	ppm	ASTM D5185m		1249	1209	1284
Sulfur	ppm	ASTM D5185m		3313	2782	2968

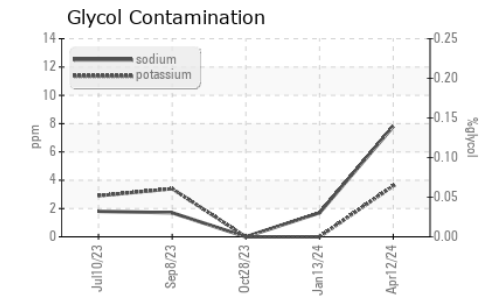
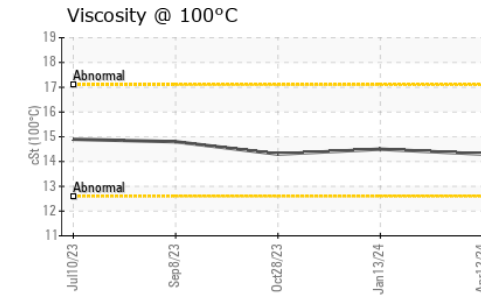
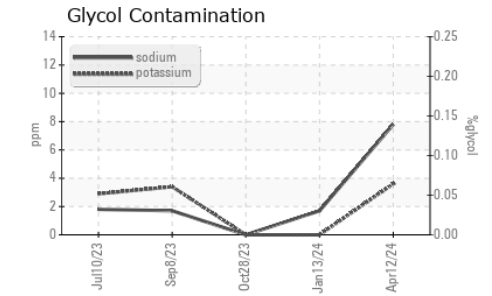
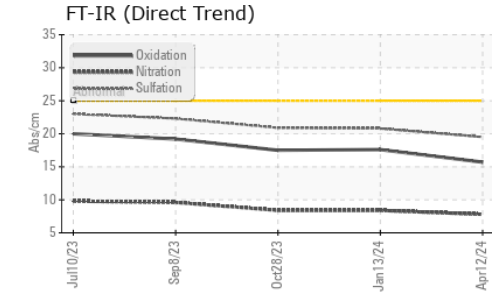
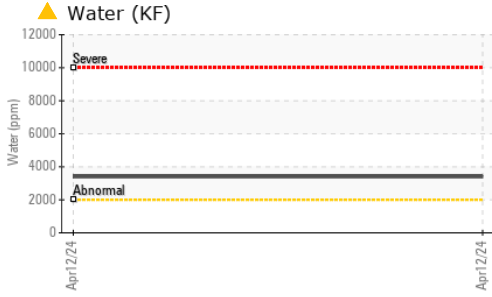
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	2	3
Sodium	ppm	ASTM D5185m		8	2	0
Potassium	ppm	ASTM D5185m	>20	4	0	0
Water	%	ASTM D6304	>0.2	▲ 0.340	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 3400	---	---
Glycol	%	*ASTM D2982		NEG	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.8	8.4	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	20.8	20.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	17.6	17.5
Base Number (BN)	mg KOH/g	ASTM D2896		9.2	8.6	8.5



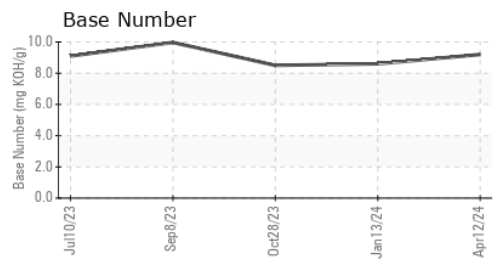
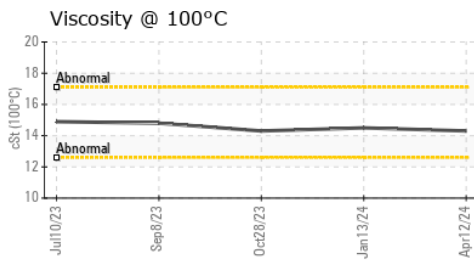
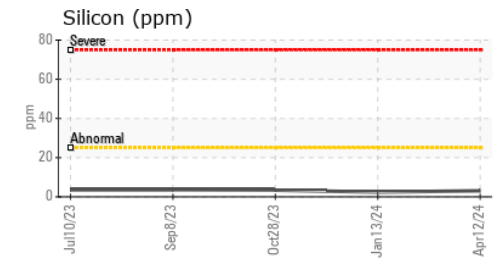
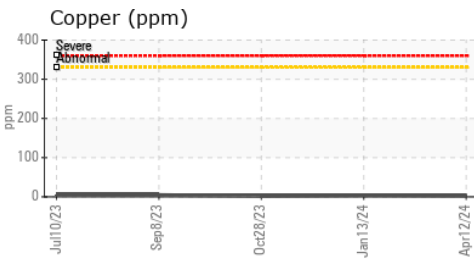
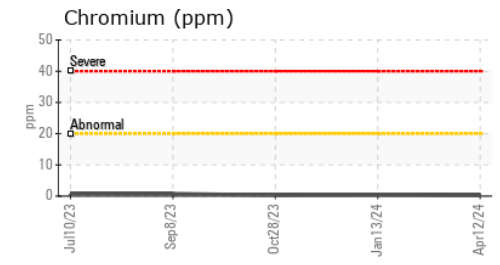
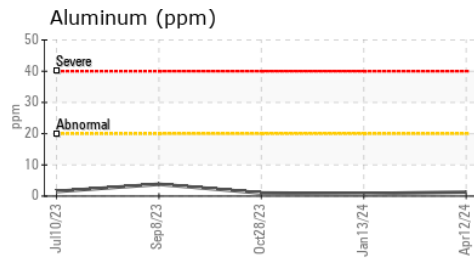
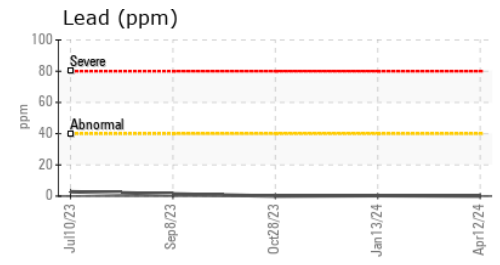
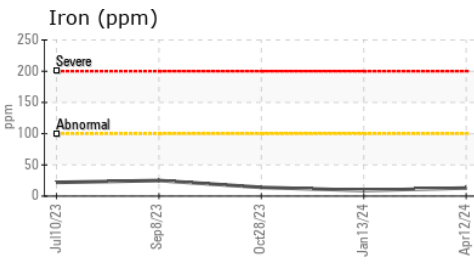
OIL ANALYSIS REPORT



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	▲ 0.2%	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.3	14.5	14.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0893846 **Received** : 17 May 2024
Lab Number : 06183805 **Tested** : 22 May 2024
Unique Number : 11035131 **Diagnosed** : 22 May 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: Glycol, KF, TBN)

C.L. BENTON & SONS INC
 706 38TH AVE N
 MYRTLE BEACH, SC
 US 29577
 Contact: JAMIE HUCKS
 shop@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)