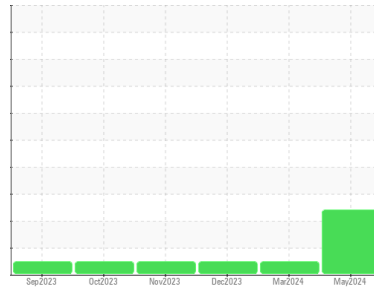




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id

4 IN VAC PUMP 338

Component

Diesel Engine

Fluid

PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0917242	WC0906198	WC0879005
Sample Date	Client Info			06 May 2024	07 Mar 2024	19 Dec 2023
Machine Age	hrs	Client Info		14591	14178	13876
Oil Age	hrs	Client Info		413	302	422
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	9	17	8
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	4	1
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	5	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		5	3	5
Barium	ppm	ASTM D5185m		0	0	10
Molybdenum	ppm	ASTM D5185m		49	65	58
Manganese	ppm	ASTM D5185m		1	<1	0
Magnesium	ppm	ASTM D5185m		837	1075	884
Calcium	ppm	ASTM D5185m		1024	1198	1018
Phosphorus	ppm	ASTM D5185m		897	1166	1082
Zinc	ppm	ASTM D5185m		1107	1347	1146
Sulfur	ppm	ASTM D5185m		2904	3432	3405

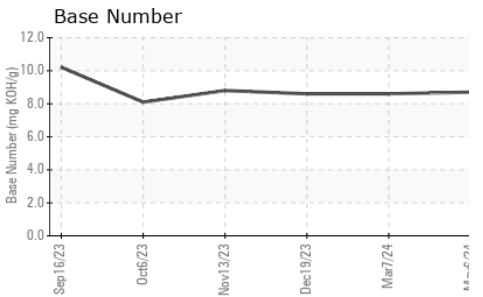
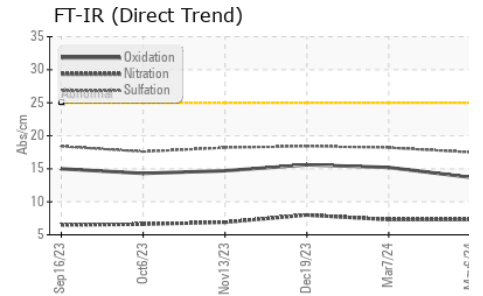
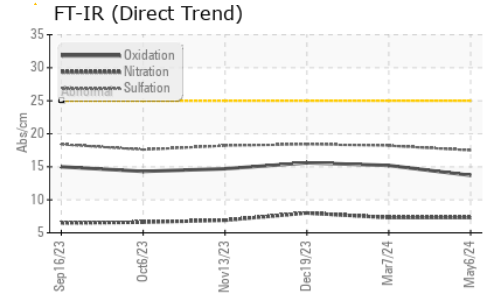
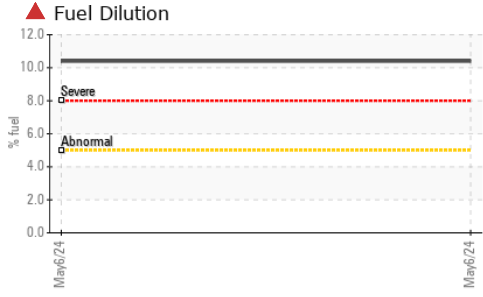
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	5	2
Sodium	ppm	ASTM D5185m		2	2	0
Potassium	ppm	ASTM D5185m	>20	<1	1	2
Fuel	%	ASTM D3524	>5	▲ 10.4	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	7.3	7.3	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.5	18.2	18.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	15.2	15.6
Base Number (BN)	mg KOH/g	ASTM D2896		8.7	8.6	8.6



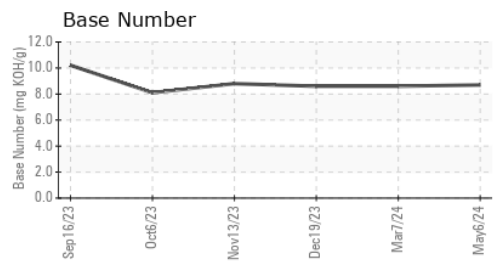
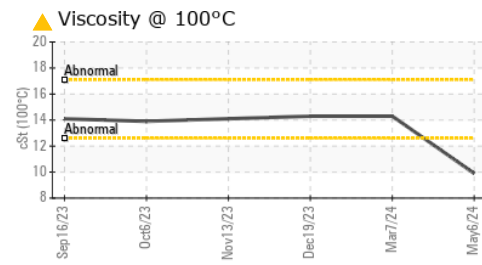
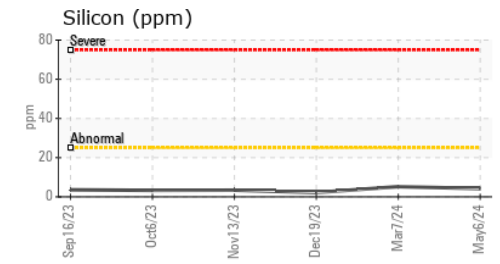
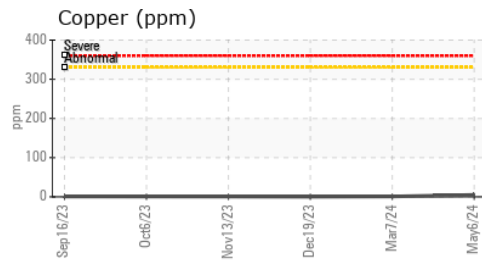
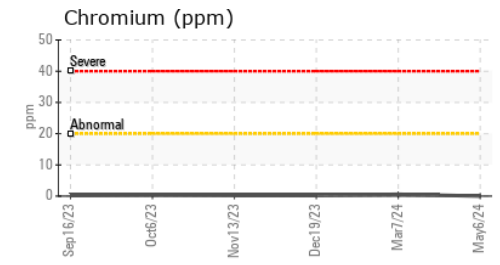
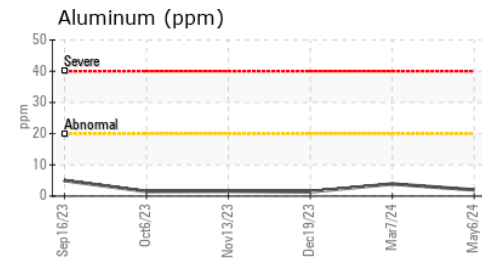
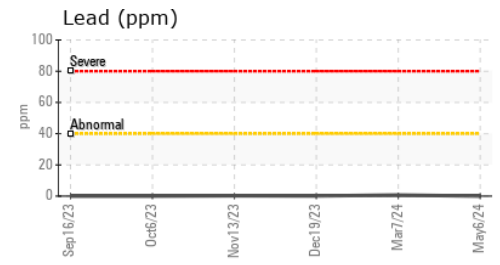
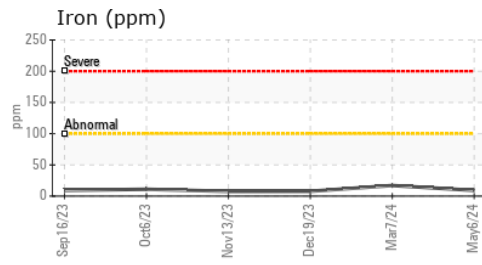
OIL ANALYSIS REPORT



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	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 9.9	14.3	14.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0917242 **Received** : 17 May 2024
Lab Number : 06183794 **Tested** : 22 May 2024
Unique Number : 11035120 **Diagnosed** : 22 May 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, 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)