



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
33 CARLSON
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- LTR)

RECOMMENDATION

We advise that you check the fuel injection system. The oil is near the end of it's useful service life, recommend schedule an oil change. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0897588	WC0768117	WC0606375
Sample Date		Client Info		31 Jan 2024	30 Jan 2023	21 Sep 2021
Machine Age	hrs	Client Info		0	0	292
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	2	1	1
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	1	<1	<1
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	3	5	6
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

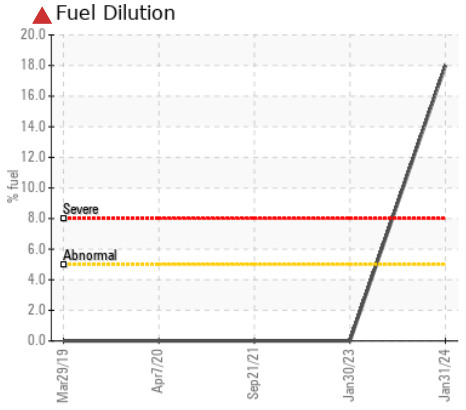
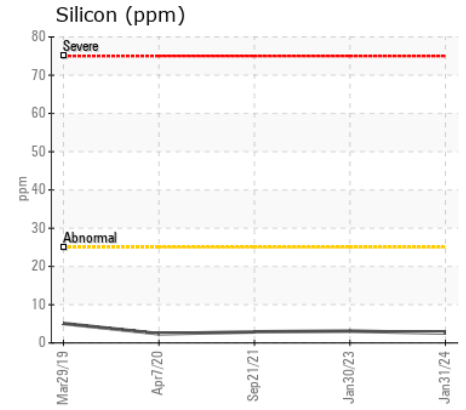
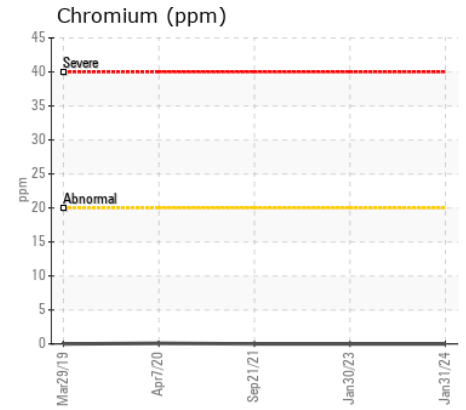
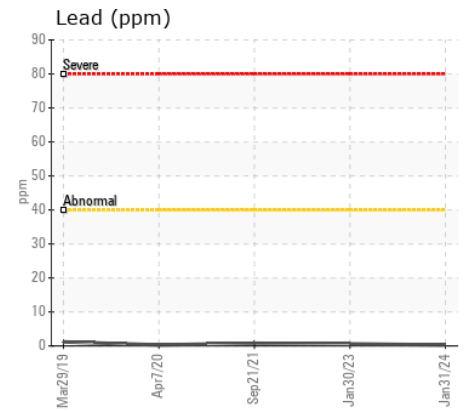
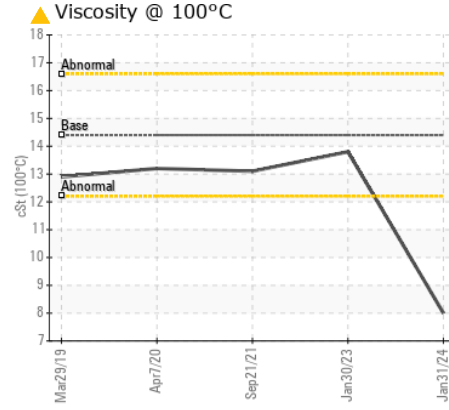
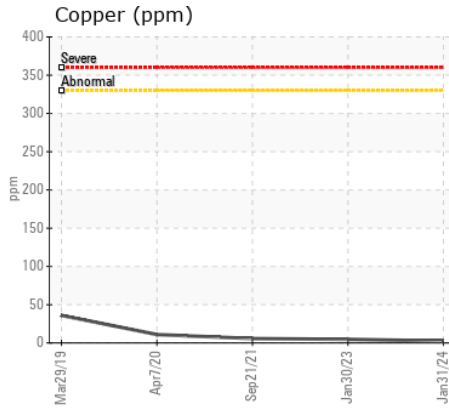
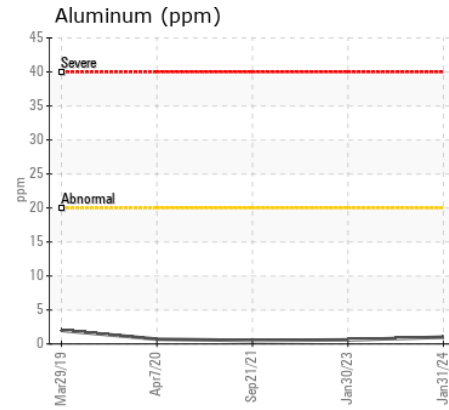
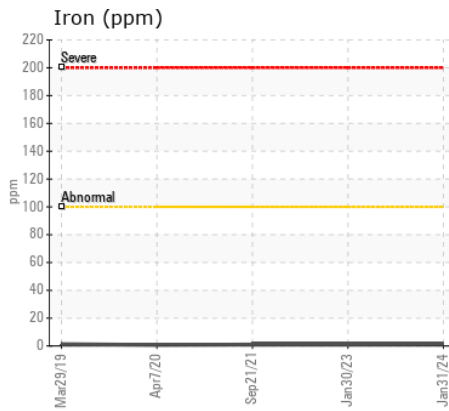
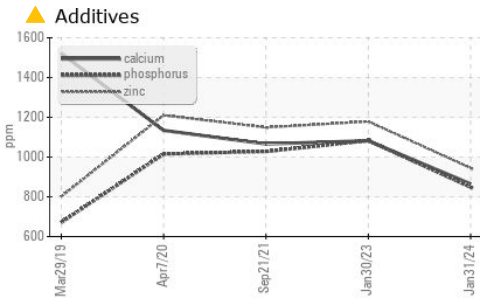
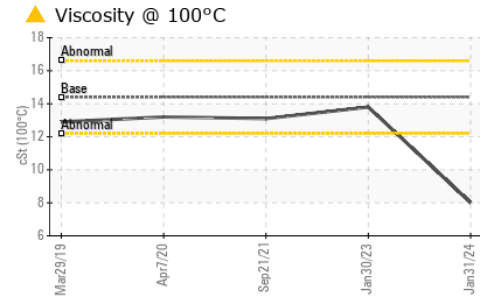
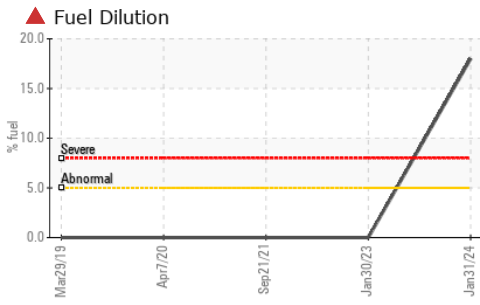
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	3	3
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Fuel	%	ASTM D7593*	>5	▲ 18	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	5.4	4.4	5.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.2	18.4	18.2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Calcium ppm levels are abnormally low. Visc @ 100°C is abnormally low. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)	>158	1	2	1
Boron	ppm	ASTM D5185(m)	250	1	3	12
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	49	59	54
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	790	947	908
Calcium	ppm	ASTM D5185(m)	3000	▲ 865	1082	1066
Phosphorus	ppm	ASTM D5185(m)	1150	848	1083	1028
Zinc	ppm	ASTM D5185(m)	1350	945	1179	1149
Sulfur	ppm	ASTM D5185(m)	4250	2421	2824	2695
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.5	10.0	12.9
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 8	13.8	13.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0897588 **Received** : 01 Mar 2024
Lab Number : 02619215 **Tested** : 04 Mar 2024
Unique Number : 5736325 **Diagnosed** : 04 Mar 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.