



WEAR

NORMAL

CONTAMINATION

ABNORMAL

FLUID CONDITION

ABNORMAL

Area

[82883]

Machine Id

205 CUMMER AVE TORONTO CITY OF TORONTO 12VF012171

Component

Rear Diesel Engine

Fluid

ESSO XD-3 EXTRA 15W40 (40 LTR)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PN0005727	PN0004331	PN808897
Sample Date		Client Info		21 Dec 2023	28 Nov 2022	28 Apr 2010
Machine Age	hrs	Client Info		830	810	413
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>125	4	6	11
Chromium	ppm	ASTM D5185(m)	>5	0	0	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	1
Lead	ppm	ASTM D5185(m)	>12	<1	0	<1
Copper	ppm	ASTM D5185(m)	>45	2	<1	2
Tin	ppm	ASTM D5185(m)	>20	12	<1	4
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

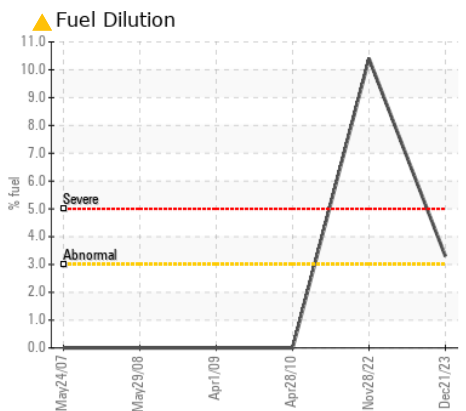
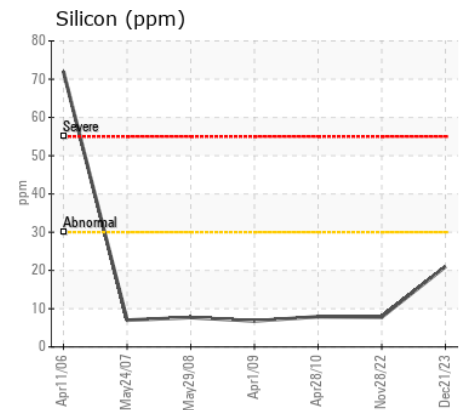
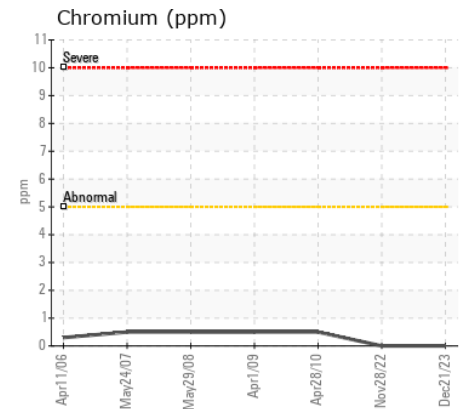
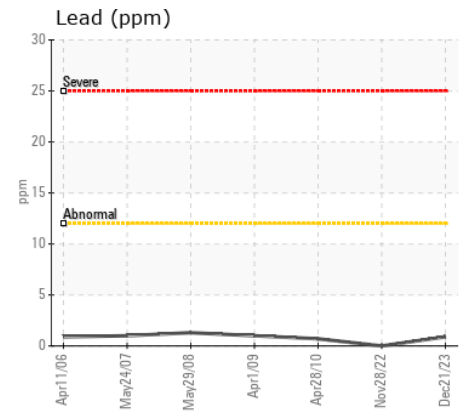
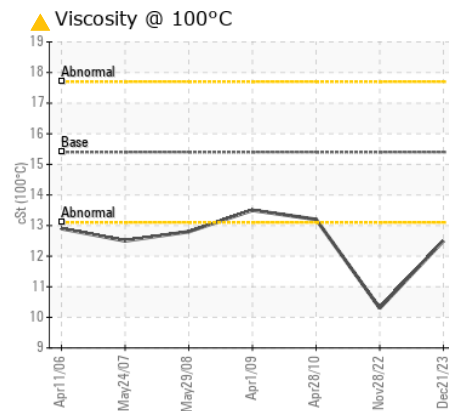
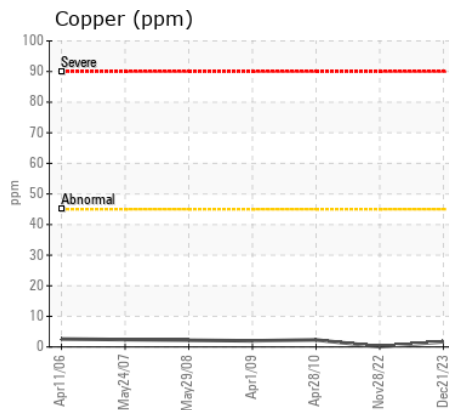
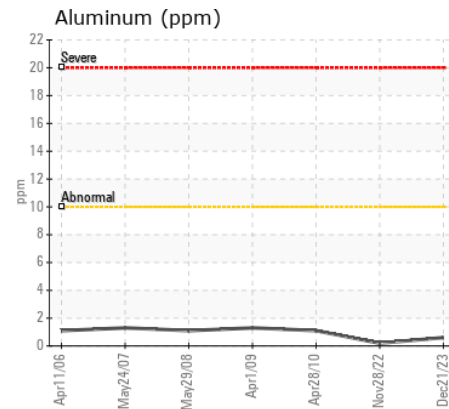
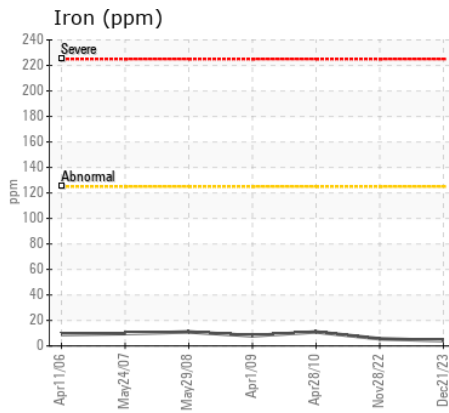
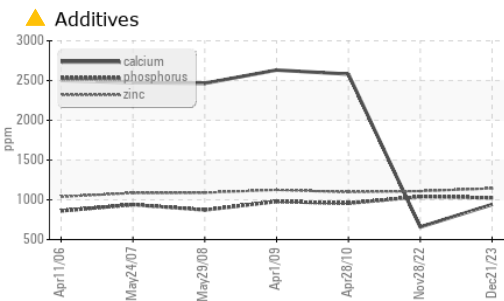
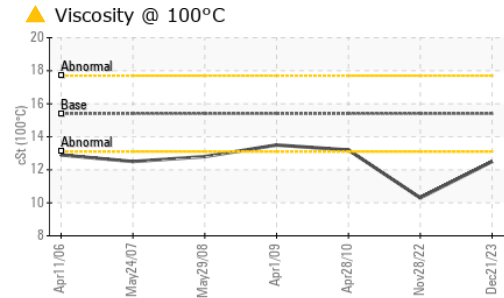
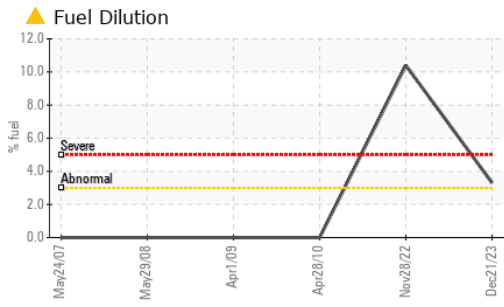
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>30	21	8	8
Potassium	ppm	ASTM D5185(m)	>20	0	0	0
Fuel	%	ASTM D7593*	>3.0	▲ 3.3	10.4	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>0.8	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	3.6	4.4	5.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	12.9	14.2	18.2
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
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)	>192	2	<1	0
Boron	ppm	ASTM D5185(m)		2	2	<1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		<1	1	<1
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		904	997	8
Calcium	ppm	ASTM D5185(m)	3780	▲ 941	658	2581
Phosphorus	ppm	ASTM D5185(m)	1370	1025	1040	956
Zinc	ppm	ASTM D5185(m)	1500	1144	1109	1096
Sulfur	ppm	ASTM D5185(m)	3800	3452	5607	4690
Oxidation	Abs/.1mm	ASTM D7414*	>25	6.8	7.1	10.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.5	10.3	13.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PN0005727 **Received** : 04 Jan 2024
Lab Number : 02606531 **Diagnosed** : 05 Jan 2024
Unique Number : 5707617 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: PercentFuel, Visual)

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.

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