



Machine Id
441 BLOOR ST. EAST FH313 CITY OF TORONTO 39001047

Component
Right Natural Gas Engine

Fluid
ESSO XD-3 EXTRA 5W30 (10 LTR)

RECOMMENDATION

We advise that you check for the source of water entry. 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		PN0005621	PN0004554	PN0000766
Sample Date		Client Info		22 Jan 2024	24 Jan 2023	17 Jan 2020
Machine Age	hrs	Client Info		84	82	28
Oil Age	hrs	Client Info		16	0	0
Filter Age	hrs	Client Info		16	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>50	8	10	35
Chromium	ppm	ASTM D5185(m)	>4	0	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>9	3	3	4
Lead	ppm	ASTM D5185(m)	>30	2	2	4
Copper	ppm	ASTM D5185(m)	>35	<1	1	10
Tin	ppm	ASTM D5185(m)	>4	<1	<1	1
Vanadium	ppm	ASTM D5185(m)		0	0	<1
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

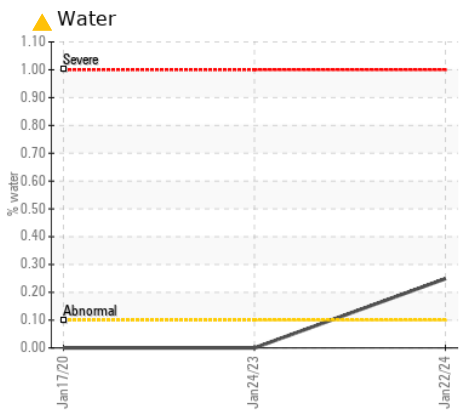
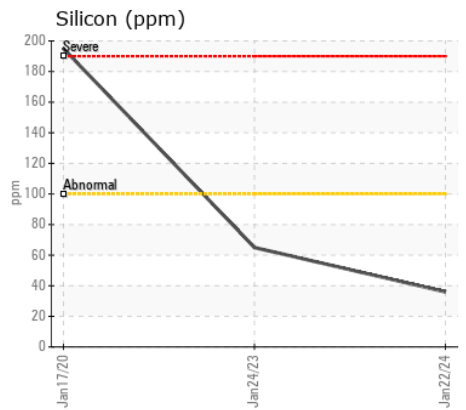
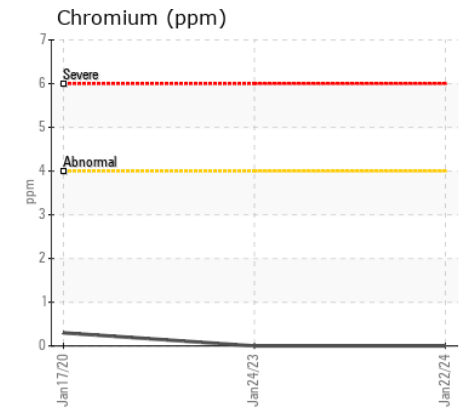
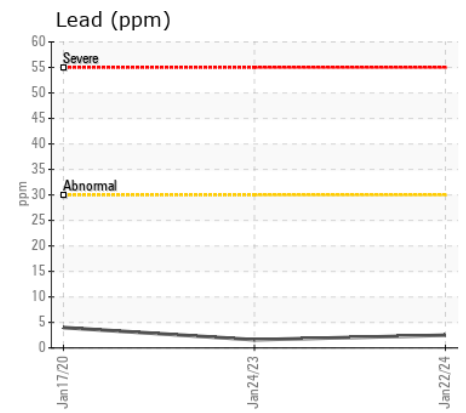
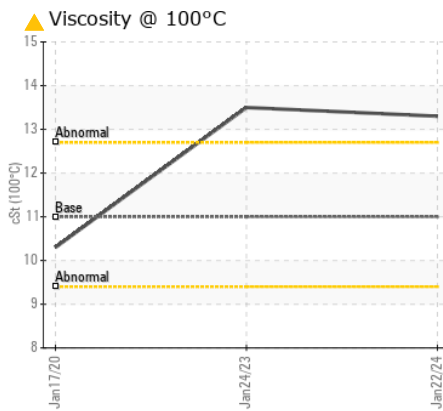
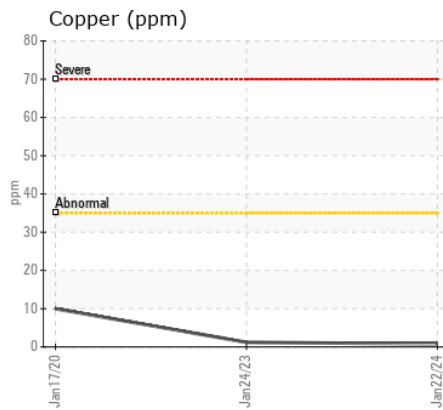
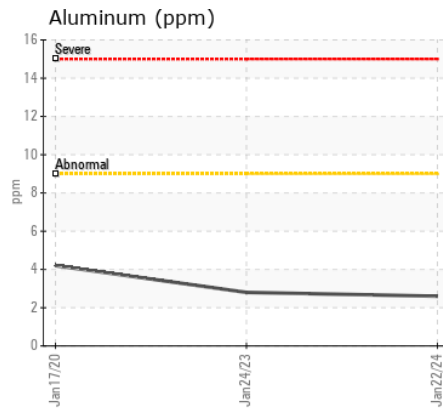
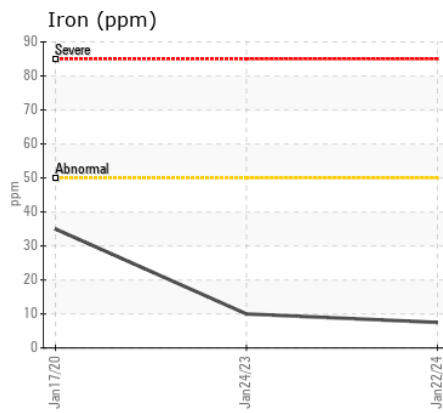
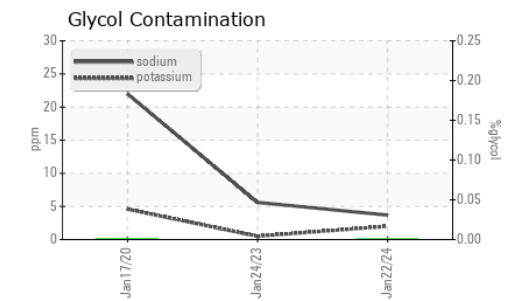
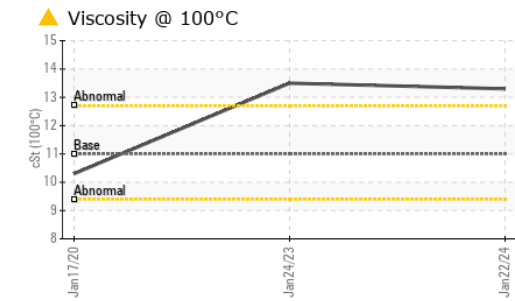
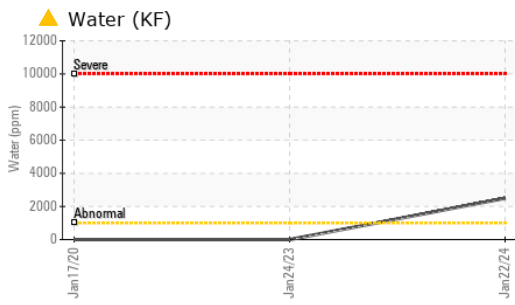
There is a moderate concentration of water present in the oil. Test for glycol is negative.

Silicon	ppm	ASTM D5185(m)	>+100	36	65	195
Potassium	ppm	ASTM D5185(m)	>20	2	<1	5
Water	%	ASTM D6304*	>0.1	▲ 0.249	---	---
ppm Water	ppm	ASTM D6304*	>1000	▲ 2498	---	---
Glycol	%	ASTM D7922*		0.0	---	0.0
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	7.9	4.2	5.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	16.9	15.2	20.3
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*	>0.1	▲ .2%	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		4	6	22
Boron	ppm	ASTM D5185(m)		50	35	59
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		39	50	99
Manganese	ppm	ASTM D5185(m)		0	2	8
Magnesium	ppm	ASTM D5185(m)		311	67	153
Calcium	ppm	ASTM D5185(m)	2360	1809	2903	1601
Phosphorus	ppm	ASTM D5185(m)	1110	1011	881	571
Zinc	ppm	ASTM D5185(m)	1220	1133	934	688
Sulfur	ppm	ASTM D5185(m)		3320	3037	1612
Oxidation	Abs/.1mm	ASTM D7414*	>25	12.2	6.8	10.1
Visc @ 100°C	cSt	ASTM D7279(m)	11.0	▲ 13.3	13.5	10.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PN0005621 **Received** : 24 Jan 2024
Lab Number : 02610871 **Diagnosed** : 25 Jan 2024
Unique Number : 5719966 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, KF, Visual)

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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.