



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1285 DUFFERIN ST TORONTO CITY OF TORONTO CITY OF TORONTO

Component
Right Diesel Engine

Fluid
ESSO XD-3 EXTRA 5W30 (20 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
 Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PN0006150	PN0004827	PN0003468
Sample Date		Client Info		02 May 2024	05 May 2023	16 May 2022
Machine Age	hrs	Client Info		86	69	54
Oil Age	hrs	Client Info		17	15	16
Filter Age	hrs	Client Info		17	15	16
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	10	10	12
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	3	4	3
Lead	ppm	ASTM D5185(m)	>40	1	2	2
Copper	ppm	ASTM D5185(m)	>330	5	9	14
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

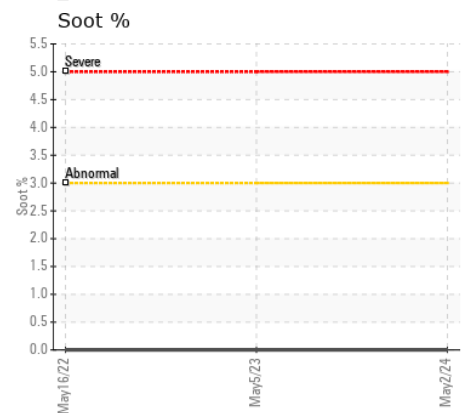
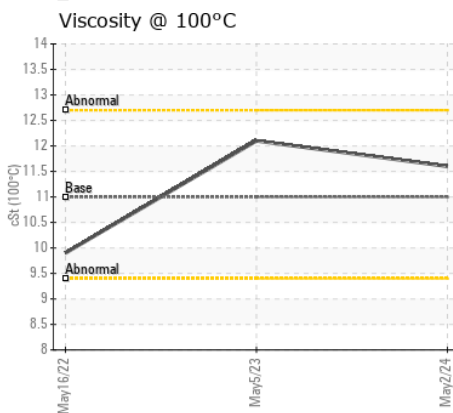
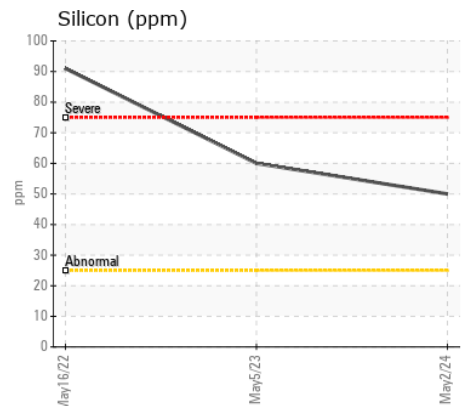
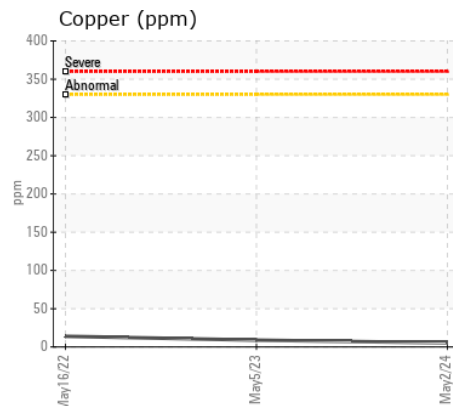
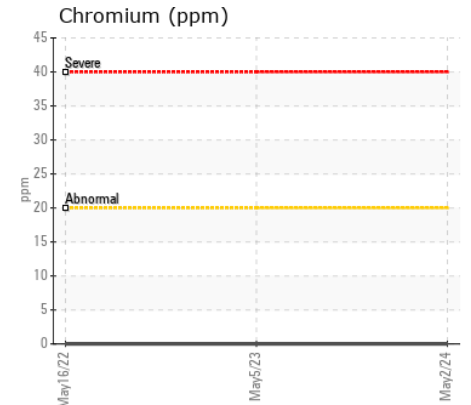
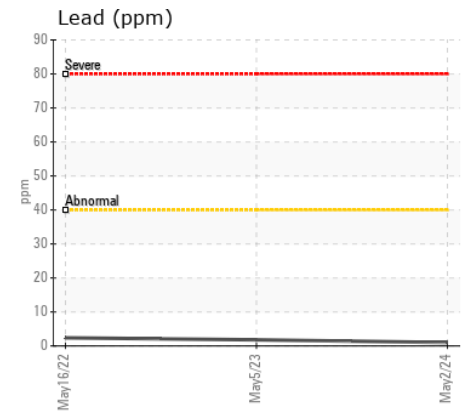
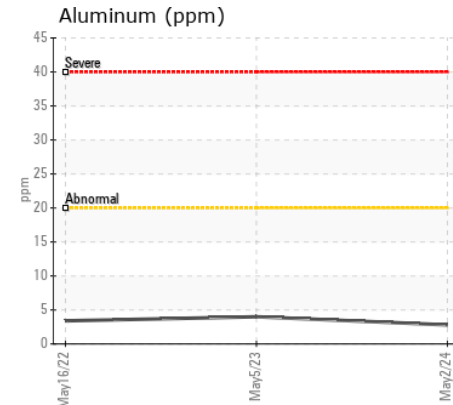
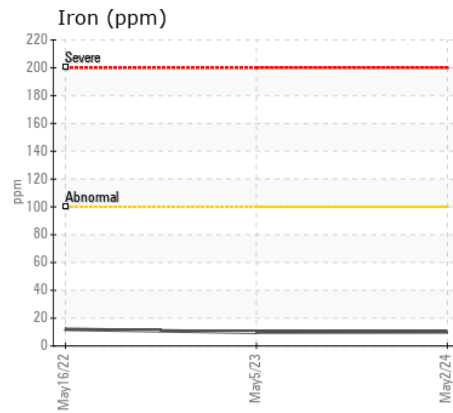
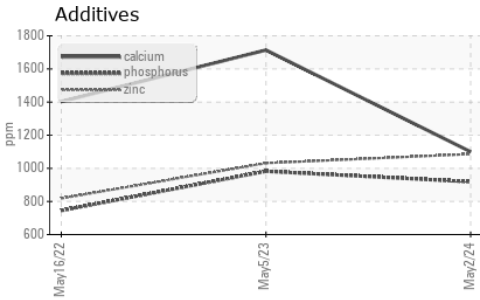
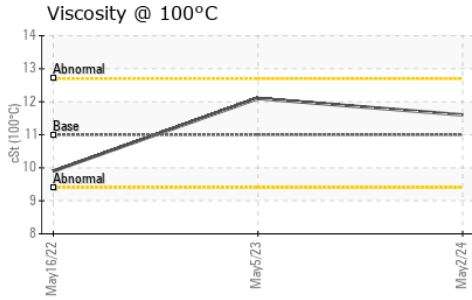
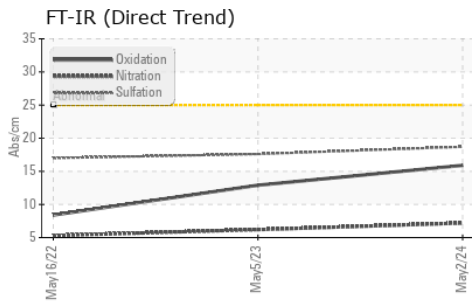
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	50	60	91
Potassium	ppm	ASTM D5185(m)	>20	<1	1	11
Fuel		WC Method	>5	<1.0	<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	7.2	6.2	5.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.7	17.6	17.0
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	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil.
 The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		5	4	8
Boron	ppm	ASTM D5185(m)		49	54	98
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		63	66	62
Manganese	ppm	ASTM D5185(m)		<1	1	2
Magnesium	ppm	ASTM D5185(m)		840	418	391
Calcium	ppm	ASTM D5185(m)	2360	1100	1714	1403
Phosphorus	ppm	ASTM D5185(m)	1110	919	982	745
Zinc	ppm	ASTM D5185(m)	1220	1086	1031	818
Sulfur	ppm	ASTM D5185(m)		2672	2830	2460
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.9	12.9	8.4
Visc @ 100°C	cSt	ASTM D7279(m)	11.0	11.6	▲ 12.1	▲ 9.9



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PN0006150 **Received** : 07 May 2024
Lab Number : 02633803 **Tested** : 07 May 2024
Unique Number : 5774956 **Diagnosed** : 07 May 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: 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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