



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**70 YORK STREET TORONTO PENTHOUSE COLLIERS INTERNATIONAL 16VF008288**

Component  
**Right Diesel Engine**

Fluid  
**ESSO XD-3 EXTRA SAE 40 (80 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		<b>PN0005690</b>	PN0004602	PN0003286
Sample Date		Client Info		<b>02 Feb 2024</b>	13 Feb 2023	14 Feb 2022
Machine Age	hrs	Client Info		<b>673</b>	663	641
Oil Age	hrs	Client Info		<b>20</b>	23	0
Filter Age	hrs	Client Info		<b>20</b>	23	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>125	<b>2</b>	2	2
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>12	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>45	<b>1</b>	<1	1
Tin	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	VLITE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

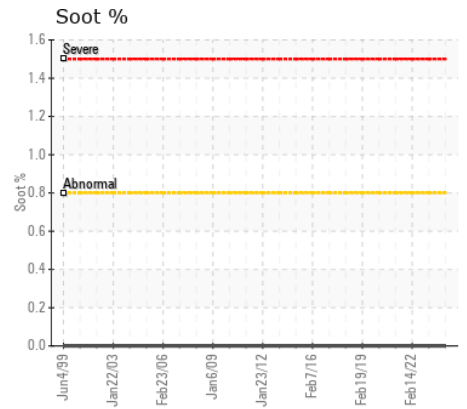
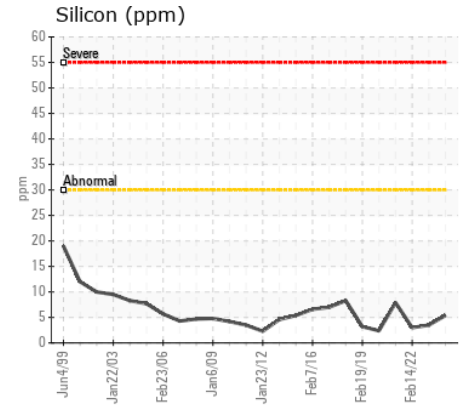
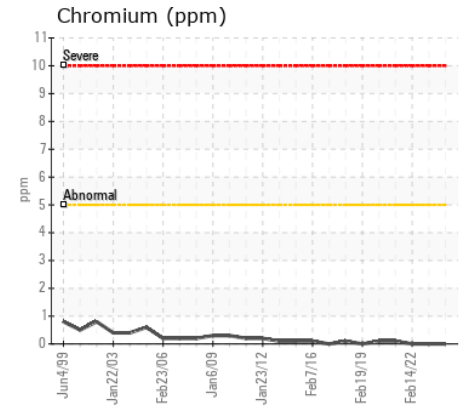
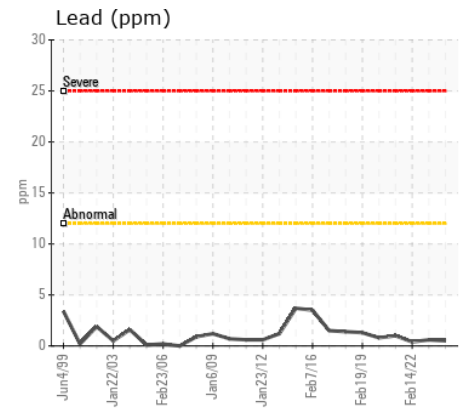
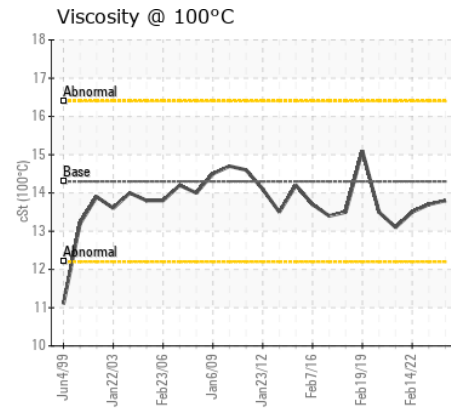
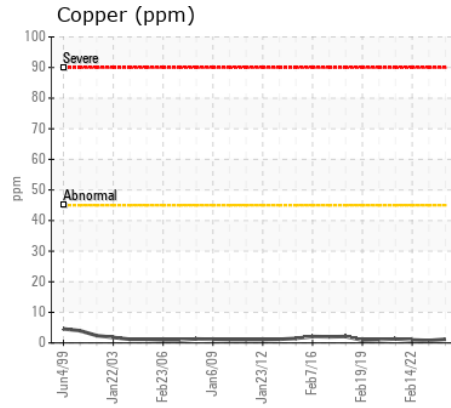
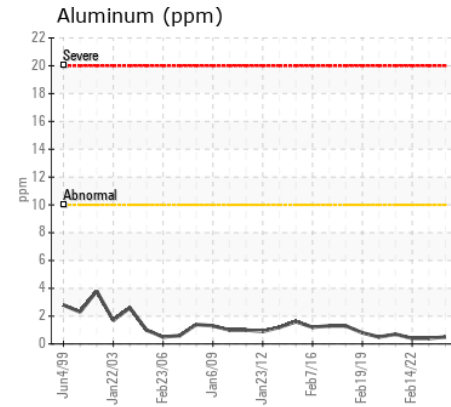
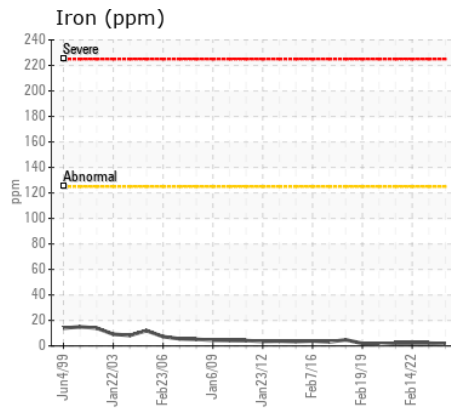
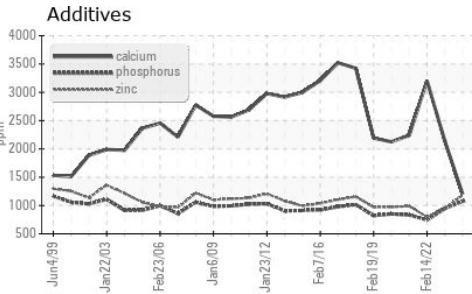
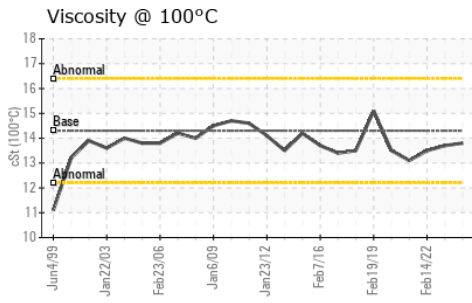
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>30	<b>5</b>	4	3
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>0.8	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>3.2</b>	5.0	2.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>12.6</b>	16.6	12.2
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	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)		<b>&lt;1</b>	2	4
Boron	ppm	ASTM D5185(m)		<b>2</b>	10	9
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>1</b>	7	8
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185(m)		<b>887</b>	595	81
Calcium	ppm	ASTM D5185(m)	2550	<b>1203</b>	2140	3204
Phosphorus	ppm	ASTM D5185(m)	1000	<b>1075</b>	948	745
Zinc	ppm	ASTM D5185(m)	1120	<b>1181</b>	948	800
Sulfur	ppm	ASTM D5185(m)		<b>3299</b>	5448	2280
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>5.5</b>	6.1	4.2
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	<b>13.8</b>	13.7	13.5



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PN0005690  
**Lab Number** : 02615899  
**Unique Number** : 5733009  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**Received** : 15 Feb 2024  
**Tested** : 15 Feb 2024  
**Diagnosed** : 15 Feb 2024 - Kevin Marson

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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