



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

Machine Id  
**330 PROGRESS AVE SCARBOROUGH CITY OF TORONTO 37255195**

Component  
**Right Diesel Engine**  
 Fluid  
**ESSO XD-3 EXTRA 15W40 (140 LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PN0005854</b>	PN0004721	PN0003229
Sample Date		Client Info		<b>15 Apr 2024</b>	27 Apr 2023	27 Apr 2022
Machine Age	hrs	Client Info		<b>234</b>	237	205
Oil Age	hrs	Client Info		<b>12</b>	0	0
Filter Age	hrs	Client Info		<b>12</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>90	<b>&lt;1</b>	1	<1
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	1	2
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

There is no indication of any contamination in the oil.

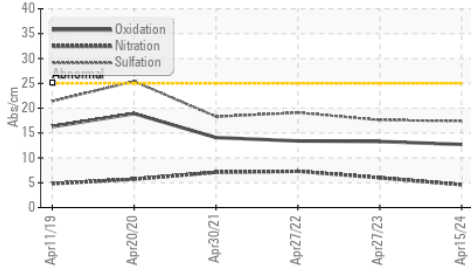
Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	7	8
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>6	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>4.6</b>	6.0	7.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>17.4</b>	17.6	19.1
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

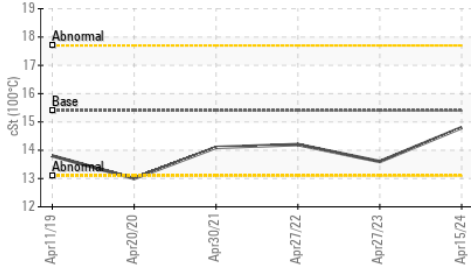
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>192	<b>1</b>	2	2
Boron	ppm	ASTM D5185(m)		<b>11</b>	48	77
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>60</b>	71	80
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>845</b>	396	54
Calcium	ppm	ASTM D5185(m)	3780	<b>1164</b>	1802	2042
Phosphorus	ppm	ASTM D5185(m)	1370	<b>987</b>	1080	1023
Zinc	ppm	ASTM D5185(m)	1500	<b>1145</b>	1141	1125
Sulfur	ppm	ASTM D5185(m)	3800	<b>2610</b>	3012	3126
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>12.7</b>	13.3	13.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>14.8</b>	13.6	14.2

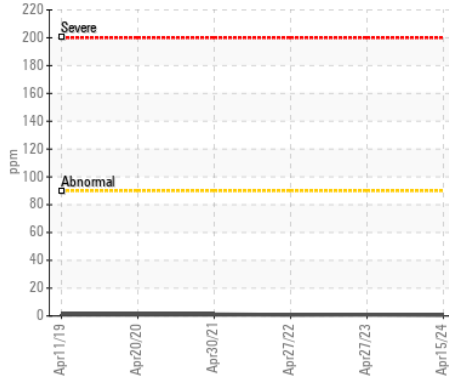
FT-IR (Direct Trend)



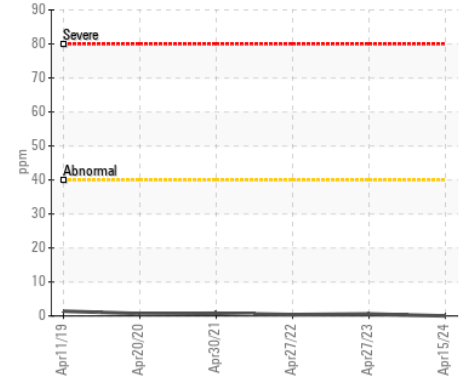
Viscosity @ 100°C



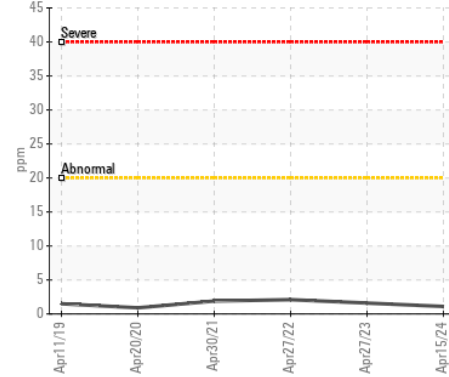
Iron (ppm)



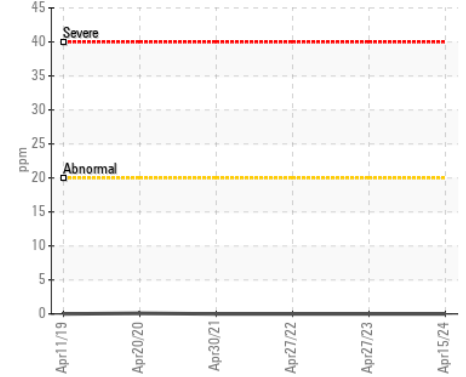
Lead (ppm)



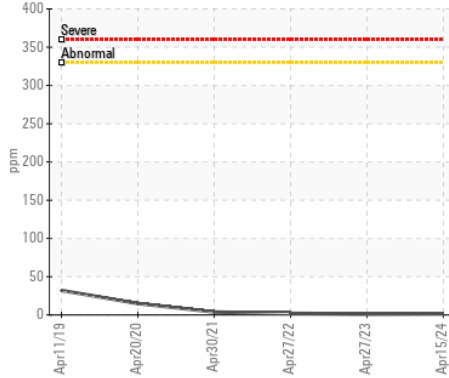
Aluminum (ppm)



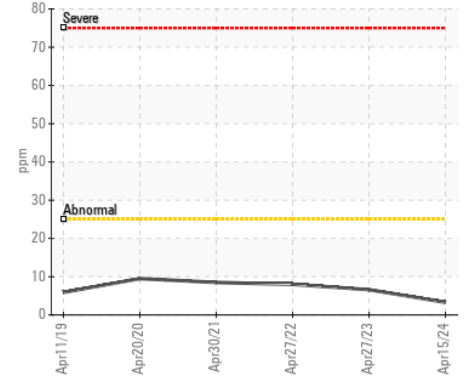
Chromium (ppm)



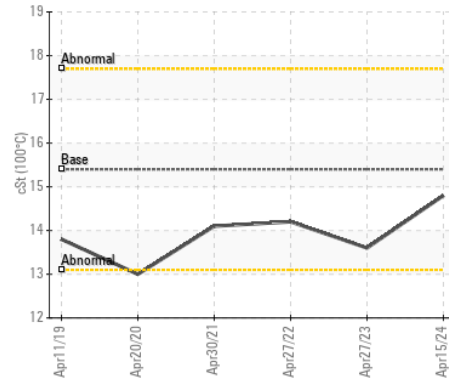
Copper (ppm)



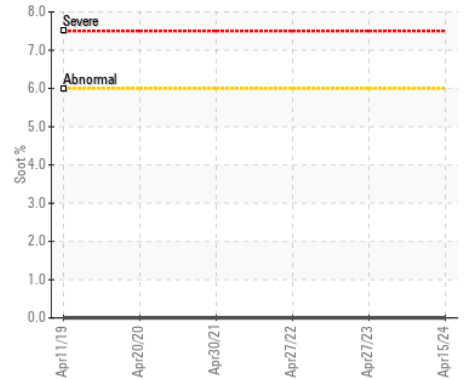
Silicon (ppm)



Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PN0005854 **Received** : 22 Apr 2024  
**Lab Number** : 02630532 **Tested** : 22 Apr 2024  
**Unique Number** : 5763664 **Diagnosed** : 22 Apr 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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