



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
YORK REGION
 Machine Id
240 ORCHARD HEIGHTS AURORA YORK REGION YORK REGION
 Component
Right Diesel Engine
 Fluid
ESSO XD-3 EXTRA 15W40 (60 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PN0005176	PN0004901	PN0003848
Sample Date		Client Info		03 Jun 2024	13 Jul 2023	28 Jul 2022
Machine Age	hrs	Client Info		172	155	151
Oil Age	hrs	Client Info		0	4	0
Filter Age	hrs	Client Info		0	4	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)	>100	4	1	1
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	2	2
Lead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>330	1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

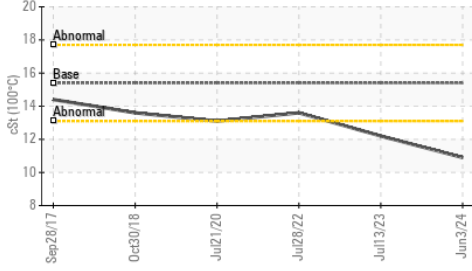
Silicon	ppm	ASTM D5185(m)	>25	5	3	8
Potassium	ppm	ASTM D5185(m)	>20	<1	2	2
Fuel	%	ASTM D7593*	>5	0.0	0.9	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	5.2	4.0	7.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.8	13.8	17.3
Silt	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	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

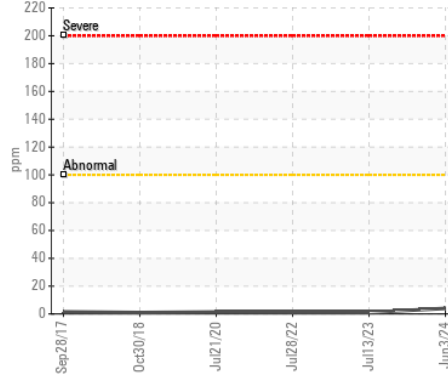
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>192	3	<1	8
Boron	ppm	ASTM D5185(m)		57	31	80
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		42	17	86
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)		529	43	88
Calcium	ppm	ASTM D5185(m)	3780	1711	2520	2278
Phosphorus	ppm	ASTM D5185(m)	1370	938	1169	1086
Zinc	ppm	ASTM D5185(m)	1500	1082	1214	1205
Sulfur	ppm	ASTM D5185(m)	3800	2523	2980	3548
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.6	7.6	13.2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 10.9	12.2	13.6

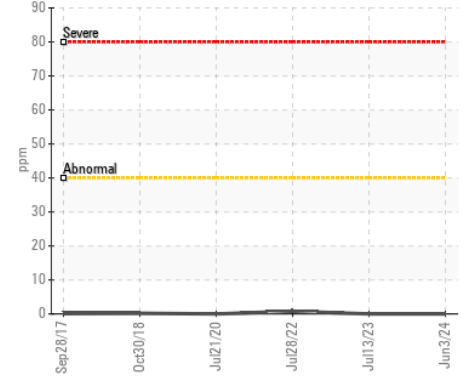
▲ Viscosity @ 100°C



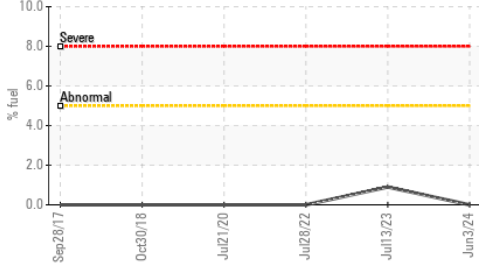
Iron (ppm)



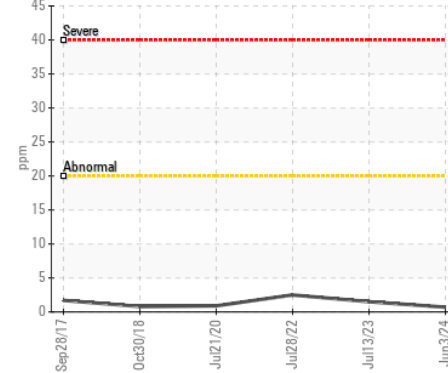
Lead (ppm)



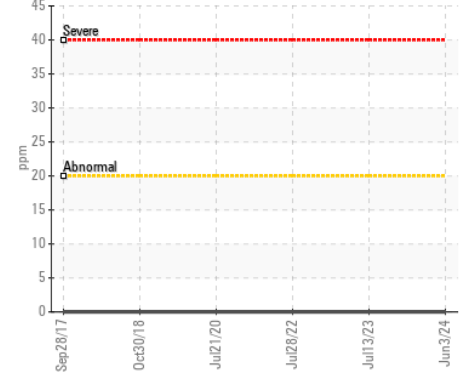
Fuel Dilution



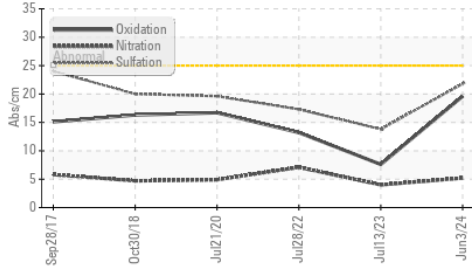
Aluminum (ppm)



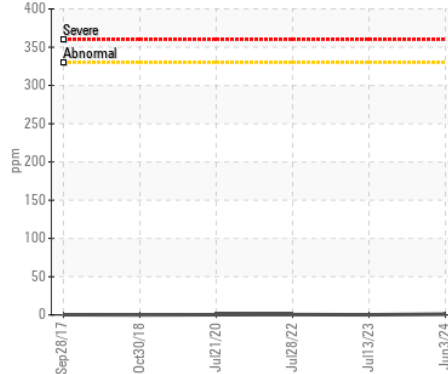
Chromium (ppm)



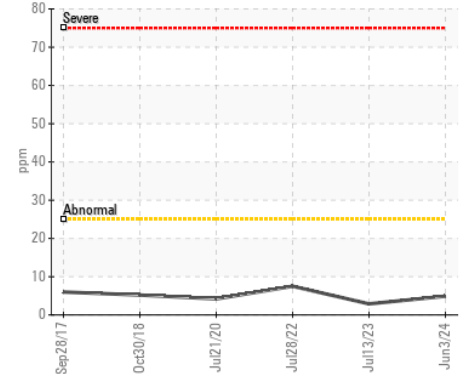
FT-IR (Direct Trend)



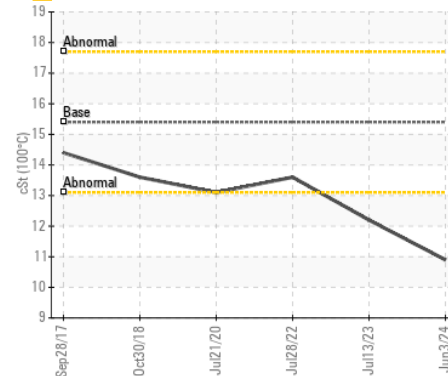
Copper (ppm)



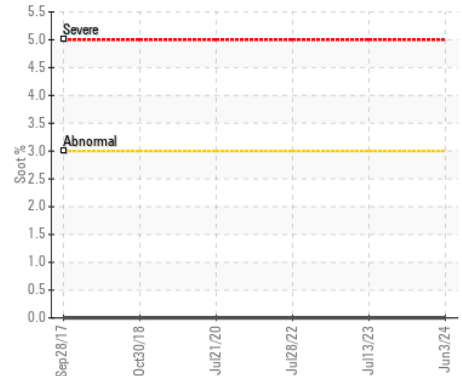
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PN0005176 **Received** : 06 Jun 2024
Lab Number : 02640200 **Tested** : 10 Jun 2024
Unique Number : 5789362 **Diagnosed** : 10 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, 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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