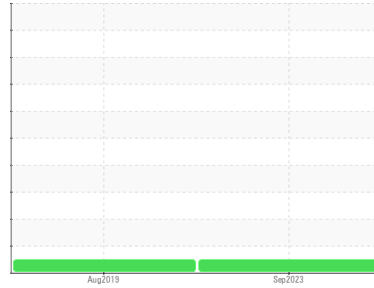


# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**SMEAL 26039**

Component  
**Diesel Engine**

Fluid  
**CASTROL HYPURON 15W40 (--- GAL)**

## DIAGNOSIS

**Recommendation**  
Resample at the next service interval to monitor.

**Wear**  
All component wear rates are normal.

**Contamination**  
There is no indication of any contamination in the oil.

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PC0075234</b>	AP96973	---
Sample Date	Client Info		<b>11 Sep 2023</b>	15 Aug 2019	---
Machine Age	mths	Client Info	<b>6</b>	15429	---
Oil Age	mths	Client Info	<b>6</b>	15429	---
Oil Changed	Client Info		<b>Changed</b>	Changed	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	---
Glycol	WC Method		<b>NEG</b>	0.0	---

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>90	<b>42</b>	64	---
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	5	---
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	1	---
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	1	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>4</b>	5	---
Lead	ppm	ASTM D5185(m)	>40	<b>4</b>	13	---
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	24	---
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	4	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>8</b>	27	---
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---
Molybdenum	ppm	ASTM D5185(m)		<b>65</b>	50	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	2	---
Magnesium	ppm	ASTM D5185(m)		<b>1047</b>	651	---
Calcium	ppm	ASTM D5185(m)		<b>1106</b>	1650	---
Phosphorus	ppm	ASTM D5185(m)		<b>1036</b>	1000	---
Zinc	ppm	ASTM D5185(m)		<b>1298</b>	1266	---
Sulfur	ppm	ASTM D5185(m)		<b>2494</b>	2592	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>7</b>	16	---
Sodium	ppm	ASTM D5185(m)		<b>5</b>	4	---
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	10	---

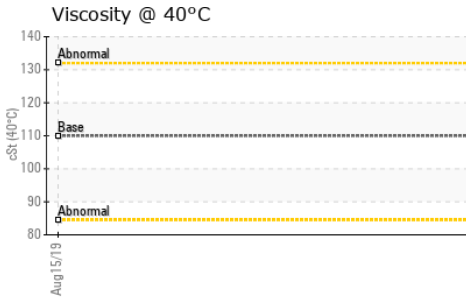
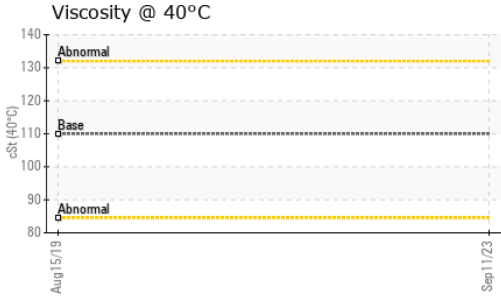
## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	<b>0.8</b>	0.6	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.3</b>	11.4	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>28.1</b>	28.6	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>26.9</b>	22.0	---

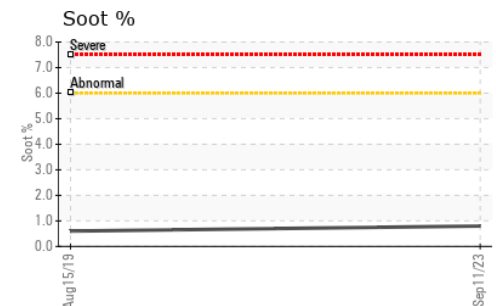
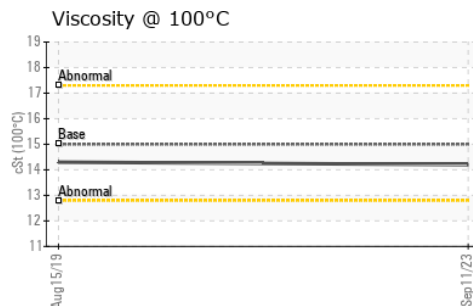
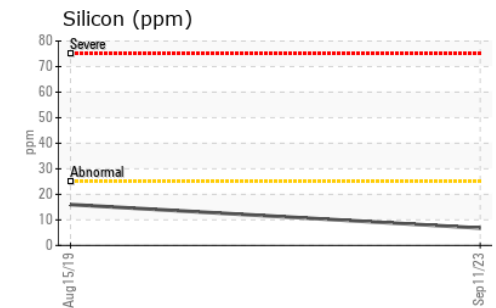
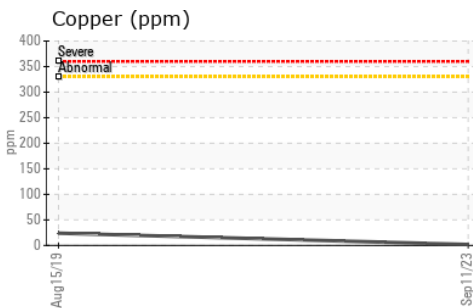
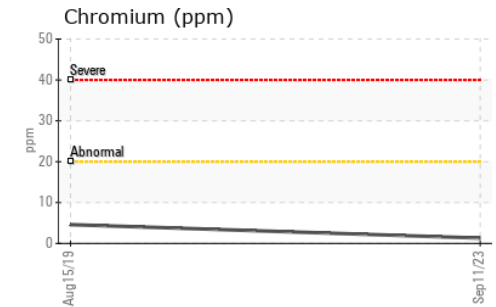
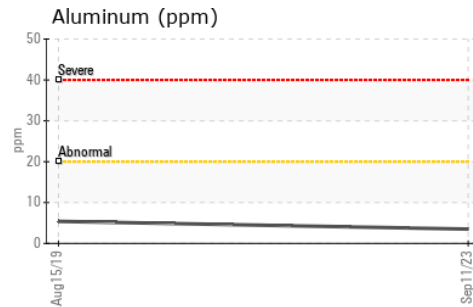
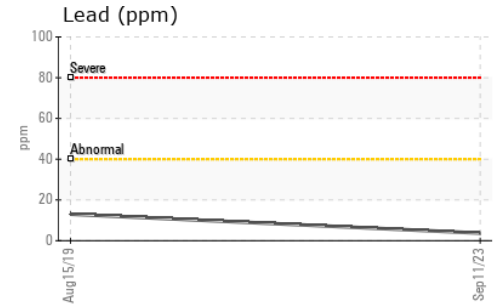
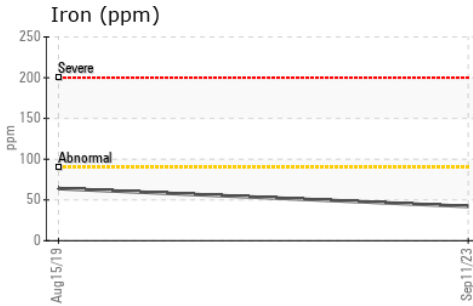
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	110	106	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	14.2	14.3
Viscosity Index (VI)	Scale	ASTM D2270*	140	136	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0075234 **Received** : 06 Nov 2023  
**Lab Number** : 02594126 **Diagnosed** : 07 Nov 2023  
**Unique Number** : 5671205 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

**TORONTO FIRE SERVICES**  
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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.