



# OIL ANALYSIS REPORT

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

Machine Id  
**165561**  
Component  
**Diesel Engine**  
Fluid  
**SAE 5W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0085568</b>	---	---
Sample Date		Client Info		<b>19 Dec 2023</b>	---	---
Machine Age	kms	Client Info		<b>173994</b>	---	---
Oil Age	kms	Client Info		<b>0</b>	---	---
Filter Age	kms	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>N/A</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>4</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	---	---
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	---	---
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	---	---
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

## CONTAMINATION

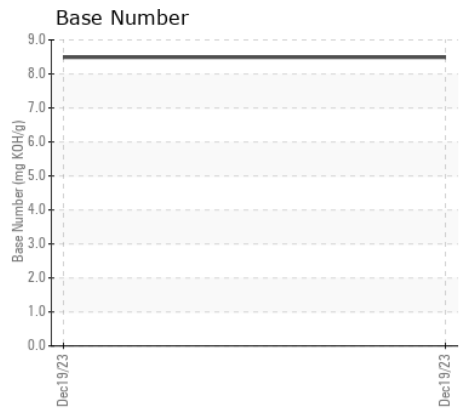
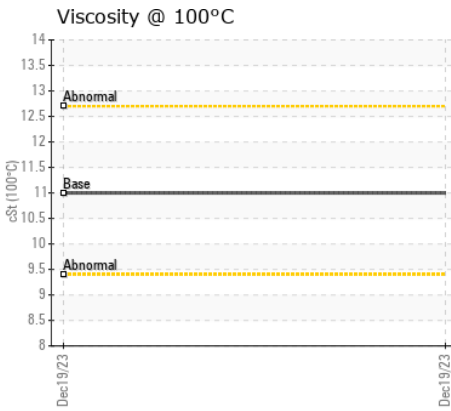
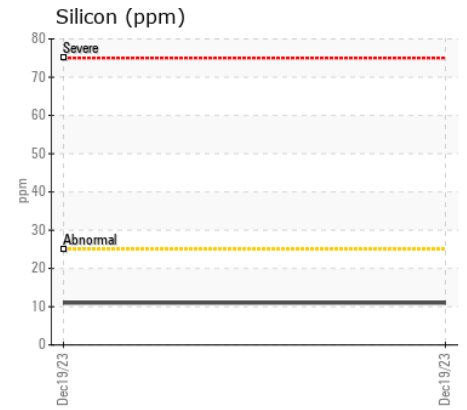
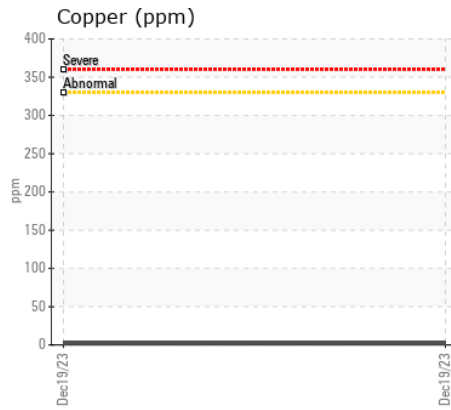
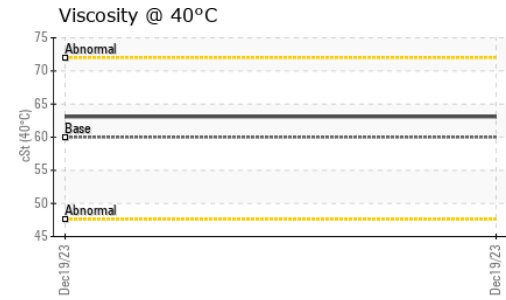
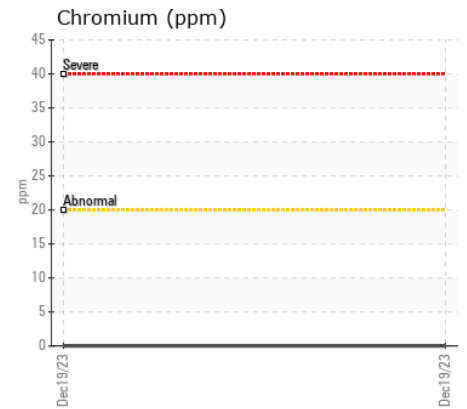
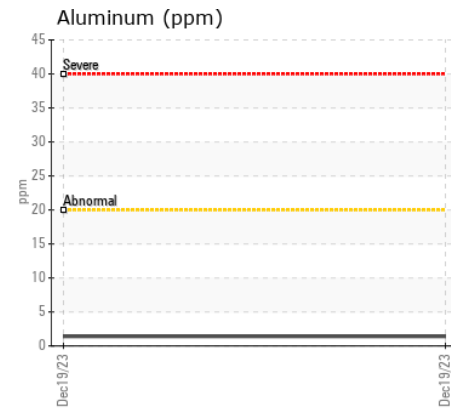
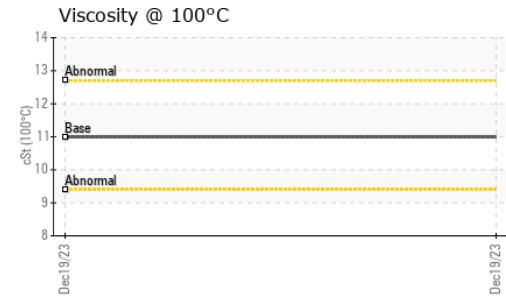
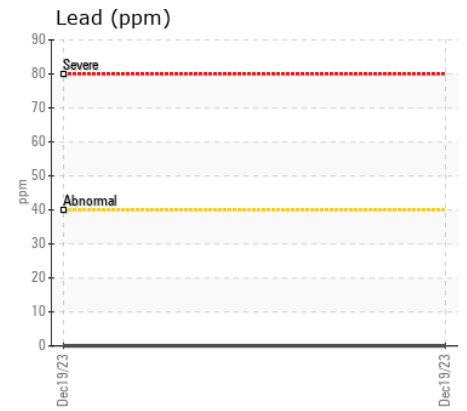
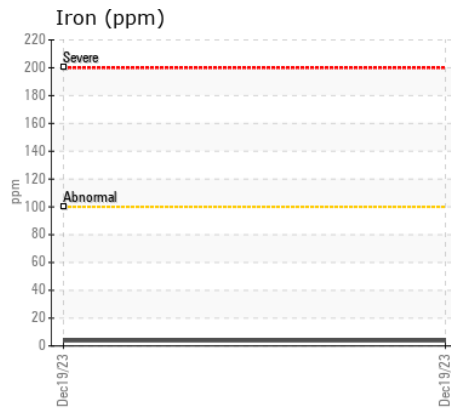
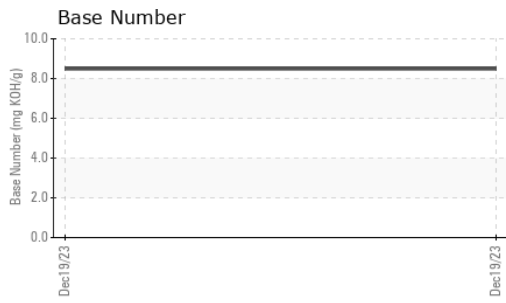
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>11</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	---	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*	>3	<b>0</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>4.9</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>15.1</b>	---	---
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>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>1</b>	---	---
Boron	ppm	ASTM D5185(m)		<b>153</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>63</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>568</b>	---	---
Calcium	ppm	ASTM D5185(m)		<b>1107</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>647</b>	---	---
Zinc	ppm	ASTM D5185(m)		<b>748</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>2305</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>9.2</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*		<b>8.49</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	60.0	<b>63.1</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.0	<b>11.0</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	177	<b>167</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Petro-Canada Technical/Behshad Sabah  
**Sample No.** : PC0085568 **Received** : 27 Dec 2023  
**Lab Number** : 02605291 **Diagnosed** : 28 Dec 2023  
**Unique Number** : 5698376 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI, 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.

Mississauga, ON  
 CA L5J 1K2  
 Contact: Behshad Sabah  
 Behshad.Sabah@hfsinclair.com  
 T: (905)716-2158  
 F: (905)403-6740