



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 635850
 Component
Diesel Engine
 Fluid
PETRO CANADA SUPREME 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0085571	---	---
Sample Date		Client Info		19 Dec 2023	---	---
Machine Age	kms	Client Info		87937	---	---
Oil Age	kms	Client Info		0	---	---
Filter Age	kms	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>80	2	---	---
Chromium	ppm	ASTM D5185(m)	>5	0	---	---
Nickel	ppm	ASTM D5185(m)	>2	<1	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)	>3	0	---	---
Aluminum	ppm	ASTM D5185(m)	>30	1	---	---
Lead	ppm	ASTM D5185(m)	>30	0	---	---
Copper	ppm	ASTM D5185(m)	>150	3	---	---
Tin	ppm	ASTM D5185(m)	>5	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

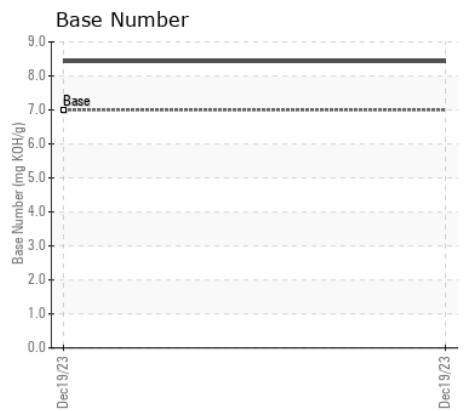
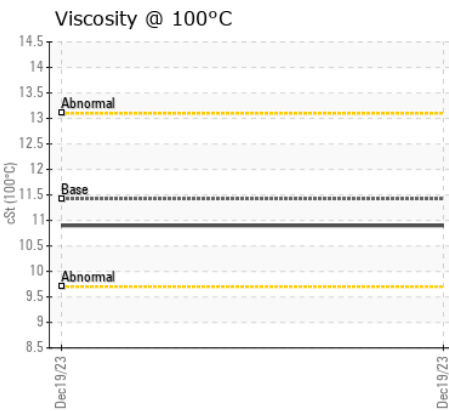
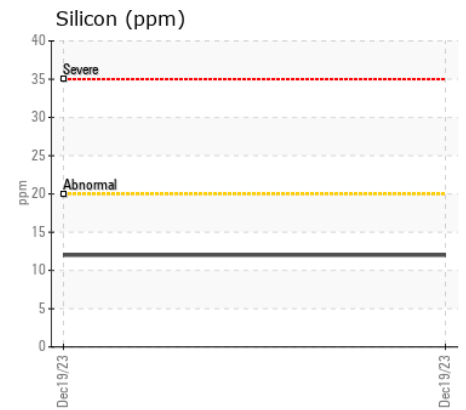
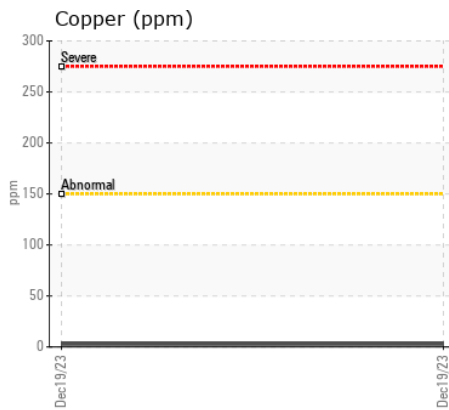
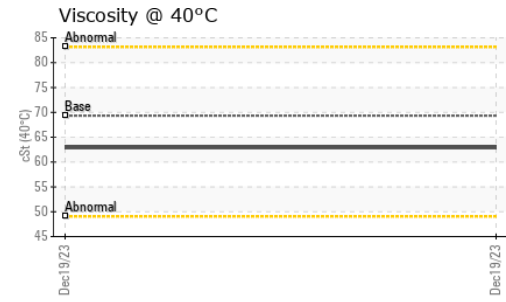
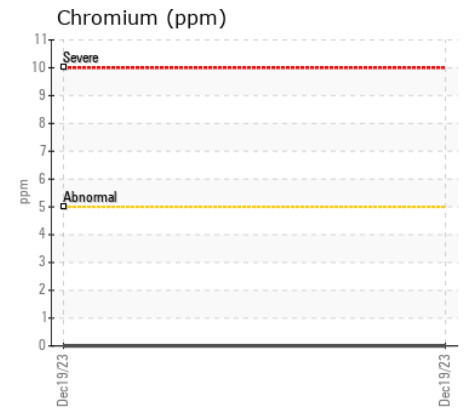
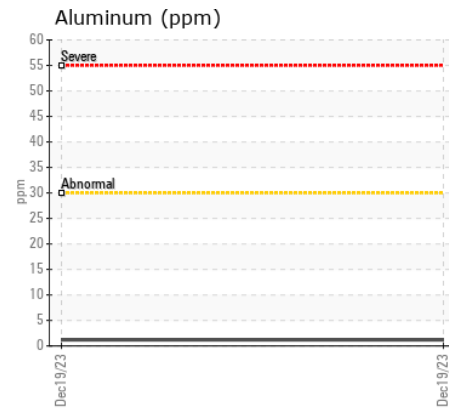
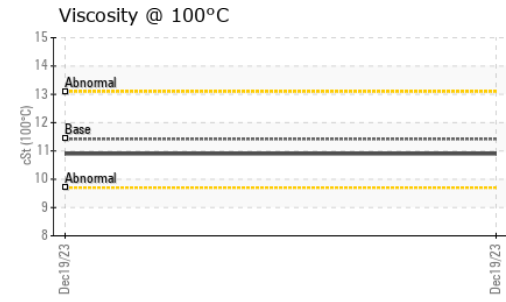
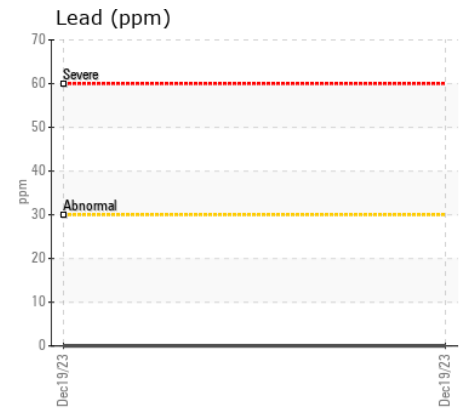
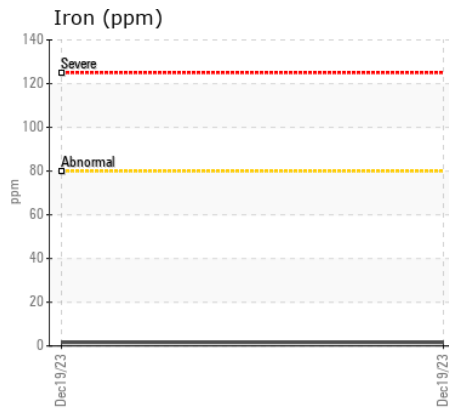
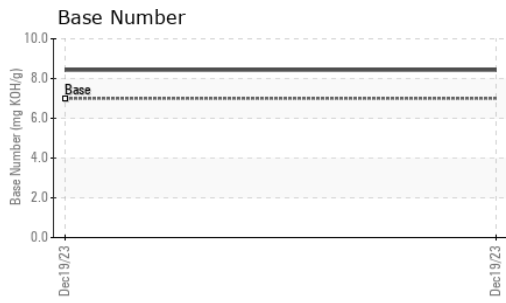
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	12	---	---
Potassium	ppm	ASTM D5185(m)	>20	1	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*	>3	0	---	---
Nitration	Abs/cm	ASTM D7624*	>20	5.5	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	15.8	---	---
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	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---

FLUID CONDITION

The BN result is higher than normal. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	---	---
Boron	ppm	ASTM D5185(m)	186	140	---	---
Barium	ppm	ASTM D5185(m)	<1	0	---	---
Molybdenum	ppm	ASTM D5185(m)	79	61	---	---
Manganese	ppm	ASTM D5185(m)	0	0	---	---
Magnesium	ppm	ASTM D5185(m)	578	578	---	---
Calcium	ppm	ASTM D5185(m)	1002	1091	---	---
Phosphorus	ppm	ASTM D5185(m)	745	654	---	---
Zinc	ppm	ASTM D5185(m)	837	765	---	---
Sulfur	ppm	ASTM D5185(m)	2502	2245	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	10.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	7.0	8.43	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	69.33	62.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	10.9	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	159	165	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Petro-Canada Technical/Behshad Sabah
Sample No. : PC0085571 **Received** : 27 Dec 2023
Lab Number : 02605288 **Diagnosed** : 28 Dec 2023
Unique Number : 5698373 **Diagnostician** : Kevin Marson
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