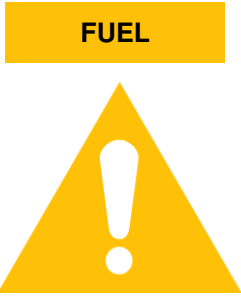
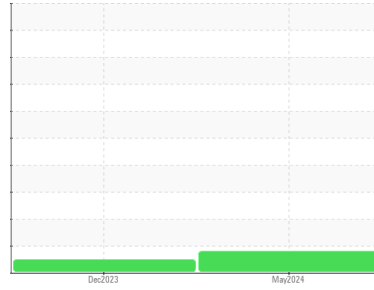


Area
UPS CANADA
 Machine Id
FREIGHTLINER 174771
 Component
Diesel Engine
 Fluid
PETRO CANADA SUPREME 5W30 (--- GAL)

Sample Rating Trend



DIAGNOSIS

- Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**
Metal levels are typical for a new component breaking in.
- Contamination**
Light fuel dilution occurring. No other contaminants were detected in the oil.
- Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0085515	PC0085573	---
Sample Date	Client Info			29 May 2024	19 Dec 2023	---
Machine Age	kms	Client Info		50006	38046	---
Oil Age	kms	Client Info		0	0	---
Oil Changed	Client Info			Not Chngd	N/A	---
Sample Status				MARGINAL	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method	>0.2		NEG	NEG	---
Glycol	WC Method			NEG	NEG	---

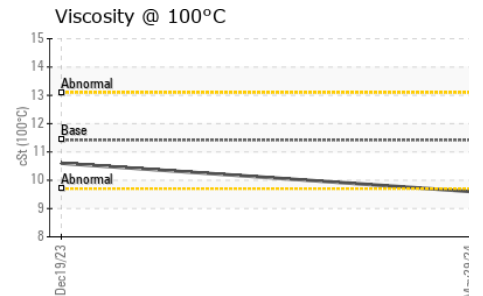
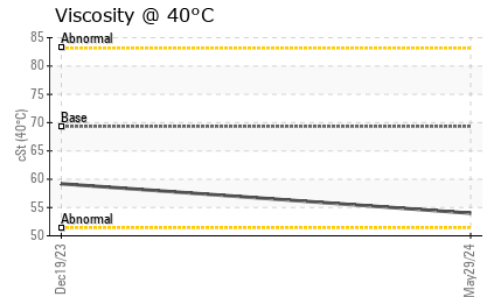
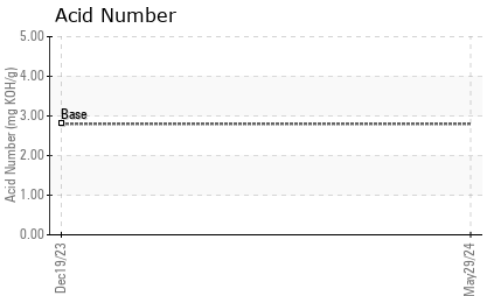
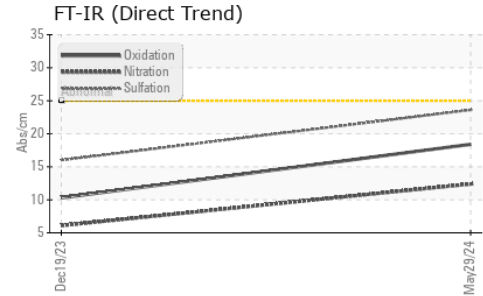
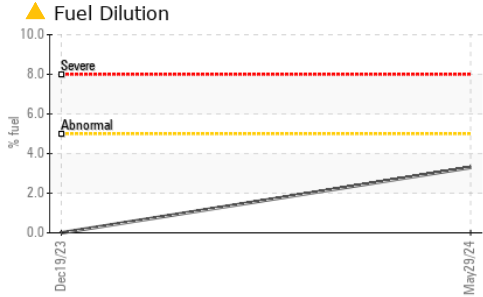
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>80	18	5	---
Chromium	ppm	ASTM D5185(m)	>5	<1	0	---
Nickel	ppm	ASTM D5185(m)	>2	<1	0	---
Titanium	ppm	ASTM D5185(m)		<1	0	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>30	3	2	---
Lead	ppm	ASTM D5185(m)	>30	0	0	---
Copper	ppm	ASTM D5185(m)	>150	2	1	---
Tin	ppm	ASTM D5185(m)	>5	1	<1	---
Antimony	ppm	ASTM D5185(m)		0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Beryllium	ppm	ASTM D5185(m)		0	0	---
Cadmium	ppm	ASTM D5185(m)		0	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	186	42	155	---
Barium	ppm	ASTM D5185(m)	<1	0	0	---
Molybdenum	ppm	ASTM D5185(m)	79	73	64	---
Manganese	ppm	ASTM D5185(m)	0	<1	0	---
Magnesium	ppm	ASTM D5185(m)	578	565	489	---
Calcium	ppm	ASTM D5185(m)	1002	1250	1149	---
Phosphorus	ppm	ASTM D5185(m)	745	712	602	---
Zinc	ppm	ASTM D5185(m)	837	796	683	---
Sulfur	ppm	ASTM D5185(m)	2502	2294	2268	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	15	26	---
Sodium	ppm	ASTM D5185(m)		2	1	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Fuel	%	ASTM D7593*	>5	▲ 3.3	<1.0	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	---
Nitration	Abs/cm	ASTM D7624*	>20	12.4	6.1	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.6	16.0	---

OIL ANALYSIS REPORT

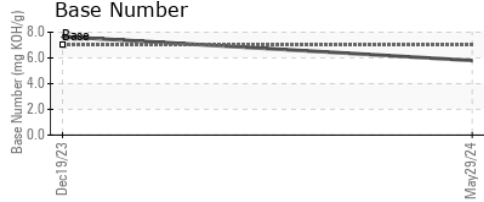
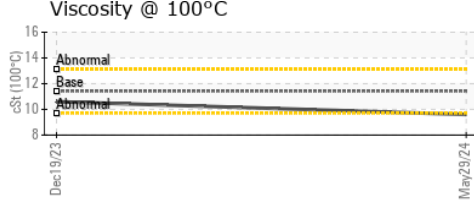
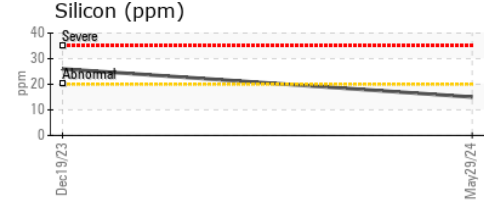
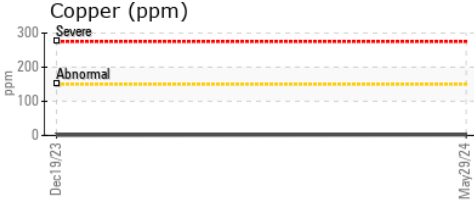
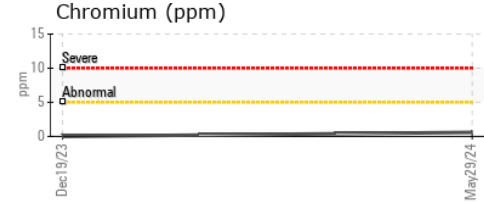
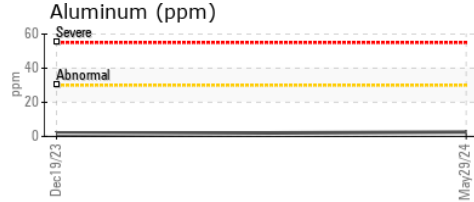
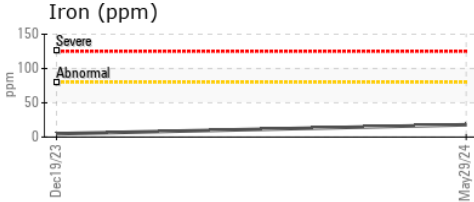


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	18.4	10.3	---
Acid Number (AN)	mg KOH/g	ASTM D974*	2.8	4.15	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	7.0	5.80	7.66	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	NONE	---
Silt	scalar	Visual*	NONE	LIGHT	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
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)	69.33	54.0	59.2	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	9.6	10.6	---
Viscosity Index (VI)	Scale	ASTM D2270*	159	163	171	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Petro-Canada Technical/Behshad Sabah**
Sample No. : PC0085515 **Received** : 19 Jun 2024
Lab Number : **02642846** **Tested** : 20 Jun 2024
Unique Number : 5800385 **Diagnosed** : 20 Jun 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: FuelDilution, KV40, PercentFuel, TAN Auto, TAN Man, VI, Oxidation)
 Behshad Sabah
 Behshad.Sabah@hfsinclair.com

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.
 T: (905)716-2158
 F: (905)403-6740