



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area  
**CARMEL PHARMS**  
Machine Id  
**CATERPILLAR GEN 1 (S/N 4FD05049)**  
Component  
**Diesel Engine**  
Fluid  
**CAT ADV 40 (--- GAL)**

## RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PP	---	---
Sample Date		Client Info		17 Jan 2024	---	---
Machine Age	hrs	Client Info		9593	---	---
Oil Age	hrs	Client Info		250	---	---
Filter Age	hrs	Client Info		320	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	4	---	---
Chromium	ppm	ASTM D5185(m)	>20	<1	---	---
Nickel	ppm	ASTM D5185(m)	>2	0	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>25	3	---	---
Lead	ppm	ASTM D5185(m)	>40	3	---	---
Copper	ppm	ASTM D5185(m)	>330	54	---	---
Tin	ppm	ASTM D5185(m)	>15	<1	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---

## CONTAMINATION

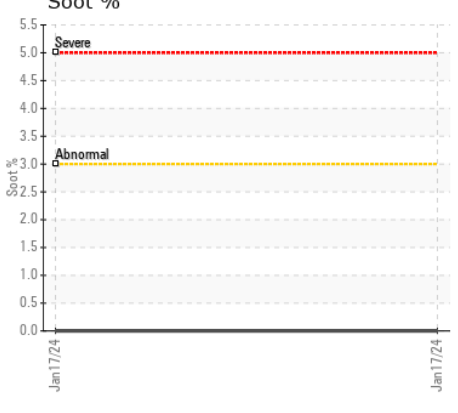
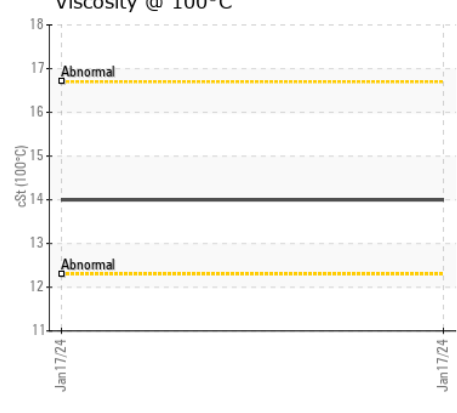
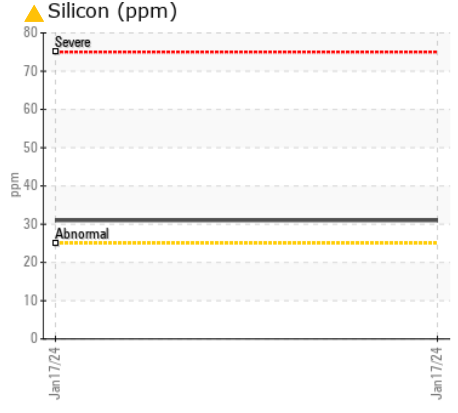
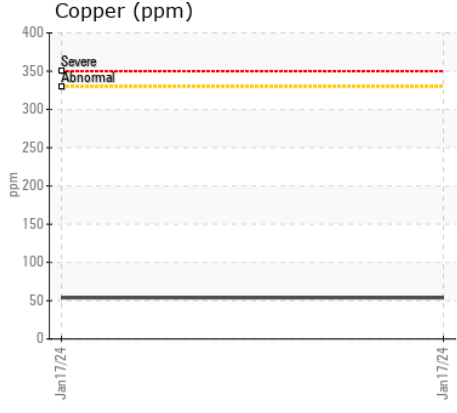
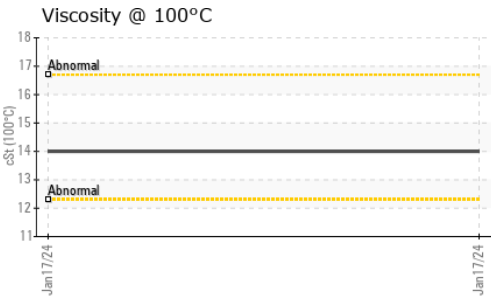
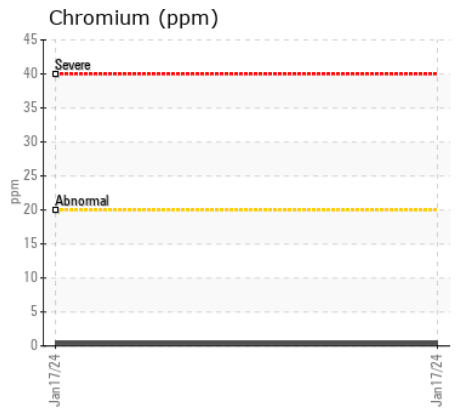
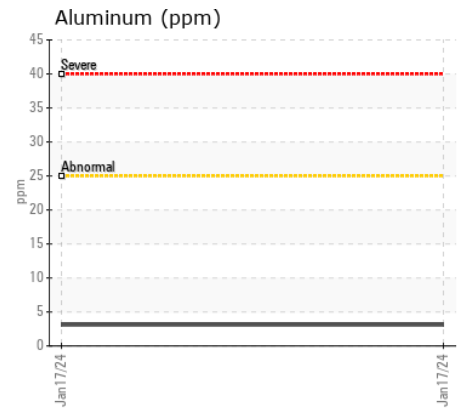
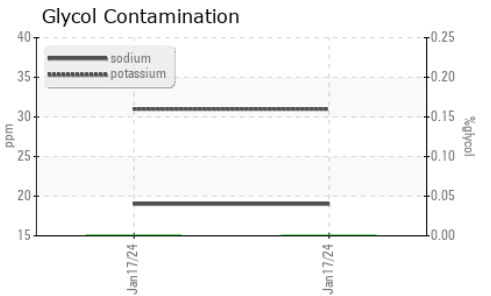
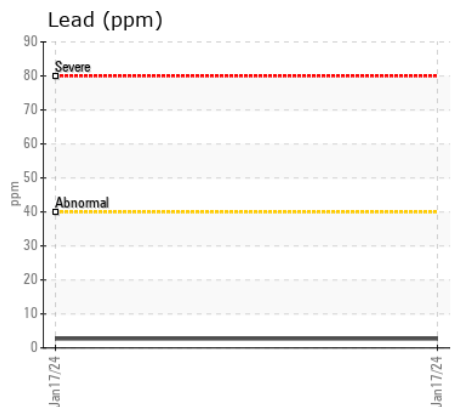
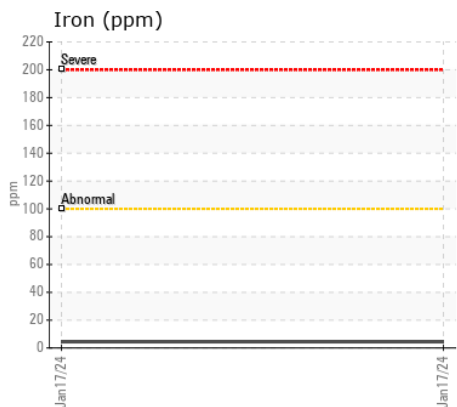
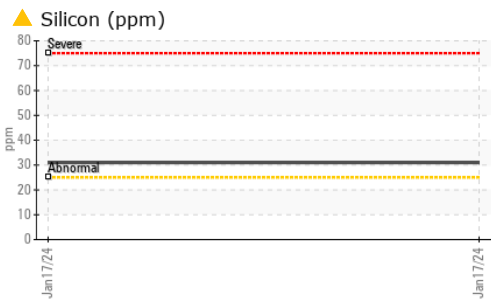
There is a moderate concentration of dirt present in the oil.

Silicon	ppm	ASTM D5185(m)	>25	▲ 31	---	---
Potassium	ppm	ASTM D5185(m)	>20	31	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol	%	ASTM D7922*		0.0	---	---
Soot %	%	ASTM D7844*	>3	0	---	---
Nitration	Abs/cm	ASTM D7624*	>20	6.8	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.4	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---

## FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		19	---	---
Boron	ppm	ASTM D5185(m)		7	---	---
Barium	ppm	ASTM D5185(m)		<1	---	---
Molybdenum	ppm	ASTM D5185(m)		<1	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		4	---	---
Calcium	ppm	ASTM D5185(m)		1429	---	---
Phosphorus	ppm	ASTM D5185(m)		284	---	---
Zinc	ppm	ASTM D5185(m)		319	---	---
Sulfur	ppm	ASTM D5185(m)		2255	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		14.0	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PP **Received** : 17 Jan 2024  
**Lab Number** : 02609565 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 5710651 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol )

**Torontom CAT - Power Systems**  
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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.