



OIL ANALYSIS REPORT

Sample Rating Trend

DIRT



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



DIAGNOSIS

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.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	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	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---
Water	WC Method	>0.2	NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2	
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	---	---
Antimony	ppm	ASTM D5185(m)		0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
Beryllium	ppm	ASTM D5185(m)		0	---	---
Cadmium	ppm	ASTM D5185(m)		0	---	---

ADDITIVES

	method	limit/base	current	history1	history2	
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	---	---
Lithium	ppm	ASTM D5185(m)		<1	---	---

CONTAMINANTS

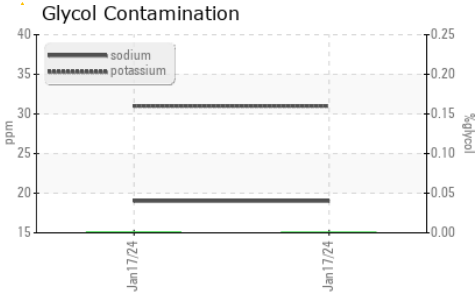
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	▲ 31	---	---
Sodium	ppm	ASTM D5185(m)		19	---	---
Potassium	ppm	ASTM D5185(m)	>20	31	---	---
Glycol	%	ASTM D7922*		0.0	---	---

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0	---	---
Nitration	Abs/cm	ASTM D7624*	>20	6.8	---	---
Sulfation	Abs./1mm	ASTM D7415*	>30	17.4	---	---



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FLUID DEGRADATION

method	limit/base	current	history1	history2
Abs./1mm	ASTM D7414*	>25	---	---

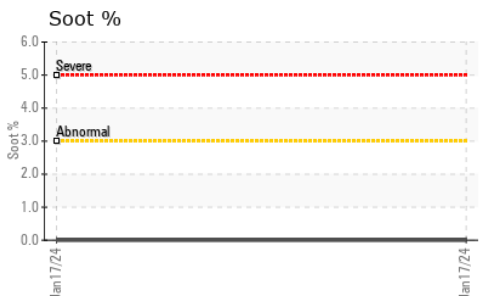
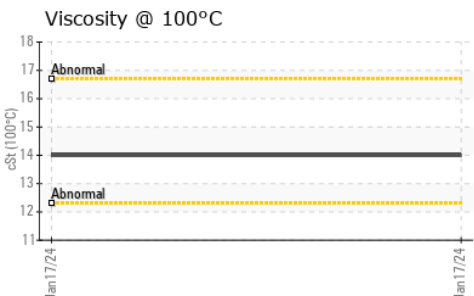
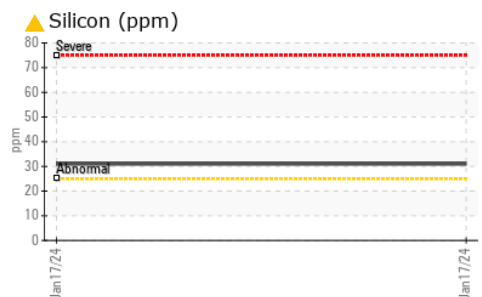
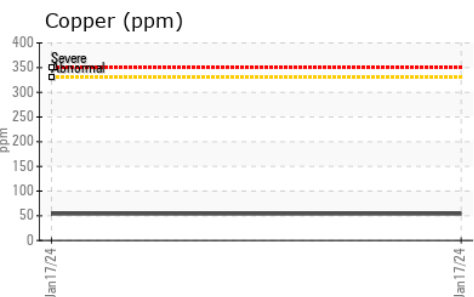
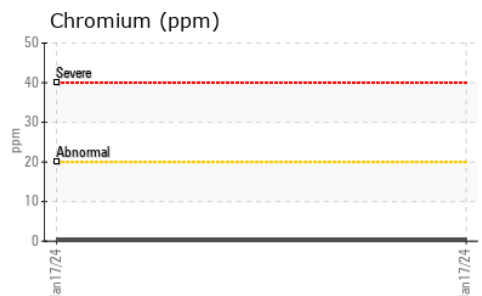
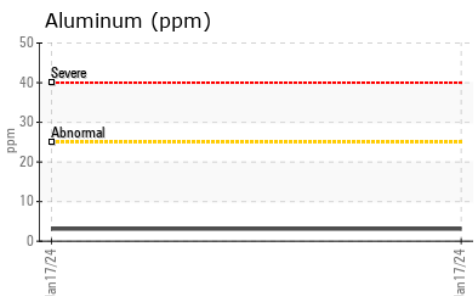
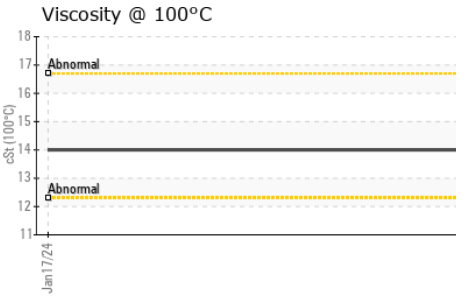
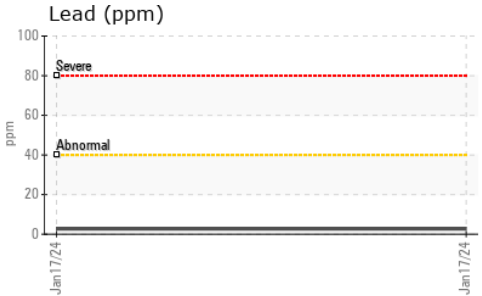
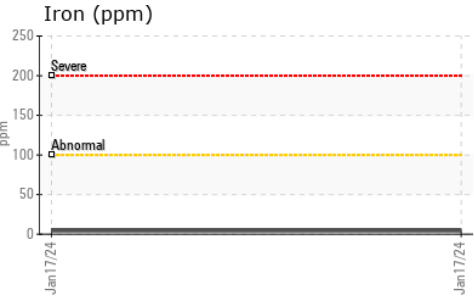
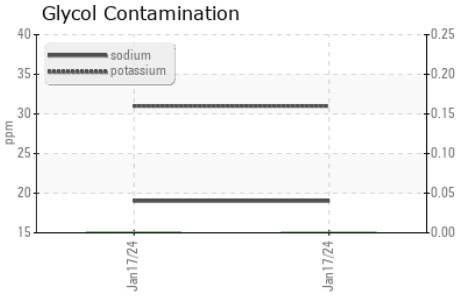
VISUAL

method	limit/base	current	history1	history2
scalar	Visual*	>0.2	---	---
scalar	Visual*	NEG	---	---

FLUID PROPERTIES

method	limit/base	current	history1	history2
cSt	ASTM D7279(m)	14.0	---	---

GRAPHS



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

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 288 Orenda Rd.
 Brampton, ON
 CA L6T 1E9
 Contact: Scott McMahon
 smcmahon@toromont.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.