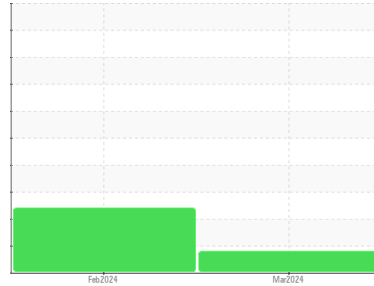


# OIL ANALYSIS REPORT

## Sample Rating Trend

**FUEL**



Area  
**East Chicago Operations**  
 Machine Id  
**CATERPILLAR 272D SS-28 (S/N CAT0272DCB5W00411)**  
 Component  
**Rear Diesel Engine**  
 Fluid  
**PETRO CANADA 15W40 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0113805</b>	PCA0113743	---
Sample Date	Client Info			<b>21 Mar 2024</b>	01 Feb 2024	---
Machine Age	hrs	Client Info		<b>12256</b>	12128	---
Oil Age	hrs	Client Info		<b>127</b>	819	---
Oil Changed	Client Info			<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	SEVERE	---

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>10</b>	25	---
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	---
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	1	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

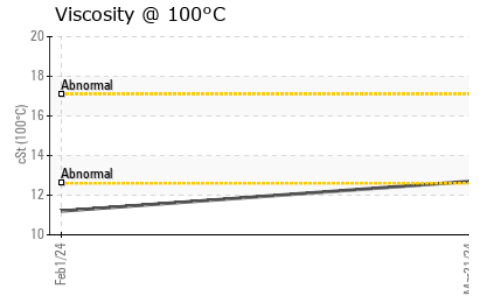
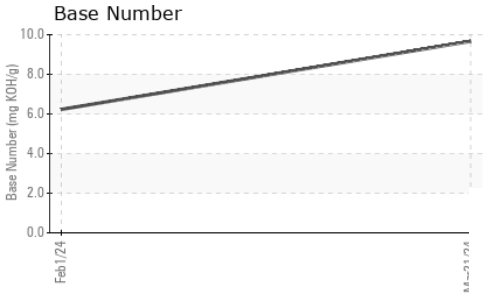
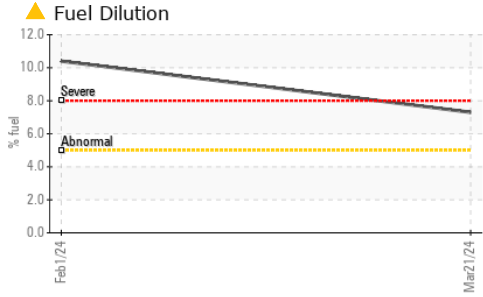
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>5</b>	2	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>52</b>	61	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>826</b>	838	---
Calcium	ppm	ASTM D5185m		<b>945</b>	919	---
Phosphorus	ppm	ASTM D5185m		<b>972</b>	879	---
Zinc	ppm	ASTM D5185m		<b>1129</b>	1097	---
Sulfur	ppm	ASTM D5185m		<b>3175</b>	2611	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	---
Sodium	ppm	ASTM D5185m		<b>2</b>	1	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	---
Fuel	%	ASTM D3524	>5	<b>▲ 7.3</b>	▲ 10.4	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	11.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.0</b>	22.0	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.3</b>	21.5	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.67</b>	6.23	---

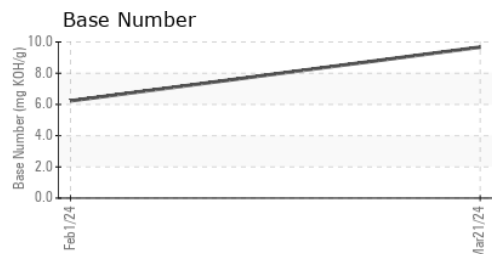
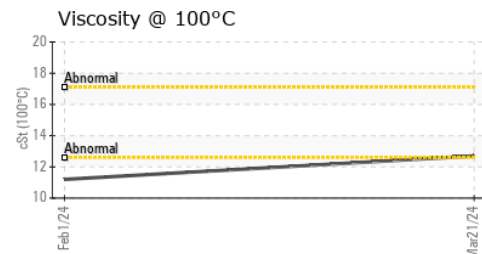
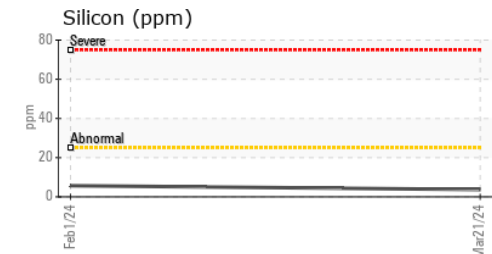
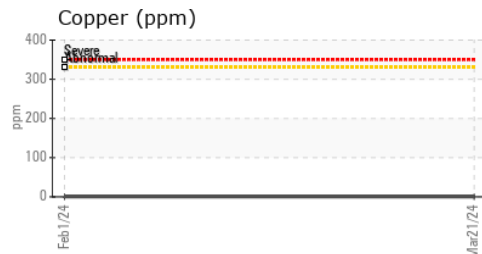
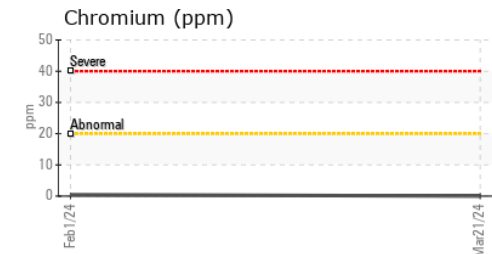
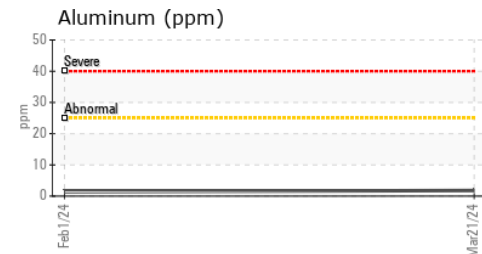
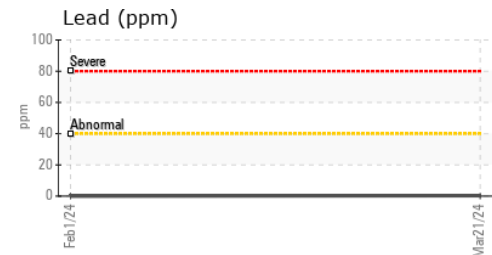
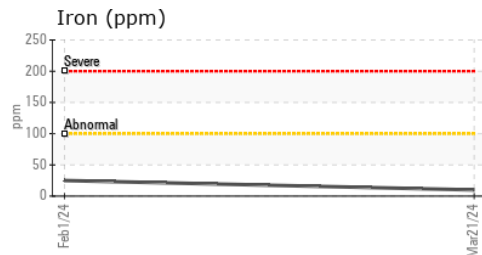
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
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	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.7	▲ 11.2	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0113805      **Received** : 25 Mar 2024  
**Lab Number** : 06128031      **Tested** : 27 Mar 2024  
**Unique Number** : 10942182      **Diagnosed** : 27 Mar 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: PercentFuel )

**SCRAP METAL SERVICES**  
 415 E 151ST STREET  
 EAST CHICAGO, IN  
 US 46312  
 Contact: DAN GERTLER  
 dgertler@scrapmetalservices.com  
 T: (312)771-4999  
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)