



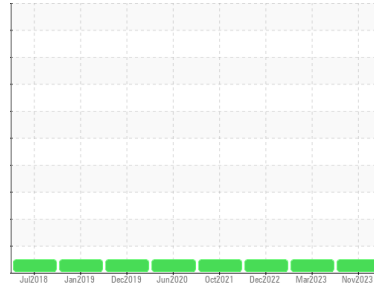
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**GM Seattle Off Road Shop**  
 Machine Id  
**[GM Seattle Off Road Shop] 28-229**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PE0000597</b>	PE0001777	PE0001060
Sample Date	Client Info		<b>30 Nov 2023</b>	27 Mar 2023	01 Dec 2022
Machine Age	hrs	Client Info	<b>2889</b>	2504	2399
Oil Age	hrs	Client Info	<b>385</b>	433	374
Oil Changed	Client Info		<b>Changed</b>	Changed	Oil Added
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>33</b>	19	15
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>14</b>	8	7
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>12</b>	2	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>35</b>	57	64
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>48</b>	46	46
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>686</b>	633	706
Calcium	ppm	ASTM D5185m	<b>1518</b>	1327	1481
Phosphorus	ppm	ASTM D5185m	<b>1003</b>	913	969
Zinc	ppm	ASTM D5185m	<b>1179</b>	1089	1216
Sulfur	ppm	ASTM D5185m	<b>3383</b>	3003	4111

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	3	3
Sodium	ppm	ASTM D5185m >150	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	0

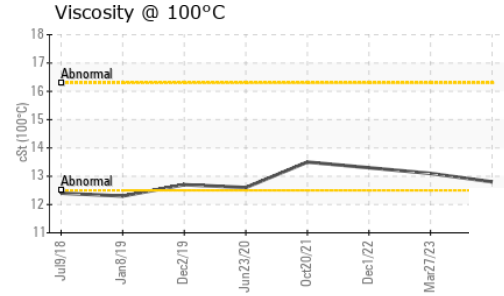
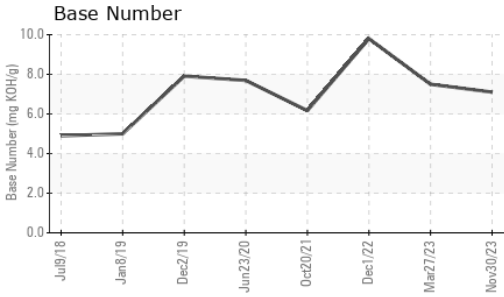
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.9</b>	8.0	8.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.3</b>	17.1	20.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.4</b>	14.2	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	<b>7.1</b>	7.5	9.8

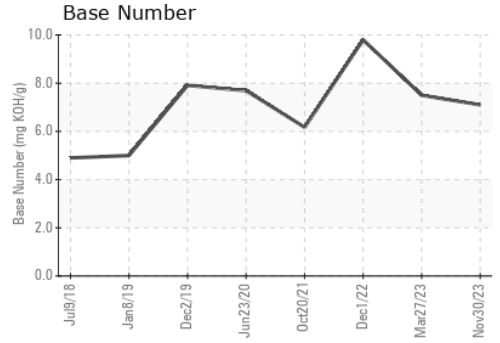
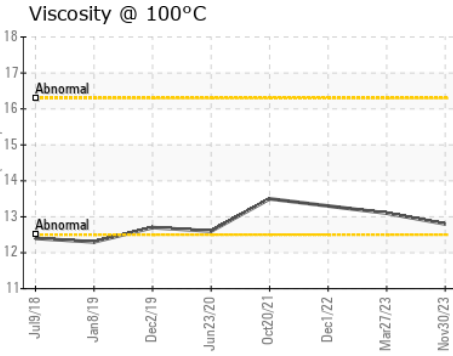
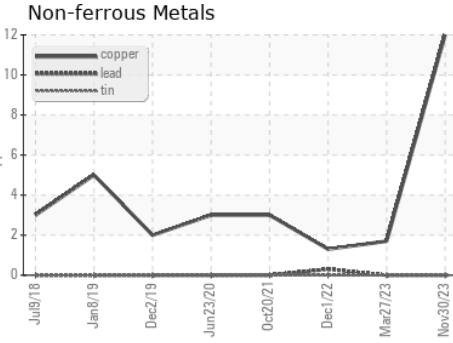
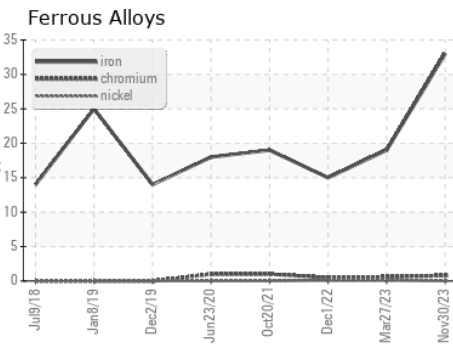
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	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 @ 100°C	cSt	ASTM D445	<b>12.8</b>	13.1	13.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0000597 **Recieved** : 12 Jan 2024  
**Lab Number** : **06059996** **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831378 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN )

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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)