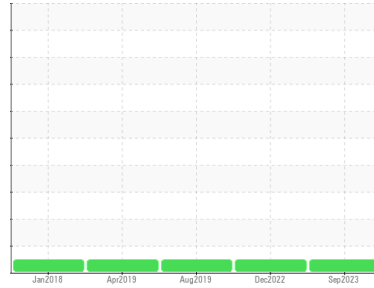




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**GM Seattle Off Road Shop**  
 Machine Id  
**[GM Seattle Off Road Shop] 24-545**  
 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>PE0000538</b>	PE0000585	PE12291833
Sample Date	Client Info		<b>15 Sep 2023</b>	08 Dec 2022	27 Aug 2019
Machine Age	hrs	Client Info	<b>4126</b>	3705	1772
Oil Age	hrs	Client Info	<b>421</b>	560	302
Oil Changed	Client Info		<b>Changed</b>	Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<b>&lt;1.0</b>	<1.0	2
Glycol	WC Method		<b>NEG</b>	NEG	0.0

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>51	<b>7</b>	14	7
Chromium	ppm	ASTM D5185m	>11	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>31	<b>&lt;1</b>	2	3
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>26	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>84</b>	28	100
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>62</b>	30	15
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>99</b>	509	694
Calcium	ppm	ASTM D5185m		<b>2143</b>	1678	1329
Phosphorus	ppm	ASTM D5185m		<b>1018</b>	900	703
Zinc	ppm	ASTM D5185m		<b>1251</b>	1150	828
Sulfur	ppm	ASTM D5185m		<b>4503</b>	3864	---

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>22	<b>8</b>	10	7
Sodium	ppm	ASTM D5185m	>150	<b>3</b>	0	3
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	25

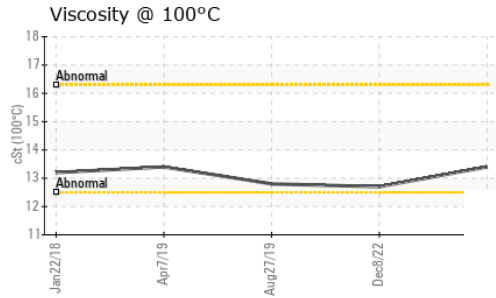
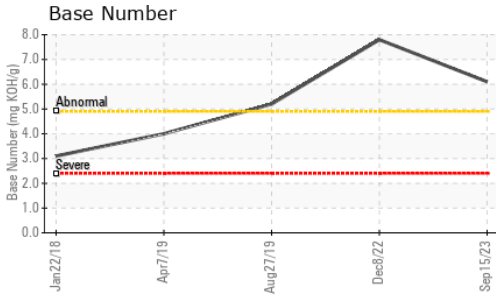
## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.5	<0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	12.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.4</b>	23.4	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.5</b>	21.5	15
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.1</b>	7.8	5.2

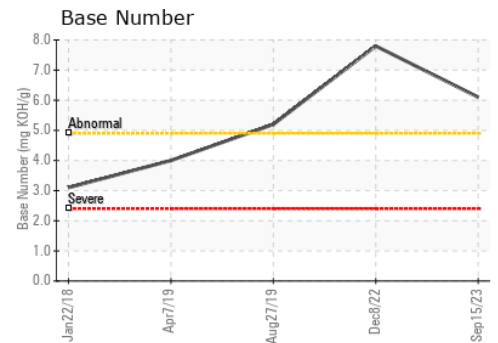
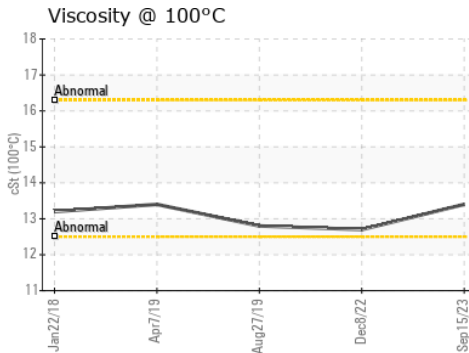
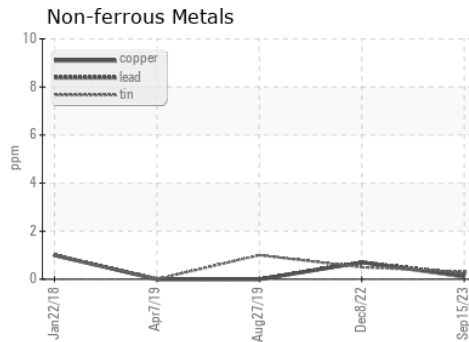
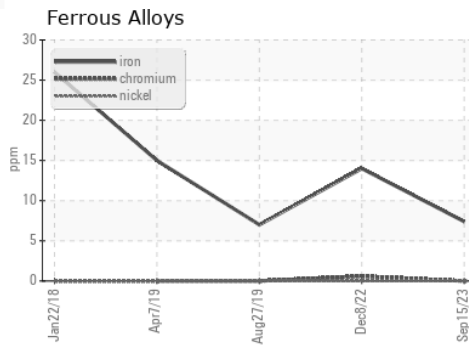
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	NEG	---
Free Water	scalar	*Visual		<b>NEG</b>	NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	<b>13.4</b>	12.7	12.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0000538 **Received** : 25 Sep 2023  
**Lab Number** : **05960481** **Diagnosed** : 27 Sep 2023  
**Unique Number** : 10661694 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN )

**Gary Merlino Construction - Off Road Shop**  
 9125 10TH AVE SOUTH  
 SEATTLE, WA  
 US 98108  
 Contact: Jesse Patterson  
 oilsamples@gmccinc.com  
 T: 1(866)292-1303

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)

F: