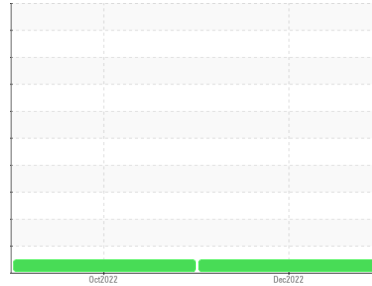




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**WESTERN STAR 4207**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## 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>WC0744201</b>	WC0694233	---
Sample Date	Client Info			<b>17 Dec 2022</b>	18 Oct 2022	---
Machine Age	mls	Client Info		<b>125199</b>	122114	---
Oil Age	mls	Client Info		<b>0</b>	450	---
Oil Changed	Client Info			<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	---
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>7</b>	51	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	17	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	44	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>0</b>	49	---
Barium	ppm	ASTM D5185m	10	<b>0</b>	<1	---
Molybdenum	ppm	ASTM D5185m	100	<b>58</b>	92	---
Manganese	ppm	ASTM D5185m		<b>0</b>	1	---
Magnesium	ppm	ASTM D5185m	450	<b>942</b>	567	---
Calcium	ppm	ASTM D5185m	3000	<b>1083</b>	1379	---
Phosphorus	ppm	ASTM D5185m	1150	<b>1056</b>	819	---
Zinc	ppm	ASTM D5185m	1350	<b>1240</b>	1036	---
Sulfur	ppm	ASTM D5185m	4250	<b>3684</b>	2467	---

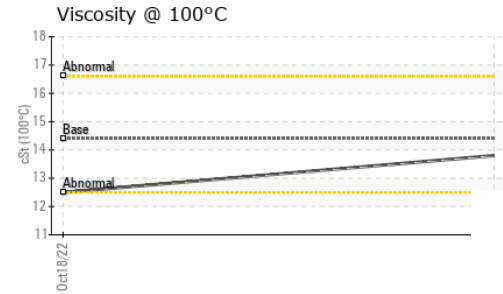
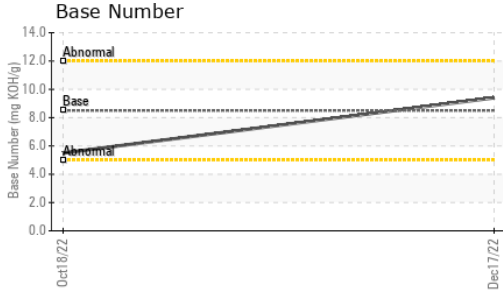
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	8	---
Sodium	ppm	ASTM D5185m	>158	<b>1</b>	<1	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	23	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	11.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.5</b>	26.2	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.6</b>	24.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>9.4</b>	5.5	---



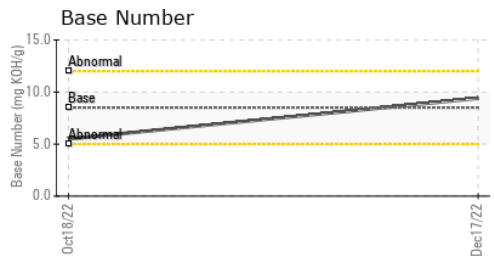
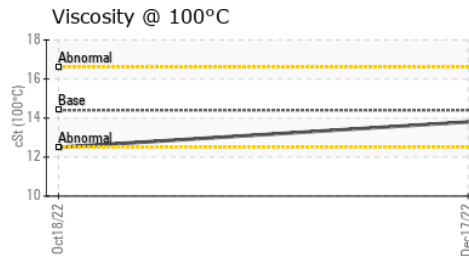
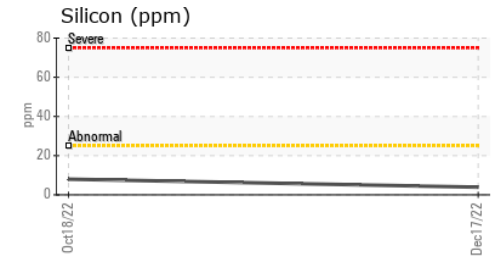
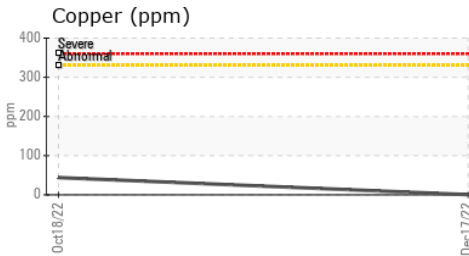
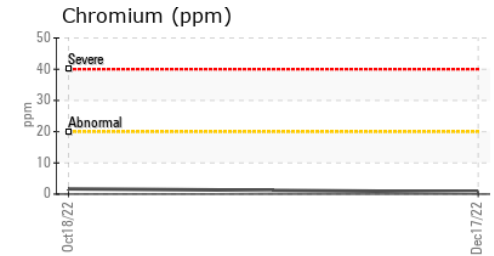
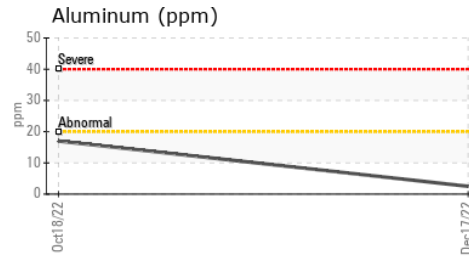
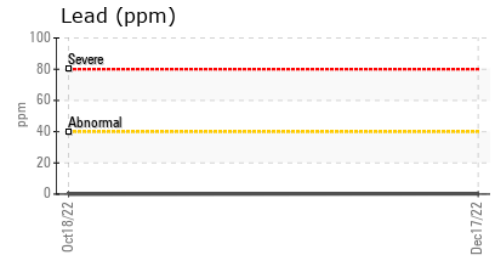
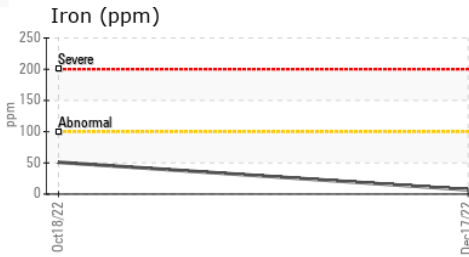
# OIL ANALYSIS REPORT



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	14.4	<b>13.8</b>	12.5	---

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0744201      **Received** : 07 Dec 2023  
**Lab Number** : 06027299      **Diagnosed** : 08 Dec 2023  
**Unique Number** : 10777090      **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**INTERSTATE WASTE-CHESTER**  
 89 BLACK MEADOW RD  
 CHESTER, NY  
 US 10918  
 Contact: ROB CLARKE  
 rclarke@interstatewaste.com  
 T:  
 F: (845)572-3301

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)