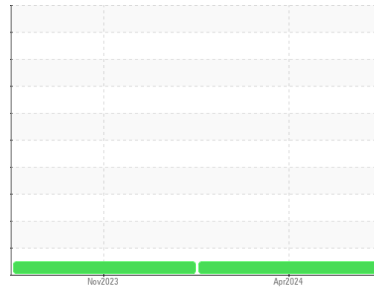




# OIL ANALYSIS REPORT

Area  
**TRACTORS**  
 Machine Id  
**[TRACTORS] 157**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 10W30 (--- GAL)**

## Sample Rating Trend



**NORMAL**



## 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>SBP0005847</b>	SBP0005642	---
Sample Date	Client Info		<b>10 Apr 2024</b>	09 Nov 2023	---
Machine Age	mls	Client Info	<b>107991</b>	25000	---
Oil Age	mls	Client Info	<b>25000</b>	0	---
Oil Changed	Client Info		<b>Changed</b>	Changed	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	---
Water	WC Method	>0.2	<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>43</b>	19	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	<1	---
Nickel	ppm	ASTM D5185m >5	<b>10</b>	2	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	---
Aluminum	ppm	ASTM D5185m >20	<b>7</b>	3	---
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	1	---
Copper	ppm	ASTM D5185m >330	<b>50</b>	26	---
Tin	ppm	ASTM D5185m >15	<b>2</b>	2	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>3</b>	5	---
Barium	ppm	ASTM D5185m 10	<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m 100	<b>61</b>	62	---
Manganese	ppm	ASTM D5185m	<b>2</b>	<1	---
Magnesium	ppm	ASTM D5185m 450	<b>895</b>	989	---
Calcium	ppm	ASTM D5185m 3000	<b>1250</b>	1082	---
Phosphorus	ppm	ASTM D5185m 1150	<b>957</b>	1041	---
Zinc	ppm	ASTM D5185m 1350	<b>1260</b>	1335	---
Sulfur	ppm	ASTM D5185m 4250	<b>2977</b>	2889	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>22</b>	10	---
Sodium	ppm	ASTM D5185m	<b>14</b>	2	---
Potassium	ppm	ASTM D5185m >20	<b>17</b>	7	---
Glycol	%	*ASTM D2982	<b>NEG</b>	NEG	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.9</b>	0.6	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.9</b>	9.5	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.4</b>	21.2	---

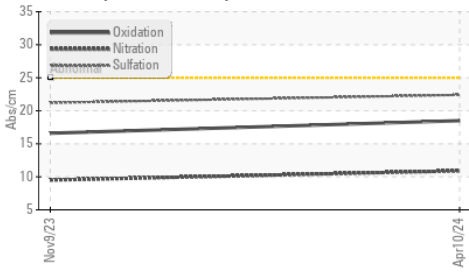
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.5</b>	16.6	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>7.2</b>	6.9	---

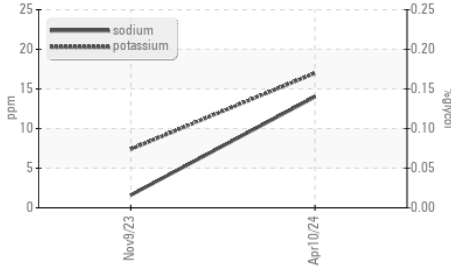


# OIL ANALYSIS REPORT

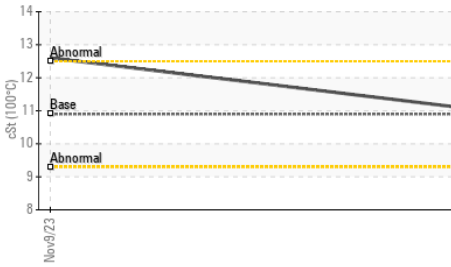
FT-IR (Direct Trend)



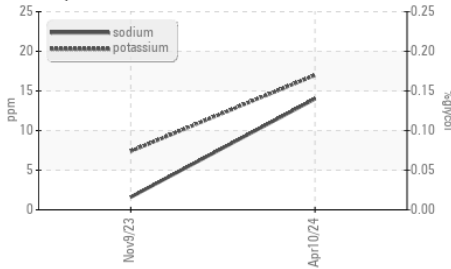
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

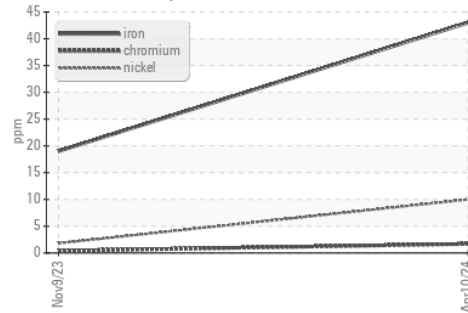


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

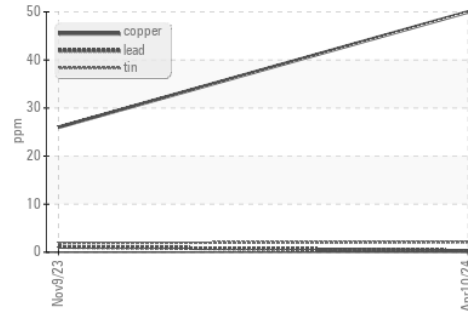
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	11.1	12.6

## GRAPHS

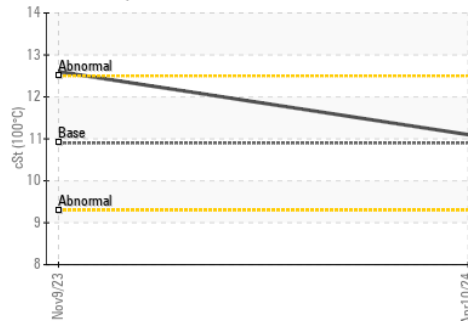
Ferrous Alloys



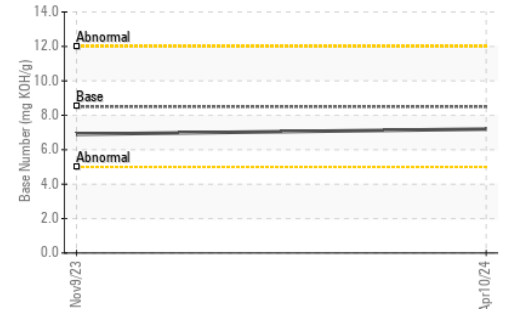
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0005847      **Received** : 22 Apr 2024  
**Lab Number** : 06156621      **Tested** : 24 Apr 2024  
**Unique Number** : 10992044      **Diagnosed** : 24 Apr 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**ARMSTRONG RENTALS LLC**  
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 BEATRICE, NE  
 US 68310  
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 joea@armstrongrentalsllc.com  
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 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)