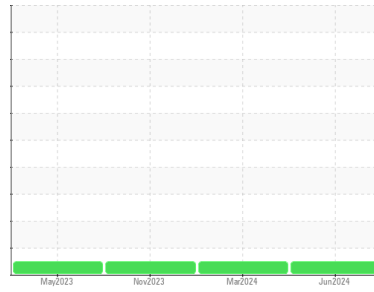




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**91098**  
 Component  
**Diesel Engine**  
 Fluid  
**AG 10W30 (10 GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### 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>SBP0004989</b>	SBP0004985	SBP0004618
Sample Date	Client Info			<b>13 Jun 2024</b>	11 Mar 2024	07 Nov 2023
Machine Age	mls	Client Info		<b>23330</b>	0	20500
Oil Age	mls	Client Info		<b>0</b>	20000	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
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	>80	<b>9</b>	9	11
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>4</b>	3	4
Lead	ppm	ASTM D5185m	>30	<b>2</b>	0	<1
Copper	ppm	ASTM D5185m	>150	<b>15</b>	19	27
Tin	ppm	ASTM D5185m	>5	<b>1</b>	1	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>8</b>	4	4
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>63</b>	55	59
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>1025</b>	900	940
Calcium	ppm	ASTM D5185m		<b>1141</b>	1056	1228
Phosphorus	ppm	ASTM D5185m		<b>1117</b>	988	1031
Zinc	ppm	ASTM D5185m		<b>1364</b>	1203	1294
Sulfur	ppm	ASTM D5185m		<b>3583</b>	2933	2891

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>4</b>	3	5
Sodium	ppm	ASTM D5185m		<b>2</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	1	8

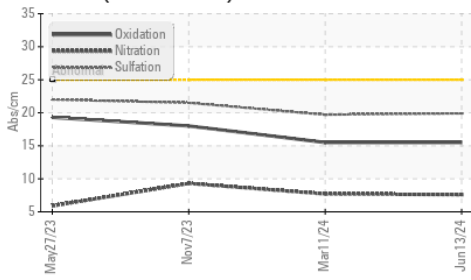
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	7.7	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.9</b>	19.7	21.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	15.5	18.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.7</b>	8.4	7.6

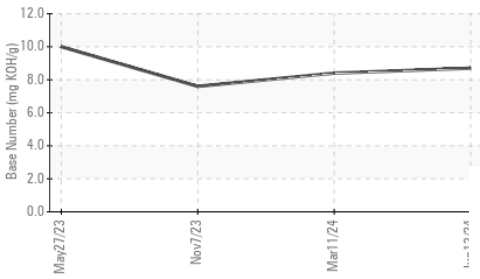


# OIL ANALYSIS REPORT

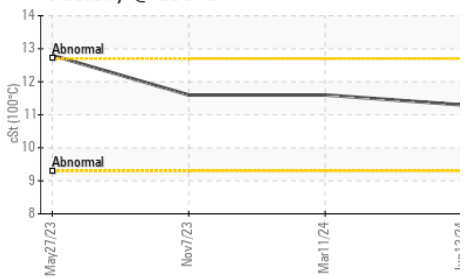
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

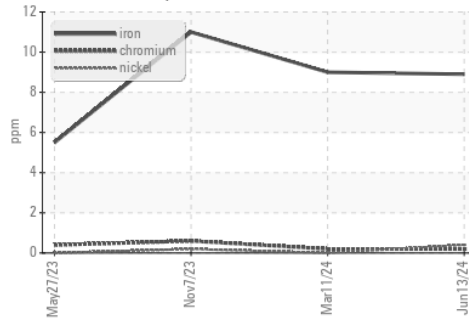


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

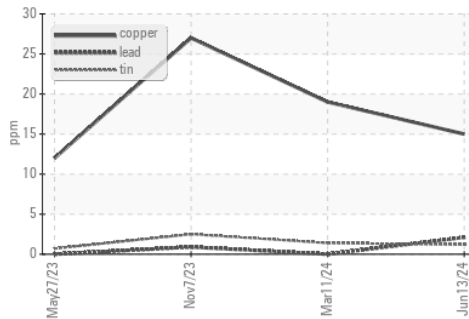
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.3	11.6	11.6

## GRAPHS

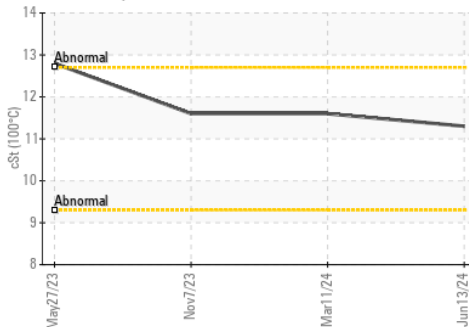
Ferrous Alloys



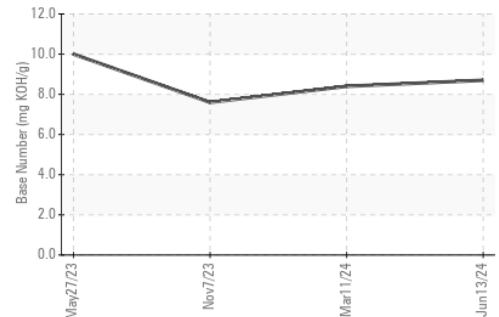
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0004989  
**Lab Number** : 06217511  
**Unique Number** : 11090375  
**Test Package** : FLEET

**Received** : 21 Jun 2024  
**Tested** : 24 Jun 2024  
**Diagnosed** : 24 Jun 2024 - Wes Davis

**Sapp Bros. Fleet - York Location**  
 PO Box 249  
 York, NE  
 US 68467  
 Contact: Service Manager

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)

T:  
F: