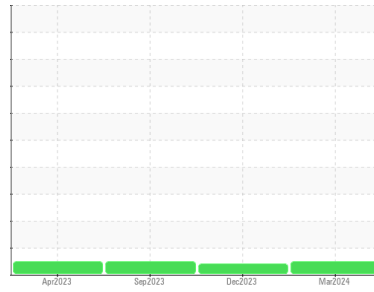




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**3084**  
 Component  
**Diesel Engine**  
 Fluid  
**AMERIGUARD 10W30 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### 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>SBP0006570</b>	SBP0005987	SBP0003936
Sample Date	Client Info			<b>29 Mar 2024</b>	14 Dec 2023	21 Sep 2023
Machine Age	mls	Client Info		<b>83162</b>	75123	58803
Oil Age	mls	Client Info		<b>8039</b>	16320	8624
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	0.0	<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>14</b>	8	13
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	2	4
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>4</b>	37	<1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>62</b>	27	65
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>912</b>	316	1098
Calcium	ppm	ASTM D5185m		<b>1219</b>	1879	1175
Phosphorus	ppm	ASTM D5185m		<b>1017</b>	1024	1234
Zinc	ppm	ASTM D5185m		<b>1269</b>	1172	1525
Sulfur	ppm	ASTM D5185m		<b>3138</b>	3642	3693

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	3
Sodium	ppm	ASTM D5185m		<b>1</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	3

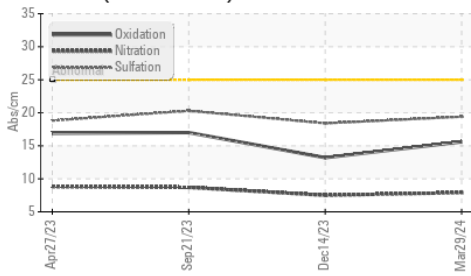
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	7.5	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.4</b>	18.4	20.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	13.2	17.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.1</b>	7.5	8.9

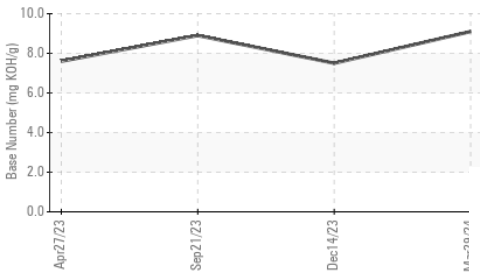


# OIL ANALYSIS REPORT

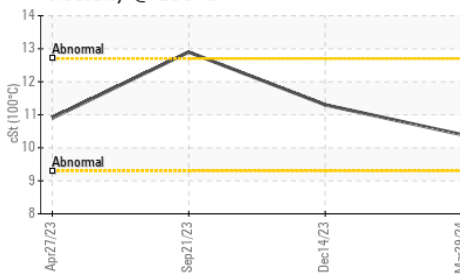
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

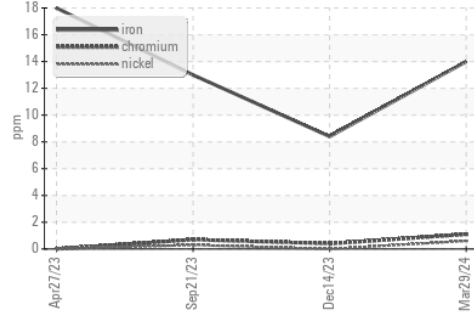


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

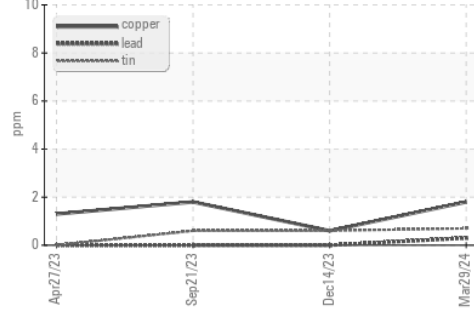
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.4	11.3	12.9

## GRAPHS

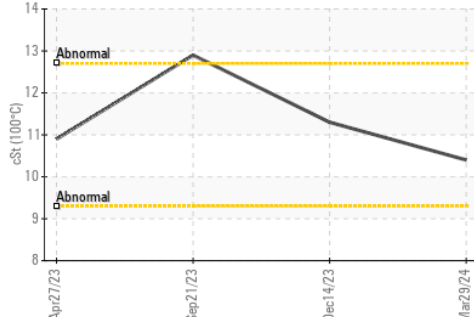
Ferrous Alloys



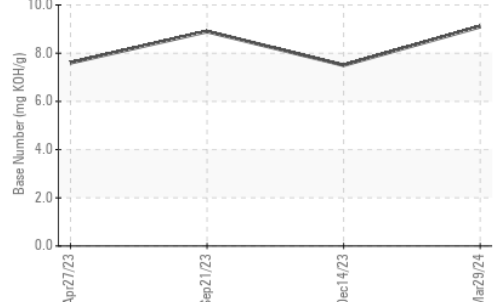
Non-ferrous Metals



Viscosity @ 100°C



Base Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0006570      **Received** : 08 Apr 2024  
**Lab Number** : 06140923      **Tested** : 08 Apr 2024  
**Unique Number** : 10965731      **Diagnosed** : 08 Apr 2024 - Wes Davis  
**Test Package** : FLEET

**Sapp Bros. Petroleum - Corporate - OMA**  
 9915 South 148th  
 OMAHA, NE 68138  
 Contact: Josh Broz  
 JBroz@sappbros.net  
 T: (402)895-2202  
 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)