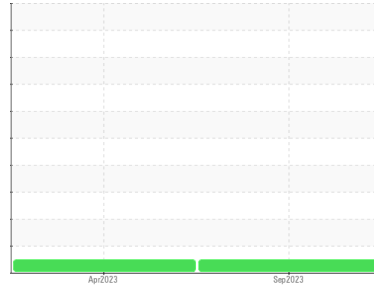




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**3084**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm. Please specify the component make and model with your next sample.

### 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>SBP0003936</b>	SBP0004643	---
Sample Date	Client Info			<b>21 Sep 2023</b>	27 Apr 2023	---
Machine Age	mls Client Info			<b>58803</b>	50179	---
Oil Age	mls Client Info			<b>8624</b>	0	---
Oil Changed	Client Info			<b>Changed</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>	0.5	---
Glycol	WC Method			<b>NEG</b>	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>13</b>	18	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	4	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>&lt;1</b>	2	---
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	100	<b>65</b>	66	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	450	<b>1098</b>	1100	---
Calcium	ppm	ASTM D5185m	3000	<b>1175</b>	1227	---
Phosphorus	ppm	ASTM D5185m	1150	<b>1234</b>	1139	---
Zinc	ppm	ASTM D5185m	1350	<b>1525</b>	1410	---
Sulfur	ppm	ASTM D5185m	4250	<b>3693</b>	3683	---

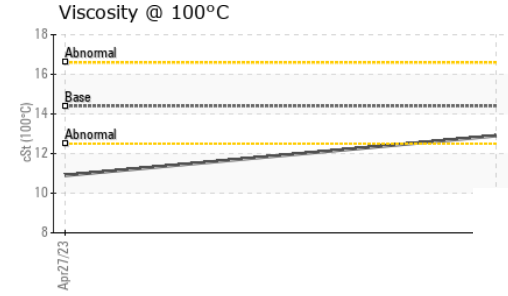
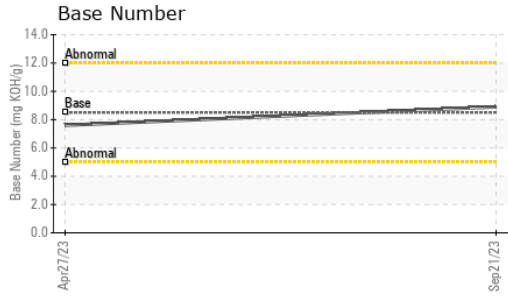
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	4	---
Sodium	ppm	ASTM D5185m	>216	<b>2</b>	1	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	4	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	8.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.3</b>	18.8	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.0</b>	16.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.9</b>	7.6	---



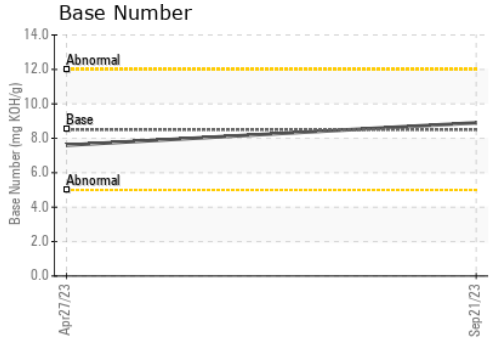
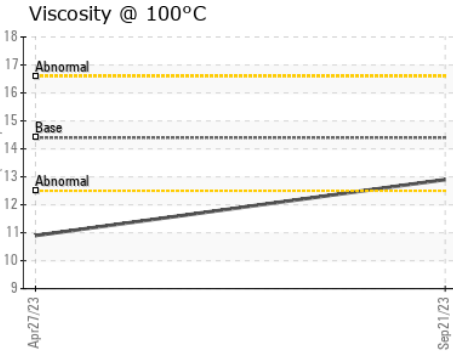
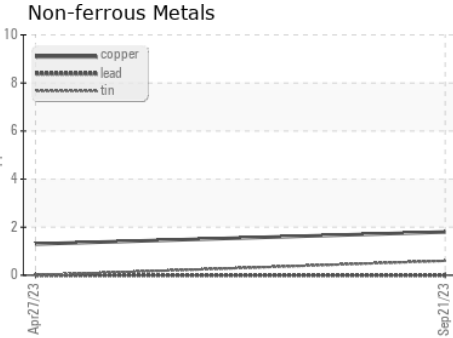
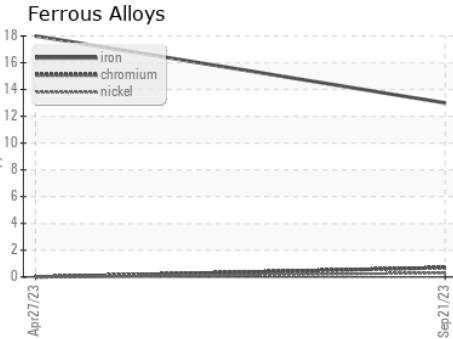
# OIL ANALYSIS REPORT



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>12.9</b>	10.9	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0003936 **Received** : 04 Oct 2023  
**Lab Number** : **05968607** **Diagnosed** : 04 Oct 2023  
**Unique Number** : 10675158 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**Sapp Bros. Petroleum - Corporate - OMA**  
 9915 South 148th  
 OMAHA, NE  
 US 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)