



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**91094**  
Component  
**Diesel Engine**  
Fluid  
**AG 15W40 BULK (10 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>SBP0001603</b>	SBP0005917	SBP0004662
Sample Date		Client Info		<b>18 Jun 2024</b>	30 Jan 2024	12 Sep 2023
Machine Age	mls	Client Info		<b>332319</b>	311505	289807
Oil Age	mls	Client Info		<b>20490</b>	21698	19974
Filter Age	mls	Client Info		<b>20490</b>	21698	19974
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>8</b>	9	9
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>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>3</b>	2	3
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>150	<b>6</b>	7	6
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

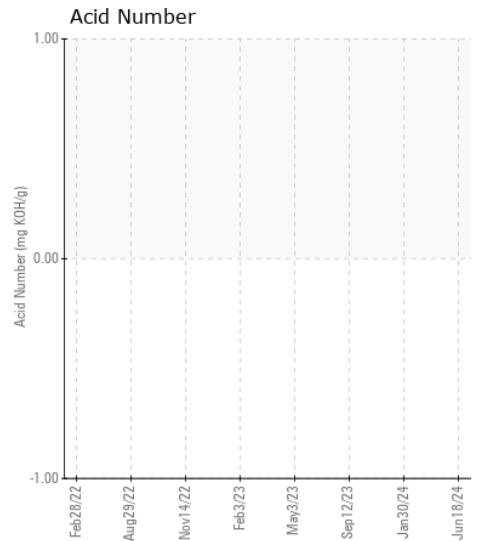
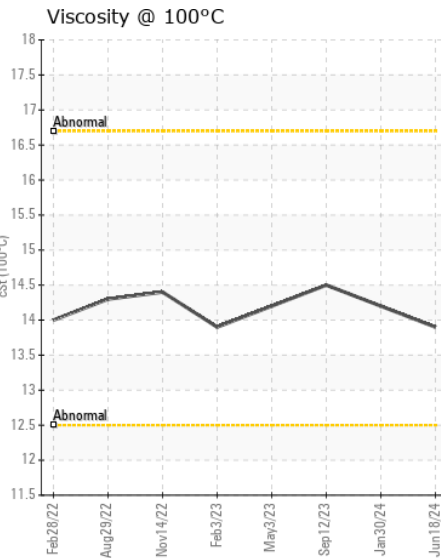
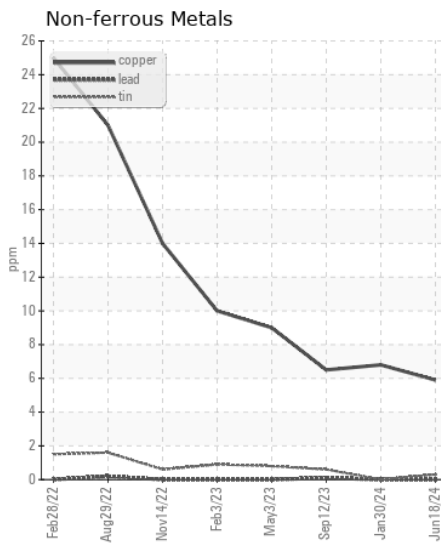
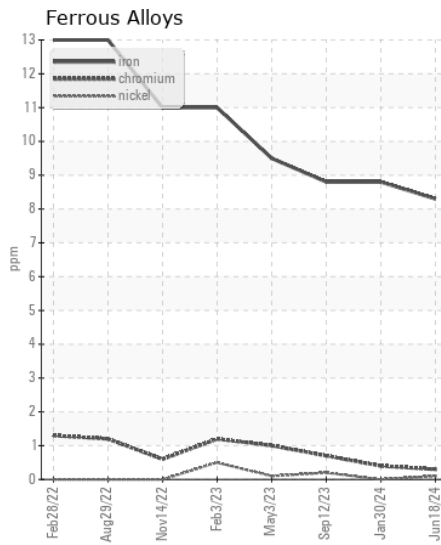
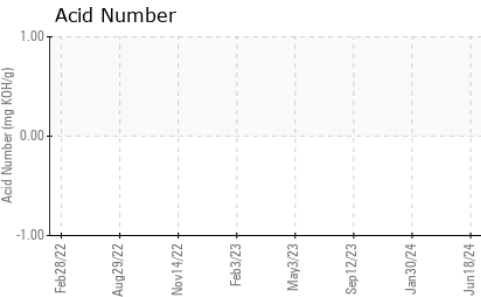
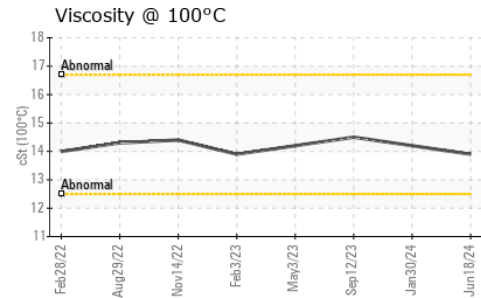
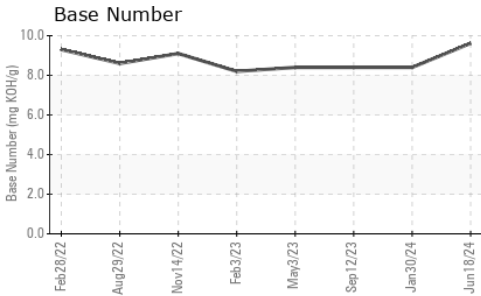
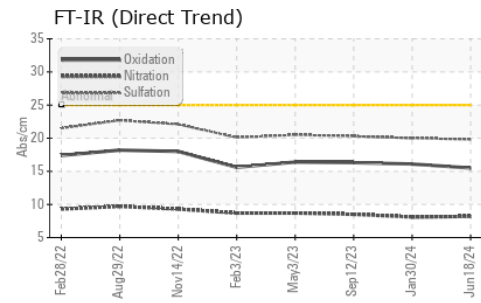
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>4</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	5	5
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	%	ASTM D6304	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.2</b>	8.1	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.8</b>	20.0	20.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## 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.

Sodium	ppm	ASTM D5185m		<b>1</b>	<1	2
Boron	ppm	ASTM D5185m		<b>3</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>61</b>	66	67
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>1051</b>	981	1133
Calcium	ppm	ASTM D5185m		<b>1226</b>	1068	1225
Phosphorus	ppm	ASTM D5185m		<b>1159</b>	970	1121
Zinc	ppm	ASTM D5185m		<b>1412</b>	1268	1437
Sulfur	ppm	ASTM D5185m		<b>3751</b>	2777	3070
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	16.1	16.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.62</b>	8.4	8.4
Visc @ 100°C	cSt	ASTM D445		<b>13.9</b>	14.2	14.5



Certificate 12367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0001603  
**Lab Number** : 06227690  
**Unique Number** : 11111183  
**Test Package** : PLANT ( Additional Tests: FT-IR, KV100, TBN )

**Sapp Bros. Fleet - Ogallala Location**

**Received** : 03 Jul 2024  
**Tested** : 06 Jul 2024  
**Diagnosed** : 06 Jul 2024 - Don Baldrige

US  
 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)

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