



# OIL ANALYSIS REPORT

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

Machine Id  
**98054 394**  
 Component  
**Gasoline Engine**  
 Fluid  
**MOTORCRAFT SYNTHETIC BLEND 5W20 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>SBP0001586</b>	SBP0005582	SBP0001714
Sample Date		Client Info		<b>05 Mar 2024</b>	22 Nov 2023	27 Jun 2023
Machine Age	mls	Client Info		<b>201662</b>	196512	189907
Oil Age	mls	Client Info		<b>5150</b>	6605	6380
Filter Age	mls	Client Info		<b>5150</b>	6605	6380
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	>150	<b>10</b>	12	21
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>40	<b>3</b>	2	1
Lead	ppm	ASTM D5185m	>50	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>155	<b>4</b>	6	5
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
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

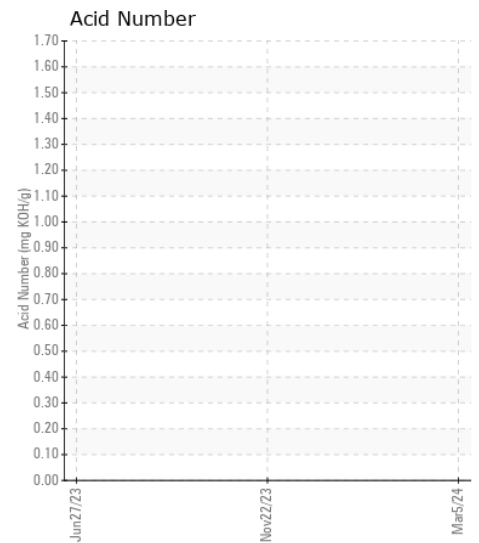
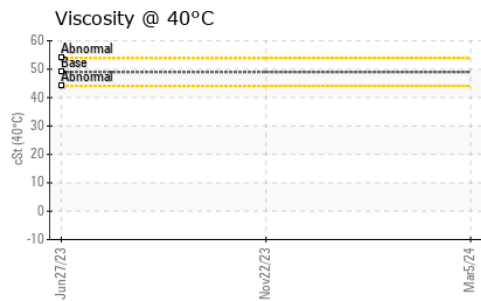
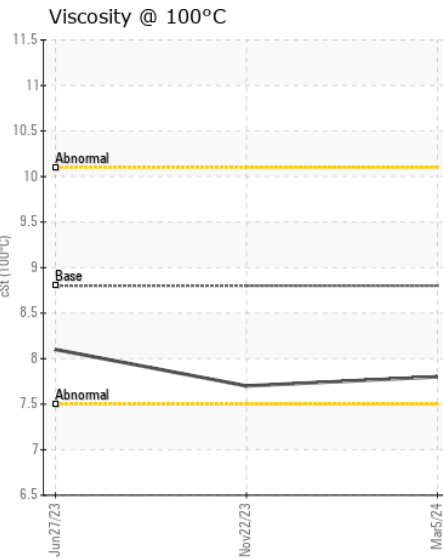
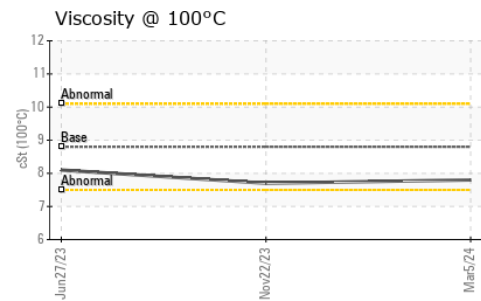
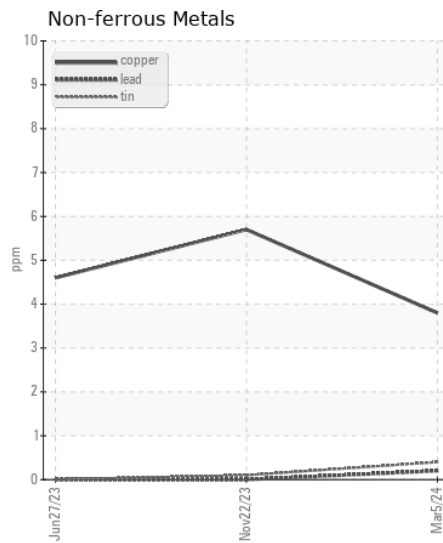
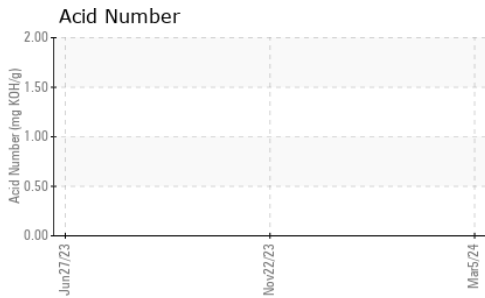
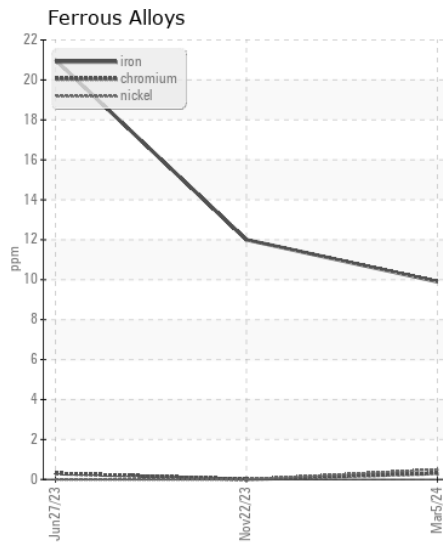
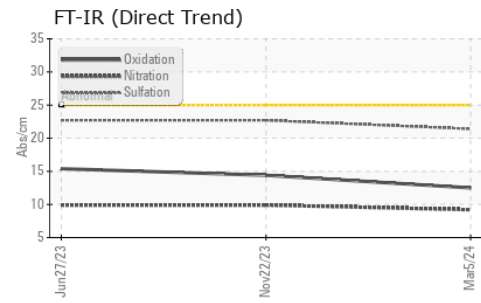
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	<b>11</b>	12	14
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	1
Fuel		WC Method	>4.0	<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		<b>0</b>	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	9.9	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.4</b>	22.7	22.7
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 AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>400	<b>&lt;1</b>	2	7
Boron	ppm	ASTM D5185m		<b>72</b>	35	53
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>70</b>	68	79
Manganese	ppm	ASTM D5185m		<b>1</b>	2	2
Magnesium	ppm	ASTM D5185m		<b>486</b>	518	494
Calcium	ppm	ASTM D5185m		<b>905</b>	887	1002
Phosphorus	ppm	ASTM D5185m		<b>637</b>	622	619
Zinc	ppm	ASTM D5185m		<b>757</b>	764	719
Sulfur	ppm	ASTM D5185m		<b>2855</b>	2596	3206
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.5</b>	14.4	15.4
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.65</b>	---	---
Visc @ 100°C	cSt	ASTM D445	8.8	<b>7.8</b>	7.7	8.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0001586  
**Lab Number** : 06239302  
**Unique Number** : 11128136  
**Test Package** : PLANT ( Additional Tests: FT-IR, KV100 )

**Sapp Bros. Fleet - Ogallala Location**

**Received** : 17 Jul 2024  
**Tested** : 19 Jul 2024  
**Diagnosed** : 19 Jul 2024 - Jonathan Hester

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)

US  
 Contact: Service Manager

T:  
 F: