OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
98020
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.

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

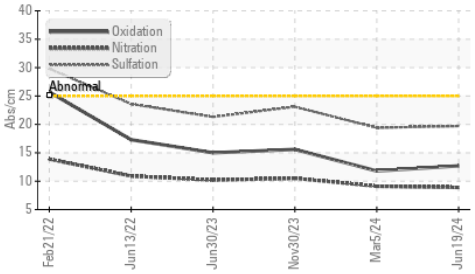
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**SBP0001604**	SBP0001585	SBP0005533
Sample Date		Client Info		**19 Jun 2024**	05 Mar 2024	30 Nov 2023
Machine Age	mls	Client Info		**143144**	138487	133453
Oil Age	mls	Client Info		**4657**	5034	6936
Filter Age	mls	Client Info		**4657**	5034	6936
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>150	**11**	22	12
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>40	**3**	3	2
Lead	ppm	ASTM D5185m	>50	**<1**	<1	0
Copper	ppm	ASTM D5185m	>155	**<1**	1	1
Tin	ppm	ASTM D5185m	>10	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	**9**	8	8
Potassium	ppm	ASTM D5185m	>20	**2**	2	<1
Fuel		WC Method	>4.0	**<1.0**	<1.0	<1.0
Water	%	ASTM D6304	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844		**0**	0	0
Nitration	Abs/cm	*ASTM D7624	>20	**8.9**	9.1	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.7**	19.4	23.1
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Sodium	ppm	ASTM D5185m	>400	**0**	<1	4
Boron	ppm	ASTM D5185m		**64**	85	25
Barium	ppm	ASTM D5185m		**<1**	<1	0
Molybdenum	ppm	ASTM D5185m		**71**	72	68
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**501**	501	515
Calcium	ppm	ASTM D5185m		**939**	934	881
Phosphorus	ppm	ASTM D5185m		**616**	632	628
Zinc	ppm	ASTM D5185m		**766**	770	765
Sulfur	ppm	ASTM D5185m		**2705**	2786	2596
Oxidation	Abs/.1mm	*ASTM D7414	>25	**12.7**	11.8	15.6
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.41**	1.46	---
Visc @ 100°C	cSt	ASTM D445	8.8	**7.5**	7.5	7.6

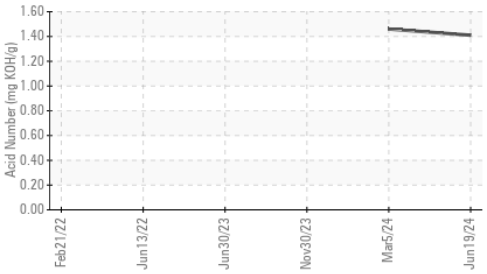
Report Id: SBTOGA [WUSCAR] 06239304 (Generated: 07/21/2024 13:20:12) Rev: 1

Submitted By: DAN VAN ZEE

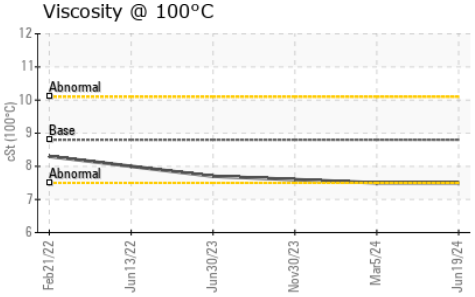
FT-IR (Direct Trend)



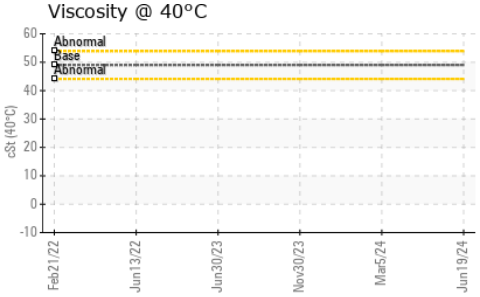
Acid Number



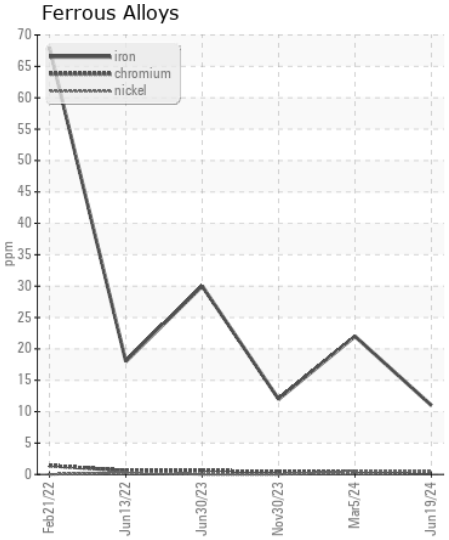
Viscosity @ 100°C



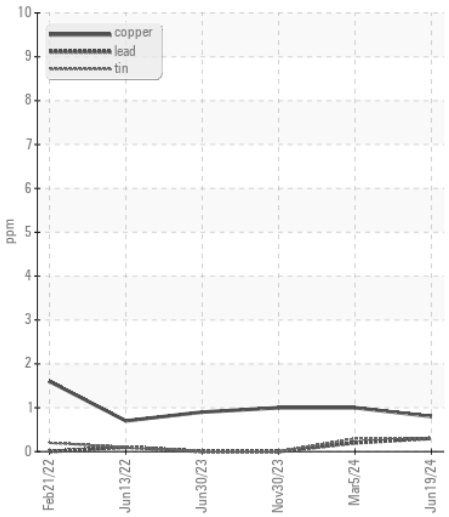
Viscosity @ 40°C



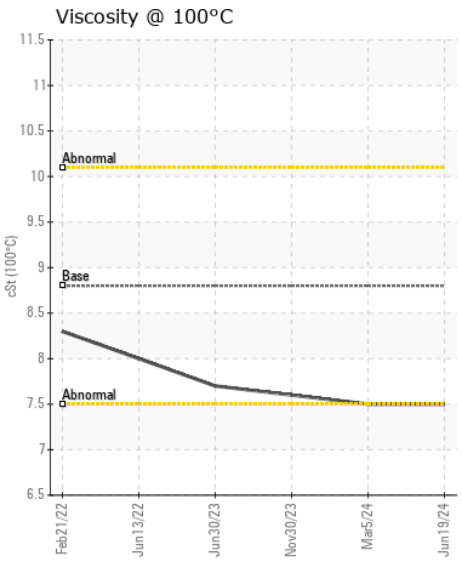
Ferrous Alloys



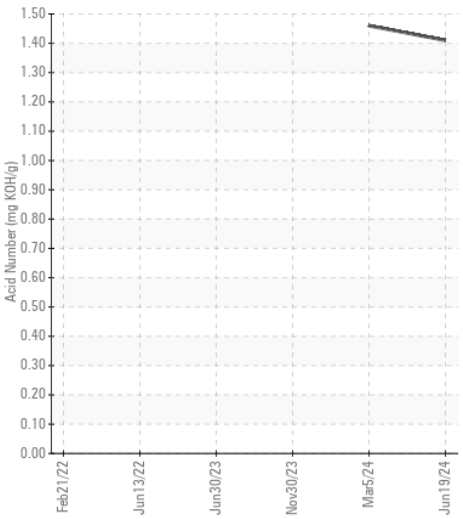
Non-ferrous Metals



Viscosity @ 100°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0001604
Lab Number : 06239304
Unique Number : 11128138
Test Package : PLANT (Additional Tests: FT-IR, KV100)

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

Sapp Bros. Fleet - Ogallala Location
,
US
Contact: Service Manager
T:
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)