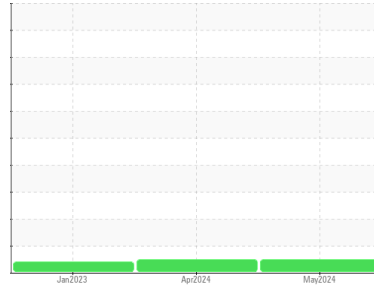




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

{UNASSIGNED}

Machine Id

97027

Component

1 Diesel Engine

Fluid

AMERIGUARD 10W30 (30000 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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			SBP0007021	SBP0007029	SBP0001727
Sample Date	Client Info			21 May 2024	05 Apr 2024	09 Jan 2023
Machine Age	mls	Client Info		54761	51570	15000
Oil Age	mls	Client Info		3191	36570	15000
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	<1.0	0.9
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	12	50	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	0
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	1	0	19
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		2	4	11
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		60	60	50
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1003	911	760
Calcium	ppm	ASTM D5185m		1250	1114	1208
Phosphorus	ppm	ASTM D5185m		1172	1040	963
Zinc	ppm	ASTM D5185m		1386	1236	1154
Sulfur	ppm	ASTM D5185m		3967	3029	2736

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	7	5
Sodium	ppm	ASTM D5185m		<1	<1	0
Potassium	ppm	ASTM D5185m	>20	2	<1	2

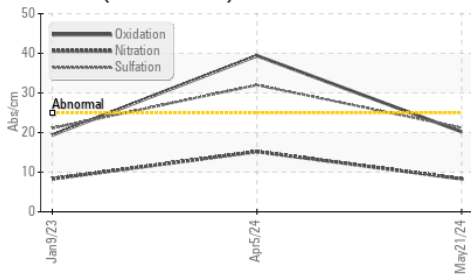
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.2	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.3	15.2	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	32.0	21.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.2	39.4	19.4
Base Number (BN)	mg KOH/g	ASTM D2896		7.8	2.1	8.2

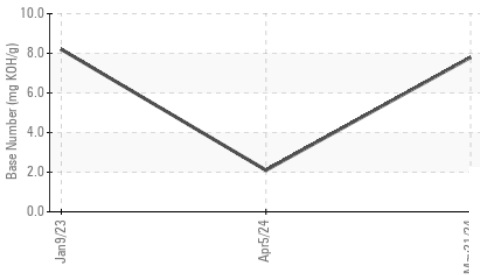


OIL ANALYSIS REPORT

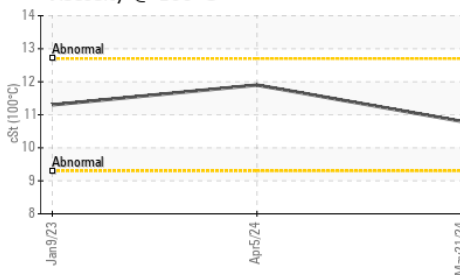
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

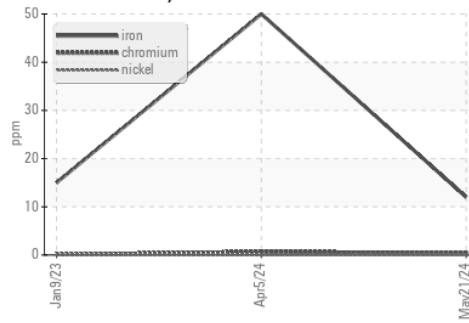


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

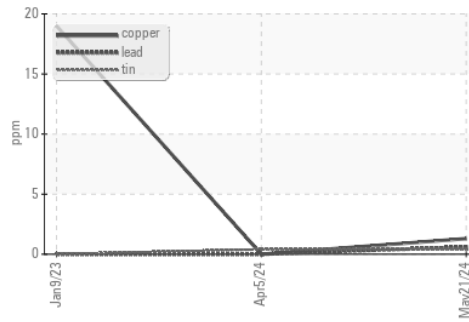
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.8	11.9	11.3

GRAPHS

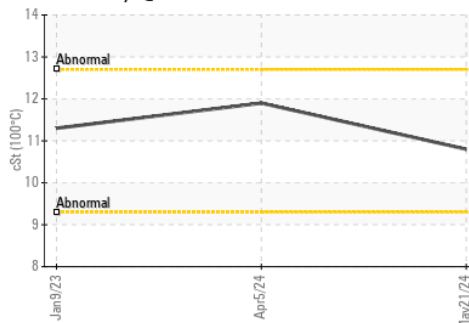
Ferrous Alloys



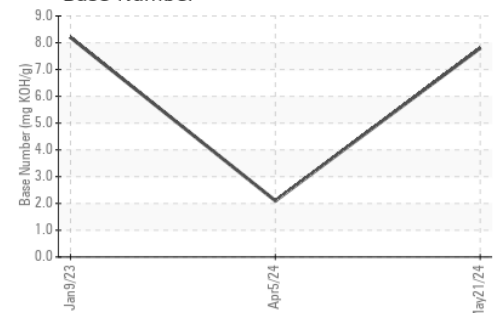
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0007021 **Received** : 30 May 2024
Lab Number : 06195042 **Tested** : 31 May 2024
Unique Number : 11057165 **Diagnosed** : 31 May 2024 - Wes Davis
Test Package : FLEET

Sapp Bros. Fleet - Omaha Petroleum Location
 9915 South 148th
 OMAHA, NE 68138
 US 68138
 Contact: Stephanie Kelly
 skelly@sappbros.net
 T: (800)211-8589
 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)