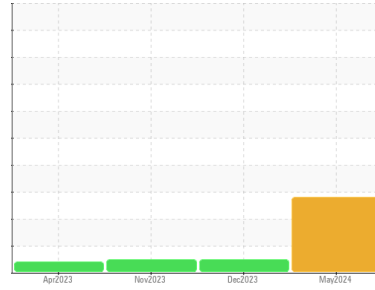




OIL ANALYSIS REPORT

Machine Id
93086
 Component
Diesel Engine
 Fluid
AMERIGUARD 15W40 (10 GAL)

Sample Rating Trend



GLYCOL



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Fuel content negligible. Test for glycol is negative.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		SBP0007205	SBP0006013	SBP0005014
Sample Date	Client Info		05 May 2024	05 Dec 2023	10 Nov 2023
Machine Age	mls	Client Info	76353	64589	62560
Oil Age	mls	Client Info	11764	2029	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>80	27	2	20
Chromium	ppm	ASTM D5185m	>5	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	7	2	7
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	2	<1	2
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		0	2	<1
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		70	53	64
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1070	936	980
Calcium	ppm	ASTM D5185m		1229	968	1137
Phosphorus	ppm	ASTM D5185m		1125	952	1035
Zinc	ppm	ASTM D5185m		1328	1223	1291
Sulfur	ppm	ASTM D5185m		3637	2939	4227

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>20	4	2	3
Sodium	ppm	ASTM D5185m		▲ 61	<1	0
Potassium	ppm	ASTM D5185m	>20	▲ 67	3	16
Fuel	%	ASTM D3524	>5	0.2	<1.0	<1.0
Glycol	%	*ASTM D2982		NEG	NEG	NEG

INFRA-RED

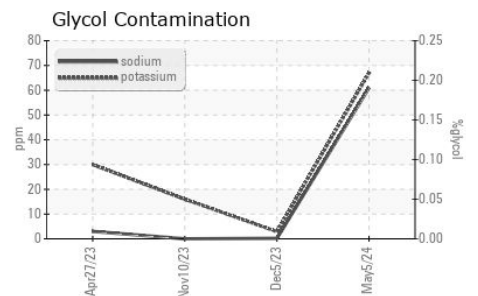
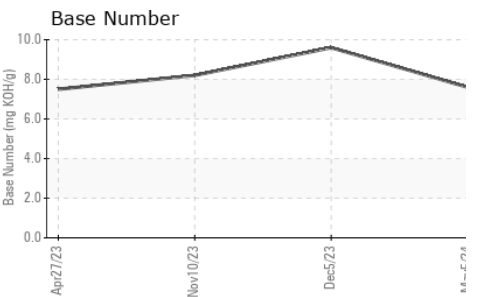
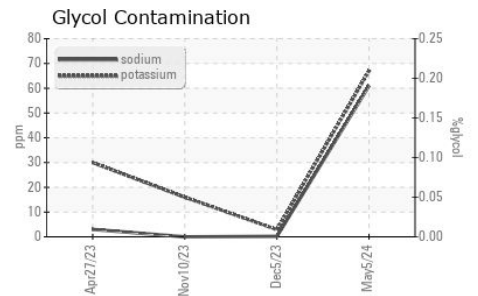
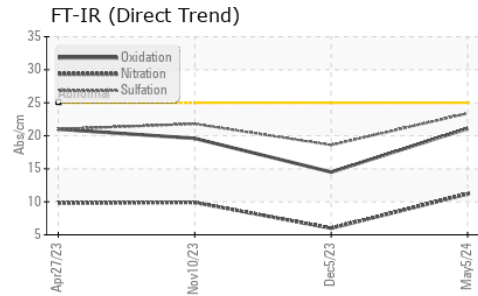
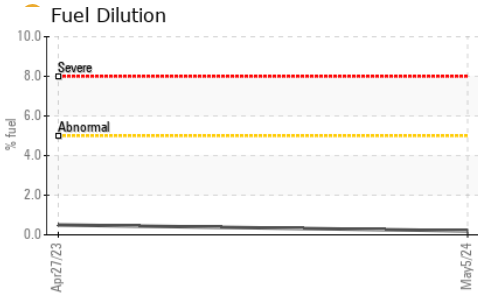
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.5	0.1	0.4
Nitration	Abs/cm	*ASTM D7624	>20	11.2	6.0	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	18.6	21.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.1	14.5	19.6
Base Number (BN)	mg KOH/g	ASTM D2896		7.6	9.6	8.2



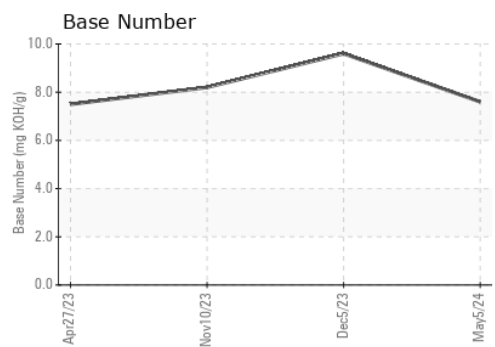
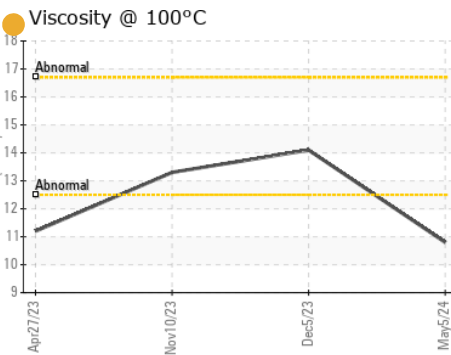
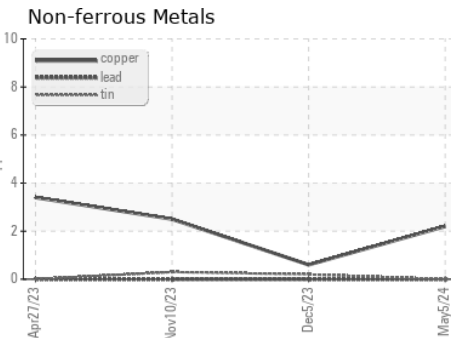
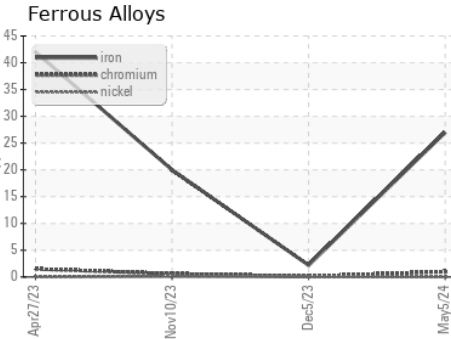
OIL ANALYSIS REPORT



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	14.1	13.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0007205 **Received** : 14 May 2024
Lab Number : 06178330 **Tested** : 17 May 2024
Unique Number : 11029656 **Diagnosed** : 17 May 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, Glycol, PercentFuel)

Sapp Bros. Fleet - Omaha Petroleum Location
 9915 South 148th
 OMAHA, NE
 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)