



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL



Machine Id
93044
Component
Diesel Engine
Fluid
AMERIGUARD 15W40 (10 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		SBP0001583	SBP0004655	SBP0001650
Sample Date		Client Info		28 Feb 2024	15 Aug 2023	03 Apr 2023
Machine Age	mls	Client Info		291671	279033	268848
Oil Age	mls	Client Info		12638	10185	9116
Filter Age	mls	Client Info		12638	10185	9116
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	54	42	41
Chromium	ppm	ASTM D5185m	>5	2	2	2
Nickel	ppm	ASTM D5185m	>2	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	3	4	4
Lead	ppm	ASTM D5185m	>30	5	6	0
Copper	ppm	ASTM D5185m	>150	3	2	2
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

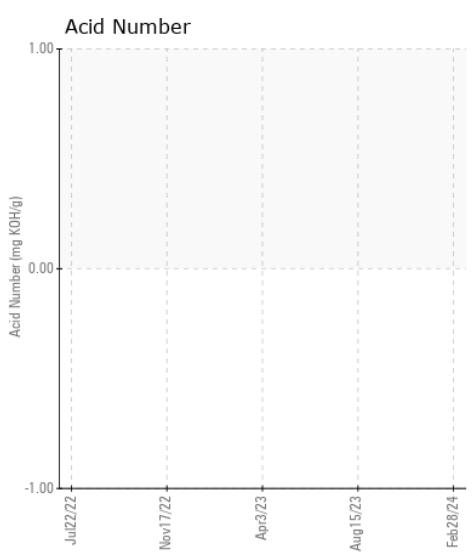
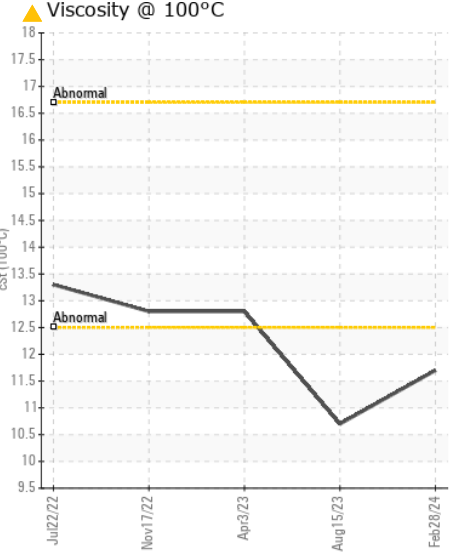
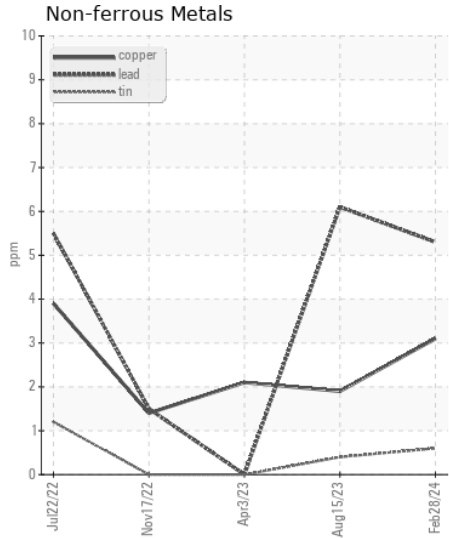
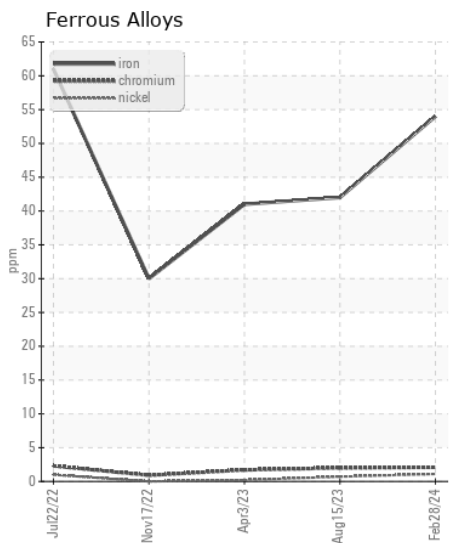
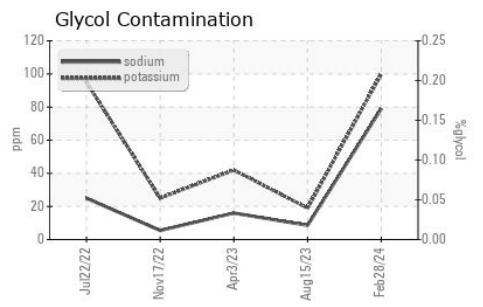
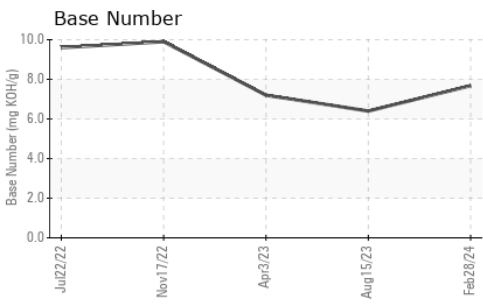
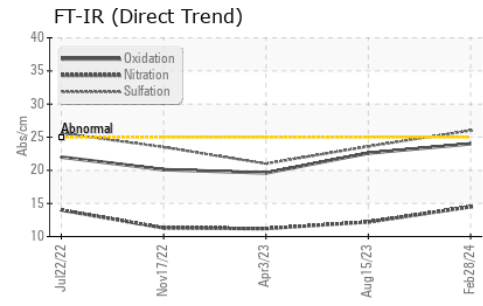
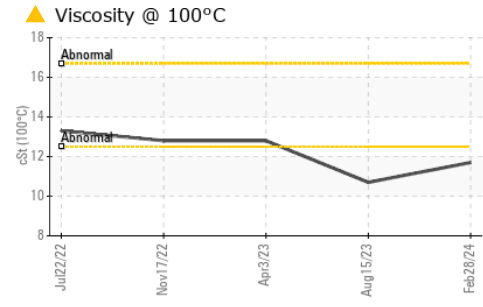
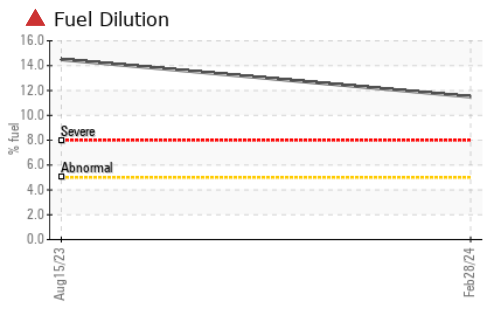
Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>20	6	5	5
Potassium	ppm	ASTM D5185m	>20	▲ 100	19	42
Fuel	%	ASTM D3524	>5	▲ 11.5	▲ 14.5	<1.0
Water	%	ASTM D6304	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.5	1.3	1.1
Nitration	Abs/cm	*ASTM D7624	>20	14.5	12.2	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.0	23.6	21.0
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

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		79	9	16
Boron	ppm	ASTM D5185m		1	2	4
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		63	57	68
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		855	935	1003
Calcium	ppm	ASTM D5185m		980	983	1148
Phosphorus	ppm	ASTM D5185m		825	989	1067
Zinc	ppm	ASTM D5185m		1135	1224	1295
Sulfur	ppm	ASTM D5185m		2599	2802	3643
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.0	22.6	19.6
Base Number (BN)	mg KOH/g	ASTM D2896		7.68	6.4	7.2
Visc @ 100°C	cSt	ASTM D445		▲ 11.7	▲ 10.7	12.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0001583
Lab Number : 06239323
Unique Number : 11128157
Test Package : PLANT (Additional Tests: FT-IR, Glycol, KV100, PercentFuel, TBN)

Sapp Bros. Fleet - Ogallala Location
 Received : 17 Jul 2024
 Tested : 19 Jul 2024
 Diagnosed : 19 Jul 2024 - Sean Felton
 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)