



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
YARD FERROUS
Machine Id
SENNEBOGEN 830M C195 (S/N 830.0.2061)
Component
Diesel Engine
Fluid
SHELL 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0870238	WC0842966	WC0810968
Sample Date		Client Info		30 Nov 2023	06 Sep 2023	17 Jun 2023
Machine Age	hrs	Client Info		11465	11256	11028
Oil Age	hrs	Client Info		209	228	250
Filter Age	hrs	Client Info		209	228	250
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				SEVERE	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	22	28	24
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	3	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

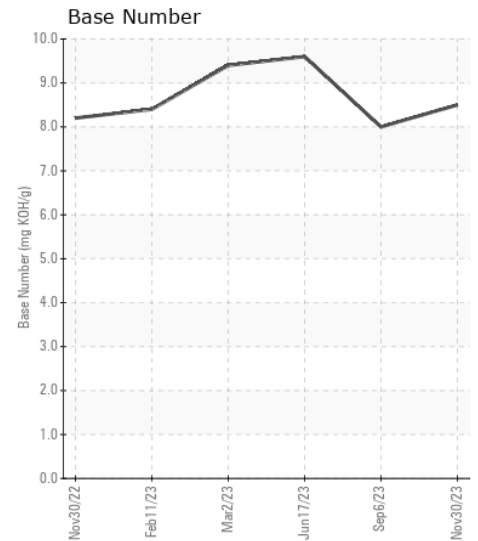
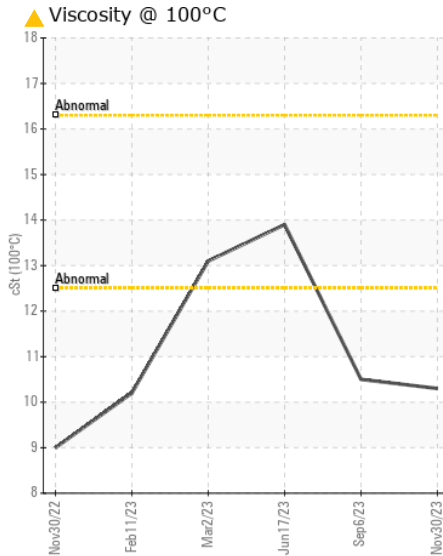
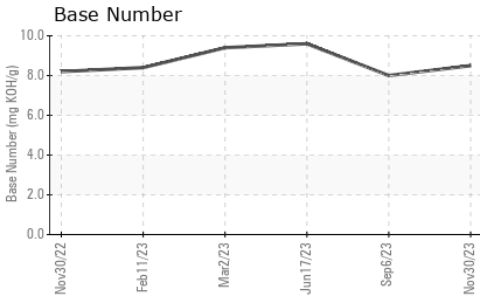
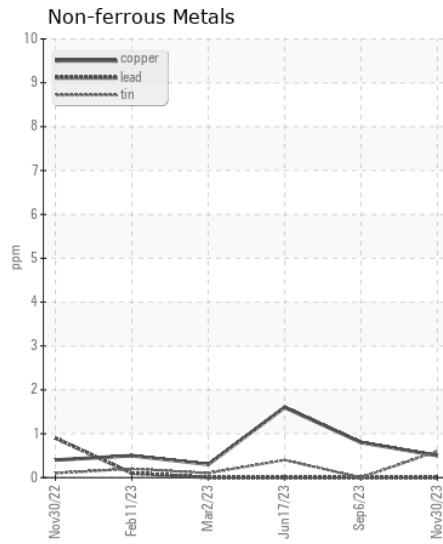
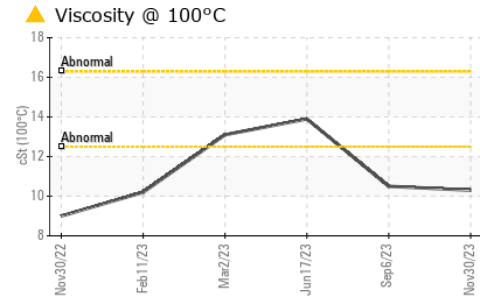
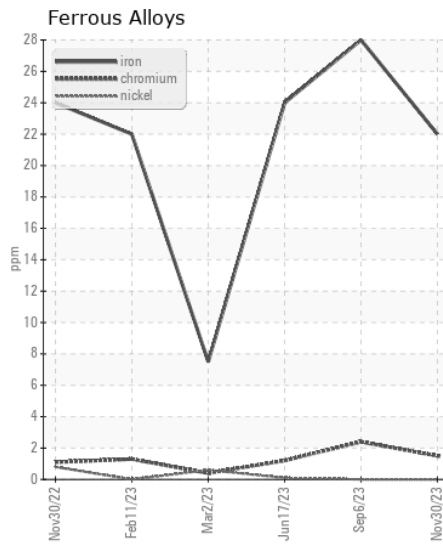
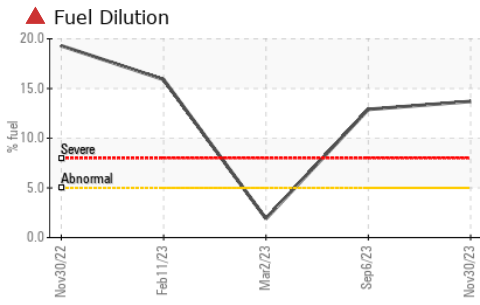
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	4	6	6
Potassium	ppm	ASTM D5185m	>20	2	2	2
Fuel	%	ASTM D3524	>5	▲ 13.7	▲ 12.9	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.7	0.9
Nitration	Abs/cm	*ASTM D7624	>20	10.0	9.3	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	19.4	22.1
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

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>150	2	1	1
Boron	ppm	ASTM D5185m		11	10	51
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		59	63	108
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		907	921	1005
Calcium	ppm	ASTM D5185m		999	1060	1240
Phosphorus	ppm	ASTM D5185m		992	917	1068
Zinc	ppm	ASTM D5185m		1180	1157	1331
Sulfur	ppm	ASTM D5185m		3004	3203	3859
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	15.5	17.5
Base Number (BN)	mg KOH/g	ASTM D2896		8.5	8.0	9.6
Visc @ 100°C	cSt	ASTM D445		▲ 10.3	▲ 10.5	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870238 **Received** : 21 Dec 2023
Lab Number : 06041809 **Tested** : 26 Dec 2023
Unique Number : 10802417 **Diagnosed** : 26 Dec 2023 - Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, TBN)

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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)