



Machine Id
BELLEVUE
Component
Starboard Genset
Fluid
DIESEL ENGINE OIL SAE 15W40 (15 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. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0056961	MW0057120	MW0048412
Sample Date		Client Info		19 Apr 2024	07 Mar 2024	08 Oct 2023
Machine Age	hrs	Client Info		0	5922	4129
Oil Age	hrs	Client Info		500	0	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				SEVERE	NORMAL	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	5	0	2
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	1	2	3
Lead	ppm	ASTM D5185m	>17	0	0	0
Copper	ppm	ASTM D5185m	>70	<1	0	<1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

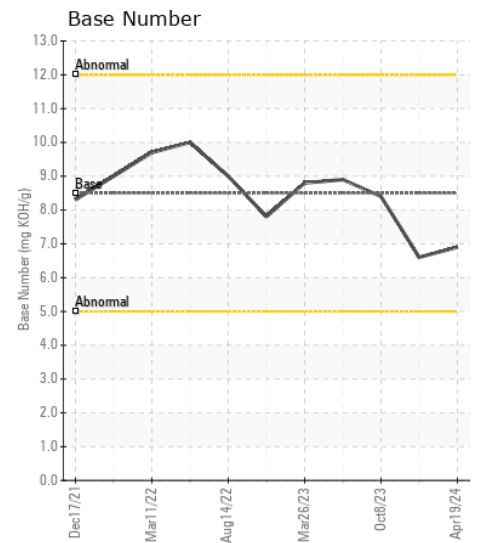
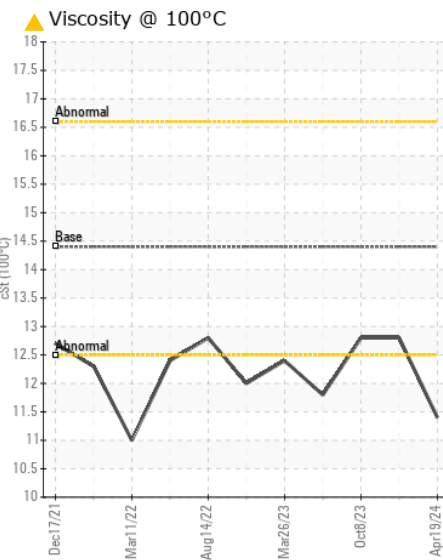
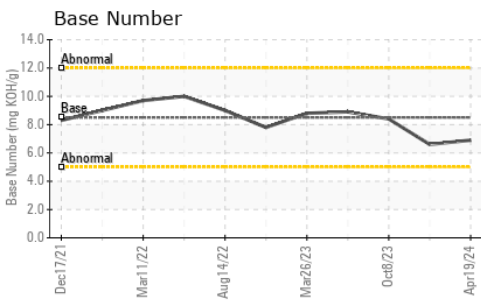
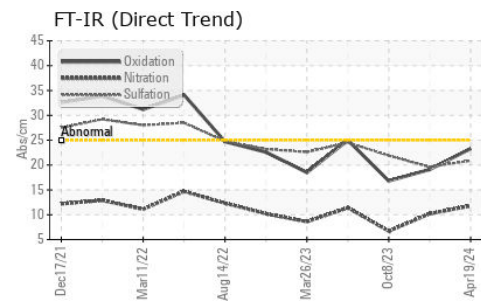
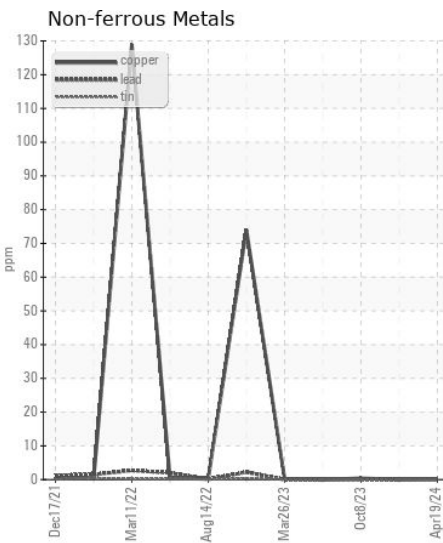
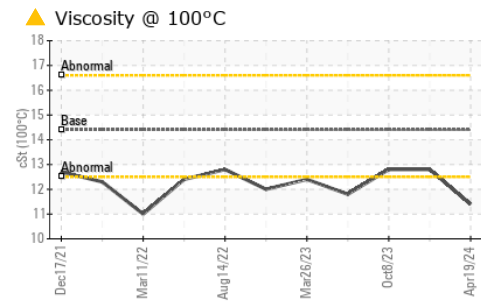
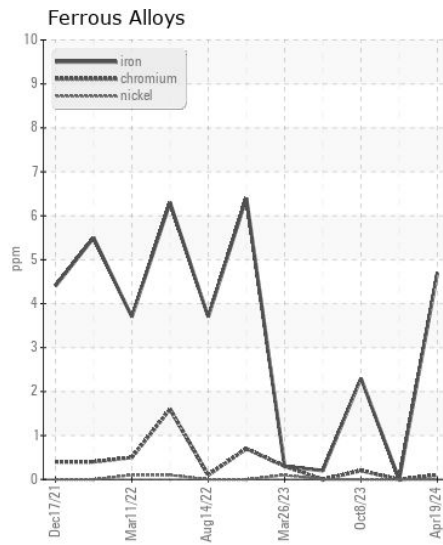
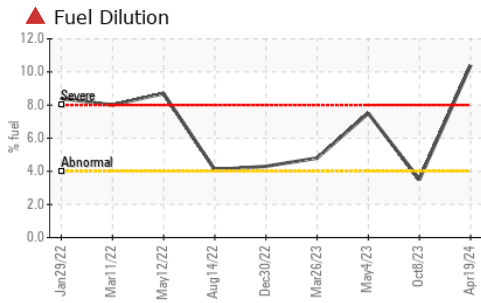
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	3	3	4
Potassium	ppm	ASTM D5185m	>20	9	0	3
Fuel	%	ASTM D3524	>4.0	▲ 10.4	<1.0	▲ 3.5
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	11.8	10.2	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	19.6	21.9
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. 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	>158	7	<1	<1
Boron	ppm	ASTM D5185m	250	10	0	344
Barium	ppm	ASTM D5185m	10	0	0	12
Molybdenum	ppm	ASTM D5185m	100	36	23	115
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	450	549	320	636
Calcium	ppm	ASTM D5185m	3000	1456	1831	1406
Phosphorus	ppm	ASTM D5185m	1150	923	929	652
Zinc	ppm	ASTM D5185m	1350	1093	1069	797
Sulfur	ppm	ASTM D5185m	4250	3604	3627	2308
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.3	19.1	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.9	6.6	8.4
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.4	12.8	12.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0056961

Lab Number : 06159688

Unique Number : 10995111

Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 24 Apr 2024

Tested : 29 Apr 2024

Diagnosed : 29 Apr 2024 - Wes Davis

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)

C & B MARINE

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