



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
BELLEVUE
Component
Starboard Genset
Fluid
DIESEL ENGINE OIL SAE 15W40 (15 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. 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		MW0070018	MW0069943	MW0056961
Sample Date		Client Info		11 Jul 2024	31 May 2024	19 Apr 2024
Machine Age	hrs	Client Info		7434	6937	0
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		500	500	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	12	12	5
Chromium	ppm	ASTM D5185m	>4	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>5	<1	0	0
Aluminum	ppm	ASTM D5185m	>12	2	3	1
Lead	ppm	ASTM D5185m	>17	1	2	0
Copper	ppm	ASTM D5185m	>70	2	11	<1
Tin	ppm	ASTM D5185m	>15	<1	1	0
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 no indication of any contamination in the oil.

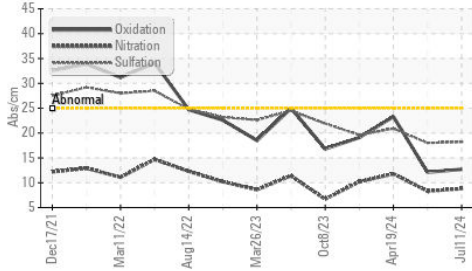
Silicon	ppm	ASTM D5185m	>25	4	3	3
Potassium	ppm	ASTM D5185m	>20	2	3	9
Fuel		WC Method	>4.0	<1.0	1.4	▲ 10.4
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.3	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.8	8.3	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	18.0	20.9
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

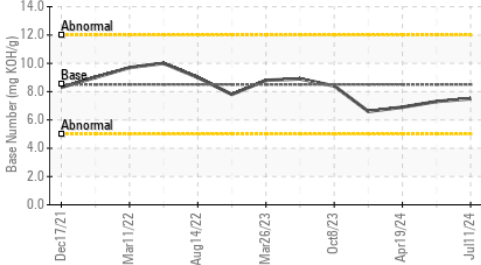
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<1	0	7
Boron	ppm	ASTM D5185m	250	13	16	10
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	20	17	36
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m	450	232	200	549
Calcium	ppm	ASTM D5185m	3000	1832	2027	1456
Phosphorus	ppm	ASTM D5185m	1150	871	989	923
Zinc	ppm	ASTM D5185m	1350	1032	1080	1093
Sulfur	ppm	ASTM D5185m	4250	3075	3591	3604
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.7	12.1	23.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.5	7.3	6.9
Visc @ 100°C	cSt	ASTM D445	14.4	12.8	13.1	▲ 11.4

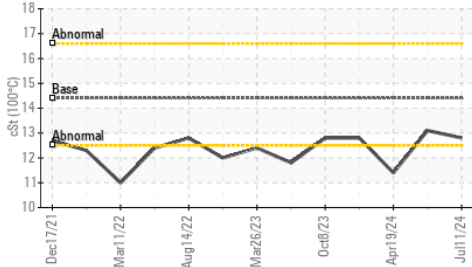
FT-IR (Direct Trend)



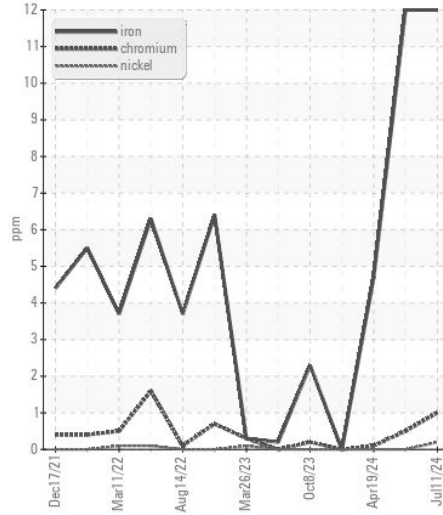
Base Number



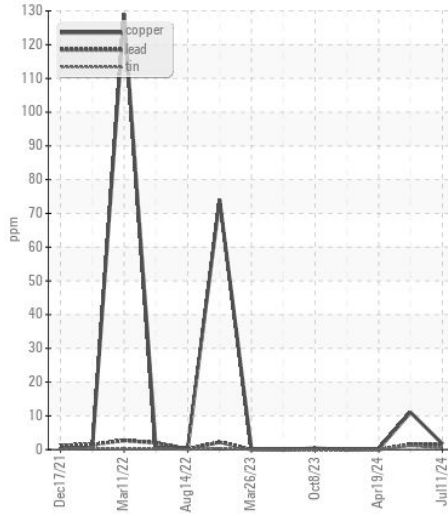
Viscosity @ 100°C



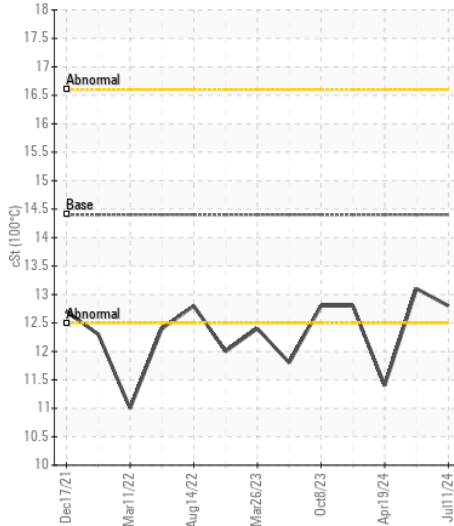
Ferrous Alloys



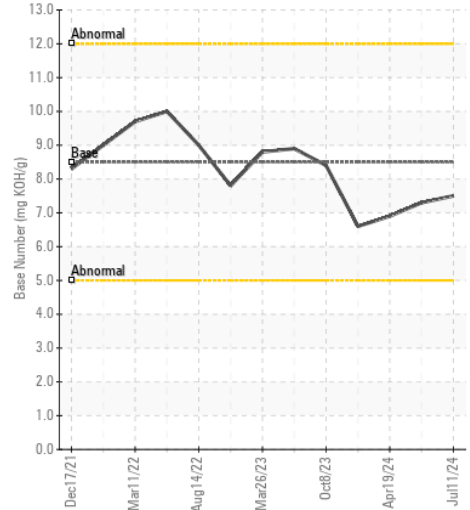
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0070018
Lab Number : 06238686
Unique Number : 11127520
Test Package : MAR 2

Received : 16 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 17 Jul 2024 - Wes Davis

C & B MARINE
 50 E RIVERCENTER BLVD, SUITE 1180
 COVINGTON, KY
 US 41011

Contact: DAVID WESTRICH
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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)