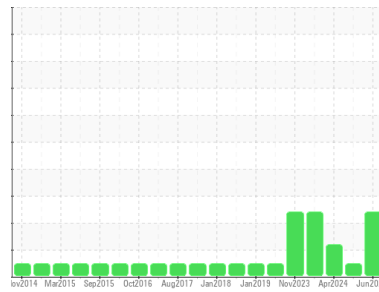




PROBLEM SUMMARY

Area
SANDY B
 Machine Id
[SANDY B] 008 562531-8
 Component
Starboard Genset
 Fluid
SHELL ROTELLA T 15W40 (--- GAL)

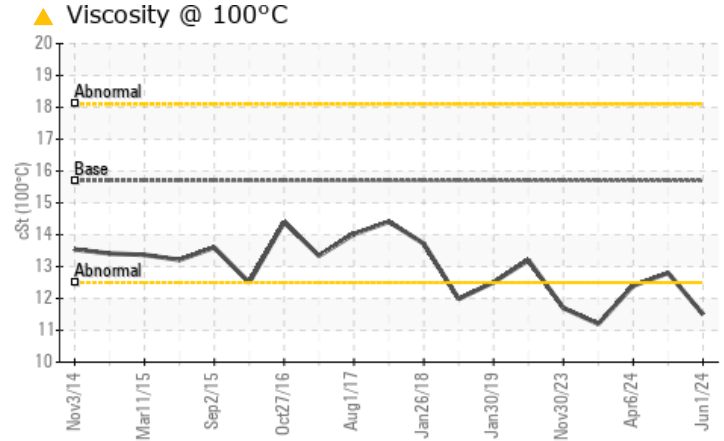
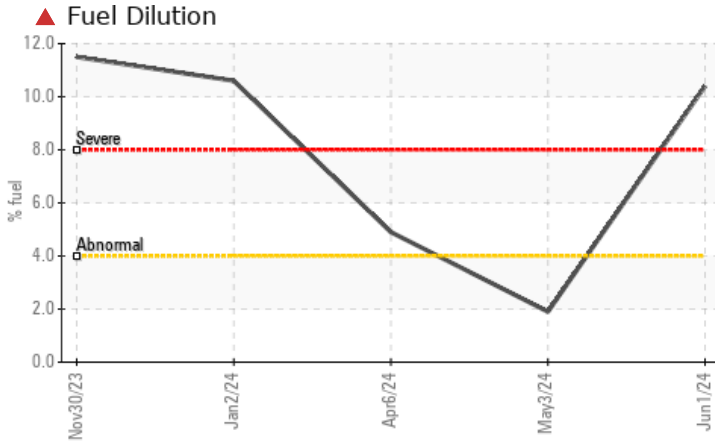
Sample Rating Trend



FUEL



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	ABNORMAL
Fuel	%	ASTM D3524	>4.0	▲ 10.4	1.9	▲ 4.9
Visc @ 100°C	cSt	ASTM D445	15.7	▲ 11.5	12.8	▲ 12.4

Customer Id: INGPAD
 Sample No.: MW0065729
 Lab Number: 06219188
 Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

NORMAL



03 May 2024 Diag: Wes Davis

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

[view report](#)



FUEL



06 Apr 2024 Diag: Sean Felton

We advise that you check the fuel injection system. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of fuel present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity.

[view report](#)



FUEL



02 Jan 2024 Diag: Wes Davis

We advise that you check the fuel injection system. We recommend that you change the oil at the next available stoppage or outage. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. 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.

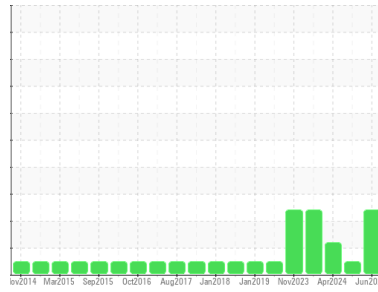
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area
SANDY B
 Machine Id
[SANDY B] 008 562531-8
 Component
Starboard Genset
 Fluid
SHELL ROTELLA T 15W40 (--- GAL)

DIAGNOSIS

Recommendation
 We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of fuel present in the oil.

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.

SAMPLE INFORMATION

Sample Number	Client Info	method	limit/base	current	history1	history2
MW0065729						
Sample Date	Client Info			01 Jun 2024	03 May 2024	06 Apr 2024
Machine Age	hrs	Client Info		25021	24726	24328
Oil Age	hrs	Client Info		382	87	475
Oil Changed	Client Info			Not Chngd	Not Chngd	Not Chngd
Sample Status				SEVERE	NORMAL	ABNORMAL

CONTAMINATION

Water	WC Method	limit/base	current	history1	history2
		>0.1	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

Iron	ppm	ASTM D5185m	limit/base	current	history1	history2
			>50	6	3	2
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	<1	2	0
Lead	ppm	ASTM D5185m	>17	0	<1	0
Copper	ppm	ASTM D5185m	>70	<1	<1	0
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0

ADDITIVES

Boron	ppm	ASTM D5185m	limit/base	current	history1	history2
			316	116	228	203
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	13	16	9
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	24	87	69	52
Calcium	ppm	ASTM D5185m	2292	2157	1995	2286
Phosphorus	ppm	ASTM D5185m	1064	932	936	1009
Zinc	ppm	ASTM D5185m	1160	1143	1084	1219
Sulfur	ppm	ASTM D5185m	4996	3698	3807	4060

CONTAMINANTS

Silicon	ppm	ASTM D5185m	limit/base	current	history1	history2
			>25	8	5	13
Sodium	ppm	ASTM D5185m		1	0	0
Potassium	ppm	ASTM D5185m	>20	5	9	5
Fuel	%	ASTM D3524	>4.0	▲ 10.4	1.9	▲ 4.9

INFRA-RED

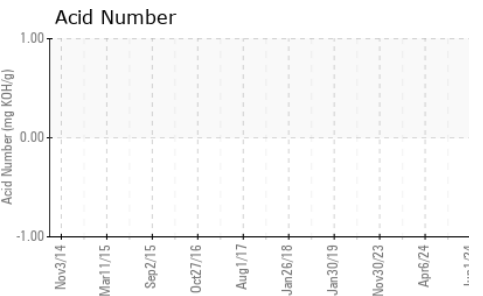
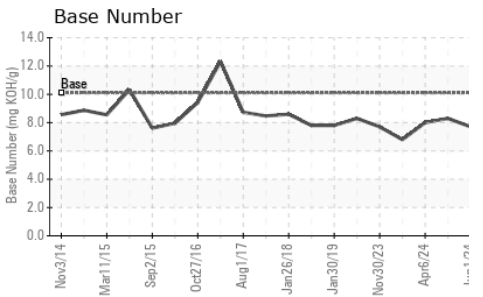
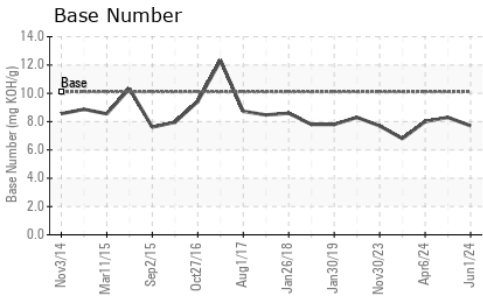
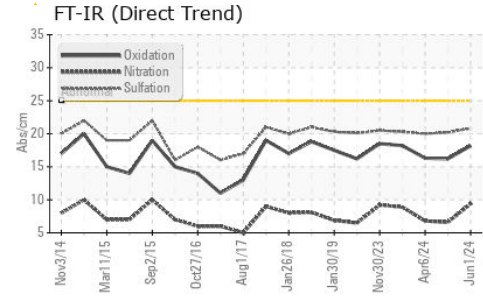
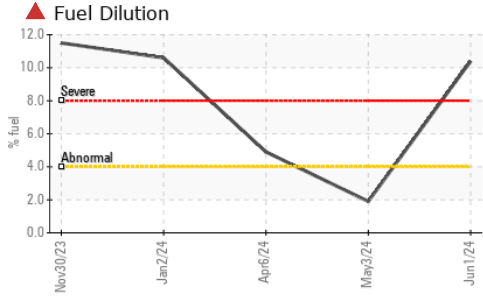
Soot %	%	*ASTM D7844	limit/base	current	history1	history2
				0.4	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.4	6.6	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	20.2	20.0

FLUID DEGRADATION

Oxidation	Abs/.1mm	*ASTM D7414	limit/base	current	history1	history2
			>25	18.2	16.2	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.7	8.3	8.0



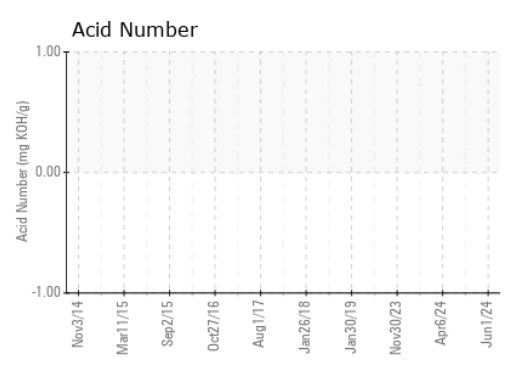
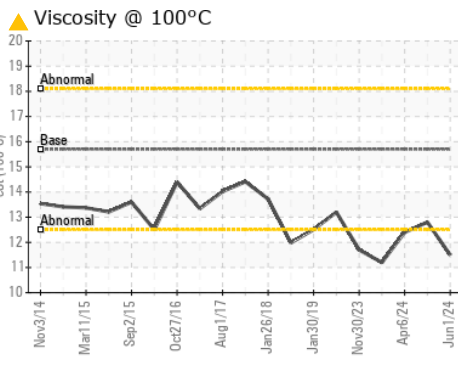
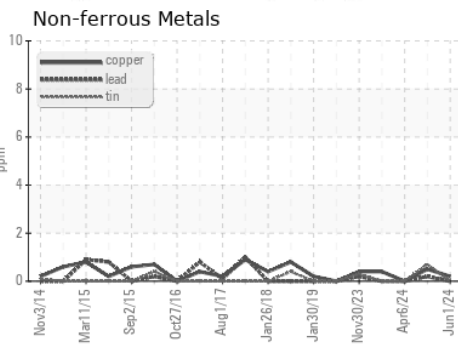
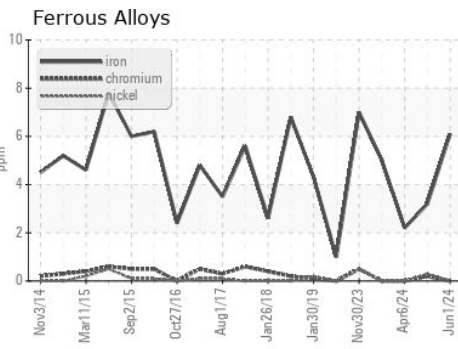
OIL ANALYSIS REPORT



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	▲ 11.5	12.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0065729 **Received** : 24 Jun 2024
Lab Number : 06219188 **Tested** : 27 Jun 2024
Unique Number : 11097385 **Diagnosed** : 27 Jun 2024 - Don Baldrige
Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel, TAN Man)

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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)