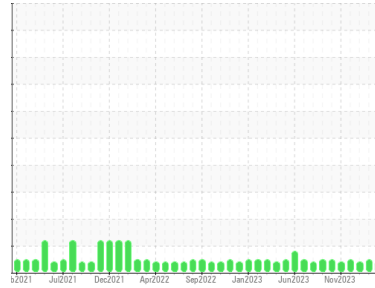




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
Martinsville
 Machine Id
[Martinsville] Oil - Starboard Genset
 Component
Starboard Genset
 Fluid
DIESEL ENGINE OIL SAE 15W40 (7 GAL)

DIAGNOSIS

● Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: George willis)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

● Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0805447	WC0735541	WC0845814
Sample Date	Client Info			18 Mar 2024	15 Feb 2024	21 Jan 2024
Machine Age	hrs	Client Info		1874	1547	1096
Oil Age	hrs	Client Info		363	0	500
Oil Changed	Client Info			Not Chngd	Changed	Changed
Sample Status				ATTENTION	NORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	10	1	14
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>5	<1	0	<1
Aluminum	ppm	ASTM D5185m	>12	2	0	2
Lead	ppm	ASTM D5185m	>17	1	0	4
Copper	ppm	ASTM D5185m	>70	1	0	4
Tin	ppm	ASTM D5185m	>15	<1	0	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	22	22	29
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	69	58	68
Manganese	ppm	ASTM D5185m		<1	0	2
Magnesium	ppm	ASTM D5185m	450	1563	1500	1425
Calcium	ppm	ASTM D5185m	3000	1278	1159	1165
Phosphorus	ppm	ASTM D5185m	1150	1151	979	992
Zinc	ppm	ASTM D5185m	1350	1329	1231	1234
Sulfur	ppm	ASTM D5185m	4250	3717	3945	3029

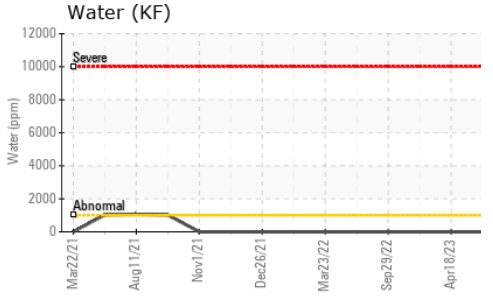
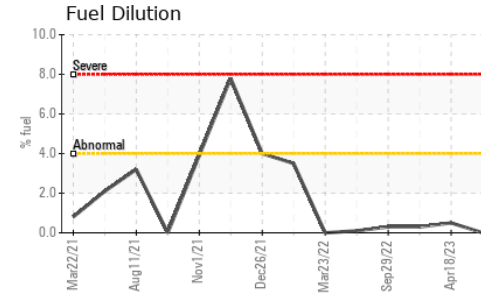
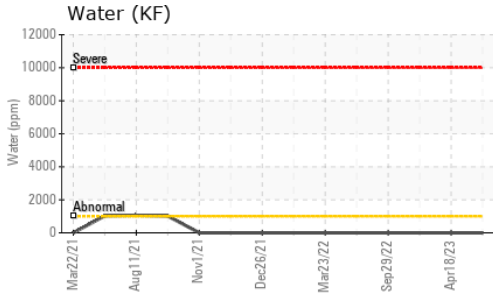
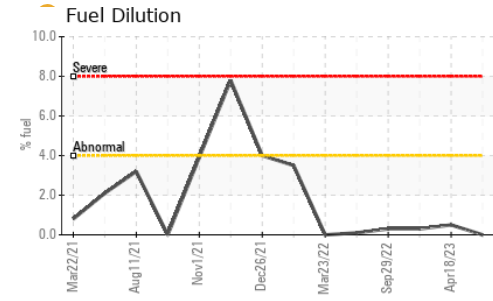
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	4	6
Sodium	ppm	ASTM D5185m	>158	<1	0	4
Potassium	ppm	ASTM D5185m	>20	2	0	3
Fuel	%	ASTM D3524	>4.0	<1.0	<1.0	<1.0
Water	%	ASTM D6304	>0.1	NEG	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.2	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.1	5.4	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	18.0	20.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	13.7	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	13.01	11.94	12.27



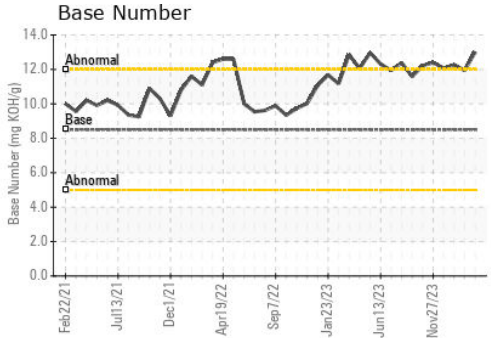
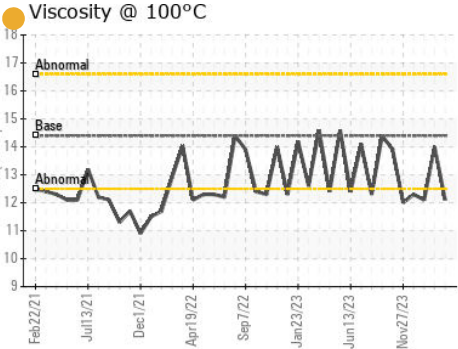
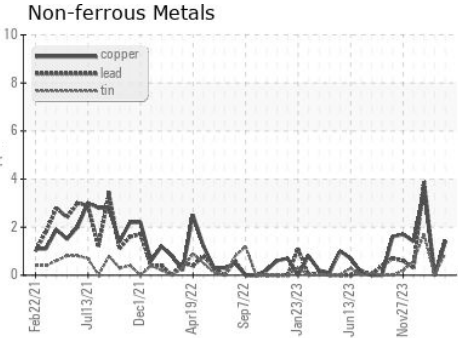
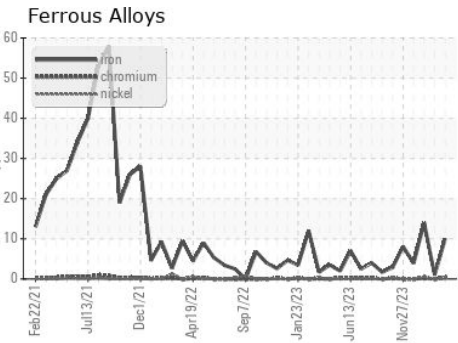
OIL ANALYSIS REPORT



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	14.4 ● 12.1	14.0	12.1 ●

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0805447 **Received** : 27 Mar 2024
Lab Number : 06130829 **Tested** : 01 Apr 2024
Unique Number : 10950294 **Diagnosed** : 01 Apr 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: FuelDilution, KF, PercentFuel)

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 CATLETTSBURG, KY
 US 41169
 Contact: CORY GUMBERT
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 F: x:

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)