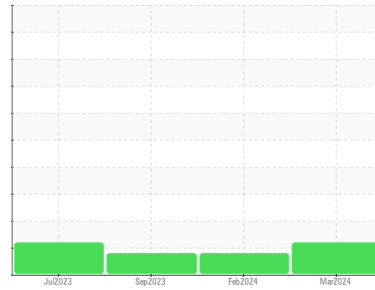




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area
SEAWARD EXPLORER
 Machine Id
Explorer
 Component
2 Genset
 Fluid
MOBIL DELVAC 1330 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0886565	WC0859376	WC0818100
Sample Date	Client Info			19 Mar 2024	07 Feb 2024	01 Sep 2023
Machine Age	hrs	Client Info		12051	11697	0
Oil Age	hrs	Client Info		516	162	0
Oil Changed	Client Info			Changed	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	17	7	8
Chromium	ppm	ASTM D5185m	>4	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	2	<1	<1
Lead	ppm	ASTM D5185m	>17	12	<1	<1
Copper	ppm	ASTM D5185m	>70	2	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	1	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		6	5	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		885	1312	746
Calcium	ppm	ASTM D5185m		2229	874	1576
Phosphorus	ppm	ASTM D5185m		836	691	846
Zinc	ppm	ASTM D5185m		992	829	1011
Sulfur	ppm	ASTM D5185m		3630	2322	3639

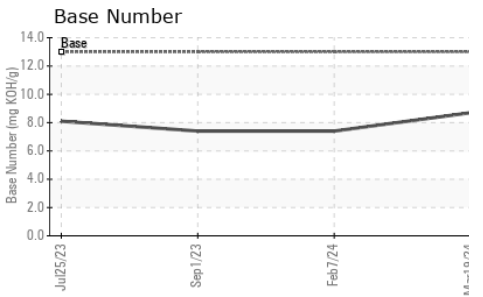
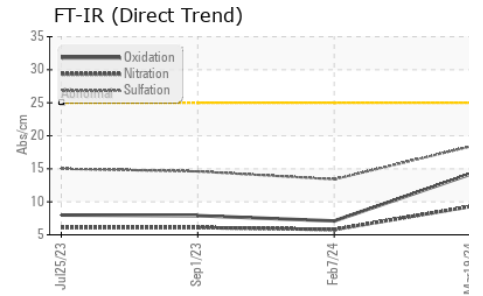
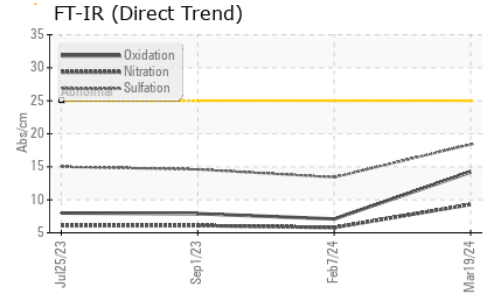
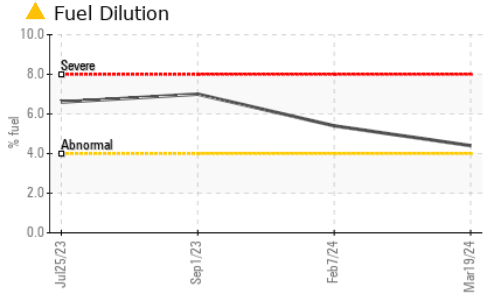
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	3	5
Sodium	ppm	ASTM D5185m		0	1	2
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel	%	ASTM D3524	>4.0	▲ 4.4	▲ 5.4	▲ 7.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.3	5.8	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	13.4	14.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	7.1	7.9
Base Number (BN)	mg KOH/g	ASTM D2896	13	8.7	7.4	7.4



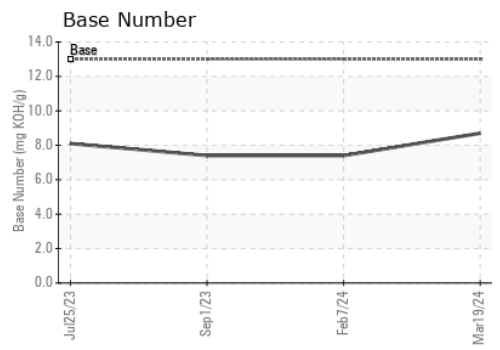
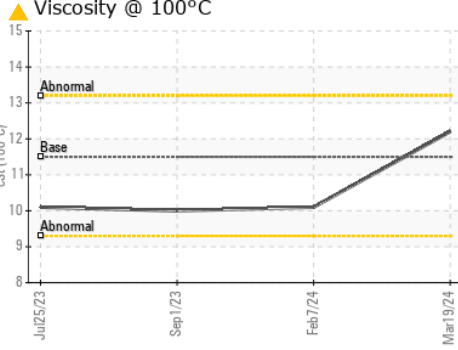
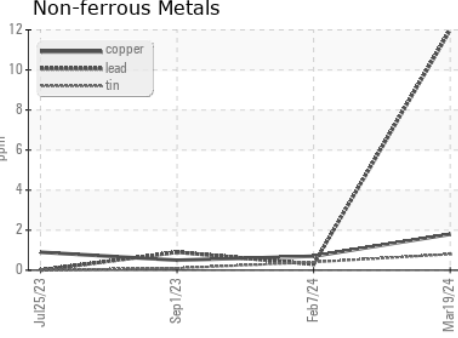
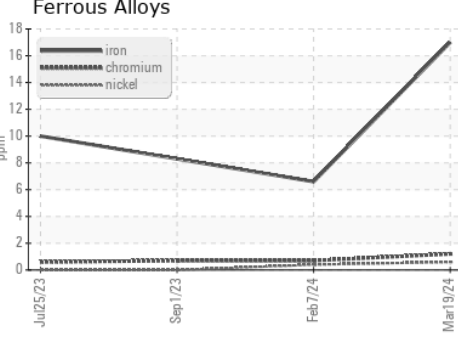
OIL ANALYSIS REPORT



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	11.5	▲ 12.2	10.1	10.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0886565 **Received** : 19 Apr 2024
Lab Number : 06155176 **Tested** : 24 Apr 2024
Unique Number : 10990599 **Diagnosed** : 24 Apr 2024 - Sean Felton
Test Package : MAR 2 (Additional Tests: PercentFuel)

SEAWARD SERVICES
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 NEW ALBANY, IN
 US 47150
 Contact: PETER CHARBONNET
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 T:
 F:

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)