

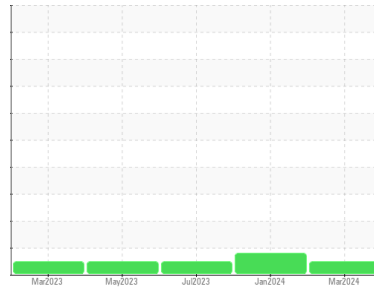


OIL ANALYSIS REPORT



Area
SEAWARD ENDEAVOR
 Machine Id
Endeavor
 Component
1 Genset
 Fluid
CHEVRON DELO 400 XLE 15W40 (9 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0891211	WC0891237	WC0779526
Sample Date	Client Info		23 Mar 2024	24 Jan 2024	06 Jul 2023
Machine Age	hrs	Client Info	16820	16643	15099
Oil Age	hrs	Client Info	0	303	200
Oil Changed	Client Info		Not Changed	Not Changd	Not Changed
Sample Status			NORMAL	MARGINAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	▲ 2.5	<1.0
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	8	6	3
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	2	<1
Silver	ppm	ASTM D5185m	>5	0	<1	<1
Aluminum	ppm	ASTM D5185m	>12	1	1	1
Lead	ppm	ASTM D5185m	>17	0	1	0
Copper	ppm	ASTM D5185m	>70	2	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		22	28	386
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		8	10	82
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		82	79	381
Calcium	ppm	ASTM D5185m		2521	2376	1630
Phosphorus	ppm	ASTM D5185m	760	1022	968	1057
Zinc	ppm	ASTM D5185m	830	1215	1105	1238
Sulfur	ppm	ASTM D5185m	2770	4539	4515	3650

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	3	3	3
Sodium	ppm	ASTM D5185m		2	0	0
Potassium	ppm	ASTM D5185m	>20	1	3	2

INFRA-RED

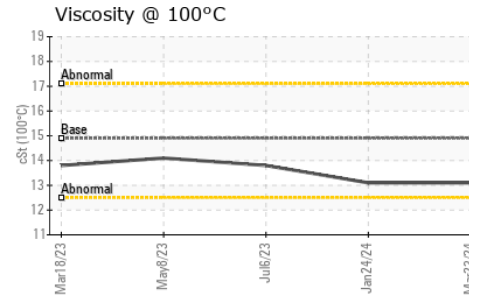
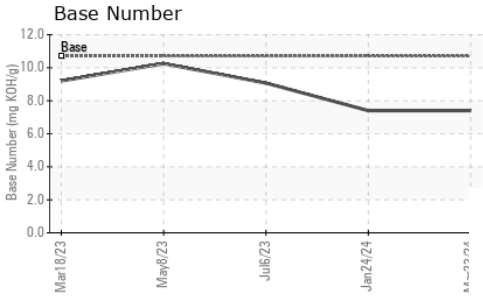
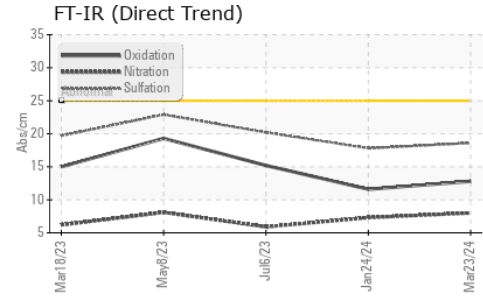
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.3	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	17.8	20.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	11.6	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	7.4	7.4	9.07



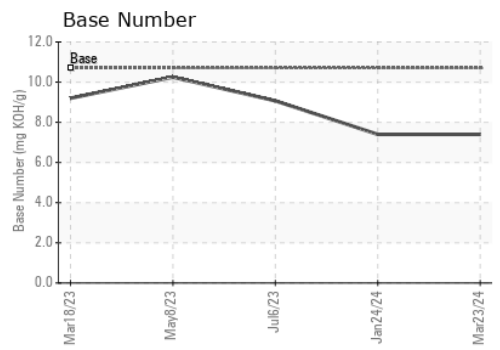
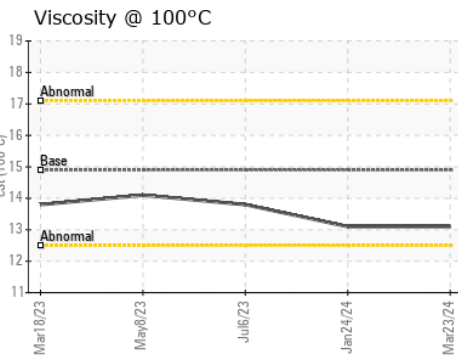
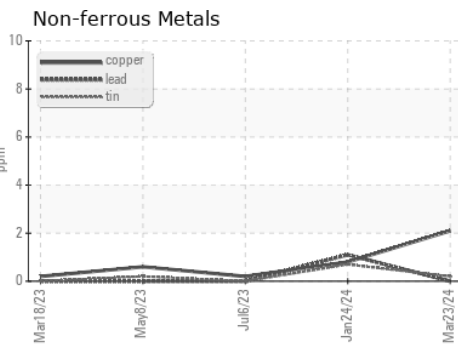
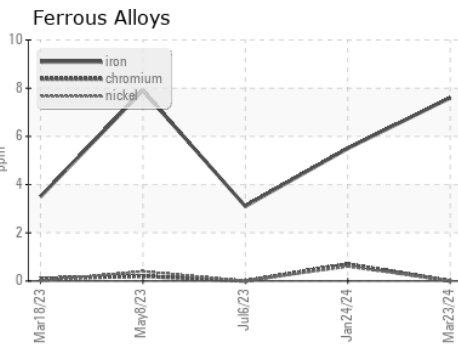
OIL ANALYSIS REPORT



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	14.9	13.1	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0891211 **Received** : 11 Apr 2024
Lab Number : 06146502 **Tested** : 12 Apr 2024
Unique Number : 10976580 **Diagnosed** : 15 Apr 2024 - Sean Felton
Test Package : MAR 2

SEAWARD SERVICES
 222 PEARL ST
 NEW ALBANY, IN
 US 47150
 Contact: PETER CHARBONNET
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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)