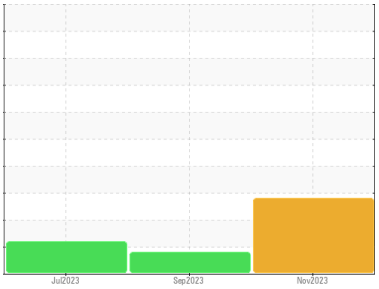
PROBLEM SUMMARY

Sample Rating Trend

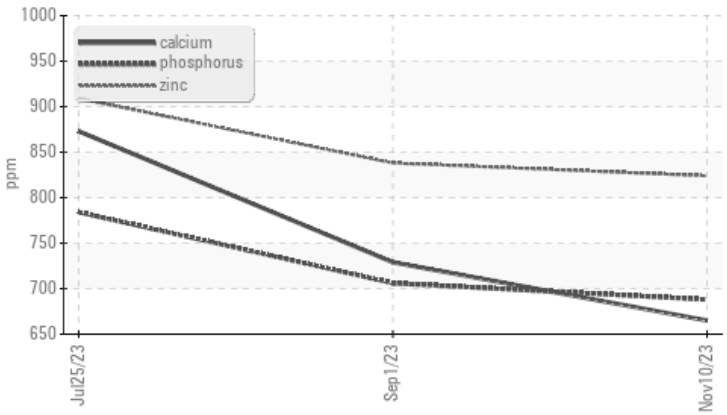


FUEL

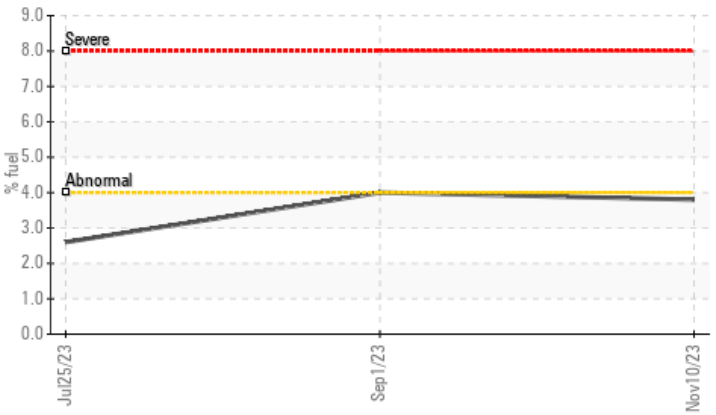
Area
SEAWARD EXPLORER
Machine Id
Explorer - PME
Component
Port Main Engine
Fluid
MOBIL DELVAC 1330 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Additives



▲ Fuel Dilution



RECOMMENDATION

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ABNORMAL	ABNORMAL
Magnesium	ppm	ASTM D5185m		▲ **1433**	1372	1474
Calcium	ppm	ASTM D5185m		▲ **665**	729	873
Phosphorus	ppm	ASTM D5185m		▲ **688**	706	784
Zinc	ppm	ASTM D5185m		▲ **824**	838	909
Sulfur	ppm	ASTM D5185m		▲ **2407**	2408	3168
Fuel	%	ASTM D3524	>4.0	▲ **3.8**	▲ 4.0	▲ 2.6

Customer Id: SEANEW
Sample No.: WC0859384
Lab Number: 06012186
Test Package: MAR 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

01 Sep 2023 Diag: Wes Davis

FUEL

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a moderate 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. The oil is no longer serviceable due to the presence of contaminants.

view report

25 Jul 2023 Diag: Wes Davis

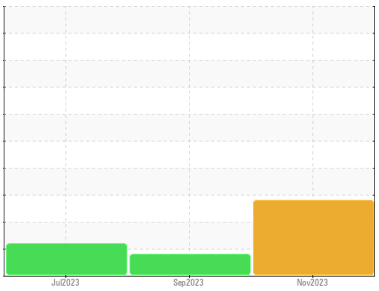
FUEL

The oil change at the time of sampling has been noted. 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.All component wear rates are normal. Light fuel dilution occurring. 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 condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
SEAWARD EXPLORER
Machine Id
Explorer - PME
Component
Port Main Engine
Fluid
MOBIL DELVAC 1330 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
Additive levels indicate the addition of a different brand, or type of oil. 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		**WC0859384**	WC0818103	WC0818085
Sample Date		Client Info		**10 Nov 2023**	01 Sep 2023	25 Jul 2023
Machine Age	hrs	Client Info		**15970**	15331	14911
Oil Age	hrs	Client Info		**500**	548	14783
Oil Changed		Client Info		**Not Changd**	Not Changd	Changed
Sample Status				**ATTENTION**	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	>75	**4**	4	3
Chromium	ppm	ASTM D5185m	>8	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m	>3	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**1**	<1	0
Lead	ppm	ASTM D5185m	>18	**0**	0	0
Copper	ppm	ASTM D5185m	>80	**2**	1	<1
Tin	ppm	ASTM D5185m	>14	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**3**	8	13
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m		▲ **1433**	1372	1474
Calcium	ppm	ASTM D5185m		▲ **665**	729	873
Phosphorus	ppm	ASTM D5185m		▲ **688**	706	784
Zinc	ppm	ASTM D5185m		▲ **824**	838	909
Sulfur	ppm	ASTM D5185m		▲ **2407**	2408	3168

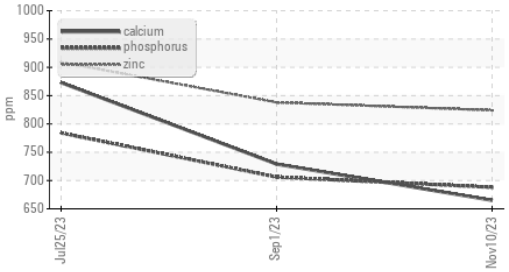
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**1**	1	1
Sodium	ppm	ASTM D5185m	>75	**0**	1	1
Potassium	ppm	ASTM D5185m	>20	**2**	0	0
Fuel	%	ASTM D3524	>4.0	▲ **3.8**	▲ 4.0	▲ 2.6

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**4.5**	7.0	4.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**12.5**	14.1	12.5

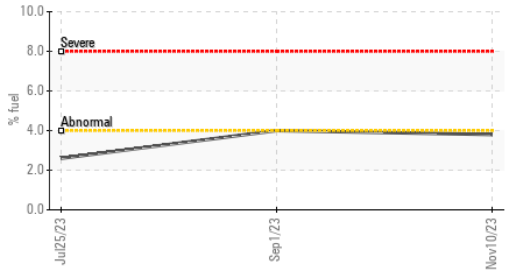
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**5.0**	7.6	5.4
Base Number (BN)	mg KOH/g	ASTM D2896	13	**7.8**	7.3	8.0

OIL ANALYSIS REPORT

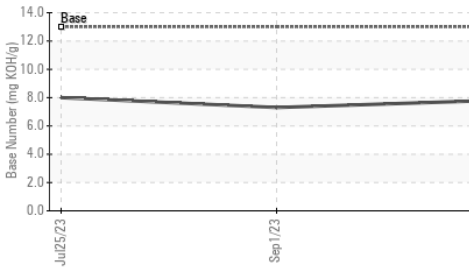
Additives



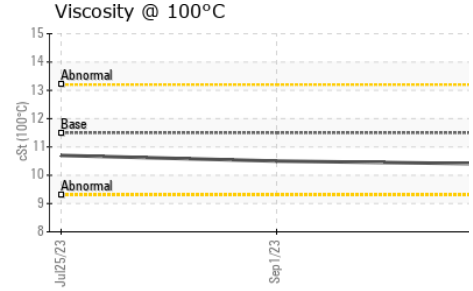
Fuel Dilution



Base Number



Viscosity @ 100°C

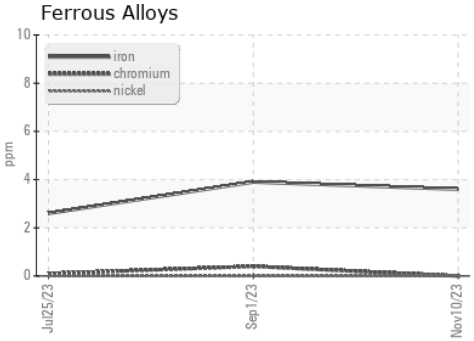


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

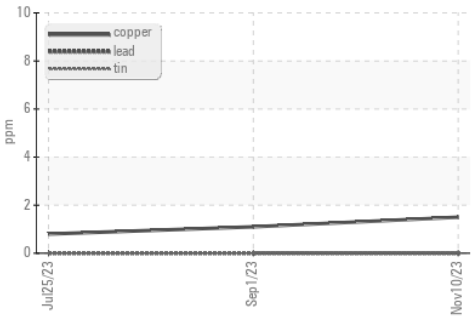
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.5	**10.4**	10.5	▲ 10.7

GRAPHS

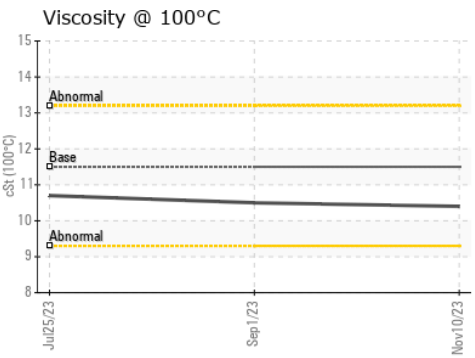
Ferrous Alloys



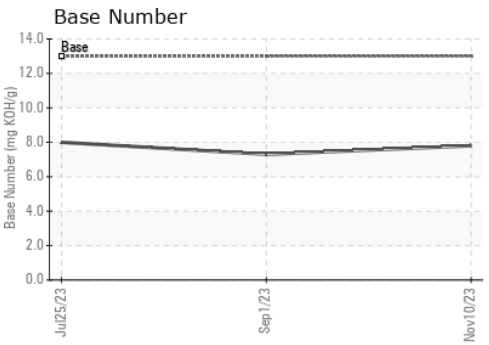
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0859384 **Received** : 20 Nov 2023
Lab Number : 06012186 **Diagnosed** : 21 Nov 2023
Unique Number : 10751330 **Diagnostician** : Wes Davis
Test Package : MAR 2 (Additional Tests: PercentFuel)

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)

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Report Id: SEANEW [WUSCAR] 06012186 (Generated: 11/21/2023 18:27:50) Rev: 1

Submitted By: PETER CHARBONNET