MAR I WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MAIN ENGINE #2
Component
2 Main Engine
Fluid
MOBIL DELVAC 1640 (1500 LTR)

RECOMMENDATION

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid. this testkit includes BN to determine the suitability of the oil for continued use.

WEAR

Component wear rates appear to be normal (unconfirmed).

CONTAMINATION

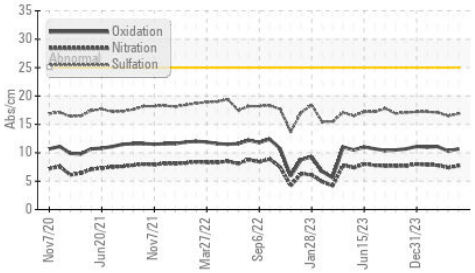
There is no indication of any contamination in the oil.

FLUID CONDITION

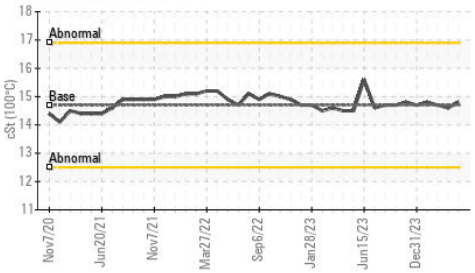
The condition of the oil is acceptable for the time in service (unconfirmed).

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0803093	WC0803033	WC0803021
Sample Date		Client Info		20 Apr 2024	23 Mar 2024	25 Feb 2024
Machine Age	hrs	Client Info		36538	36230	35908
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Filter Changed		Client Info		Not Changd	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>120	3	3	3
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>5	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>40	0	0	0
Copper	ppm	ASTM D5185(m)	>300	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>25	1	2	3
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*		0.1	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	7.7	7.4	7.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	16.9	16.5	17.1
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
Sodium	ppm	ASTM D5185(m)		1	1	1
Boron	ppm	ASTM D5185(m)		1	1	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	<1
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)		220	222	216
Calcium	ppm	ASTM D5185(m)		3764	3761	3645
Phosphorus	ppm	ASTM D5185(m)		882	873	893
Zinc	ppm	ASTM D5185(m)		997	999	973
Sulfur	ppm	ASTM D5185(m)		8367	8355	8632
Oxidation	Abs/.1mm	ASTM D7414*	>25	10.7	10.3	11.1
Visc @ 100°C	cSt	ASTM D7279(m)	14.7	14.8	14.6	14.7

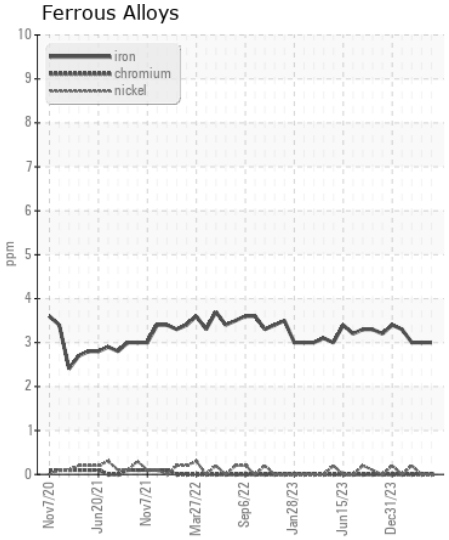
FT-IR (Direct Trend)



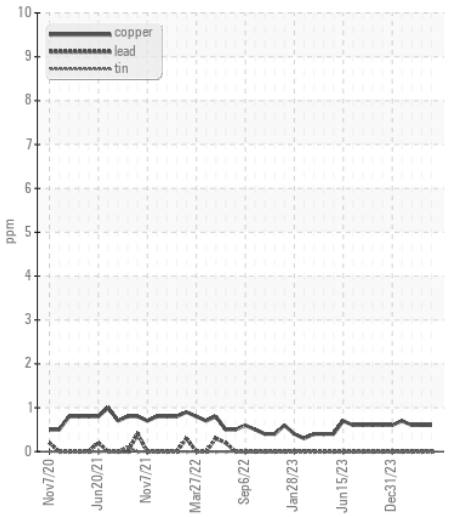
Viscosity @ 100°C



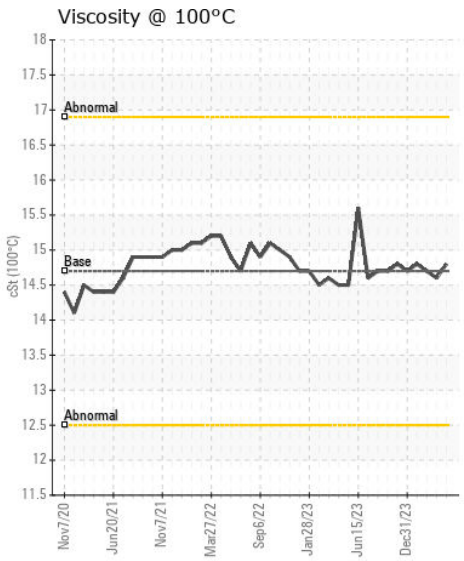
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9			**Siem Offshore Canada LP.**
Sample No.	: WC0803093	**Received**	: 29 Apr 2024	M/V Avalon Sea, 140 WATER STREET SUITE 1000
Lab Number	: 02631921	**Tested**	: 29 Apr 2024	ST. JOHN`S, NL
Unique Number	: 5773074	**Diagnosed**	: 29 Apr 2024 - Wes Davis	CA A1C 6H6
Test Package	: MAR 1			Contact: Avalon Sea

To discuss this sample report, contact Customer Service at 1-800-268-2131. ecr@avalonsea.siemoffshore.com

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:

Validity of results and interpretation are based on the sample and information as supplied. F: