



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
NORMAL
NORMAL

Machine Id
CRT EXPRESS STBD (S/N 12347)
Component
Starboard Main Engine
Fluid
SIRIUS 15W40 (200 LTR)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR

Copper ppm levels are noted. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

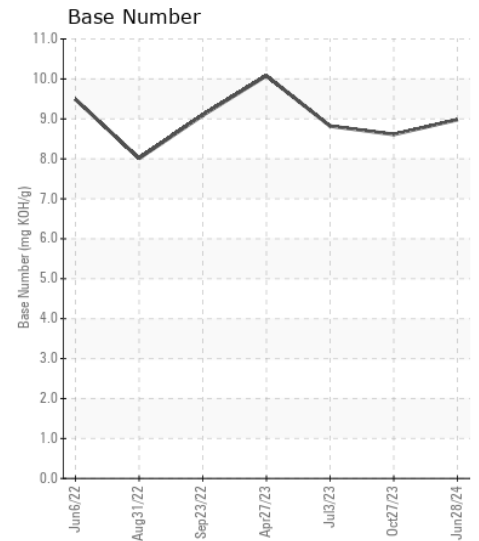
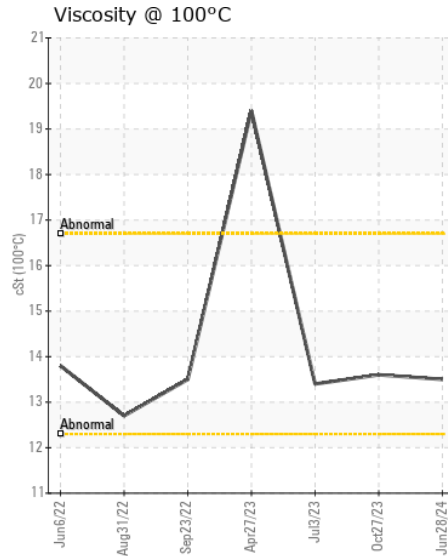
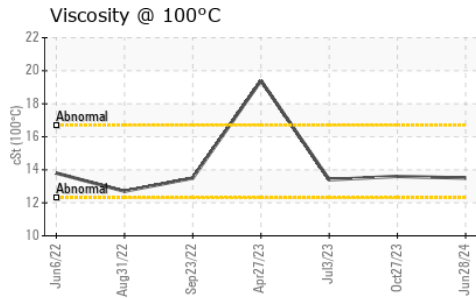
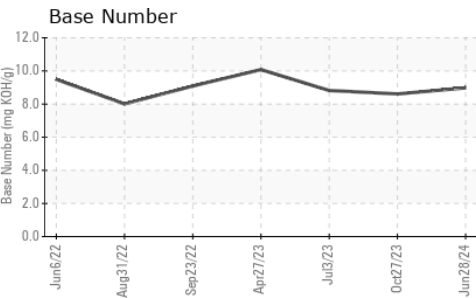
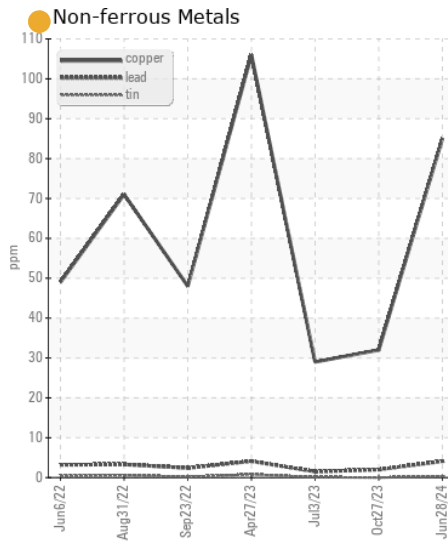
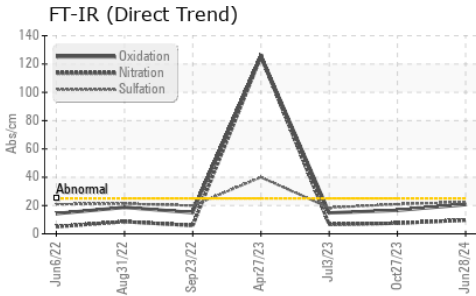
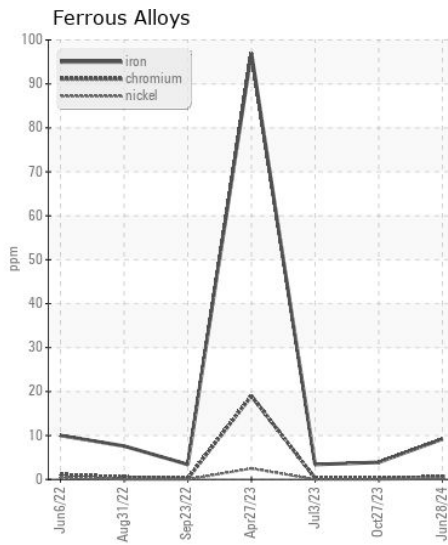
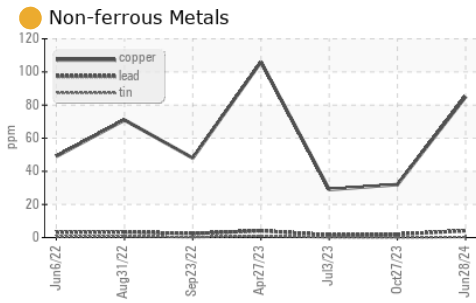
CONTAMINATION

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0955563	WC	WC0722078
Sample Date		Client Info		28 Jun 2024	27 Oct 2023	03 Jul 2023
Machine Age	hrs	Client Info		43245	42812	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	N/A	N/A
Filter Changed		Client Info		Not Chngd	N/A	N/A
Sample Status				ATTENTION	NORMAL	SEVERE
Iron	ppm	ASTM D5185(m)	>75	9	4	3
Chromium	ppm	ASTM D5185(m)	>8	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	0
Titanium	ppm	ASTM D5185(m)	>3	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	1	<1	1
Lead	ppm	ASTM D5185(m)	>18	4	2	2
Copper	ppm	ASTM D5185(m)	>80	85	32	29
Tin	ppm	ASTM D5185(m)	>14	<1	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	---	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	---	NONE
Silicon	ppm	ASTM D5185(m)	>20	3	3	4
Potassium	ppm	ASTM D5185(m)	>20	1	<1	5
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	0.0	▲ >.70
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.7	7.5	6.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.4	20.9	18.4
Silt	scalar	Visual*	NONE	NONE	---	VLITE
Debris	scalar	Visual*	NONE	NONE	---	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	---	NONE
Appearance	scalar	Visual*	NORML	NORML	---	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	▲ .2%
Sodium	ppm	ASTM D5185(m)	>75	14	17	● 82
Boron	ppm	ASTM D5185(m)		17	18	24
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		64	62	55
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)		945	913	771
Calcium	ppm	ASTM D5185(m)		1308	1255	1155
Phosphorus	ppm	ASTM D5185(m)		999	1026	1053
Zinc	ppm	ASTM D5185(m)		1272	1214	1189
Sulfur	ppm	ASTM D5185(m)		2531	2666	2727
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.7	16.6	14.8
Base Number (BN)	mg KOH/g	ASTM D2896*		8.98	8.61	8.82
Visc @ 100°C	cSt	ASTM D7279(m)		13.5	13.6	13.4



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0955563
Lab Number : 02645373
Unique Number : 5802912
Test Package : MAR 2 (Additional Tests: Visual)

Received : 04 Jul 2024
Tested : 04 Jul 2024
Diagnosed : 05 Jul 2024 - Kevin Marson

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.