



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
CRUISER 2006005837
Component
Starboard Main Engine
Fluid
SHELL ROTELLA T SB 5W30 (20 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0950381	---	---
Sample Date		Client Info		28 May 2024	---	---
Machine Age	hrs	Client Info		1500	---	---
Oil Age	hrs	Client Info		20	---	---
Filter Age	hrs	Client Info		20	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>75	7	---	---
Chromium	ppm	ASTM D5185(m)	>8	0	---	---
Nickel	ppm	ASTM D5185(m)	>2	<1	---	---
Titanium	ppm	ASTM D5185(m)	>3	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>15	1	---	---
Lead	ppm	ASTM D5185(m)	>18	0	---	---
Copper	ppm	ASTM D5185(m)	>80	3	---	---
Tin	ppm	ASTM D5185(m)	>14	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	3	---	---
Potassium	ppm	ASTM D5185(m)	>20	6	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*		0	---	---
Nitration	Abs/cm	ASTM D7624*	>20	7.0	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.8	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	VLITE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.1	NEG	---	---

FLUID CONDITION

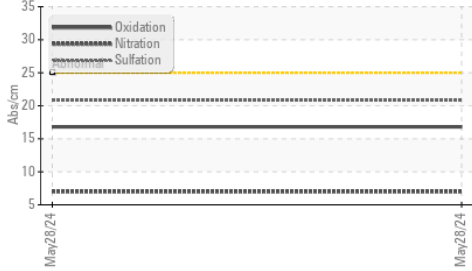
Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>75	2	---	---
Boron	ppm	ASTM D5185(m)		161	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		12	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		15	---	---
Calcium	ppm	ASTM D5185(m)		2112	---	---
Phosphorus	ppm	ASTM D5185(m)		994	---	---
Zinc	ppm	ASTM D5185(m)		1110	---	---
Sulfur	ppm	ASTM D5185(m)		2951	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.8	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.5	▲ 14.6	---	---

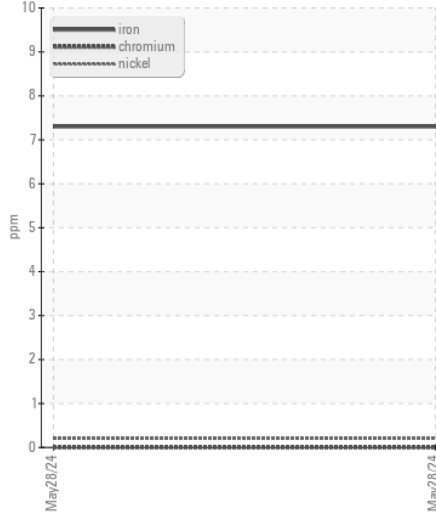
▲ Viscosity @ 100°C



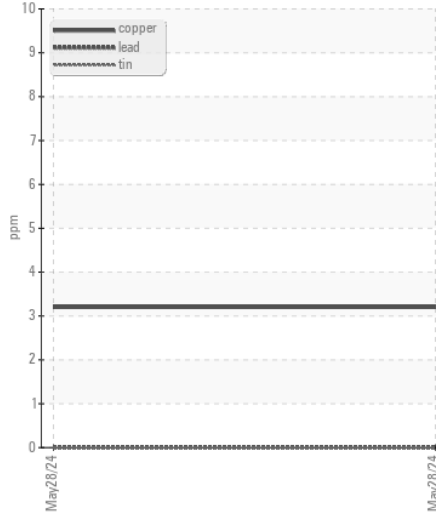
FT-IR (Direct Trend)



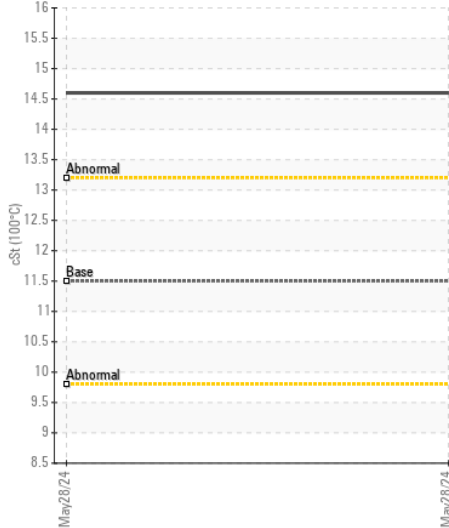
Ferrous Alloys



Non-ferrous Metals



▲ Viscosity @ 100°C



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Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0950381
Lab Number : 02638797
Unique Number : 5787959
Test Package : MAR 1

Received : 30 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 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.