



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
SAMUELRIS
Machine Id
S30-3112 Stbd.Ship Service CAT
Component
Starboard Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (64 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0759149	WC0638081	WC0759147
Sample Date		Client Info		06 Jan 2024	18 Nov 2023	06 Aug 2023
Machine Age	hrs	Client Info		50979	50479	49979
Oil Age	hrs	Client Info		500	500	511
Filter Age	hrs	Client Info		500	500	511
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	8	10	11
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	1	<1
Lead	ppm	ASTM D5185(m)	>40	2	2	2
Copper	ppm	ASTM D5185(m)	>330	7	8	16
Tin	ppm	ASTM D5185(m)	>15	<1	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

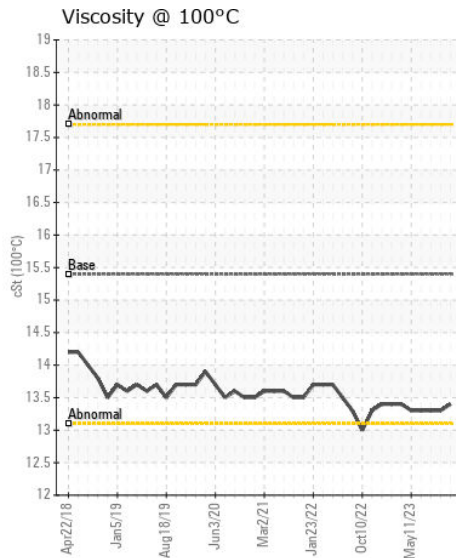
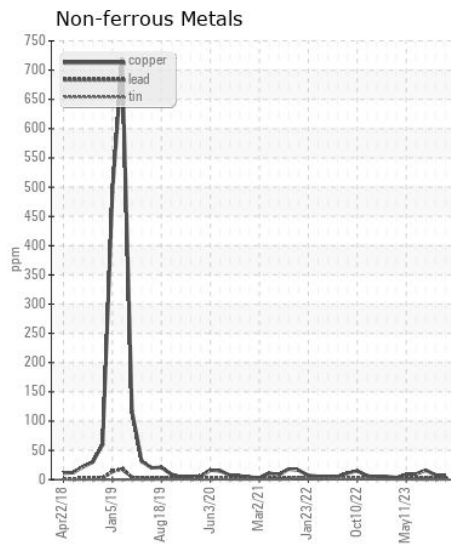
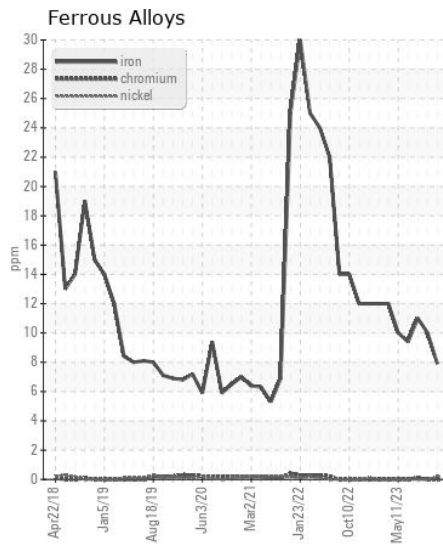
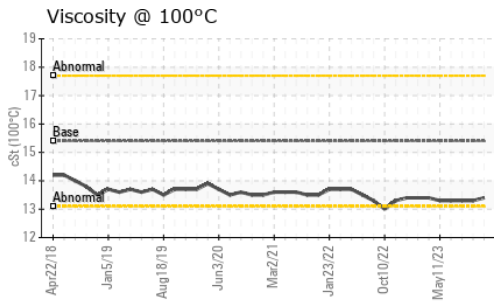
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	2	2	2
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.1	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	6.4	6.6	6.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.6	20.1	19.7
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	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*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<1	2	2
Boron	ppm	ASTM D5185(m)	0	6	6	7
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	58	59	60
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	958	1003	1009
Calcium	ppm	ASTM D5185(m)	1070	1068	1089	1087
Phosphorus	ppm	ASTM D5185(m)	1150	1015	1019	1082
Zinc	ppm	ASTM D5185(m)	1270	1179	1232	1236
Sulfur	ppm	ASTM D5185(m)	2060	2653	2570	2624
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.0	15.3	14.9
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.4	13.3	13.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0759149
Lab Number : 02608907
Unique Number : 5709993
Test Package : MAR 1

CANADIAN COAST GUARD
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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.