



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
SAMUELRIS
Machine Id
S30-3111 Port Ship Service CAT
Component
Port Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (60 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0638085	WC0638088	WC0759151
Sample Date		Client Info		26 Mar 2024	12 Feb 2024	10 Jan 2024
Machine Age	hrs	Client Info		52010	51513	51007
Oil Age	hrs	Client Info		497	506	499
Filter Age	hrs	Client Info		497	506	499
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	6	6	6
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
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	6	6	9
Tin	ppm	ASTM D5185(m)	>15	0	<1	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

CONTAMINATION

There is no indication of any contamination in the oil.

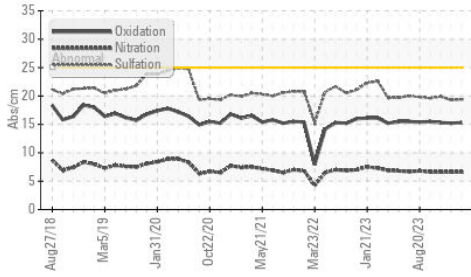
Silicon	ppm	ASTM D5185(m)	>25	<1	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	6.6	6.6	6.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.4	19.3	19.9
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*	>0.2	NEG	NEG	NEG

FLUID CONDITION

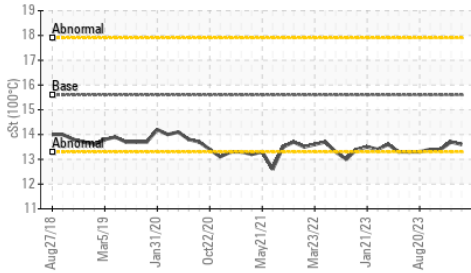
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	1	1
Boron	ppm	ASTM D5185(m)	0	5	6	6
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	59	59	57
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	1010	980	987	952
Calcium	ppm	ASTM D5185(m)	1070	1087	1070	1071
Phosphorus	ppm	ASTM D5185(m)	1150	998	1033	996
Zinc	ppm	ASTM D5185(m)	1270	1204	1199	1179
Sulfur	ppm	ASTM D5185(m)	2060	2468	2696	2626
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.3	15.2	15.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	13.6	13.7	13.4

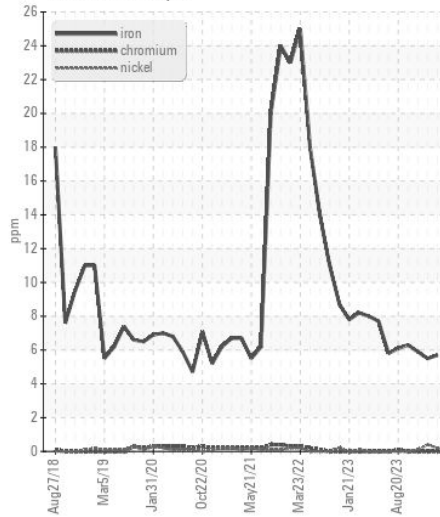
FT-IR (Direct Trend)



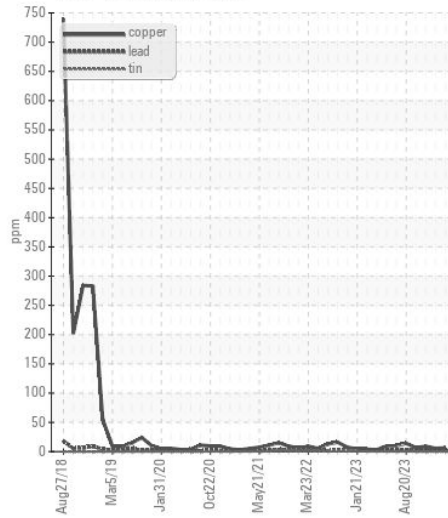
Viscosity @ 100°C



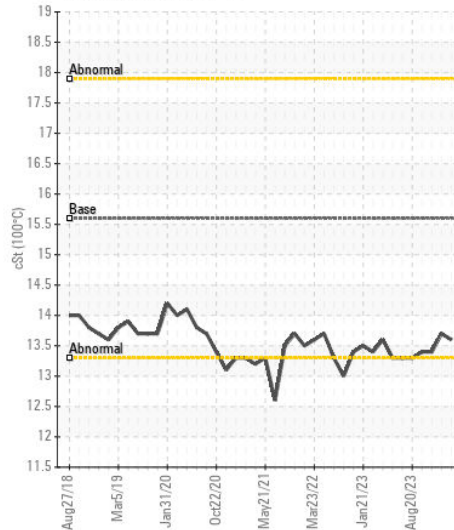
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0638085
Lab Number : 02628108
Unique Number : 5761240
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.