



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
EMERGENCYGENERATOR (S/N U888643S)
 Component
Diesel Engine
 Fluid
CASTROL 15W40 (50 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0787190	WC0787193	WC0787178
Sample Date		Client Info		06 May 2024	20 Jan 2024	02 May 2023
Machine Age	hrs	Client Info		336	312	312
Oil Age	hrs	Client Info		100	13	312
Filter Age	hrs	Client Info		100	13	312
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		None	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>250	1	1	2
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>35	<1	1	1
Lead	ppm	ASTM D5185(m)	>100	0	<1	0
Copper	ppm	ASTM D5185(m)	>60	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>5	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

CONTAMINATION

There is no indication of any contamination in the oil.

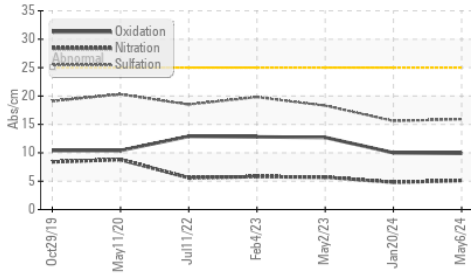
Silicon	ppm	ASTM D5185(m)	>35	6	8	3
Potassium	ppm	ASTM D5185(m)	>20	1	<1	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	5.1	4.8	5.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	15.9	15.6	18.3
Silt	scalar	Visual*	NONE	VLITE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	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

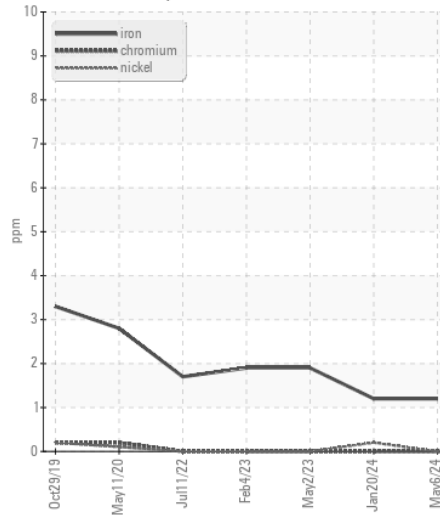
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>406	2	1	2
Boron	ppm	ASTM D5185(m)		61	62	91
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		37	37	16
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)		323	322	333
Calcium	ppm	ASTM D5185(m)		2560	2632	2556
Phosphorus	ppm	ASTM D5185(m)		919	938	1003
Zinc	ppm	ASTM D5185(m)		1006	1028	1049
Sulfur	ppm	ASTM D5185(m)		2779	3106	3723
Oxidation	Abs/.1mm	ASTM D7414*	>25	9.9	10.0	12.7
Visc @ 100°C	cSt	ASTM D7279(m)		13.5	13.7	13.4

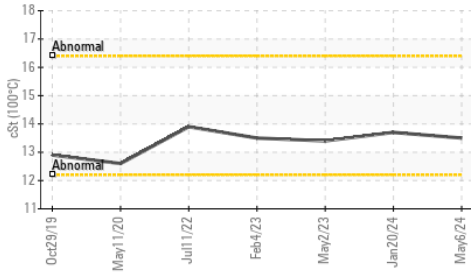
FT-IR (Direct Trend)



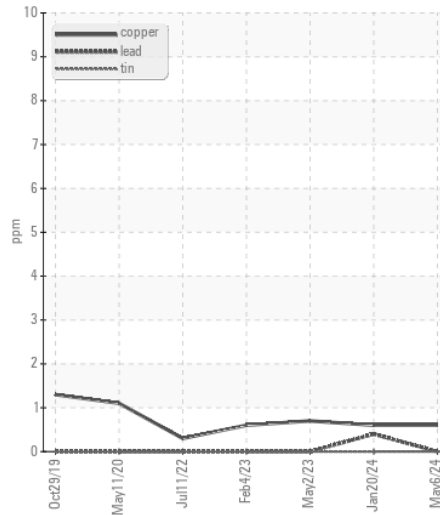
Ferrous Alloys



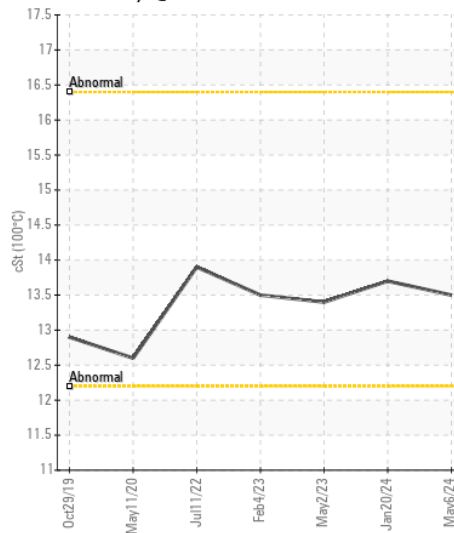
Viscosity @ 100°C



Non-ferrous Metals



Viscosity @ 100°C



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0787190
Lab Number : 02638323
Unique Number : 5787485
Test Package : MAR 1

Horizon Maritime Services Ltd. - K.J. Gardner
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 Dartmouth, NS
 CA B2Y 4T6
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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.

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