



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Power Generation
Machine Id
Main Engine #1 (S/N PAG00373)
Component
1 Main Engine
Fluid
CASTROL CRB Multi 15W-40 CK-4 (800 LTR)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid. this testkit includes BN to determine the suitability of the oil for continued use.

WEAR

Component wear rates appear to be normal (unconfirmed).

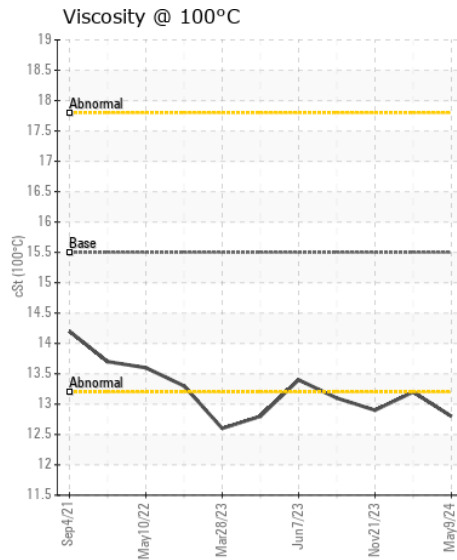
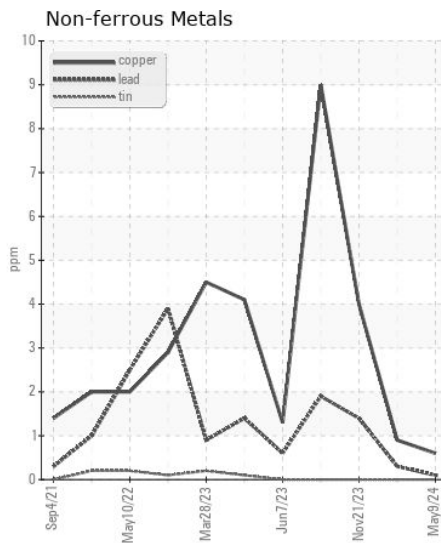
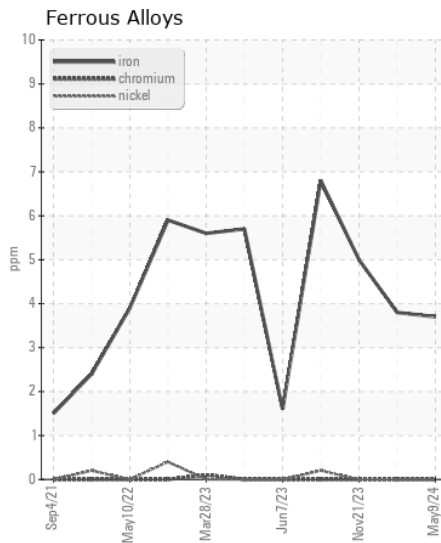
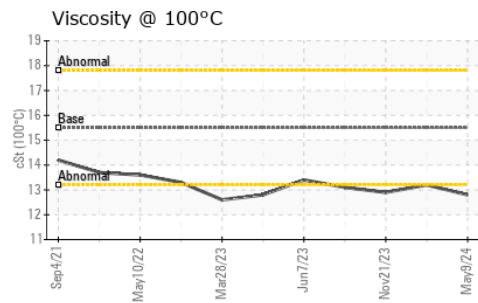
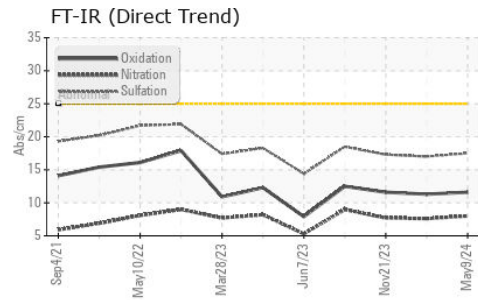
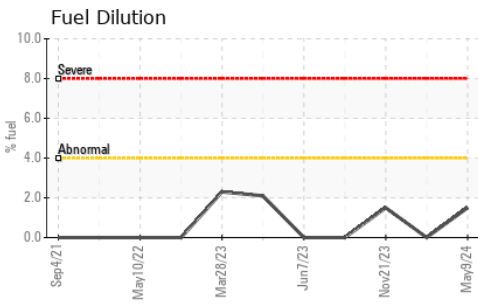
CONTAMINATION

Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0850486	WC0850478	WC0850498
Sample Date		Client Info		09 May 2024	17 Mar 2024	21 Nov 2023
Machine Age	hrs	Client Info		51366	50240	48484
Oil Age	hrs	Client Info		1000	850	982
Filter Age	hrs	Client Info		1000	850	982
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	MARGINAL
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Iron	ppm	ASTM D5185(m)	>75	4	4	5
Chromium	ppm	ASTM D5185(m)	>8	0	0	0
Nickel	ppm	ASTM D5185(m)	>2	0	0	0
Titanium	ppm	ASTM D5185(m)	>3	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>15	<1	1	1
Lead	ppm	ASTM D5185(m)	>18	<1	<1	1
Copper	ppm	ASTM D5185(m)	>80	<1	<1	4
Tin	ppm	ASTM D5185(m)	>14	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	▲ VLITE
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Silicon	ppm	ASTM D5185(m)	>20	2	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Fuel	%	ASTM D7593*	>4.0	1.5	<1.0	1.5
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	8.0	7.6	7.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.5	17.0	17.3
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
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*	>0.1	NEG	NEG	NEG
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Sodium	ppm	ASTM D5185(m)	>75	1	1	1
Boron	ppm	ASTM D5185(m)		50	57	58
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		29	34	36
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)		14	15	16
Calcium	ppm	ASTM D5185(m)		3572	3562	3604
Phosphorus	ppm	ASTM D5185(m)		850	840	852
Zinc	ppm	ASTM D5185(m)		1007	997	998
Sulfur	ppm	ASTM D5185(m)		2835	2724	2650
Oxidation	Abs/.1mm	ASTM D7414*	>25	11.6	11.3	11.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	12.8	13.2	12.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0850486
Lab Number : 02640399
Unique Number : 5789561
Test Package : MAR 1 (Additional Tests: FuelDilution, PercentFuel)

Horizon Maritime Services Ltd. - Horizon Enabler
 87 Water Street, 2nd Floor
 St. John's, NL
 CA A1C 1A5
 Contact: Stephen Nowlan
 Cheng.Enabler@northsea.no

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.