



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**AZIMUTH THRUSTER**  
 Component  
**Thrust Bearing**  
 Fluid  
**CASTROL ALPHA SP 68 (--- LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## WEAR

All component wear rates are normal.

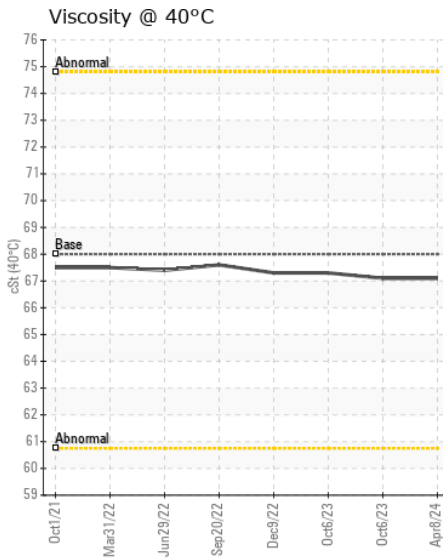
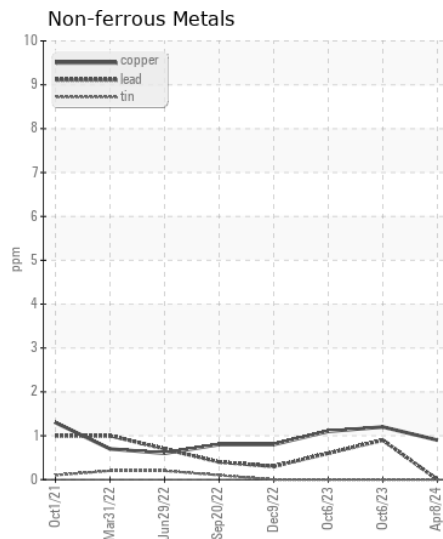
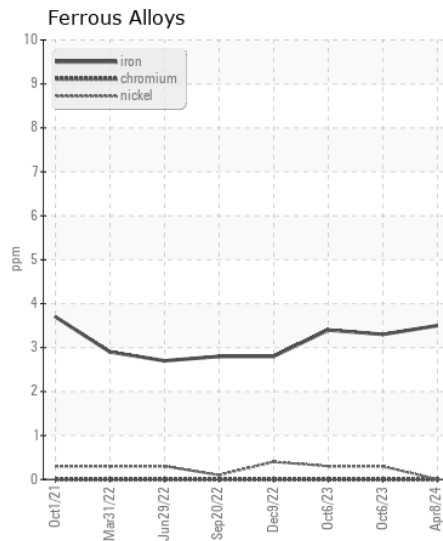
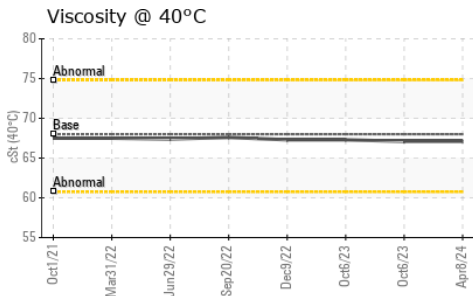
## CONTAMINATION

There is no indication of any contamination in the oil.

## FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0902410</b>	WC0773444	WC0773437
Sample Date		Client Info		<b>08 Apr 2024</b>	06 Oct 2023	06 Oct 2023
Machine Age	hrs	Client Info		<b>13843</b>	13583	14335
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL
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Iron	ppm	ASTM D5185(m)	>85	<b>4</b>	3	3
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>40	<b>0</b>	0	<1
Lead	ppm	ASTM D5185(m)	>60	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>7	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185(m)	>40	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
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Silicon	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Water		WC Method	>2	<b>NEG</b>	NEG	NEG
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>2	<b>NEG</b>	NEG	NEG
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Sodium	ppm	ASTM D5185(m)		<b>1</b>	<1	<1
Boron	ppm	ASTM D5185(m)		<b>1</b>	2	2
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>1</b>	<1	1
Calcium	ppm	ASTM D5185(m)		<b>4</b>	4	5
Phosphorus	ppm	ASTM D5185(m)		<b>258</b>	267	275
Zinc	ppm	ASTM D5185(m)		<b>13</b>	13	16
Sulfur	ppm	ASTM D5185(m)		<b>8366</b>	8682	8747
Visc @ 40°C	cSt	ASTM D7279(m)	68	<b>67.1</b>	67.1	67.3



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0902410  
**Lab Number** : 02630942  
**Unique Number** : 5772095  
**Test Package** : MAR 1 ( Additional Tests: BottomAnalysis, FilterPatch )

**Horizon Maritime Services Ltd. - Horizon Arctic**  
 87 WATER STREET,, 2ND FLOOR  
 ST.JOHNS, NL  
 CA A1C 1A5  
 Contact: Horizon Arctic Chief Engineer  
 chiefeng.arctic@horizonvessel.com  
 T: (709)702-4447

Received : 23 Apr 2024  
 Tested : 24 Apr 2024  
 Diagnosed : 24 Apr 2024 - Kevin Marson

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.