



# OIL ANALYSIS REPORT

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

Machine Id  
**BOW THRUSTER 1 (S/N 10450)**  
 Component  
**1 Bow Thruster**  
 Fluid  
**CASTROL ALPHA SP 68 (900 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid. this testkit includes AN to determine the suitability of the oil for continued use.

## WEAR

All component wear rates are normal.

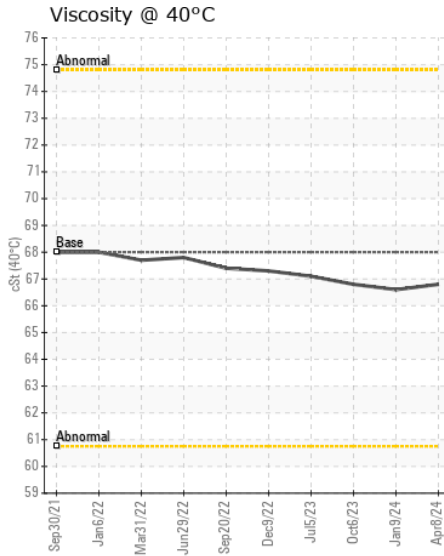
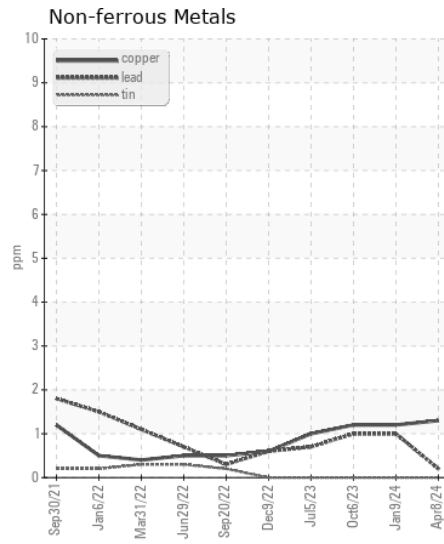
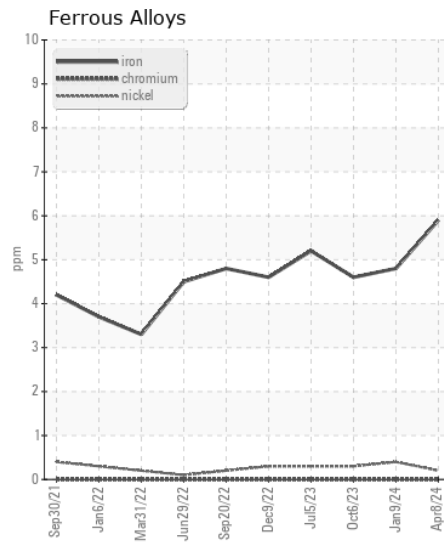
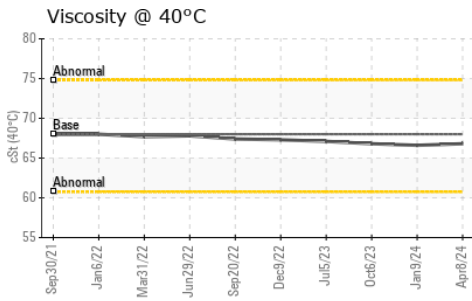
## CONTAMINATION

There is no indication of any contamination in the component(unconfirmed).

## FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0902412</b>	WC0872124	WC0773446
Sample Date		Client Info		<b>08 Apr 2024</b>	09 Jan 2024	06 Oct 2023
Machine Age	hrs	Client Info		<b>20405</b>	18986	18524
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>	Not Changd	N/A
Filter Changed		Client Info		<b>N/A</b>	Not Changd	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL
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Iron	ppm	ASTM D5185(m)	>90	<b>6</b>	5	5
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	1
Copper	ppm	ASTM D5185(m)	>20	<b>1</b>	1	1
Tin	ppm	ASTM D5185(m)	>15	<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)	>7	<b>0</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Water		WC Method	>0.2	<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*	>0.2	<b>NEG</b>	NEG	NEG
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Sodium	ppm	ASTM D5185(m)		<b>4</b>	<1	2
Boron	ppm	ASTM D5185(m)		<b>1</b>	<1	1
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	<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>3</b>	3	3
Phosphorus	ppm	ASTM D5185(m)		<b>216</b>	214	215
Zinc	ppm	ASTM D5185(m)		<b>19</b>	17	16
Sulfur	ppm	ASTM D5185(m)		<b>7497</b>	7941	7684
Visc @ 40°C	cSt	ASTM D7279(m)	68	<b>66.8</b>	66.6	66.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0902412  
**Lab Number** : 02630944  
**Unique Number** : 5772097  
**Test Package** : MAR 1

**Horizon Maritime Services Ltd. - Horizon Arctic**  
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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.