

#### Machine Id BOW THRUSTER 2 (S/N 10451) Component 2 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

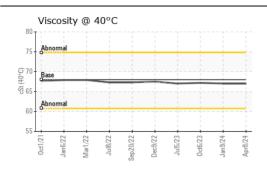
There is no indication of any contamination in the component(unconfirmed).

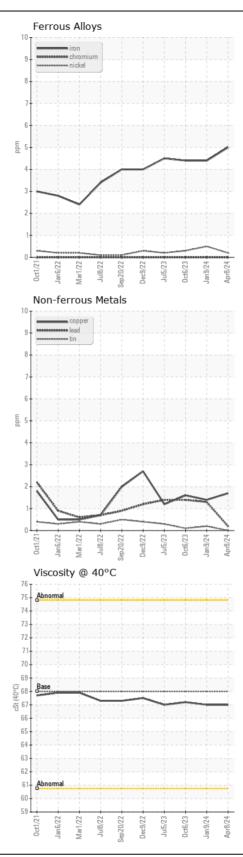
# FLUID CONDITION

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		WC0902411	WC0872122	WC0773445
	Sample Date		Client Info		08 Apr 2024	09 Jan 2024	06 Oct 2023
	Machine Age	hrs	Client Info		19469	18044	17611
	Oil Age	hrs	Client Info		0	0	0
	Filter Age	hrs	Client Info		0	0	0
	Oil Changed		Client Info		N/A	Not Changd	N/A
	Filter Changed		Client Info		N/A	Not Changd	N/A
	Sample Status				NORMAL	NORMAL	NORMAL
						4	4
	Iron	ppm	ASTM D5185(m)	>90	5	4	4
	Chromium	ppm	ASTM D5185(m)	>10	0	0	0
	Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
	Titanium	ppm	ASTM D5185(m)		0	0	0
	Silver	ppm	ASTM D5185(m)	10	0	0	<1
	Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	<1
	Lead	ppm	ASTM D5185(m)	>20	<1	1	1
	Copper	ppm	ASTM D5185(m)	>20	2	1	2
	Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
	Vanadium	ppm	ASTM D5185(m)	NONE	0	0	0
	White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
	Silicon	ppm	ASTM D5185(m)	>7	0	<1	<1
	Potassium	ppm	ASTM D5185(m)	>20	0	<1	0
	Water		WC Method	>0.2	NEG	NEG	NEG
	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
	Sodium	ppm	ASTM D5185(m)		<1	<1	<1
	Boron	ppm	ASTM D5185(m)		<1	<1	1
	Barium	ppm	ASTM D5185(m)		0	0	<1
	Molybdenum	ppm	ASTM D5185(m)		0	0	0
	Manganese	ppm	ASTM D5185(m)		0	0	0
	Magnesium	ppm	ASTM D5185(m)		<1	<1	1
	Calcium	ppm	ASTM D5185(m)		2	3	3
						045	000
	Phosphorus	ppm	ASTM D5185(m)		213	215	229
	Phosphorus Zinc	ppm ppm	ASTM D5185(m) ASTM D5185(m)		213 17	17	18
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Contact/Location: Horizon Arctic Chief Engineer - HORIZONARC





Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Horizon Maritime Services Ltd. - Horizon Arctic CALA Sample No. : WC0902411 Received : 23 Apr 2024 87 WATER STREET,, 2ND FLOOR Lab Number : 02630943 Tested : 23 Apr 2024 ST.JOHNS, NL ISO 17025:2017 Accredited Laboratory Unique Number : 5772096 Diagnosed : 23 Apr 2024 - Wes Davis CA A1C 1A5 Test Package : MAR 1 Contact: Horizon Arctic Chief Engineer To discuss this sample report, contact Customer Service at 1-800-268-2131. chiefeng.arctic@horizonvessel.com T: (709)702-4447 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. F: