**WEAR** CONTAMINATION **FLUID CONDITION** 

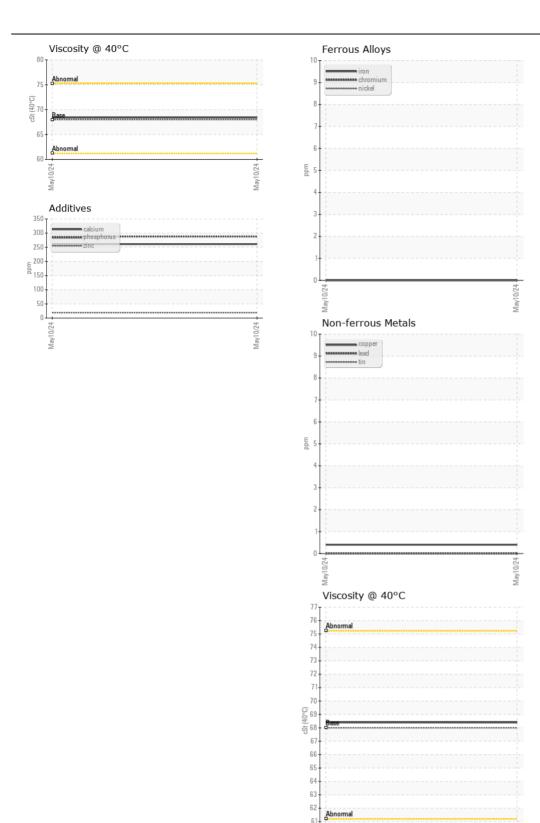
**NORMAL NORMAL NORMAL** 

Machine Id

## 404.002 (S/N RRM300023240)

Component Starboard Bow Thruster

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0935661		
Sample Date		Client Info		10 May 2024		
Machine Age	hrs	Client Info		6888		
Oil Age	hrs	Client Info		0		
Filter Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Filter Changed		Client Info		Not Changd		
Sample Status				NORMAL		
Iron	mag	ASTM D5185(m)	>90	0		
		. ,				
				-		
Titanium		. ,		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum		ASTM D5185(m)	>10	0		
Lead		ASTM D5185(m)	>20	0		
Copper	ppm	ASTM D5185(m)	>20	<1		
Tin	ppm	ASTM D5185(m)	>15	0		
Vanadium	ppm	ASTM D5185(m)		0		
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Cilioon	nnm	ACTM DE10E(m)	. 7	0		
		. ,				
	ррпп	, ,				
	coalar					
		Visual*	>0.2	NEG		
Sodium	nnm	ACTM DE185(m)		· · · · · · · · · · · · · · · · · · ·		
		. ,				
		. ,				
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9		. ,				
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		. ,				
Zinc	ppm	ASTM D5185(m)		19		
	LL					
Sulfur	ppm	ASTM D5185(m)		8857		
	Sample Number Sample Date Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium White Metal Yellow Metal Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	Sample Number Sample Date Machine Age hrs Oil Age hrs Filter Age hrs Oil Changed Filter Changed Sample Status  Iron ppm Chromium ppm Nickel ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Silicon ppm Potassium ppm Water Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Codor scalar Emulsified Water scalar Sodium ppm Boron ppm Manganese ppm Magnesium ppm Manganese ppm Magnesium ppm Calcium ppm Phosphorus	Sample Number Sample Date Machine Age Oil Age hrs Client Info Oil Age hrs Client Info Oil Age hrs Client Info Oil Changed Filter Age Oil Changed Filter Changed Client Info Sample Status  Iron Ppm ASTM D5185(m) Chromium Ppm ASTM D5185(m) Nickel Ppm ASTM D5185(m) Aluminum Ppm ASTM D5185(m) Aluminum Ppm ASTM D5185(m) Copper Ppm ASTM D5185(m) Tin Ppm ASTM D5185(m) Vanadium Ppm ASTM D5185(m) Visual*  Yellow Metal Scalar Visual*  Silicon Potassium Ppm ASTM D5185(m) Vater WC Method Silt Scalar Visual* Sand/Dirt Appearance Scalar Visual*  Sand/Dirt Appearance Scalar Visual*  Sodium Ppm ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	Sample Number Sample Date Client Info  Machine Age hrs Client Info  Oil Age hrs Client Info  Filter Age hrs Client Info  Oil Changed Client Info  Filter Changed Client Info  Sample Status  Iron ppm ASTM D5185(m) >90  Chromium ppm ASTM D5185(m) >10  Nickel ppm ASTM D5185(m) >10  Titanium ppm ASTM D5185(m) >10  Titanium ppm ASTM D5185(m) >20  Copper ppm ASTM D5185(m) >20  Copper ppm ASTM D5185(m) >15  Vanadium ppm ASTM D5185(m) >15  Vanadium ppm ASTM D5185(m) >15  Vanadium ppm ASTM D5185(m) >20  Tin ppm ASTM D5185(m) >15  Vanadium ppm ASTM D5185(m) >20  Tin ppm ASTM D5185(m) >20  Tin ppm ASTM D5185(m) >20  Tin ppm ASTM D5185(m) >20  Visual* NONE  Silicon ppm ASTM D5185(m) >7  Potassium ppm ASTM D5185(m) >20  Water Visual* NONE  Silt scalar Visual* NONE  Sand/Dirt scalar Visual* NONE  Appearance scalar Visual* NONE  Appearance scalar Visual* NONE  Appearance scalar Visual* NONE  Sand/Dirt scalar Visual* NONE  Sand/Dirt scalar Visual* NONE  Scalar Visual* NONE  Appearance scalar Visual* NONE  Scalar Visual* NONE  Appearance scalar Visual* NONE  Scalar Visual* NONE  Appearance scalar Visual* NONE  Appearance scalar Visual* NONE  Appearance scalar Visual* NONE  Appearance scalar Visual* NORML  Molybdenum ppm ASTM D5185(m)  Boron ppm ASTM D5185(m)  Boron ppm ASTM D5185(m)  Magnesium ppm ASTM D5185(m)  Phosphorus ppm ASTM D5185(m)	Sample Number         Client Info         WC0935661           Sample Date         Client Info         10 May 2024           Machine Age         hrs         Client Info         6888           Oil Age         hrs         Client Info         0           Filter Age         hrs         Client Info         Not Changd           Gillent Info         Not Changd         Not Changd           Filter Changed         Client Info         Not Changd           Sample Status         NORMAL           Iron         ppm         ASTM D5185(m)         >90         0           Chromium         ppm         ASTM D5185(m)         >10         0           Nickel         ppm         ASTM D5185(m)         >10         0           Silver         ppm         ASTM D5185(m)         >10         0           Aluminum         ppm         ASTM D5185(m)         >20         0           Copper         ppm         ASTM D5185(m)         >20         0           Copper         ppm         ASTM D5185(m)         >20         -1           Tin         ppm         ASTM D5185(m)         >20         -1           Vanadium         ppm         ASTM D5185(m)         >7	Sample Number   Client Info   WC0935661   Sample Date   Client Info   10 May 2024   Sample Date   Client Info   6888   Sample Date   Client Info   6888   Sample Status   Client Info   O   Sample Status   NORMAL   NORMAL   Sample Status   NORMAL   Sample Status   NORMAL   NORMAL   Sample Status   NORMAL   NORMAL   Sample Status   NORMAL   NOR





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: WC0935661 Lab Number : 02636198 Unique Number : 5785360 Test Package : MAR 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Horizon Maritime Services Ltd. - Dragon Received **Tested** 

Diagnosed

: 16 May 2024 : 16 May 2024

: 17 May 2024 - Kevin Marson

422 Main Street Mulgrave, NS CA B0E 2G0

Contact: Service Manager

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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