



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**STERN THRUSTER**

Component  
**Lower Gearbox**

Fluid  
**PANOLIN MARGEAR 100 (--- GAL)**

## RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0829219	---	---
Sample Date		Client Info		09 Jun 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		58	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

## WEAR

All component wear rates are normal.

PQ		ASTM D8184*		0	---	---
Iron	ppm	ASTM D5185(m)	>150	<1	---	---
Chromium	ppm	ASTM D5185(m)	>10	0	---	---
Nickel	ppm	ASTM D5185(m)	>10	<1	---	---
Titanium	ppm	ASTM D5185(m)		1	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>5	<1	---	---
Lead	ppm	ASTM D5185(m)	>65	0	---	---
Copper	ppm	ASTM D5185(m)	>80	<1	---	---
Tin	ppm	ASTM D5185(m)	>8	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

## CONTAMINATION

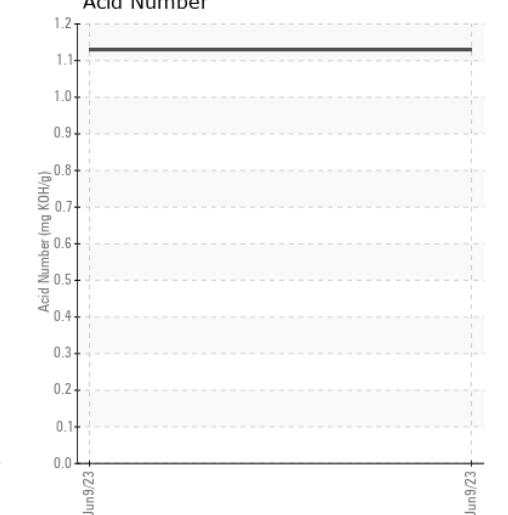
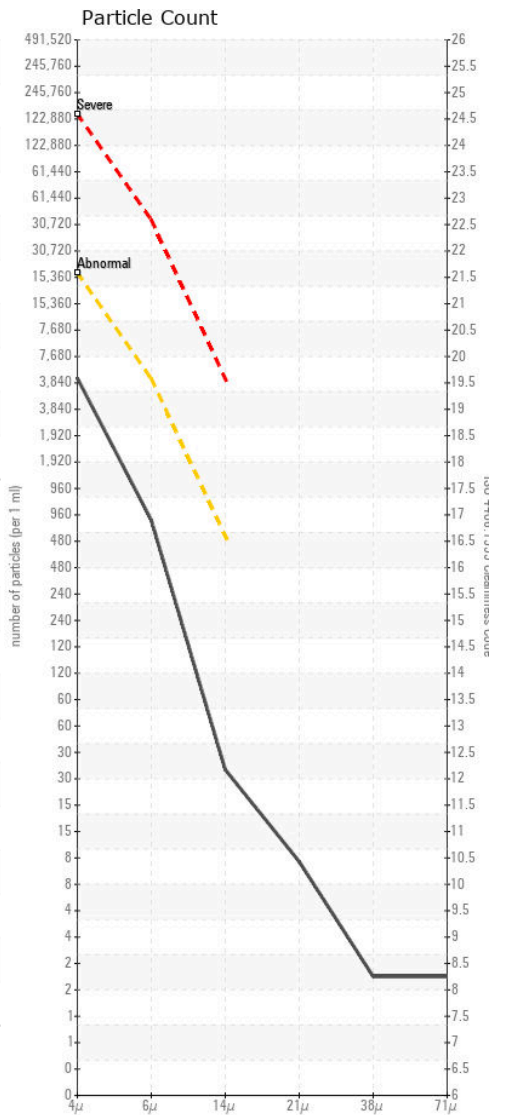
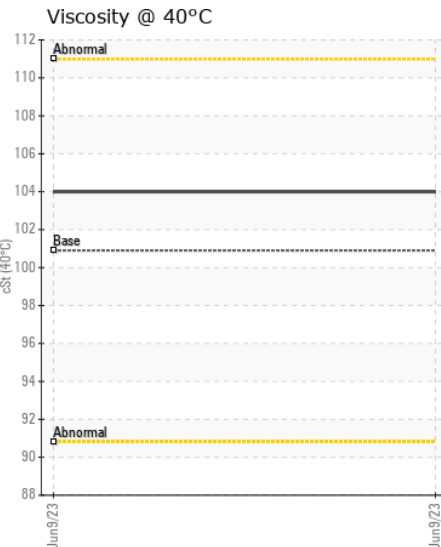
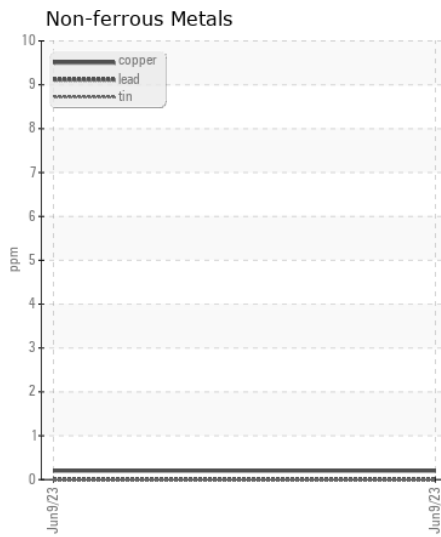
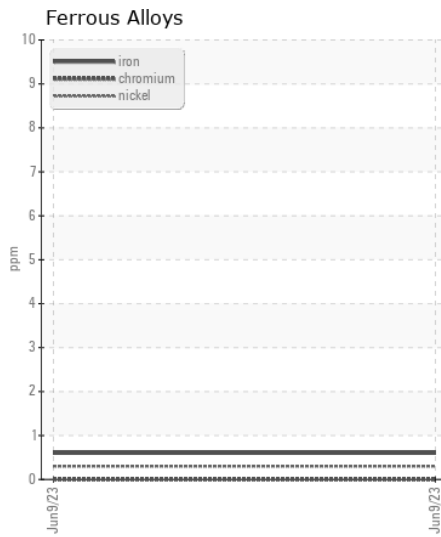
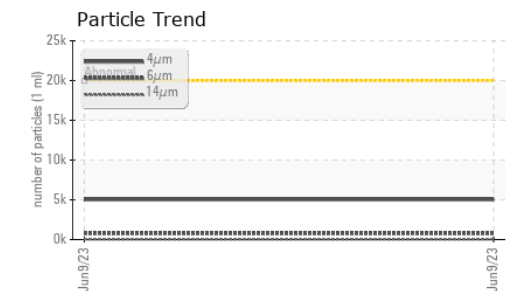
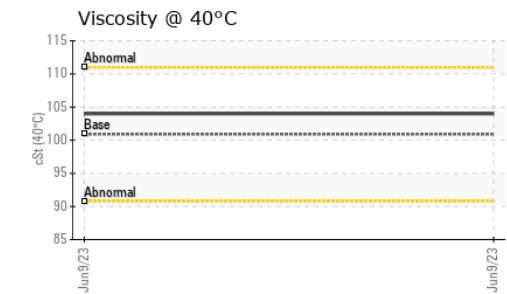
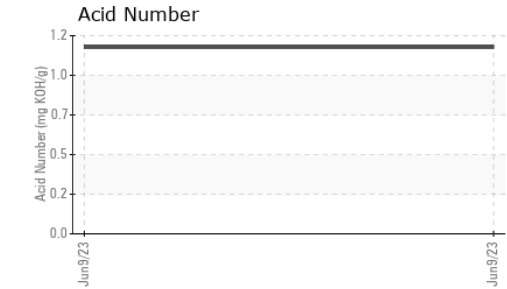
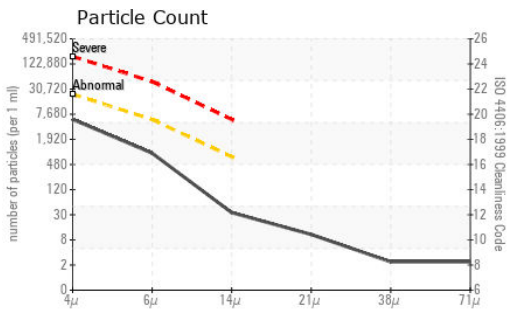
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>20	13	---	---
Potassium	ppm	ASTM D5185(m)	>20	0	---	---
Water		WC Method	>0.2	NEG	---	---
Particles >4µm		ASTM D7647	>20000	5035	---	---
Particles >6µm		ASTM D7647	>5000	785	---	---
Particles >14µm		ASTM D7647	>640	30	---	---
Particles >21µm		ASTM D7647	>160	9	---	---
Particles >38µm		ASTM D7647	>40	2	---	---
Particles >71µm		ASTM D7647	>10	2	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/17/12	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		1	---	---
Boron	ppm	ASTM D5185(m)		<1	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		0	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		<1	---	---
Calcium	ppm	ASTM D5185(m)		4	---	---
Phosphorus	ppm	ASTM D5185(m)		362	---	---
Zinc	ppm	ASTM D5185(m)		4	---	---
Sulfur	ppm	ASTM D5185(m)		393	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*		1.13	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	100.9	104	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0829219 **Received** : 21 Sep 2023  
**Lab Number** : 02584550 **Tested** : 26 Sep 2023  
**Unique Number** : 5645615 **Diagnosed** : 26 Sep 2023 - Bill Quesnel  
**Test Package** : MAR 2 ( Additional Tests: PrtCount )

**Canadian Coast Guard**  
 CCGS Amundsen, 101 Boul. Champlain  
 Quebec, QC  
 CA G1K 7Y7  
 Contact: Jean-Pierre Munger  
 Jean-Pierre.Munger@dfo-mpo.gc.ca  
 T: (418)648-5440  
 F:

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.