



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FWD 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		WC0829228	---	---
Sample Date		Client Info		06 Sep 2023	---	---
Machine Age	hrs	Client Info		8	---	---
Oil Age	hrs	Client Info		8	---	---
Filter Age	hrs	Client Info		8	---	---
Oil Changed		Client Info		N/A	---	---
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)		2	---	---
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

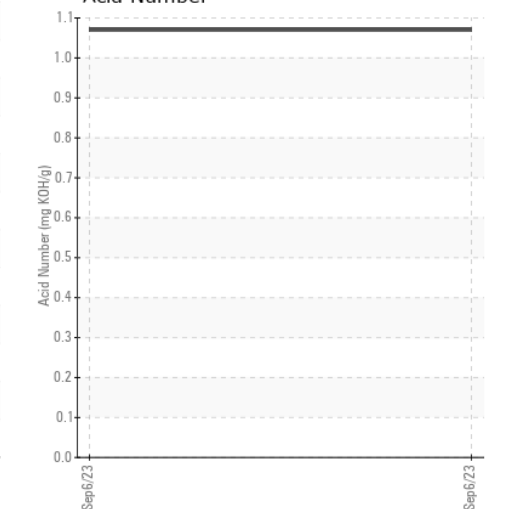
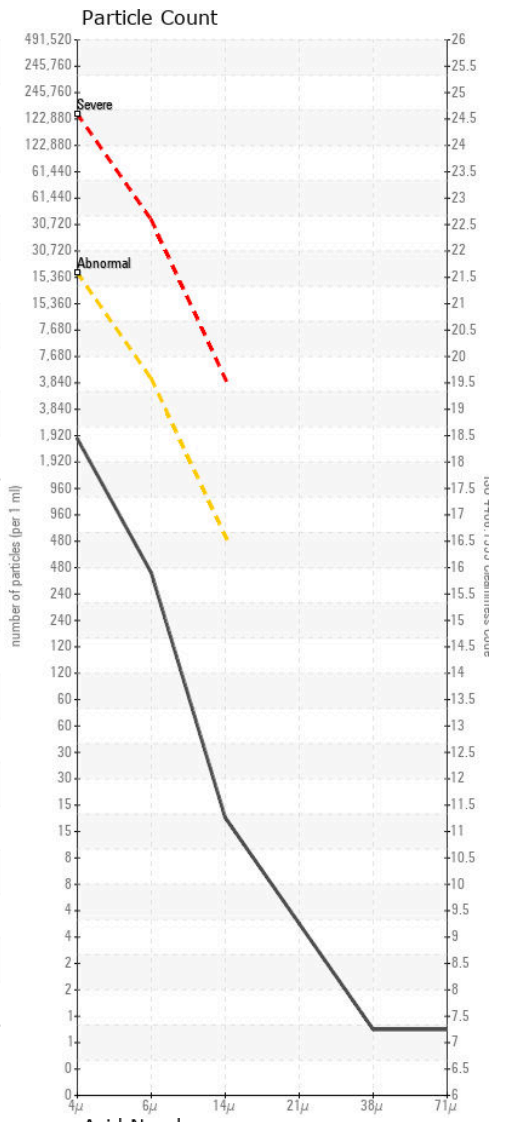
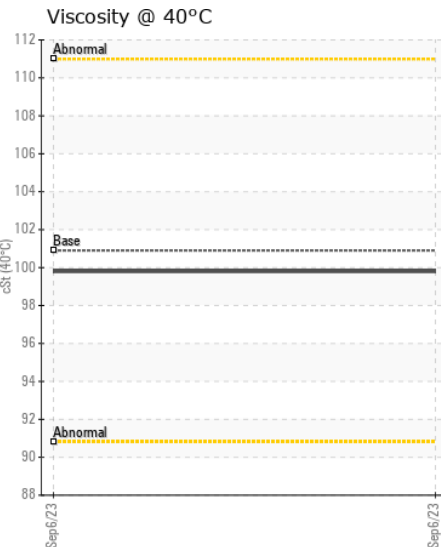
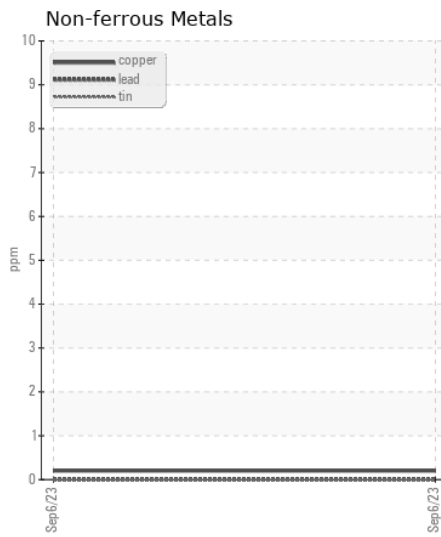
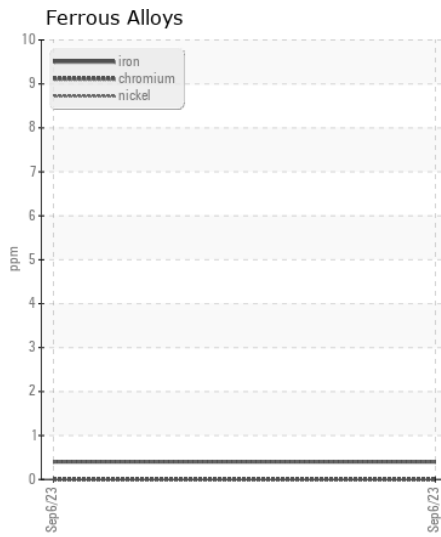
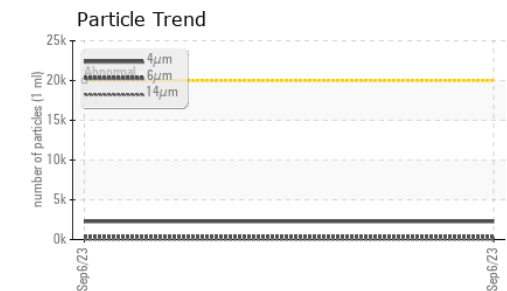
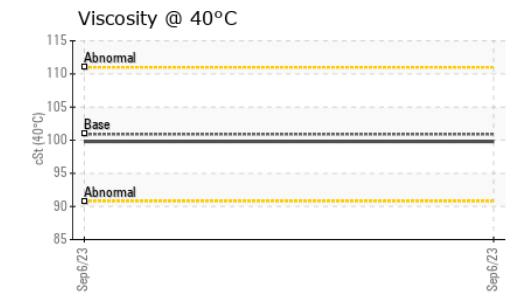
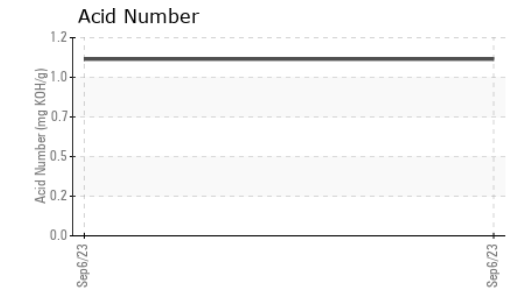
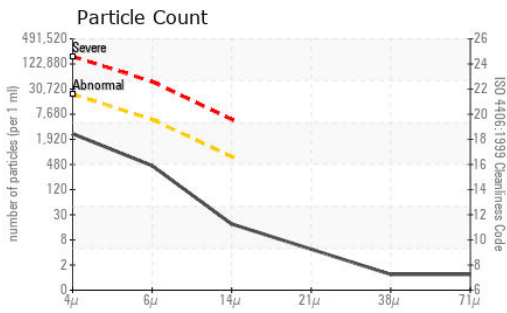
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>20	18	---	---
Potassium	ppm	ASTM D5185(m)	>20	0	---	---
Water		WC Method	>0.2	NEG	---	---
Particles >4µm		ASTM D7647	>20000	2280	---	---
Particles >6µm		ASTM D7647	>5000	394	---	---
Particles >14µm		ASTM D7647	>640	16	---	---
Particles >21µm		ASTM D7647	>160	4	---	---
Particles >38µm		ASTM D7647	>40	1	---	---
Particles >71µm		ASTM D7647	>10	1	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	18/16/11	---	---
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)		353	---	---
Zinc	ppm	ASTM D5185(m)		9	---	---
Sulfur	ppm	ASTM D5185(m)		311	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*		1.07	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	100.9	99.8	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0829228
Lab Number : 02584551
Unique Number : 5645616
Test Package : MAR 2 (Additional Tests: PrtCount)

Canadian Coast Guard
 CCGS Amundsen, 101 Boul. Champlain
 Quebec, QC
 CA G1K 7Y7
 Contact: Chief Engineer
 amundsense@ccgs-ngcc.gc.ca
 T: (418)953-8233
 F: x:

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.