



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

Machine Id  
**STBD FIFI GEARBOX**  
 Component  
**Starboard Gearbox**  
 Fluid  
**PETRO CANADA ENDURATEX EP 68 (40 LTR)**

**RECOMMENDATION**

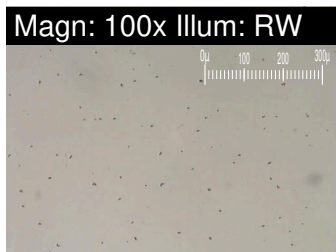
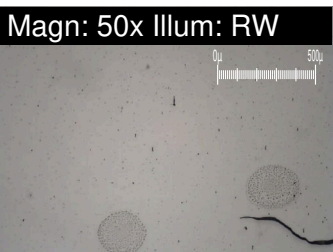
Resample at the next service interval to monitor.

**WEAR**

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0873819</b>	WC0873815	---
Sample Date		Client Info		<b>05 Apr 2024</b>	30 Jan 2024	---
Machine Age	hrs	Client Info		<b>39000</b>	0	---
Oil Age	hrs	Client Info		<b>500</b>	0	---
Filter Age	hrs	Client Info		<b>500</b>	0	---
Oil Changed		Client Info		<b>Not Changed</b>	N/A	---
Filter Changed		Client Info		<b>Changed</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

PQ		ASTM D8184*		<b>0</b>	0	---
Iron	ppm	ASTM D5185(m)	>150	<b>&lt;1</b>	<1	---
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	---
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	---
Lead	ppm	ASTM D5185(m)	>65	<b>5</b>	6	---
Copper	ppm	ASTM D5185(m)	>80	<b>1</b>	1	---
Tin	ppm	ASTM D5185(m)	>8	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Large Particles		DR-Ferr*		<b>2.1</b>	1.0	---
Small Particles		DR-Ferr*		<b>2.0</b>	0.9	---
Total Particles		DR-Ferr*	>---	<b>4.1</b>	1.9	---
Large Particles Percentage	%	DR-Ferr*		<b>2.4</b>	5.3	---
Severity Index		DR-Ferr*		<b>0</b>	0	---
Ferrous Rubbing	Scale 0-10	ASTM D7684*		<b>1</b>	1	
Ferrous Sliding	Scale 0-10	ASTM D7684*			1	
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		<b>1</b>		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*			1	
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		<b>1</b>	1	
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				



## CONTAMINANTS

There is no indication of any contamination in the oil.

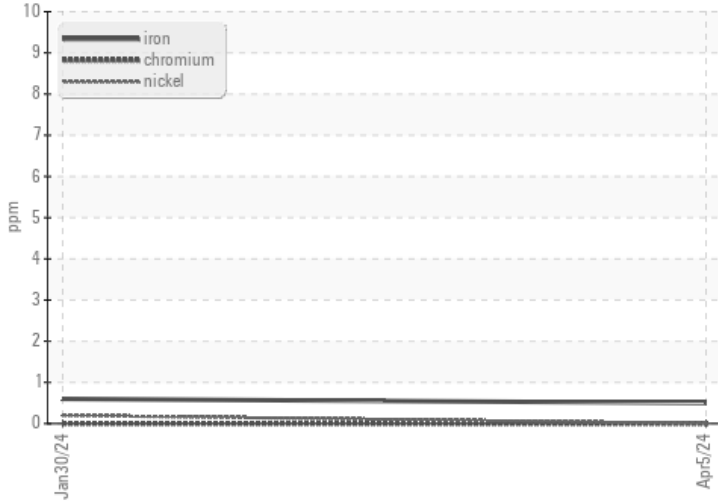
Silicon	ppm	ASTM D5185(m)	>20	<b>4</b>	5	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		<b>1</b>	1	
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		<b>1</b>		

## OIL CONDITION

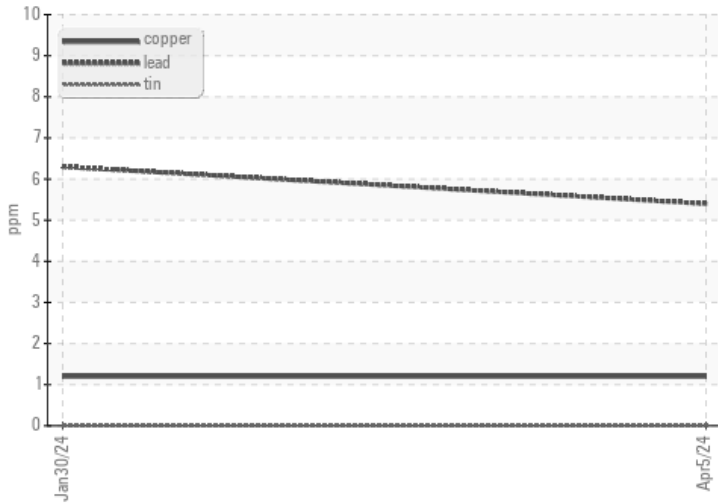
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	---
Boron	ppm	ASTM D5185(m)	69	<b>54</b>	53	---
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)	1	<b>0</b>	0	---
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	0	---
Magnesium	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	0	---
Calcium	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	2	---
Phosphorus	ppm	ASTM D5185(m)	246	<b>243</b>	244	---
Zinc	ppm	ASTM D5185(m)	1	<b>3</b>	2	---
Sulfur	ppm	ASTM D5185(m)	3670	<b>4202</b>	4362	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.4	<b>0.39</b>	0.38	---
Visc @ 40°C	cSt	ASTM D7279(m)	68.0	<b>67.7</b>	67.5	---
Lubricant Degradation	Scale 0-10	ASTM D7684*				

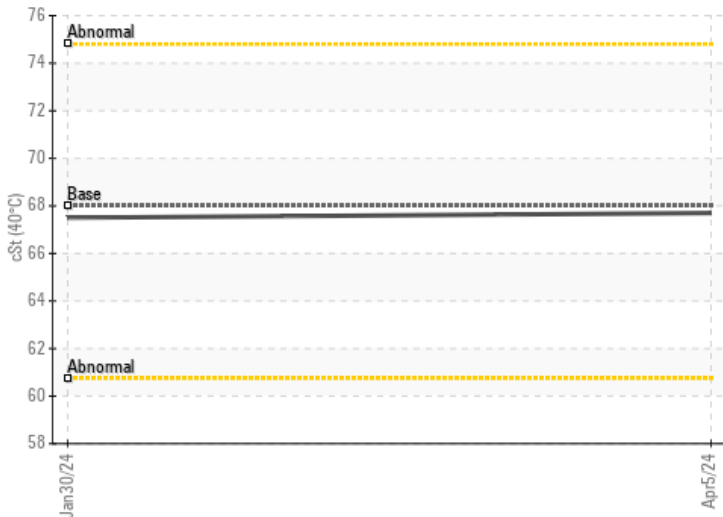
### Ferrous Alloys



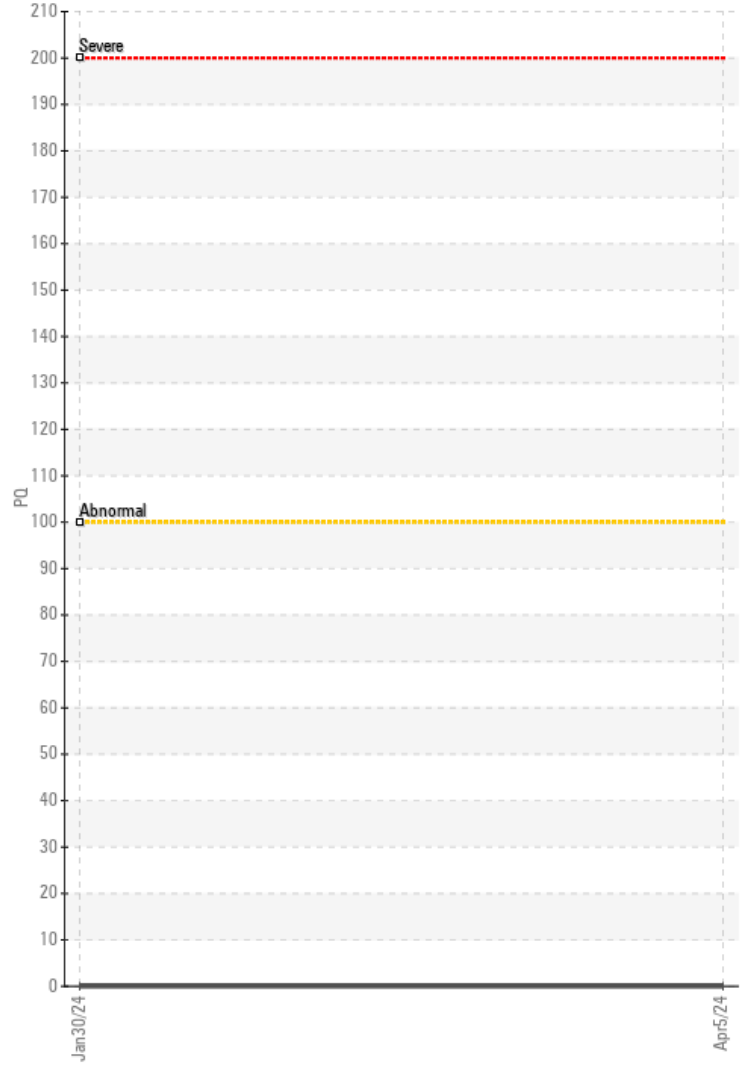
### Non-ferrous Metals



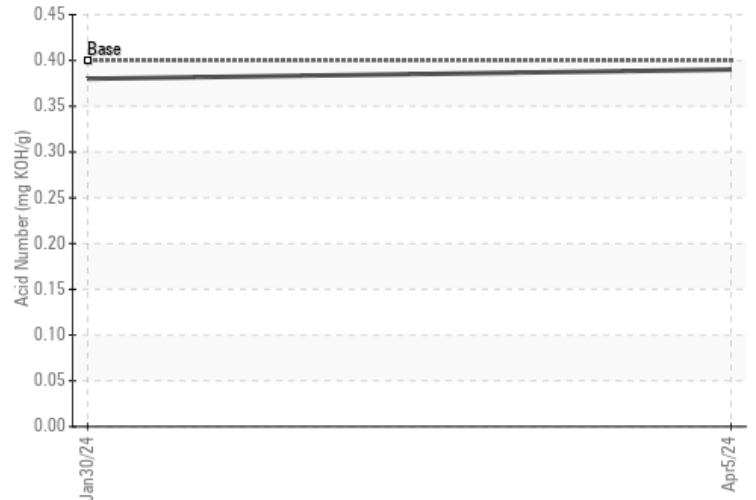
### Viscosity @ 40°C



### PQ



### Acid Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0873819  
**Lab Number** : 02628597  
**Unique Number** : 5761729  
**Test Package** : MAR 3 ( Additional Tests: TAN Man )

**CANSHIP UGLAND LTD - M/V PLACENTIA PRIDE**  
 C/O NEWTERM LOGISTICS, 21 GLENCOE  
 MOUNT PEARL, NL  
 CA A1N 4S6  
 Contact: Don Gibbons  
 don@canship.com  
 T: (709)782-3333  
 F: (709)782-0225

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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