



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**17C01H07#03 TUGGER GEARBOX**  
 Component  
**Starboard Gearbox**  
 Fluid  
**PETRO CANADA TRAXON 75W90 SYNTHETIC (3 LTR)**

## RECOMMENDATION

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

## WEAR

All component wear rates are normal.

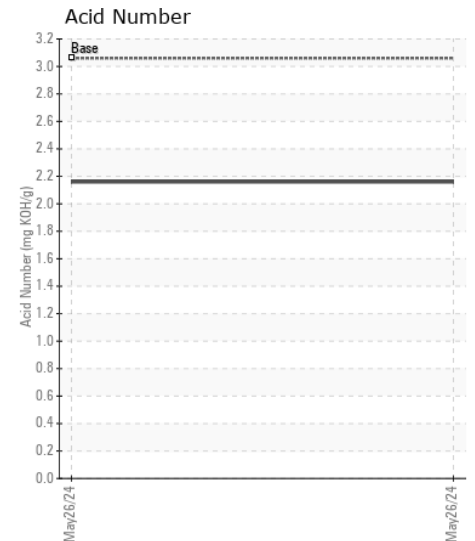
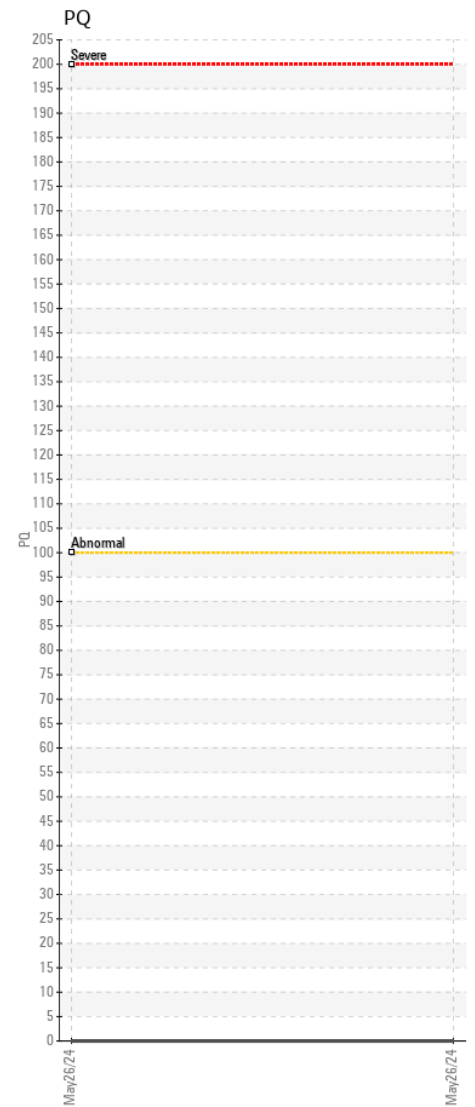
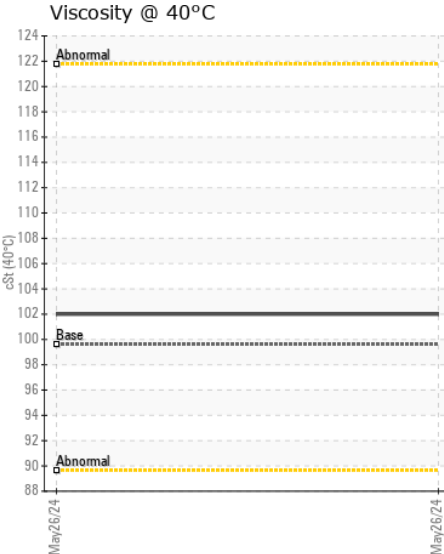
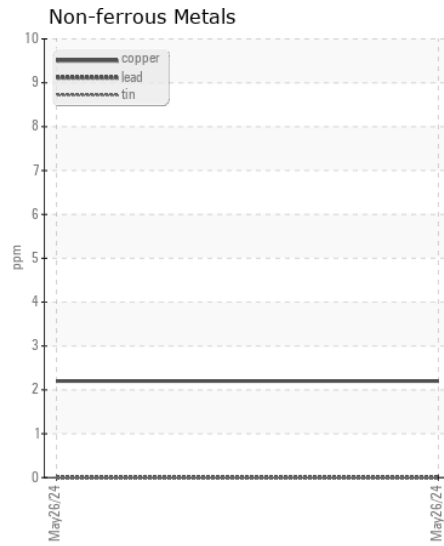
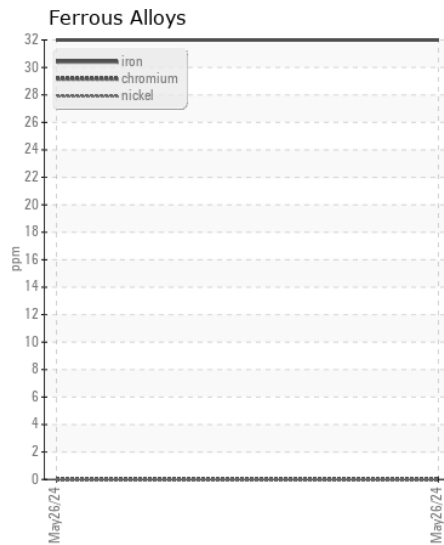
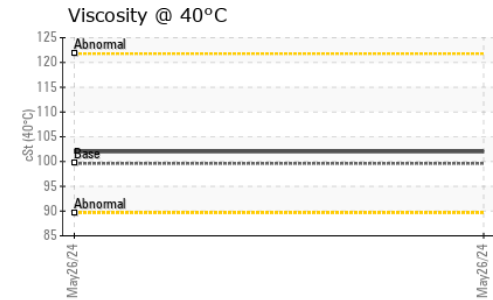
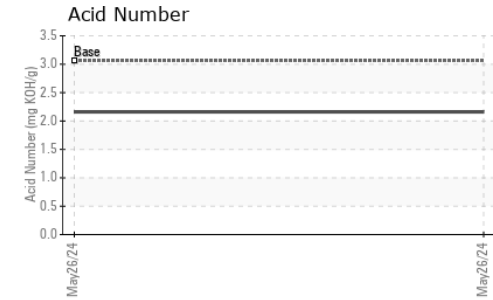
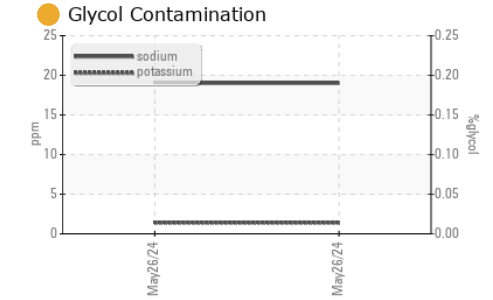
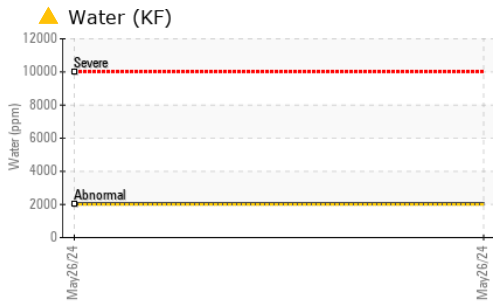
## CONTAMINATION

There is a moderate concentration of water present in the oil. Abnormal water content and sodium(Na) level indicate possible sea water contamination.

## FLUID CONDITION

The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0839664	---	---
Sample Date		Client Info		26 May 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		150	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		None	---	---
Sample Status				ABNORMAL	---	---
PQ		ASTM D8184*		0	---	---
Iron	ppm	ASTM D5185(m)	>150	32	---	---
Chromium	ppm	ASTM D5185(m)	>10	0	---	---
Nickel	ppm	ASTM D5185(m)	>10	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>5	0	---	---
Lead	ppm	ASTM D5185(m)	>65	0	---	---
Copper	ppm	ASTM D5185(m)	>80	2	---	---
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	---	---
Silicon	ppm	ASTM D5185(m)	>20	0	---	---
Potassium	ppm	ASTM D5185(m)	>20	1	---	---
Water	%	ASTM D6304*	>0.2	▲ 0.204	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 2044	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	▲ HAZY	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185(m)		● 19	---	---
Boron	ppm	ASTM D5185(m)	328	193	---	---
Barium	ppm	ASTM D5185(m)	1	0	---	---
Molybdenum	ppm	ASTM D5185(m)		0	---	---
Manganese	ppm	ASTM D5185(m)		<1	---	---
Magnesium	ppm	ASTM D5185(m)	1	5	---	---
Calcium	ppm	ASTM D5185(m)	7	6	---	---
Phosphorus	ppm	ASTM D5185(m)	1145	1349	---	---
Zinc	ppm	ASTM D5185(m)	3	9	---	---
Sulfur	ppm	ASTM D5185(m)	17909	22813	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	3.06	2.16	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	102	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0839664 **Received** : 30 May 2024  
**Lab Number** : 02638963 **Tested** : 04 Jun 2024  
**Unique Number** : 5788125 **Diagnosed** : 04 Jun 2024 - Kevin Marson  
**Test Package** : MAR 2 ( Additional Tests: KF, TAN Man )

**CANADIAN COAST GUARD**  
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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.