



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
17C01H07#01 - Fwd Tugger Gearbox

Component
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. We recommend that you drain the oil from the component if this has not already been done. 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 you service the filters on this component. Resample in 30-45 days to monitor this situation.

WEAR

All component wear rates are normal.

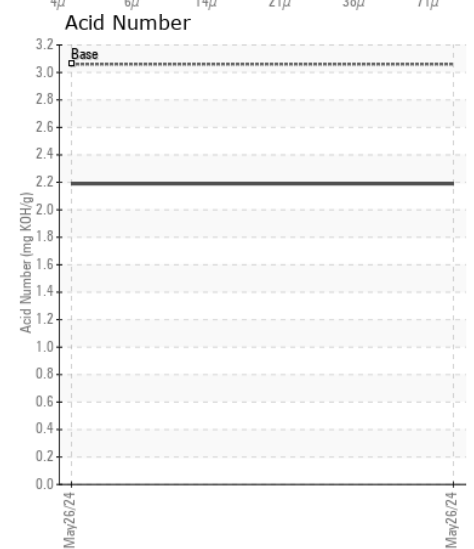
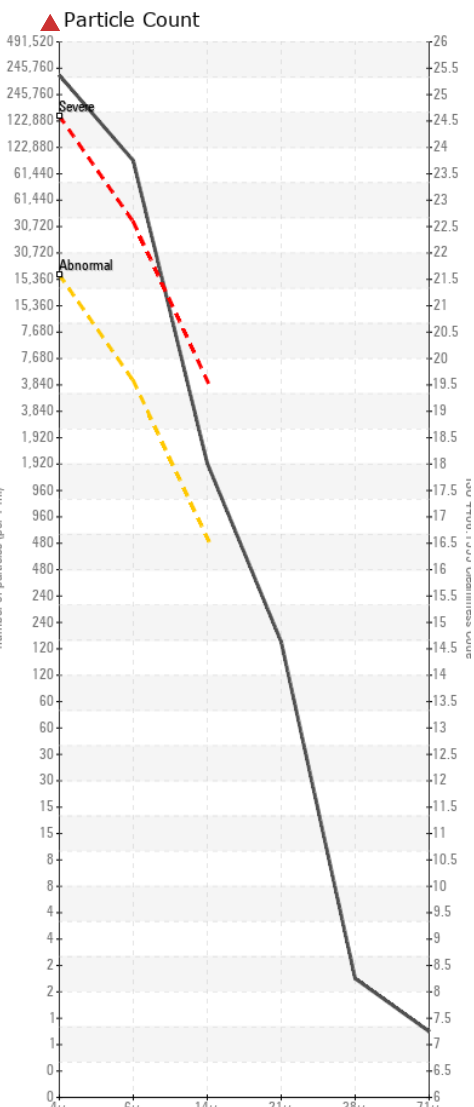
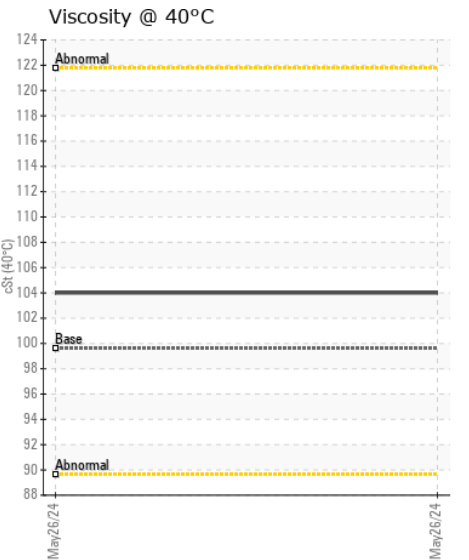
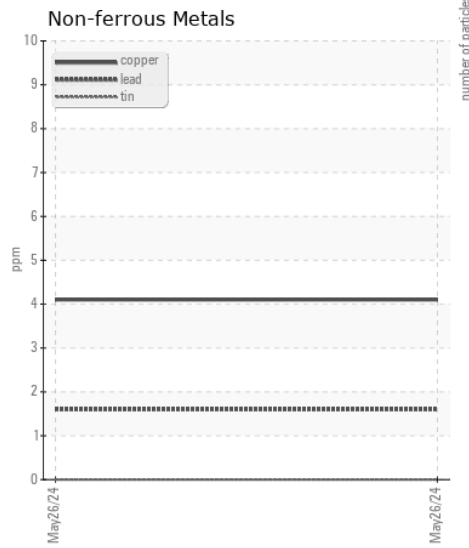
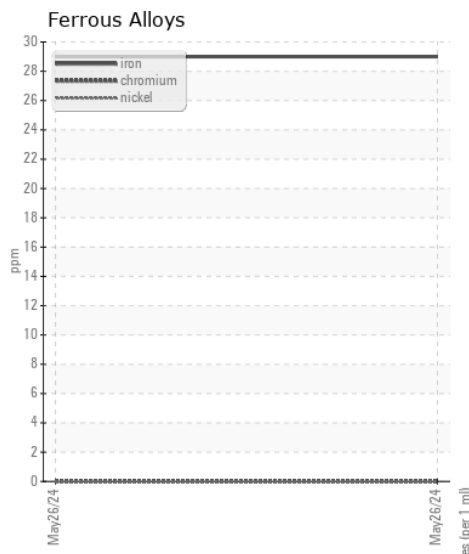
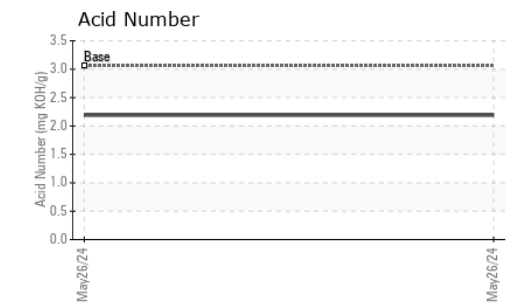
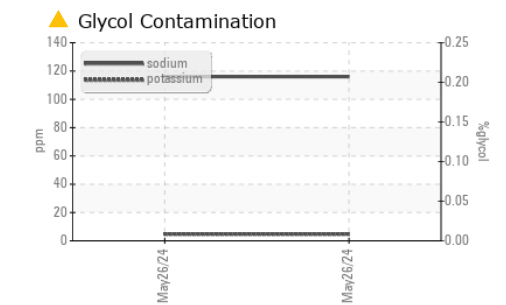
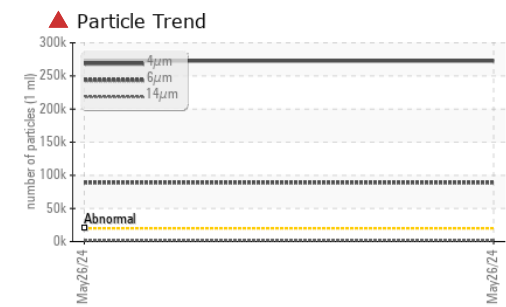
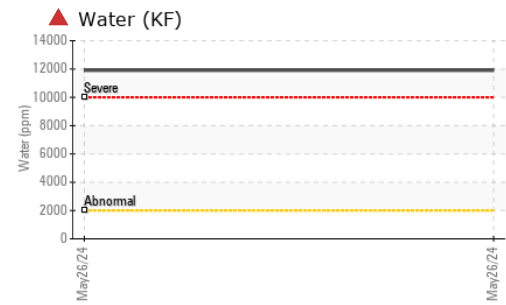
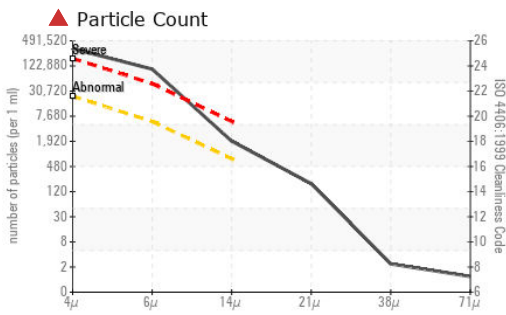
CONTAMINATION

There is a high amount of silt (particulates < 14 microns in size) present in the oil. There is a high 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0839663	---	---
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				SEVERE	---	---
Iron	ppm	ASTM D5185(m)	>150	29	---	---
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	2	---	---
Copper	ppm	ASTM D5185(m)	>80	4	---	---
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	10	---	---
Potassium	ppm	ASTM D5185(m)	>20	5	---	---
Water	%	ASTM D6304*	>0.2	▲ 1.190	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 11909	---	---
Particles >4µm		ASTM D7647	>20000	▲ 272666	---	---
Particles >6µm		ASTM D7647	>5000	▲ 89068	---	---
Particles >14µm		ASTM D7647	>640	▲ 1700	---	---
Particles >21µm		ASTM D7647	>160	164	---	---
Particles >38µm		ASTM D7647	>40	2	---	---
Particles >71µm		ASTM D7647	>10	1	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 25/24/18	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	VLITE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	▲ HAZY	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	---	---
Sodium	ppm	ASTM D5185(m)		▲ 116	---	---
Boron	ppm	ASTM D5185(m)	328	209	---	---
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	18	---	---
Calcium	ppm	ASTM D5185(m)	7	7	---	---
Phosphorus	ppm	ASTM D5185(m)	1145	1365	---	---
Zinc	ppm	ASTM D5185(m)	3	11	---	---
Sulfur	ppm	ASTM D5185(m)	17909	23692	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	3.06	2.19	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	104	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0839663 **Received** : 30 May 2024
Lab Number : 02638967 **Tested** : 04 Jun 2024
Unique Number : 5788129 **Diagnosed** : 04 Jun 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KF, PrtCount, 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.