



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
Anchor Windlass Gearbox (S/N 17A02D)
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 220 (80 LTR)

RECOMMENDATION

Check seals and/or filters for points of contaminant entry. We advise that you check for the source of water entry. 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.

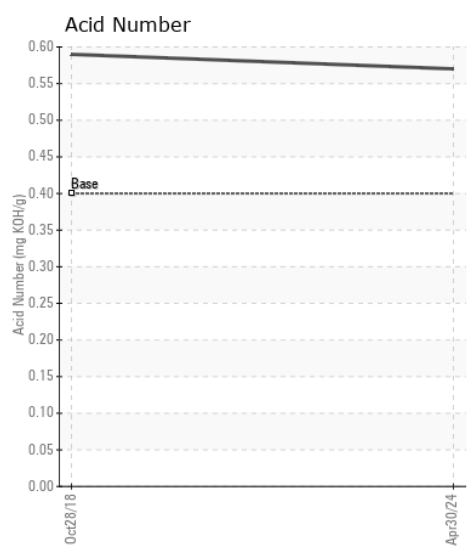
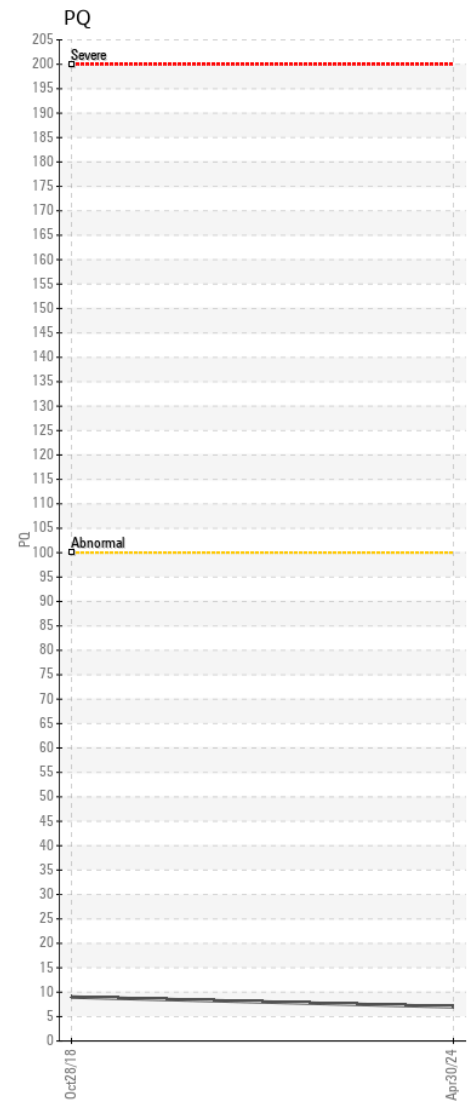
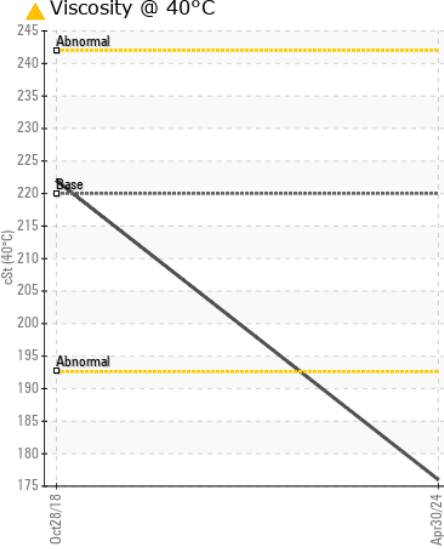
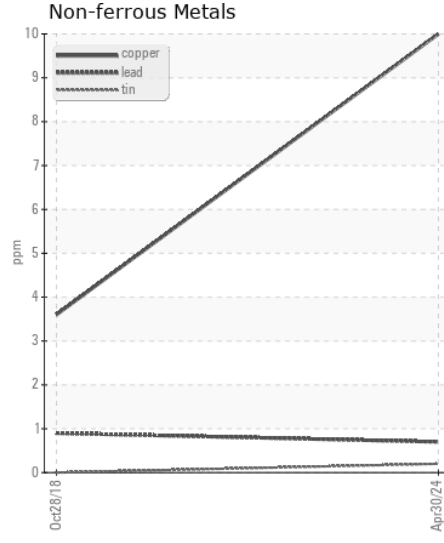
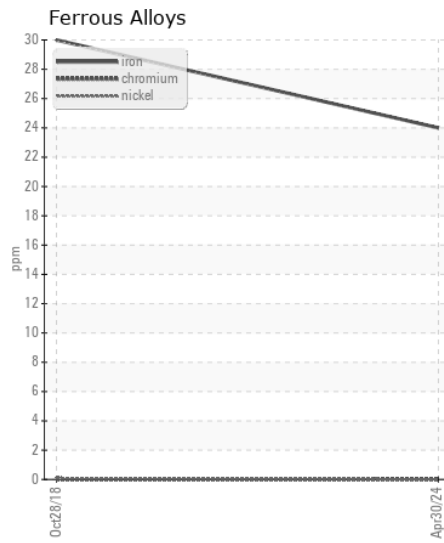
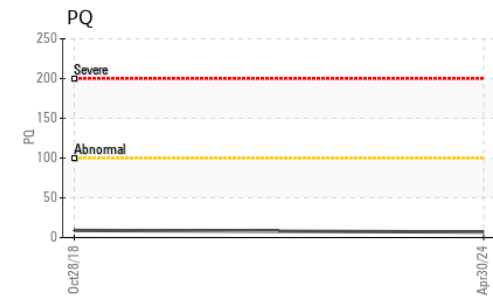
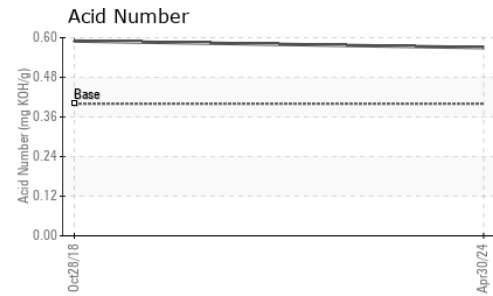
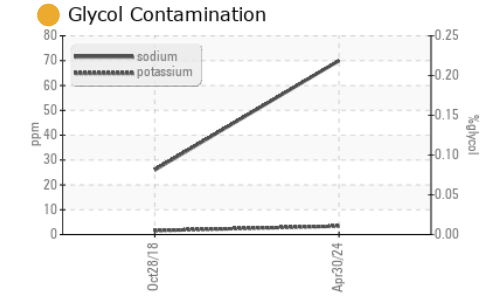
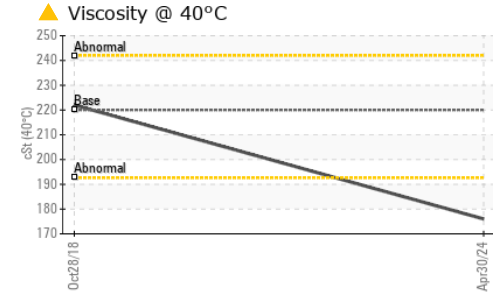
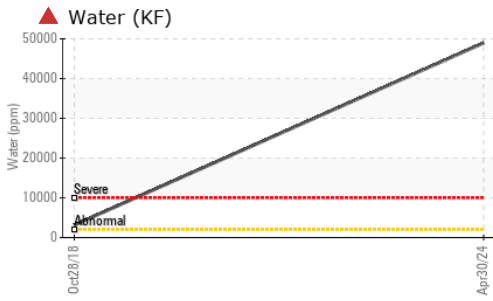
CONTAMINATION

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

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 150 range, advise investigate. 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		WC0839654	WC62007842	---
Sample Date		Client Info		30 Apr 2024	28 Oct 2018	---
Machine Age	hrs	Client Info		0	1257	---
Oil Age	hrs	Client Info		0	46	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Changed	---
Filter Changed		Client Info		None	Not Changd	---
Sample Status				SEVERE	ABNORMAL	---
PQ		ASTM D8184*		7	9	---
Iron	ppm	ASTM D5185(m)	>150	24	30	---
Chromium	ppm	ASTM D5185(m)	>10	0	0	---
Nickel	ppm	ASTM D5185(m)	>10	0	<1	---
Titanium	ppm	ASTM D5185(m)		<1	0	---
Silver	ppm	ASTM D5185(m)		<1	0	---
Aluminum	ppm	ASTM D5185(m)	>5	<1	2	---
Lead	ppm	ASTM D5185(m)	>65	<1	<1	---
Copper	ppm	ASTM D5185(m)	>80	10	4	---
Tin	ppm	ASTM D5185(m)	>8	<1	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185(m)	>20	5	9	---
Potassium	ppm	ASTM D5185(m)	>20	3	2	---
Water	%	ASTM D6304*	>0.2	▲ 4.895	▲ 0.314	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 48959	▲ 3140.0	---
Silt	scalar	Visual*	NONE	VLITE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	▲ MILKY	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	▲ 1%	.2%	---
Sodium	ppm	ASTM D5185(m)		● 70	26	---
Boron	ppm	ASTM D5185(m)	60	25	17	---
Barium	ppm	ASTM D5185(m)	0	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	<1	---
Manganese	ppm	ASTM D5185(m)	0	<1	<1	---
Magnesium	ppm	ASTM D5185(m)	0	11	5	---
Calcium	ppm	ASTM D5185(m)	0	6	6	---
Phosphorus	ppm	ASTM D5185(m)	270	307	421	---
Zinc	ppm	ASTM D5185(m)	0	10	7	---
Sulfur	ppm	ASTM D5185(m)	11200	7107	5634	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	0.57	0.59	---
Visc @ 40°C	cSt	ASTM D7279(m)	220	▲ 176	222	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0839654 **Received** : 14 May 2024
Lab Number : 02635418 **Tested** : 15 May 2024
Unique Number : 5776571 **Diagnosed** : 15 May 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KF)

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.