



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
AH2711 - Wartsila Bowthruster
 Component
Bow Thruster
 Fluid
PETRO CANADA ENDURATEX EP 100 (185 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0855640	WC0855646	WC0753472
Sample Date		Client Info		29 Mar 2024	28 Jan 2024	28 Nov 2023
Machine Age	hrs	Client Info		2584	2499	3744
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	193
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	Changed	Not Changd
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	1	2	2
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	0	<1	0
Lead	ppm	ASTM D5185(m)	>20	0	0	<1
Copper	ppm	ASTM D5185(m)	>20	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

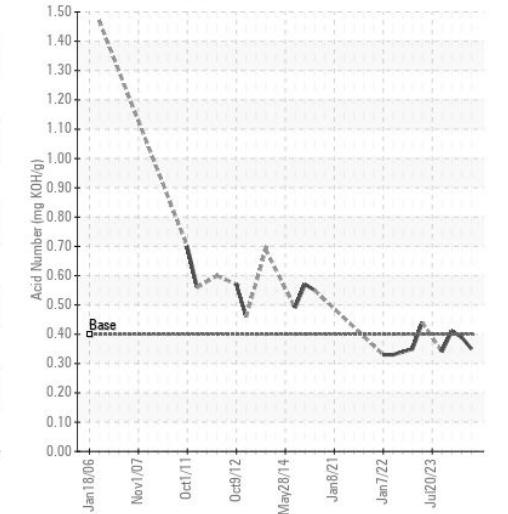
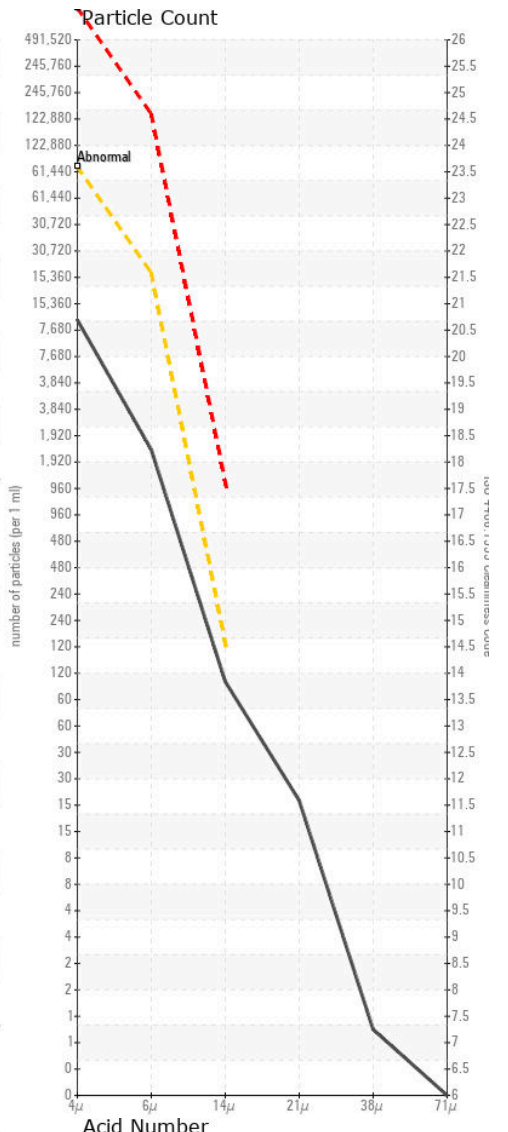
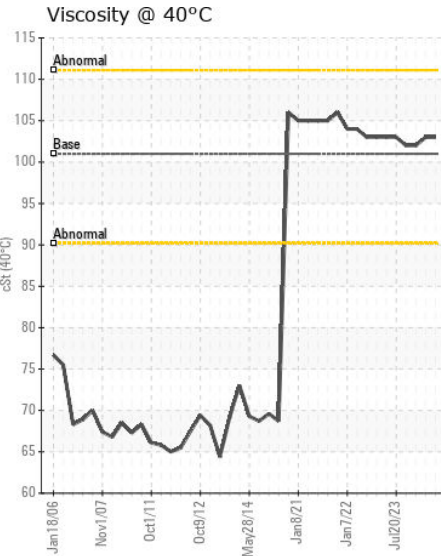
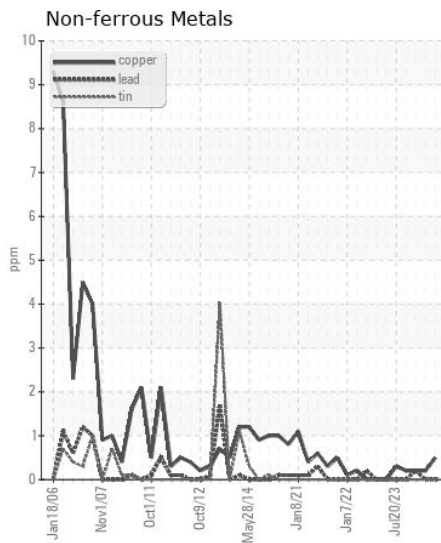
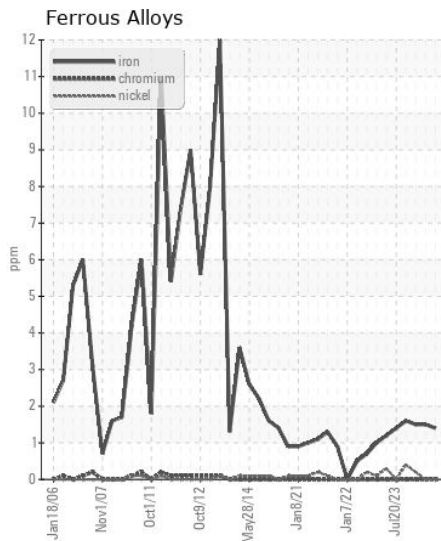
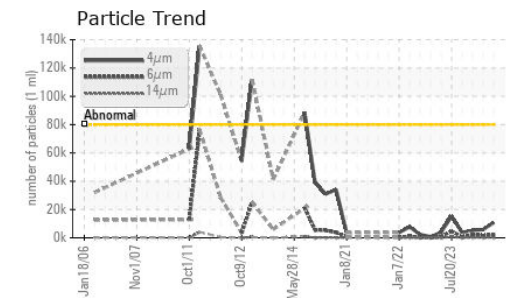
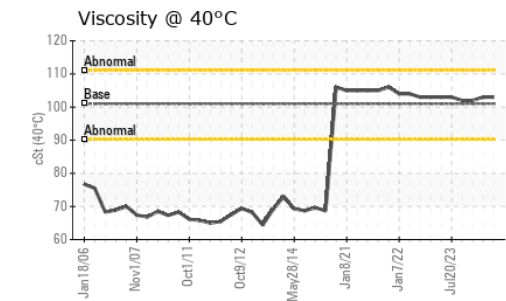
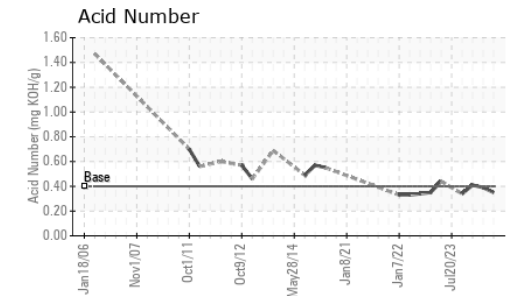
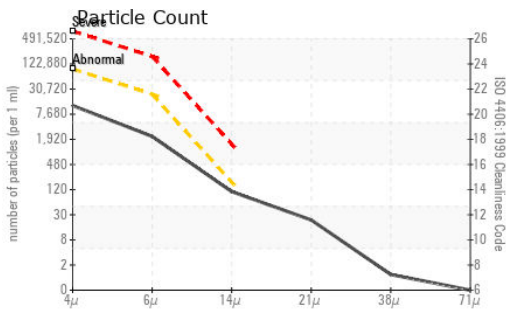
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>7	<1	2	3
Potassium	ppm	ASTM D5185(m)	>20	0	<1	0
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	10789	5760	5268
Particles >6µm		ASTM D7647	>20000	1974	1620	2031
Particles >14µm		ASTM D7647	>160	95	132	222
Particles >21µm		ASTM D7647	>40	20	36	44
Particles >38µm		ASTM D7647	>10	1	7	4
Particles >71µm		ASTM D7647	>3	0	4	2
Oil Cleanliness		ISO 4406 (c)	>23/21/14	21/18/14	20/18/14	20/18/15
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	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)		3	2	3
Boron	ppm	ASTM D5185(m)	50	63	60	61
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	0	1	2	1
Phosphorus	ppm	ASTM D5185(m)	270	241	246	242
Zinc	ppm	ASTM D5185(m)	0	7	6	7
Sulfur	ppm	ASTM D5185(m)	4500	3978	4316	4144
Acid Number (AN)	mg KOH/g	ASTM D974*	0.4	0.35	0.39	0.41
Visc @ 40°C	cSt	ASTM D7279(m)	101	103	103	102



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0855640
Lab Number : 02628297
Unique Number : 5761429
Test Package : MAR 2
Received : 11 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 12 Apr 2024 - Wes Davis

CANADIAN COAST GUARD/DFO
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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.