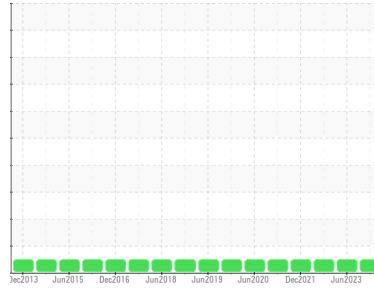




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
BRUCE A/1/71310
 Machine Id
1-71310-P3-PM Up Brg Filler
 Component
Upper Bearing
 Fluid
PETRO CANADA TURBOFLO XL68 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.
 NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0871681	WC0801558	WC0729996
Sample Date	Client Info		03 Dec 2023	05 Jun 2023	07 Dec 2022
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >10	0	<1	<1
Chromium	ppm	ASTM D5185(m) >5	0	0	0
Nickel	ppm	ASTM D5185(m) >5	0	0	0
Titanium	ppm	ASTM D5185(m) >5	0	0	0
Silver	ppm	ASTM D5185(m)	<1	0	0
Aluminum	ppm	ASTM D5185(m) >5	<1	<1	<1
Lead	ppm	ASTM D5185(m) >5	<1	<1	<1
Copper	ppm	ASTM D5185(m) >5	<1	<1	0
Tin	ppm	ASTM D5185(m) >5	0	0	0
Antimony	ppm	ASTM D5185(m)	0	0	0
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<1	<1	<1
Barium	ppm	ASTM D5185(m)	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	0
Calcium	ppm	ASTM D5185(m)	<1	<1	0
Phosphorus	ppm	ASTM D5185(m)	2	2	<1
Zinc	ppm	ASTM D5185(m) 0	3	4	3
Sulfur	ppm	ASTM D5185(m)	1916	1904	2022
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

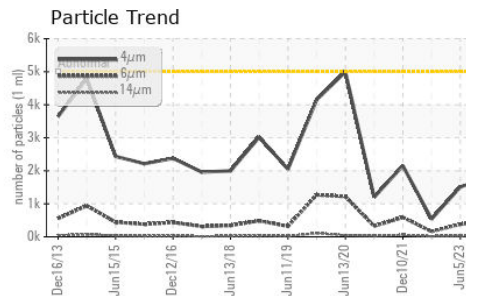
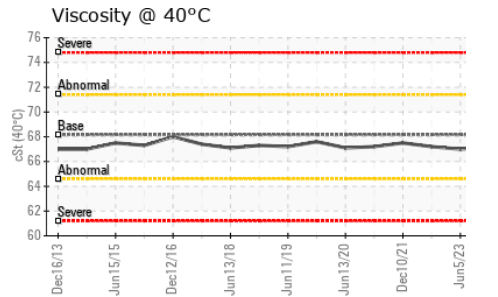
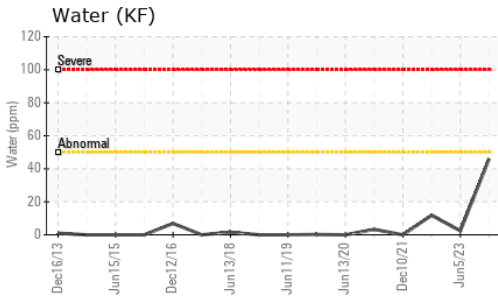
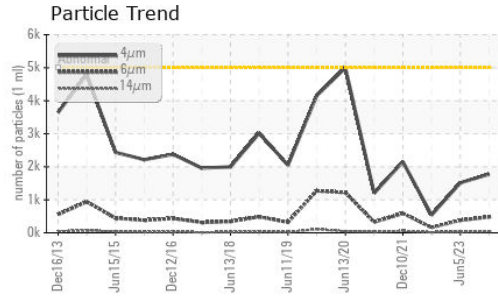
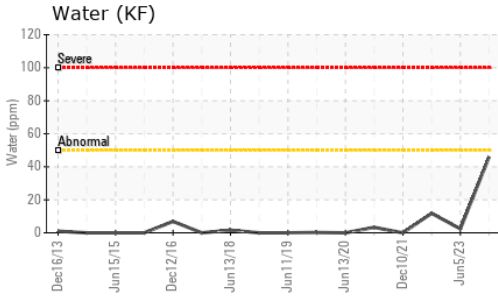
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >5	8	8	8
Sodium	ppm	ASTM D5185(m) >5	<1	<1	<1
Potassium	ppm	ASTM D5185(m) >20	0	<1	0
Water	%	ASTM D6304* >0.005	0.004	0.001	0.001
ppm Water	ppm	ASTM D6304* >50	46	2.4	11.8

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	1774	1515	539
Particles >6µm	ASTM D7647	>1300	481	382	160
Particles >14µm	ASTM D7647	>320	41	28	16
Particles >21µm	ASTM D7647	>80	11	9	6
Particles >38µm	ASTM D7647	>20	1	0	1
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/15	18/16/13	18/16/12	16/14/11



OIL ANALYSIS REPORT

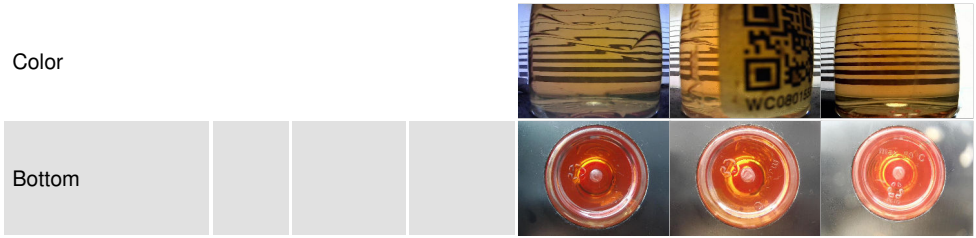


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	0.15	0.10	0.12

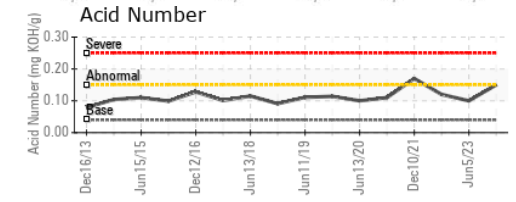
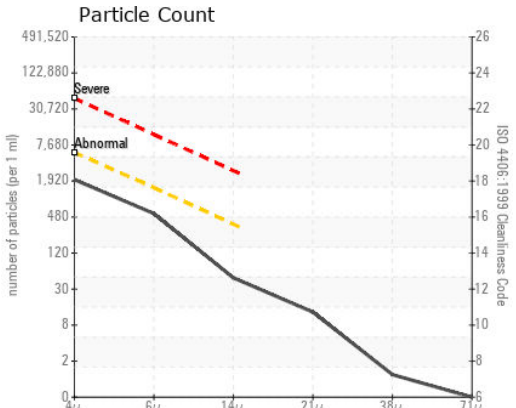
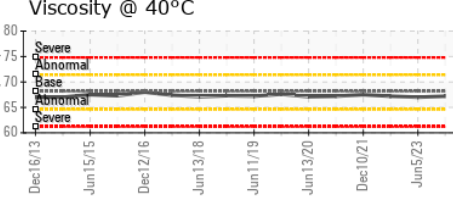
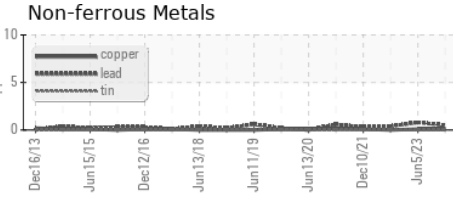
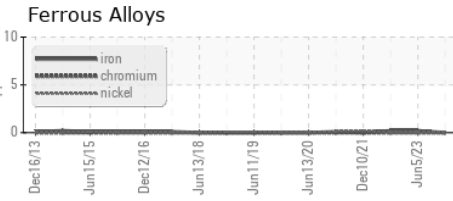
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.005	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68.17	67.2	67.0	67.2

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0871681
Lab Number : 02603818
Unique Number : 5696903
Test Package : IND 2 (Additional Tests: TAN Man)

Bruce Power - Bruce A PdM
 P.O.Box 1540, 177 Tie Road., RM-222 U2 Column 2N11 615'
 Tiverton, ON
 CA N0G 2T0
 Contact: Pierre Adouki
 pierre.adouki@brucepower.com
 T: (519)361-2673
 F:

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.