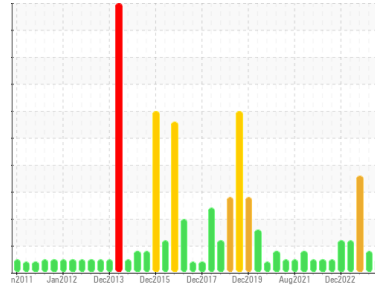




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
BRUCE A/4/43230
 Machine Id
4-43230-P2-BFP Tank Vent
 Component
Bulk Fluid Tank
 Fluid
ESSO TERESSO ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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		WC0871713	WC0815671	WC0801487
Sample Date	Client Info		29 Nov 2023	29 Aug 2023	19 Jun 2023
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	ATTENTION	SEVERE

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >10	<1	<1	<1
Chromium	ppm	ASTM D5185(m) >5	0	0	0
Nickel	ppm	ASTM D5185(m) >5	0	<1	0
Titanium	ppm	ASTM D5185(m) >5	0	0	0
Silver	ppm	ASTM D5185(m)	<1	0	0
Aluminum	ppm	ASTM D5185(m) >5	0	<1	<1
Lead	ppm	ASTM D5185(m) >5	1	1	<1
Copper	ppm	ASTM D5185(m) >5	<1	<1	<1
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	<1
Calcium	ppm	ASTM D5185(m)	<1	<1	<1
Phosphorus	ppm	ASTM D5185(m)	1	2	37
Zinc	ppm	ASTM D5185(m)	<1	2	2
Sulfur	ppm	ASTM D5185(m)	51	67	57
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

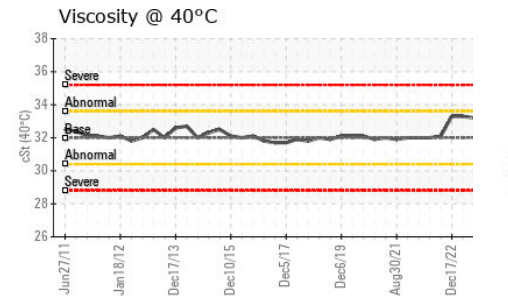
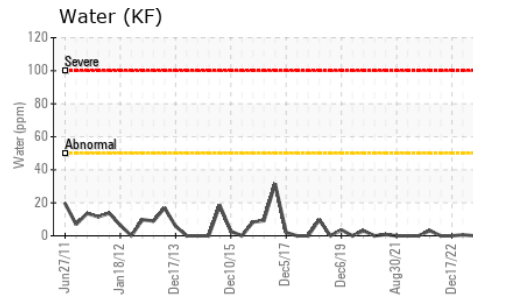
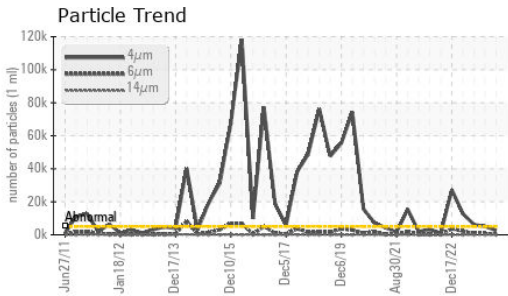
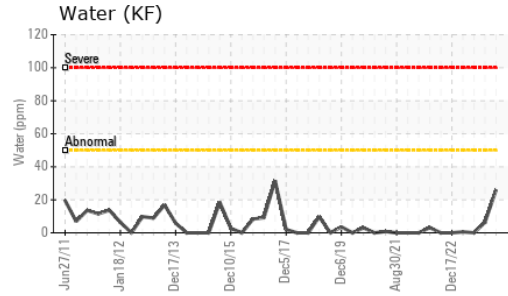
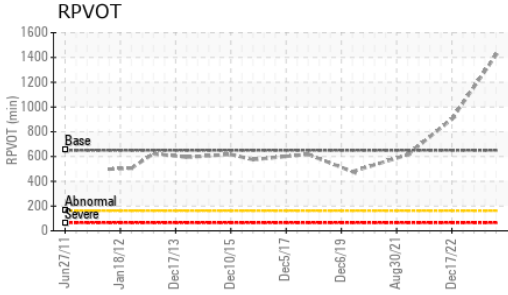
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >5	<1	2	7
Sodium	ppm	ASTM D5185(m) >5	0	0	0
Potassium	ppm	ASTM D5185(m) >20	0	<1	<1
Water	%	ASTM D6304* >0.005	0.003	0.001	0.00
ppm Water	ppm	ASTM D6304* >50	26	6.4	0.00

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	2599	5080	6215
Particles >6µm	ASTM D7647	>1300	355	747	872
Particles >14µm	ASTM D7647	>320	5	42	36
Particles >21µm	ASTM D7647	>80	2	5	9
Particles >38µm	ASTM D7647	>20	0	0	1
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/15	19/16/10	20/17/13	20/17/12



OIL ANALYSIS REPORT



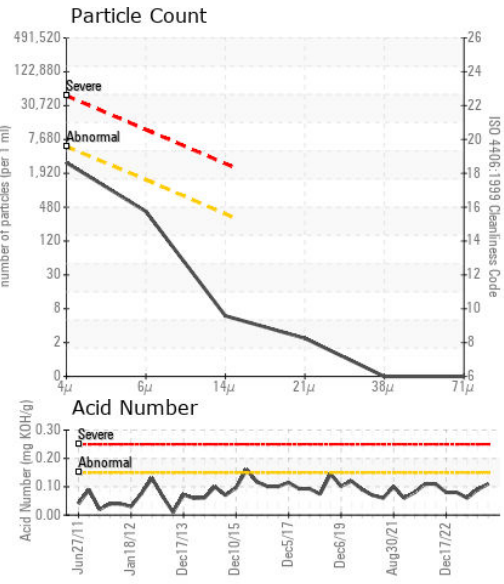
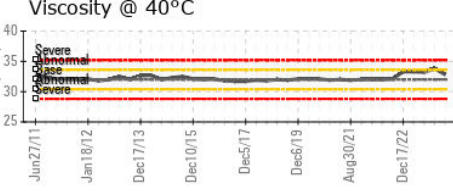
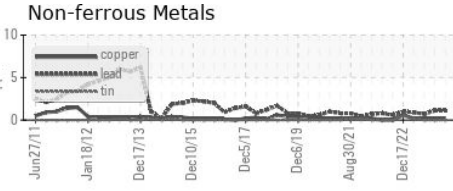
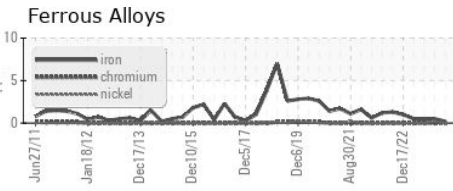
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.11	0.09	0.06

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)	32	32.8	33.8	33.2
Oxidation Test (RPVOT)	minutes	ASTM D2272*	650	1421	---	---

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0871713
Lab Number : 02603820
Unique Number : 5696905
Test Package : IND 2 (Additional Tests: RPVOT, 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.