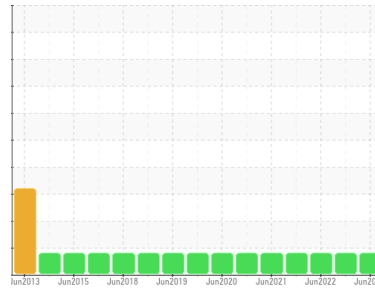




# OIL ANALYSIS REPORT

## Sample Rating Trend



## ADDITIVES



Area

**BRUCE A/1/71310**

Machine Id

**1-71310-P4-PM Up Brg Filler**

Component

**Upper Bearing**

Fluid

**PETRO CANADA TURBOFLO XL68 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA TURBOFLO XL68, however, a fluid match indicates that this fluid is ISO 68 R&O Hydraulic Oil. Please confirm the oil type and grade on your next sample. 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

Additive levels indicate the addition of a different brand, or type of oil. 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		<b>WC</b>	WC0729994	WC0696828
Sample Date	Client Info		<b>24 Jun 2024</b>	07 Dec 2022	20 Jun 2022
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ATTENTION</b>	ATTENTION	ATTENTION

### WEAR METALS

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

### ADDITIVES

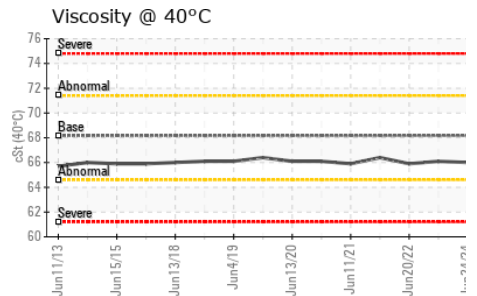
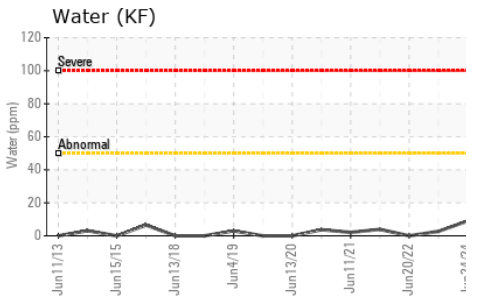
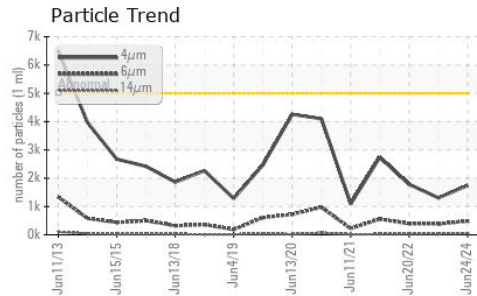
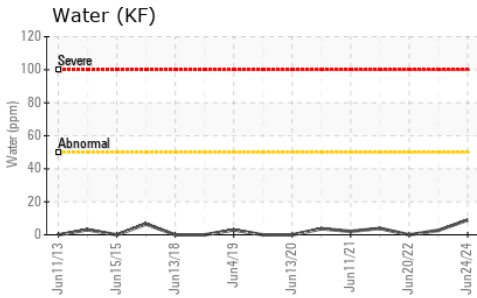
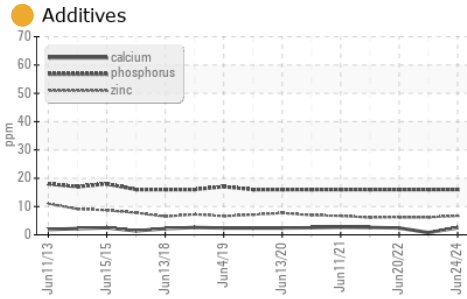
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<1	<1	<1
Barium	ppm	ASTM D5185(m)	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	<b>2</b>	<1	2
Phosphorus	ppm	ASTM D5185(m)	<b>16</b>	16	16
Zinc	ppm	ASTM D5185(m) 0	<b>7</b>	6	6
Sulfur	ppm	ASTM D5185(m)	<b>1844</b>	1989	1984
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >5	<b>4</b>	5	5
Sodium	ppm	ASTM D5185(m) >5	<b>7</b>	7	7
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Water	%	ASTM D6304* >0.005	<b>0.001</b>	0.001	0.00
ppm Water	ppm	ASTM D6304* >50	<b>9</b>	2.7	0.00

### FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>1744</b>	1304	1782
Particles >6µm	ASTM D7647	>1300	<b>487</b>	385	395
Particles >14µm	ASTM D7647	>320	<b>44</b>	37	28
Particles >21µm	ASTM D7647	>80	<b>12</b>	8	5
Particles >38µm	ASTM D7647	>20	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/15	<b>18/16/13</b>	18/16/12	18/16/12

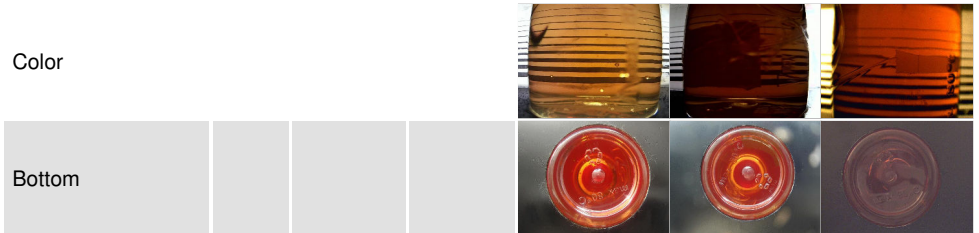


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	<b>0.10</b>	0.09	0.12

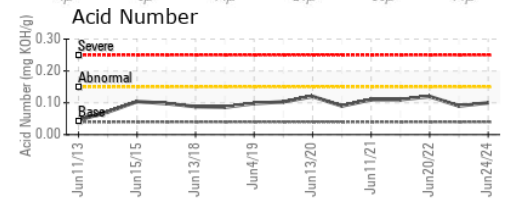
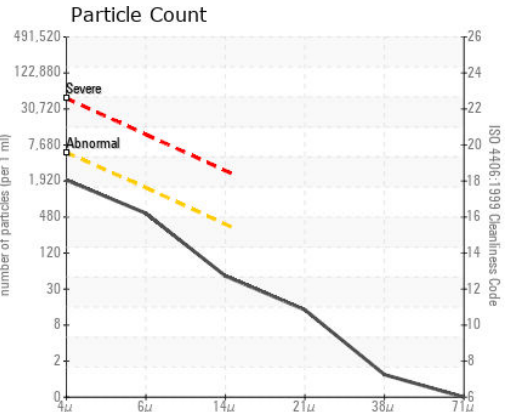
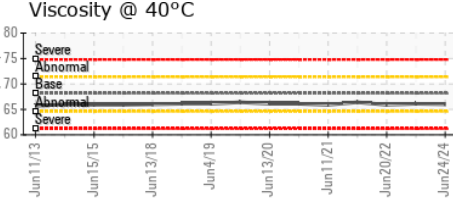
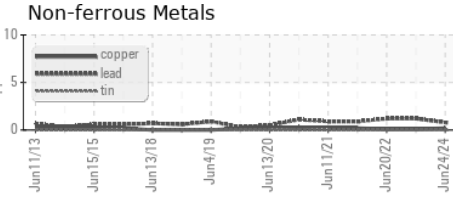
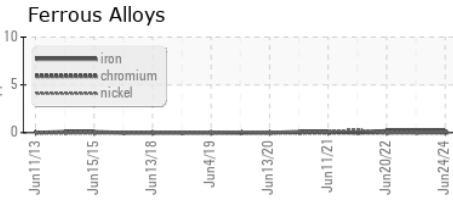
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	68.17	<b>66.0</b>	66.1	65.9

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.** : WC  
**Lab Number** : 02645896  
**Unique Number** : 5811448  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

**Received** : 05 Jul 2024  
**Tested** : 08 Jul 2024  
**Diagnosed** : 08 Jul 2024 - Kevin Marson

**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.