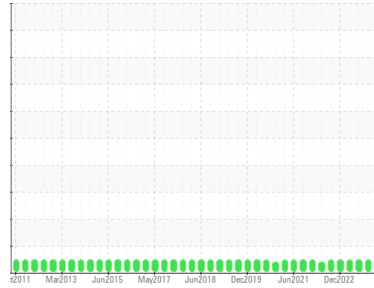




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**BRUCE B/5/33120**  
 Machine Id  
**5-33120-P2-PM Up Brg**  
 Component  
**Upper Bearing**  
 Fluid  
**MOBIL DTE 732 (280 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

### Contaminants

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

### Oil 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		<b>WC</b>	WC0791620	WC0791666
Sample Date	Client Info		<b>18 Dec 2023</b>	06 Sep 2023	14 Jun 2023
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>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >1	<b>0</b>	0	0
Chromium	ppm	ASTM D5185(m) >1	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >1	<b>0</b>	<1	<1
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) >1	<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185(m) >3	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >1	<b>0</b>	0	<1
Tin	ppm	ASTM D5185(m)	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	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)	<b>0</b>	0	0
Barium	ppm	ASTM D5185(m)	<b>0</b>	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)	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185(m)	<b>0</b>	<1	<1
Phosphorus	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Zinc	ppm	ASTM D5185(m)	<b>&lt;1</b>	1	2
Sulfur	ppm	ASTM D5185(m)	<b>17</b>	34	31
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

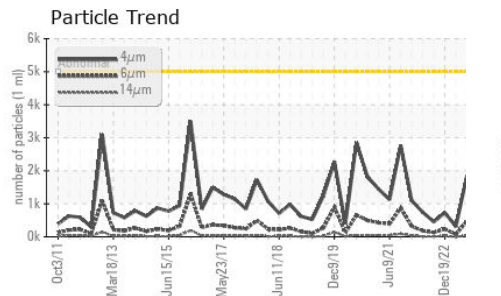
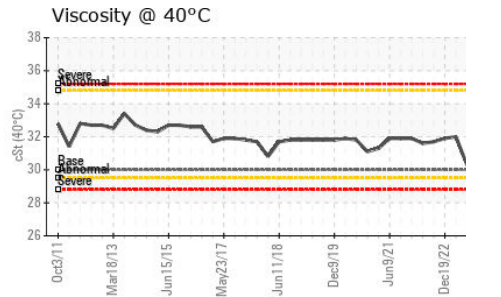
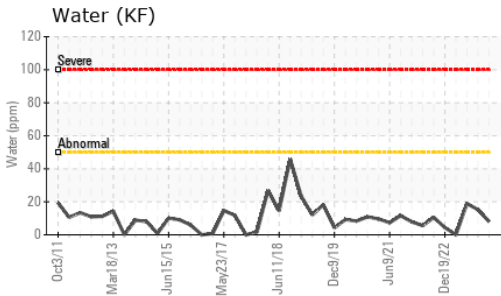
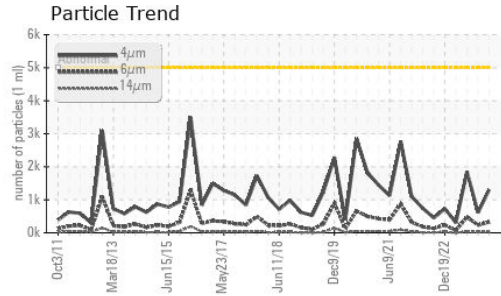
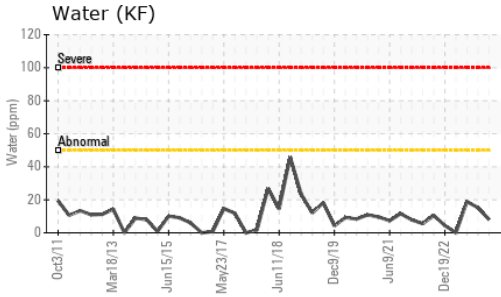
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >5	<b>0</b>	0	0
Sodium	ppm	ASTM D5185(m) >5	<b>0</b>	0	0
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	<1	<1
Water	%	ASTM D6304* >0.005	<b>0.001</b>	0.002	0.002
ppm Water	ppm	ASTM D6304* >50	<b>8</b>	15.2	18.9

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>1305</b>	613	1854
Particles >6µm	ASTM D7647	>1300	<b>329</b>	232	481
Particles >14µm	ASTM D7647	>320	<b>20</b>	23	36
Particles >21µm	ASTM D7647	>80	<b>3</b>	7	10
Particles >38µm	ASTM D7647	>20	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/15	<b>18/16/11</b>	16/15/12	18/16/12

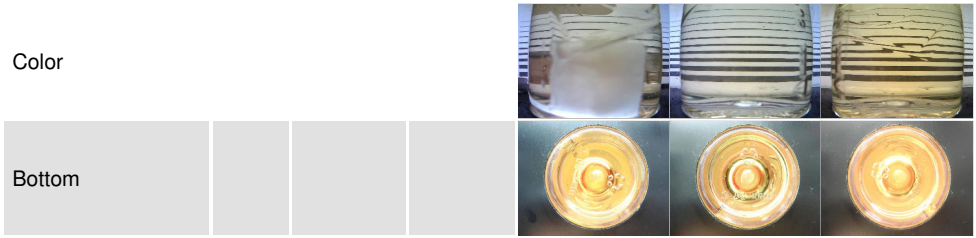
# OIL ANALYSIS REPORT



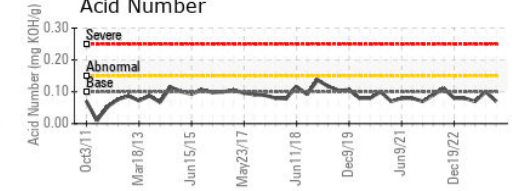
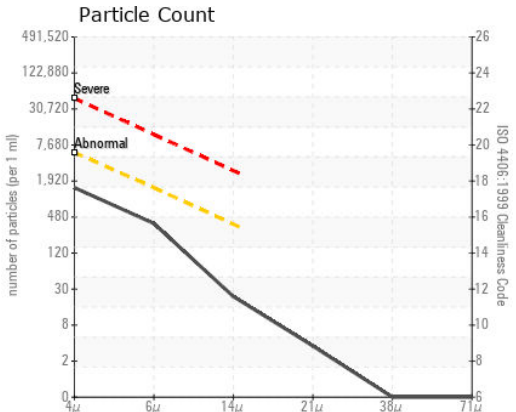
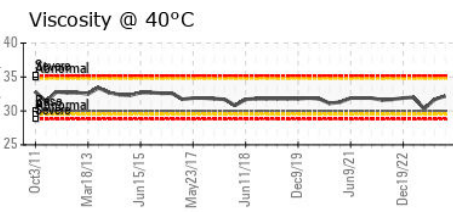
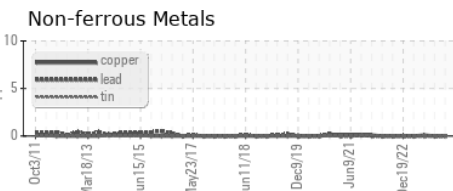
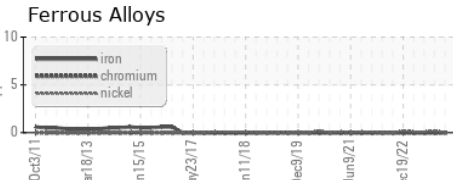
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.10	<b>0.07</b>	0.10	0.07
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	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)	30.0	<b>32.2</b>	31.7	30.3

### SAMPLE IMAGES



### GRAPHS



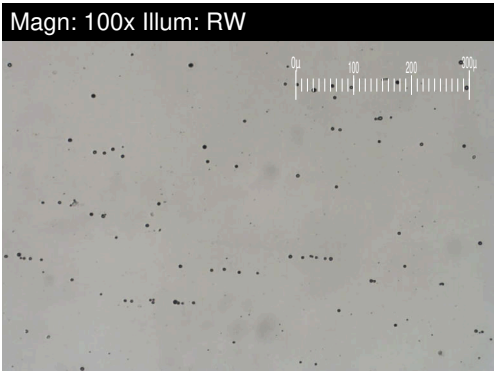
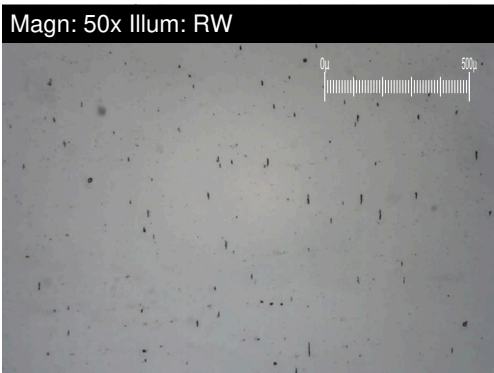
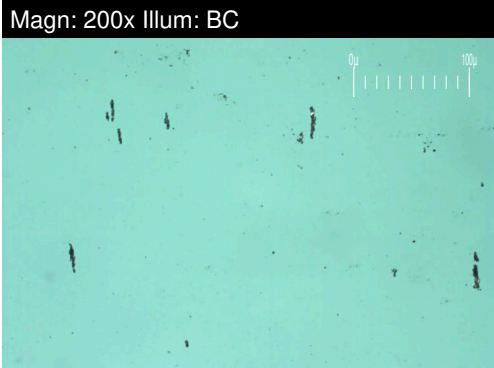
**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC  
**Lab Number** : 02606246  
**Unique Number** : 5707332  
**Test Package** : IND 2 ( Additional Tests: A-Ferr, Bottom, DR-Ferr, TAN Man )  
**Received** : 03 Jan 2024  
**Diagnosed** : 05 Jan 2024  
**Diagnostician** : Kevin Marson  
 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.

**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:



# FERROGRAPHY REPORT

Area  
**BRUCE B/5/33120**  
 Machine Id  
**5-33120-P2-PM Up Brg**  
 Component  
**Upper Bearing**  
 Fluid  
**MOBIL DTE 732 (280 GAL)**

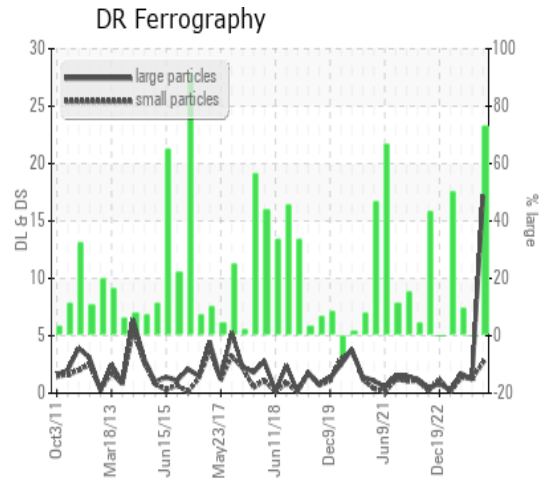


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		<b>17.2</b>	1.2	1.7
Small Particles		DR-Ferr*		<b>2.7</b>	1.3	1.4
Total Particles		DR-Ferr*	>---	<b>19.9</b>	2.5	3.1
Large Particles Percentage	%	DR-Ferr*		<b>72.9</b>	0	9.7
Severity Index		DR-Ferr*		<b>249</b>	0	1

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		<b>2</b>		
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		<b>1</b>		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*				
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		<b>1</b>		
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		<b>1</b>		

## WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.



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