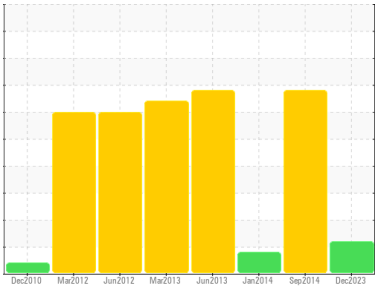
PROBLEM SUMMARY

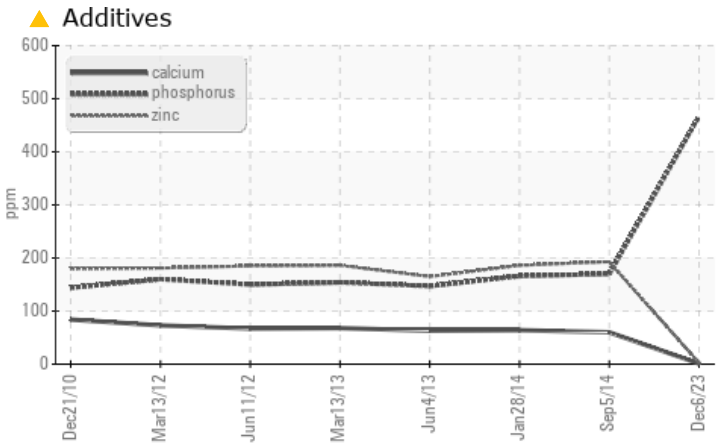
Sample Rating Trend



ADDITIVES

Area
BRUCE A/4/75120
Machine Id
4-75120-CP1 Ld (LP/HP-MK2)-Lube Oil Level
Component
Reciprocating Compressor
Fluid
SHELL CORENA P 68 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Fluid appears to match the fluid ATLAS COPCO ROTO Z FLUID, advise investigate.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	SEVERE	ABNORMAL
Phosphorus	ppm	ASTM D5185(m)	100	▲ **467**	170	166
Zinc	ppm	ASTM D5185(m)	115	▲ **3**	193	186
Sulfur	ppm	ASTM D5185(m)	1300	▲ **625**	1362	1421

Customer Id: BRUTIV
Sample No.: WC0871699
Lab Number: 02603835
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
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Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

05 Sep 2014 Diag: Kevin Marson

WEAR

We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Iron ppm levels are severe. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system. Particles >6µm are abnormally high. The water content is negligible. Viscosity of sample indicates oil is within ISO 100 range, advise investigate. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

28 Jan 2014 Diag: Kevin Marson

VISCOSITY

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible. Viscosity of sample indicates oil is within ISO 100 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

04 Jun 2013 Diag: Kevin Marson

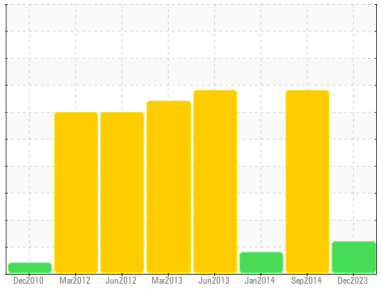
WEAR

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Iron ppm levels are severe. Copper ppm levels are abnormal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ADDITIVES

Area
BRUCE A/4/75120
Machine Id
4-75120-CP1 Ld (LP/HP-MK2)-Lube Oil Level
Component
Reciprocating Compressor
Fluid
SHELL CORENA P 68 (--- GAL)

DIAGNOSIS

▲ Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Fluid appears to match the fluid ATLAS COPCO ROTO Z FLUID, advise investigate.

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		**WC0871699**	WC22108377	WC22106273
Sample Date		Client Info		**06 Dec 2023**	05 Sep 2014	28 Jan 2014
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				**ATTENTION**	SEVERE	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>5	**0**	⬢ 12	3
Chromium	ppm	ASTM D5185(m)	>5	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**<1**	0	0
Titanium	ppm	ASTM D5185(m)	>5	**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	<1	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**	4	<1
Tin	ppm	ASTM D5185(m)	>5	**0**	<1	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	<1	0

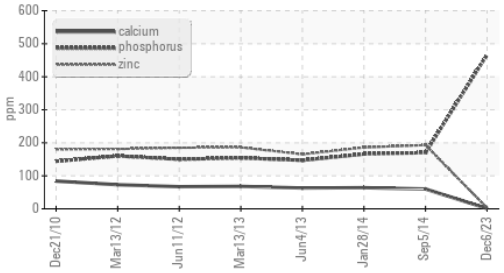
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	**0**	<1	<1
Calcium	ppm	ASTM D5185(m)	20	**1**	60	64
Phosphorus	ppm	ASTM D5185(m)	100	▲ **467**	170	166
Zinc	ppm	ASTM D5185(m)	115	▲ **3**	193	186
Sulfur	ppm	ASTM D5185(m)	1300	▲ **625**	1362	1421
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>5	**0**	<1	<1
Sodium	ppm	ASTM D5185(m)		**<1**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**0**	2	1
Water	%	ASTM D6304*	>0.1	**0.004**	0.004	0.001
ppm Water	ppm	ASTM D6304*	>1000	**48**	41.0	14.5

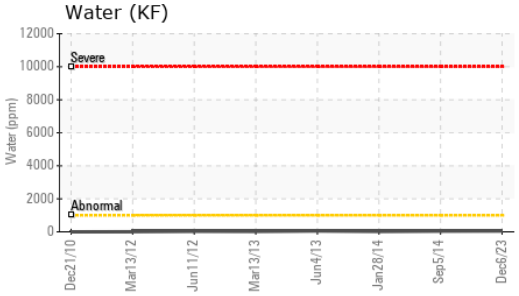
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**680**	76882	45076
Particles >6µm		ASTM D7647	>2500	**293**	▲ 16701	▲ 2819
Particles >14µm		ASTM D7647	>320	**19**	88	94
Particles >21µm		ASTM D7647	>80	**4**	13	23
Particles >38µm		ASTM D7647	>20	**1**	1	0
Particles >71µm		ASTM D7647	>4	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	**17/15/11**	▲ 23/21/14	▲ 23/19/14

OIL ANALYSIS REPORT

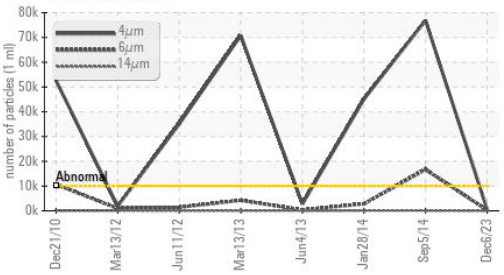
Additives



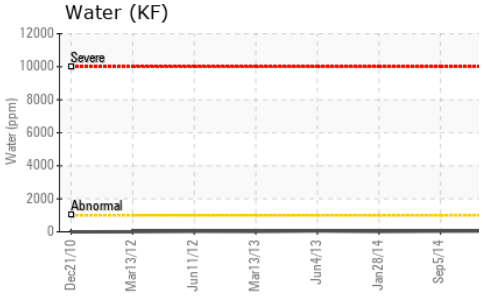
Water (KF)



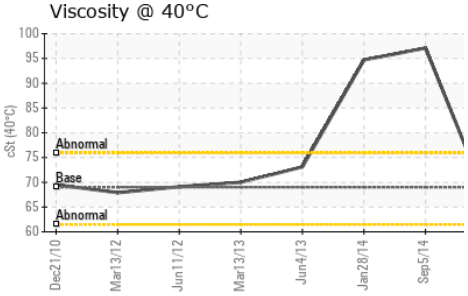
Particle Trend



Water (KF)



Viscosity @ 40°C

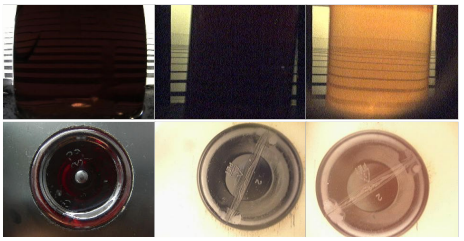


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.3	**0.31**	0.253	0.32

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**	VLITE	LIGHT
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*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

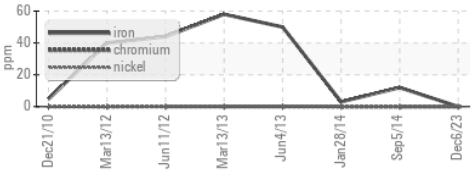
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	69	**66.5**	▲ 97.1	▲ 94.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

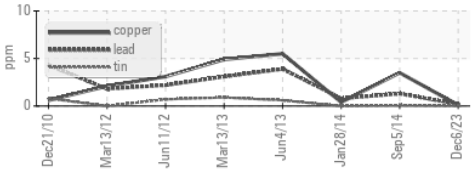


GRAPHS

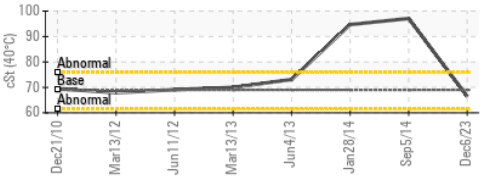
Ferrous Alloys



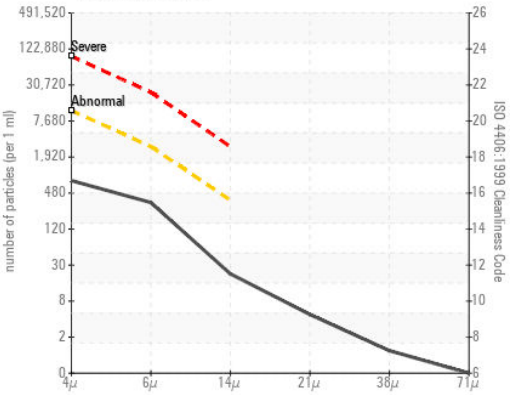
Non-ferrous Metals



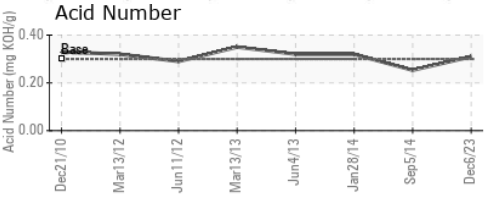
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0871699 **Recieved** : 18 Dec 2023
Lab Number : 02603835 **Diagnosed** : 19 Dec 2023
Unique Number : 5696920 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: TAN Man)

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
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