



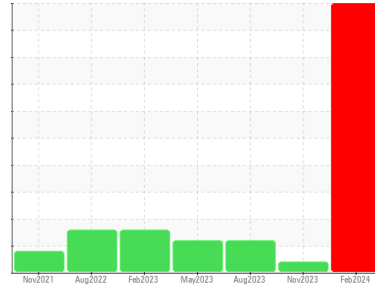
PROBLEM SUMMARY

Sample Rating Trend

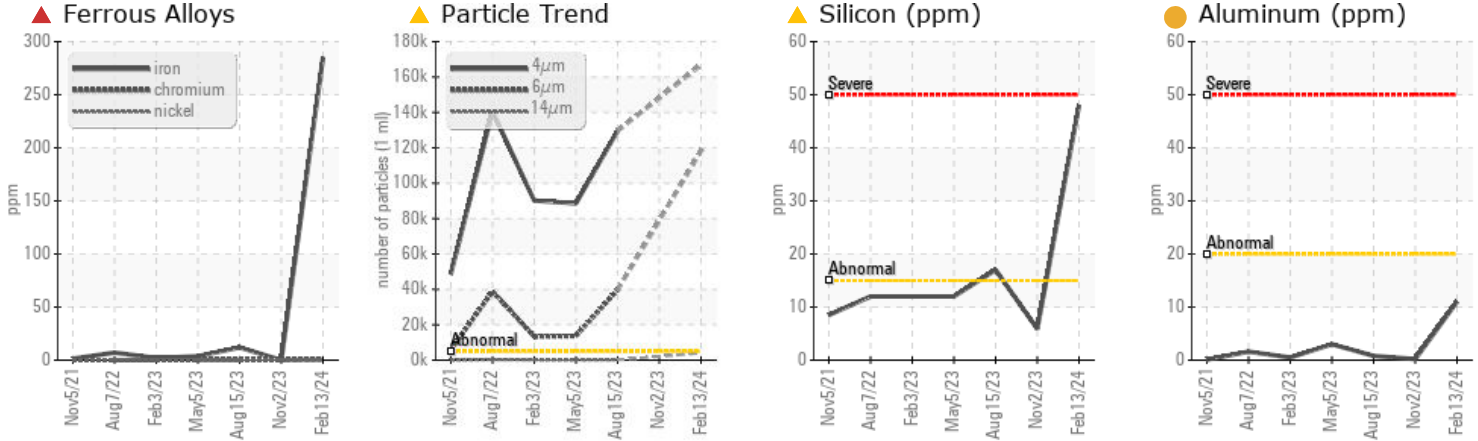
WEAR



Area
VACUUM PUMP [10024012791]
 Machine Id
B68192 - BUSCH ROTARY VANE
 Component
Vacuum Pump
 Fluid
BUSCH R530S (--- GAL)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>20	▲ 285	0	12
Silicon	ppm	ASTM D5185m	>15	▲ 48	6	17
Particles >4µm		ASTM D7647	>5000	▲ 166742	---	▲ 129622
Particles >6µm		ASTM D7647	>1300	▲ 118108	---	▲ 39689
Particles >14µm		ASTM D7647	>160	▲ 4055	---	129
Particles >21µm		ASTM D7647	>40	▲ 72	---	9
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 25/24/19	---	▲ 24/22/14

Customer Id: PAPOMA
 Sample No.: WC0691455
 Lab Number: 06098380
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
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To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

02 Nov 2023 Diag: Don Baldrige

VIS DEBRIS



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report



15 Aug 2023 Diag: Doug Bogart

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



05 May 2023 Diag: Doug Bogart

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

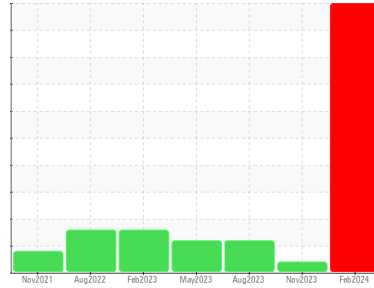
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
VACUUM PUMP [10024012791]
 Machine Id
B68192 - BUSCH ROTARY VANE
 Component
Vacuum Pump
 Fluid
BUSCH R530S (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear

The iron level is severe.

▲ Contamination

There is a high amount of particulates present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0691455	WC0872412	WC0838793
Sample Date	Client Info	13 Feb 2024	02 Nov 2023	15 Aug 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		SEVERE	ABNORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >.1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >20	▲ 285	0	12
Chromium	ppm ASTM D5185m >20	<1	0	<1
Nickel	ppm ASTM D5185m >20	<1	0	0
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m	<1	0	0
Aluminum	ppm ASTM D5185m >20	● 11	<1	<1
Lead	ppm ASTM D5185m >20	<1	0	0
Copper	ppm ASTM D5185m >20	<1	<1	0
Tin	ppm ASTM D5185m >20	<1	0	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	2	0	0
Barium	ppm ASTM D5185m	5	0	<1
Molybdenum	ppm ASTM D5185m	<1	0	0
Manganese	ppm ASTM D5185m	2	0	0
Magnesium	ppm ASTM D5185m	7	<1	4
Calcium	ppm ASTM D5185m	29	2	8
Phosphorus	ppm ASTM D5185m	0	<1	2
Zinc	ppm ASTM D5185m	6	0	<1
Sulfur	ppm ASTM D5185m	3174	2769	66

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >15	▲ 48	6	17
Sodium	ppm ASTM D5185m	75	4	30
Potassium	ppm ASTM D5185m >20	5	<1	3

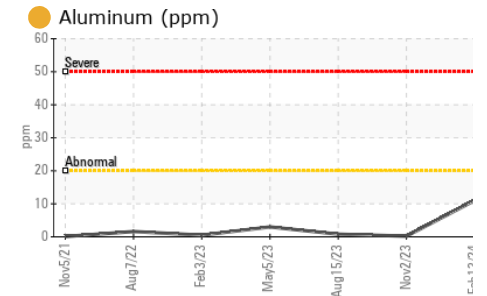
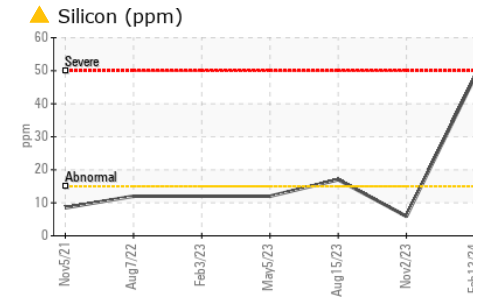
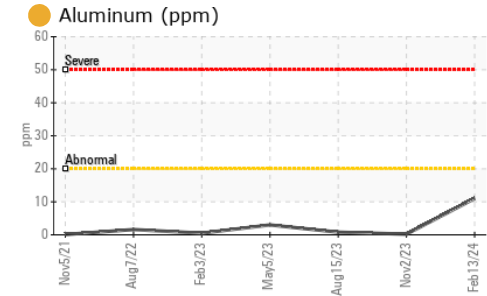
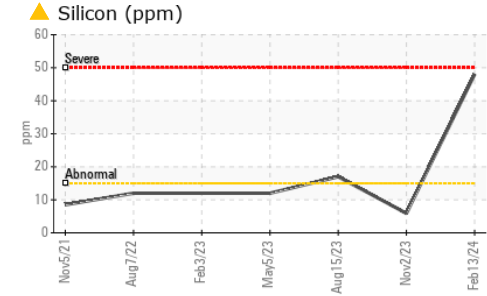
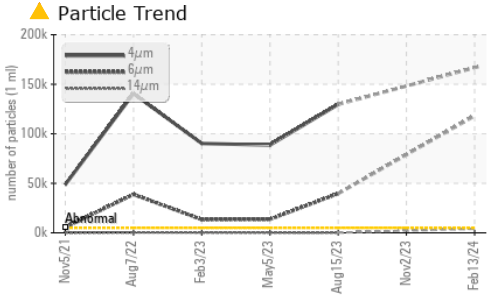
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 166742	---	▲ 129622
Particles >6µm	ASTM D7647 >1300	▲ 118108	---	▲ 39689
Particles >14µm	ASTM D7647 >160	▲ 4055	---	129
Particles >21µm	ASTM D7647 >40	▲ 72	---	9
Particles >38µm	ASTM D7647 >10	0	---	1
Particles >71µm	ASTM D7647 >3	0	---	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 25/24/19	---	▲ 24/22/14

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	0.092	0.166	0.082

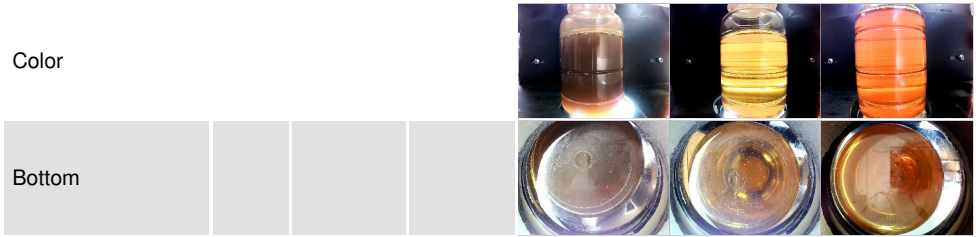
OIL ANALYSIS REPORT



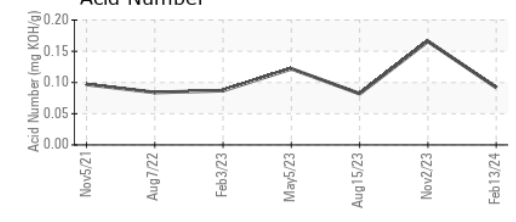
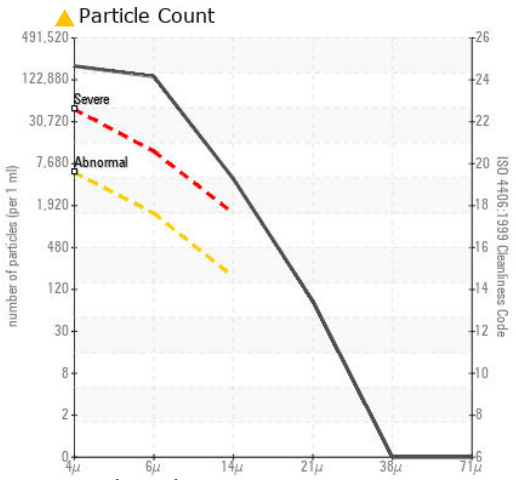
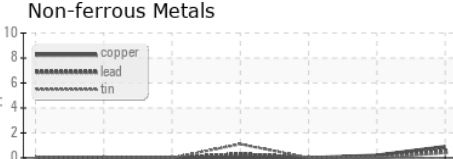
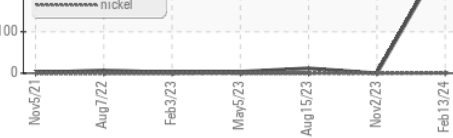
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	95.0	116	111

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0691455 **Received** : 23 Feb 2024
Lab Number : 06098380 **Tested** : 28 Feb 2024
Unique Number : 10896610 **Diagnosed** : 28 Feb 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: PrtCount)

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 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)