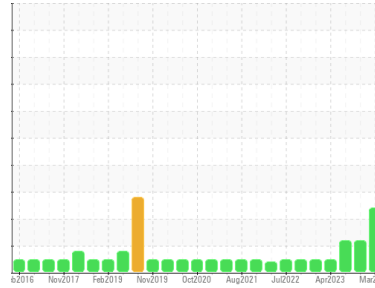




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
BUSCH CV3 RIB SECONDARY (S/N 5590640)

Component
Vacuum Pump
Fluid
USPI VAC 100 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

An increase in the iron level is noted.

Contamination

There is a high amount of particulates present in the oil.

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		USPM30456	USPM31827	USPM29208
Sample Date	Client Info		18 Mar 2024	10 Dec 2023	15 Aug 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			ABNORMAL	ABNORMAL	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	▲ 51	30	10
Chromium	ppm	ASTM D5185m >20	0	<1	0
Nickel	ppm	ASTM D5185m >20	0	0	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	0	<1
Lead	ppm	ASTM D5185m >20	0	0	0
Copper	ppm	ASTM D5185m >20	0	0	<1
Tin	ppm	ASTM D5185m >20	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	0	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 0	0	<1	<1
Calcium	ppm	ASTM D5185m 0	0	4	1
Phosphorus	ppm	ASTM D5185m 1800	1406	1547	1446
Zinc	ppm	ASTM D5185m 0	0	0	<1
Sulfur	ppm	ASTM D5185m 0	0	40	0

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	6	5	5
Sodium	ppm	ASTM D5185m	0	1	0
Potassium	ppm	ASTM D5185m >20	0	<1	<1
Water	%	ASTM D6304 >.1	0.033	0.067	0.075
ppm Water	ppm	ASTM D6304 >1000	330	674	758.8

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 36238	▲ 18006	● 7648
Particles >6µm	ASTM D7647	>1300	▲ 8770	▲ 3928	● 1976
Particles >14µm	ASTM D7647	>160	▲ 206	128	104
Particles >21µm	ASTM D7647	>40	16	10	18
Particles >38µm	ASTM D7647	>10	0	1	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/20/15	▲ 21/19/14	● 20/18/14

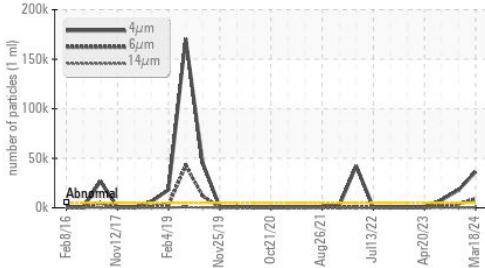
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.05	1.30	1.198	0.83

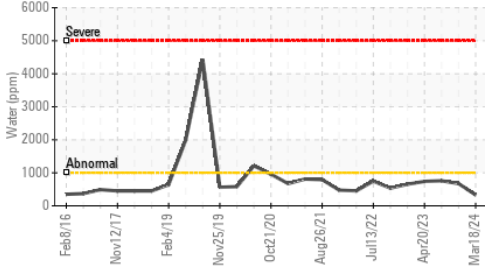


OIL ANALYSIS REPORT

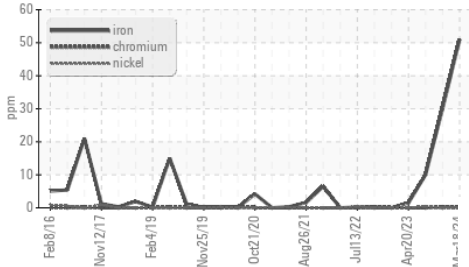
▲ Particle Trend



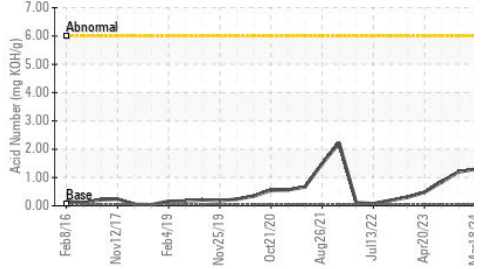
Water (KF)



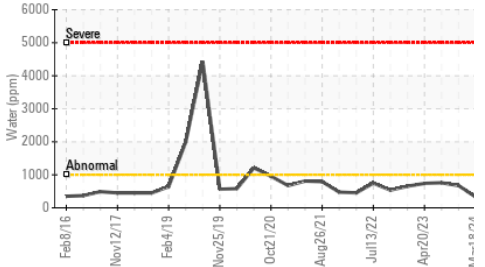
▲ Ferrous Alloys



Acid Number



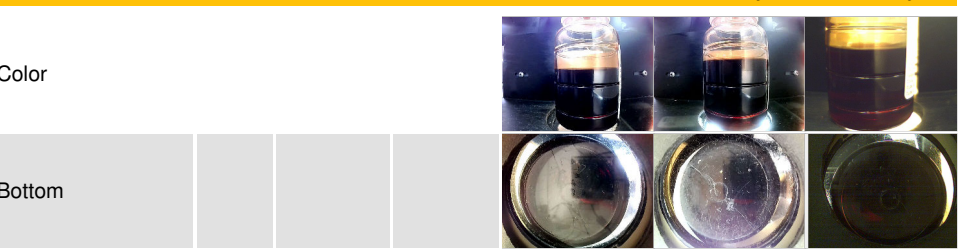
Water (KF)



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	NONE	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

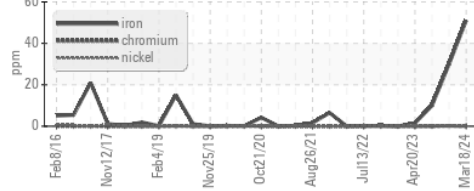
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	91	94.8	96.5

SAMPLE IMAGES

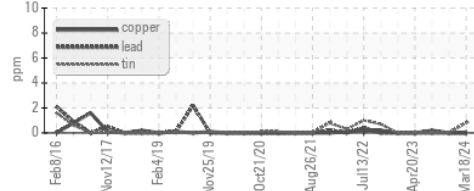


GRAPHS

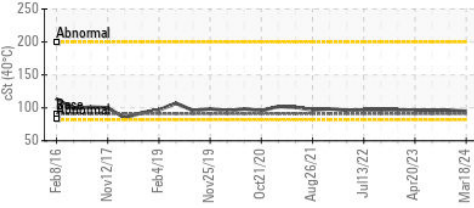
▲ Ferrous Alloys



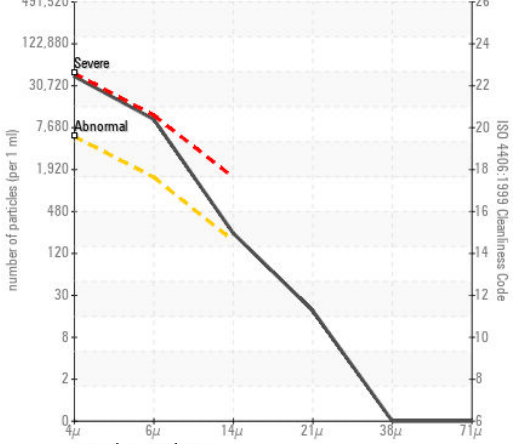
Non-ferrous Metals



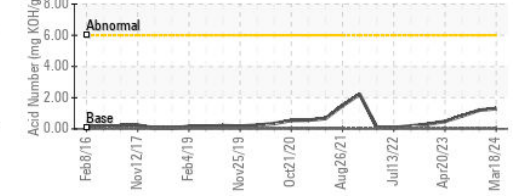
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : USPM30456
 Lab Number : 06122424
 Unique Number : 10936575
 Test Package : IND 2
 Received : 19 Mar 2024
 Tested : 20 Mar 2024
 Diagnosed : 20 Mar 2024 - Doug Bogart

JBS-OTTUMWA
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 OTTUMWA, IA
 US 52501
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 lisa_pierce@cargill.com
 T: (641)683-4741
 F: (641)683-4731

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)