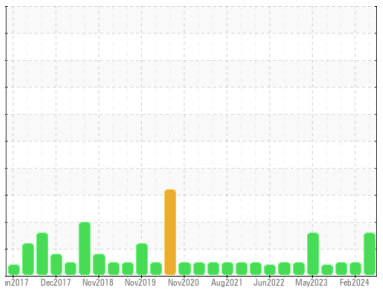
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
BUSCH VM4 / VP-2 (S/N 2512909)
Component
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
All component wear rates are normal.

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		**USP0006305**	USPM30310	USPM31371
Sample Date		Client Info		**15 Apr 2024**	28 Feb 2024	26 Nov 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**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	**0**	0	1
Chromium	ppm	ASTM D5185m	>5	**0**	0	0
Nickel	ppm	ASTM D5185m	>5	**0**	0	<1
Titanium	ppm	ASTM D5185m	>3	**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>7	**0**	0	<1
Lead	ppm	ASTM D5185m	>12	**<1**	0	<1
Copper	ppm	ASTM D5185m	>30	**0**	0	0
Tin	ppm	ASTM D5185m	>9	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	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**	0	<1
Calcium	ppm	ASTM D5185m	0	**0**	0	2
Phosphorus	ppm	ASTM D5185m	1800	**1076**	1076	1512
Zinc	ppm	ASTM D5185m	0	**0**	<1	0
Sulfur	ppm	ASTM D5185m	0	**0**	0	12

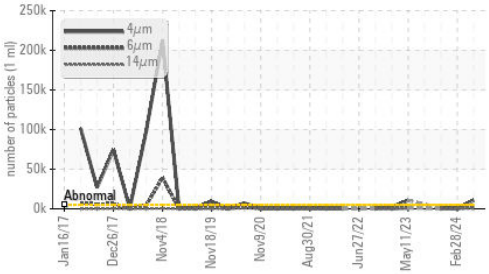
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	**<1**	2	1
Sodium	ppm	ASTM D5185m		**1**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**11**	0	2
Water	%	ASTM D6304	>.1	**0.042**	0.031	0.043
ppm Water	ppm	ASTM D6304	>1000	**426**	314	440

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **10544**	507	979
Particles >6µm		ASTM D7647	>1300	▲ **3133**	147	278
Particles >14µm		ASTM D7647	>160	▲ **204**	15	13
Particles >21µm		ASTM D7647	>40	**39**	2	4
Particles >38µm		ASTM D7647	>10	**1**	0	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/19/15**	16/14/11	17/15/11

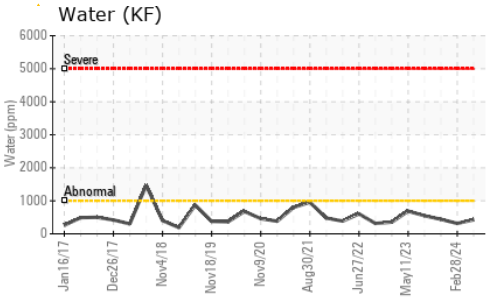
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	**0.26**	0.25	0.30

OIL ANALYSIS REPORT

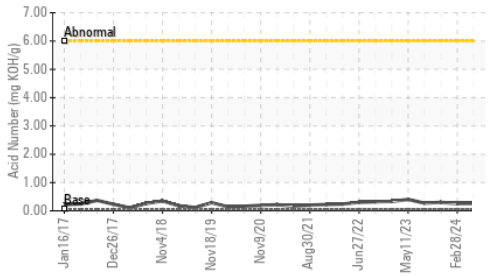
Particle Trend



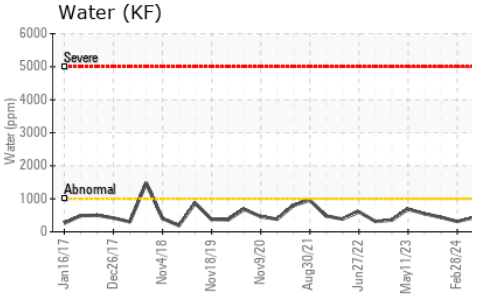
Water (KF)



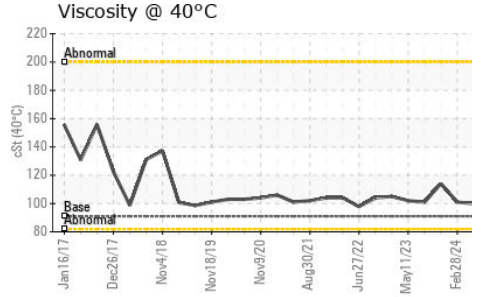
Acid Number



Water (KF)



Viscosity @ 40°C



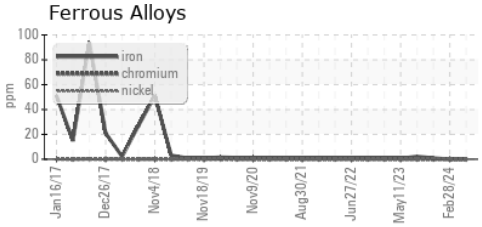
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**LIGHT**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	91	**99.9**	101	114

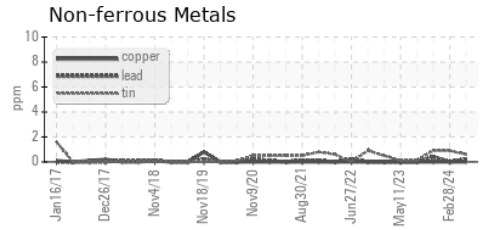
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

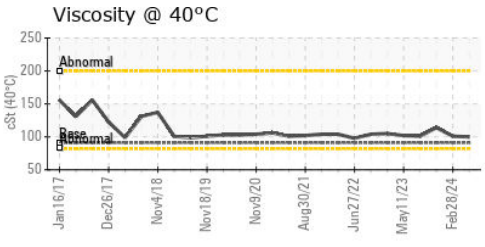
Ferrous Alloys



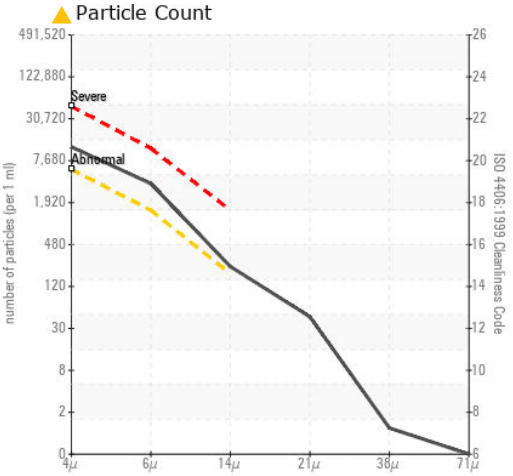
Non-ferrous Metals



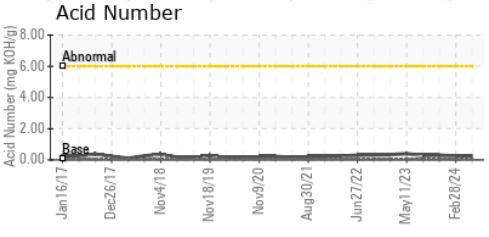
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0006305
Lab Number : 06150381
Unique Number : 10980459
Test Package : IND 2

Received : 16 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 17 Apr 2024 - Doug Bogart

TYSON-DAKOTA CITY-USP
P.O. BOX 515
DAKOTA CITY, NE
US 68731
Contact: RICHARD KOCH
T: (605)235-2396
F: (605)235-2960

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)