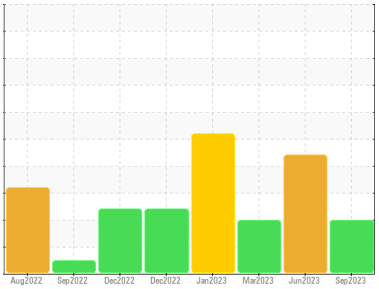
PROBLEM SUMMARY

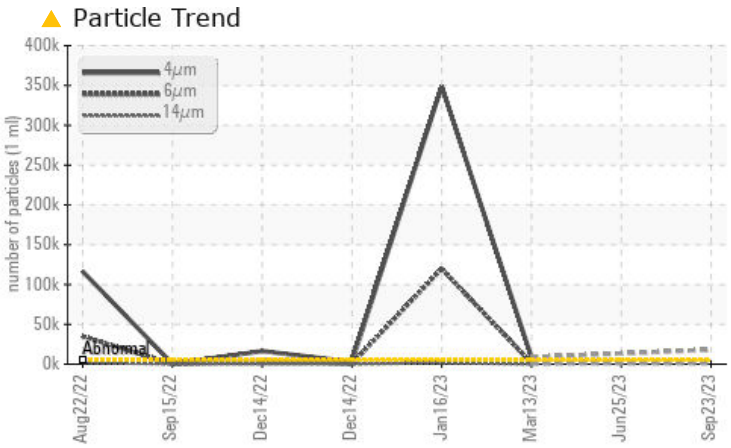
Sample Rating Trend



ISO

Machine Id
BUSCH VP-10B
Component
Vacuum Pump
Fluid
USPI VAC 100 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ATTENTION
Particles >4µm		ASTM D7647	>5000	▲ **18003**	---	▲ 8767
Particles >6µm		ASTM D7647	>1300	▲ **3636**	---	▲ 1349
Particles >14µm		ASTM D7647	>160	▲ **236**	---	11
Particles >21µm		ASTM D7647	>40	▲ **59**	---	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/19/15**	---	▲ 20/18/11

Customer Id: TYSAMAPRO
Sample No.: USPM29753
Lab Number: 05961785
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

25 Jun 2023 Diag: Doug Bogart

WATER

We advise that you follow the water drain-off procedure for this component. 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. There is a moderate amount of visible silt present in the sample. Free water present. There is a moderate concentration of water present in the oil. The oil viscosity is lower than normal. Confirmed. The AN level is acceptable for this fluid.

view report

13 Mar 2023 Diag: Doug Bogart

VISCOSITY

Resample at the next service interval to monitor. SAMPLED AT DRAIN USPI-OFFLINEAll component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirmed. The AN level is acceptable for this fluid.

view report

16 Jan 2023 Diag: Doug Bogart

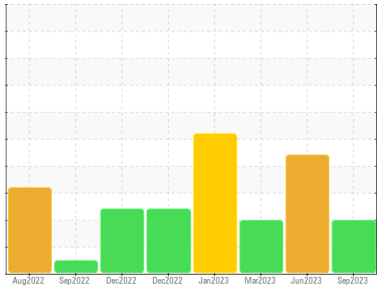
DIRT

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.The iron level is abnormal. The aluminum level is abnormal. There is a high amount of particulates present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. An increase in the sulfur level is noted. The AN level is acceptable for this fluid.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
BUSCH VP-10B
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
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		**USPM29753**	USPM27136	USPM27559
Sample Date		Client Info		**23 Sep 2023**	25 Jun 2023	13 Mar 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	**0**	11	7
Chromium	ppm	ASTM D5185m	>20	**0**	<1	0
Nickel	ppm	ASTM D5185m	>20	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**4**	2	<1
Lead	ppm	ASTM D5185m	>20	**0**	2	0
Copper	ppm	ASTM D5185m	>20	**<1**	7	2
Tin	ppm	ASTM D5185m	>20	**<1**	2	0
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	1	0
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**<1**	<1	0
Calcium	ppm	ASTM D5185m	0	**<1**	0	0
Phosphorus	ppm	ASTM D5185m	1800	**874**	252	▲ 168
Zinc	ppm	ASTM D5185m	0	**0**	0	4
Sulfur	ppm	ASTM D5185m	0	**5**	183	0

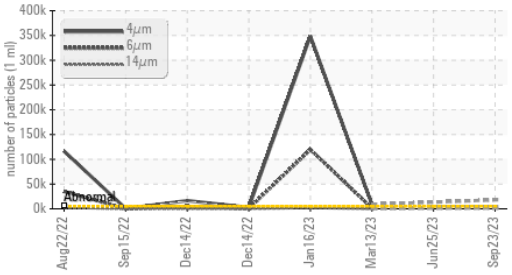
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	8	4
Sodium	ppm	ASTM D5185m		**0**	1	12
Potassium	ppm	ASTM D5185m	>20	**2**	3	2
Water	%	ASTM D6304	>.1	**0.089**	▲ 0.690	0.005
ppm Water	ppm	ASTM D6304	>1000	**897.6**	▲ 6900	52.8

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **18003**	---	▲ 8767
Particles >6µm		ASTM D7647	>1300	▲ **3636**	---	▲ 1349
Particles >14µm		ASTM D7647	>160	▲ **236**	---	11
Particles >21µm		ASTM D7647	>40	▲ **59**	---	1
Particles >38µm		ASTM D7647	>10	**3**	---	0
Particles >71µm		ASTM D7647	>3	**1**	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/19/15**	---	▲ 20/18/11

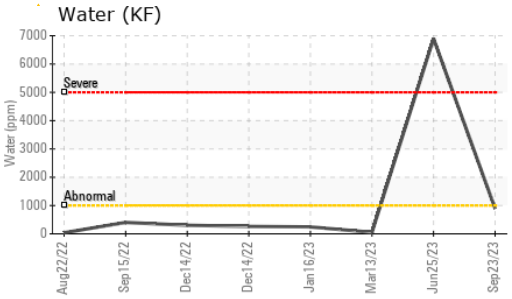
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	**0.06**	0.46	0.51

OIL ANALYSIS REPORT

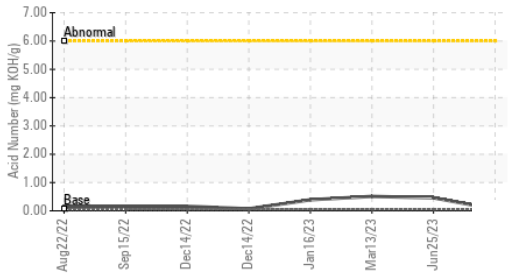
Particle Trend



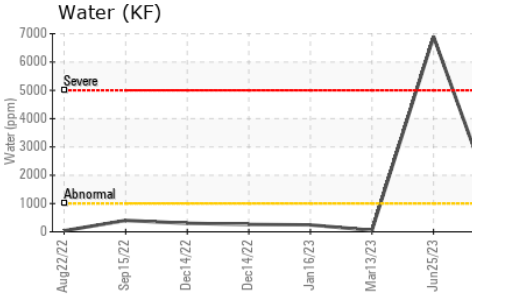
Water (KF)



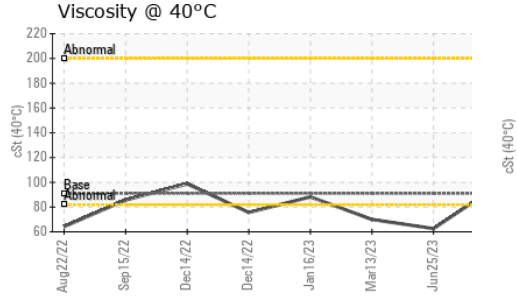
Acid Number



Water (KF)

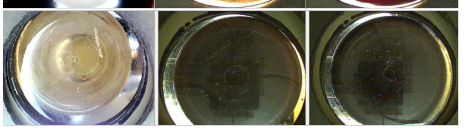


Viscosity @ 40°C



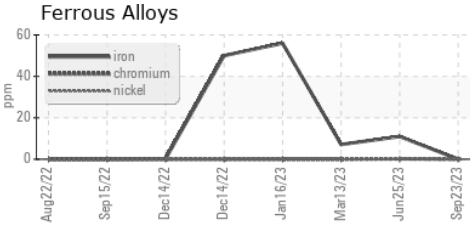
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	▲ MODER	NONE
Debris	scalar	*Visual	NONE	**LIGHT**	NONE	NONE
Sand/Dirt	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**	▲ 0.2%	NEG
Free Water	scalar	*Visual		**NEG**	▲ 1.0	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	91	**95.8**	▲ 62.6	▲ 70.0

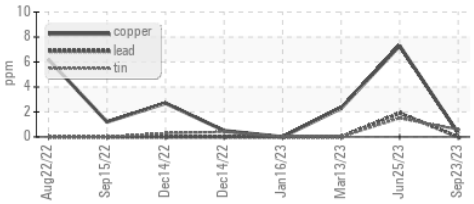
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

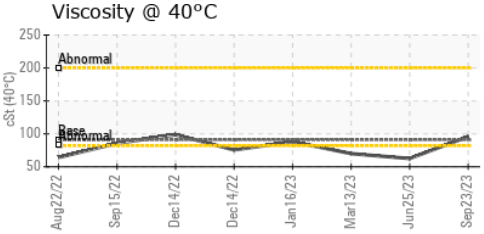
Ferrous Alloys



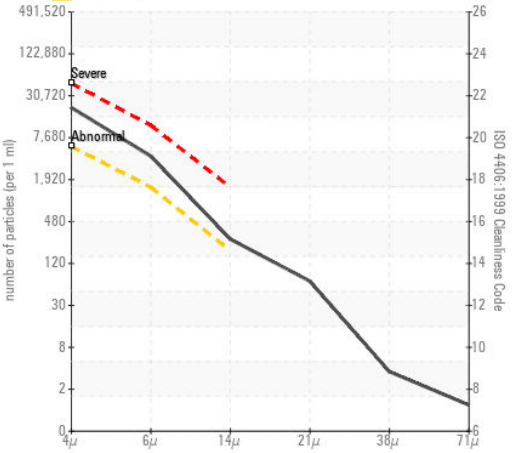
Non-ferrous Metals



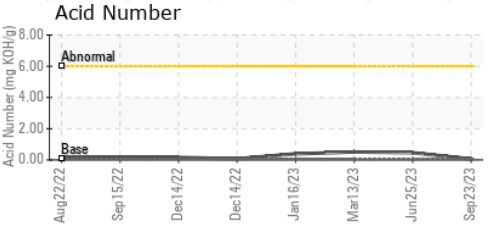
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM29753
Lab Number : 05961785
Unique Number : 10668336
Test Package : IND 2

Received : 26 Sep 2023
Diagnosed : 27 Sep 2023
Diagnostician : Doug Bogart

Certificate L2367

TYSON -AMARILLO-PRO
AMARILLO, TX
US
Contact: SERVICE MANAGER
T:
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)