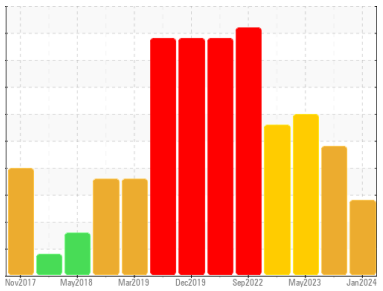
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
VACUUM - RM 123-RTE-PCK LN 2 CRY 2ND TOP (S/N N15091831)
Component
Pump
Fluid
USPI VAC 100 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you perform a filter service and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. Appearance is hazy. There is a moderate concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**USPM30626**	USPM29872	USPM28293
Sample Date		Client Info		**02 Jan 2024**	03 Oct 2023	23 May 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**	SEVERE	SEVERE

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

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**1**	6	0
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m	0	**0**	0	<1
Calcium	ppm	ASTM D5185m	0	**<1**	0	<1
Phosphorus	ppm	ASTM D5185m	1800	**1023**	1339	1741
Zinc	ppm	ASTM D5185m	0	**0**	11	21
Sulfur	ppm	ASTM D5185m	0	**0**	23	25

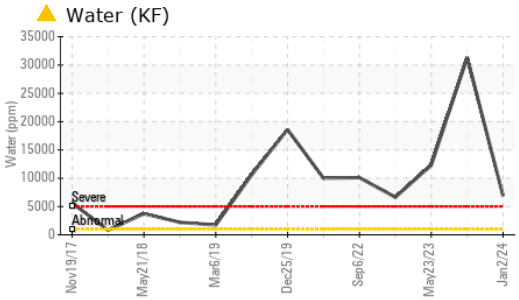
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	**3**	4	1
Sodium	ppm	ASTM D5185m		**12**	18	26
Potassium	ppm	ASTM D5185m	>20	**0**	0	2
Water	%	ASTM D6304	>.1	▲ **0.693**	⬢ 3.13	⬢ 1.23
ppm Water	ppm	ASTM D6304	>1000	▲ **6930**	⬢ 31300	⬢ 12300

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **27135**	---	---
Particles >6µm		ASTM D7647	>1300	▲ **5500**	---	---
Particles >14µm		ASTM D7647	>160	**145**	---	---
Particles >21µm		ASTM D7647	>40	**26**	---	---
Particles >38µm		ASTM D7647	>10	**1**	---	---
Particles >71µm		ASTM D7647	>3	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/20/14**	---	---

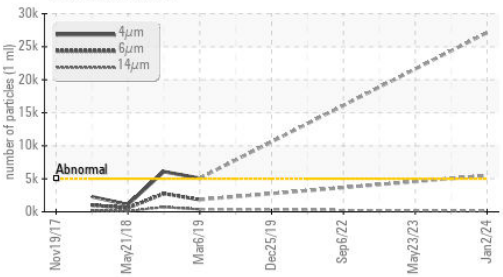
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	**0.18**	0.36	0.133

OIL ANALYSIS REPORT

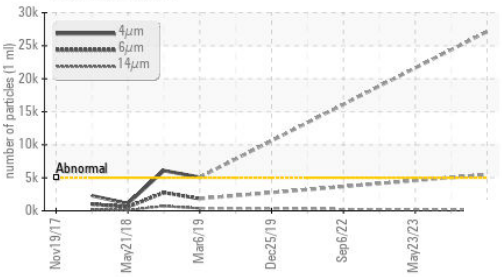
Water (KF)



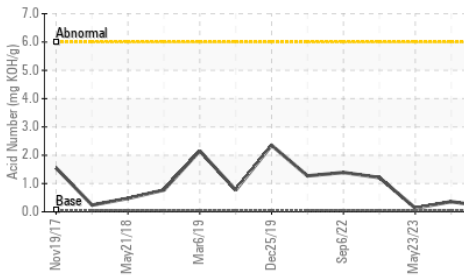
Particle Trend



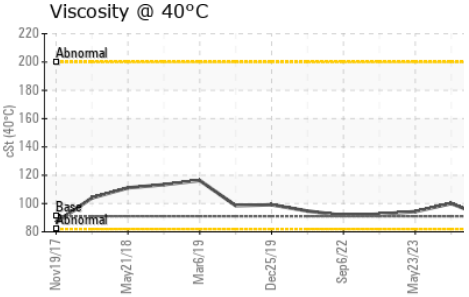
Particle Trend



Acid Number



Viscosity @ 40°C



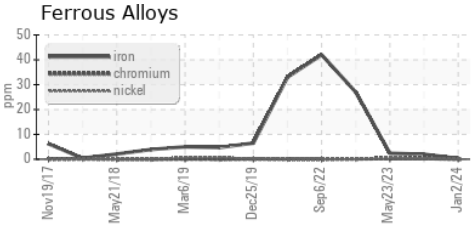
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	▲ HEAVY	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	▲ MILKY	▲ HAZY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.1	▲ **0.2%**	⬢ 0.2%	⬢ 0.2%
Free Water	scalar	*Visual		**NEG**	NEG	▲ 1.0

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	91	**90.2**	100	94.3

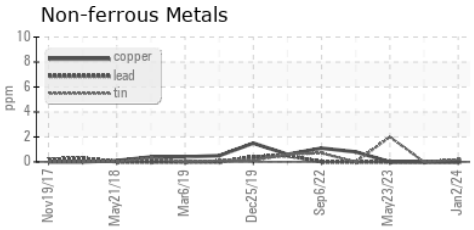
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

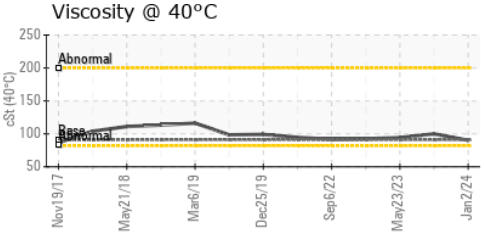
Ferrous Alloys



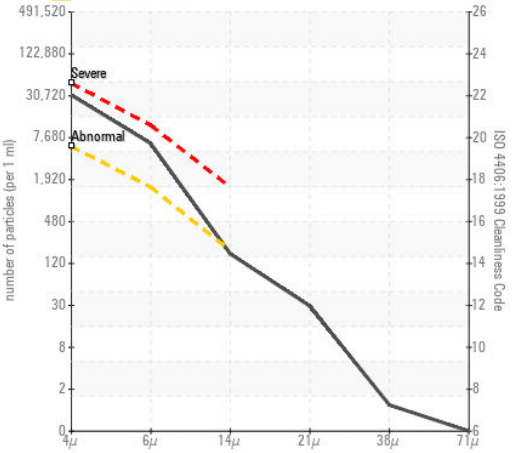
Non-ferrous Metals



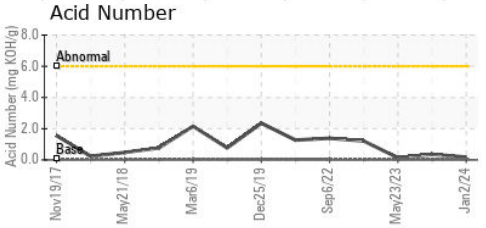
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM30626
Lab Number : 06062029
Unique Number : 10833411
Test Package : IND 2

Recieved : 16 Jan 2024
Diagnosed : 23 Jan 2024
Diagnostician : Doug Bogart

Certificate L2367

BOARS HEAD - NEW CASTLE
125 E COUNTY RD 400 S
NEW CASTLE, IN
US 47362
Contact:
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)