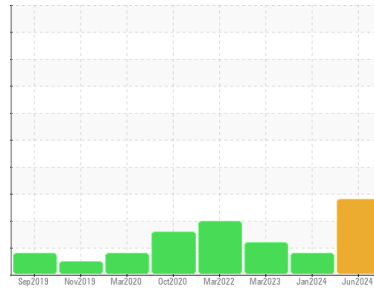




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
PL2 LINE 1 - MULTIVAC (S/N C180400399)
 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	USPM36472	USPM30740	USPM26882
Sample Date	Client Info	04 Jun 2024	23 Jan 2024	22 Mar 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ATTENTION	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >90	11	22	5
Chromium	ppm	ASTM D5185m >5	0	0	0
Nickel	ppm	ASTM D5185m >5	0	0	0
Titanium	ppm	ASTM D5185m >3	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >7	<1	0	<1
Lead	ppm	ASTM D5185m >12	0	0	0
Copper	ppm	ASTM D5185m >30	0	<1	0
Tin	ppm	ASTM D5185m >9	0	0	0
Antimony	ppm	ASTM D5185m	---	---	---
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	2	0
Magnesium	ppm	ASTM D5185m 0	0	<1	0
Calcium	ppm	ASTM D5185m 0	<1	5	0
Phosphorus	ppm	ASTM D5185m 1800	659	260	693
Zinc	ppm	ASTM D5185m 0	26	<1	0
Sulfur	ppm	ASTM D5185m 0	235	1360	6

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >60	18	8	10
Sodium	ppm	ASTM D5185m	3	2	0
Potassium	ppm	ASTM D5185m >20	2	0	<1
Water	%	ASTM D6304 >.1	0.034	0.015	0.017
ppm Water	ppm	ASTM D6304 >1000	341	156	179.8

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 55347	● 9027	▲ 17536
Particles >6µm	ASTM D7647 >1300	▲ 10820	677	▲ 3217
Particles >14µm	ASTM D7647 >160	▲ 383	51	103
Particles >21µm	ASTM D7647 >40	▲ 93	11	24
Particles >38µm	ASTM D7647 >10	▲ 12	0	0
Particles >71µm	ASTM D7647 >3	▲ 9	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 23/21/16	● 20/17/13	▲ 21/19/14

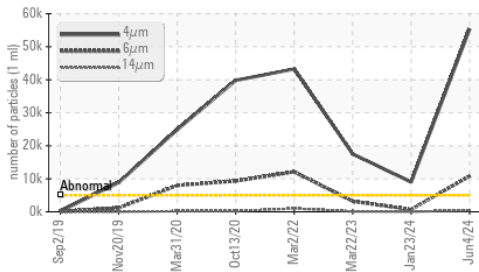
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.05	0.15	0.11	0.114

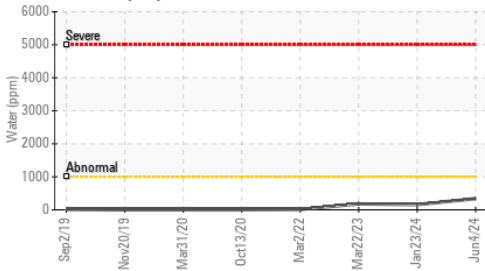


OIL ANALYSIS REPORT

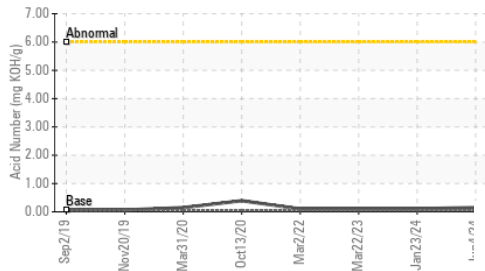
Particle Trend



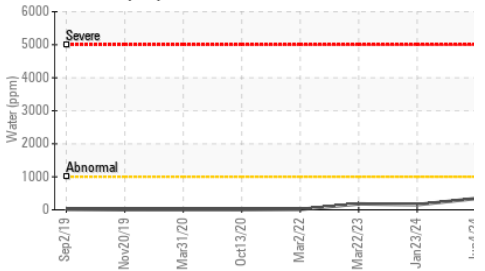
Water (KF)



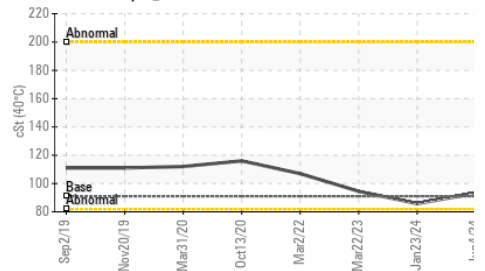
Acid Number



Water (KF)



Viscosity @ 40°C



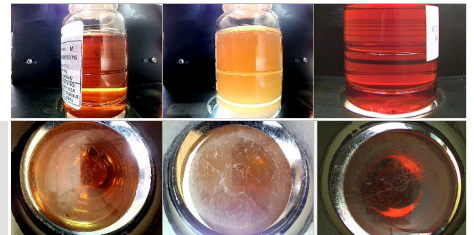
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	93.2	85.8	94.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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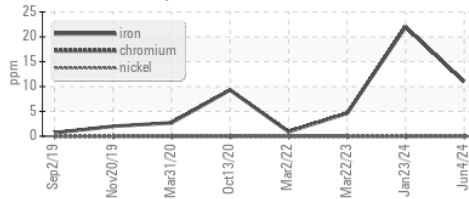
Color

Bottom

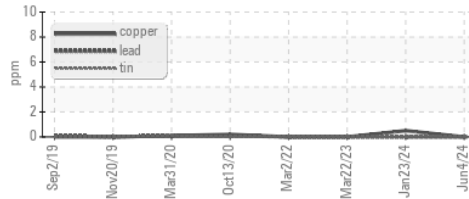


GRAPHS

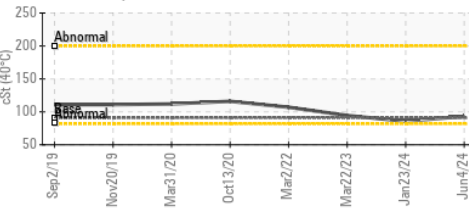
Ferrous Alloys



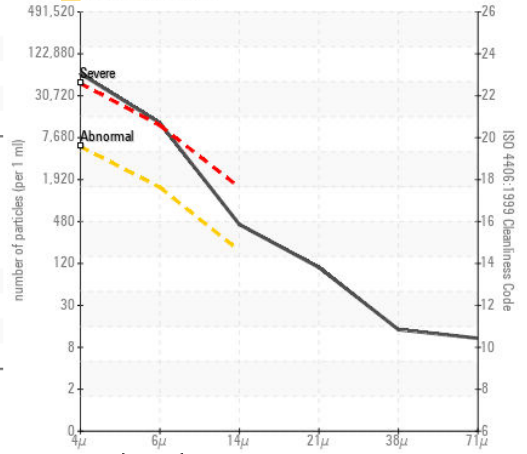
Non-ferrous Metals



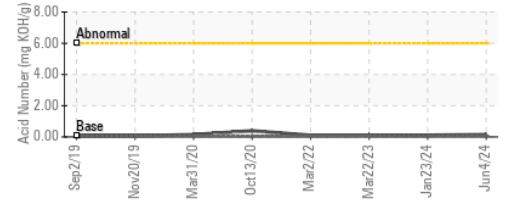
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : USPM36472
 Lab Number : 06200184
 Unique Number : 11062307
 Test Package : IND 2

ARMOUR - ECKRICH (SMITHFIELD FOODS SMISAILL)

Received : 05 Jun 2024
 Tested : 06 Jun 2024
 Diagnosed : 10 Jun 2024 - Doug Bogart

SAINT CHARLES, IL
 US
 Contact:

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)

T:
F: