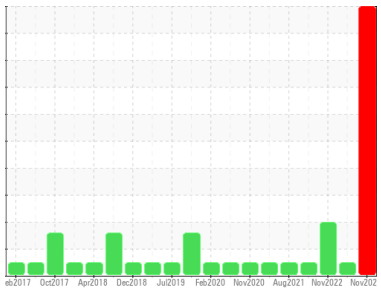
PROBLEM SUMMARY

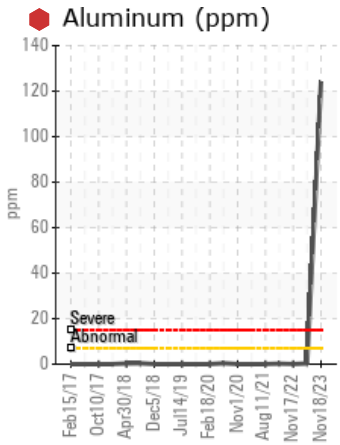
Sample Rating Trend

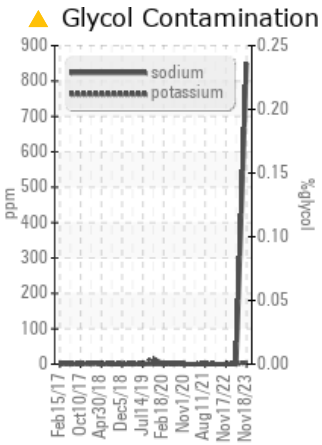


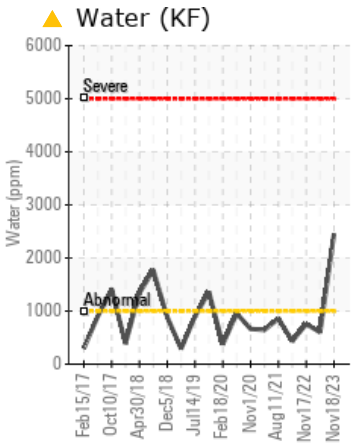
WEAR

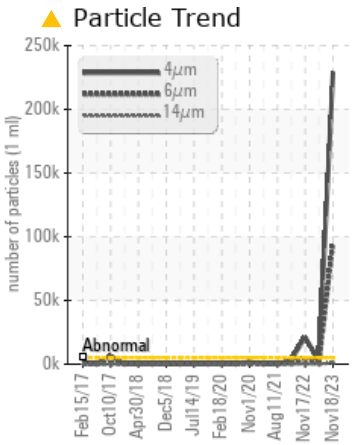
Machine Id
VAC 1178634-3 MIDDLE (S/N C5878-1)
Component
Pump
Fluid
USPI VAC 100 (--- GAL)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise an early resample to confirm this situation. All data confirmed.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	ABNORMAL
Aluminum	ppm	ASTM D5185m	>7	**124**	<1	0
Sodium	ppm	ASTM D5185m		**850**	0	0
Water	%	ASTM D6304	>.1	**0.245**	0.060	0.075
ppm Water	ppm	ASTM D6304	>1000	**2450.0**	600.5	754.4
Particles >4µm		ASTM D7647	>5000	**229065**	2802	20986
Particles >6µm		ASTM D7647	>1300	**95171**	868	4514
Particles >14µm		ASTM D7647	>160	**899**	43	207
Particles >21µm		ASTM D7647	>40	**241**	7	48
Particles >38µm		ASTM D7647	>10	**23**	1	8
Particles >71µm		ASTM D7647	>3	**5**	0	2
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**25/24/17**	19/17/13	22/19/15

Customer Id: JBSBEA
Sample No.: USPM31309
Lab Number: 06010899
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
Resample	---	---	?	We advise an early resample to confirm this situation.

HISTORICAL DIAGNOSIS

13 Jul 2023 Diag: Doug Bogart

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

17 Nov 2022 Diag: Doug Bogart

ISO

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

27 Feb 2022 Diag: Doug Bogart

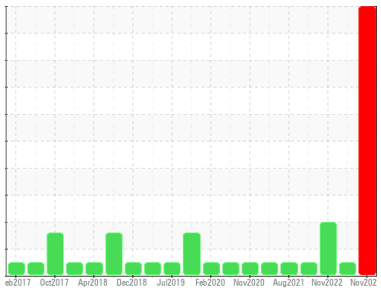
NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
VAC 1178634-3 MIDDLE (S/N C5878-1)
Component
Pump
Fluid
USPI VAC 100 (--- GAL)

DIAGNOSIS

Recommendation
We advise an early resample to confirm this situation. All data confirmed.

Wear
The aluminum level is severe.

Contamination
There is a high amount of particulates present in the oil. The high sodium (Na) level indicates the possible presence of salt water. There is a light concentration of water present in the oil.

Fluid Condition
An increase in the viscosity is noted. Confirmed. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**USPM31309**	USPM27379	USPM23644
Sample Date		Client Info		**18 Nov 2023**	13 Jul 2023	17 Nov 2022
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				**SEVERE**	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	**39**	2	3
Chromium	ppm	ASTM D5185m	>5	**<1**	0	0
Nickel	ppm	ASTM D5185m	>5	**<1**	0	0
Titanium	ppm	ASTM D5185m	>3	**<1**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>7	**124**	<1	0
Lead	ppm	ASTM D5185m	>12	**2**	0	<1
Copper	ppm	ASTM D5185m	>30	**2**	0	0
Tin	ppm	ASTM D5185m	>9	**<1**	0	1
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	0	0
Barium	ppm	ASTM D5185m	0	**35**	0	0
Molybdenum	ppm	ASTM D5185m	0	**<1**	0	0
Manganese	ppm	ASTM D5185m		**1**	<1	0
Magnesium	ppm	ASTM D5185m	0	**3**	0	0
Calcium	ppm	ASTM D5185m	0	**14**	0	0
Phosphorus	ppm	ASTM D5185m	1800	**939**	1436	1625
Zinc	ppm	ASTM D5185m	0	**3**	0	0
Sulfur	ppm	ASTM D5185m	0	**5**	0	<1

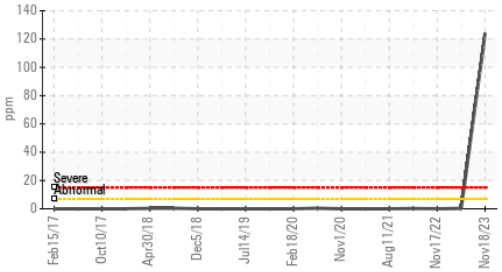
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	**6**	3	4
Sodium	ppm	ASTM D5185m		**850**	0	0
Potassium	ppm	ASTM D5185m	>20	**5**	2	0
Water	%	ASTM D6304	>.1	**0.245**	0.060	0.075
ppm Water	ppm	ASTM D6304	>1000	**2450.0**	600.5	754.4

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**229065**	2802	20986
Particles >6µm		ASTM D7647	>1300	**95171**	868	4514
Particles >14µm		ASTM D7647	>160	**899**	43	207
Particles >21µm		ASTM D7647	>40	**241**	7	48
Particles >38µm		ASTM D7647	>10	**23**	1	8
Particles >71µm		ASTM D7647	>3	**5**	0	2
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**25/24/17**	19/17/13	22/19/15

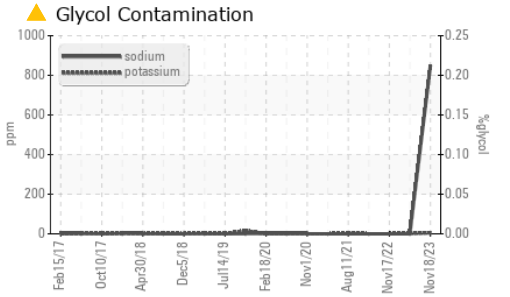
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	**0.32**	0.34	0.70

OIL ANALYSIS REPORT

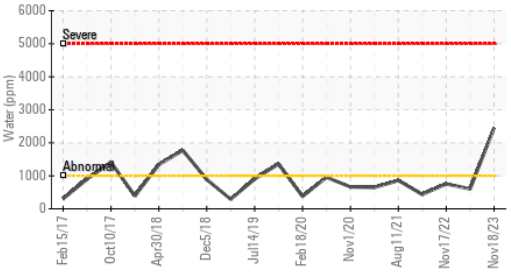
Aluminum (ppm)



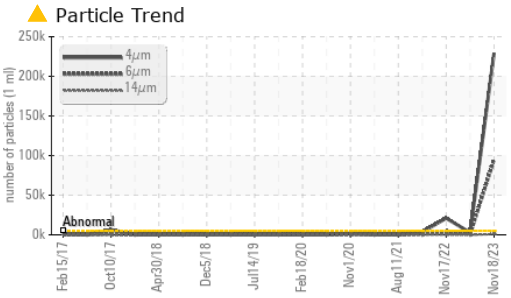
Glycol Contamination



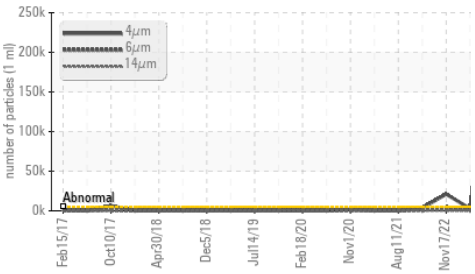
Water (KF)



Particle Trend

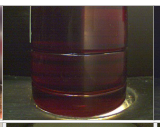
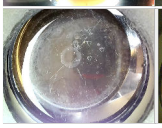
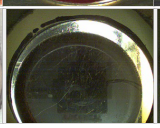
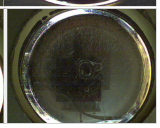


Particle Trend



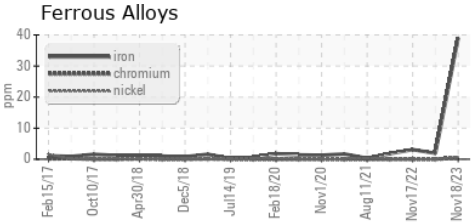
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**LIGHT**	NONE	NONE
Sand/Dirt	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	**143.6**	103	104

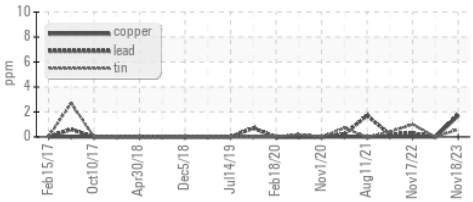
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

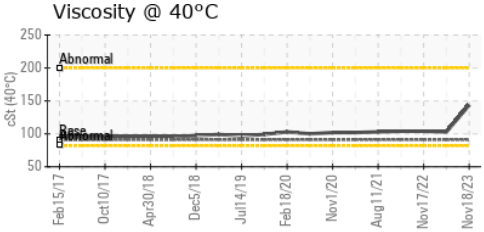
Ferrous Alloys



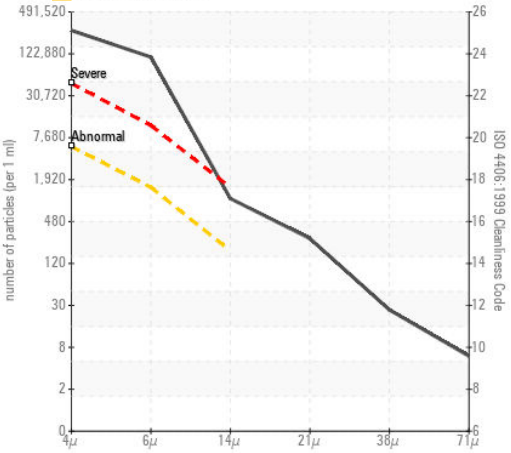
Non-ferrous Metals



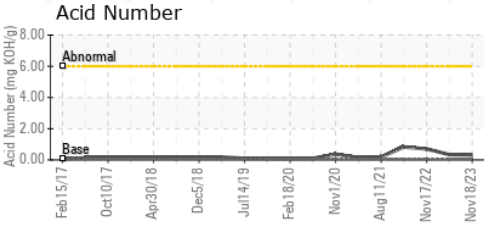
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM31309
Lab Number : 06010899
Unique Number : 10750043
Test Package : IND 2

Received : 17 Nov 2023
Diagnosed : 22 Nov 2023
Diagnostician : Doug Bogart

Certificate L2367

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)

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