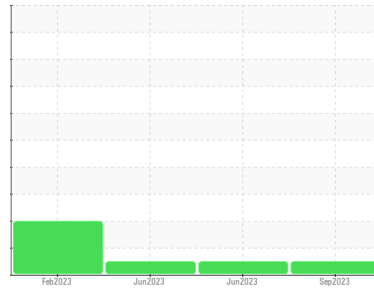




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**8S (S/N 5587282)**

Component  
**Vacuum Pump**

Fluid  
**USPI VAC 100 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

### 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	<b>USPM29814</b>	USPM28211	USP227736
Sample Date	Client Info	<b>27 Sep 2023</b>	19 Jun 2023	09 Jun 2023
Machine Age	hrs	Client Info	<b>0</b>	0
Oil Age	hrs	Client Info	<b>0</b>	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Tin	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Calcium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m	1800	<b>880</b>	870	870
Zinc	ppm	ASTM D5185m	0	<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m	0	<b>21</b>	34	37

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>15	<b>12</b>	9	10
Sodium	ppm	ASTM D5185m		<b>0</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Water	%	ASTM D6304	>.1	<b>0.030</b>	0.040	0.050
ppm Water	ppm	ASTM D6304	>1000	<b>300.4</b>	409.6	509.6

## FLUID CLEANLINESS

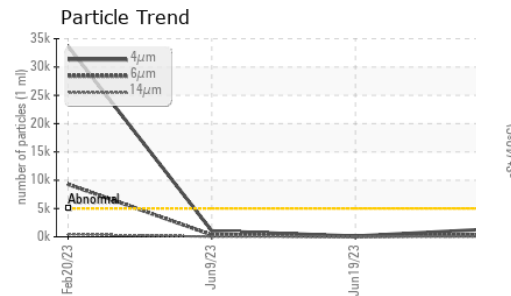
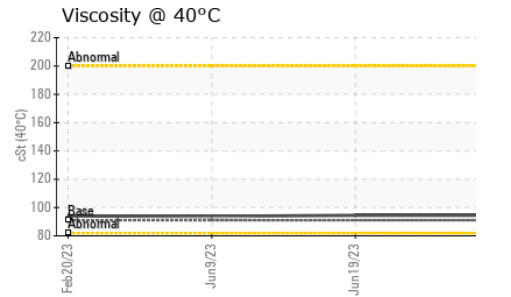
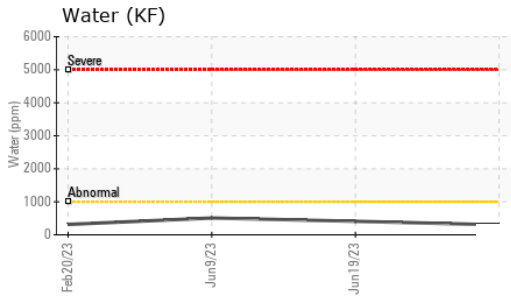
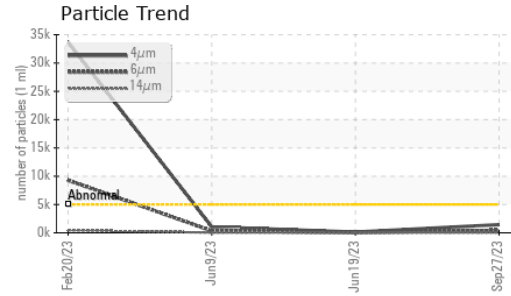
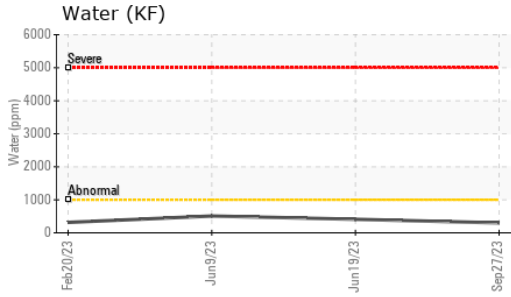
method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>5000	<b>1439</b>	129	1051
Particles >6µm	ASTM D7647	>1300	<b>437</b>	48	341
Particles >14µm	ASTM D7647	>160	<b>32</b>	8	30
Particles >21µm	ASTM D7647	>40	<b>7</b>	2	7
Particles >38µm	ASTM D7647	>10	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>18/16/12</b>	14/13/10	17/16/12

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	<b>0.35</b>	0.18	0.23



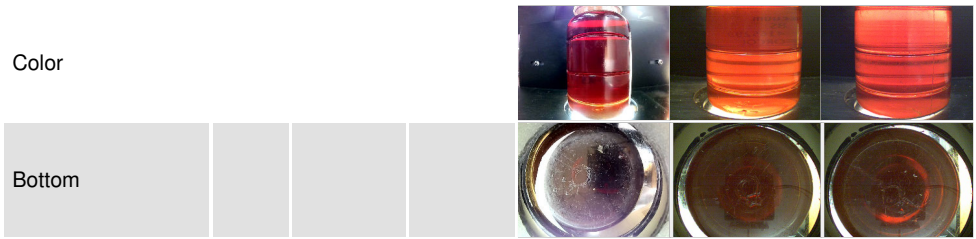
# OIL ANALYSIS REPORT



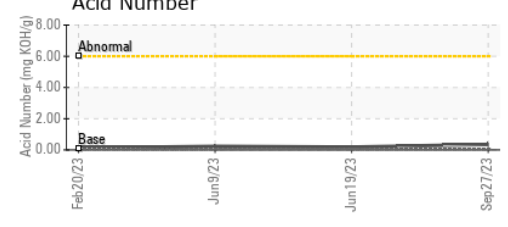
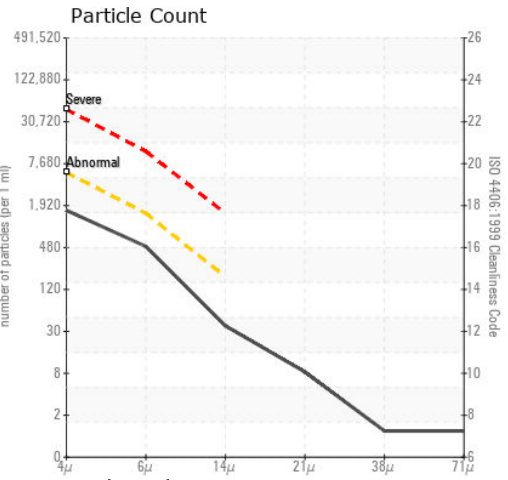
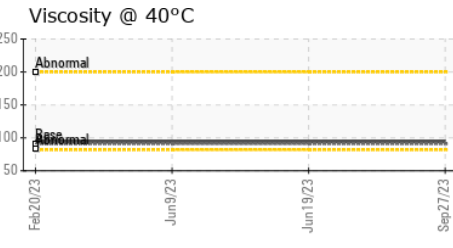
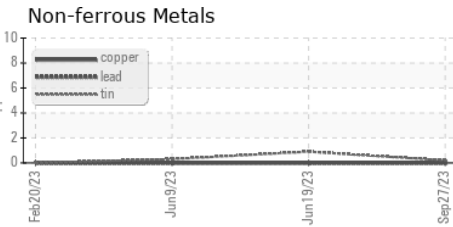
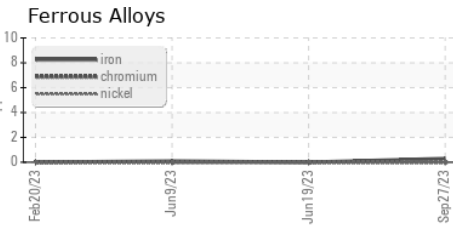
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 91	<b>94.5</b>	94.5	93.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USPM29814      **Received** : 02 Oct 2023  
**Lab Number** : 05966392      **Diagnosed** : 03 Oct 2023  
**Unique Number** : 10672943      **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**CARGILL FORT MORGAN**  
 1505 E BURLINGTON AVE  
 FORT MORGAN, CO  
 US 80701  
 Contact: JOE ROSENFELD

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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F: