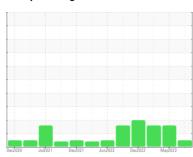


## **OIL ANALYSIS REPORT**

### **Sample Rating Trend**







# A4 TUMBLER

Component **Pump** Fluid

**USPI VAC 100 (--- LTR)** 

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

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

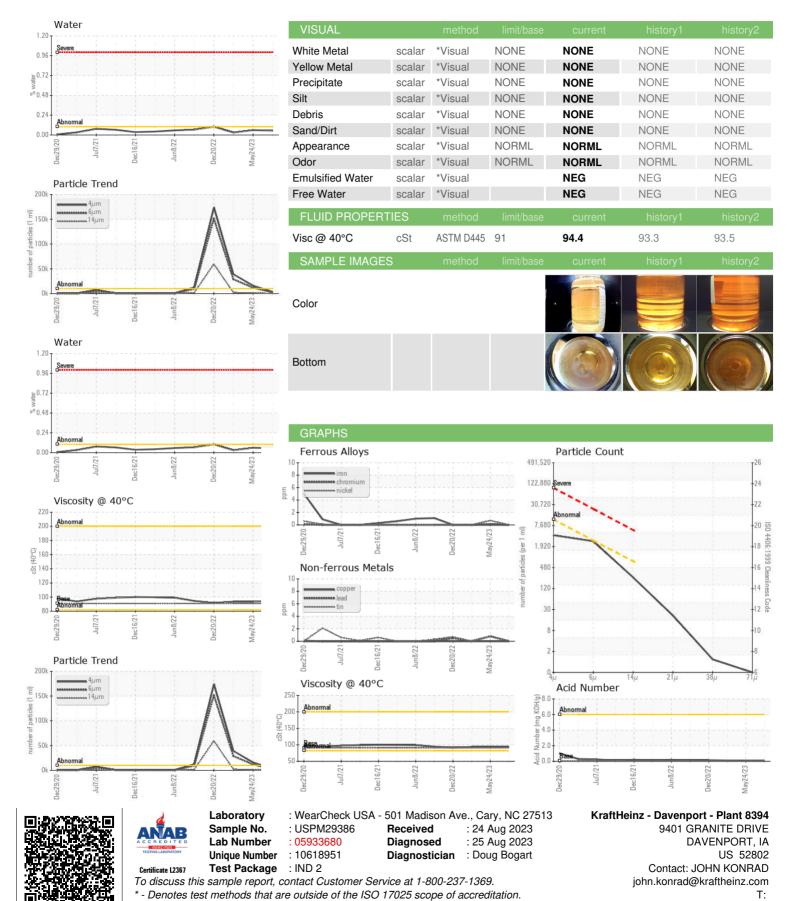
#### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

		Dec2020	Jul2021 Dec2021	Jun2022 Dec2022 M	ay2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USPM29386	USPM28402	USPM28513
Sample Date		Client Info		18 Aug 2023	24 May 2023	30 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				NORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	0	0	0
Chromium	ppm	ASTM D5185m	>5	0	<1	0
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>7	0	0	1
Lead	ppm	ASTM D5185m	>12	0	<1	0
Copper	ppm	ASTM D5185m	>30	0	0	0
Tin	ppm	ASTM D5185m	>9	<1	<1	0
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	<1	<1
Magnesium	ppm	ASTM D5185m	0	<1	0	2
Calcium	ppm	ASTM D5185m	0	2	<1	0
Phosphorus	ppm	ASTM D5185m	1800	998	958	943
Zinc	ppm	ASTM D5185m	0	0	0	0
Sulfur	ppm	ASTM D5185m	0	25	0	0
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	4	3	6
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	0	2	0
Water	%	ASTM D6304		0.052	0.059	0.029
ppm Water	ppm	ASTM D6304	>.1	525.2	592.1	293.4
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	3546	<u>▲</u> 15793	▲ 38933
Particles >6µm		ASTM D7647	>2500	2396	<b>▲</b> 11796	<u>\$\text{28594}\$</u>
Particles >14µm		ASTM D7647	>640	221	<u>▲</u> 1277	<b>1890</b>
Particles >21µm		ASTM D7647	>160	18	87	107
Particles >38µm		ASTM D7647	>40	1	1	2
Particles >71μm		ASTM D7647	>10	0	0	2
Oil Cleanliness		ISO 4406 (c)	>20/18/16	19/18/15	<u>\$\text{\Delta}\$ 21/21/17</u>	<u>▲</u> 22/22/18
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	0.053	0.105	0.11



## **OIL ANALYSIS REPORT**



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: (563)326-8391