

PROBLEM SUMMARY

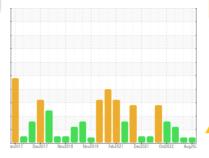
Sample Rating Trend

VIS DEBRIS

BUSCH VM8 / VP-3 (S/N 2512909)

Pump Fluid

USPI VAC 100 (--- GAL)





COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

PROBLEMATIC TEST RESULTS							
Sample Status				ABNORMAL	ABNORMAL	ATTENTION	
Debris	scalar	*Visual	NONE	▲ MODER	▲ MODER	LIGHT	

Customer Id: IBPDAK01 Sample No.: USPM29280 Lab Number: 05928282 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
Change Filter			?	We recommend you service the filters on this component.
Alert			?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

11 May 2023 Diag: Doug Bogart

VIS DERRIS



We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



26 Jan 2023 Diag: Jonathan Hester

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



03 Oct 2022 Diag: Doug Bogart

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate 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.





OIL ANALYSIS REPORT

Sample Rating Trend

VIS DEBRIS

BUSCH VM8 / VP-3 (S/N 2512909)

Component

Pump

USPI VAC 100 (--- GAL)





DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris 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 Date Client Info 19 Aug 2023 11 May 2023 26 Jan 20 Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status ABNORMAL ATTENTIC ABNORMAL ATTENTIC WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >90 2 6 17 Chromium ppm ASTM D5185m >5 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Allwinium ppm ASTM D5185m >3 0 0 0 Lead ppm ASTM D5185m >12 0 0 <1	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date	Sample Number		Client Info		USPM29280	USPM28931	USPM26269
Machine Age hrs Client Info 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							26 Jan 2023
Oil Age hrs Client Info N/A N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >90 2 6 17 Chromium ppm ASTM D5185m >5 0 0 0 Nickel ppm ASTM D5185m >5 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Alluminum ppm ASTM D5185m >3 0 0 0 Alluminum ppm ASTM D5185m >2 0 0 <1 Lead ppm ASTM D5185m >12 0 0 <1 <1 Copper ppm ASTM D5185m >9 <1 <1 <1 <1 <1 Vanadium ppm ASTM D5185m	•	hrs			_		
Client Info							
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Copper ppm ASTM D5185m >30 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td>					-		
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Barium	ADDITIVES		method	limit/base	current	history1	history2
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Magnesium ppm ASTM D5185m 0 <1 <1 0 Calcium ppm ASTM D5185m 0 0 4 3 Phosphorus ppm ASTM D5185m 1800 931 1485 988 Zinc ppm ASTM D5185m 0 0 <1 10 Sulfur ppm ASTM D5185m 0 14 0 60 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >60 6 2 7 Sodium ppm ASTM D5185m >60 6 2 7 Sodium ppm ASTM D5185m >20 2 2 0 Water % ASTM D5185m >20 2 2 0 Water % ASTM D6304 0.055 0.068 0.040 Particles >4µm ASTM D7647 >5000 4	Molybdenum	ppm	ASTM D5185m	0	0	0	0
Calcium ppm ASTM D5185m 0 0 4 3 Phosphorus ppm ASTM D5185m 1800 931 1485 988 Zinc ppm ASTM D5185m 0 0 <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 1800 931 1485 988 Zinc ppm ASTM D5185m 0 0 <1 10 Sulfur ppm ASTM D5185m 0 14 0 60 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >60 6 2 7 Sodium ppm ASTM D5185m >60 6 2 7 Sodium ppm ASTM D5185m >20 2 2 0 Potassium ppm ASTM D5185m >20 2 2 0 Water % ASTM D5185m >20 2 2 0 Water % ASTM D5185m >20 2 2 0 Water % ASTM D6304 >.1 554.7 684.9 409.5 FLUID CLEANLINESS method limit/base current	Magnesium	ppm	ASTM D5185m	0	<1	<1	0
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Sulfur ppm ASTM D5185m 0 14 0 60 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >60 6 2 7 Sodium ppm ASTM D5185m >60 6 2 7 Sodium ppm ASTM D5185m >20 2 2 0 Water % ASTM D5185m >20 2 2 0 Water % ASTM D5185m >20 2 2 0 Water % ASTM D6304 0.055 0.068 0.040 ppm Water ppm ASTM D6304 >.1 554.7 684.9 409.5 FLUID CLEANLINESS method limit/base current history1 history1 history1 Particles >4µm ASTM D7647 >5000 △ 5692 Particles >71µm ASTM D7647 >	Phosphorus	ppm	ASTM D5185m	1800	931	1485	988
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Silicon ppm ASTM D5185m >60 6 2 7	Sulfur	ppm	ASTM D5185m	0	14	0	60
Sodium ppm ASTM D5185m <1 0 1 Potassium ppm ASTM D5185m >20 2 2 0 Water % ASTM D6304 0.055 0.068 0.040 opm Water ppm ASTM D6304 >.1 554.7 684.9 409.5 FLUID CLEANLINESS method limit/base current history1 history1 history1 history1 Particles >4μm ASTM D7647 >5000 Δ 5692 Particles >6μm ASTM D7647 >1300 Δ 1410 Particles >14μm ASTM D7647 >160 64 Particles >21μm ASTM D7647 >40 9 Particles >38μm ASTM D7647 >3 1 Particles >71μm ASTM D7647 >3 Δ 20/18/1 FLUID DEGRADATION	CONTAMINANTS	3	method	limit/base	current	history1	history2
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Particles >38μm ASTM D7647 >10 1 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 Δ 20/18/1 FLUID DEGRADATION method limit/base current history1 history1	Particles >14μm		ASTM D7647	>160			64
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Particles >71µm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 △ 20/18/1 FLUID DEGRADATION method limit/base current history1 history1	•						1
Oil Cleanliness ISO 4406 (c) >19/17/14	•		ASTM D7647				0
-	·						<u>△</u> 20/18/13
-	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
					0.17	0.36	0.75

Acid Number (AN)

mg KOH/g ASTM D8045 0.05

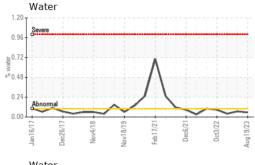
0.36

0.17

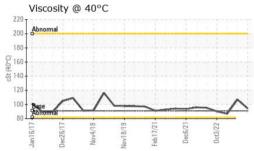
0.75



OIL ANALYSIS REPORT



Water						
0.96 Severe						
ag 0.72			٨			
≥ ≥°0.48			Λ			
0.24 Abnormal		~/	/ \			
Jan16/17 + Dec26/17	Nov4/18 -	Nov18/19 =	Feb17/21-	Dec6/21-	Oct3/22 -	Aug19/23
Jan	N	Nov	쿧	ă	ŏ	Aug



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	▲ MODER	▲ MODER	LIGHT
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		NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history
Visc @ 40°C	cSt	ASTM D445	91	94.3	107	86.9

SAMPLE IMAGES

method

limit/base

current

history1

history2

Color

Bottom

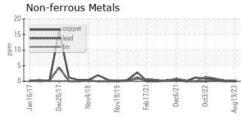


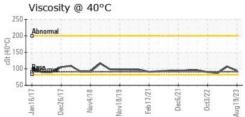


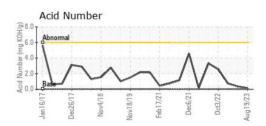


GRAPHS

Ferrous Alloys 200











Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : USPM29280 : 05928282

: 10608229

Received Diagnosed Diagnostician : Doug Bogart

: 18 Aug 2023 : 22 Aug 2023

TYSON-DAKOTA CITY-USP P.O. BOX 515

DAKOTA CITY, NE US 68731

T: (605)235-2396

Contact: RICHARD KOCH

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)

F: (605)235-2960 Contact/Location: RICHARD KOCH - IBPDAK01