

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

VM-1-VPPA (S/N UO80701249) Component

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

Recommendation

Resample at the next service interval to monitor. We were unable to perform a particle count due to to insufficient sample.

Wear

All component wear rates are normal.

Contamination

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.

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r2017 Dec2017	0ct2018	Aug2019	Oct2020	Feb2022	Dec2022	Aug202



SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USPM29444	USPM28116	USPM25479
Sample Date		Client Info		29 Aug 2023	21 May 2023	29 Dec 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				NORMAL	NORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	1	<1	33
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	0	0	0
Lead	ppm	ASTM D5185m	>12	0	0	0
Copper	ppm	ASTM D5185m	>30	<1	0	3
Tin	ppm	ASTM D5185m	>9	0	0	<1
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	2	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	0	<1	<1	0
Calcium	ppm	ASTM D5185m	0	0	<1	0
Phosphorus	ppm	ASTM D5185m	1800	680	869	674
Zinc	ppm		0	0	0	<1
Sulfur	ppm	ASTM D5185m	0	25	29	245
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	12	14	9
Sodium	ppm	ASTM D5185m		0	0	10
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Water	%	ASTM D6304		0.091	0.047	0.017
ppm Water	ppm	ASTM D6304	>.1	912.0	476.4	178.5

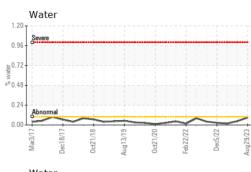
ppm Water	ppm	ASTM D6304	>.1	912.0	476.4	178.5
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000		1197	🔺 259694
Particles >6µm		ASTM D7647	>1300		409	4 1950
Particles >14µm		ASTM D7647	>160		48	4 290
Particles >21µm		ASTM D7647	>40		14	24
Particles >38µm		ASTM D7647	>10		0	1
Particles >71µm		ASTM D7647	>3		0	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14		17/16/13	▲ 25/23/15
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	0.085	0.12	0.195

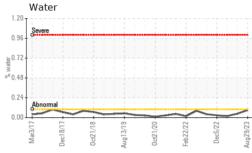
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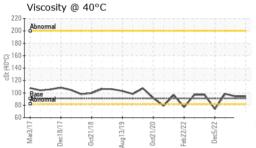
Contact/Location: RICK DUVALL - TYSJOSPRO



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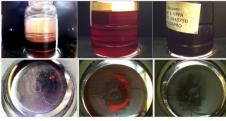




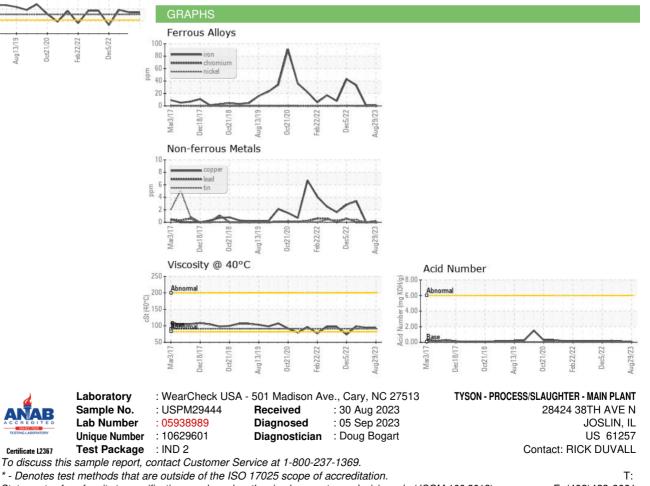


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	91	94.0	94.2	98.5
SAMPLE IMAGES		method	limit/base	current	history1	history2
						fictuum H-1-VPD-

Color



Bottom



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

F: (402)423-6661

Certificate L2367

Contact/Location: RICK DUVALL - TYSJOSPRO