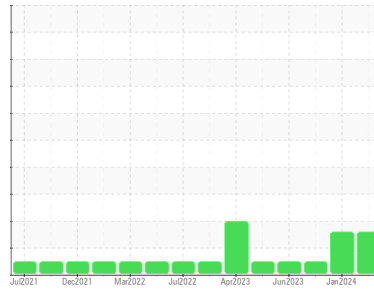




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
4S (S/N 5580359)
 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
 Elemental level of silicon (Si) above normal. 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	USPM36385	USPM30820	USPM29807
Sample Date	Client Info	02 Jun 2024	29 Jan 2024	27 Sep 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		MARGINAL	ABNORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	0	2	3
Chromium	ppm	ASTM D5185m >20	0	<1	0
Nickel	ppm	ASTM D5185m >20	0	0	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >20	0	2	<1
Lead	ppm	ASTM D5185m >20	0	<1	0
Copper	ppm	ASTM D5185m >20	0	<1	0
Tin	ppm	ASTM D5185m >20	0	<1	<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	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	<1	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 0	0	0	0
Calcium	ppm	ASTM D5185m 0	0	0	0
Phosphorus	ppm	ASTM D5185m 1800	1005	870	1073
Zinc	ppm	ASTM D5185m 0	0	0	0
Sulfur	ppm	ASTM D5185m 0	0	0	13

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	▲ 26	▲ 36	13
Sodium	ppm	ASTM D5185m	<1	0	0
Potassium	ppm	ASTM D5185m >20	0	1	<1
Water	%	ASTM D6304 >.1	0.036	0.032	0.032
ppm Water	ppm	ASTM D6304 >1000	365	326	326.6

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	507	281	827
Particles >6µm	ASTM D7647 >1300	186	89	260
Particles >14µm	ASTM D7647 >160	31	8	23
Particles >21µm	ASTM D7647 >40	8	2	5
Particles >38µm	ASTM D7647 >10	0	0	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	16/15/12	15/14/10	17/15/12

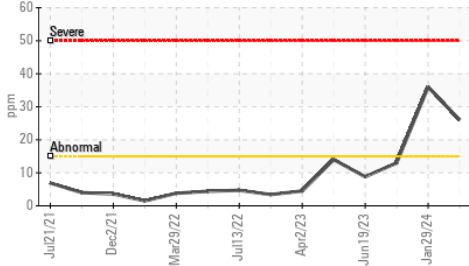
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.05	0.42	0.54	0.52

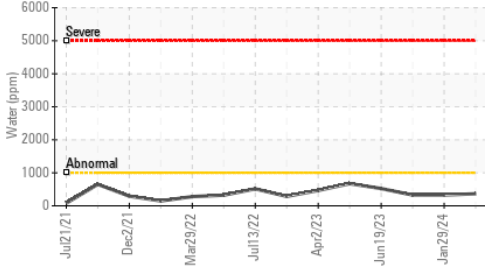


OIL ANALYSIS REPORT

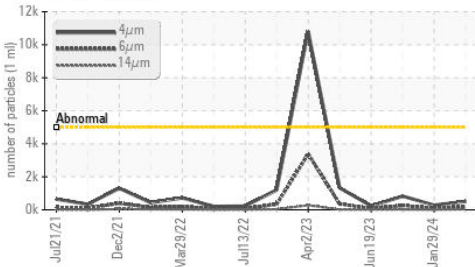
▲ Silicon (ppm)



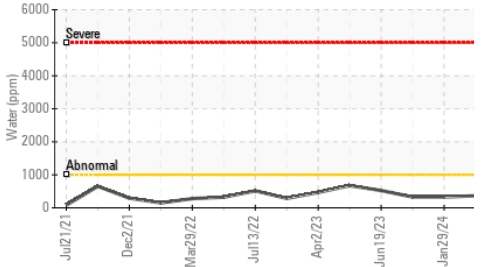
Water (KF)



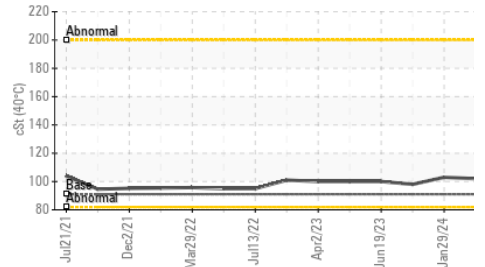
Particle Trend



Water (KF)



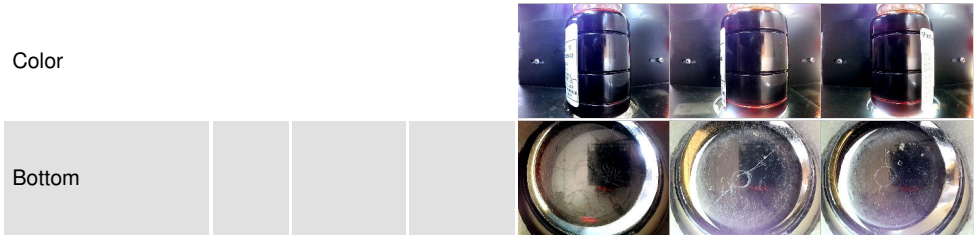
Viscosity @ 40°C



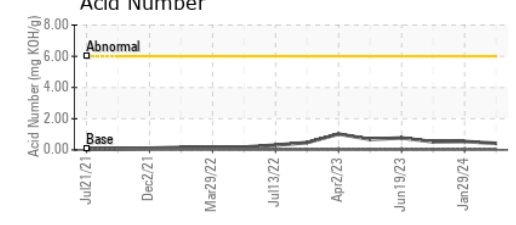
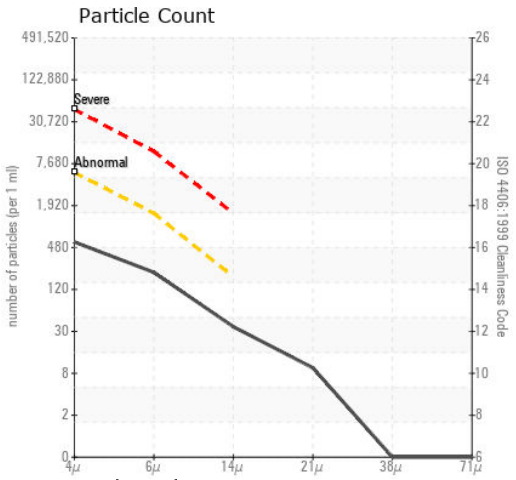
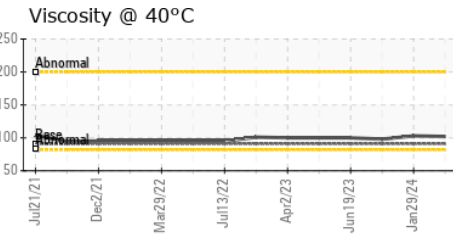
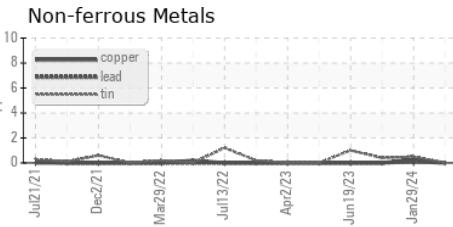
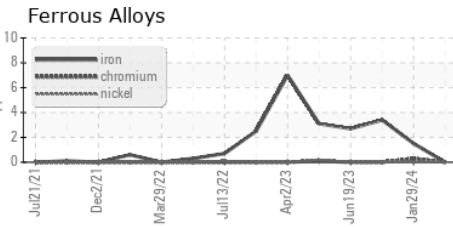
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 91	102	103	98.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM36385
Lab Number : 06197683
Unique Number : 11059806
Test Package : IND 2

Received : 03 Jun 2024
Tested : 04 Jun 2024
Diagnosed : 05 Jun 2024 - Doug Bogart

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

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)

T:
F: