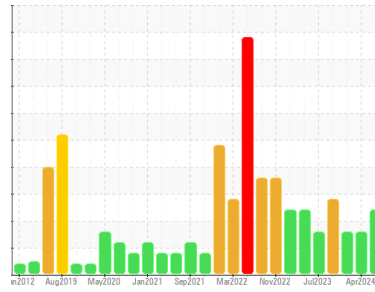




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
HOWE PUMP OUT (S/N 01061-005-1-01-01)
 Component
Refrigeration Compressor
 Fluid
USPI 1009-68 SC (--- QTS)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

The iron level is abnormal. All other component wear rates are normal.

Contamination

There is a high amount of particulates 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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		USP0013214	USP0008122	USP0004630
Sample Date	Client Info		17 Jun 2024	02 Apr 2024	03 Jan 2024
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			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >8	▲ 43	▲ 61	37
Chromium	ppm	ASTM D5185m >2	0	0	<1
Nickel	ppm	ASTM D5185m	<1	0	<1
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >3	<1	0	1
Lead	ppm	ASTM D5185m >2	1	2	3
Copper	ppm	ASTM D5185m >8	11	17	13
Tin	ppm	ASTM D5185m >4	3	5	3
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	<1	<1	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	<1
Manganese	ppm	ASTM D5185m	1	1	<1
Magnesium	ppm	ASTM D5185m	0	0	<1
Calcium	ppm	ASTM D5185m	0	0	<1
Phosphorus	ppm	ASTM D5185m	0	0	0
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m 50	<1	0	0

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	1	1	1
Sodium	ppm	ASTM D5185m	2	1	0
Potassium	ppm	ASTM D5185m >20	3	<1	<1
Water	%	ASTM D6304 >0.01	0.004	0.002	0.003
ppm Water	ppm	ASTM D6304 >100	44	17	28

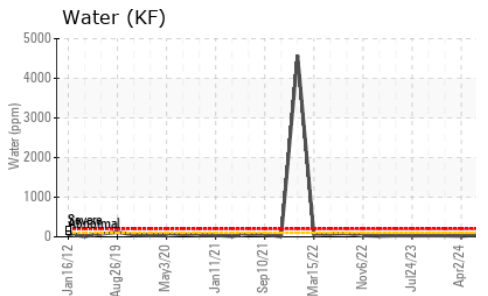
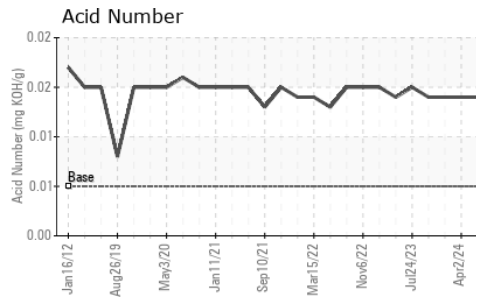
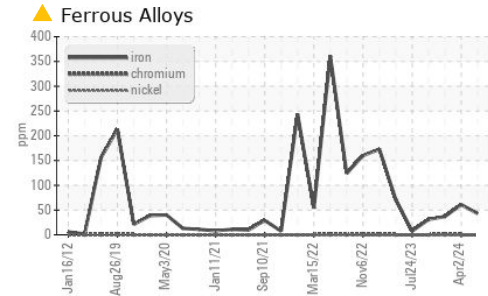
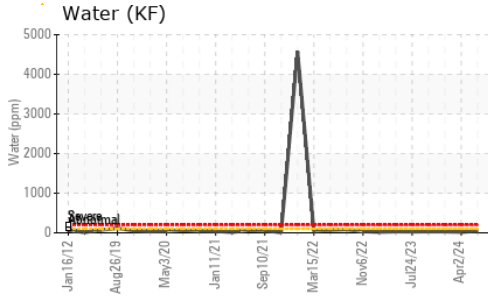
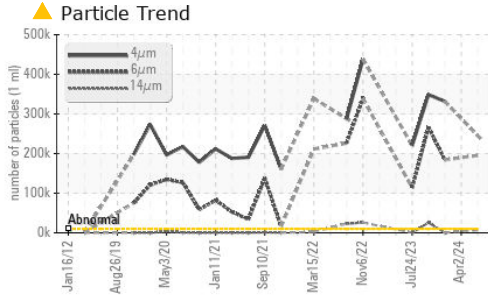
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 245542	---	▲ 331707
Particles >6µm	ASTM D7647	>2500	▲ 195297	---	▲ 184114
Particles >14µm	ASTM D7647	>320	▲ 6215	---	▲ 586
Particles >21µm	ASTM D7647	>80	10	---	36
Particles >38µm	ASTM D7647	>20	0	---	0
Particles >71µm	ASTM D7647	>4	0	---	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 25/25/20	---	▲ 26/25/16

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974 0.005	0.014	0.014	0.014

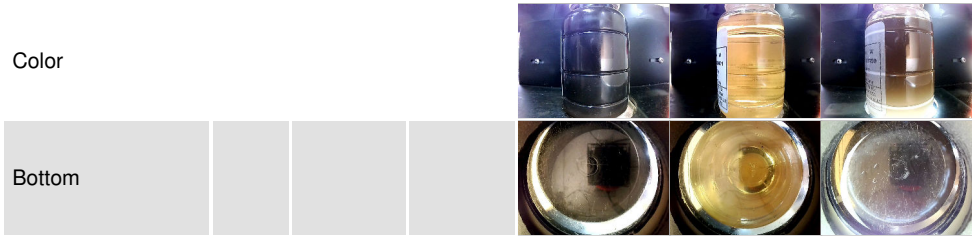
OIL ANALYSIS REPORT



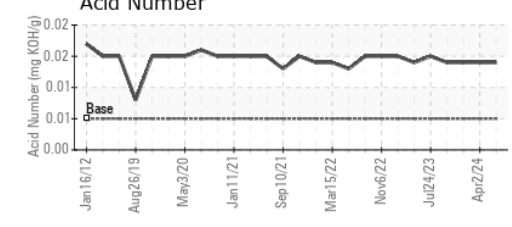
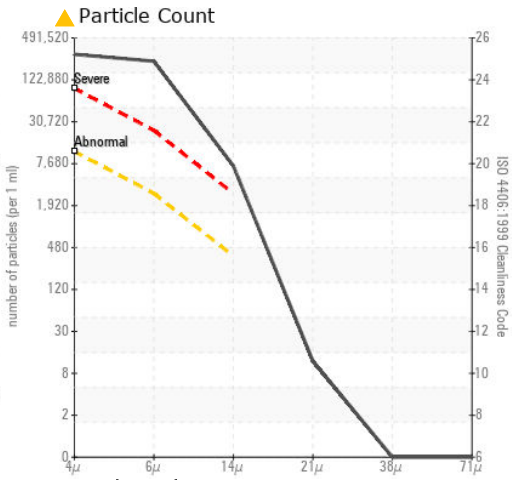
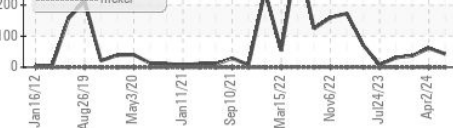
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	▲ MODER	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	67	66.8	66.6

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. : USP0013214
Lab Number : 06214084
Unique Number : 11086948
Test Package : IND 2
Received : 18 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 21 Jun 2024 - Jonathan Hester

TYSON-COUNCIL BLUFFS-USP
 COUNCIL BLUFFS, IA
 US
 Contact: SERVICE MANAGER

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)