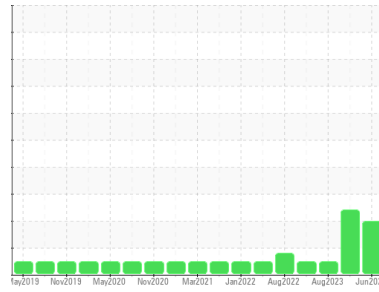




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
P-031636 EXPANDER

Component
Pump Hydraulic System

Fluid
USPI FG HYD 46 (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

All 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	USPM37657	USPM30243	USPM29178
Sample Date	Client Info	10 Jun 2024	21 Feb 2024	08 Aug 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		ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	9	7	<1
Chromium	ppm	ASTM D5185m >20	<1	0	0
Nickel	ppm	ASTM D5185m >20	0	<1	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	<1
Aluminum	ppm	ASTM D5185m >20	0	<1	<1
Lead	ppm	ASTM D5185m >20	<1	1	0
Copper	ppm	ASTM D5185m >20	1	0	<1
Tin	ppm	ASTM D5185m >20	<1	2	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

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	<1	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	<1	0	0
Calcium	ppm	ASTM D5185m	0	0	0
Phosphorus	ppm	ASTM D5185m 725	473	512	450
Zinc	ppm	ASTM D5185m	0	5	9
Sulfur	ppm	ASTM D5185m 625	480	550	542

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	3	4	3
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	<1	<1	0
Water	%	ASTM D6304 >0.05	0.002	▲ 0.132	0.006
ppm Water	ppm	ASTM D6304 >500	20	▲ 1320	67.7

FLUID CLEANLINESS

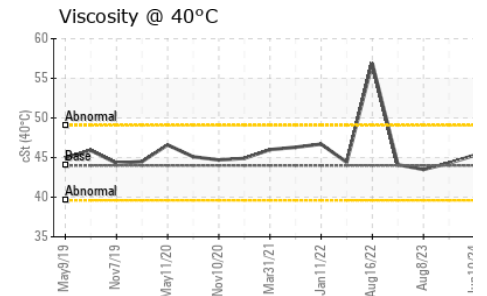
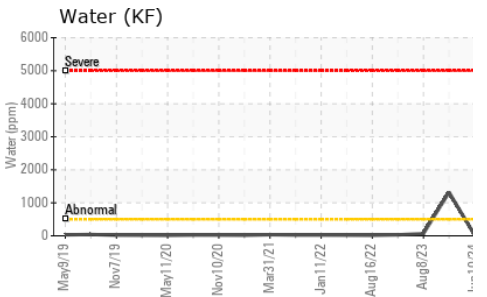
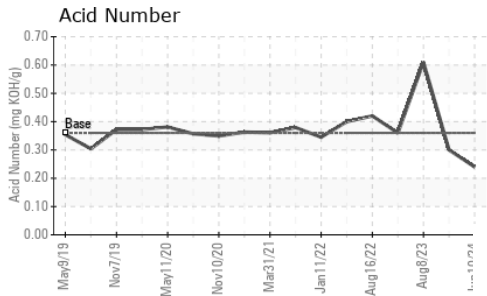
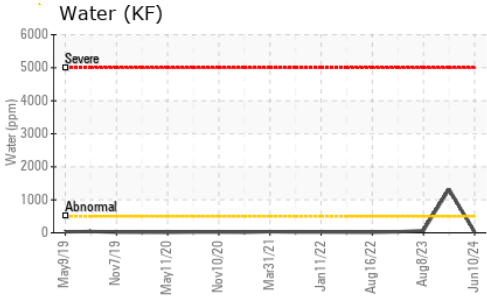
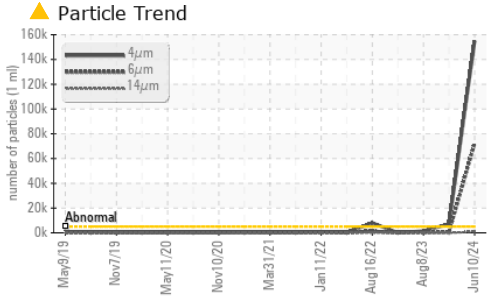
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 154912	● 7098	1453
Particles >6µm	ASTM D7647 >1300	▲ 72219	● 661	109
Particles >14µm	ASTM D7647 >160	▲ 829	● 31	13
Particles >21µm	ASTM D7647 >40	▲ 72	● 9	4
Particles >38µm	ASTM D7647 >10	1	● 0	0
Particles >71µm	ASTM D7647 >3	0	● 0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 24/23/17	● 20/17/12	18/14/11

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.36	0.24	0.30	0.61



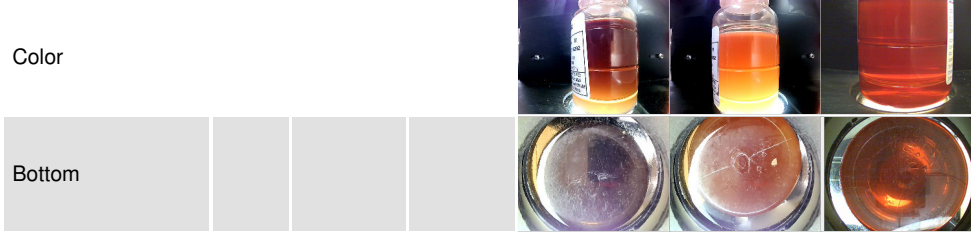
OIL ANALYSIS REPORT



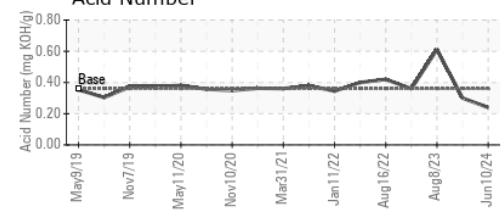
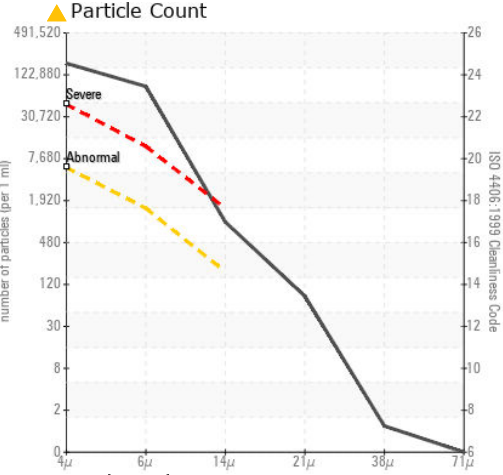
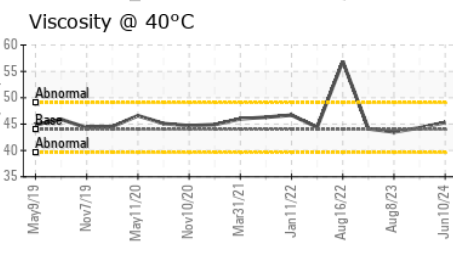
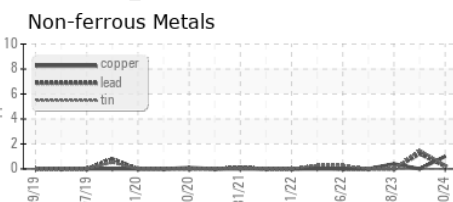
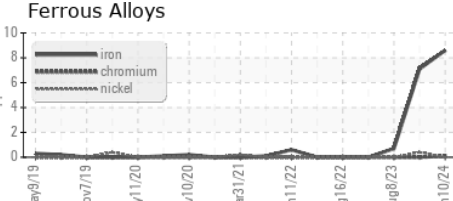
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	0.2%
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	44	45.3	44.3

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM37657 **Received** : 13 Jun 2024
Lab Number : 06209268 **Tested** : 16 Jun 2024
Unique Number : 11076729 **Diagnosed** : 16 Jun 2024 - Doug Bogart
Test Package : IND 2

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 GAINESVILLE, GA
 US 30501
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 robyn_wilbanks@cargill.com
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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)