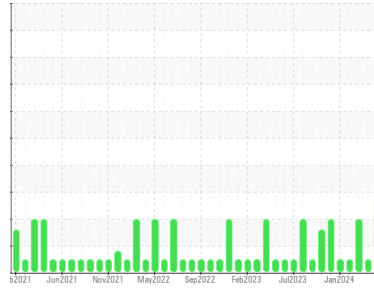




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

MELT SHOP - HYDRAULIC

Machine Id

MELT SHOP HYDRAULIC POWER PACK SMS (S/N 15-8000-0815-0100)

Component

Tank Hydraulic System

Fluid

FIRE-RESISTANT FLUID ISO 46 (105 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 pH level of this fluid is within the acceptable limits at 9.0. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		RP0039057	RP0042717	RP0042650
Sample Date	Client Info		09 May 2024	28 Mar 2024	05 Mar 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	NORMAL	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	0	6	2
Chromium	ppm	ASTM D5185m >20	0	1	1
Nickel	ppm	ASTM D5185m >20	0	1	<1
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >20	0	12	11
Lead	ppm	ASTM D5185m >20	0	0	0
Copper	ppm	ASTM D5185m >20	0	<1	<1
Tin	ppm	ASTM D5185m >20	0	1	1
Vanadium	ppm	ASTM D5185m	0	1	1
Cadmium	ppm	ASTM D5185m	0	<1	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	0	8	<1
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 5	0	<1	0
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m 5	<1	<1	<1
Calcium	ppm	ASTM D5185m 50	0	6	5
Phosphorus	ppm	ASTM D5185m 175	0	6	2
Zinc	ppm	ASTM D5185m 62	12	<1	3

CONTAMINANTS

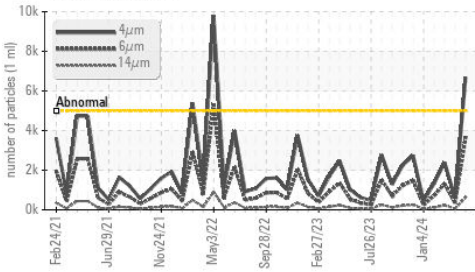
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<1	3	3
Sodium	ppm	ASTM D5185m	0	55	45
Potassium	ppm	ASTM D5185m >20	<1	7	7
Water	%	ASTM D6304 >55	37.7	28.4	37.7
ppm Water	ppm	ASTM D6304 >55000	377000	284000	377000

FLUID CLEANLINESS

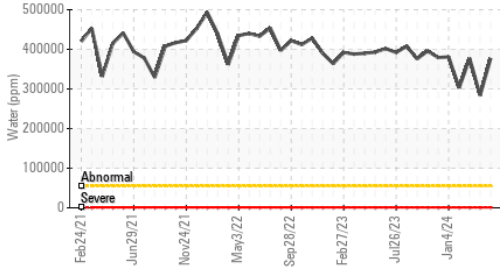
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 6681	600	2392
Particles >6µm	ASTM D7647	>1300	▲ 3640	327	● 1303
Particles >14µm	ASTM D7647	>160	▲ 619	56	● 222
Particles >21µm	ASTM D7647	>40	▲ 209	19	● 75
Particles >38µm	ASTM D7647	>10	▲ 32	3	● 12
Particles >71µm	ASTM D7647	>3	▲ 3	0	● 1
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 20/19/16	16/16/13	● 18/18/15

OIL ANALYSIS REPORT

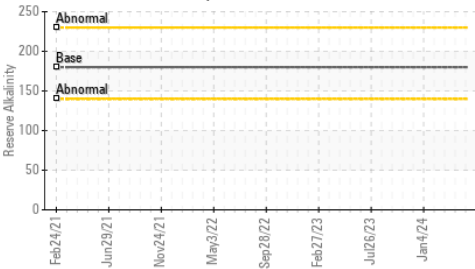
Particle Trend



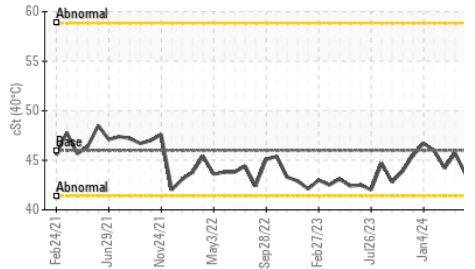
Water (KF)



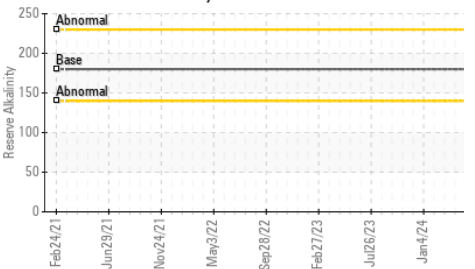
Reserve Alkalinity



Viscosity @ 40°C



Reserve Alkalinity



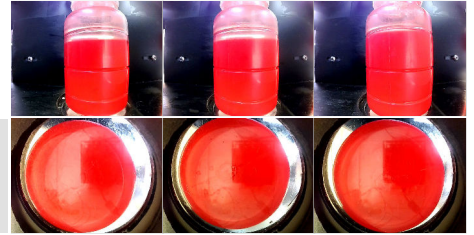
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>55	0.2%	0.2%
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287	9.00	9.00	10.0
Visc @ 40°C	cSt	ASTM D445	46	45.7	44.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

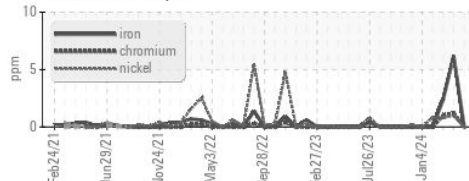
Color

Bottom

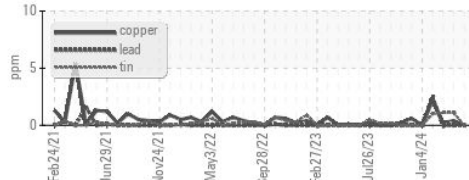


GRAPHS

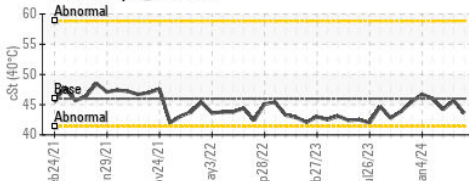
Ferrous Alloys



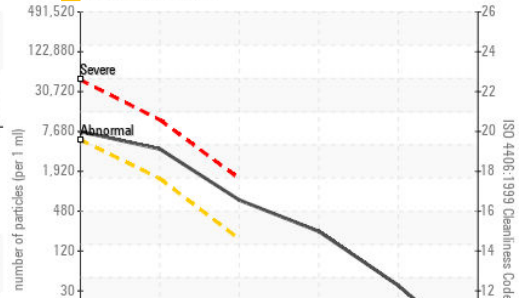
Non-ferrous Metals



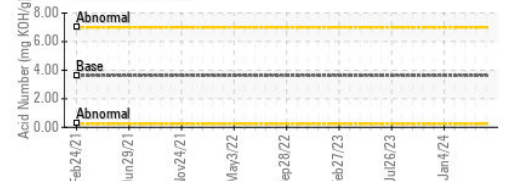
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0039057 **Received** : 10 May 2024
Lab Number : 06175580 **Tested** : 16 May 2024
Unique Number : 11021633 **Diagnosed** : 16 May 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: pH, ReserveAlk)

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)

OUTOKUMPU STAINLESS USA
 HWY 43 N
 CALVERT, AL 36513
 Contact: MARIO JOHNSON
 Mario.johnson@outokumpu.com
 T: (251)321-4105
 F: x: