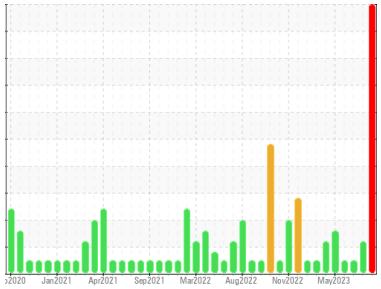
PROBLEM SUMMARY

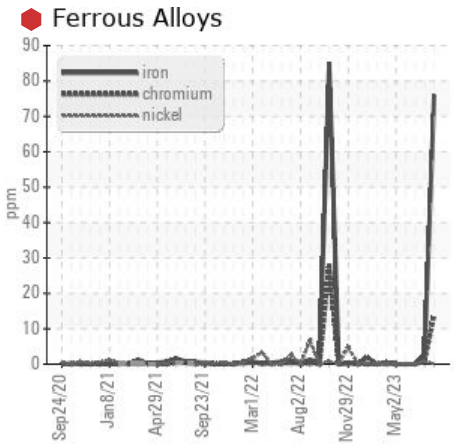
Sample Rating Trend

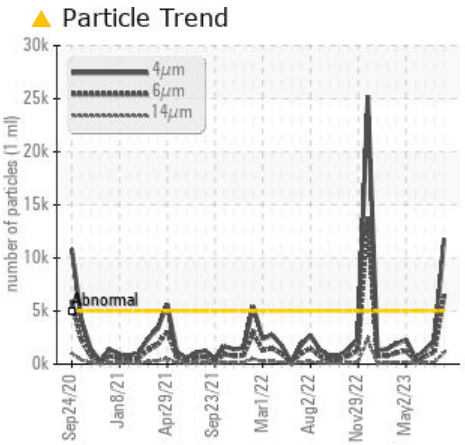


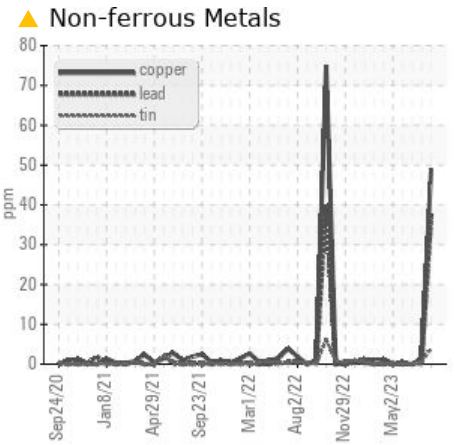
WEAR

Area
MELT SHOP - HYDRAULIC
Machine Id
MELT SHOP LADLE WALL LADLE PREHEATER HYDRAULIC UNIT (S/N 15-3000-0741-0020)
Component
Tank Hydraulic System
Fluid
FIRE-RESISTANT FLUID ISO 46 (20 GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>20	**76**	2	0
Lead	ppm	ASTM D5185m	>20	**37**	<1	0
Copper	ppm	ASTM D5185m	>20	**49**	1	0
Particles >4µm		ASTM D7647	>5000	**11805**	2140	1314
Particles >6µm		ASTM D7647	>1300	**6431**	1166	716
Particles >14µm		ASTM D7647	>160	**1094**	198	122
Particles >21µm		ASTM D7647	>40	**369**	67	41
Particles >38µm		ASTM D7647	>10	**57**	10	6
Particles >71µm		ASTM D7647	>3	**6**	1	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**21/20/17**	18/17/15	18/17/14
Appearance	scalar	*Visual	NORML	**LAYRD**	NORML	NORML

Customer Id: OUTCALAL
Sample No.: RP0038424
Lab Number: 05938916
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

26 Jul 2023 Diag: Jonathan Hester

ISO

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of particulates present in the oil. The pH level of this fluid is within the acceptable limits. pH is 9. The condition of the oil is acceptable for the time in service.

view report

28 Jun 2023 Diag: Jonathan Hester

NORMAL

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. 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.

view report

31 May 2023 Diag: Jonathan Hester

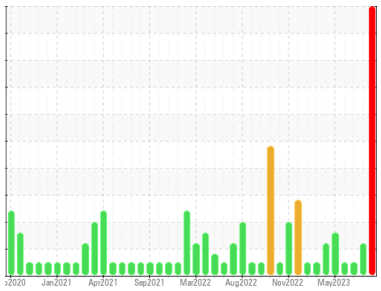
NORMAL

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. 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.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
MELT SHOP - HYDRAULIC
Machine Id
MELT SHOP LADLE WALL LADLE PREHEATER HYDRAULIC UNIT (S/N 15-3000-0741-0020)
Component
Tank Hydraulic System
Fluid
FIRE-RESISTANT FLUID ISO 46 (20 GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear
Bearing and/or bushing wear is indicated.

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 @ 10.0.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**RP0038424**	RP0035478	RP0035149
Sample Date		Client Info		**29 Aug 2023**	26 Jul 2023	28 Jun 2023
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				**SEVERE**	ATTENTION	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	● **76**	2	0
Chromium	ppm	ASTM D5185m	>20	**14**	<1	0
Nickel	ppm	ASTM D5185m	>20	**<1**	<1	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	<1	<1
Lead	ppm	ASTM D5185m	>20	▲ **37**	<1	0
Copper	ppm	ASTM D5185m	>20	▲ **49**	1	0
Tin	ppm	ASTM D5185m	>20	**4**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

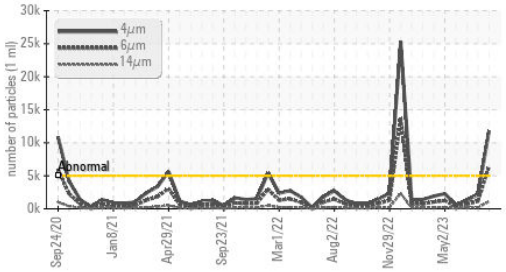
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**0**	<1	0
Barium	ppm	ASTM D5185m	5	**0**	1	0
Molybdenum	ppm	ASTM D5185m	5	**0**	0	0
Manganese	ppm	ASTM D5185m		**2**	<1	0
Magnesium	ppm	ASTM D5185m	5	**<1**	0	4
Calcium	ppm	ASTM D5185m	50	**11**	<1	0
Phosphorus	ppm	ASTM D5185m	175	**272**	10	2
Zinc	ppm	ASTM D5185m	62	**722**	19	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**10**	2	0
Sodium	ppm	ASTM D5185m		**<1**	7	<1
Potassium	ppm	ASTM D5185m	>20	**0**	2	<1
Water	%	ASTM D6304	>55	**39.0**	42.9	42.2
ppm Water	ppm	ASTM D6304	>55000	**390000**	429000	422000

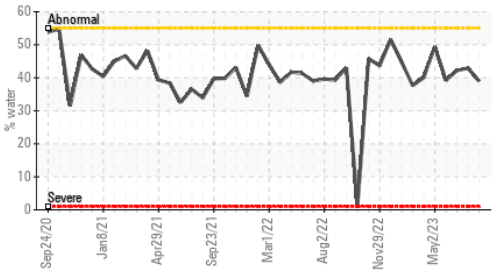
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **11805**	2140	1314
Particles >6µm		ASTM D7647	>1300	▲ **6431**	1166	716
Particles >14µm		ASTM D7647	>160	▲ **1094**	▲ 198	122
Particles >21µm		ASTM D7647	>40	▲ **369**	▲ 67	41
Particles >38µm		ASTM D7647	>10	▲ **57**	10	6
Particles >71µm		ASTM D7647	>3	▲ **6**	1	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/20/17**	▲ 18/17/15	18/17/14

OIL ANALYSIS REPORT

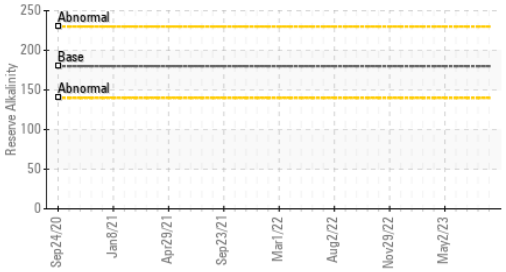
Particle Trend



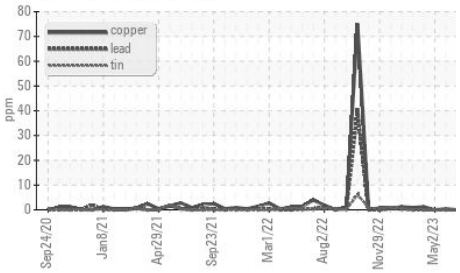
Water



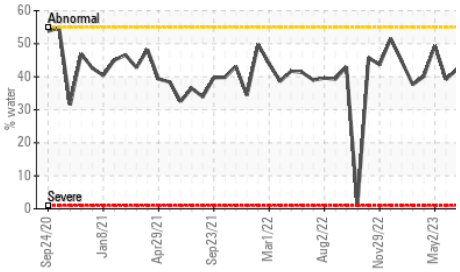
Reserve Alkalinity



Non-ferrous Metals

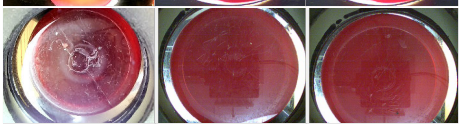


Water



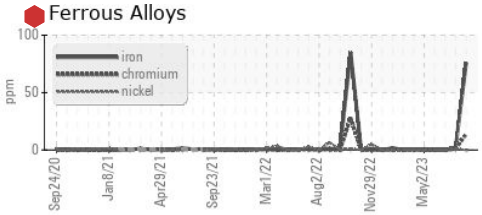
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287		**10.0**	9.00	9.00
Visc @ 40°C	cSt	ASTM D445	46	**45.6**	43.9	43.5

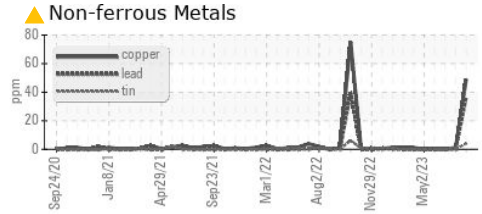
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

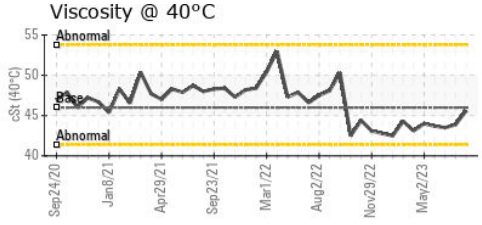
Ferrous Alloys



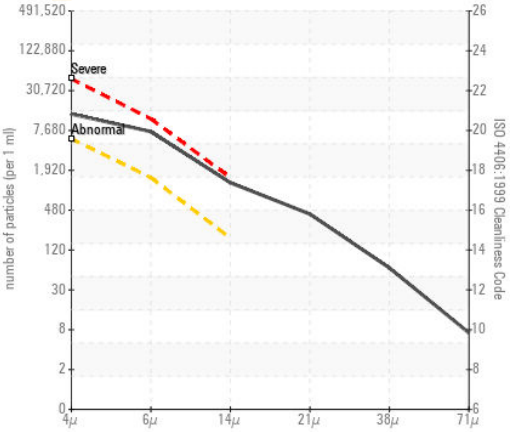
Non-ferrous Metals



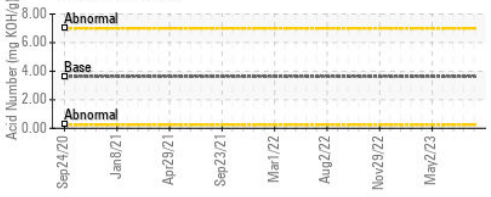
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0038424 **Received** : 30 Aug 2023
Lab Number : 05938916 **Diagnosed** : 01 Sep 2023
Unique Number : 10629528 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: pH, ReserveAlk)

Certificate L2367

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)

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