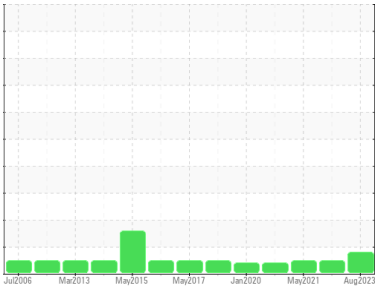
PROBLEM SUMMARY

Area
RMR-Somerset
Machine Id
LIEBHERR A934 028807-935
Component
Hydraulic System
Fluid
MV 46 (120 GAL)

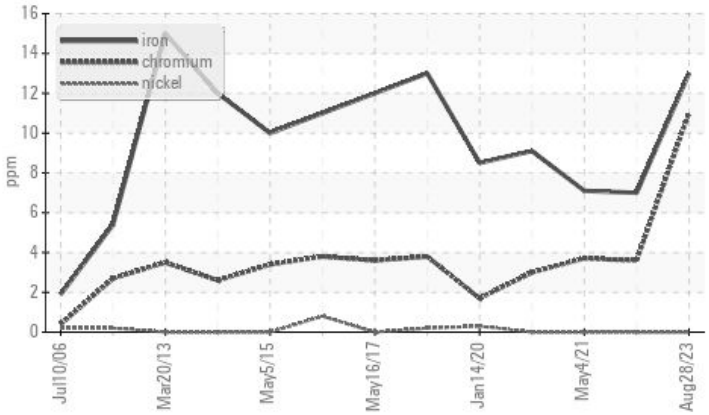
Sample Rating Trend



WEAR

COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys



RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ATTENTION**	NORMAL	NORMAL
Chromium	ppm	ASTM D5185m	>5	▲ **11**	4	4

Customer Id: RIVSOM
Sample No.: DJJ0017781
Lab Number: 05968885
Test Package: MOBCE

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

02 Nov 2021 Diag: Angela Borella

NORMAL

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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

04 May 2021 Diag: Don Baldridge

NORMAL

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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

11 Nov 2020 Diag: Don Baldridge

ISO

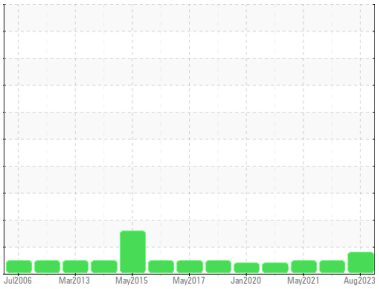
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Area
RMR-Somerset
Machine Id
LIEBHERR A934 028807-935
Component
Hydraulic System
Fluid
MV 46 (120 GAL)

Sample Rating Trend



WEAR

DIAGNOSIS

Recommendation
The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
An increase in the copper level is noted. All other component wear rates are normal.

Contamination
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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**DJJ0017781**	DJJ0011942	DJJ0003865
Sample Date		Client Info		**28 Aug 2023**	02 Nov 2021	04 May 2021
Machine Age	hrs	Client Info		**19131**	16982	16297
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ATTENTION**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**13**	7	7
Chromium	ppm	ASTM D5185m	>5	▲ **11**	4	4
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>2	**3**	<1	0
Lead	ppm	ASTM D5185m	>5	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>15	**7**	5	5
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<1
Antimony	ppm	ASTM D5185m	>2	**---**	0	0
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		**39**	37	37
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**29**	26	23
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**114**	107	92
Calcium	ppm	ASTM D5185m		**670**	526	558
Phosphorus	ppm	ASTM D5185m		**413**	443	422
Zinc	ppm	ASTM D5185m		**505**	473	494
Sulfur	ppm	ASTM D5185m		**2182**	1678	1672

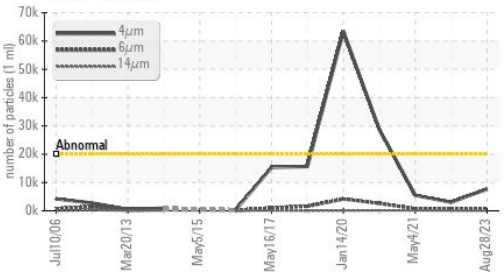
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**10**	8	11
Sodium	ppm	ASTM D5185m		**5**	5	6
Potassium	ppm	ASTM D5185m	>20	**3**	1	4

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**7675**	3016	5500
Particles >6µm		ASTM D7647	>5000	**618**	668	714
Particles >14µm		ASTM D7647	>640	**15**	70	133
Particles >21µm		ASTM D7647	>160	**3**	16	54
Particles >38µm		ASTM D7647	>40	**0**	2	6
Particles >71µm		ASTM D7647	>10	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**20/16/11**	19/17/13	20/17/14

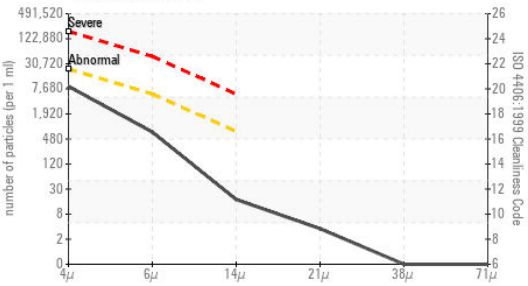
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.45**	0.635	0.417

OIL ANALYSIS REPORT

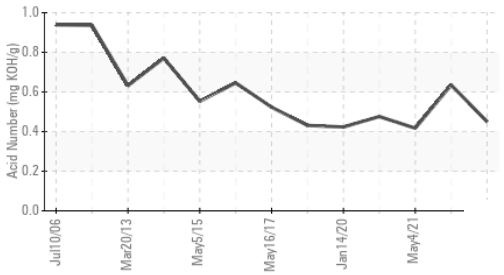
Particle Trend



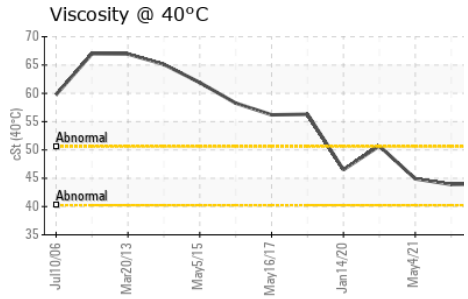
Particle Count



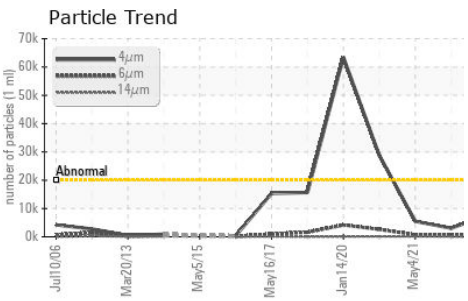
Acid Number



Viscosity @ 40°C

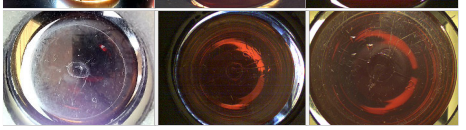


Particle Trend



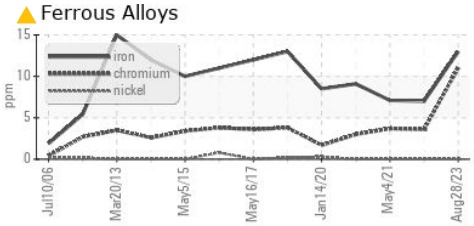
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**44.0**	43.9	44.9

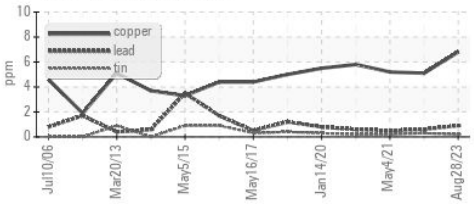
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

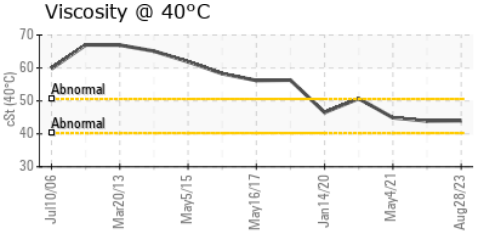
Ferrous Alloys



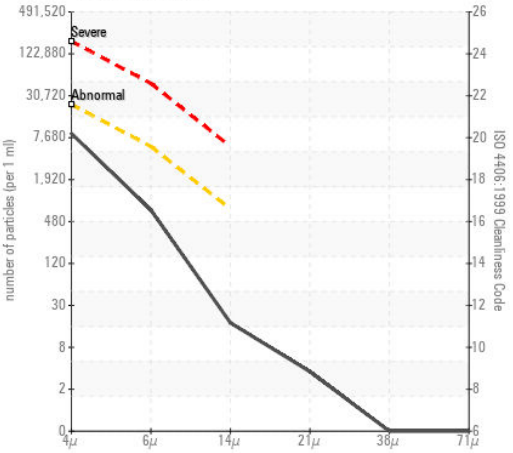
Non-ferrous Metals



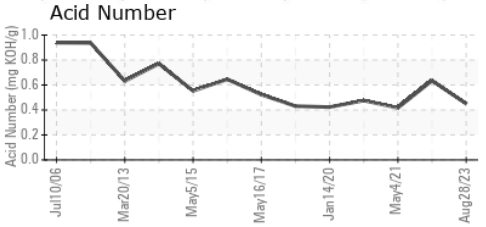
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0017781
Lab Number : 05968885
Unique Number : 10675436
Test Package : MOBCE

Received : 04 Oct 2023
Diagnosed : 06 Oct 2023
Diagnostician : Angela Borella

RIVER METALS RECYCLING - SOMERSET
905 CRANE ROAD
SOMERSET, KY
US 42501
Contact: RYAN BOWDEN

T:
F: (606)679-7523

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)