

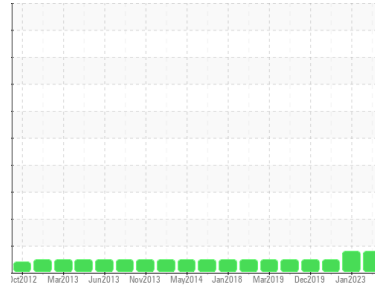


PROBLEM SUMMARY



Area
TPR-Houston Port
 Machine Id
LIEBHERR A944CHD 058903-194
 Component
Hydraulic System
 Fluid
MV 46 (460 LTR)

Sample Rating Trend



SEDIMENT



COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	NORMAL
Silt	scalar	*Visual	NONE	▲ MODER	NONE	NONE

Customer Id: RIVSOM
Sample No.: DJJ0017788
Lab Number: 05968884
Test Package: MOBCE



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@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
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

24 Jan 2023 Diag: Jonathan Hester

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a high amount of silt (particulates < 6 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



04 Nov 2021 Diag: Don Baldrige

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



02 Dec 2019 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



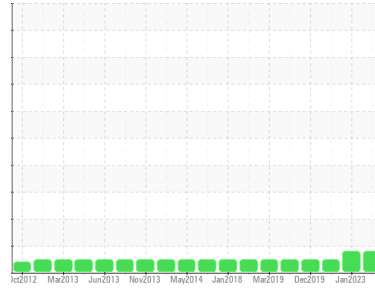


OIL ANALYSIS REPORT



Area
TPR-Houston Port
 Machine Id
LIEBHERR A944CHD 058903-194
 Component
Hydraulic System
 Fluid
MV 46 (460 LTR)

Sample Rating Trend



SEDIMENT



DIAGNOSIS

▲ Recommendation

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

▲ Contamination

There is a moderate amount of visible silt present in the sample.

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		DJJ0017788	DJJ05749479	DJJ0011491
Sample Date	Client Info		30 Aug 2023	24 Jan 2023	04 Nov 2021
Machine Age	hrs	Client Info	17179	0	14624
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Chngd	N/A	Not Chngd
Sample Status			ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >60	10	20	7
Chromium	ppm	ASTM D5185m >40	1	1	1
Nickel	ppm	ASTM D5185m >10	0	0	0
Titanium	ppm	ASTM D5185m	<1	<1	<1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >5	2	<1	<1
Lead	ppm	ASTM D5185m >5	<1	<1	<1
Copper	ppm	ASTM D5185m >15	2	3	4
Tin	ppm	ASTM D5185m >5	0	0	<1
Antimony	ppm	ASTM D5185m	---	---	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	33	25	18
Barium	ppm	ASTM D5185m	0	2	0
Molybdenum	ppm	ASTM D5185m	39	20	6
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	103	71	53
Calcium	ppm	ASTM D5185m	510	567	198
Phosphorus	ppm	ASTM D5185m	368	343	382
Zinc	ppm	ASTM D5185m	447	409	420
Sulfur	ppm	ASTM D5185m	2063	2208	1387

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	6	8	3
Sodium	ppm	ASTM D5185m	2	0	2
Potassium	ppm	ASTM D5185m >20	3	2	2

FLUID CLEANLINESS

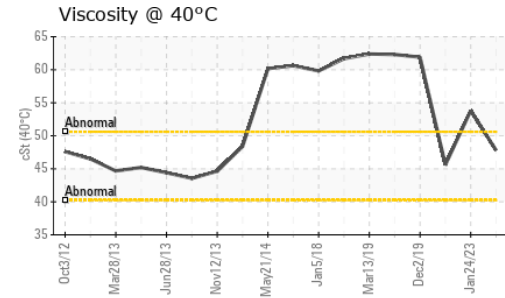
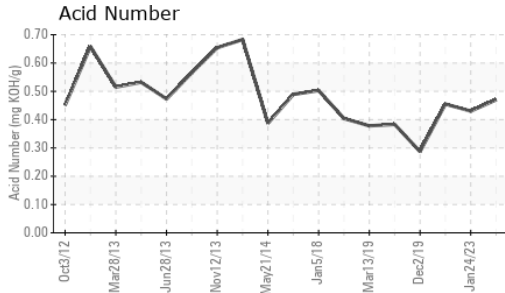
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	---	▲ 62230	2617
Particles >6µm	ASTM D7647	>5000	---	2458	575
Particles >14µm	ASTM D7647	>640	---	62	57
Particles >21µm	ASTM D7647	>160	---	13	16
Particles >38µm	ASTM D7647	>40	---	2	0
Particles >71µm	ASTM D7647	>10	---	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	---	▲ 23/18/13	19/16/13

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.47	0.43	0.455



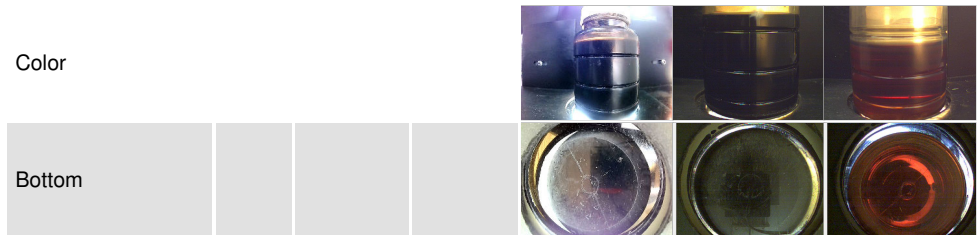
OIL ANALYSIS REPORT



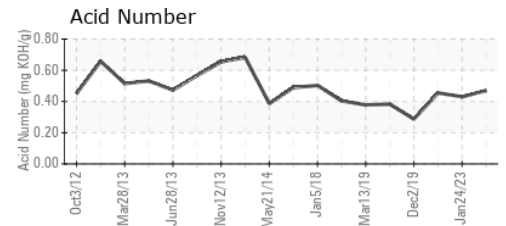
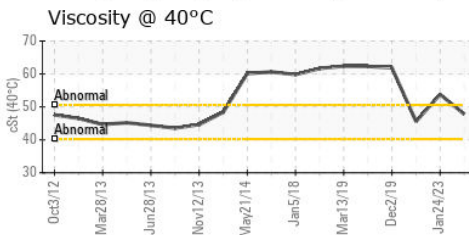
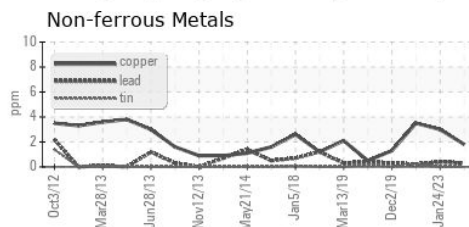
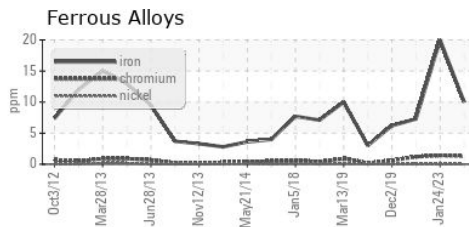
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	▲ MODER	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	47.8	53.8	45.6

SAMPLE IMAGES



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0017788 **Received** : 04 Oct 2023
Lab Number : 05968884 **Diagnosed** : 06 Oct 2023
Unique Number : 10675435 **Diagnostician** : Jonathan Hester
Test Package : MOBCE

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

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)

T:
F: (606)679-7523