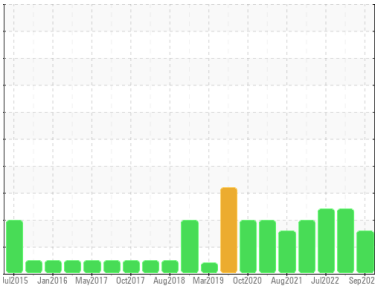
OIL ANALYSIS REPORT

Machine Id
MACK 1373H
Component
Hydraulic System
Fluid
NOT GIVEN (--- QTS)

Sample Rating Trend



WEAR

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
The aluminum level is abnormal. The copper level is abnormal.

Contamination
There is a high amount of silt (particulates < 14 microns in size) 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		**KL0012916**	KL0011857	KL0009002
Sample Date		Client Info		**06 Sep 2023**	03 May 2023	08 Jul 2022
Machine Age	mls	Client Info		**148113**	142409	132995
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**11**	10	10
Chromium	ppm	ASTM D5185m	>10	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>5	**5**	▲ 11	▲ 8
Lead	ppm	ASTM D5185m	>4	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>15	▲ **17**	▲ 15	▲ 20
Tin	ppm	ASTM D5185m	>4	**0**	1	0
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**94**	88	116
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**54**	49	51
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**694**	680	614
Calcium	ppm	ASTM D5185m		**1009**	1024	1075
Phosphorus	ppm	ASTM D5185m		**891**	916	916
Zinc	ppm	ASTM D5185m		**1078**	1123	1081
Sulfur	ppm	ASTM D5185m		**3105**	3661	3643

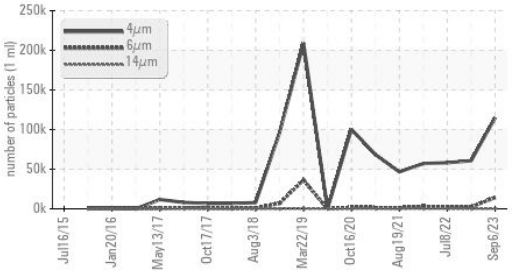
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**5**	5	4
Sodium	ppm	ASTM D5185m		**4**	2	0
Potassium	ppm	ASTM D5185m	>20	**0**	2	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**114801**	60754	58133
Particles >6µm		ASTM D7647	>1300	▲ **14359**	▲ 2306	▲ 2047
Particles >14µm		ASTM D7647	>160	**63**	15	34
Particles >21µm		ASTM D7647	>40	**5**	3	10
Particles >38µm		ASTM D7647	>10	**1**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>17/14	▲ **21/13**	▲ 18/11	▲ 18/12

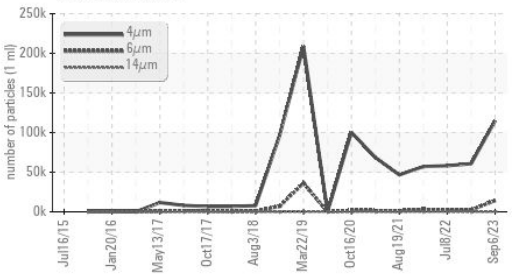
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.47**	1.39	1.46

OIL ANALYSIS REPORT

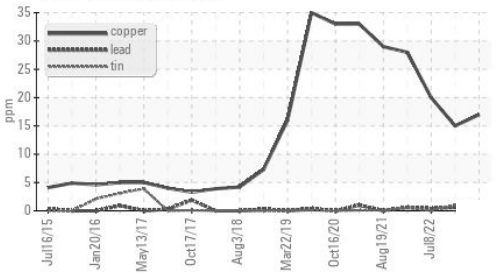
Particle Trend



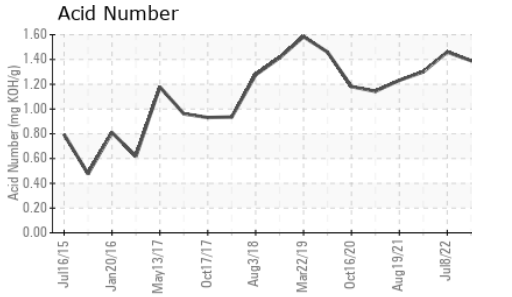
Particle Trend



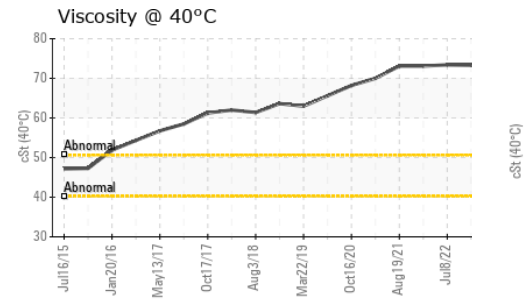
Non-ferrous Metals



Acid Number

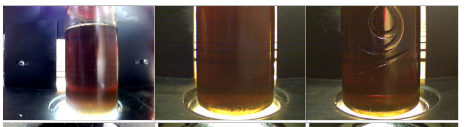
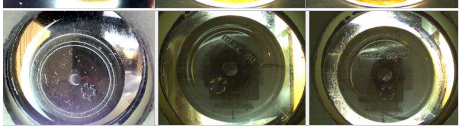


Viscosity @ 40°C



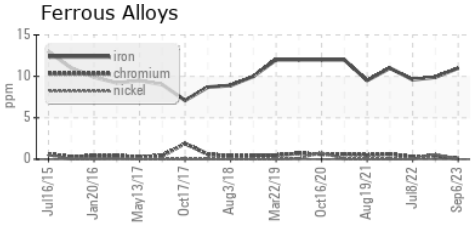
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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		**75.9**	73.3	73.4

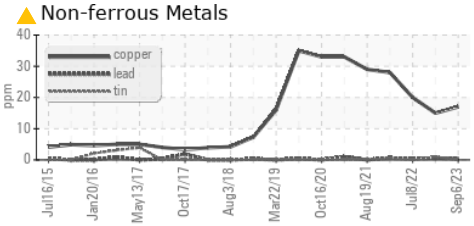
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

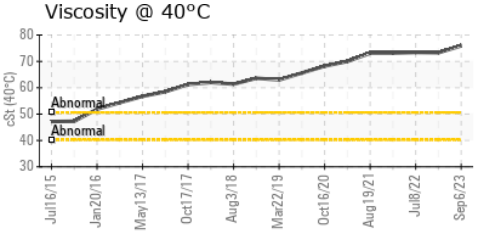
Ferrous Alloys



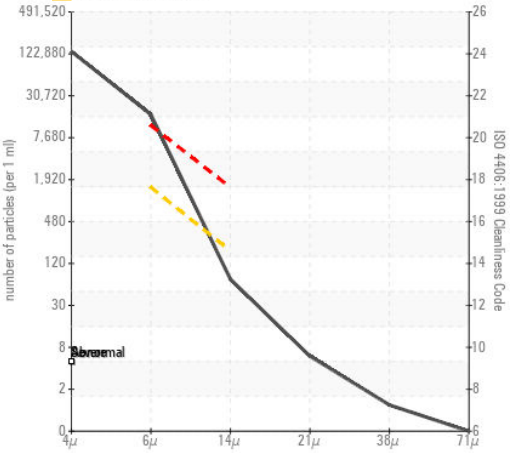
Non-ferrous Metals



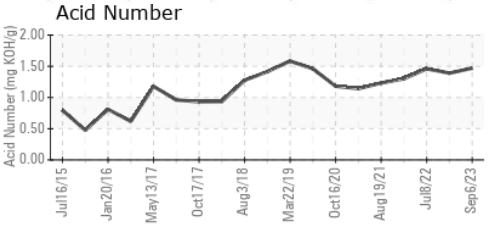
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0012916
Lab Number : 05965355
Unique Number : 10671906
Test Package : MOB 2

Received : 29 Sep 2023
Diagnosed : 02 Oct 2023
Diagnostician : Don Baldridge

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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