



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**AMR-12 Street**  
Machine Id  
**339324 LIEBHERR LH60 1204-86896**  
Component  
**Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 46 (240 GAL)**

## RECOMMENDATION

We recommend you service the filters on this component. 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0017126</b>	DJJ0017128	DJJ0013897
Sample Date		Client Info		<b>02 Feb 2024</b>	26 Dec 2023	15 Sep 2023
Machine Age	hrs	Client Info		<b>15292</b>	15052	14489
Oil Age	hrs	Client Info		<b>1250</b>	1000	0
Filter Age	hrs	Client Info		<b>250</b>	1000	0
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ATTENTION	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>60	<b>7</b>	7	7
Chromium	ppm	ASTM D5185m	>40	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>0</b>	2	2
Lead	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>15	<b>2</b>	2	2
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

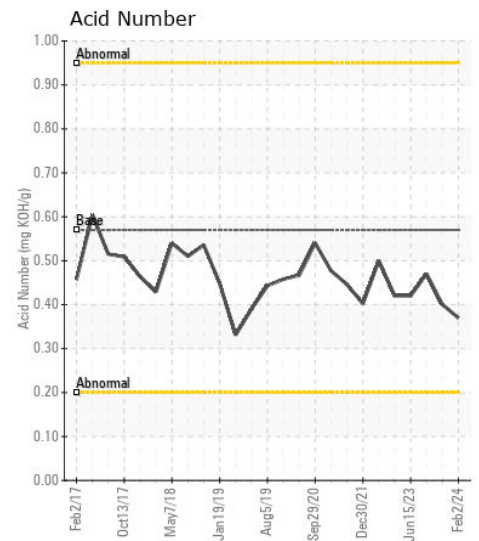
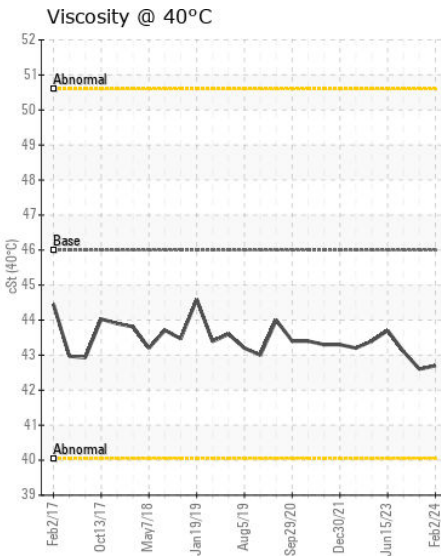
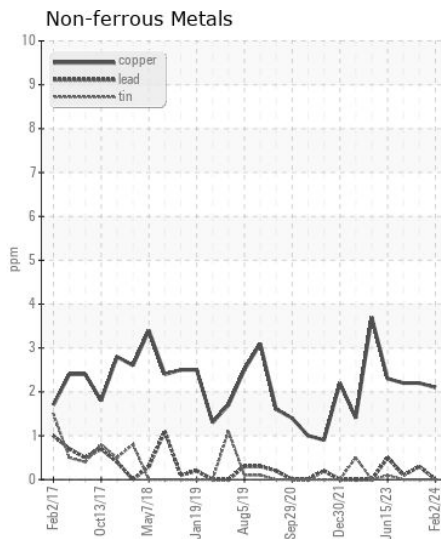
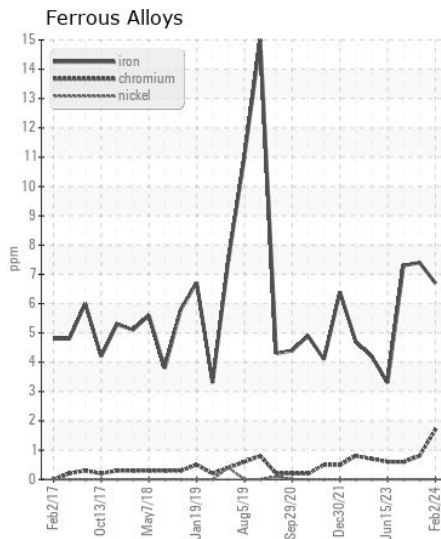
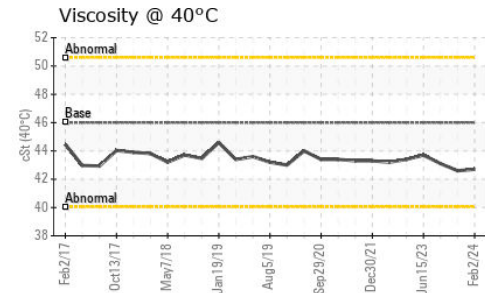
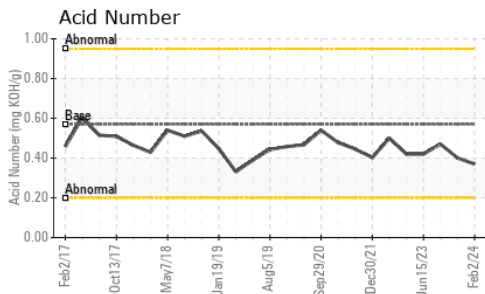
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>---</b>	▲ 37579	---
Particles >6µm		ASTM D7647	>5000	<b>---</b>	1458	---
Particles >14µm		ASTM D7647	>640	<b>---</b>	55	---
Particles >21µm		ASTM D7647	>160	<b>---</b>	11	---
Particles >38µm		ASTM D7647	>40	<b>---</b>	0	---
Particles >71µm		ASTM D7647	>10	<b>---</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>---</b>	▲ 22/18/13	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>▲ MODER</b>	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>1</b>	0	<1
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	25	<b>0</b>	1	1
Calcium	ppm	ASTM D5185m	200	<b>81</b>	108	67
Phosphorus	ppm	ASTM D5185m	300	<b>331</b>	370	338
Zinc	ppm	ASTM D5185m	370	<b>411</b>	435	425
Sulfur	ppm	ASTM D5185m	2500	<b>898</b>	1045	997
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.37</b>	0.40	0.47
Visc @ 40°C	cSt	ASTM D445	46	<b>42.7</b>	42.6	43.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0017126  
**Lab Number** : 06084709  
**Unique Number** : 10872154  
**Test Package** : CONST

**Received** : 09 Feb 2024  
**Tested** : 12 Feb 2024  
**Diagnosed** : 12 Feb 2024 - Jonathan Hester

**ADVANTAGE METALS RECYCLING - 12 STREET**  
 1153 S. 12TH STREET  
 KANSAS CITY, KS  
 US 66105  
 Contact: JOHN PEEK  
 john.peek@advantagerecycling.com  
 T: (660)424-9134  
 F: (913)621-2766

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)