



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL



Area  
**AMR-Topeka**  
Machine Id  
**112146 LIEBHERR A924C 063247-1049**  
Component  
**Hydraulic System**  
Fluid  
**LIEBHERR HYDRAULIC HVI (50 GAL)**

## RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0023255</b>	DJJ0019410	DJJ0017139
Sample Date		Client Info		<b>02 Apr 2024</b>	20 Jun 2023	20 Oct 2022
Machine Age	hrs	Client Info		<b>8606</b>	8076	7833
Oil Age	hrs	Client Info		<b>0</b>	2000	0
Filter Age	hrs	Client Info		<b>0</b>	1000	0
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Sample Status				<b>ATTENTION</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>55	<b>16</b>	18	0
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>3	<b>1</b>	<1	0
Lead	ppm	ASTM D5185m	>4	<b>2</b>	0	0
Copper	ppm	ASTM D5185m	>10	<b>3</b>	2	0
Tin	ppm	ASTM D5185m	>2	<b>1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

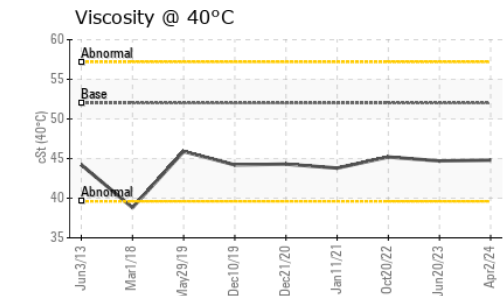
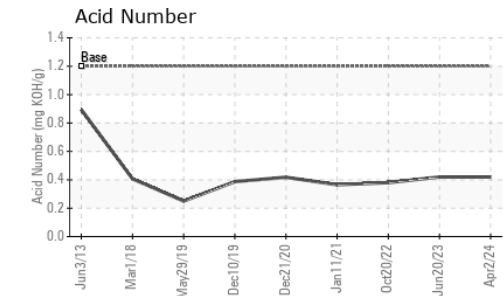
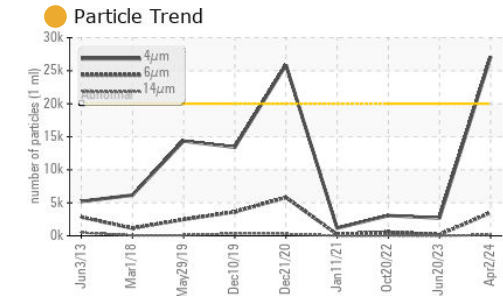
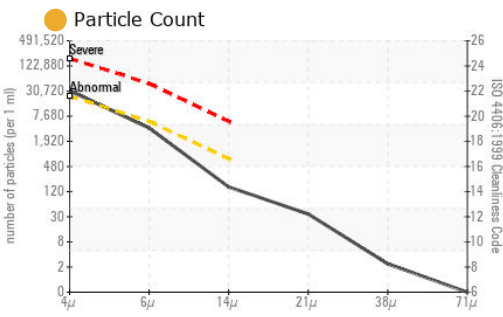
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>11	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	<1	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>27093</b>	2686	3068
Particles >6µm		ASTM D7647	>5000	<b>3495</b>	163	557
Particles >14µm		ASTM D7647	>640	<b>137</b>	9	35
Particles >21µm		ASTM D7647	>160	<b>31</b>	2	9
Particles >38µm		ASTM D7647	>40	<b>2</b>	0	1
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>22/19/14</b>	19/15/10	19/16/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
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>0</b>	<1	0
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>1</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	7	<b>2</b>	5	2
Calcium	ppm	ASTM D5185m	1500	<b>64</b>	72	48
Phosphorus	ppm	ASTM D5185m	750	<b>353</b>	292	341
Zinc	ppm	ASTM D5185m	820	<b>394</b>	363	424
Sulfur	ppm	ASTM D5185m	4000	<b>913</b>	1034	909
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	<b>0.42</b>	0.42	0.38
Visc @ 40°C	cSt	ASTM D445	52	<b>44.8</b>	44.7	45.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0023255  
**Lab Number** : 06147248  
**Unique Number** : 10977326  
**Test Package** : CONST

**ADVANTAGE METALS RECYCLING - TOPEKA**  
 1628 NW GORDON ST  
 TOPEKA, KS  
 US 66608

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)

