



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Area
AMR-Sedalia
Machine Id
567149 LIEBHERR LH50 124549
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0018458	DJJ0018628	DJJ0019054
Sample Date		Client Info		15 Mar 2024	14 Nov 2023	14 Jul 2023
Machine Age	hrs	Client Info		4584	4066	3531
Oil Age	hrs	Client Info		1500	1000	500
Filter Age	hrs	Client Info		500	1000	500
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Changed	Not Chngd
Sample Status				ATTENTION	ATTENTION	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	10	9	15
Chromium	ppm	ASTM D5185m	>5	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	0	0	<1
Lead	ppm	ASTM D5185m	>4	0	0	0
Copper	ppm	ASTM D5185m	>10	2	1	<1
Tin	ppm	ASTM D5185m	>2	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

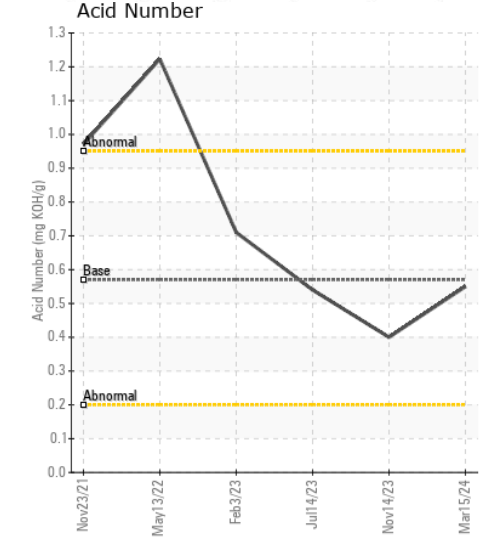
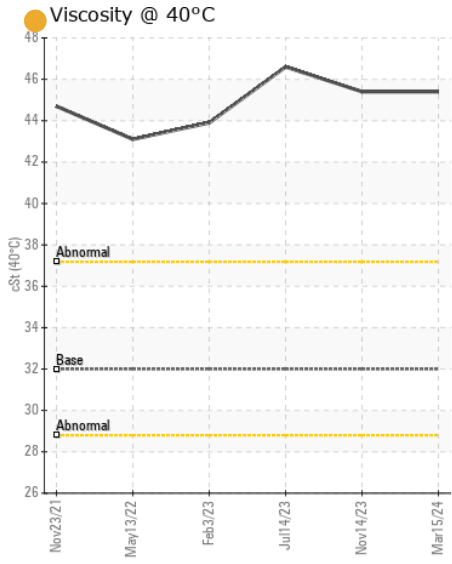
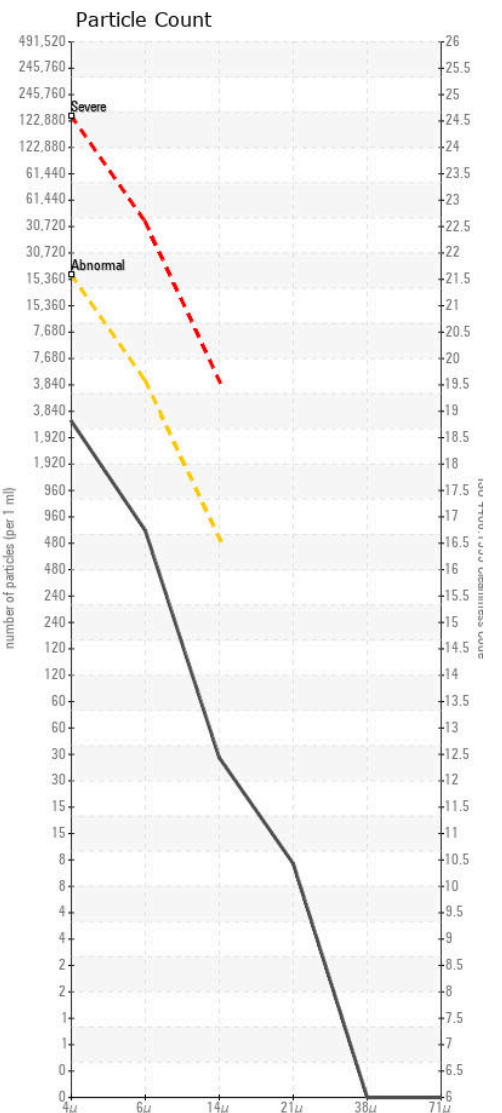
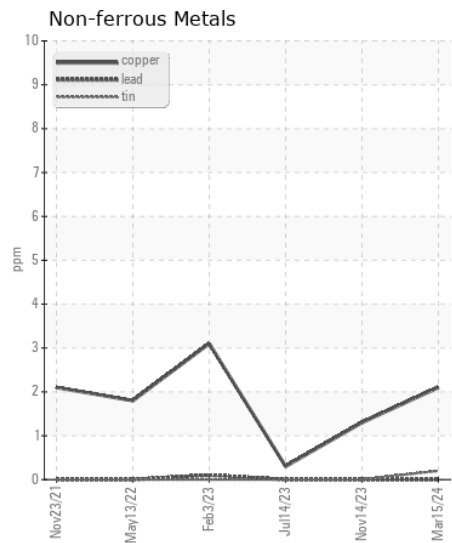
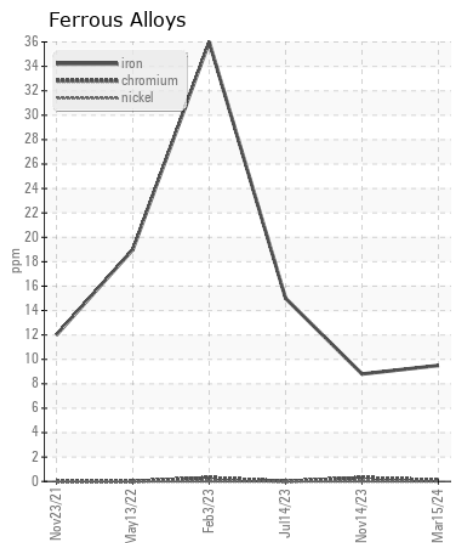
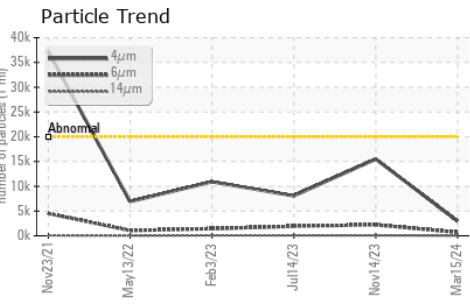
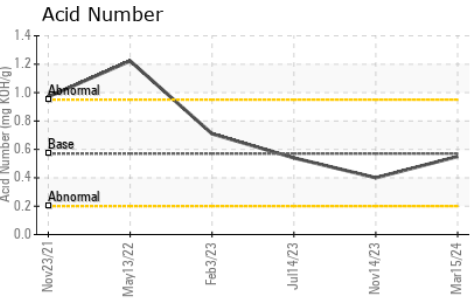
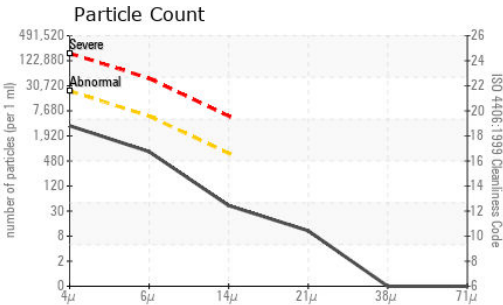
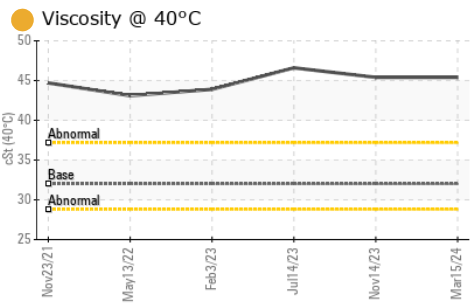
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>17	<1	<1	0
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	2946	15483	8064
Particles >6µm		ASTM D7647	>5000	704	2224	1937
Particles >14µm		ASTM D7647	>640	36	87	84
Particles >21µm		ASTM D7647	>160	9	15	17
Particles >38µm		ASTM D7647	>40	0	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/17/12	21/18/14	20/18/14
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

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		<1	<1	<1
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	<1	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	25	0	0	0
Calcium	ppm	ASTM D5185m	200	103	132	174
Phosphorus	ppm	ASTM D5185m	300	343	320	364
Zinc	ppm	ASTM D5185m	370	449	416	482
Sulfur	ppm	ASTM D5185m	2500	1045	865	1377
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.55	0.40	0.54
Visc @ 40°C	cSt	ASTM D445	32	45.4	45.4	46.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0018458
Lab Number : 06124807
Unique Number : 10938958
Test Package : CONST

Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 24 Mar 2024 - Don Baldrige

ADVANTAGE METALS RECYCLING - SEDALIA
 300 N IRON AVE
 SEDALIA, MO
 US 65301

Contact: SCOTT TUTTLE
 scott.tuttle@advantagerecycling.com

T: (660)827-1873
 F: (660)827-5304

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)