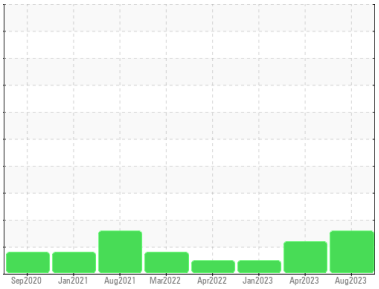
PROBLEM SUMMARY

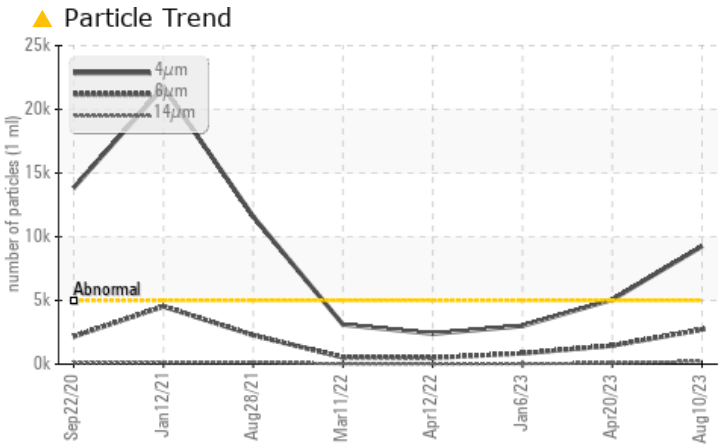
Area
AMR-Cheyenne
Machine Id
LIEBHERR 511144 (S/N 118832)
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

Sample Rating Trend



ISO

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ATTENTION	NORMAL
Particles >4µm		ASTM D7647	>5000	▲ **9253**	▲ 5066	3006
Particles >6µm		ASTM D7647	>1300	▲ **2713**	▲ 1455	850
Particles >14µm		ASTM D7647	>160	▲ **221**	75	39
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/19/15**	▲ 20/18/13	19/17/12

Customer Id: ADVKANKS
Sample No.: DJJ0018394
Lab Number: 05924146
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.

HISTORICAL DIAGNOSIS

20 Apr 2023 Diag: Jonathan Hester

ISO

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 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

06 Jan 2023 Diag: Don Baldridge

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

12 Apr 2022 Diag: Jonathan Hester

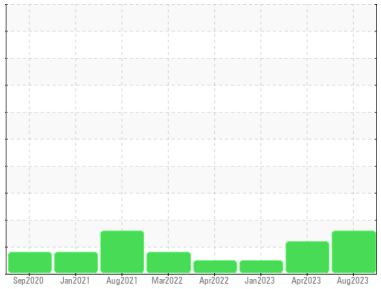
NORMAL

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

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
AMR-Cheyenne
Machine Id
LIEBHERR 511144 (S/N 118832)
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

DIAGNOSIS

▲ Recommendation
We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

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

Fluid Condition
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**DJJ0018394**	DJJ0018659	DJJ0018405
Sample Date		Client Info		**10 Aug 2023**	20 Apr 2023	06 Jan 2023
Machine Age	hrs	Client Info		**5791**	5114	4542
Oil Age	hrs	Client Info		**1500**	1000	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ATTENTION	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**7**	6	5
Chromium	ppm	ASTM D5185m	>10	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**0**	0	0
Lead	ppm	ASTM D5185m	>10	**0**	<1	0
Copper	ppm	ASTM D5185m	>75	**<1**	1	<1
Tin	ppm	ASTM D5185m	>10	**0**	0	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	5	**0**	0	0
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**0**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m	25	**2**	3	0
Calcium	ppm	ASTM D5185m	200	**86**	83	111
Phosphorus	ppm	ASTM D5185m	300	**367**	338	353
Zinc	ppm	ASTM D5185m	370	**445**	436	444
Sulfur	ppm	ASTM D5185m	2500	**1171**	923	1082

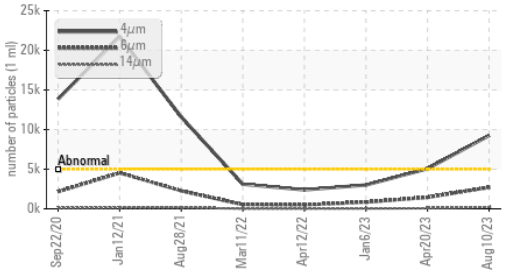
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**1**	1	<1
Sodium	ppm	ASTM D5185m		**2**	0	<1
Potassium	ppm	ASTM D5185m	>20	**0**	1	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **9253**	▲ 5066	3006
Particles >6µm		ASTM D7647	>1300	▲ **2713**	▲ 1455	850
Particles >14µm		ASTM D7647	>160	▲ **221**	75	39
Particles >21µm		ASTM D7647	>40	**51**	13	4
Particles >38µm		ASTM D7647	>10	**2**	0	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/19/15**	▲ 20/18/13	19/17/12

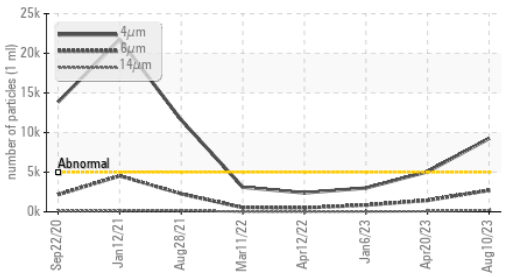
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.48**	0.43	0.44

OIL ANALYSIS REPORT

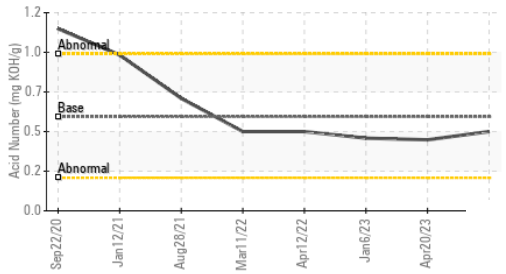
Particle Trend



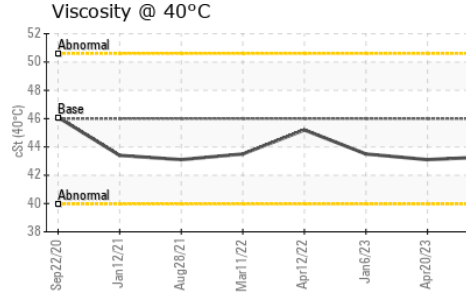
Particle Trend



Acid Number

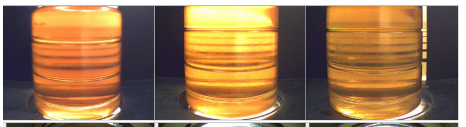
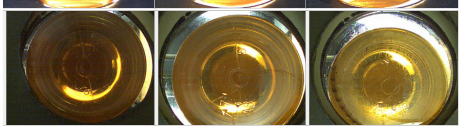


Viscosity @ 40°C



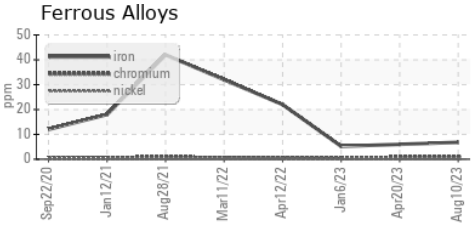
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	VLITE
Sand/Dirt	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	46	**43.3**	43.1	43.5

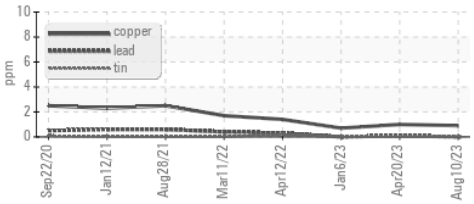
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

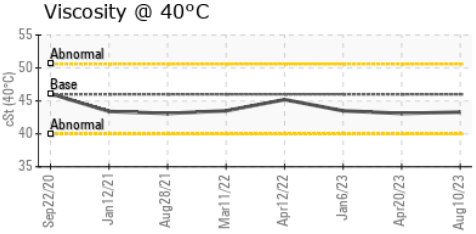
Ferrous Alloys



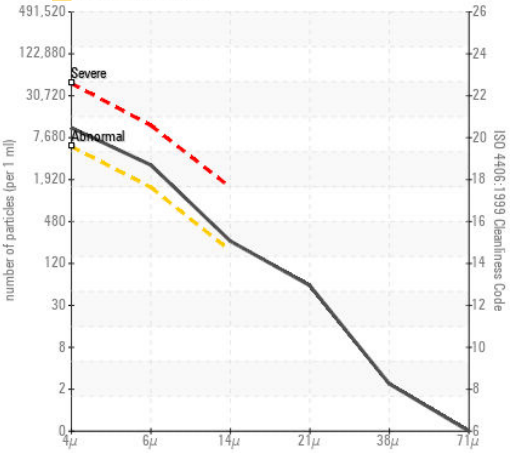
Non-ferrous Metals



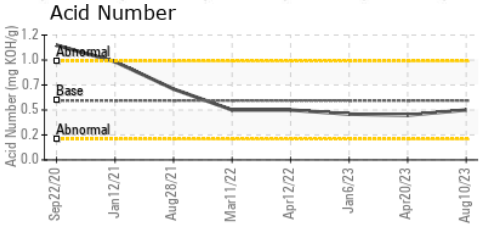
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0018394
Lab Number : 05924146
Unique Number : 10604093
Test Package : CONST

Received : 14 Aug 2023
Diagnosed : 15 Aug 2023
Diagnostician : Wes Davis

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)

ADVANTAGE METALS RECYCLING - CHEYENNE
1015 S. PACKARD ST
KANSAS CITY, KS
US 66105
Contact: BRIAN JACOBS
BRIAN.JACOBS@ADVANTAGERECYCLING.COM
T: (816)808-4711
F: