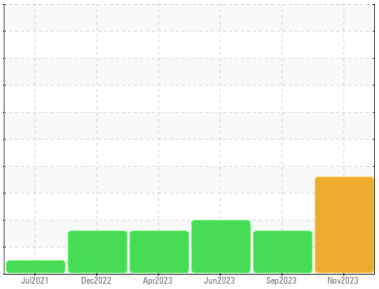
PROBLEM SUMMARY

Sample Rating Trend

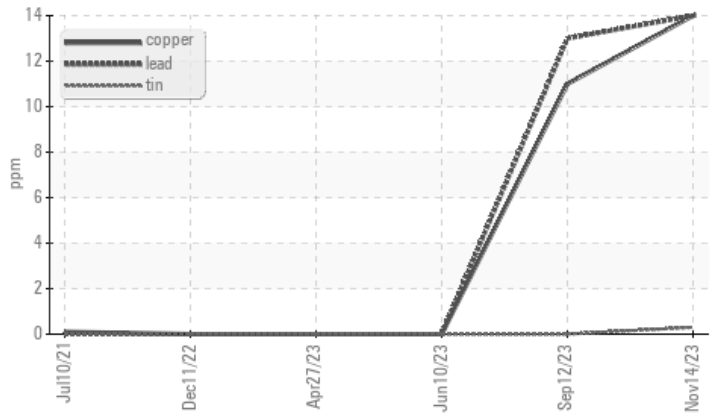


WEAR

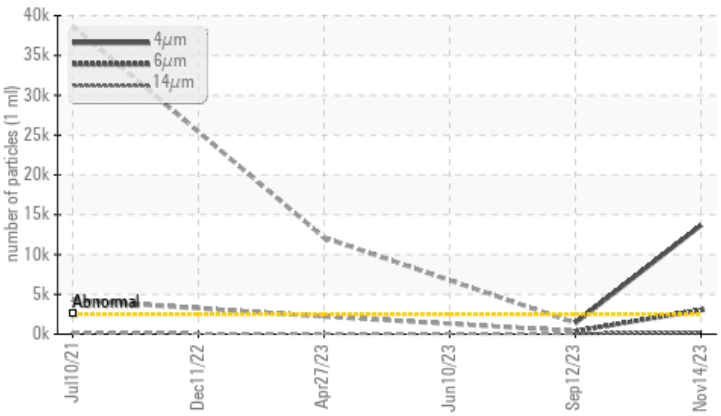
Area
FORMALDEHYDE PLANT
Machine Id
B1 Blower West End
Component
Inboard Blower
Fluid
ROYAL PURPLE SYNFILM 46 (2 GAL)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Particle Trend



RECOMMENDATION

Viscosity has lowered to an ISO 32 weight oil. Lead and Copper wear are present in the sample at a low but substantial change from previous samples. Investigate possible changes in machine using vibration and load trending to verify if wear is causing damage. No other action required at this time. Resample at next normal interval.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Lead	ppm	ASTM D5185m	>20	▲ **14**	▲ 13	0
Copper	ppm	ASTM D5185m	>20	▲ **14**	▲ 11	0
Particles >4µm		ASTM D7647	>2500	▲ **13667**	1405	---
Particles >6µm		ASTM D7647	>640	▲ **3014**	382	---
Particles >14µm		ASTM D7647	>80	▲ **186**	67	---
Particles >21µm		ASTM D7647	>20	▲ **45**	33	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **21/19/15**	18/16/13	---

Customer Id: HEXHOPAR
Sample No.: PLS0000743
Lab Number: 06011433
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Mike Johnson +1 (615)771-6030
mike.johnson@amrri.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

12 Sep 2023 Diag: Mike Johnson

WEAR

Filter quality indicates an oil change has been conducted. Viscosity has lowered to an ISO 32 weight oil. Lead and Copper wear are present in the sample at a low but substantial change from previous samples. Investigate possible changes in machine using vibration and load trending to verify if wear is causing damage. No other action required at this time. Resample at next normal interval.Lead and Copper particle wear is elevated. Particle contamination is on par with new unfiltered oil. Filtration can help extend machine life. Fluid health indicators are acceptable for continued use and indicate an oil change has taken place since the last sample.

view report

10 Jun 2023 Diag: Mike Johnson

VISUAL METAL

No particle count was conducted due to visible particulate in the sample. Filter oil if possible using B6=75 filter media or better and then resample with good sampling procedures.Wear particles are low and acceptable. Particle counting was not conducted due to visible particulate in the oil. Filtration and proper sampling techniques can improve precision of information. Fluid Viscosity is higher than the specification provided, but consistent with previous samples. If the specification is in error, contact mike.johnson@amrri.com with details.

view report

27 Apr 2023 Diag: Mike Johnson

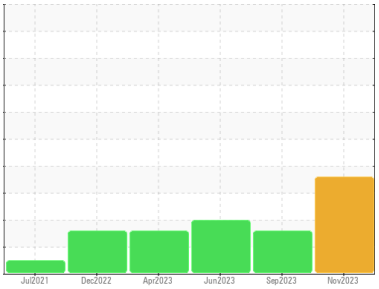
VISCOSITY

Filter oil if possible using B6=75 filter media or better. No other action required at this time. Resample at next normal interval.Wear particles are low and acceptable. Particle contamination is elevated. Filtration can help to extend machine life. Fluid viscosity is indicating an 46 oil in use. If oil in use is an ISO 46 weight oil and you would like to change the reference on file, contact Mike.Johnson@amrri.com.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
FORMALDEHYDE PLANT
Machine Id
B1 Blower West End
Component
Inboard Blower
Fluid
ROYAL PURPLE SYNFILM 46 (2 GAL)

DIAGNOSIS

Recommendation
Viscosity has lowered to an ISO 32 weight oil. Lead and Copper wear are present in the sample at a low but substantial change from previous samples. Investigate possible changes in machine using vibration and load trending to verify if wear is causing damage. No other action required at this time. Resample at next normal interval.

Wear
Lead and Copper particle wear is elevated.

Contamination
Particle contamination is on par with new unfiltered oil. Filtration can help extend machine life.

Fluid Condition
Fluid health indicators are acceptable for continued use.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PLS0000743**	PLS0000748	PLS0000609
Sample Date		Client Info		**14 Nov 2023**	12 Sep 2023	10 Jun 2023
Machine Age	mths	Client Info		**2**	18	15
Oil Age	mths	Client Info		**2**	18	15
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**14**	14	25
Iron	ppm	ASTM D5185m	>20	**0**	0	2
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	0
Lead	ppm	ASTM D5185m	>20	▲ **14**	▲ 13	0
Copper	ppm	ASTM D5185m	>20	▲ **14**	▲ 11	0
Tin	ppm	ASTM D5185m	>20	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

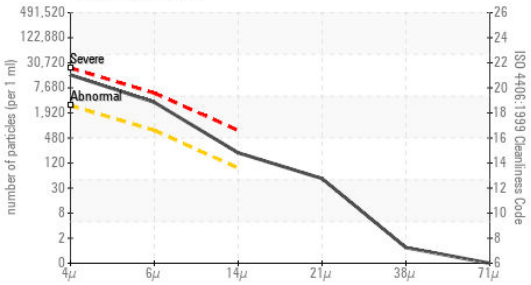
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	2
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	<1	0
Magnesium	ppm	ASTM D5185m		**28**	37	71
Calcium	ppm	ASTM D5185m		**0**	<1	1
Phosphorus	ppm	ASTM D5185m		**28**	50	0
Zinc	ppm	ASTM D5185m		**41**	39	<1
Sulfur	ppm	ASTM D5185m		**16284**	16205	18931

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	2	3
Sodium	ppm	ASTM D5185m		**<1**	2	0
Potassium	ppm	ASTM D5185m	>20	**0**	0	<1

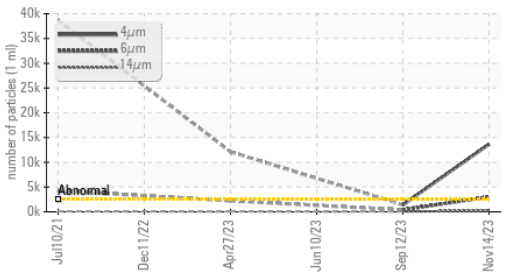
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0	0.1
Nitration	Abs/cm	*ASTM D7624		**2.5**	2.3	2.7
Sulfation	Abs/.1mm	*ASTM D7415		**20.2**	19.3	24.1

OIL ANALYSIS REPORT

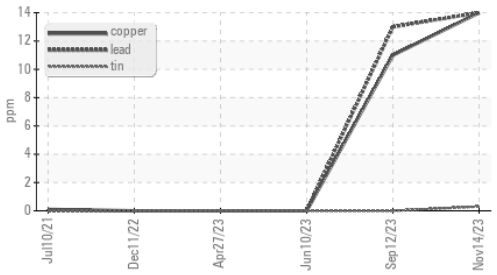
Particle Count



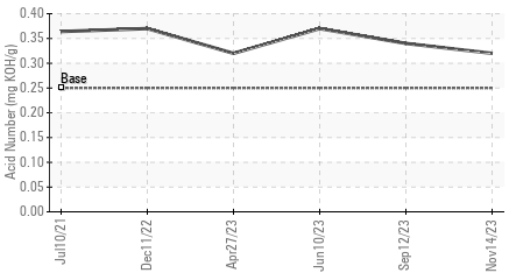
Particle Trend



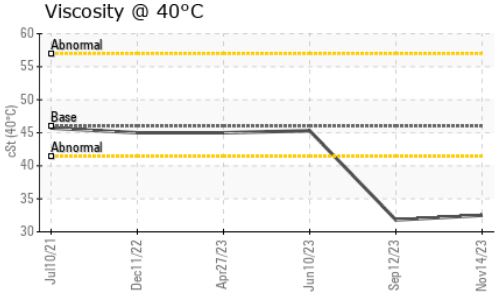
Non-ferrous Metals



Acid Number



Viscosity @ 40°C



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **13667**	1405	---
Particles >6µm		ASTM D7647	>640	▲ **3014**	382	---
Particles >14µm		ASTM D7647	>80	▲ **186**	67	---
Particles >21µm		ASTM D7647	>20	▲ **45**	33	---
Particles >38µm		ASTM D7647	>4	**1**	2	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **21/19/15**	18/16/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**13.7**	13.0	24.8
Acid Number (AN)	mg KOH/g	ASTM D8045	0.25	**0.32**	0.34	0.37

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	▲ LIGHT
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	▲ MODER
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		**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	**32.5**	31.8	▲ 45.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000743 **Received** : 17 Nov 2023
Lab Number : 06011433 **Diagnosed** : 06 Dec 2023
Unique Number : 10750577 **Diagnostician** : Mike Johnson
Test Package : IND 2 (Additional Tests: FT-IR, PQ, PrtCount)

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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US 71801
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