LIEBHERR

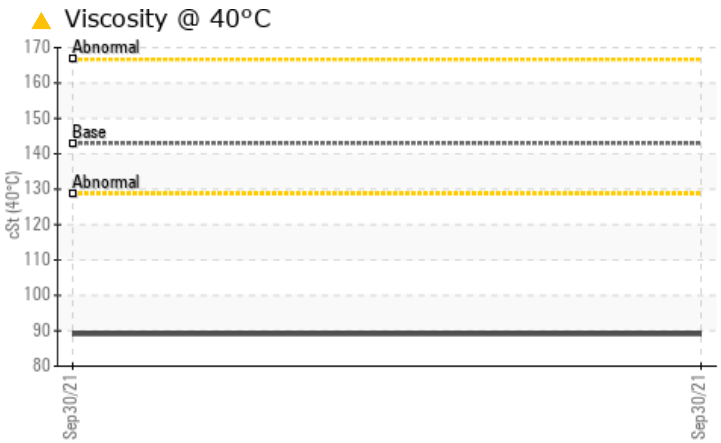
PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

Machine Id
LIEBHERR 184-713
Component
Gearbox
Fluid
GEAR OIL SAE 80W90 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	---
Debris	scalar	*Visual	NONE	▲ **MODER**	---	---
Visc @ 40°C	cSt	ASTM D445	143	▲ **89.1**	---	---

Customer Id: LEC0033
Sample No.: LH0200477
Lab Number: 05410586
Test Package: MOBCE

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.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

LIEBHERR

OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

Machine Id
LIEBHERR 184-713
Component
Gearbox
Fluid
GEAR OIL SAE 80W90 (--- GAL)

DIAGNOSIS

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

Wear
All component wear rates are normal.

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

Fluid Condition
The oil viscosity is lower than normal. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**LH0200477**	---	---
Sample Date		Client Info		**30 Sep 2021**	---	---
Machine Age	hrs	Client Info		**8339**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**34**	---	---
Chromium	ppm	ASTM D5185m	>10	**<1**	---	---
Nickel	ppm	ASTM D5185m		**0**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m		**0**	---	---
Aluminum	ppm	ASTM D5185m	>25	**1**	---	---
Lead	ppm	ASTM D5185m	>50	**0**	---	---
Copper	ppm	ASTM D5185m	>200	**2**	---	---
Tin	ppm	ASTM D5185m	>10	**<1**	---	---
Antimony	ppm	ASTM D5185m		**0**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	**28**	---	---
Barium	ppm	ASTM D5185m	200	**0**	---	---
Molybdenum	ppm	ASTM D5185m	12	**<1**	---	---
Manganese	ppm	ASTM D5185m		**<1**	---	---
Magnesium	ppm	ASTM D5185m	12	**3**	---	---
Calcium	ppm	ASTM D5185m	150	**719**	---	---
Phosphorus	ppm	ASTM D5185m	1650	**1231**	---	---
Zinc	ppm	ASTM D5185m	125	**421**	---	---
Sulfur	ppm	ASTM D5185m	22500	**11384**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**2**	---	---
Sodium	ppm	ASTM D5185m	>170	**1**	---	---
Potassium	ppm	ASTM D5185m	>20	**0**	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**MODER**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

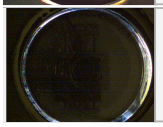
LIEBHERR

OIL ANALYSIS REPORT

Viscosity @ 40°C

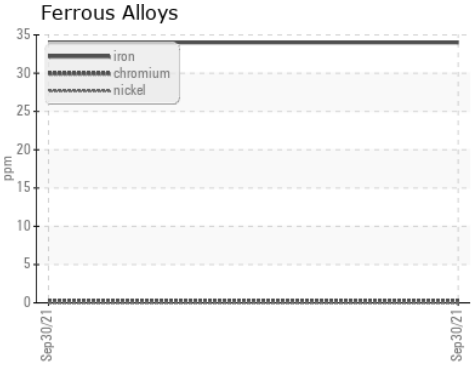
Acid Number

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	143	▲ **89.1**	---	---

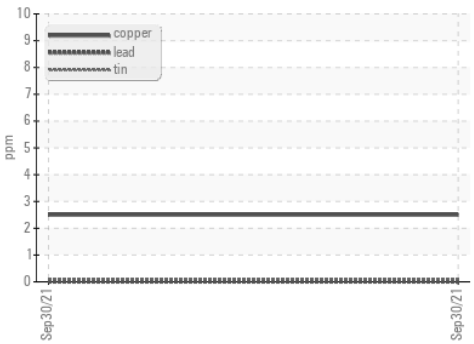
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

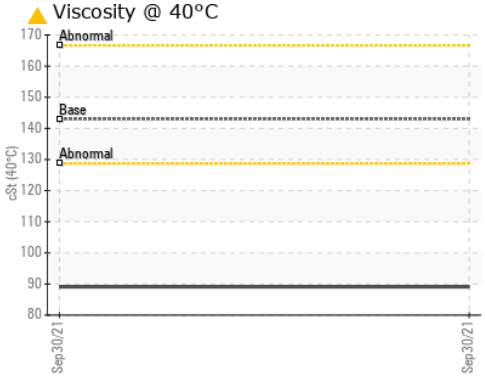
Ferrous Alloys



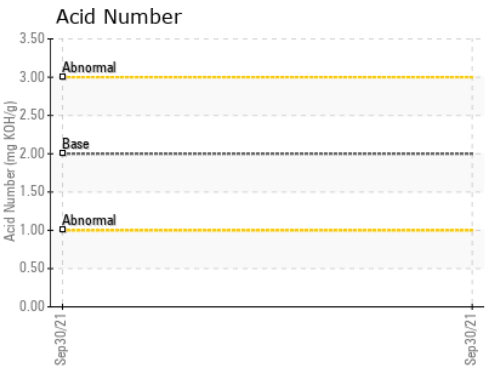
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0200477 **Received** : 29 Nov 2021
Lab Number : 05410586 **Diagnosed** : 01 Dec 2021
Unique Number : 9759774 **Diagnostician** : Jonathan Hester
Test Package : MOBCE (Additional Tests: ICP, KV40, PrtCount, SCREEN)

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)

FINKBINER EQUIPMENT CO.
15 W 400 N FRONTAGE RD
BURR RIDGE, IL
US 60527
Contact: DON FITZGERALD
dfitzgerald@finkbiner.com
T: (815)546-8991
F: (630)654-3792