OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
AMR-12 Street
Machine Id
339324 LIEBHERR LH60 1204-86896
Component
Diesel Engine
Fluid
LIEBHERR MOTOROIL 5W30 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

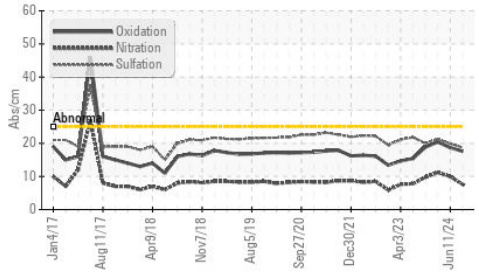
There is no indication of any contamination in the oil.

FLUID CONDITION

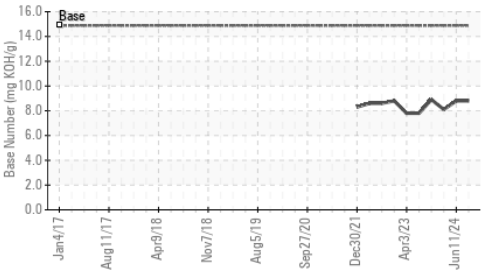
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0024869	DJJ0018451	DJJ0017127
Sample Date		Client Info		28 Jun 2024	11 Jun 2024	26 Dec 2023
Machine Age	hrs	Client Info		15537	15501	15052
Oil Age	hrs	Client Info		0	250	250
Filter Age	hrs	Client Info		0	250	250
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	9	25	15
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	8	▲ 30	13
Lead	ppm	ASTM D5185m	>30	<1	1	0
Copper	ppm	ASTM D5185m	>125	<1	2	<1
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>60	6	8	8
Potassium	ppm	ASTM D5185m	>20	2	9	17
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.6	0.9
Nitration	Abs/cm	*ASTM D7624	>20	7.6	10.0	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	19.9	21.3
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		23	● 98	▲ 259
Boron	ppm	ASTM D5185m	236	141	145	65
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	3	8	8
Manganese	ppm	ASTM D5185m	<1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	25	862	875	800
Calcium	ppm	ASTM D5185m	4298	1484	1547	1260
Phosphorus	ppm	ASTM D5185m	1020	906	953	883
Zinc	ppm	ASTM D5185m	1164	1038	1109	972
Sulfur	ppm	ASTM D5185m	2460	5460	5168	3980
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	18.7	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	14.88	8.8	8.8	8.1
Visc @ 100°C	cSt	ASTM D445	12.1	13.6	13.9	14.0

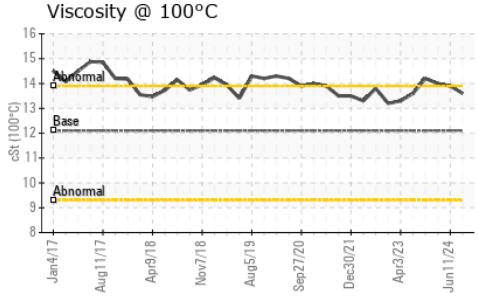
FT-IR (Direct Trend)



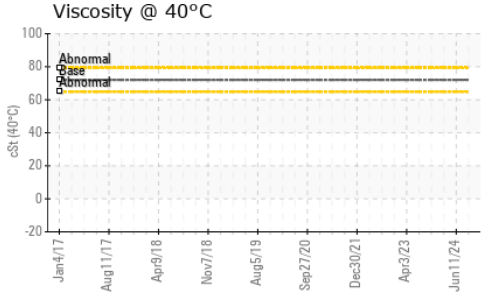
Base Number



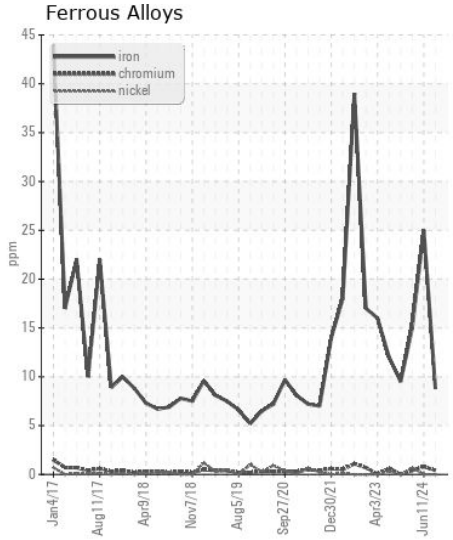
Viscosity @ 100°C



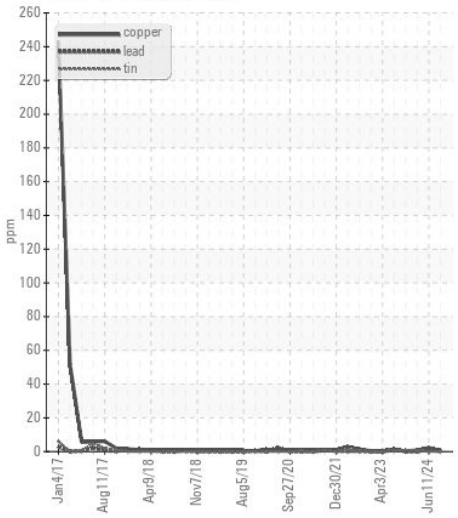
Viscosity @ 40°C



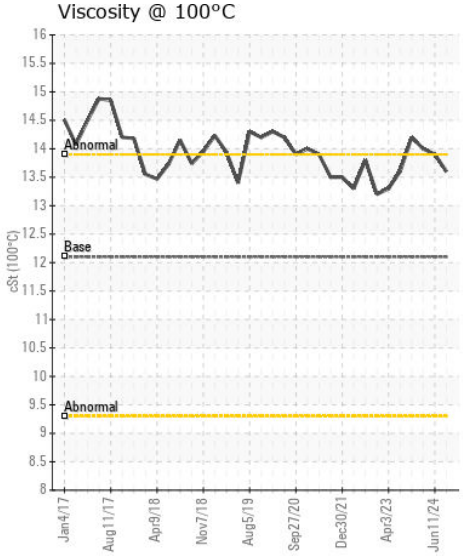
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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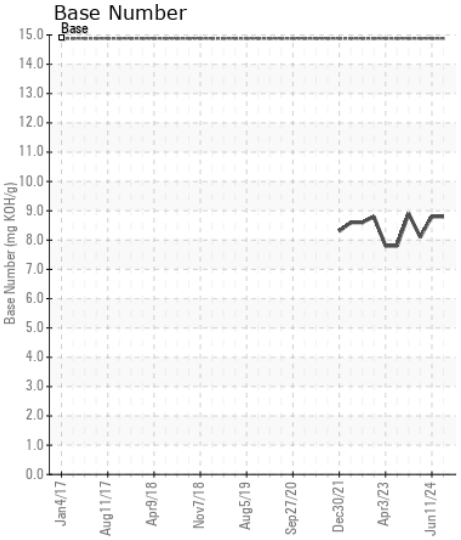

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0024869
Lab Number : 06224288
Unique Number : 11102485
Test Package : CONST (Additional Tests: KV40, TBN)

Received : 01 Jul 2024
Tested : 02 Jul 2024
Diagnosed : 02 Jul 2024 - Jonathan Hester

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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