



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR 130 - 57298
 Component
Diesel Engine
 Fluid
UNITED OIL DURALENE (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0035332	DC0032046	DC0028748
Sample Date		Client Info		15 Mar 2024	24 Oct 2023	01 May 2023
Machine Age	hrs	Client Info		250	250	250
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	2	7
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	<1	<1
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	5	3	9
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

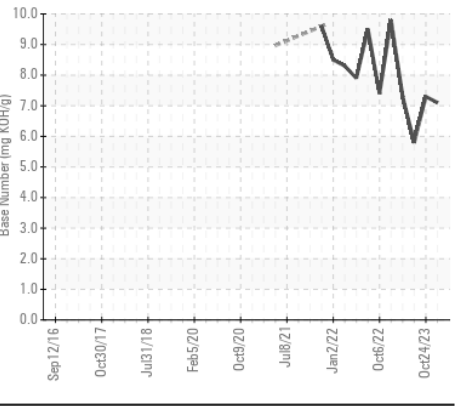
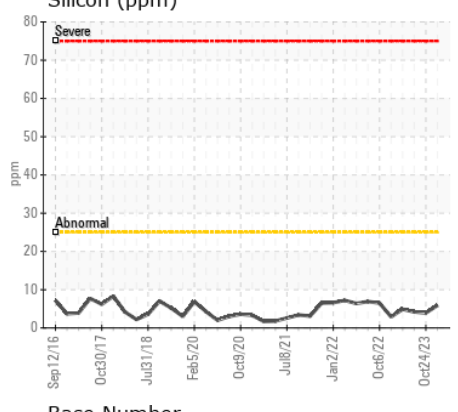
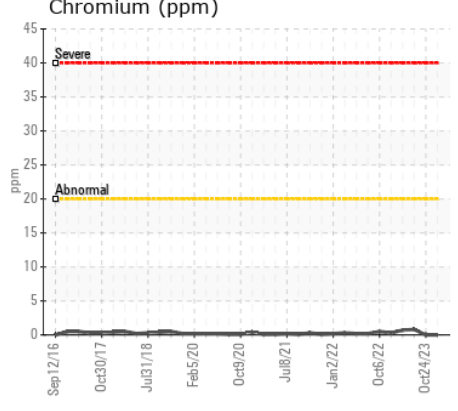
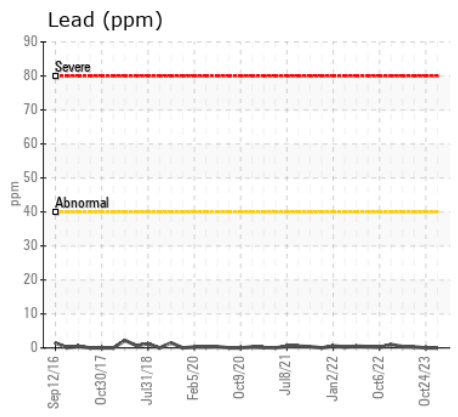
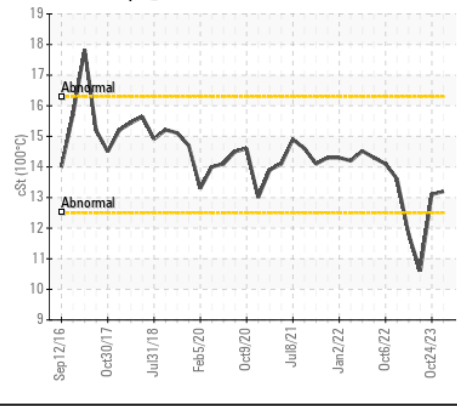
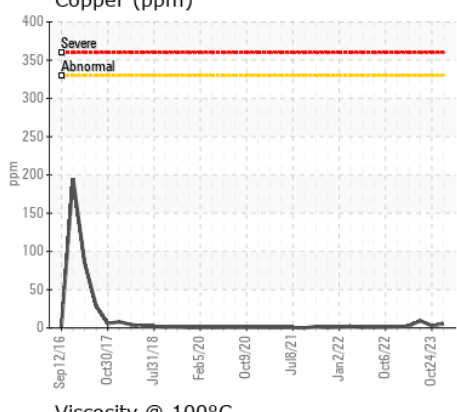
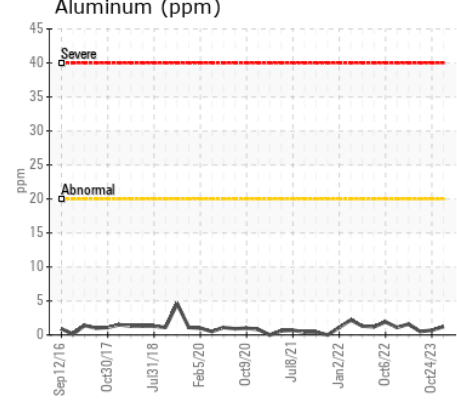
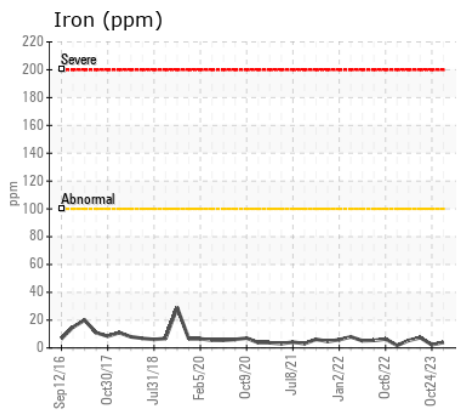
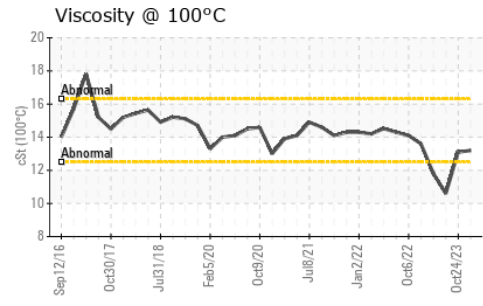
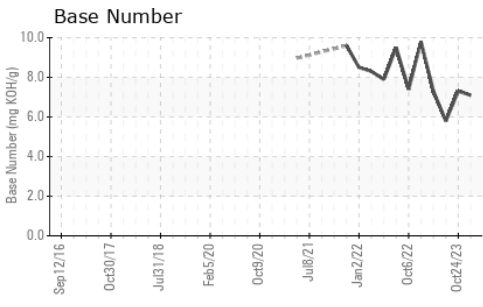
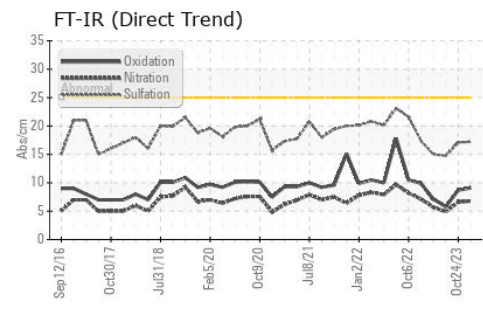
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	4	4
Potassium	ppm	ASTM D5185m	>20	<1	0	1
Fuel		WC Method	>5	<1.0	<1.0	0.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.9	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.8	6.6	4.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.2	17.1	14.7
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

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.

Sodium	ppm	ASTM D5185m		2	0	1
Boron	ppm	ASTM D5185m		3	1	3
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		3	<1	2
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		47	43	73
Calcium	ppm	ASTM D5185m		2451	2046	1288
Phosphorus	ppm	ASTM D5185m		932	827	610
Zinc	ppm	ASTM D5185m		1089	979	743
Sulfur	ppm	ASTM D5185m		4540	3703	5721
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.1	8.7	5.8
Base Number (BN)	mg KOH/g	ASTM D2896		7.1	7.3	5.8
Visc @ 100°C	cSt	ASTM D445		13.2	13.1	10.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0035332
Lab Number : 06147053
Unique Number : 10977131
Test Package : MOB 1 (Additional Tests: TBN)

Received : 12 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Sean Felton

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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)