CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR PR734XL DOZER 22700 (S/N 007856-725)
Component
Diesel Engine
Fluid
LIEBHERR MOTOROIL 10W-40 LOW ASH (--- QTS)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

WEAR

All component wear rates are normal.

CONTAMINATION

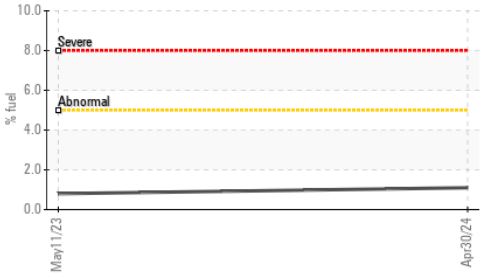
Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

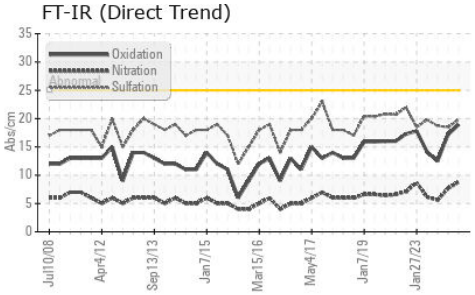
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0924606	WC0857103	WC0786416
Sample Date		Client Info		30 Apr 2024	14 Dec 2023	29 Aug 2023
Machine Age	hrs	Client Info		11967	11758	11565
Oil Age	hrs	Client Info		1000	250	500
Filter Age	hrs	Client Info		1000	250	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	8	7	17
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	2	4
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>125	3	0	2
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>60	7	6	8
Potassium	ppm	ASTM D5185m	>20	0	3	2
Fuel	%	ASTM D3524	>5	1.1	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.8	7.7	5.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	18.5	18.7
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
Sodium	ppm	ASTM D5185m		2	1	4
Boron	ppm	ASTM D5185m	169	169	190	409
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	2	36	9	83
Manganese	ppm	ASTM D5185m	<1	1	<1	<1
Magnesium	ppm	ASTM D5185m	724	838	748	404
Calcium	ppm	ASTM D5185m	1323	1350	1234	1362
Phosphorus	ppm	ASTM D5185m	678	806	874	996
Zinc	ppm	ASTM D5185m	776	923	975	1208
Sulfur	ppm	ASTM D5185m	2859	3252	3890	3746
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.9	17.2	12.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.28	9.7	8.7	6.7
Visc @ 100°C	cSt	ASTM D445	13.0	12.0	13.0	12.5

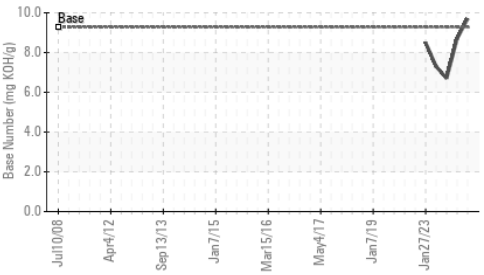
Fuel Dilution



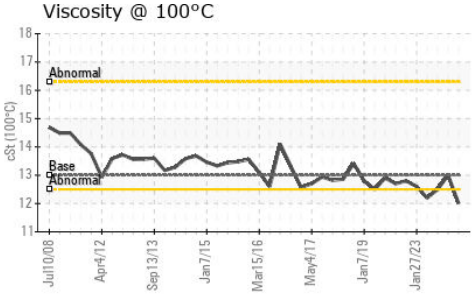
FT-IR (Direct Trend)



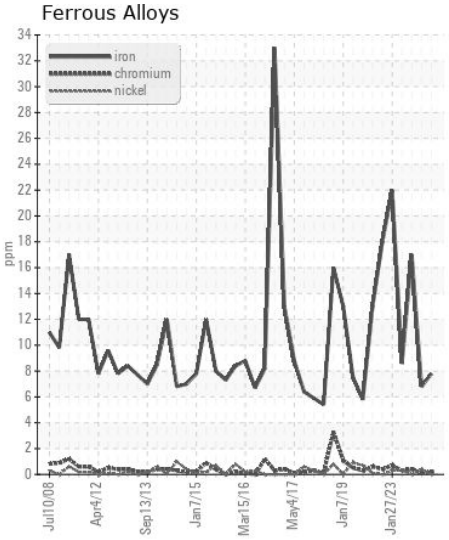
Base Number



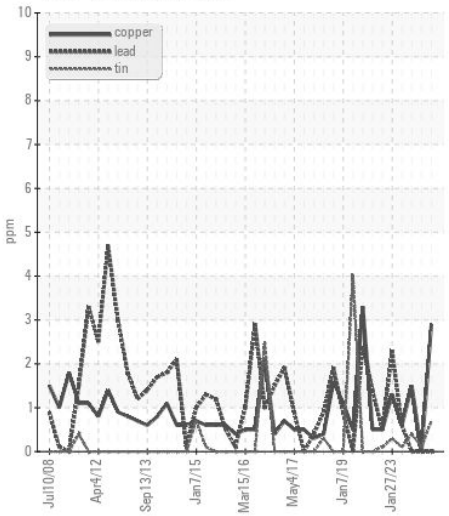
Viscosity @ 100°C



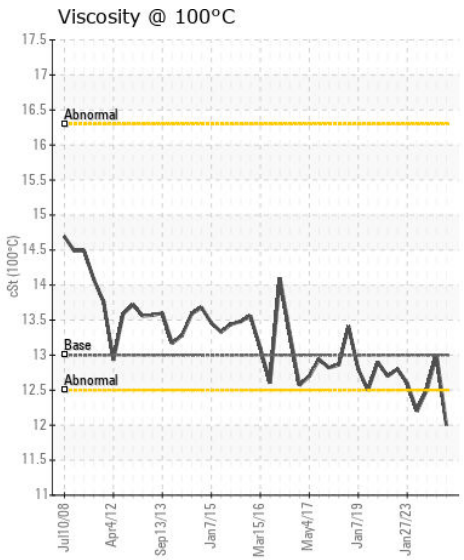
Ferrous Alloys



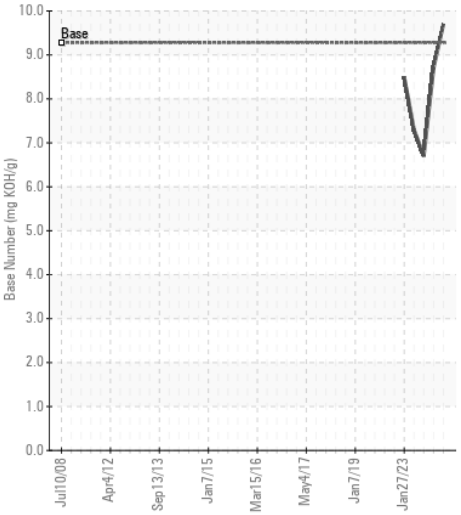
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0924606
Lab Number : 06176758
Unique Number : 11022811
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 13 May 2024
Tested : 15 May 2024
Diagnosed : 15 May 2024 - Wes Davis

SULLIVAN EASTERN INC-LIEBHERR
2860 C SLATER RD
MORRISVILLE, NC
US 27560
Contact: CHRIS CALTON

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)

T:
F: (919)484-2136