



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
021388-783 LIEBHERR R954 021388-783
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0017805	LH0258357	DJJ0018051
Sample Date		Client Info		18 Jun 2024	12 Mar 2024	26 Nov 2023
Machine Age	hrs	Client Info		5524	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	5	5	6
Chromium	ppm	ASTM D5185m	>5	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>15	2	1	1
Lead	ppm	ASTM D5185m	>30	0	2	<1
Copper	ppm	ASTM D5185m	>125	<1	<1	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

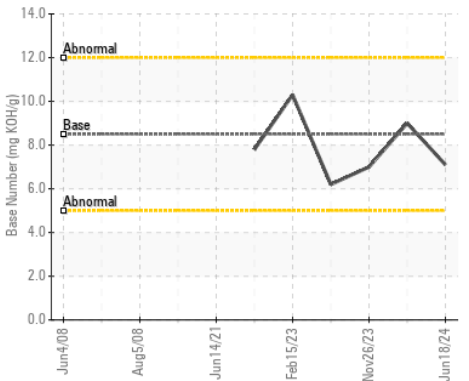
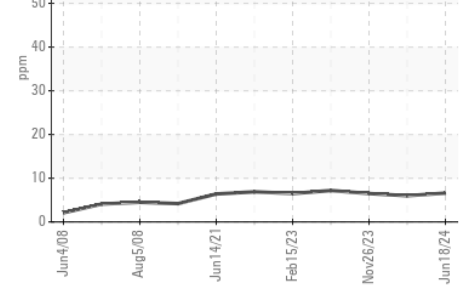
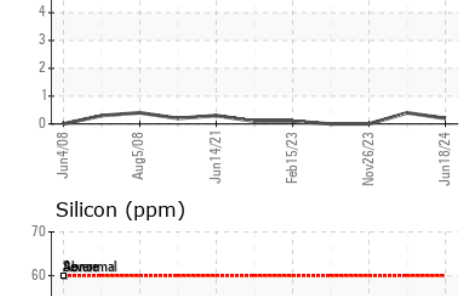
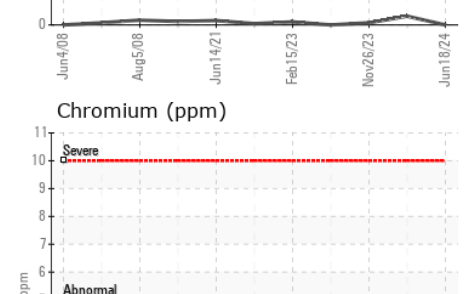
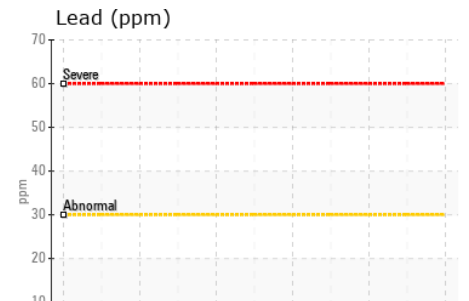
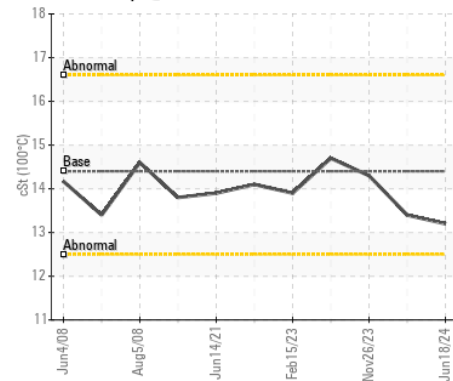
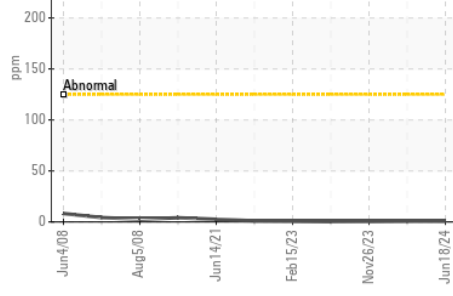
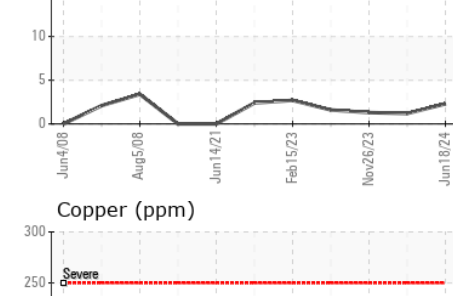
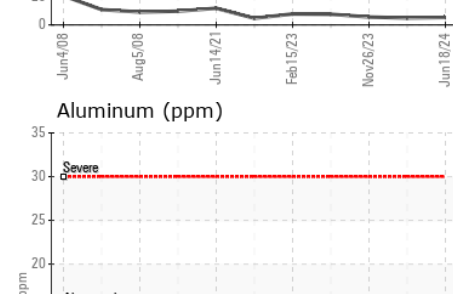
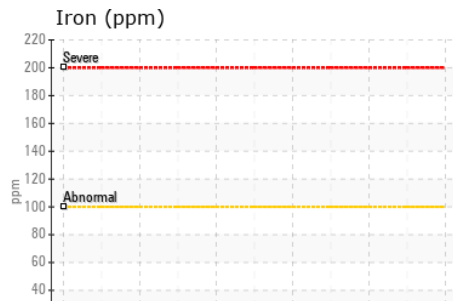
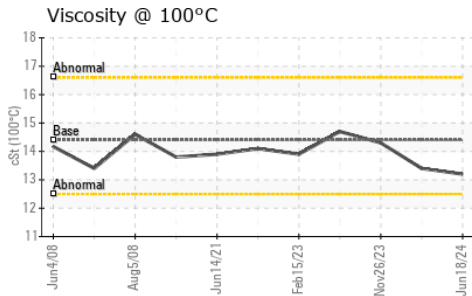
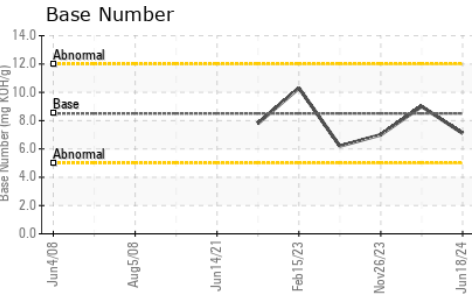
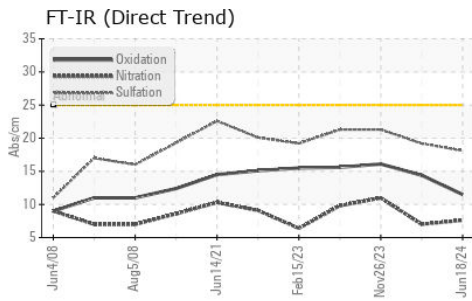
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	7	6	6
Potassium	ppm	ASTM D5185m	>20	3	2	1
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	0.6	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	7.6	7.0	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	19.2	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

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	>158	4	2	3
Boron	ppm	ASTM D5185m	250	50	13	47
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	59	56	91
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	450	96	850	45
Calcium	ppm	ASTM D5185m	3000	2091	1221	2176
Phosphorus	ppm	ASTM D5185m	1150	989	1079	1009
Zinc	ppm	ASTM D5185m	1350	1149	1230	1338
Sulfur	ppm	ASTM D5185m	4250	4160	3795	4346
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.5	14.4	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.1	9.0	7.0
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	13.4	14.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0017805
Lab Number : 06214441
Unique Number : 11087305
Test Package : MOBCE (Additional Tests: TBN)

RIVER METALS RECYCLING - NEWPORT
 P.O. BOX 72-220
 NEWPORT, KY
 US 41072
 Contact: RYAN BOWDEN

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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 F: (859)291-0086