OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
RMR-Xenia
Machine Id
18528 LIEBHERR R944 005448-651
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

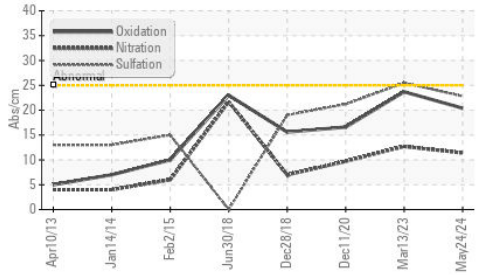
There is no indication of any contamination in the oil.

FLUID CONDITION

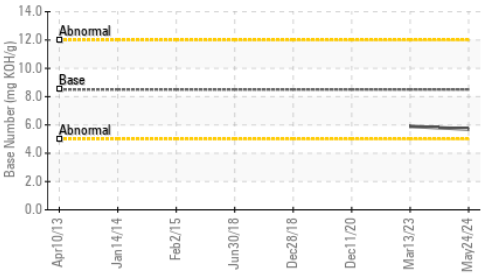
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0017797	DJJ0018009	DJJ0004281
Sample Date		Client Info		24 May 2024	13 Mar 2023	11 Dec 2020
Machine Age	hrs	Client Info		10032	9377	9026
Oil Age	hrs	Client Info		250	0	0
Filter Age	hrs	Client Info		250	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	7	12	11
Chromium	ppm	ASTM D5185m	>5	<1	<1	2
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>15	2	3	0
Lead	ppm	ASTM D5185m	>30	12	12	2
Copper	ppm	ASTM D5185m	>125	2	2	7
Tin	ppm	ASTM D5185m	>5	1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>60	7	7	6
Potassium	ppm	ASTM D5185m	>20	6	6	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	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	11.4	12.7	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.8	25.5	21.2
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	>158	6	7	7
Boron	ppm	ASTM D5185m	250	47	51	78
Barium	ppm	ASTM D5185m	10	0	0	<1
Molybdenum	ppm	ASTM D5185m	100	67	87	42
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	28	57	271
Calcium	ppm	ASTM D5185m	3000	2510	2340	2170
Phosphorus	ppm	ASTM D5185m	1150	1087	1010	1025
Zinc	ppm	ASTM D5185m	1350	1295	1321	1174
Sulfur	ppm	ASTM D5185m	4250	4676	4342	2856
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.4	23.7	16.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.7	5.9	---
Visc @ 100°C	cSt	ASTM D445	14.4	14.5	14.2	13.9

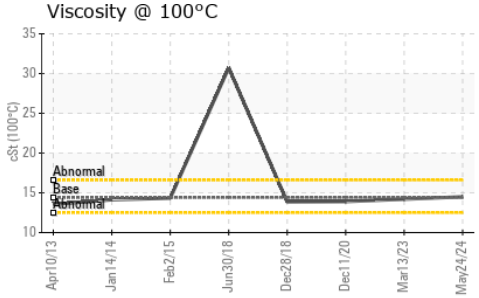
FT-IR (Direct Trend)



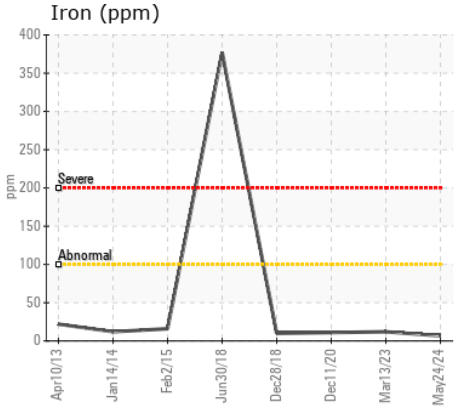
Base Number



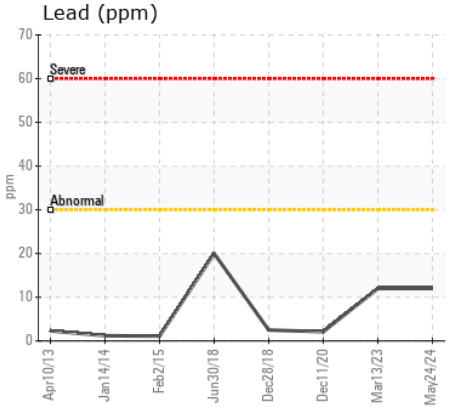
Viscosity @ 100°C



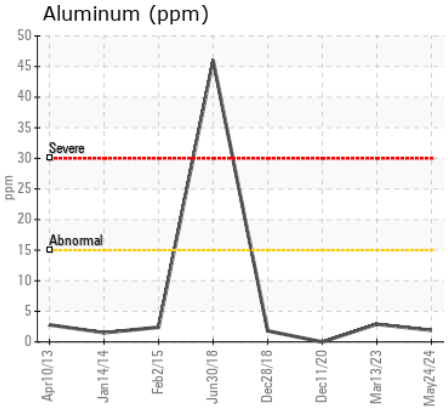
Iron (ppm)



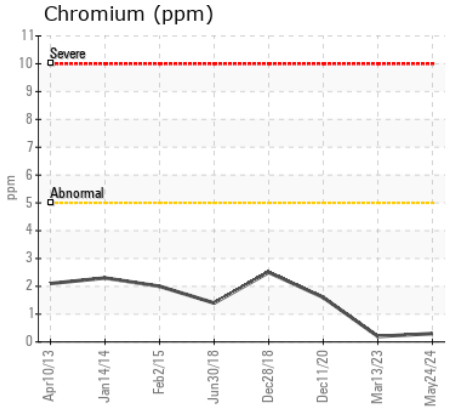
Lead (ppm)



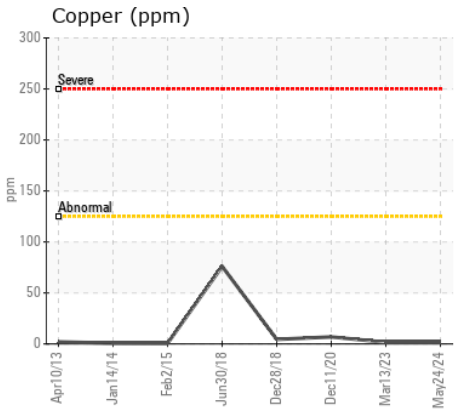
Aluminum (ppm)



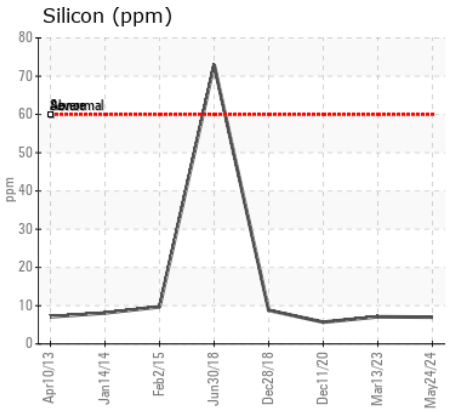
Chromium (ppm)



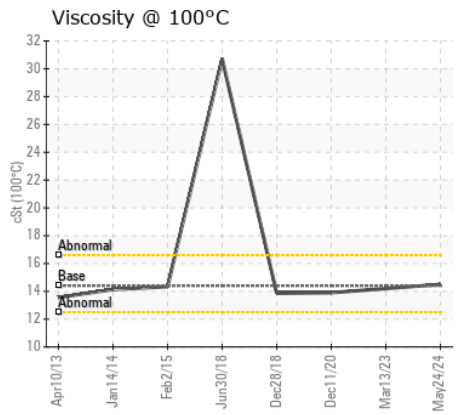
Copper (ppm)



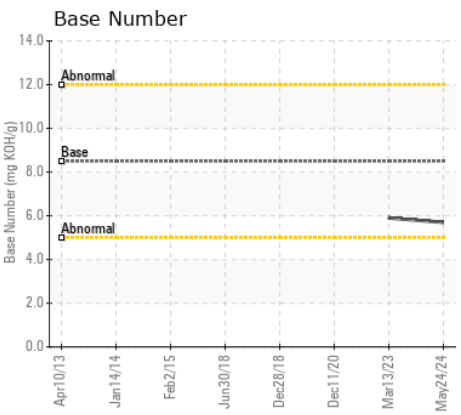
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0017797
Lab Number : 06196223
Unique Number : 11058346
Test Package : MOBCE (Additional Tests: TBN)

Received : 31 May 2024
Tested : 03 Jun 2024
Diagnosed : 03 Jun 2024 - Wes Davis

Certificate L2367

RIVER METALS RECYCLING - XENIA
840 JASPER RD
XENIA, OH
US 45385
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)

T:
F: (937)372-9324