TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
THOMAS SCHOOL BUS 2
Component
Right Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (18 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

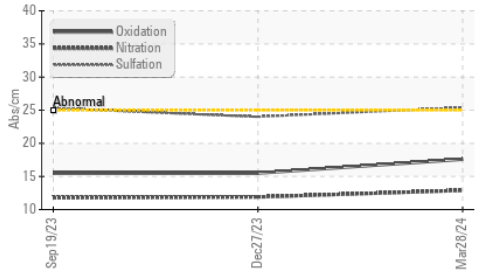
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

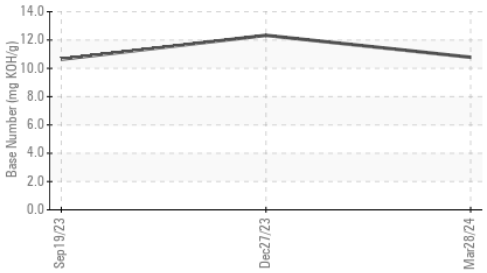
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06160594	TR06102558	TR05956581
Sample Date		Client Info		28 Mar 2024	27 Dec 2023	19 Sep 2023
Machine Age	hrs	Client Info		1064	835	672
Oil Age	hrs	Client Info		940	711	548
Filter Age	hrs	Client Info		229	167	196
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>130	107	87	77
Chromium	ppm	ASTM D5185m	>10	2	1	1
Nickel	ppm	ASTM D5185m	>4	1	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	35	28	23
Lead	ppm	ASTM D5185m	>20	<1	5	4
Copper	ppm	ASTM D5185m	>125	305	330	▲ 412
Tin	ppm	ASTM D5185m	>4	1	1	1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	17	17	18
Potassium	ppm	ASTM D5185m	>20	95	76	74
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.6	0.5	0
Nitration	Abs/cm	*ASTM D7624	>20	12.9	11.9	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.4	24.0	25.3
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		5	4	4
Boron	ppm	ASTM D5185m		1	3	2
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		115	108	114
Manganese	ppm	ASTM D5185m		2	2	2
Magnesium	ppm	ASTM D5185m		45	52	53
Calcium	ppm	ASTM D5185m		4344	4575	4462
Phosphorus	ppm	ASTM D5185m		988	925	894
Zinc	ppm	ASTM D5185m		1123	1193	1098
Sulfur	ppm	ASTM D5185m		4897	4361	4641
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	15.5	15.5
Base Number (BN)	mg KOH/g	ASTM D2896		10.78	12.33	10.64
Visc @ 100°C	cSt	ASTM D445		13.6	14.0	14.0

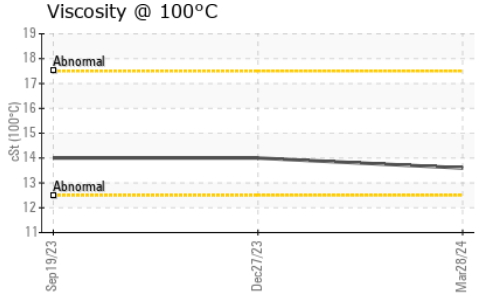
FT-IR (Direct Trend)



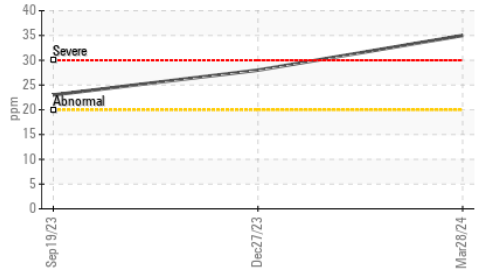
Base Number



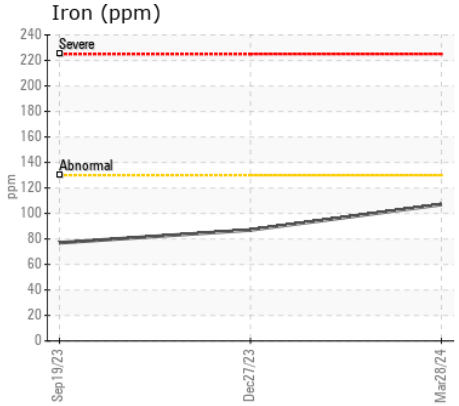
Viscosity @ 100°C



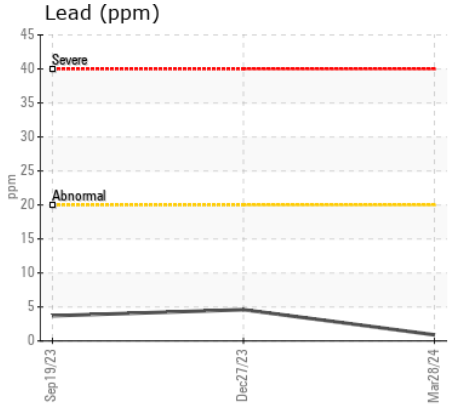
Aluminum (ppm)



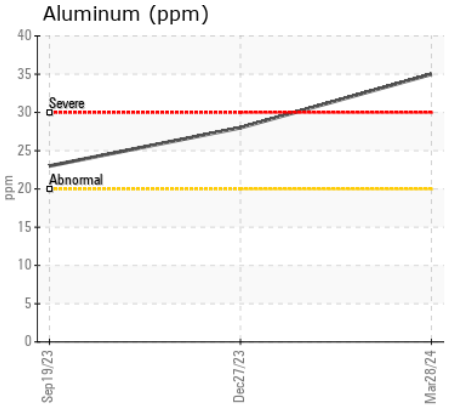
Iron (ppm)



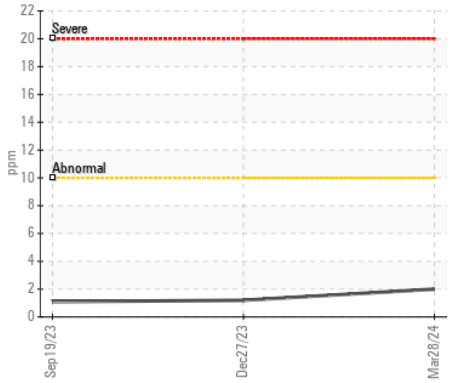
Lead (ppm)



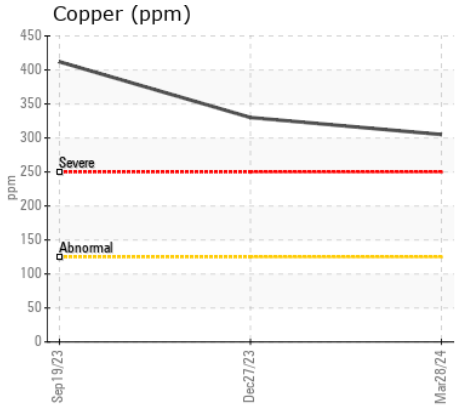
Aluminum (ppm)



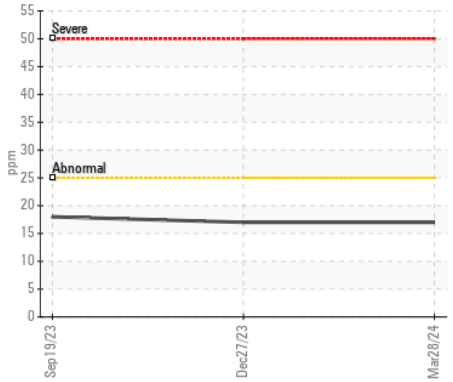
Chromium (ppm)



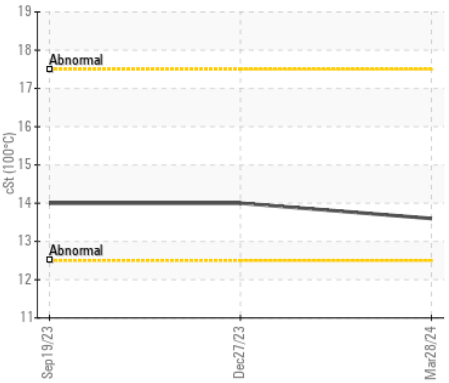
Copper (ppm)



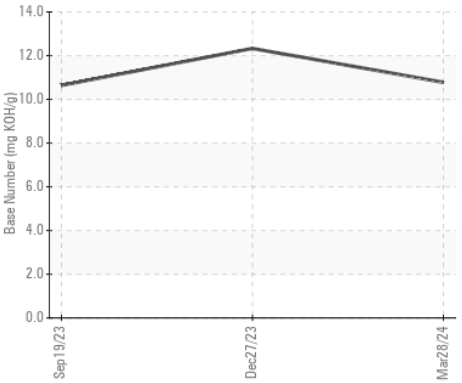
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06160594
Lab Number : 06160594
Unique Number : 10996017
Test Package : MOB 2

Received : 25 Apr 2024
Tested : 26 Apr 2024
Diagnosed : 26 Apr 2024 - Wes Davis

BOW SCHOOL DIST BUS GARAGE
12 RODINSON RD
BOW, NH
US 03304
Contact: DON PERCY

To discuss this sample report, contact Customer Service at 1-800-827-0711.
** - 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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