TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
THOMAS 23
Component
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

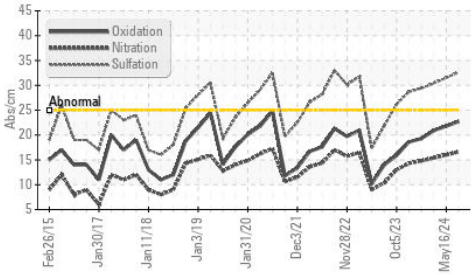
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

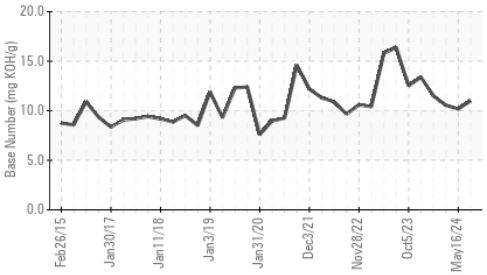
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06229315	TR06202984	TR06160598
Sample Date		Client Info		25 Jun 2024	16 May 2024	28 Mar 2024
Machine Age	hrs	Client Info		0	6191	6056
Oil Age	hrs	Client Info		1256	1156	1021
Filter Age	hrs	Client Info		103	135	205
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>130	139	132	128
Chromium	ppm	ASTM D5185m	>10	2	2	2
Nickel	ppm	ASTM D5185m	>4	1	<1	2
Titanium	ppm	ASTM D5185m	>2	1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	26	24	25
Lead	ppm	ASTM D5185m	>20	<1	<1	<1
Copper	ppm	ASTM D5185m	>125	6	4	5
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	11	10	11
Potassium	ppm	ASTM D5185m	>20	30	26	28
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	2.7	2.5	2.4
Nitration	Abs/cm	*ASTM D7624	>20	16.6	16.0	15.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.6	31.5	30.4
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	5	5
Boron	ppm	ASTM D5185m		1	0	0
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		136	130	132
Manganese	ppm	ASTM D5185m		2	1	2
Magnesium	ppm	ASTM D5185m		21	22	21
Calcium	ppm	ASTM D5185m		4675	4518	4585
Phosphorus	ppm	ASTM D5185m		1017	957	1071
Zinc	ppm	ASTM D5185m		1199	1104	1174
Sulfur	ppm	ASTM D5185m		4549	4763	5427
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.7	21.8	20.9
Base Number (BN)	mg KOH/g	ASTM D2896		10.99	10.18	10.56
Visc @ 100°C	cSt	ASTM D445		16.1	15.5	15.5

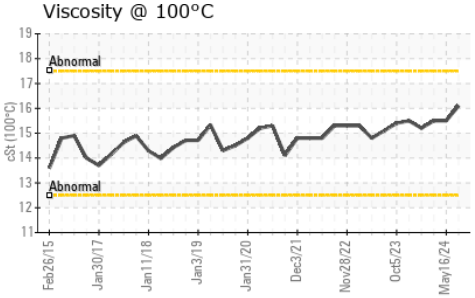
FT-IR (Direct Trend)



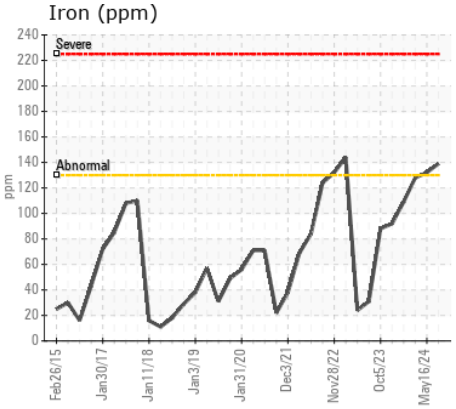
Base Number



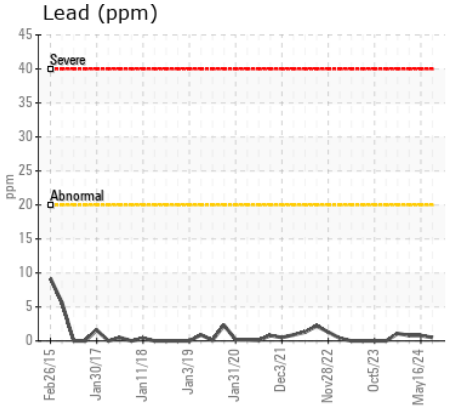
Viscosity @ 100°C



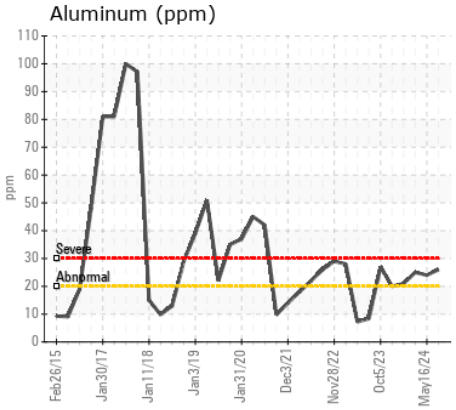
Iron (ppm)



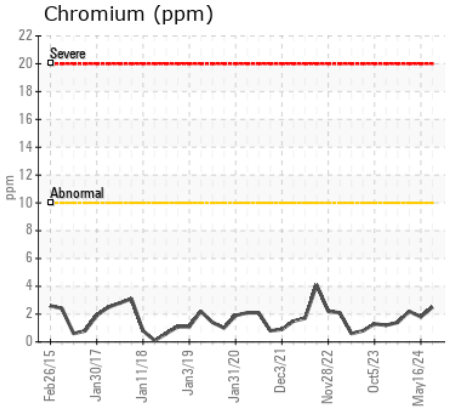
Lead (ppm)



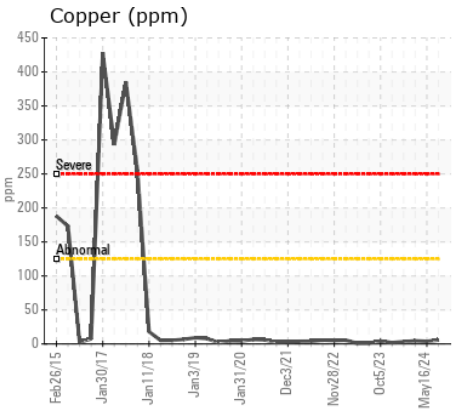
Aluminum (ppm)



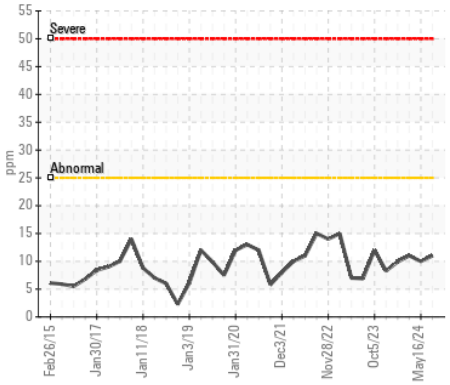
Chromium (ppm)



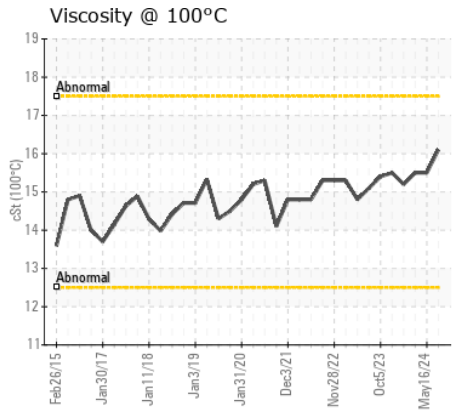
Copper (ppm)



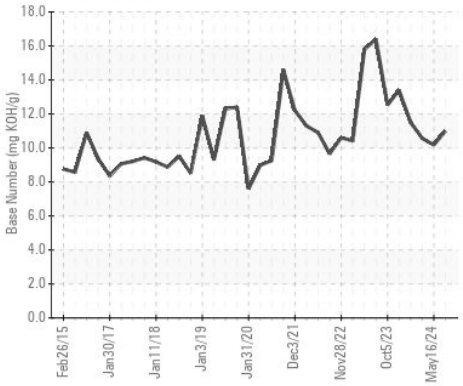
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513			**BOW SCHOOL DIST BUS GARAGE**
Sample No.	: TR06229315	**Received**	: 05 Jul 2024	12 RODINSON RD
Lab Number	: 06229315	**Tested**	: 09 Jul 2024	BOW, NH
Unique Number	: 11112808	**Diagnosed**	: 09 Jul 2024 - Angela Borella	US 03304
Test Package	: MOB 2			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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F: