TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
THOMAS BUS 3
Component
Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (18 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

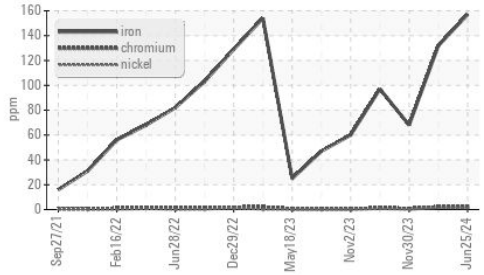
There is no indication of any contamination in the oil.

FLUID CONDITION

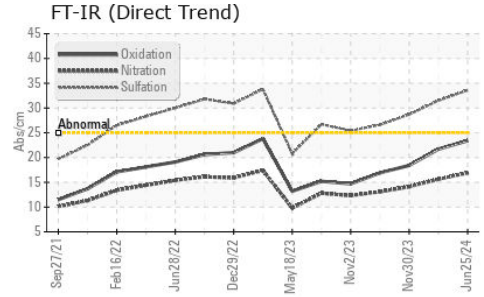
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06229312	TR06160597	TR06102557
Sample Date		Client Info		25 Jun 2024	17 Apr 2024	30 Nov 2023
Machine Age	hrs	Client Info		5638	5478	5282
Oil Age	hrs	Client Info		1261	1101	905
Filter Age	hrs	Client Info		160	196	186
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>130	▲ 157	▲ 132	97
Chromium	ppm	ASTM D5185m	>10	3	2	1
Nickel	ppm	ASTM D5185m	>4	1	1	<1
Titanium	ppm	ASTM D5185m	>2	1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	19	19	14
Lead	ppm	ASTM D5185m	>20	<1	<1	<1
Copper	ppm	ASTM D5185m	>125	6	5	3
Tin	ppm	ASTM D5185m	>4	1	1	1
Vanadium	ppm	ASTM D5185m		1	<1	<1
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	11	10	8
Potassium	ppm	ASTM D5185m	>20	17	17	11
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	2.9	2.6	2.2
Nitration	Abs/cm	*ASTM D7624	>20	16.9	15.6	14.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	33.6	31.5	28.7
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		4	5	3
Boron	ppm	ASTM D5185m		2	0	1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		134	127	125
Manganese	ppm	ASTM D5185m		2	2	<1
Magnesium	ppm	ASTM D5185m		22	21	22
Calcium	ppm	ASTM D5185m		4550	4499	4885
Phosphorus	ppm	ASTM D5185m		976	1070	959
Zinc	ppm	ASTM D5185m		1179	1170	1249
Sulfur	ppm	ASTM D5185m		4286	5438	4586
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	21.7	18.4
Base Number (BN)	mg KOH/g	ASTM D2896		10.43	9.99	11.61
Visc @ 100°C	cSt	ASTM D445		15.8	15.2	15.2

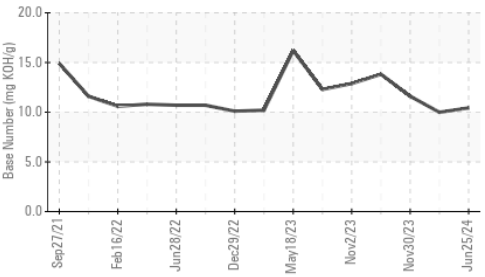
Ferrous Alloys



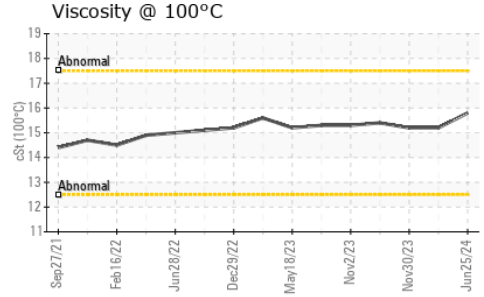
FT-IR (Direct Trend)



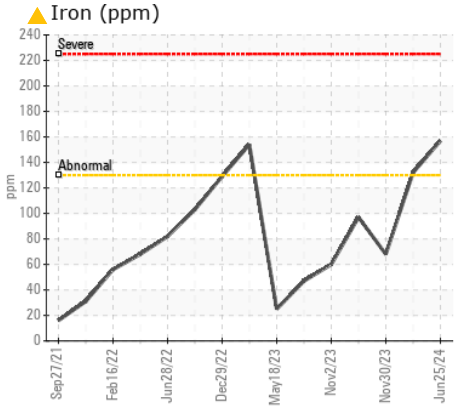
Base Number



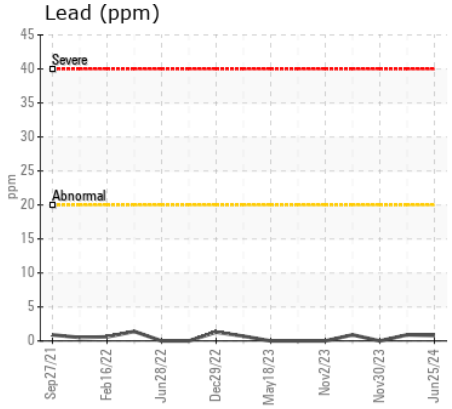
Viscosity @ 100°C



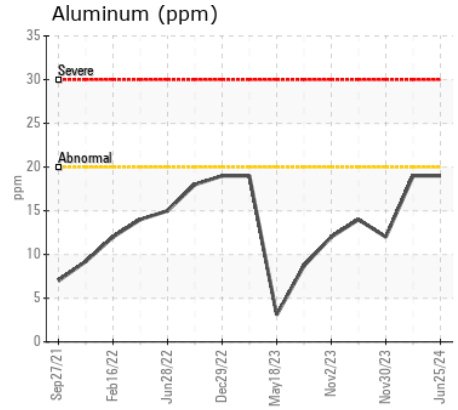
Iron (ppm)



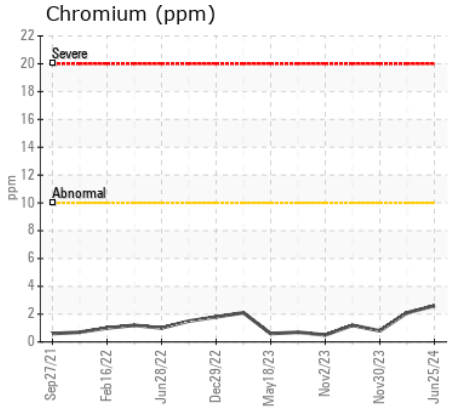
Lead (ppm)



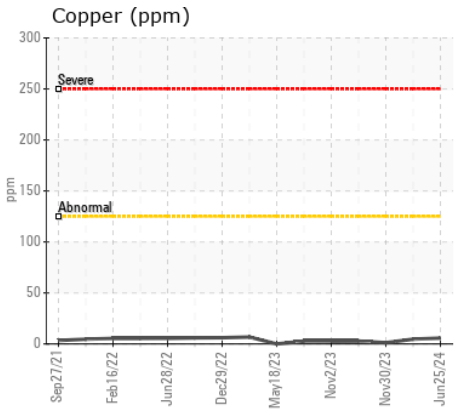
Aluminum (ppm)



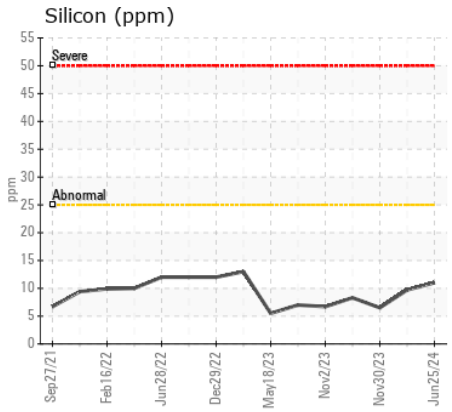
Chromium (ppm)



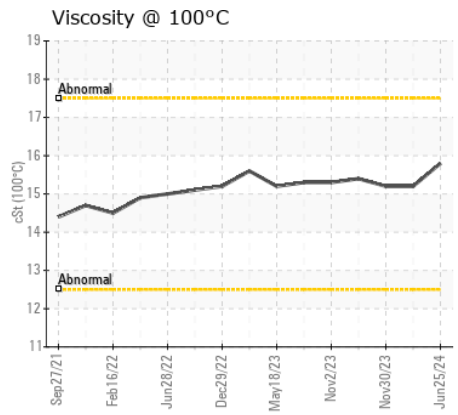
Copper (ppm)



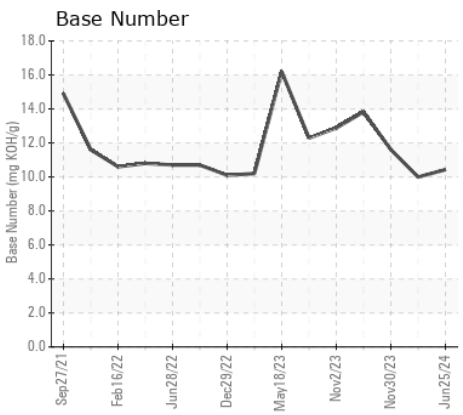
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06229312
Lab Number : 06229312
Unique Number : 11112805
Test Package : MOB 2

Received : 05 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Angela Borella

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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F: