TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MACK GU713 87 (S/N 1M2A0TC1HM034397)
Component
Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (40 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

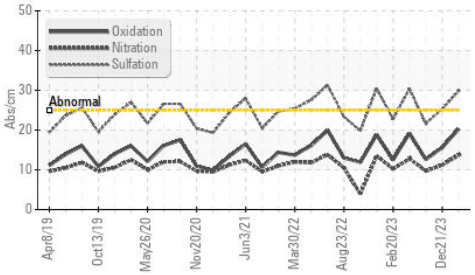
There is no indication of any contamination in the oil.

FLUID CONDITION

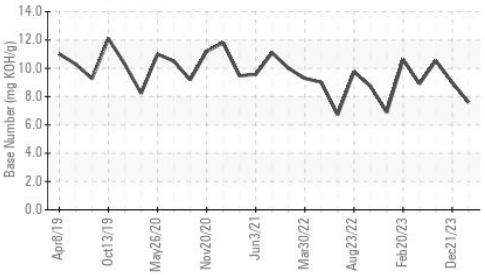
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06193038	TR06048447	TR06000043
Sample Date		Client Info		20 May 2024	21 Dec 2023	01 Nov 2023
Machine Age	hrs	Client Info		12355	12000	11773
Oil Age	hrs	Client Info		938	583	356
Filter Age	hrs	Client Info		938	583	356
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>120	41	23	18
Chromium	ppm	ASTM D5185m	>20	1	<1	0
Nickel	ppm	ASTM D5185m	>5	2	2	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	1	0	0
Aluminum	ppm	ASTM D5185m	>20	10	7	4
Lead	ppm	ASTM D5185m	>40	5	2	<1
Copper	ppm	ASTM D5185m	>330	10	8	6
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	9	7	6
Potassium	ppm	ASTM D5185m	>20	10	6	4
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	>4	0.7	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	13.7	11.2	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.8	25.3	21.6
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	4	2
Boron	ppm	ASTM D5185m		0	3	0
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		112	115	110
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		15	20	15
Calcium	ppm	ASTM D5185m		3468	3741	3505
Phosphorus	ppm	ASTM D5185m		821	977	839
Zinc	ppm	ASTM D5185m		986	1132	1087
Sulfur	ppm	ASTM D5185m		3989	4269	4064
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.2	15.6	12.6
Base Number (BN)	mg KOH/g	ASTM D2896		7.60	9.00	10.53
Visc @ 100°C	cSt	ASTM D445		15.7	15.6	15.5

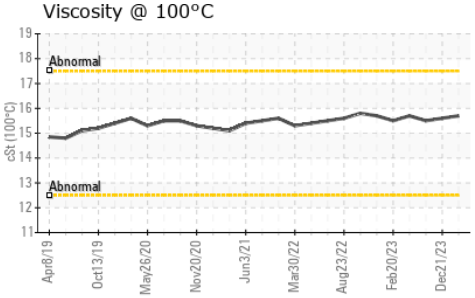
FT-IR (Direct Trend)



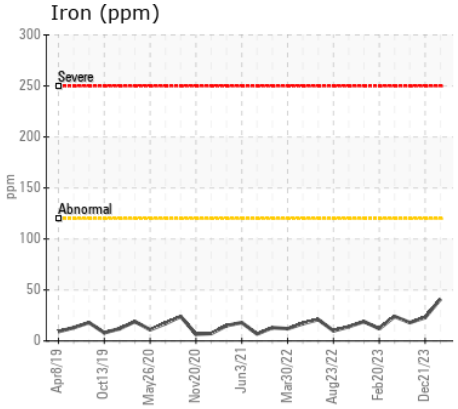
Base Number



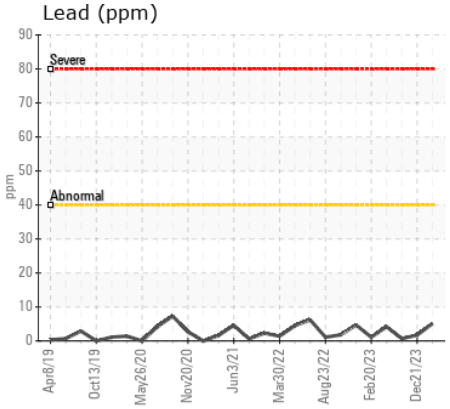
Viscosity @ 100°C



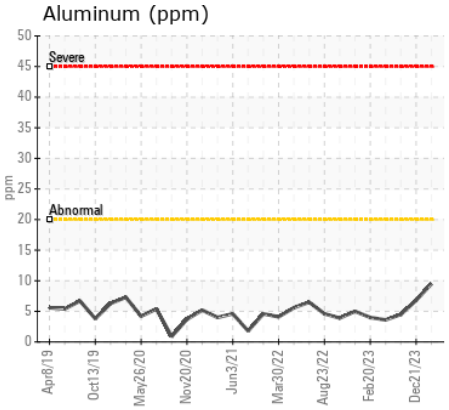
Iron (ppm)



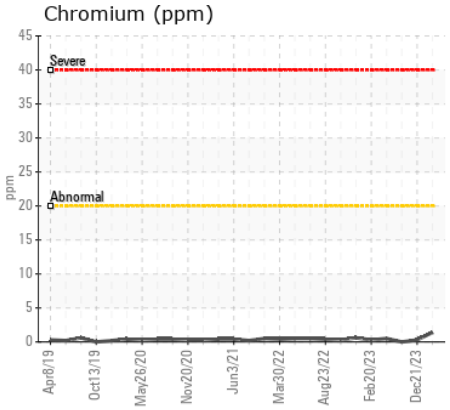
Lead (ppm)



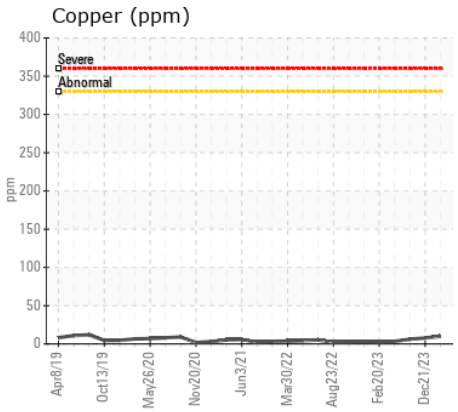
Aluminum (ppm)



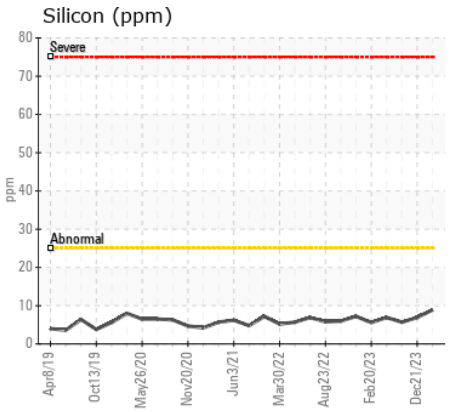
Chromium (ppm)



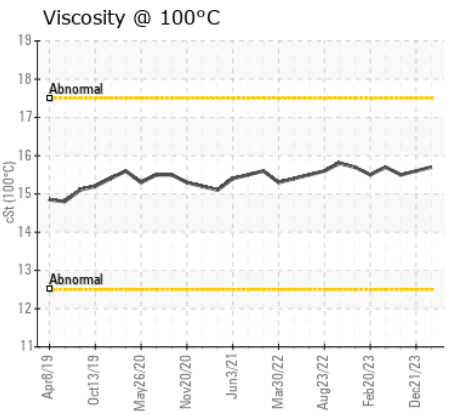
Copper (ppm)



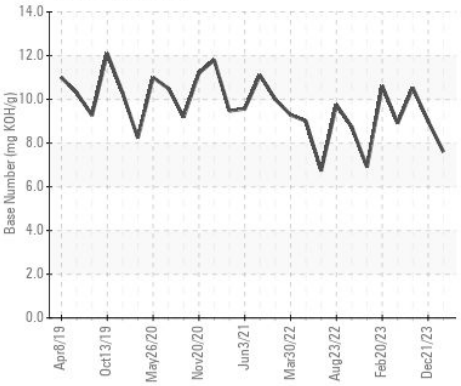
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06193038
Lab Number : 06193038
Unique Number : 11049790
Test Package : MOB 2

Received : 28 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 2024 - Wes Davis

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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