TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MACK GU713 84 (S/N 1M2AX09C9HM030241)
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

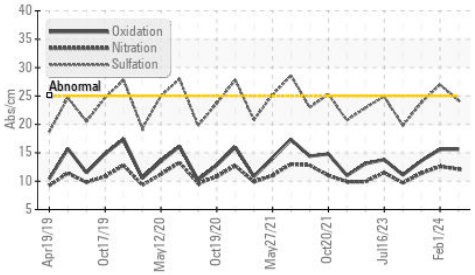
There is no indication of any contamination in the oil.

FLUID CONDITION

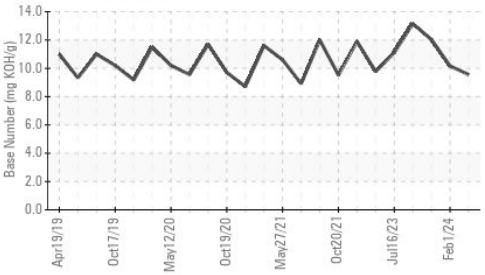
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06177905	TR06087608	TR06039560
Sample Date		Client Info		08 May 2024	01 Feb 2024	14 Dec 2023
Machine Age	hrs	Client Info		3055	2710	2490
Oil Age	hrs	Client Info		345	720	500
Filter Age	hrs	Client Info		345	720	500
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>120	20	47	34
Chromium	ppm	ASTM D5185m	>20	<1	1	1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	11	33	28
Lead	ppm	ASTM D5185m	>40	1	2	1
Copper	ppm	ASTM D5185m	>330	0	2	1
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	6	8	8
Potassium	ppm	ASTM D5185m	>20	19	71	68
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	0.9	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	12.1	12.6	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	27.0	23.8
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		2	<1	2
Boron	ppm	ASTM D5185m		2	0	4
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		106	134	115
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		15	17	21
Calcium	ppm	ASTM D5185m		3422	3769	3708
Phosphorus	ppm	ASTM D5185m		863	846	917
Zinc	ppm	ASTM D5185m		971	1107	1104
Sulfur	ppm	ASTM D5185m		4183	3923	4118
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	15.6	13.6
Base Number (BN)	mg KOH/g	ASTM D2896		9.56	10.16	12.03
Visc @ 100°C	cSt	ASTM D445		12.9	15.4	15.2

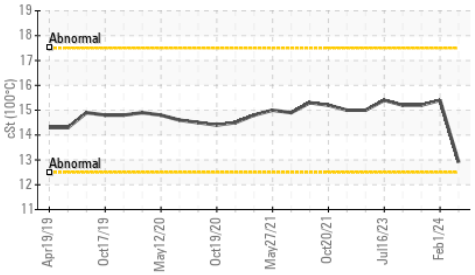
FT-IR (Direct Trend)



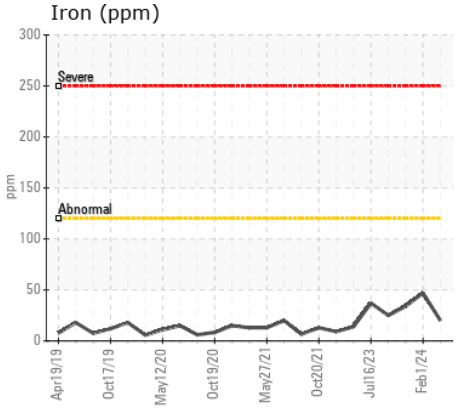
Base Number



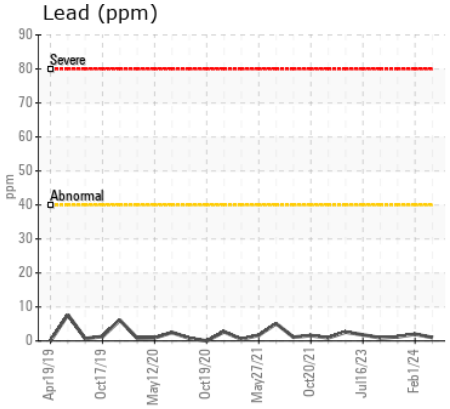
Viscosity @ 100°C



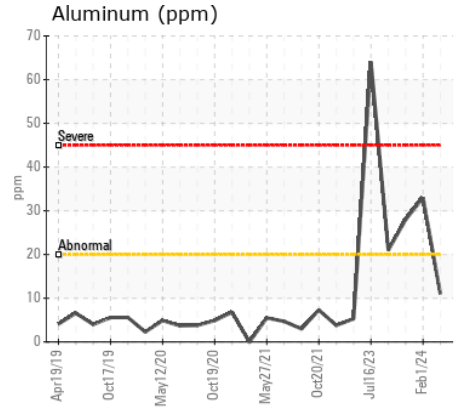
Iron (ppm)



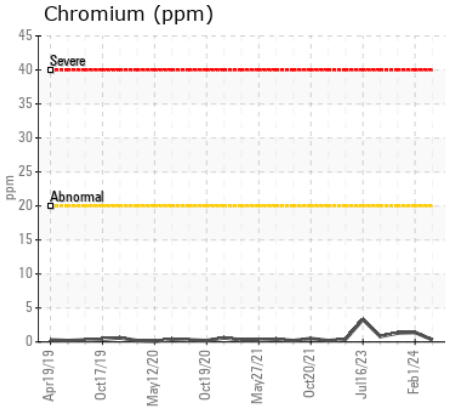
Lead (ppm)



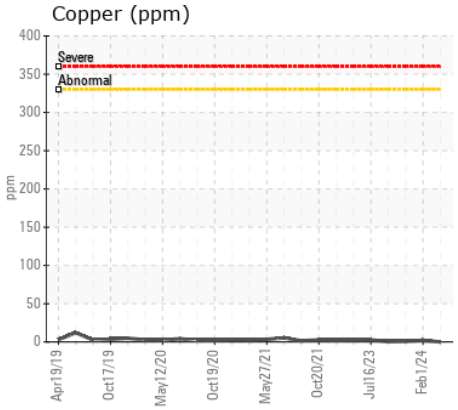
Aluminum (ppm)



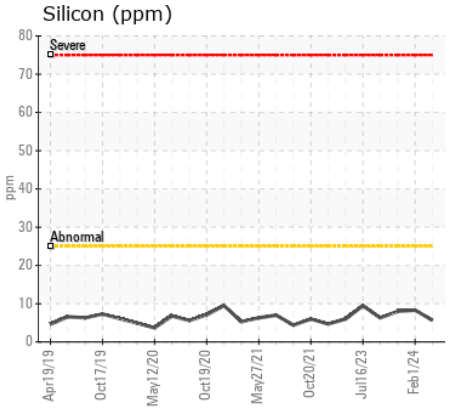
Chromium (ppm)



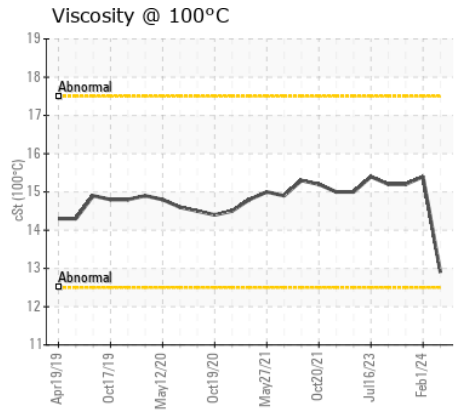
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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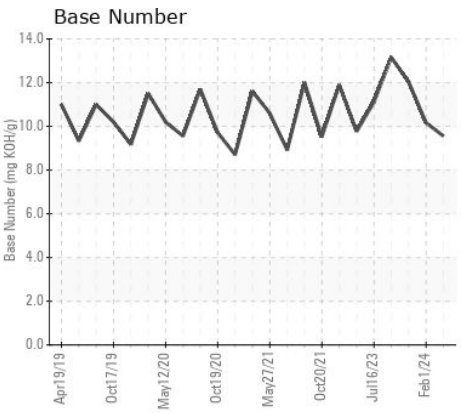

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06177905
Lab Number : 06177905
Unique Number : 11029231
Test Package : MOB 2

Received : 13 May 2024
Tested : 14 May 2024
Diagnosed : 14 May 2024 - Wes Davis

ANDREWS CONSTRUCTION COMPANY
PO BOX 720
CAMPTON, NH
US 03223-0720
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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