



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MACK GU713 89 (S/N 1M2AX09C2HM030243)
 Component
Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (40 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06193039	TR06166316	TR06035397
Sample Date		Client Info		21 May 2024	19 Apr 2024	28 Nov 2023
Machine Age	hrs	Client Info		3052	2899	2525
Oil Age	hrs	Client Info		527	374	751
Filter Age	hrs	Client Info		527	374	751
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	40	38	38
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	1	0	<1
Aluminum	ppm	ASTM D5185m	>20	14	13	29
Lead	ppm	ASTM D5185m	>40	2	1	2
Copper	ppm	ASTM D5185m	>330	2	1	2
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

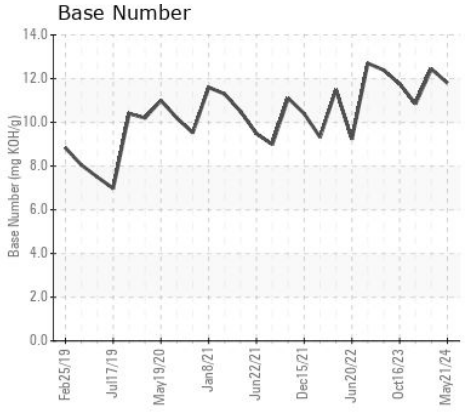
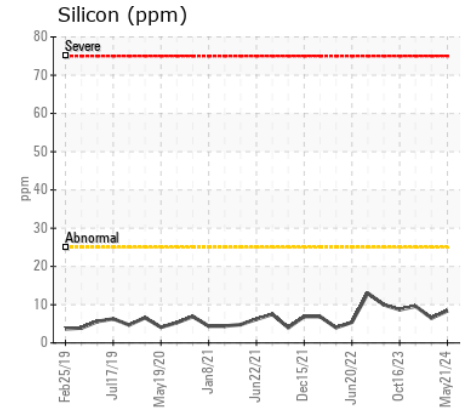
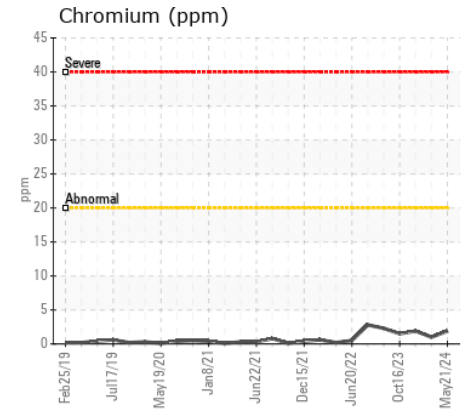
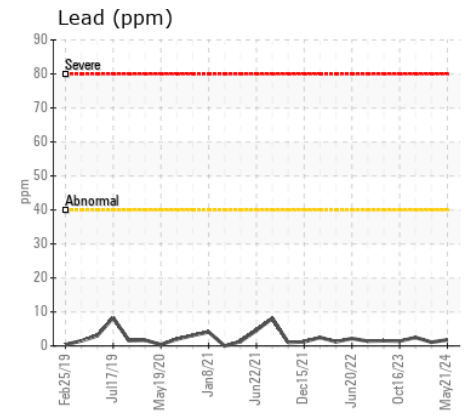
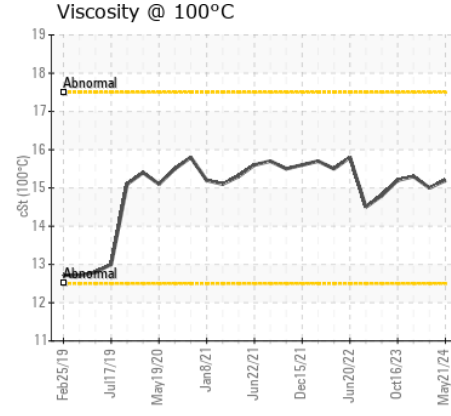
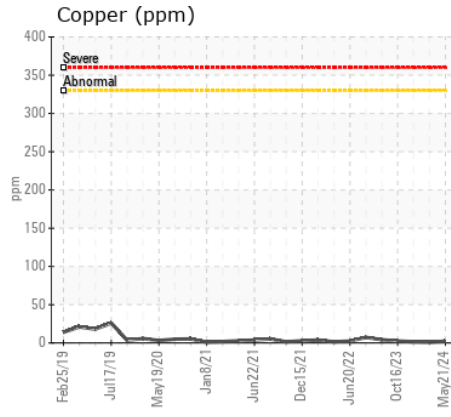
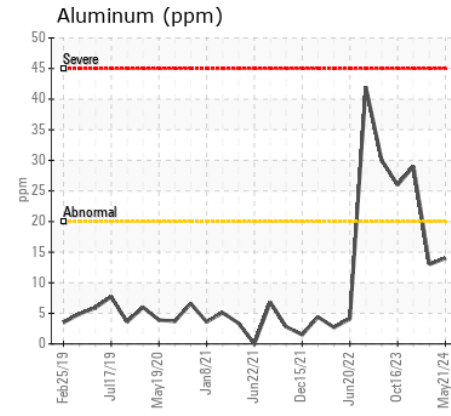
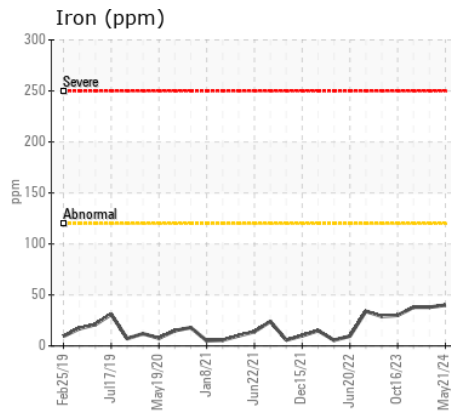
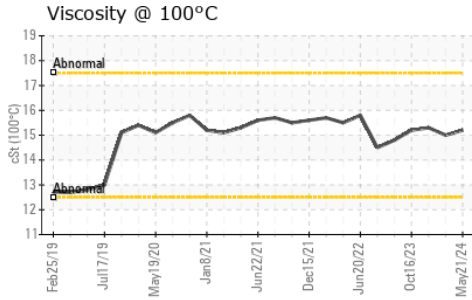
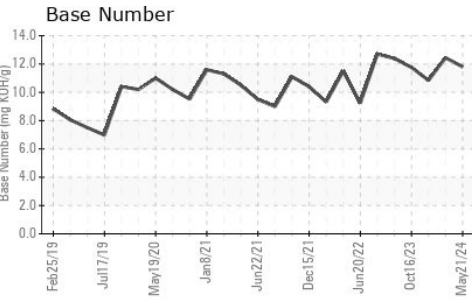
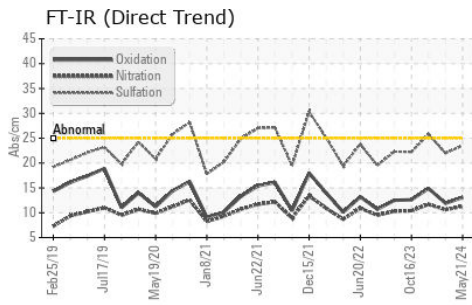
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	6	10
Potassium	ppm	ASTM D5185m	>20	28	24	73
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	0.8	0.6	0.7
Nitration	Abs/cm	*ASTM D7624	>20	11.3	10.6	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	22.0	25.8
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

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.

Sodium	ppm	ASTM D5185m		3	2	3
Boron	ppm	ASTM D5185m		0	0	2
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		117	114	116
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		14	17	21
Calcium	ppm	ASTM D5185m		3496	3704	3790
Phosphorus	ppm	ASTM D5185m		805	906	932
Zinc	ppm	ASTM D5185m		980	1049	1122
Sulfur	ppm	ASTM D5185m		3914	4721	4228
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.1	11.9	14.9
Base Number (BN)	mg KOH/g	ASTM D2896		11.80	12.44	10.85
Visc @ 100°C	cSt	ASTM D445		15.2	15.0	15.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06193039
Lab Number : 06193039
Unique Number : 11049791
Test Package : MOB 2
Received : 28 May 2024
Tested : 30 May 2024
Diagnosed : 30 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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