



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		TR06230910	TR06193039	TR06166316
Sample Date		Client Info		02 Jul 2024	21 May 2024	19 Apr 2024
Machine Age	hrs	Client Info		3290	3052	2899
Oil Age	hrs	Client Info		750	527	374
Filter Age	hrs	Client Info		750	527	374
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	49	40	38
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	1	0
Aluminum	ppm	ASTM D5185m	>20	17	14	13
Lead	ppm	ASTM D5185m	>40	3	2	1
Copper	ppm	ASTM D5185m	>330	2	2	1
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

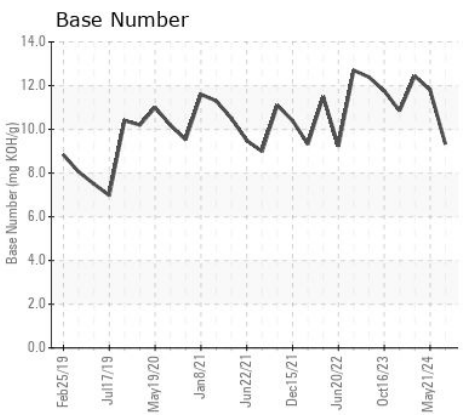
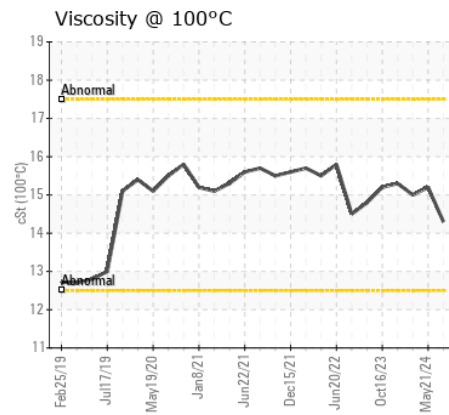
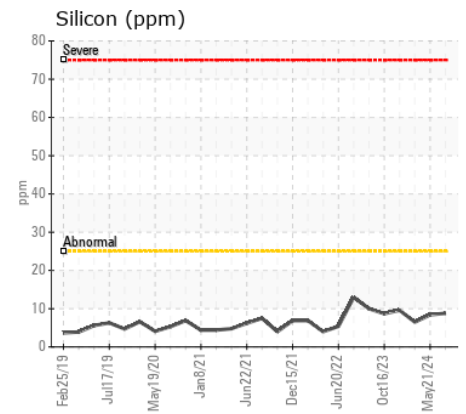
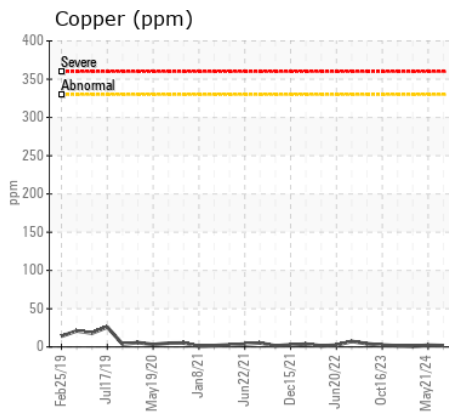
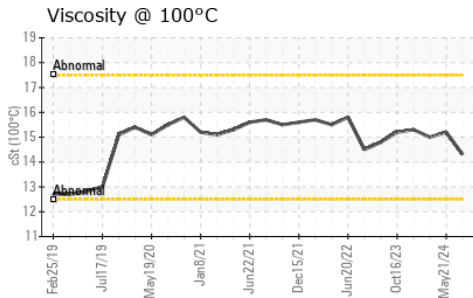
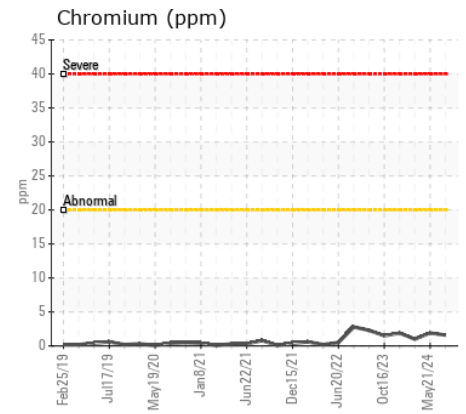
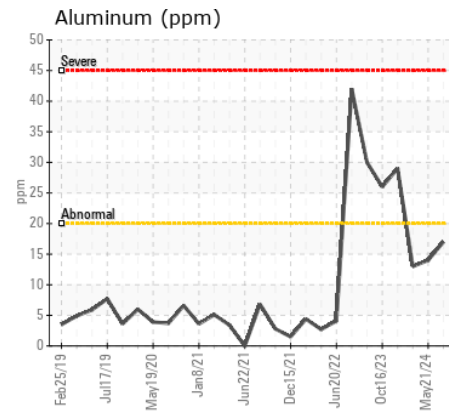
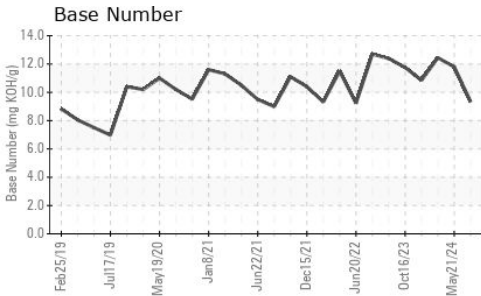
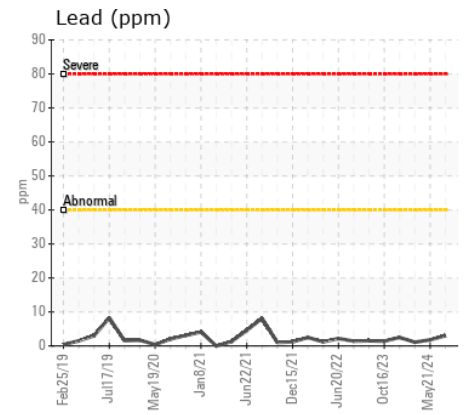
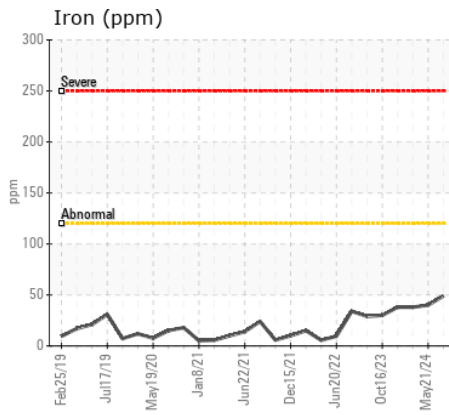
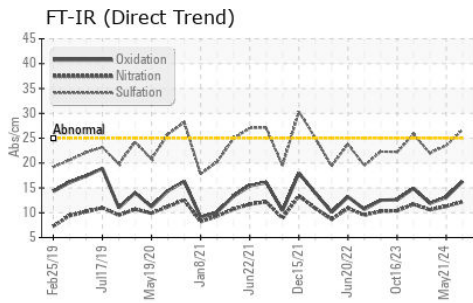
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	9	8	6
Potassium	ppm	ASTM D5185m	>20	35	28	24
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	1.1	0.8	0.6
Nitration	Abs/cm	*ASTM D7624	>20	12.2	11.3	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.7	23.5	22.0
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		2	3	2
Boron	ppm	ASTM D5185m		<1	0	0
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		119	117	114
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		16	14	17
Calcium	ppm	ASTM D5185m		3753	3496	3704
Phosphorus	ppm	ASTM D5185m		915	805	906
Zinc	ppm	ASTM D5185m		1098	980	1049
Sulfur	ppm	ASTM D5185m		3932	3914	4721
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	13.1	11.9
Base Number (BN)	mg KOH/g	ASTM D2896		9.33	11.80	12.44
Visc @ 100°C	cSt	ASTM D445		14.3	15.2	15.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06230910  
**Lab Number** : 06230910  
**Unique Number** : 11114403  
**Test Package** : MOB 2  
**Received** : 08 Jul 2024  
**Tested** : 10 Jul 2024  
**Diagnosed** : 10 Jul 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)

T:  
F: