



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**MACK GU713 82 (S/N 1M2AX07C1HM034366)**  
 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		<b>TR06212588</b>	TR06163735	TR06080930
Sample Date		Client Info		<b>07 Jun 2024</b>	22 Apr 2024	25 Jan 2024
Machine Age	hrs	Client Info		<b>11680</b>	11430	11174
Oil Age	hrs	Client Info		<b>250</b>	750	500
Filter Age	hrs	Client Info		<b>250</b>	750	500
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>6</b>	23	15
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	7	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	3	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	5	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

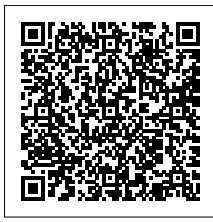
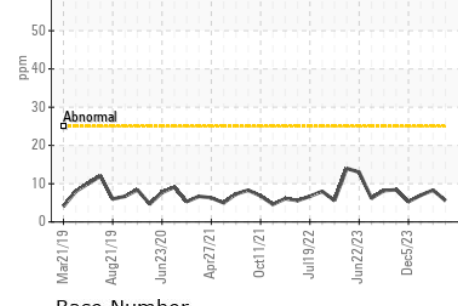
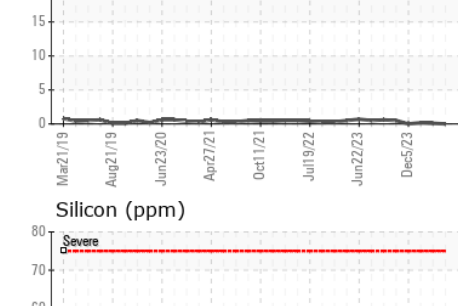
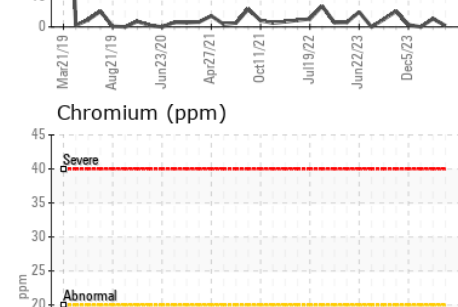
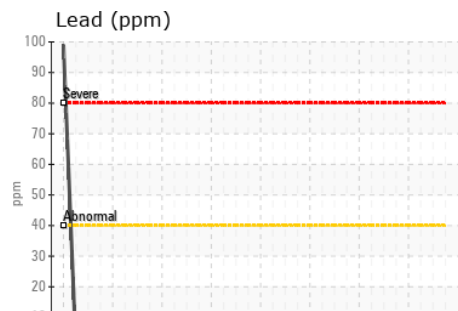
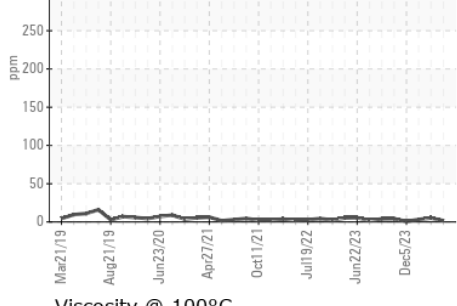
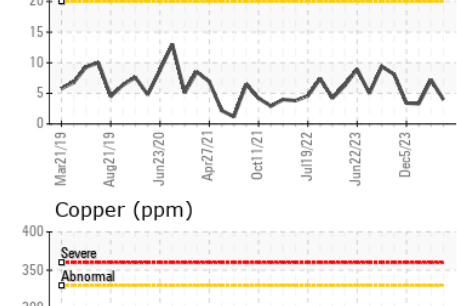
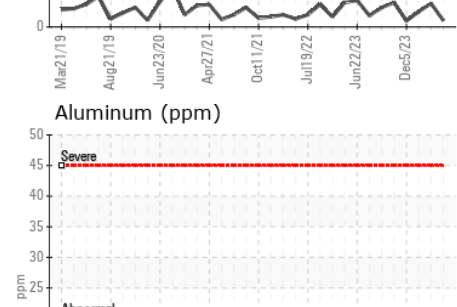
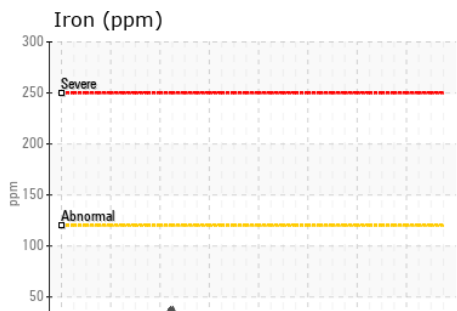
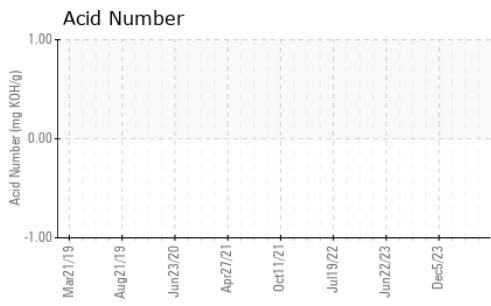
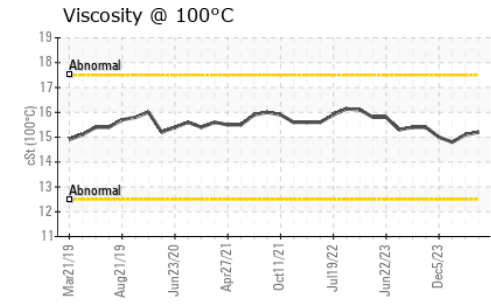
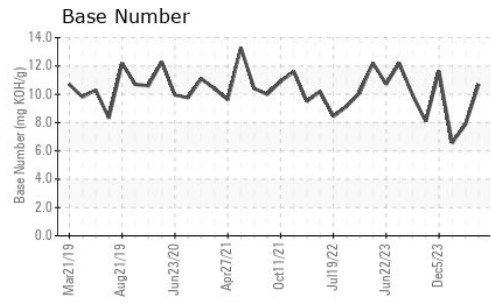
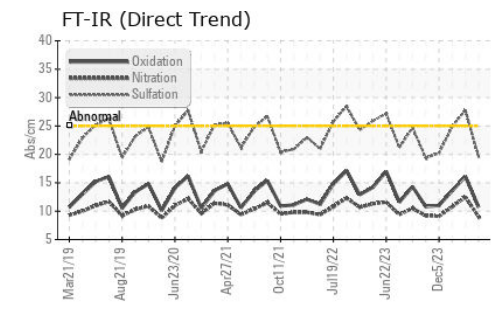
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	8	7
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	7	7
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.5</b>	1.1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	12.5	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	27.8	24.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>4</b>	3	0
Boron	ppm	ASTM D5185m		<b>4</b>	2	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	5
Molybdenum	ppm	ASTM D5185m		<b>114</b>	112	123
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>16</b>	32	12
Calcium	ppm	ASTM D5185m		<b>3847</b>	3710	3523
Phosphorus	ppm	ASTM D5185m		<b>968</b>	887	856
Zinc	ppm	ASTM D5185m		<b>1098</b>	1072	1083
Sulfur	ppm	ASTM D5185m		<b>5025</b>	4519	4018
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.7</b>	16.1	13.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.69</b>	7.86	6.57
Visc @ 100°C	cSt	ASTM D445		<b>15.2</b>	15.1	14.8



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06212588  
**Lab Number** : 06212588  
**Unique Number** : 11085452  
**Test Package** : MOB 2 ( Additional Tests: TAN Man )

**Received** : 17 Jun 2024  
**Tested** : 19 Jun 2024  
**Diagnosed** : 19 Jun 2024 - Angela Borella

**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: