



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**MACK GU813 R07 (S/N 1198832)**  
 Component  
**Diesel Engine**  
 Fluid  
**TRC PRO-SPEC V SYN BLEND 15W40 (44 QTS)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06223658</b>	TR06188260	TR05961858
Sample Date		Client Info		<b>10 Jun 2024</b>	10 May 2024	20 Sep 2023
Machine Age	mls	Client Info		<b>184565</b>	181154	161415
Oil Age	mls	Client Info		<b>42533</b>	39566	19548
Filter Age	mls	Client Info		<b>3411</b>	9903	11185
Oil Changed		Client Info		<b>Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>45</b>	45	28
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	3	3
Lead	ppm	ASTM D5185m	>40	<b>6</b>	6	6
Copper	ppm	ASTM D5185m	>330	<b>5</b>	5	3
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

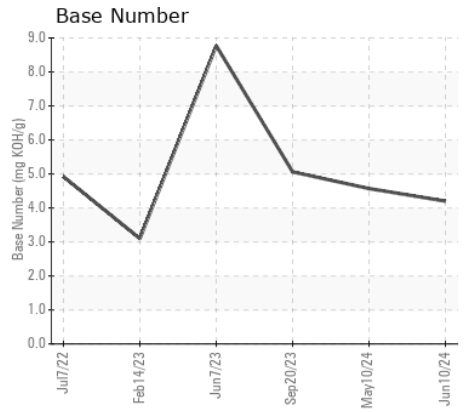
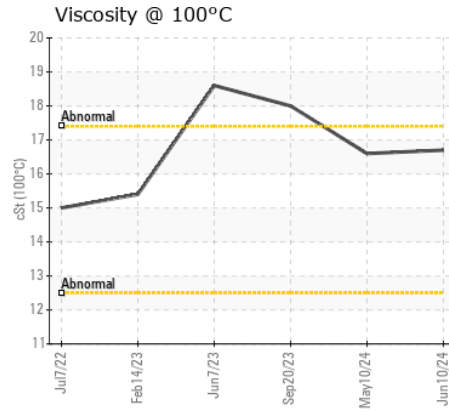
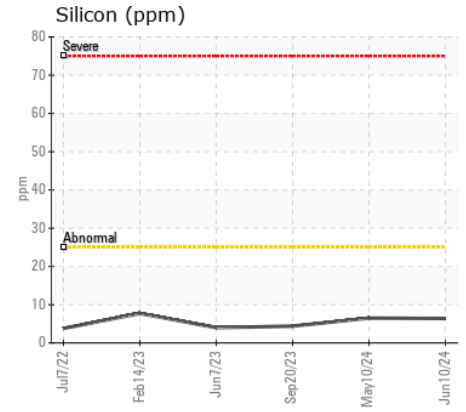
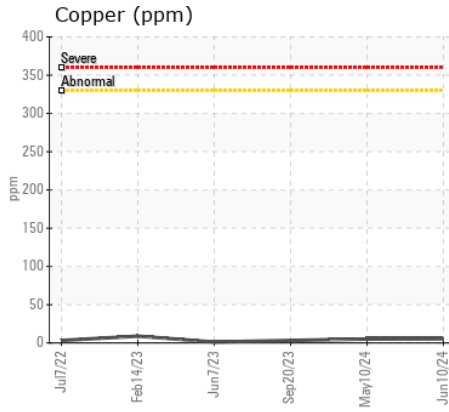
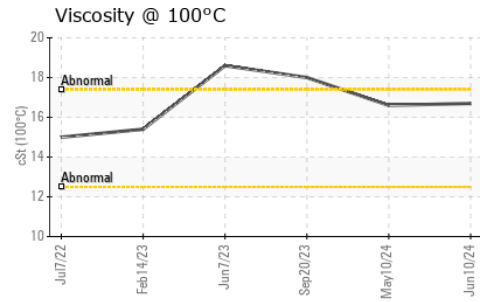
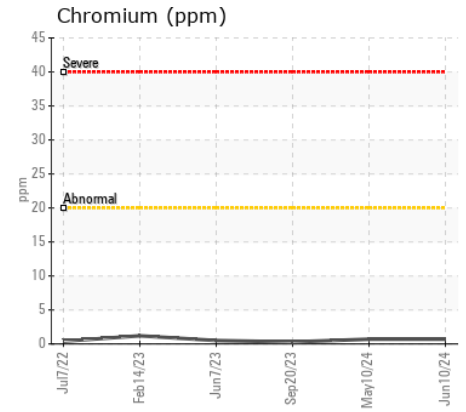
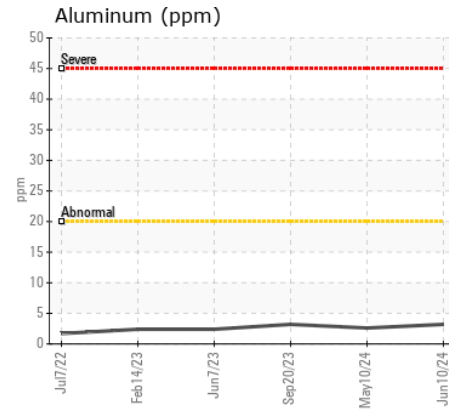
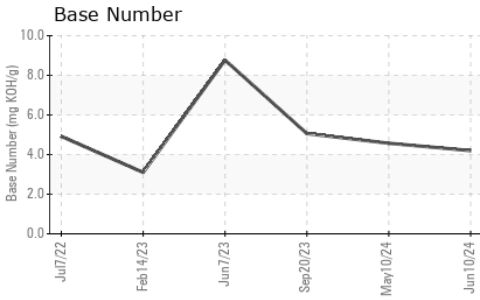
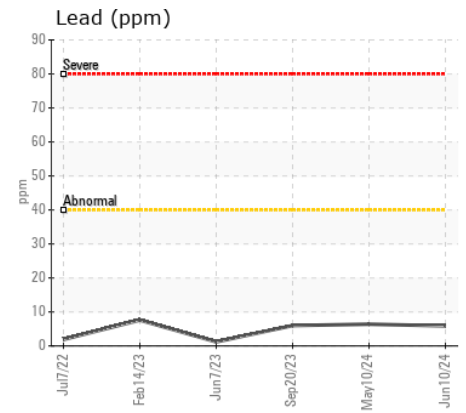
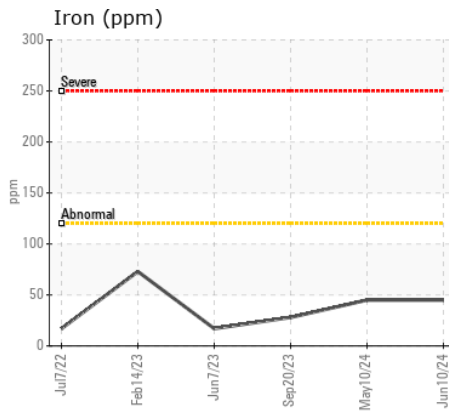
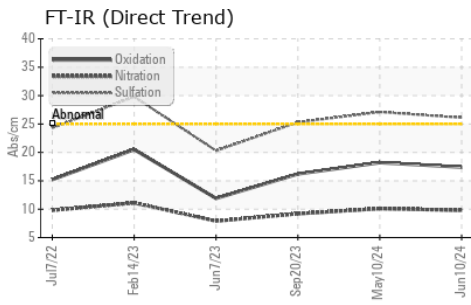
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	1	2
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>0.8</b>	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.8</b>	10.1	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.1</b>	27.1	25.3
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>6</b>	4	2
Boron	ppm	ASTM D5185m		<b>3</b>	0	<1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>6</b>	5	6
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>82</b>	47	76
Calcium	ppm	ASTM D5185m		<b>2548</b>	2504	2238
Phosphorus	ppm	ASTM D5185m		<b>975</b>	908	861
Zinc	ppm	ASTM D5185m		<b>1157</b>	1081	1089
Sulfur	ppm	ASTM D5185m		<b>4556</b>	4218	4166
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.4</b>	18.2	16.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>4.20</b>	4.57	5.06
Visc @ 100°C	cSt	ASTM D445		<b>16.7</b>	16.6	18.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06223658  
**Lab Number** : 06223658  
**Unique Number** : 11101855  
**Test Package** : MOB 2  
**Received** : 28 Jun 2024  
**Tested** : 01 Jul 2024  
**Diagnosed** : 01 Jul 2024 - Wes Davis

**NORTHWEST REFUSE SERVICE**  
 2001 WINDSOR AVE  
 BALTIMORE, MD  
 US 21217  
 Contact: JASON

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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F: