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.

WEAR

All component wear rates are normal.

CONTAMINATION

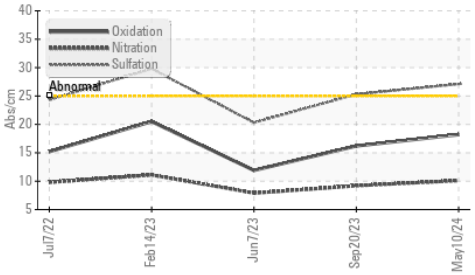
There is no indication of any contamination in the oil.

FLUID CONDITION

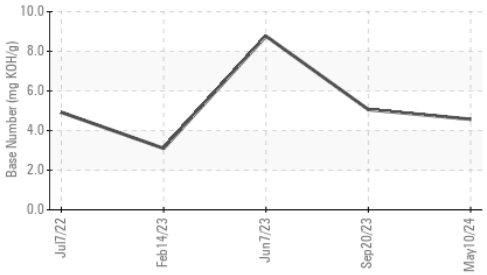
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06188260	TR05961858	TR05872817
Sample Date		Client Info		10 May 2024	20 Sep 2023	07 Jun 2023
Machine Age	mls	Client Info		181154	161415	150238
Oil Age	mls	Client Info		39566	19548	8363
Filter Age	mls	Client Info		9903	11185	8363
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	MARGINAL
Iron	ppm	ASTM D5185m	>120	45	28	17
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	3	2
Lead	ppm	ASTM D5185m	>40	6	6	1
Copper	ppm	ASTM D5185m	>330	5	3	1
Tin	ppm	ASTM D5185m	>15	1	1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	6	4	4
Potassium	ppm	ASTM D5185m	>20	1	2	3
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	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.1	9.2	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.1	25.3	20.3
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		4	2	2
Boron	ppm	ASTM D5185m		0	<1	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		5	6	7
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		47	76	85
Calcium	ppm	ASTM D5185m		2504	2238	2223
Phosphorus	ppm	ASTM D5185m		908	861	867
Zinc	ppm	ASTM D5185m		1081	1089	1066
Sulfur	ppm	ASTM D5185m		4218	4166	5233
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	16.2	11.9
Base Number (BN)	mg KOH/g	ASTM D2896		4.57	5.06	8.77
Visc @ 100°C	cSt	ASTM D445		16.6	18.0	▲ 18.6

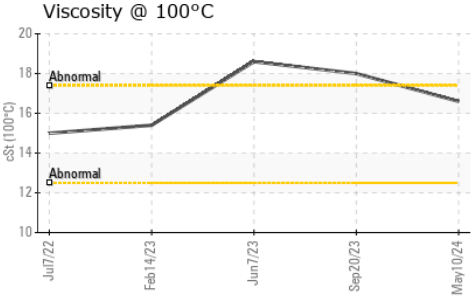
FT-IR (Direct Trend)



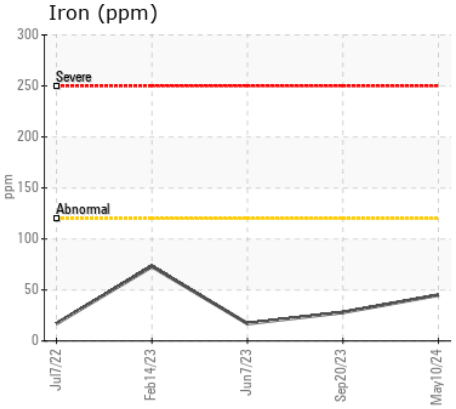
Base Number



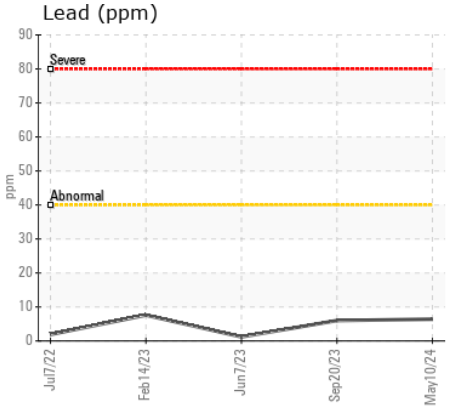
Viscosity @ 100°C



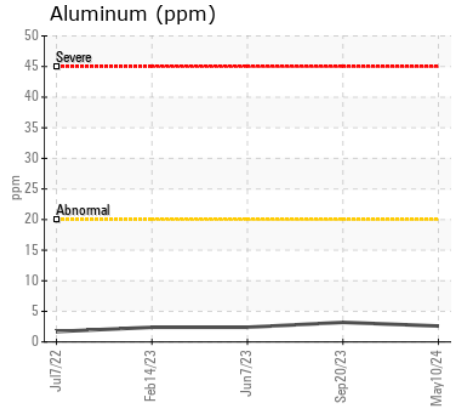
Iron (ppm)



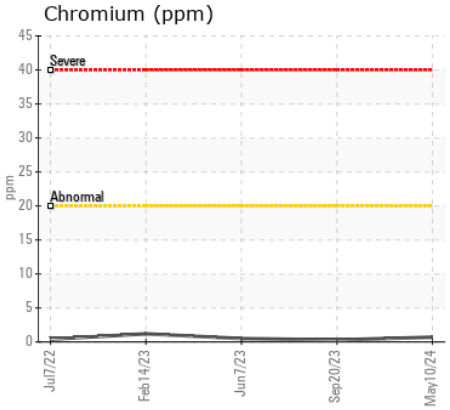
Lead (ppm)



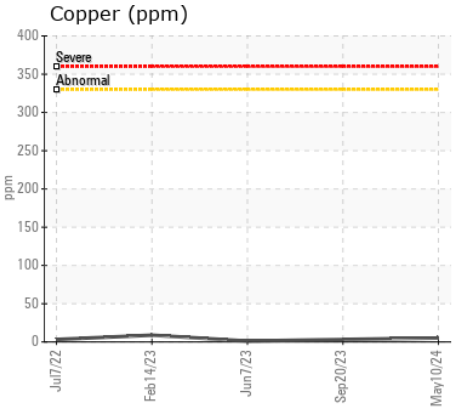
Aluminum (ppm)



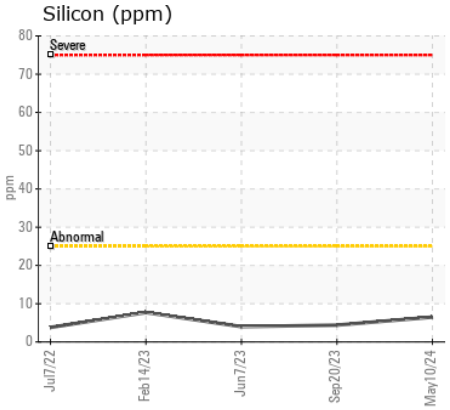
Chromium (ppm)



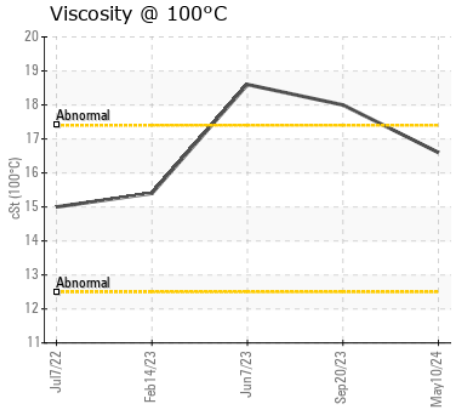
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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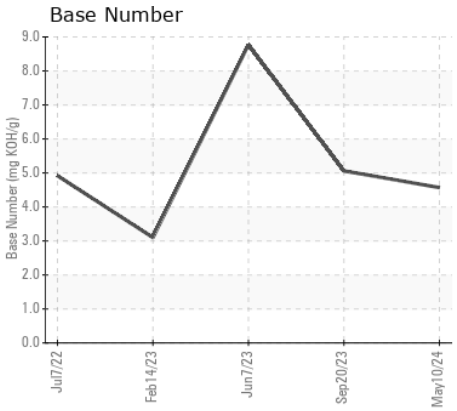

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06188260
Lab Number : 06188260
Unique Number : 11045012
Test Package : MOB 2

Received : 22 May 2024
Tested : 24 May 2024
Diagnosed : 24 May 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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