TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MACK 199
Component
Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC IV 15W40 (31 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

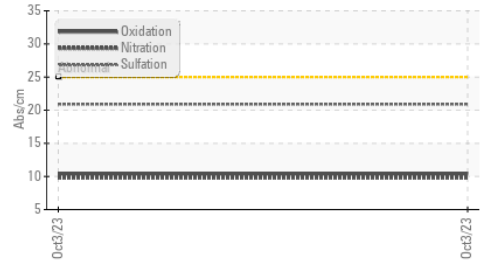
There is no indication of any contamination in the oil.

FLUID CONDITION

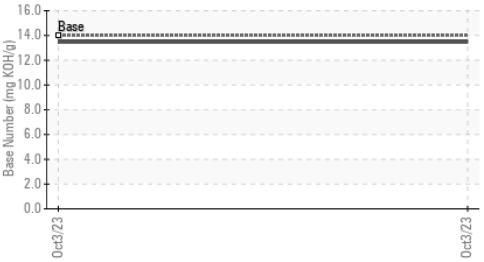
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06158496	---	---
Sample Date		Client Info		03 Oct 2023	---	---
Machine Age	mls	Client Info		515438	---	---
Oil Age	mls	Client Info		10000	---	---
Filter Age	mls	Client Info		10000	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---
Iron	ppm	ASTM D5185m	>120	22	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>5	<1	---	---
Titanium	ppm	ASTM D5185m	>2	<1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>20	5	---	---
Lead	ppm	ASTM D5185m	>40	2	---	---
Copper	ppm	ASTM D5185m	>330	36	---	---
Tin	ppm	ASTM D5185m	>15	1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>25	8	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Fuel		WC Method	>3.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>4	1.4	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185m		11	---	---
Boron	ppm	ASTM D5185m		0	---	---
Barium	ppm	ASTM D5185m		<1	---	---
Molybdenum	ppm	ASTM D5185m		159	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		18	---	---
Calcium	ppm	ASTM D5185m	1300	4096	---	---
Phosphorus	ppm	ASTM D5185m		932	---	---
Zinc	ppm	ASTM D5185m	1300	1040	---	---
Sulfur	ppm	ASTM D5185m		4436	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	14	13.47	---	---
Visc @ 100°C	cSt	ASTM D445	15.5	14.5	---	---

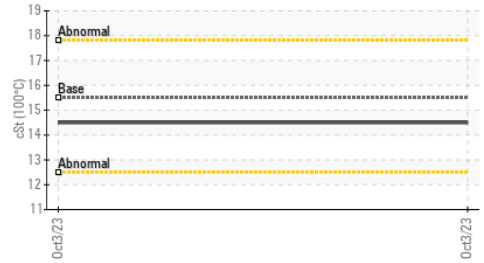
FT-IR (Direct Trend)



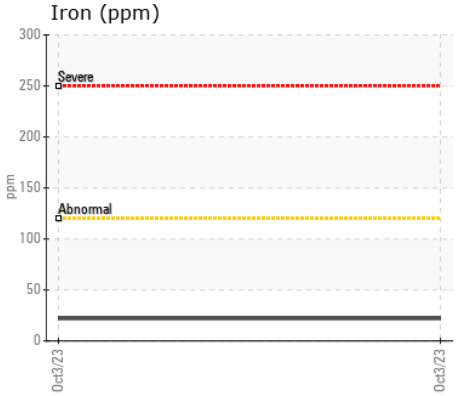
Base Number



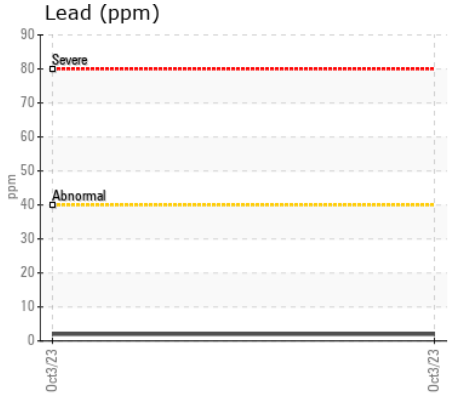
Viscosity @ 100°C



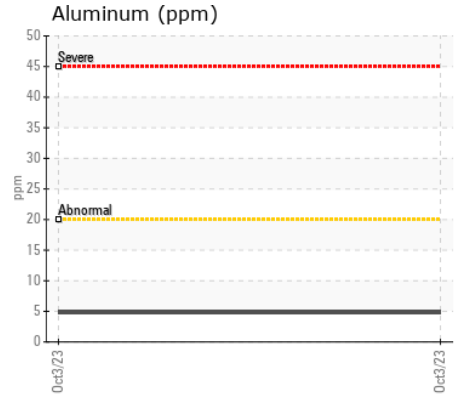
Iron (ppm)



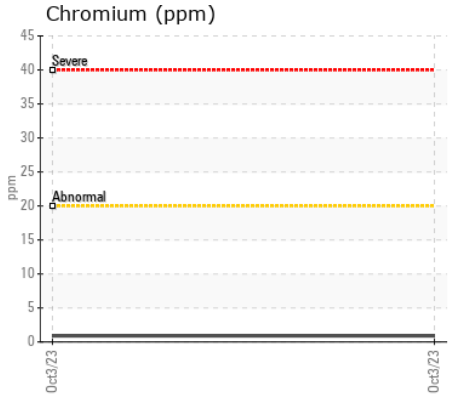
Lead (ppm)



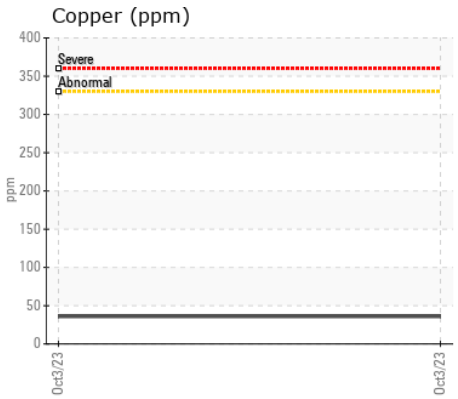
Aluminum (ppm)



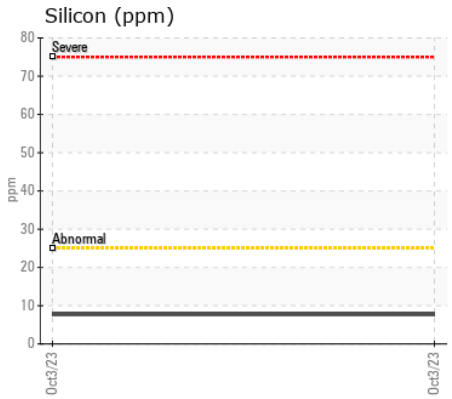
Chromium (ppm)



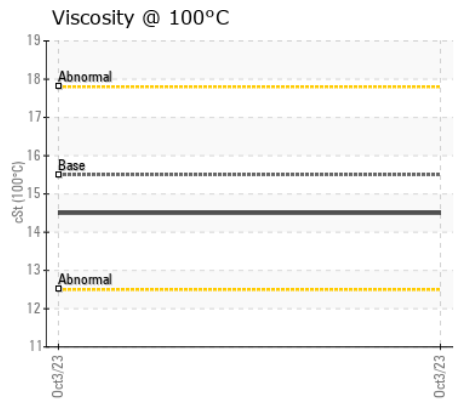
Copper (ppm)



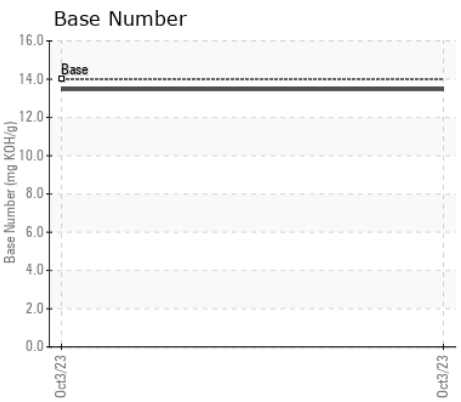
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06158496
Lab Number : 06158496
Unique Number : 10993919
Test Package : MOB 2

Received : 23 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Wes Davis

DIGGING & RIGGING II
10 CHRISTINA COURT
SPARROWS POINT, MD
US 21219
Contact: Service Manager

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: