



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KENWORTH 56

Component
Diesel Engine

Fluid
TRC MOLY XL PROSPEC III 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06055070	TR05845134	TR05816253
Sample Date		Client Info		23 Dec 2023	10 Apr 2023	10 Mar 2023
Machine Age	mls	Client Info		447365	386104	376853
Oil Age	mls	Client Info		58000	34160	24309
Filter Age	mls	Client Info		58000	10000	24309
Oil Changed		Client Info		Changed	Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	55	39	33
Chromium	ppm	ASTM D5185m	>6	2	<1	1
Nickel	ppm	ASTM D5185m	>4	2	1	2
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	3	5	3
Lead	ppm	ASTM D5185m	>10	3	2	<1
Copper	ppm	ASTM D5185m	>150	12	10	10
Tin	ppm	ASTM D5185m	>4	1	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

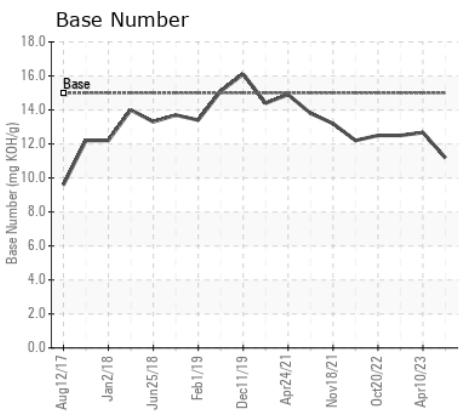
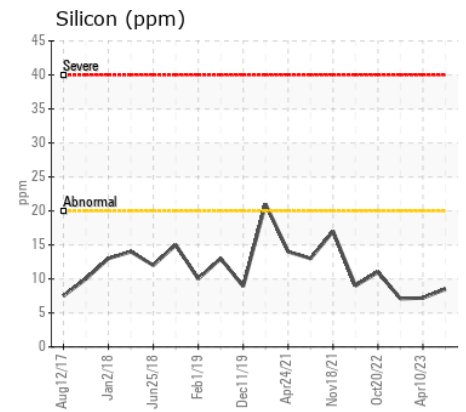
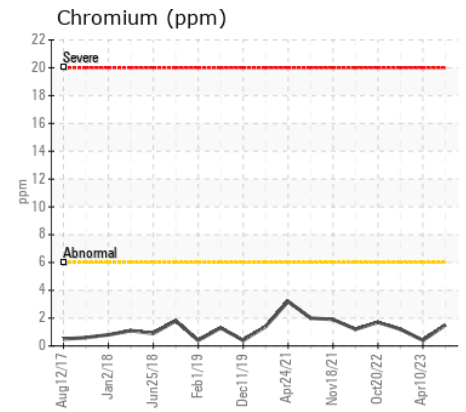
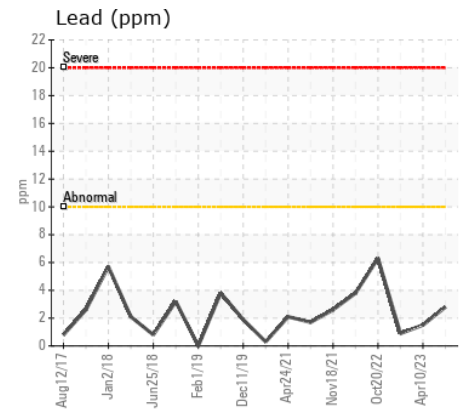
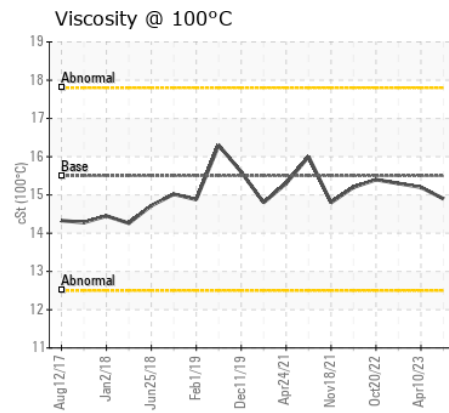
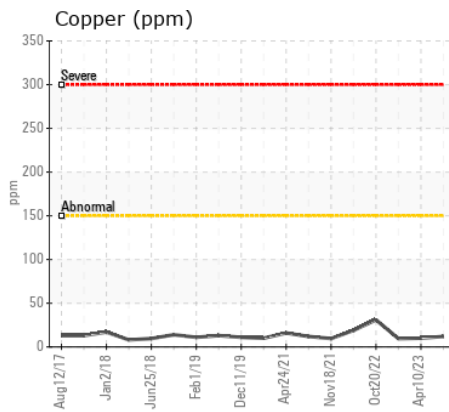
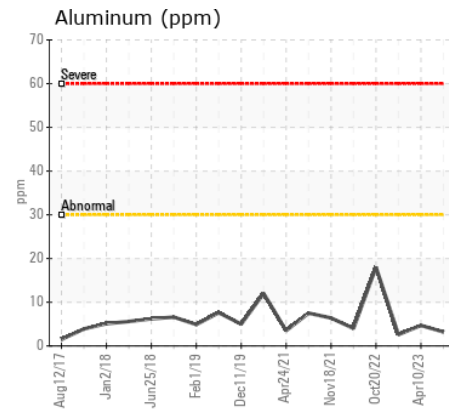
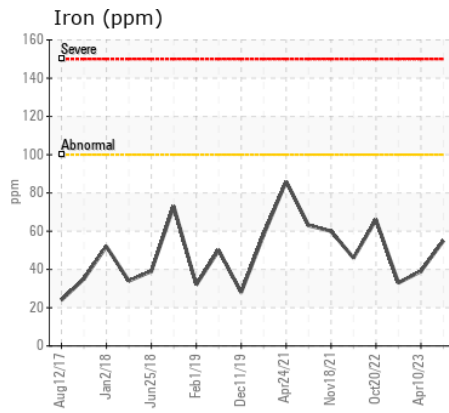
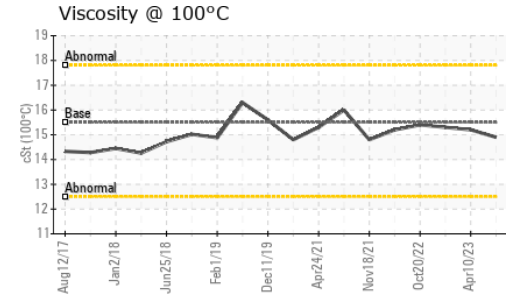
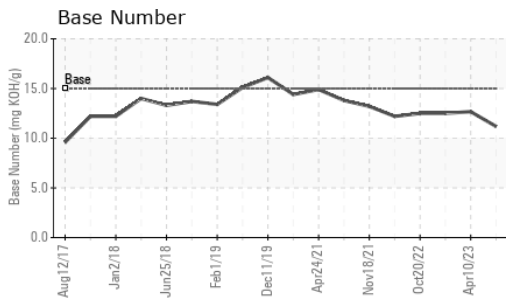
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	8	7	7
Potassium	ppm	ASTM D5185m	>20	7	3	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.7	8.6	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	23.0	22.5
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		0	2	2
Boron	ppm	ASTM D5185m		166	194	201
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		150	212	185
Manganese	ppm	ASTM D5185m		1	0	<1
Magnesium	ppm	ASTM D5185m		369	448	407
Calcium	ppm	ASTM D5185m	4500	3684	4222	4091
Phosphorus	ppm	ASTM D5185m		908	1009	1004
Zinc	ppm	ASTM D5185m	1400	1161	1271	1255
Sulfur	ppm	ASTM D5185m		4183	4611	4892
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	15.5	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	15	11.18	12.67	12.50
Visc @ 100°C	cSt	ASTM D445	15.5	14.9	15.2	15.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06055070 **Received** : 08 Jan 2024
Lab Number : 06055070 **Diagnosed** : 10 Jan 2024
Unique Number : 10821019 **Diagnostician** : Wes Davis
Test Package : MOB 2

CHARLES MOORE TRUCKING
 855 KINSEY RD
 MILES CITY, MT
 US 59301
 Contact: KELLY ZIETLOW
 cactus@midrivers.com

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)