



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1999 PETERBILT 45
 Component
Front 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		TR06055075	TR05967195	TR05873983
Sample Date		Client Info		10 Nov 2023	15 Aug 2023	27 Apr 2023
Machine Age	mls	Client Info		2426156	2404144	2373102
Oil Age	mls	Client Info		22000	30442	41511
Filter Age	mls	Client Info		22000	30442	18000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	36	62	100
Chromium	ppm	ASTM D5185m	>20	1	1	2
Nickel	ppm	ASTM D5185m	>2	1	<1	1
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	1	1
Lead	ppm	ASTM D5185m	>40	2	2	<1
Copper	ppm	ASTM D5185m	>330	31	121	▲ 374
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

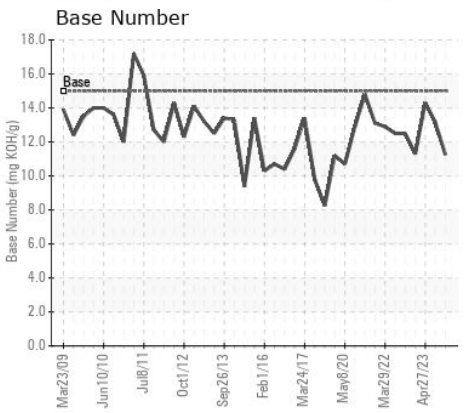
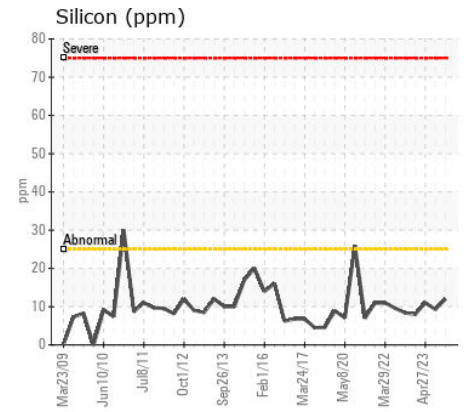
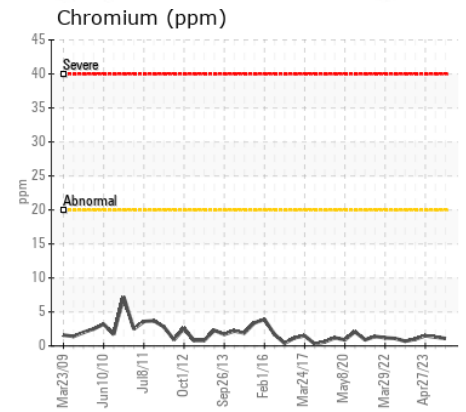
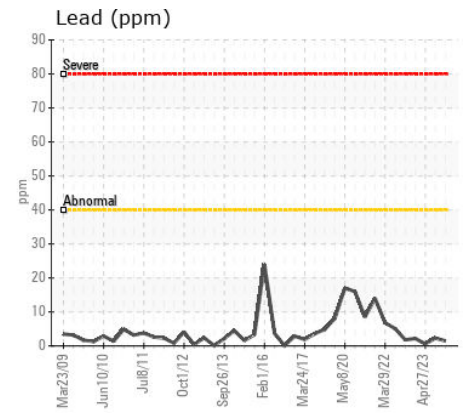
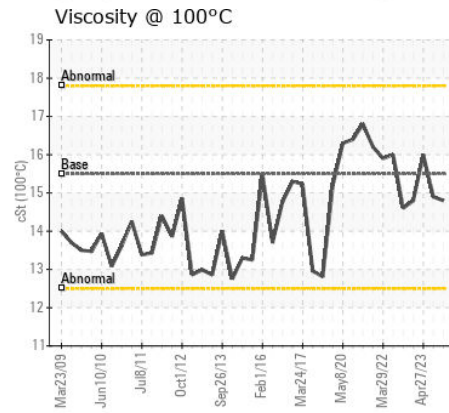
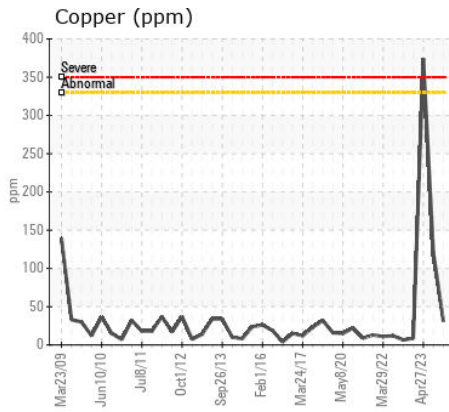
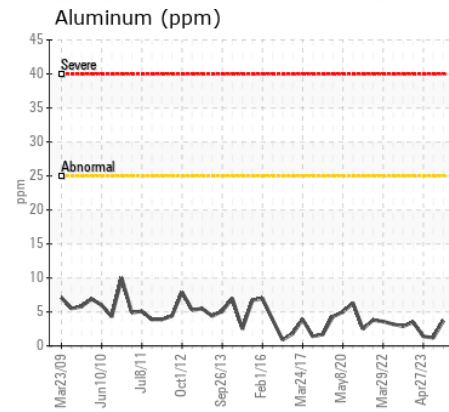
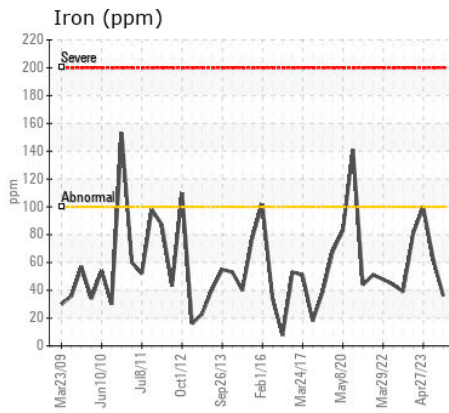
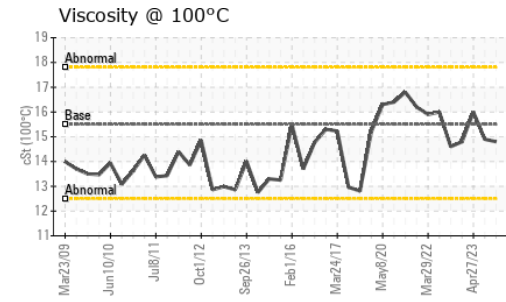
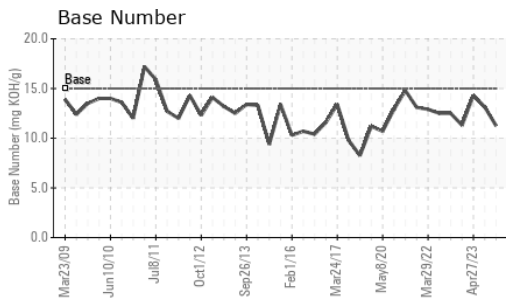
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	12	9	11
Potassium	ppm	ASTM D5185m	>20	4	2	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	0.5	0.7	1
Nitration	Abs/cm	*ASTM D7624	>20	9.3	9.1	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.3	22.5	23.0
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		164	175	200
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		188	198	210
Manganese	ppm	ASTM D5185m		1	<1	1
Magnesium	ppm	ASTM D5185m		402	417	400
Calcium	ppm	ASTM D5185m	4500	4007	3908	3968
Phosphorus	ppm	ASTM D5185m		826	914	887
Zinc	ppm	ASTM D5185m	1400	1143	1131	1054
Sulfur	ppm	ASTM D5185m		3953	3635	3790
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	15.9	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	15	11.25	13.14	14.30
Visc @ 100°C	cSt	ASTM D445	15.5	14.8	14.9	16.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06055075 **Received** : 08 Jan 2024
Lab Number : 06055075 **Diagnosed** : 10 Jan 2024
Unique Number : 10821024 **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)

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F: