



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**PETERBILT 4**

Component  
**Diesel Engine**

Fluid  
**TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06124390	TR06033649	TR05939856
Sample Date		Client Info		10 Mar 2024	12 Dec 2023	26 Aug 2023
Machine Age	mls	Client Info		196000	203000	150307
Oil Age	mls	Client Info		20000	90000	35000
Filter Age	mls	Client Info		20000	16000	22535
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	16	33	26
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	2	3
Lead	ppm	ASTM D5185m	>45	<1	4	7
Copper	ppm	ASTM D5185m	>85	12	44	57
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

## CONTAMINATION

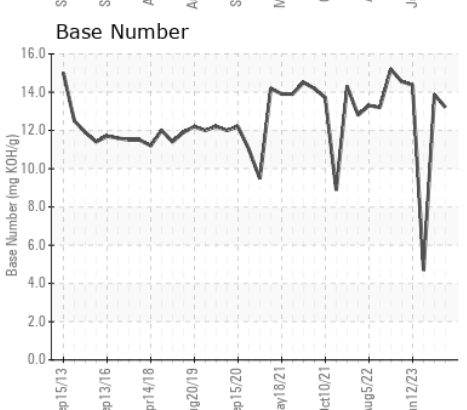
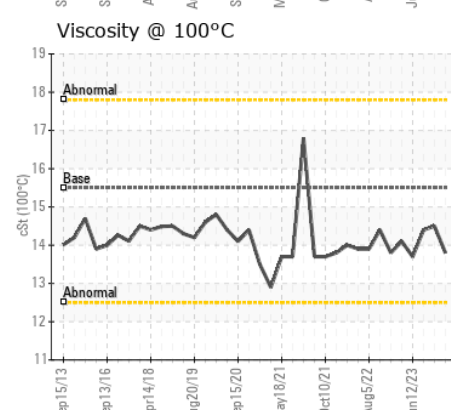
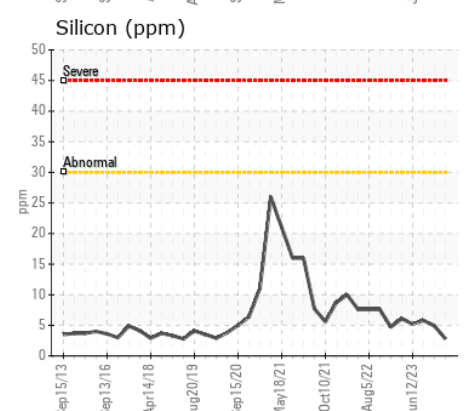
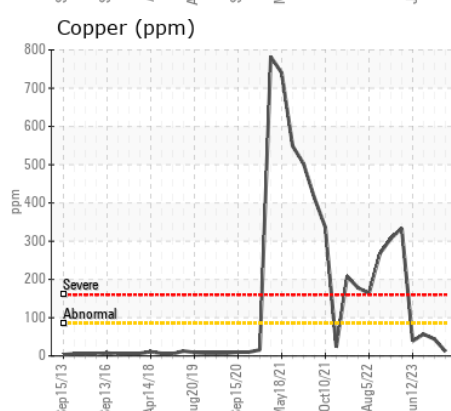
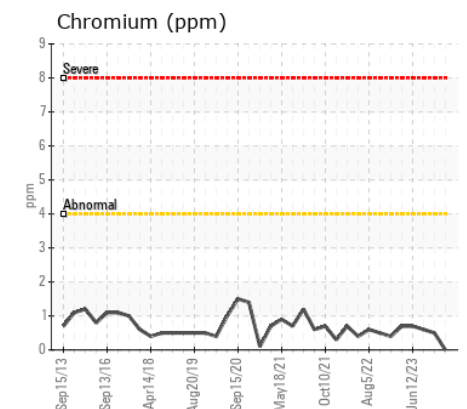
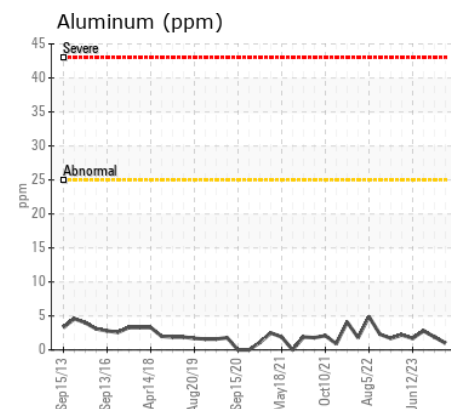
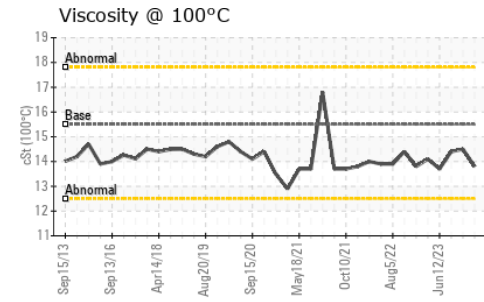
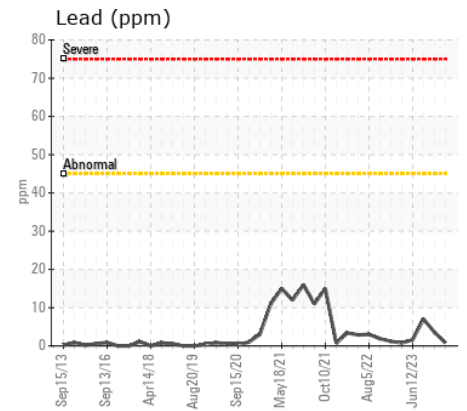
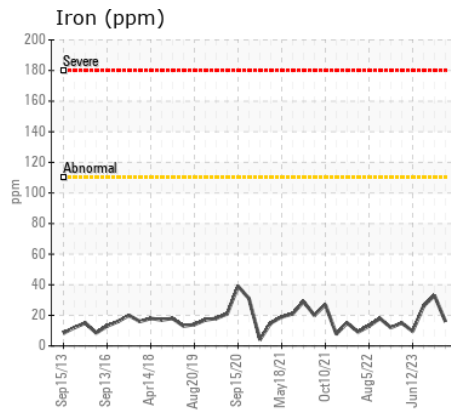
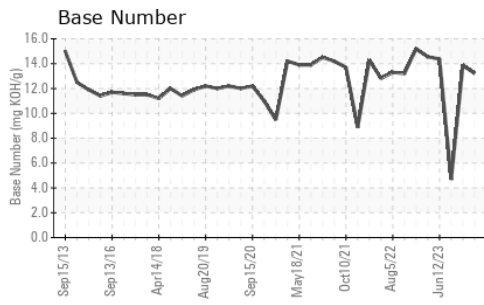
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	3	5	6
Potassium	ppm	ASTM D5185m	>20	28	92	92
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.1	11.8	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	26.5	25.7
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		21	49	43
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	12	20
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		28	26	23
Calcium	ppm	ASTM D5185m		5208	5300	5080
Phosphorus	ppm	ASTM D5185m		995	1046	939
Zinc	ppm	ASTM D5185m		1166	1243	1103
Sulfur	ppm	ASTM D5185m		4995	4420	4106
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	21.4	21.1
Base Number (BN)	mg KOH/g	ASTM D2896		13.21	13.87	4.69
Visc @ 100°C	cSt	ASTM D445	15.5	13.8	14.5	14.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06124390  
**Lab Number** : 06124390  
**Unique Number** : 10938541  
**Test Package** : MOB 2

**Received** : 20 Mar 2024  
**Tested** : 21 Mar 2024  
**Diagnosed** : 21 Mar 2024 - Wes Davis

**BRET AUSTIN**  
 833 CR 23110  
 PARIS, TX  
 US 75460  
 Contact: MIKE LEWIS

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: