



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1997 PETERBILT 97 PETE

Component
Diesel Engine

Fluid
TRC MOLY XL PRO-SPEC IV 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05647352	TR05190412	TR05132498
Sample Date		Client Info		13 Sep 2022	10 Feb 2021	17 Sep 2020
Machine Age	mls	Client Info		527077	424884	524085
Oil Age	mls	Client Info		2193	800	3110
Filter Age	mls	Client Info		2193	800	3110
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	3	8
Chromium	ppm	ASTM D5185m	>20	1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>25	4	1	0
Lead	ppm	ASTM D5185m	>40	1	1	8
Copper	ppm	ASTM D5185m	>330	12	38	▲ 341
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

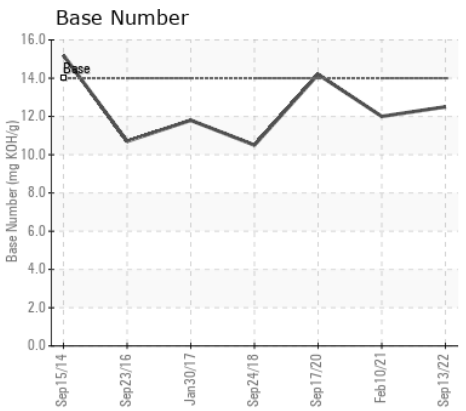
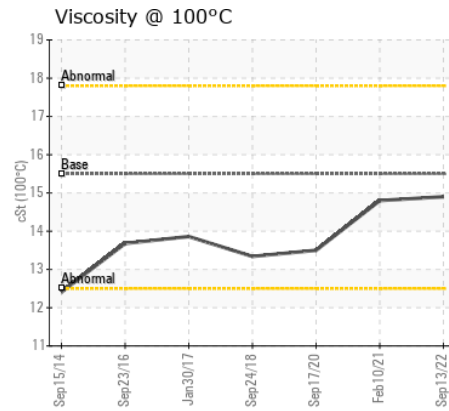
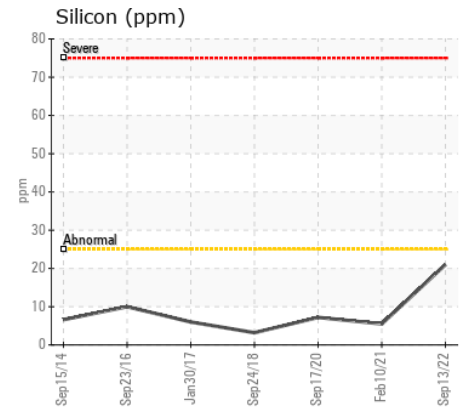
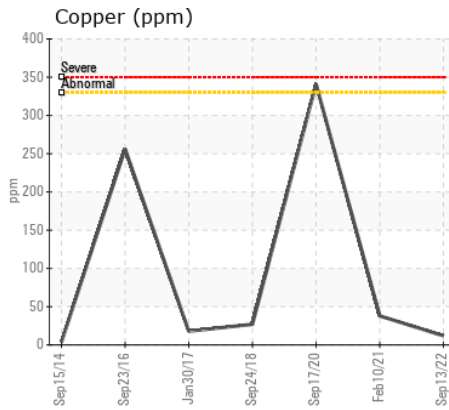
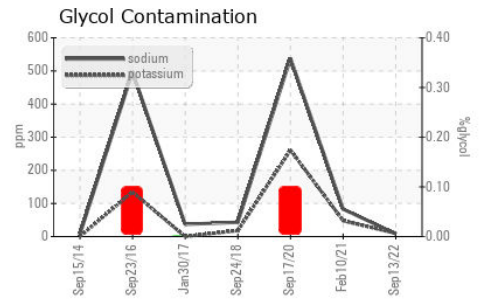
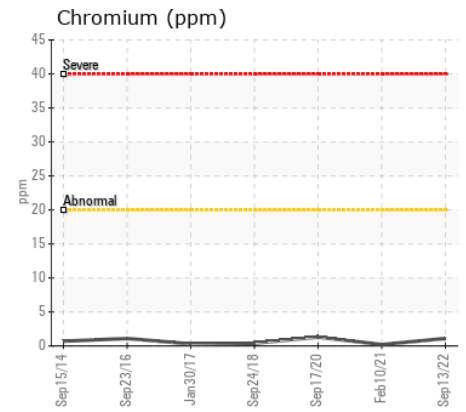
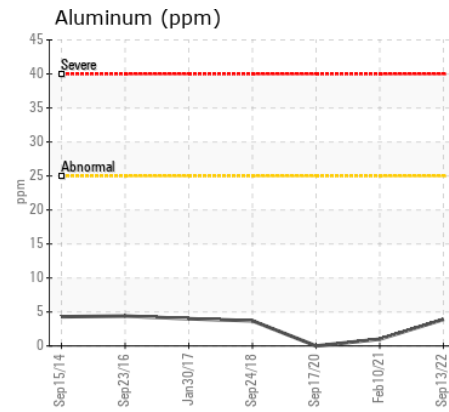
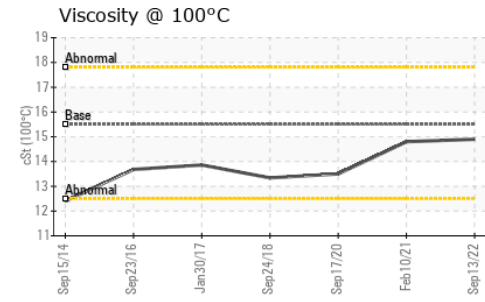
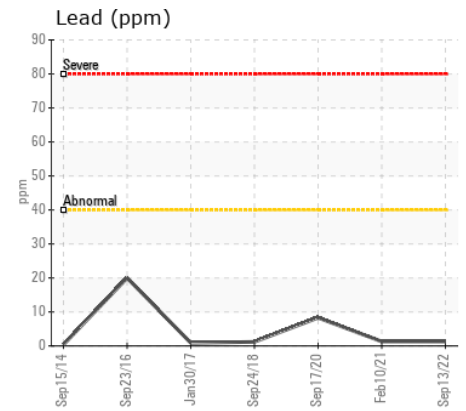
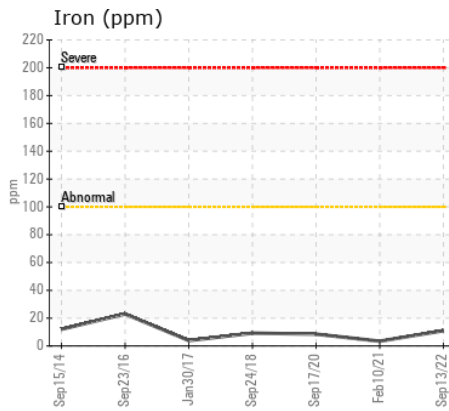
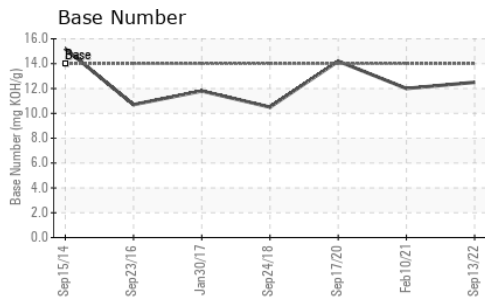
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	21	6	7
Potassium	ppm	ASTM D5185m	>20	10	▲ 48	▲ 261
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	● 0.10
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.5	8	13.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	17.4	18.9
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		8	▲ 83	▲ 538
Boron	ppm	ASTM D5185m		7	4	7
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		141	116	160
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		124	76	765
Calcium	ppm	ASTM D5185m	1300	4244	3587	1456
Phosphorus	ppm	ASTM D5185m		934	878	1163
Zinc	ppm	ASTM D5185m	1300	1122	924	1088
Sulfur	ppm	ASTM D5185m		5245	3558	3264
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.6	10.4	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	14	12.5	12.0	14.2
Visc @ 100°C	cSt	ASTM D445	15.5	14.9	14.8	13.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05647352 **Received** : 21 Sep 2022
Lab Number : 05647352 **Tested** : 23 Sep 2022
Unique Number : 10141891 **Diagnosed** : 23 Sep 2022 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

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Certificate L2367
 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)