



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
PETERBILT 389 125 (S/N 646706)

Component
Diesel Engine

Fluid
TRC PRO-SPEC IV SYN BLEND SAE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06228138	TR06006549	---
Sample Date		Client Info		13 Apr 2024	05 Aug 2023	---
Machine Age	mls	Client Info		74800	24000	---
Oil Age	mls	Client Info		25000	0	---
Filter Age	mls	Client Info		25000	0	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ATTENTION	ATTENTION	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	33	51	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	17	69	---
Lead	ppm	ASTM D5185m	>40	<1	0	---
Copper	ppm	ASTM D5185m	>330	3	13	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

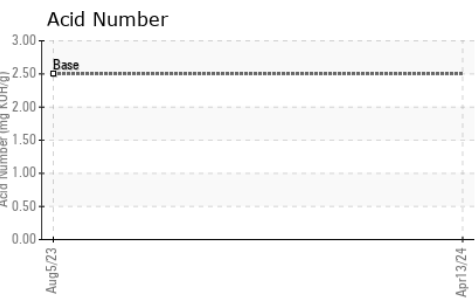
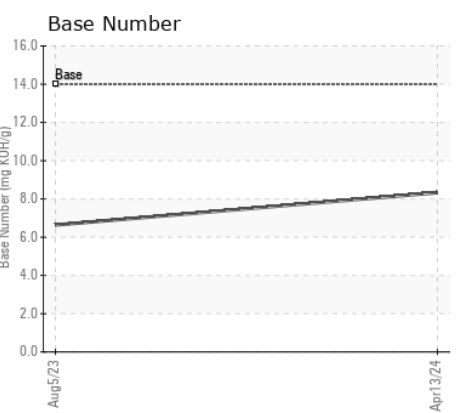
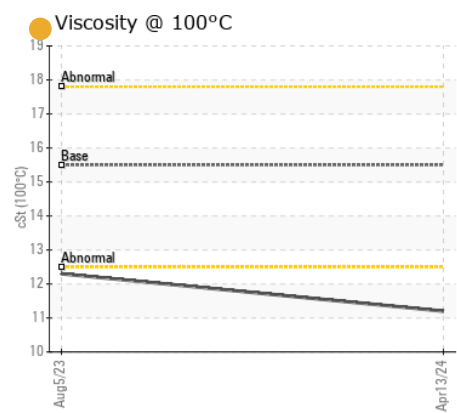
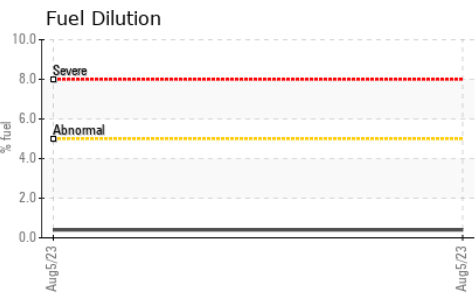
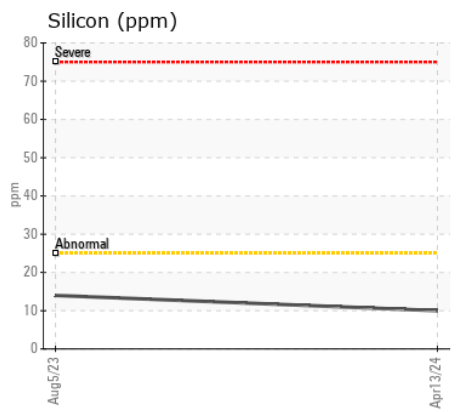
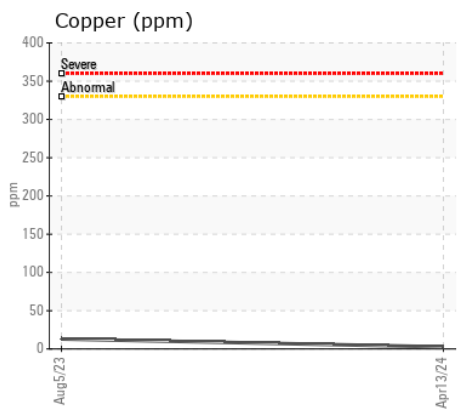
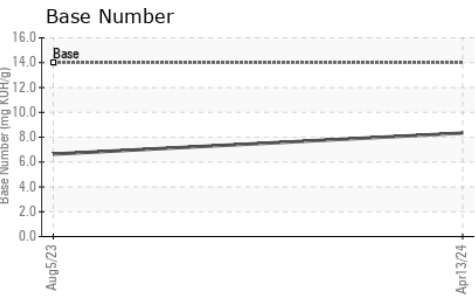
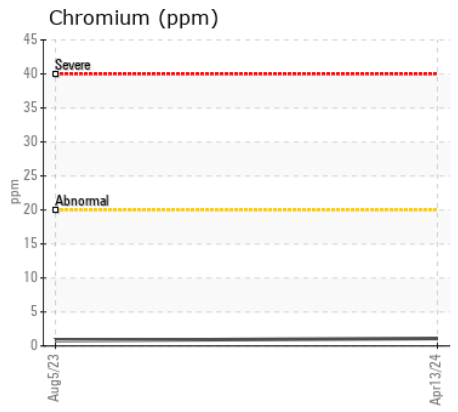
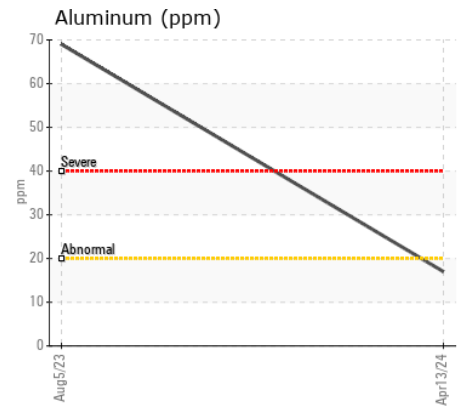
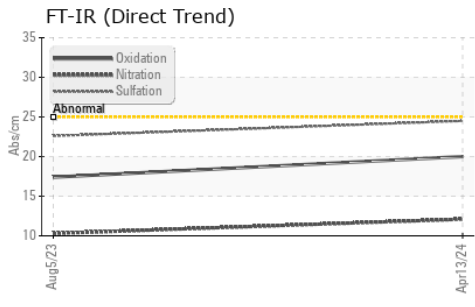
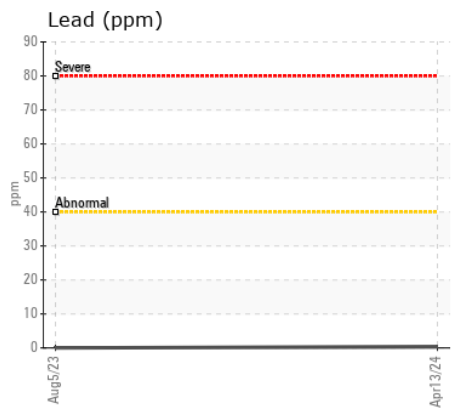
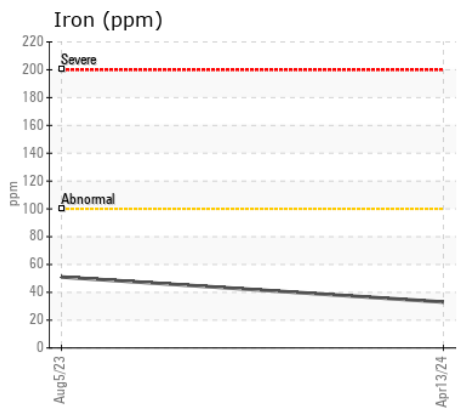
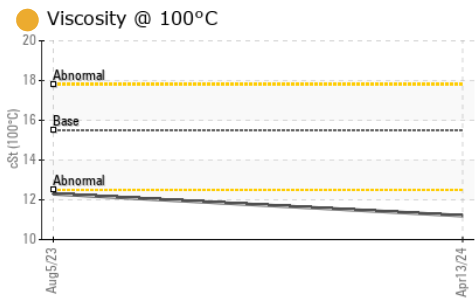
Fuel content negligible. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	10	14	---
Potassium	ppm	ASTM D5185m	>20	40	189	---
Fuel	%	ASTM D3524	>5	<1.0	0.4	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	12.1	10.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.5	22.6	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		2	4	---
Boron	ppm	ASTM D5185m	0	<1	24	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	0	<1	<1	---
Manganese	ppm	ASTM D5185m		<1	2	---
Magnesium	ppm	ASTM D5185m	9	22	670	---
Calcium	ppm	ASTM D5185m	2300	4006	1760	---
Phosphorus	ppm	ASTM D5185m	1000	773	779	---
Zinc	ppm	ASTM D5185m	1200	967	917	---
Sulfur	ppm	ASTM D5185m	3100	3527	3281	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.0	17.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	14	8.33	6.64	---
Visc @ 100°C	cSt	ASTM D445	15.5	11.2	12.3	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06228138 **Received** : 03 Jul 2024
Lab Number : 06228138 **Tested** : 08 Jul 2024
Unique Number : 11111631 **Diagnosed** : 08 Jul 2024 - Angela Borella
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel, TAN Man)

ZACHRY FARMS
 15231 COUNTY FARM RD
 CARLYLE, IL
 US 62231
 Contact: CHARLES FLATT

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: