



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
PETERBILT 389 215

Component
Diesel Engine

Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (12 GAL)

RECOMMENDATION

We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05360256	---	---
Sample Date		Client Info		22 Sep 2021	---	---
Machine Age		Client Info		0	---	---
Oil Age		Client Info		0	---	---
Filter Age		Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				SEVERE	---	---

WEAR

Cylinder, crank, or cam shaft wear is indicated. Bearing wear is indicated.

Iron	ppm	ASTM D5185m	>110	▲ 399	---	---
Chromium	ppm	ASTM D5185m	>4	▲ 7	---	---
Nickel	ppm	ASTM D5185m	>2	3	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>2	<1	---	---
Aluminum	ppm	ASTM D5185m	>25	12	---	---
Lead	ppm	ASTM D5185m	>45	▲ 622	---	---
Copper	ppm	ASTM D5185m	>85	▲ 124	---	---
Tin	ppm	ASTM D5185m	>4	▲ 17	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

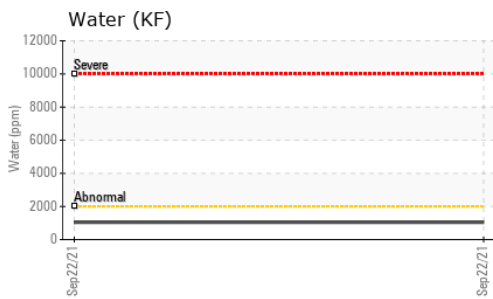
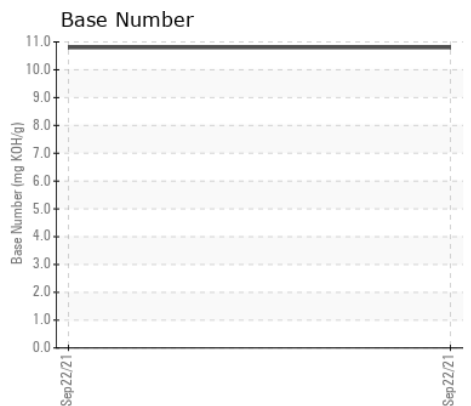
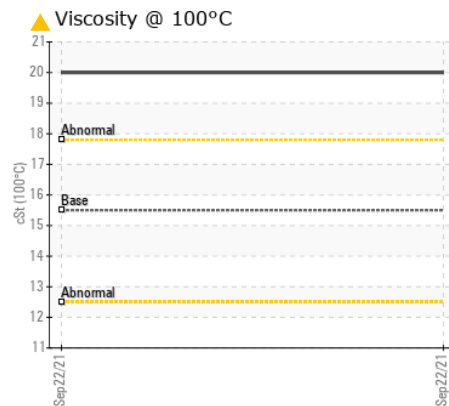
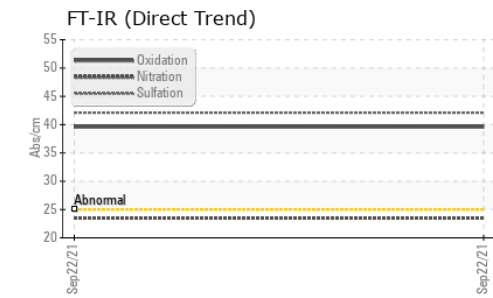
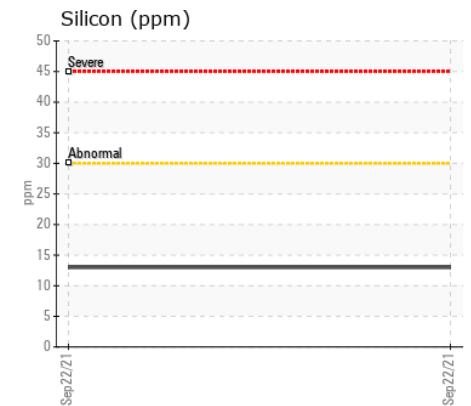
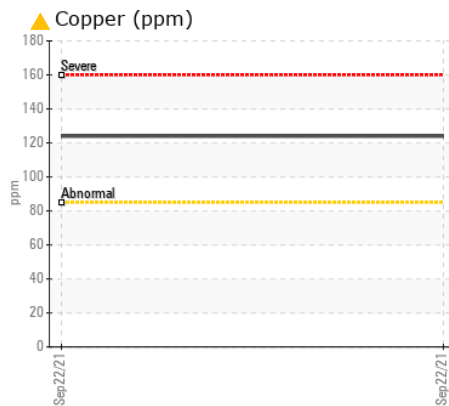
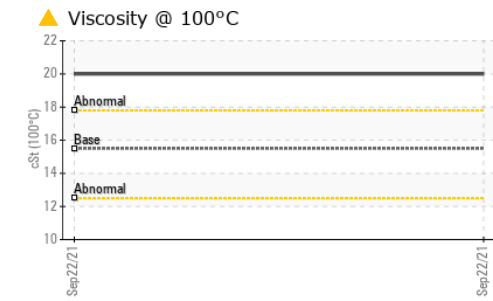
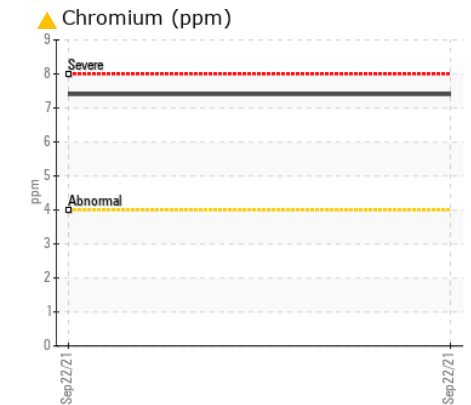
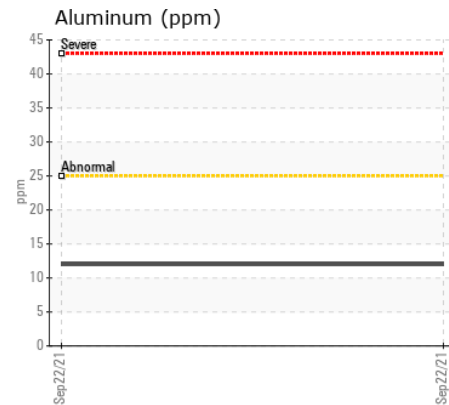
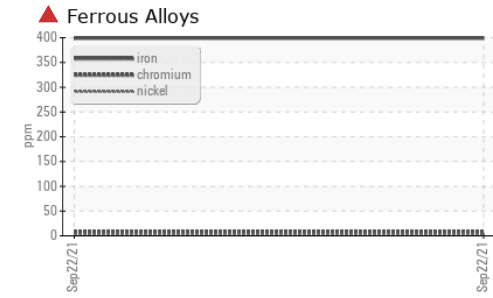
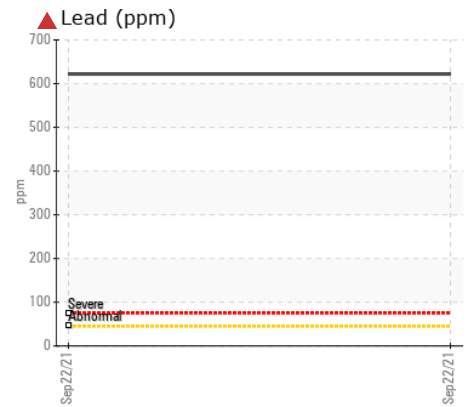
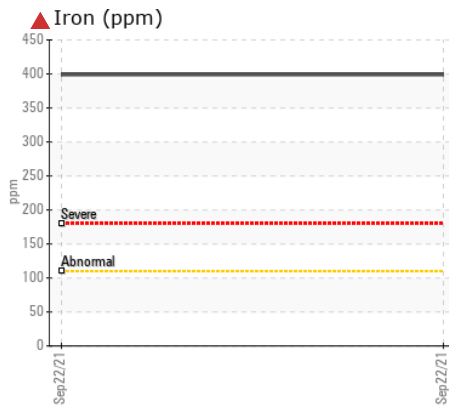
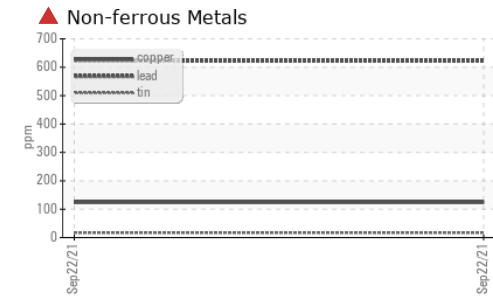
No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>30	13	---	---
Potassium	ppm	ASTM D5185m	>20	26	---	---
Fuel		WC Method	>5	<1.0	---	---
Water	%	ASTM D6304	>0.2	0.104	---	---
ppm Water	ppm	ASTM D6304	>2000	1040	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	1.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	23.5	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	42.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185m		20	---	---
Boron	ppm	ASTM D5185m		0	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		166	---	---
Manganese	ppm	ASTM D5185m		9	---	---
Magnesium	ppm	ASTM D5185m		151	---	---
Calcium	ppm	ASTM D5185m		5379	---	---
Phosphorus	ppm	ASTM D5185m		1268	---	---
Zinc	ppm	ASTM D5185m		1376	---	---
Sulfur	ppm	ASTM D5185m		4105	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	39.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		10.8	---	---
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 20.0	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05360256
Lab Number : 05360256
Unique Number : 9674349
Test Package : MOB 2 (Additional Tests: KF)

Received : 28 Sep 2021
Tested : 29 Sep 2021
Diagnosed : 29 Sep 2021 - Don Baldrige

SLATER BROS FARM LLC
 10001 CANAL RD
 HEBRON, OH
 US 43025
 Contact: LARRY HUMPHREY

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: