



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2004 FREIGHTLINER WD02
 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		TR04506586	TR04305990	---
Sample Date		Client Info		06 Jul 2018	13 Sep 2017	---
Machine Age	mls	Client Info		670969	617750	---
Oil Age	mls	Client Info		6771	4043	---
Filter Age	mls	Client Info		6771	4043	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	24	12	---
Chromium	ppm	ASTM D5185m	>4	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>54	3	1	---
Lead	ppm	ASTM D5185m	>20	0	0	---
Copper	ppm	ASTM D5185m	>240	2	3	---
Tin	ppm	ASTM D5185m	>5	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

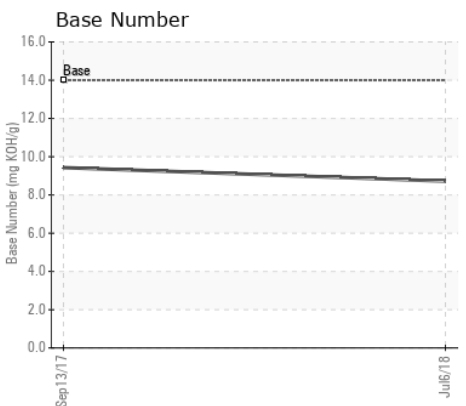
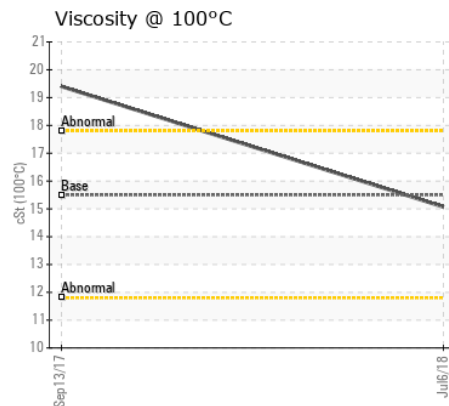
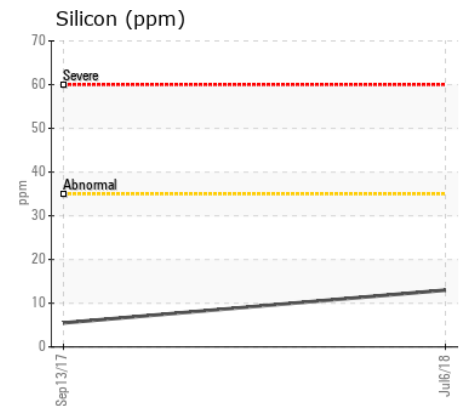
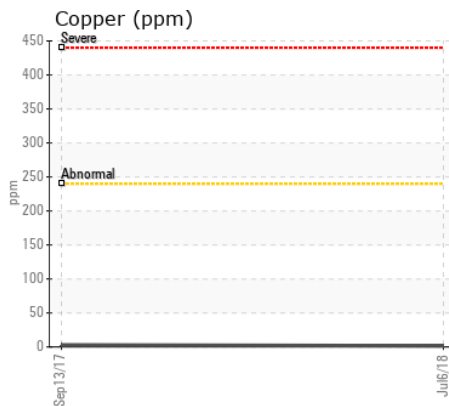
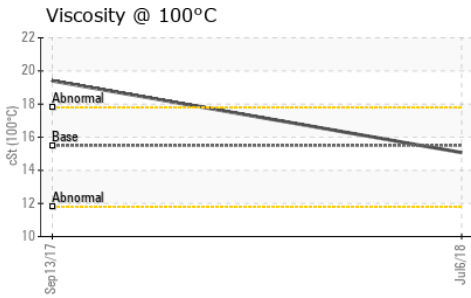
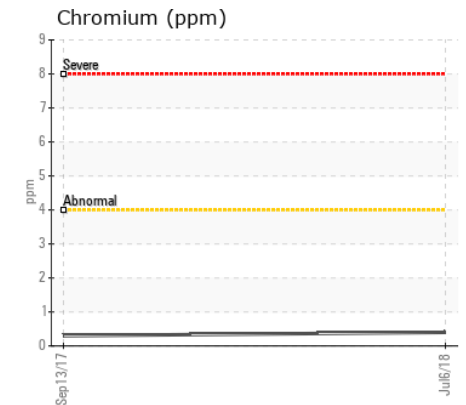
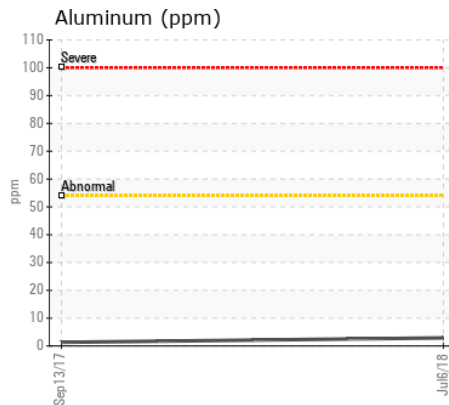
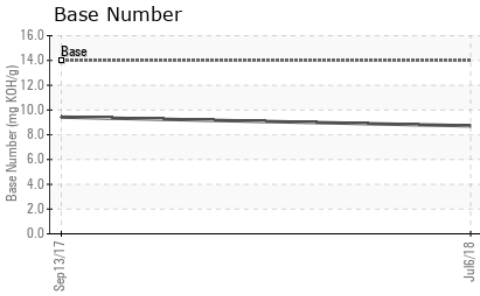
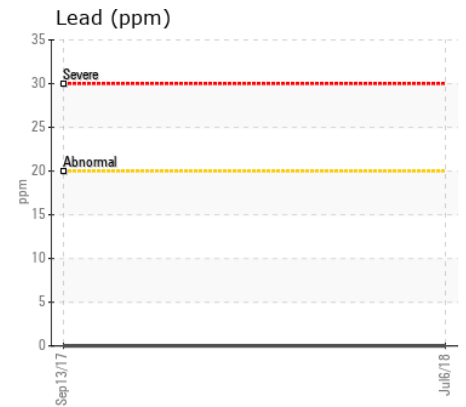
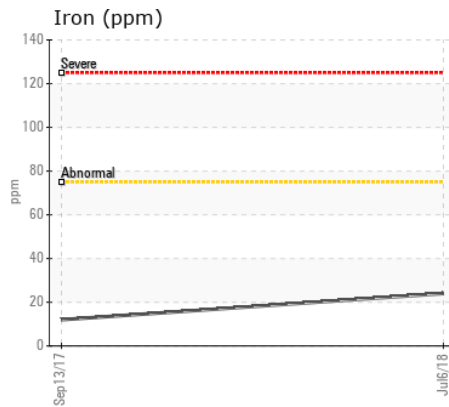
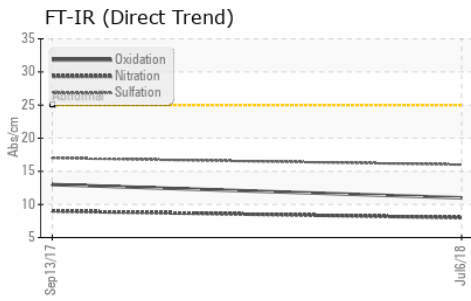
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>35	13	6	---
Potassium	ppm	ASTM D5185m	>20	2	2	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>25	8.	9.	---
Sulfation	Abs/.1mm	*ASTM D7415	>35	16.	17.	---
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 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		5	4	---
Boron	ppm	ASTM D5185m		3	18	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		40	25	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		814	607	---
Calcium	ppm	ASTM D5185m	1300	1706	1502	---
Phosphorus	ppm	ASTM D5185m		1040	910	---
Zinc	ppm	ASTM D5185m	1300	1228	1074	---
Sulfur	ppm	ASTM D5185m		1612	1853	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.	13.	---
Base Number (BN)	mg KOH/g	ASTM D2896	14	8.72	9.43	---
Visc @ 100°C	cSt	ASTM D445	15.5	15.07	▲ 19.4	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04506586
Lab Number : 04506586
Unique Number : 8260410
Test Package : MOB 2
Received : 10 Jul 2018
Tested : 11 Jul 2018
Diagnosed : 11 Jul 2018 - Don Baldridge

WD TRUCKING
 108 SASSAFRAS LN
 SHILOH, NC
 US 27974
 Contact: MICHAEL FRANCIS

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: