



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
AUTOCAR AUTOCAR

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06031823	TR05957154	---
Sample Date		Client Info		04 Dec 2023	13 Sep 2023	---
Machine Age	mls	Client Info		382000	5000	---
Oil Age	mls	Client Info		6000	5000	---
Filter Age	mls	Client Info		6000	5000	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>86	14	14	---
Chromium	ppm	ASTM D5185m	>3	<1	<1	---
Nickel	ppm	ASTM D5185m	>3	0	0	---
Titanium	ppm	ASTM D5185m	>2	0	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>15	4	<1	---
Lead	ppm	ASTM D5185m	>16	0	1	---
Copper	ppm	ASTM D5185m	>250	2	4	---
Tin	ppm	ASTM D5185m	>2	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

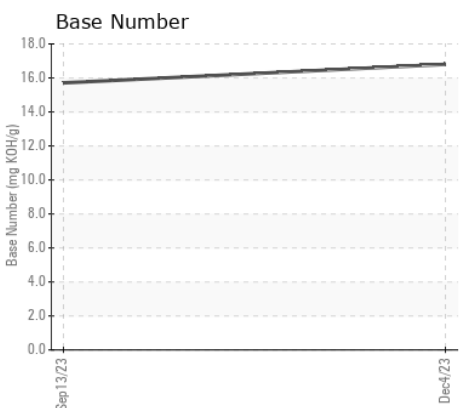
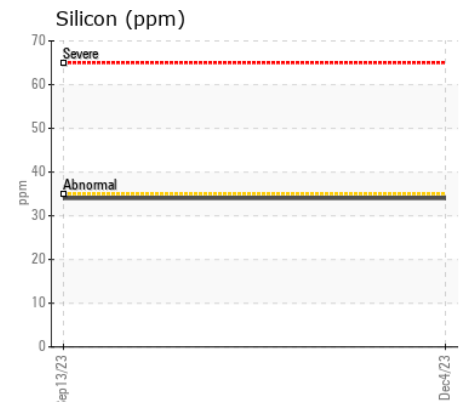
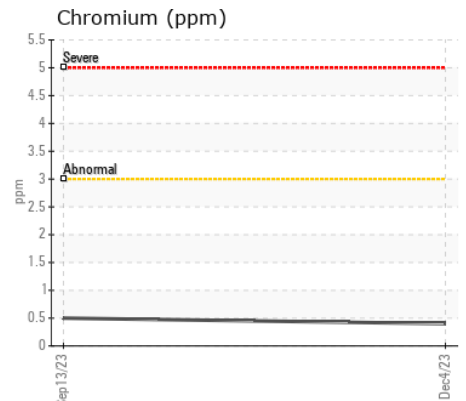
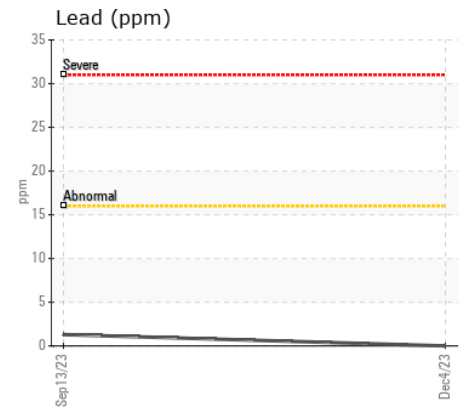
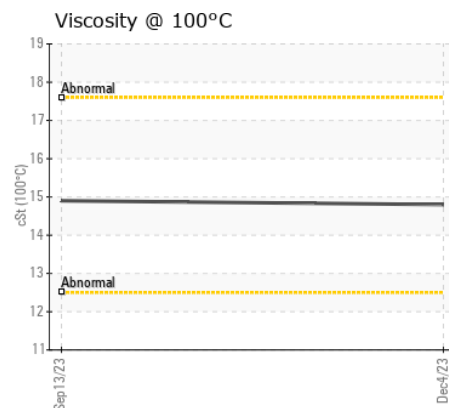
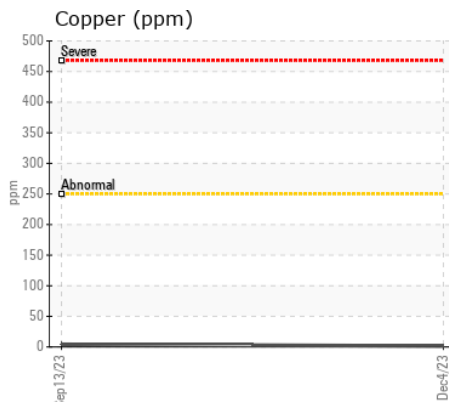
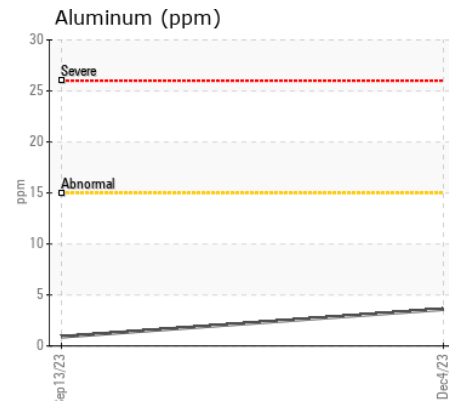
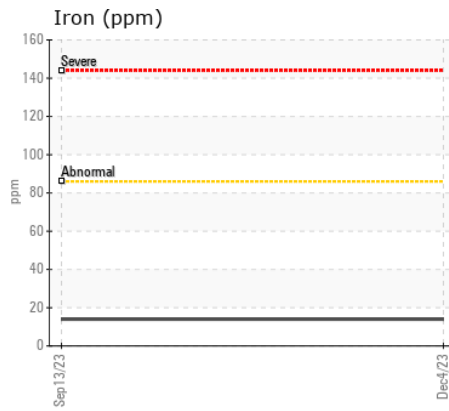
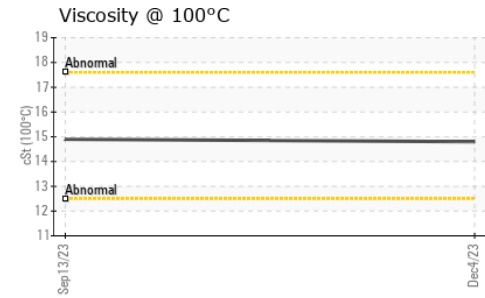
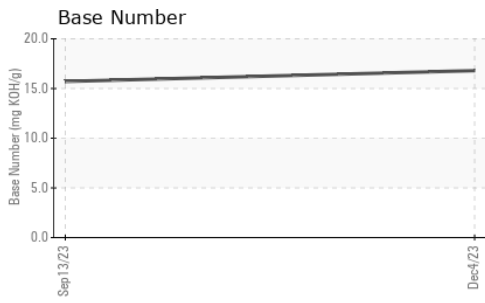
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>35	34	34	---
Potassium	ppm	ASTM D5185m	>20	2	4	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0	---
Nitration	Abs/cm	*ASTM D7624	>20	22.1	9.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	41.2	20.4	---
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		4	6	---
Boron	ppm	ASTM D5185m		14	15	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		108	113	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		21	23	---
Calcium	ppm	ASTM D5185m		4143	4422	---
Phosphorus	ppm	ASTM D5185m		924	942	---
Zinc	ppm	ASTM D5185m		1070	1118	---
Sulfur	ppm	ASTM D5185m		4331	5131	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	34.9	12.3	---
Base Number (BN)	mg KOH/g	ASTM D2896		16.80	15.71	---
Visc @ 100°C	cSt	ASTM D445		14.8	14.9	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06031823 **Received** : 11 Dec 2023
Lab Number : 06031823 **Tested** : 15 Dec 2023
Unique Number : 10781614 **Diagnosed** : 15 Dec 2023 - Jonathan Hester
Test Package : MOB 2

SPRAGUE RANCH
 6907 ROUTE 14
 BROOKFIELD, VT
 US 05036
 Contact: SCOTT BURRELL

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: