



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
VOVLO H03

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR04620731	TR04302643	---
Sample Date		Client Info		18 Dec 2018	07 Sep 2017	---
Machine Age	hrs	Client Info		6852	5562	---
Oil Age	hrs	Client Info		1200	0	---
Filter Age	hrs	Client Info		1200	0	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changd	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	48	28	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>2	<1	0	---
Titanium	ppm	ASTM D5185m	>2	<1	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>20	4	4	---
Lead	ppm	ASTM D5185m	>40	2	2	---
Copper	ppm	ASTM D5185m	>330	6	4	---
Tin	ppm	ASTM D5185m	>15	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

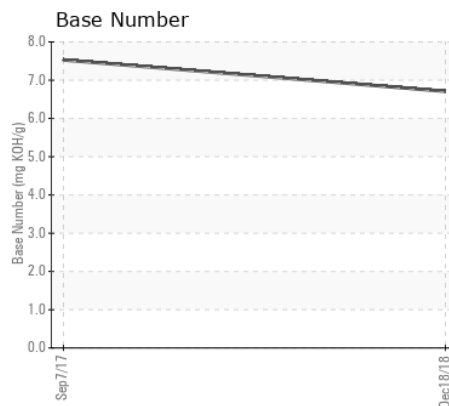
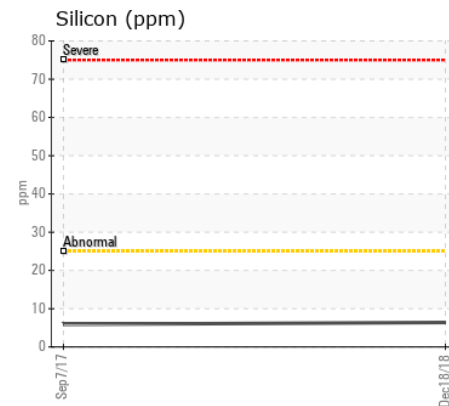
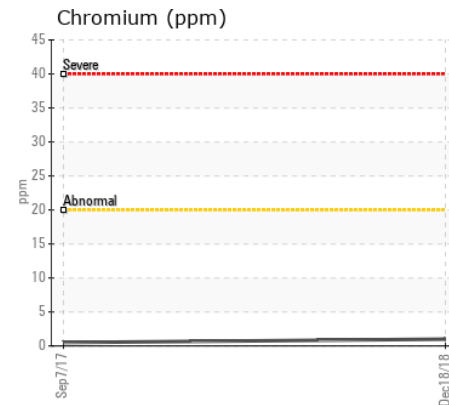
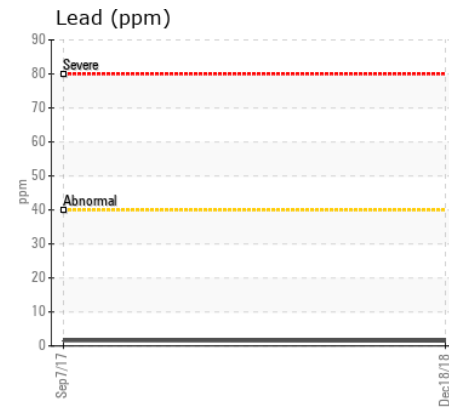
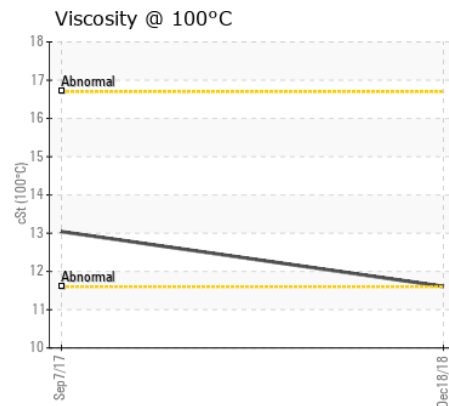
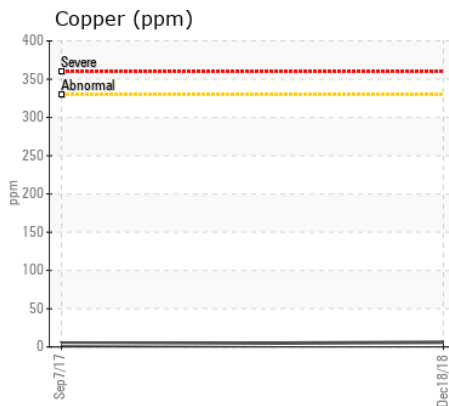
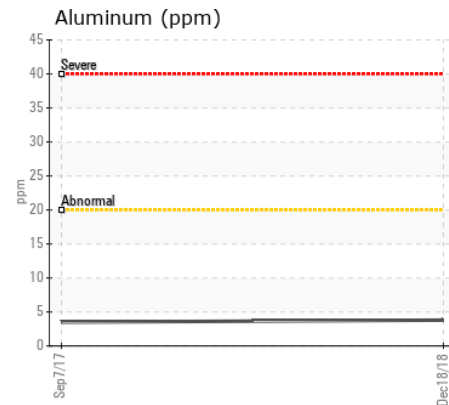
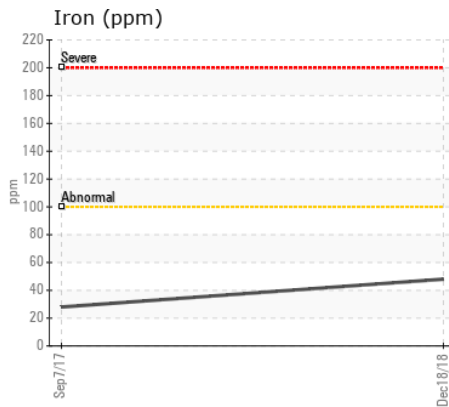
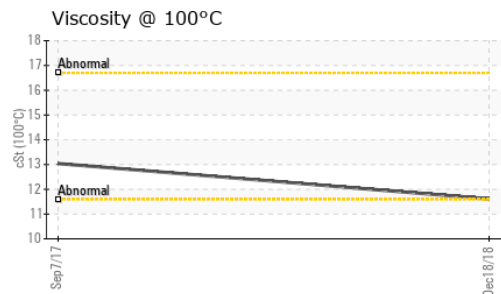
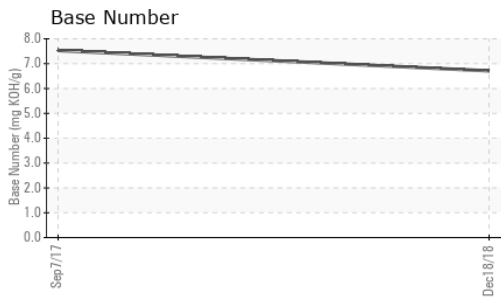
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	---
Potassium	ppm	ASTM D5185m	>20	8	0	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.8	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	10.5	7.	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	16.	---
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		8	7	---
Boron	ppm	ASTM D5185m		2	4	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		33	38	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		644	664	---
Calcium	ppm	ASTM D5185m		1310	1299	---
Phosphorus	ppm	ASTM D5185m		814	964	---
Zinc	ppm	ASTM D5185m		1042	1091	---
Sulfur	ppm	ASTM D5185m		2494	1773	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	12.	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.71	7.53	---
Visc @ 100°C	cSt	ASTM D445		11.61	13.04	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04620731 **Received** : 28 Dec 2018
Lab Number : 04620731 **Diagnosed** : 31 Dec 2018
Unique Number : 8447111 **Diagnostician** : Wes Davis
Test Package : MOB 2

CCS CONSTRUCTORS
 138 MUNSON AVE
 MORRISVILLE, VT
 US 05661
 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)

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