TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DEUTZ FAHR 68
Component
Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC IV 15W40 (10 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

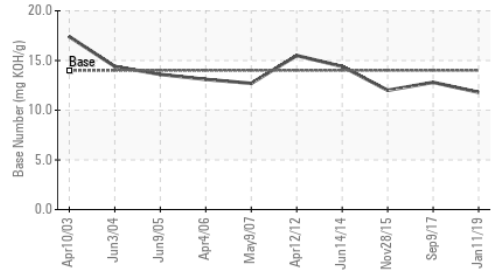
There is no indication of any contamination in the oil.

FLUID CONDITION

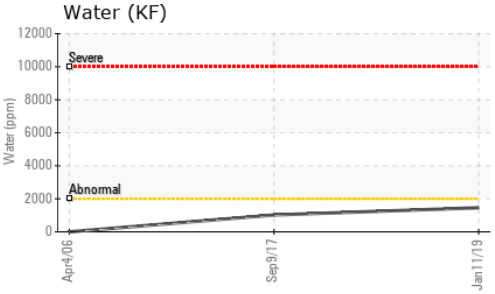
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR04784213	TR04374735	TR03895195
Sample Date		Client Info		11 Jan 2019	09 Sep 2017	28 Nov 2015
Machine Age	hrs	Client Info		6278	6088	5798
Oil Age	hrs	Client Info		190	290	236
Filter Age	hrs	Client Info		190	290	236
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	MARGINAL	MARGINAL
Iron	ppm	ASTM D5185m	>100	11	14	15
Chromium	ppm	ASTM D5185m	>20	2	3	2
Nickel	ppm	ASTM D5185m	>4	0	0	1
Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	6	6	5
Lead	ppm	ASTM D5185m	>40	2	2	4
Copper	ppm	ASTM D5185m	>330	9	9	4
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	6	5	6
Potassium	ppm	ASTM D5185m	>20	6	5	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water	%	ASTM D6304	>0.2	0.146	▲ 0.102	---
ppm Water	ppm	ASTM D6304	>2000	1460	▲ 1020	---
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0	0
Nitration	Abs/cm	*ASTM D7624	>20	14	12.	7.
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	22.	13.
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		5	5	5
Boron	ppm	ASTM D5185m		2	4	22
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		157	189	225
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		965	936	1197
Calcium	ppm	ASTM D5185m	1300	1776	1854	2108
Phosphorus	ppm	ASTM D5185m		1034	1025	1099
Zinc	ppm	ASTM D5185m	1300	1373	1304	1418
Sulfur	ppm	ASTM D5185m		3314	3221	3628
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	20.	14.
Base Number (BN)	mg KOH/g	ASTM D2896	14	11.8	12.8	12.0
Visc @ 100°C	cSt	ASTM D445	15.5	16.1	▲ 18.47	▲ 18.94

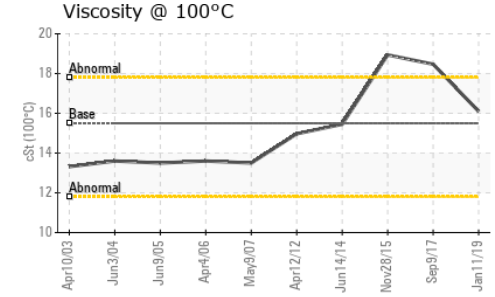
Base Number



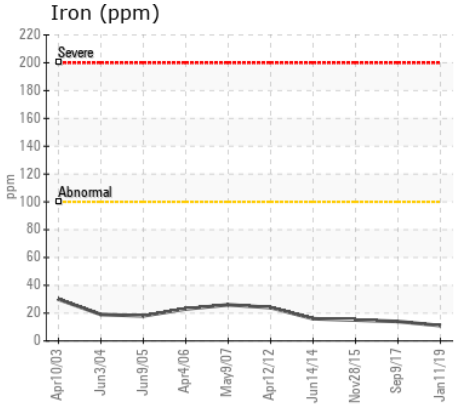
Water (KF)



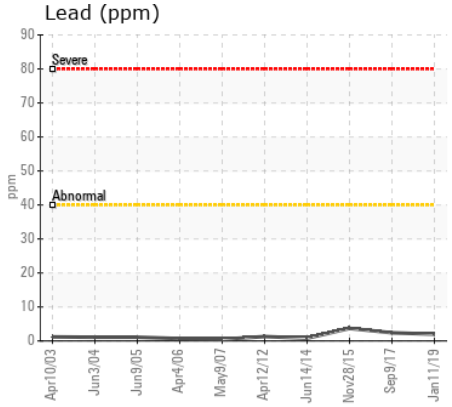
Viscosity @ 100°C



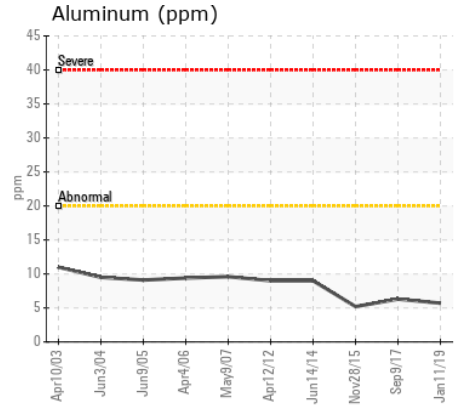
Iron (ppm)



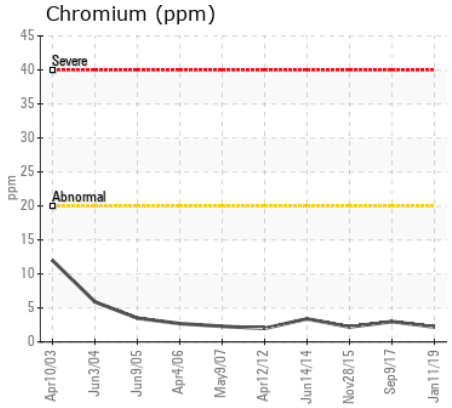
Lead (ppm)



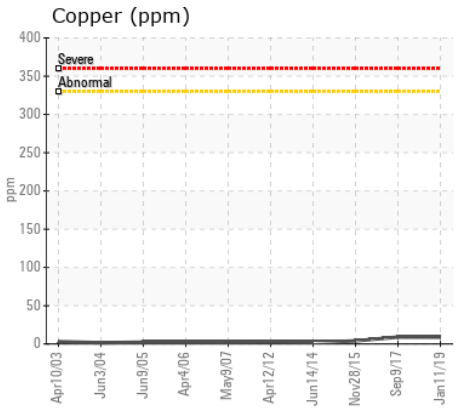
Aluminum (ppm)



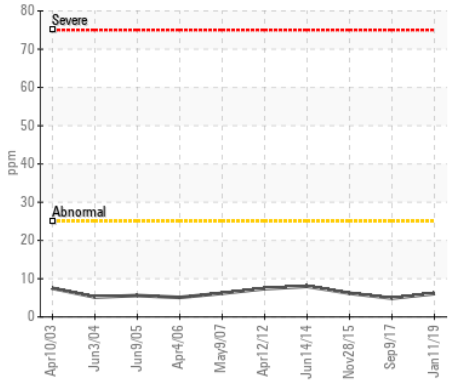
Chromium (ppm)



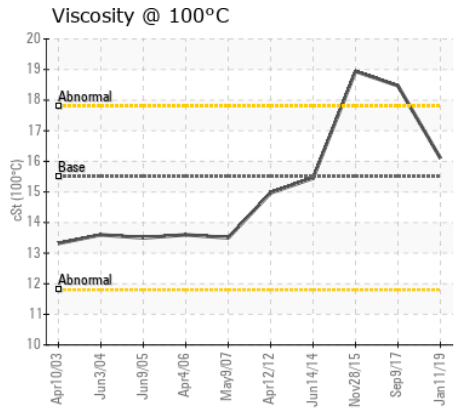
Copper (ppm)



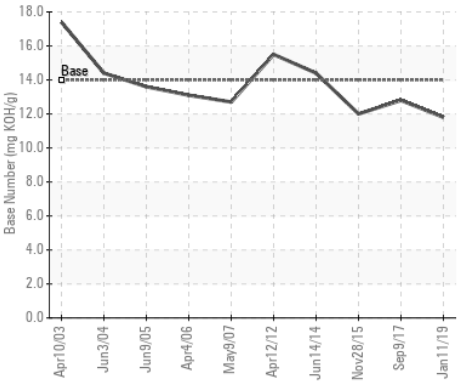
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04784213 **Received** : 23 Aug 2019
Lab Number : 04784213 **Tested** : 26 Aug 2019
Unique Number : 8712022 **Diagnosed** : 26 Aug 2019 - Don Baldridge
Test Package : MOB 2 (Additional Tests: KF)

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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