



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

CASE IH 255

Component

Diesel Engine

Fluid

TRC MOLY XL PRO-SPEC IV 15W40 (22 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR04607582	TR04374732	TR04139951
Sample Date		Client Info		13 Nov 2018	18 Nov 2017	17 Nov 2016
Machine Age	hrs	Client Info		4407	4071	3777
Oil Age	hrs	Client Info		336	294	304
Filter Age	hrs	Client Info		336	294	304
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	23	23	24
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	3
Lead	ppm	ASTM D5185m	>40	<1	2	1
Copper	ppm	ASTM D5185m	>330	7	5	3
Tin	ppm	ASTM D5185m	>15	<1	0	10
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

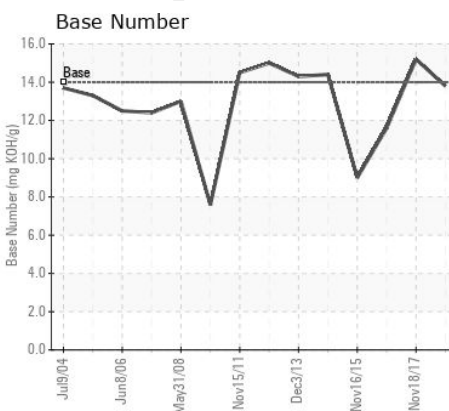
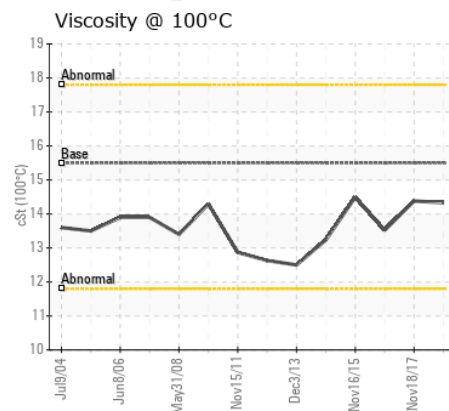
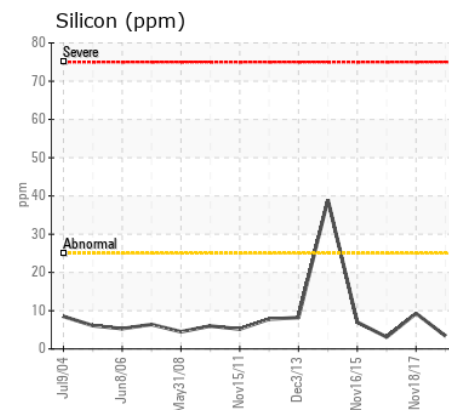
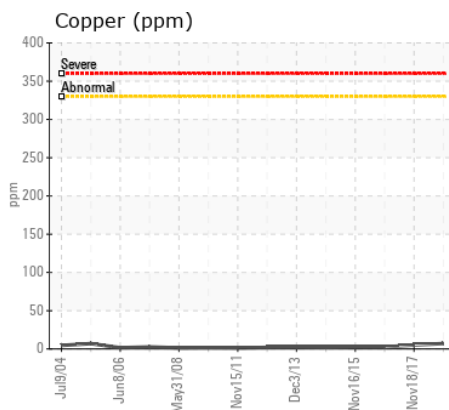
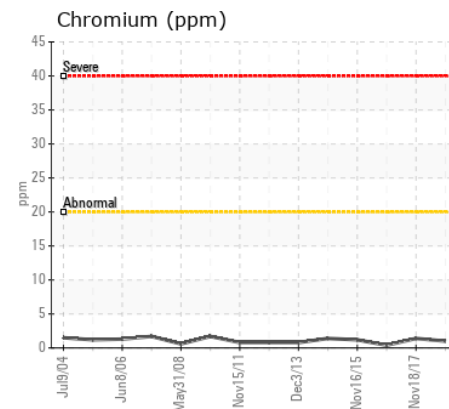
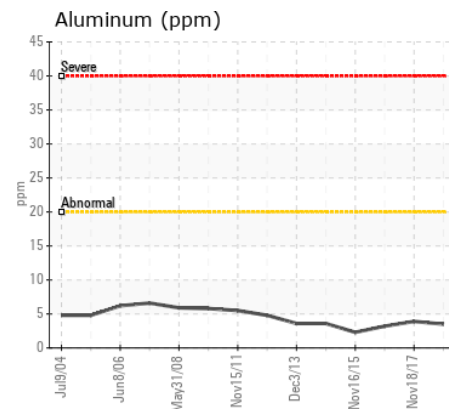
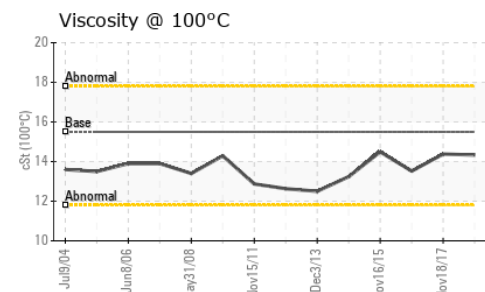
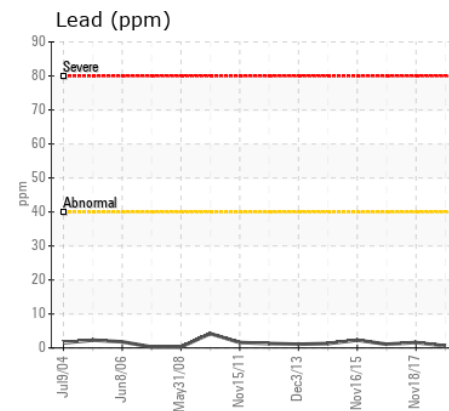
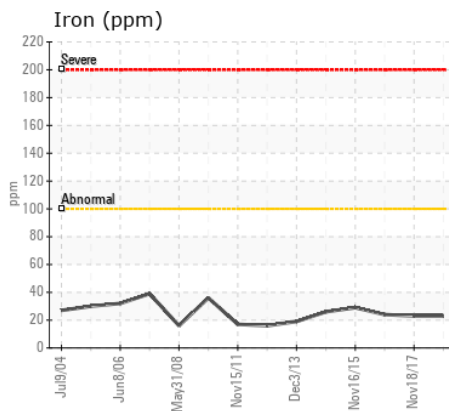
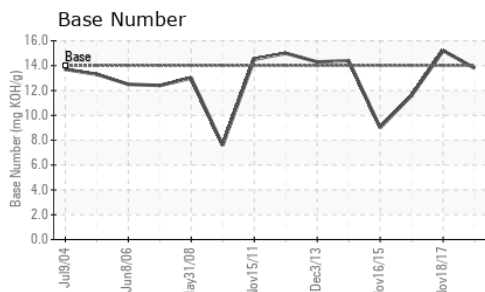
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	9	3
Potassium	ppm	ASTM D5185m	>20	1	6	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.9	8.	7.
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	17.	16.
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

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	5	6
Boron	ppm	ASTM D5185m		3	2	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		140	156	188
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		847	875	850
Calcium	ppm	ASTM D5185m	1300	1621	1693	1777
Phosphorus	ppm	ASTM D5185m		1011	1091	1020
Zinc	ppm	ASTM D5185m	1300	1141	1289	1277
Sulfur	ppm	ASTM D5185m		3938	3337	3656
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	12.	12.
Base Number (BN)	mg KOH/g	ASTM D2896	14	13.8	15.2	11.6
Visc @ 100°C	cSt	ASTM D445	15.5	14.33	14.38	13.52



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04607582
Lab Number : 04607582
Unique Number : 8421602
Test Package : MOB 2
Received : 07 Dec 2018
Tested : 10 Dec 2018
Diagnosed : 10 Dec 2018 - Wes Davis

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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)