



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CASE IH 275

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05441594	TR05132500	TR05027061
Sample Date		Client Info		15 Nov 2021	07 Nov 2020	17 Jul 2020
Machine Age	hrs	Client Info		3041	2796	2733
Oil Age	hrs	Client Info		245	243	180
Filter Age	hrs	Client Info		245	243	180
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	31	22	17
Chromium	ppm	ASTM D5185m	>20	2	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	3
Lead	ppm	ASTM D5185m	>40	<1	1	<1
Copper	ppm	ASTM D5185m	>330	196	180	84
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

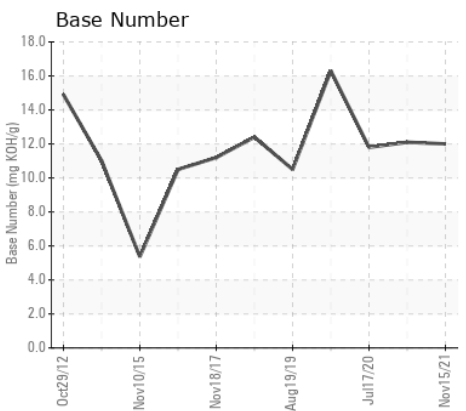
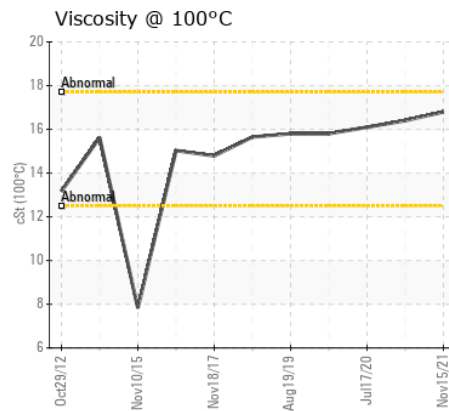
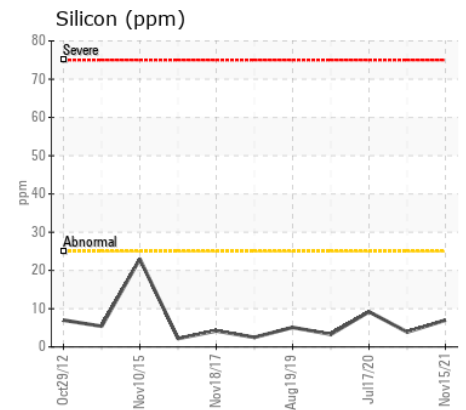
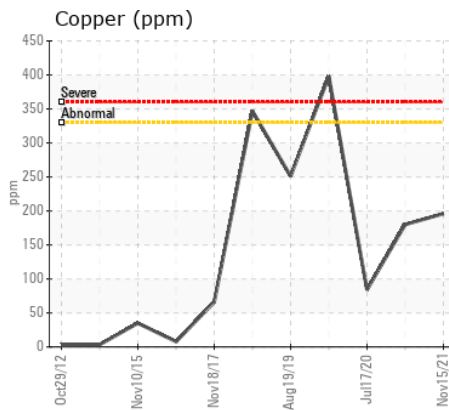
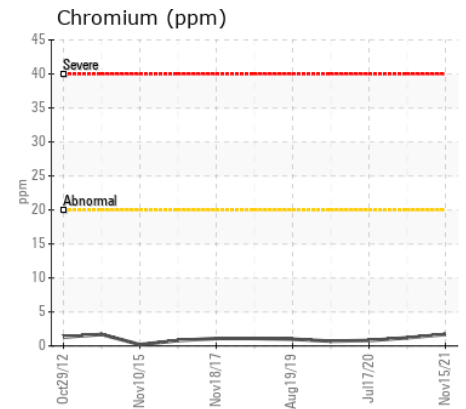
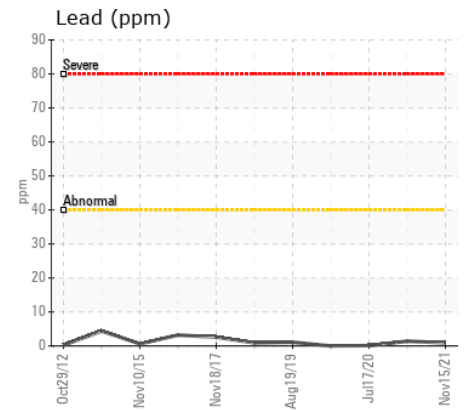
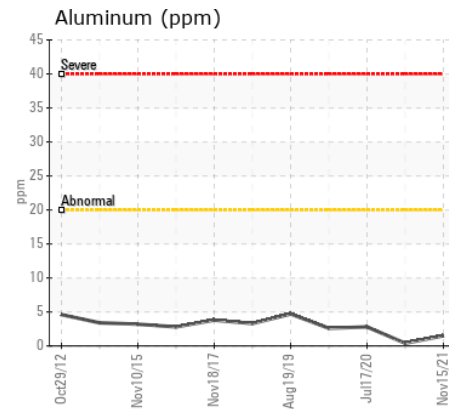
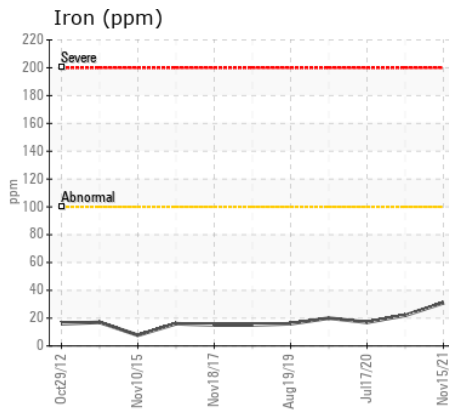
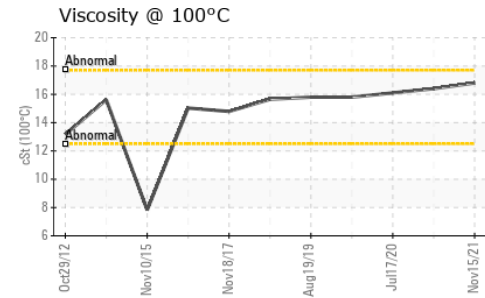
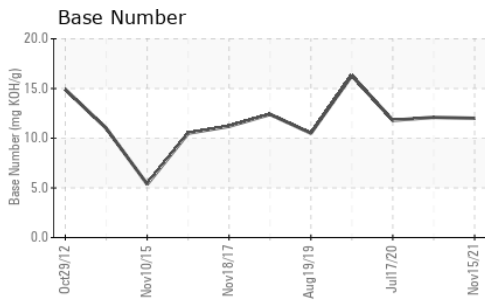
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	4	9
Potassium	ppm	ASTM D5185m	>20	2	<1	2
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	0.6	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	13.9	12.8	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.9	24.6	22.1
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		11	9	9
Boron	ppm	ASTM D5185m		1	4	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		153	142	126
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		20	40	39
Calcium	ppm	ASTM D5185m		4814	4457	4227
Phosphorus	ppm	ASTM D5185m		987	952	880
Zinc	ppm	ASTM D5185m		1119	1121	1002
Sulfur	ppm	ASTM D5185m		3378	3695	3277
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.5	17.8	15.1
Base Number (BN)	mg KOH/g	ASTM D2896		12.0	12.1	11.8
Visc @ 100°C	cSt	ASTM D445		16.8	16.4	16.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05441594
Lab Number : 05441594
Unique Number : 9805787
Test Package : MOB 2
Received : 11 Jan 2022
Tested : 12 Jan 2022
Diagnosed : 12 Jan 2022 - Wes Davis

PHIL HARDER
 57803 350TH STREET
 MOUNTAIN LAKE, MN
 US 56159
 Contact: PHILIP HARDER
 philbren@frontiernet.net
 T: 5(07) 227-6074
 F:

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)