



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		TR05773047	TR05441594	TR05132500
Sample Date		Client Info		07 Feb 2023	15 Nov 2021	07 Nov 2020
Machine Age	hrs	Client Info		3271	3041	2796
Oil Age	hrs	Client Info		230	245	243
Filter Age	hrs	Client Info		230	245	243
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	25	31	22
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	1	2	<1
Lead	ppm	ASTM D5185m	>40	<1	<1	1
Copper	ppm	ASTM D5185m	>330	128	196	180
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

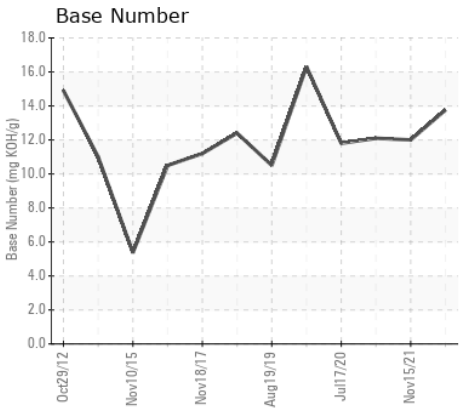
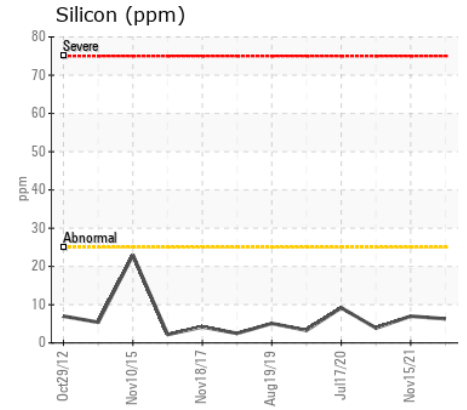
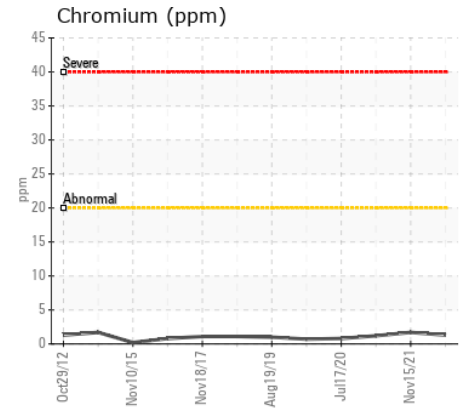
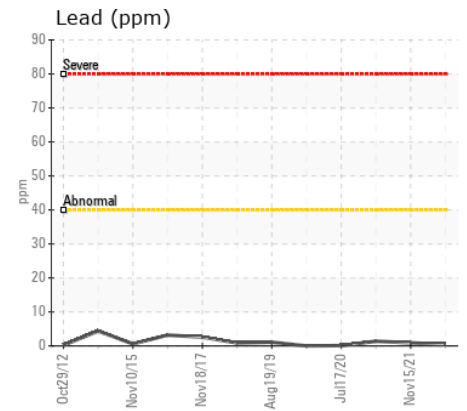
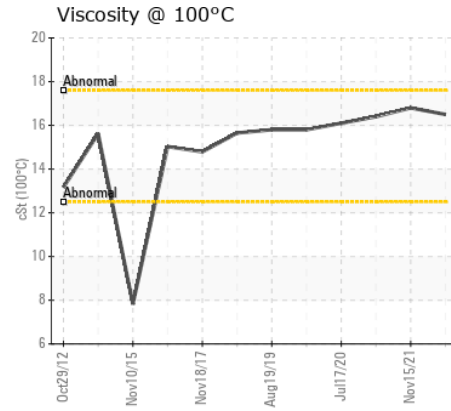
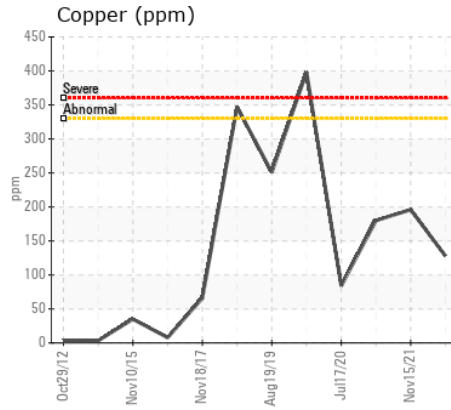
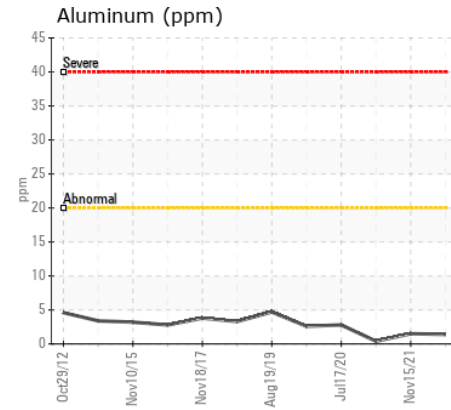
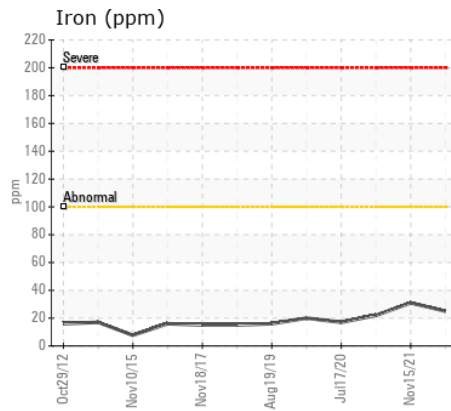
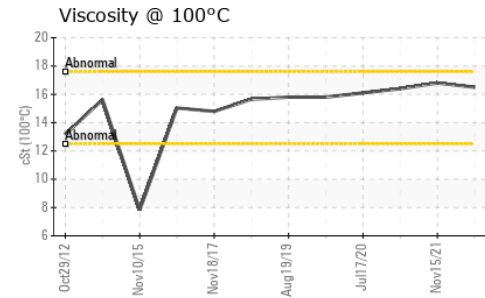
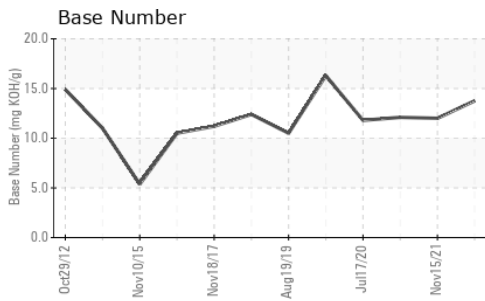
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	7	4
Potassium	ppm	ASTM D5185m	>20	2	2	<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	0.5	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	13.1	13.9	12.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4	25.9	24.6
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		2	11	9
Boron	ppm	ASTM D5185m		0	1	4
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		153	153	142
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		16	20	40
Calcium	ppm	ASTM D5185m		4790	4814	4457
Phosphorus	ppm	ASTM D5185m		929	987	952
Zinc	ppm	ASTM D5185m		1140	1119	1121
Sulfur	ppm	ASTM D5185m		4203	3378	3695
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.4	19.5	17.8
Base Number (BN)	mg KOH/g	ASTM D2896		13.76	12.0	12.1
Visc @ 100°C	cSt	ASTM D445		16.5	16.8	16.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : TR05773047

Lab Number : 05773047

Unique Number : 10347664

Test Package : MOB 2

Received : 21 Feb 2023

Tested : 22 Feb 2023

Diagnosed : 22 Feb 2023 - Wes Davis

PHIL HARDER

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MOUNTAIN LAKE, MN

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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)