



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR 521B CAT 521B
 Component
Diesel Engine
 Fluid
TRC MOLY XL PROSPEC III 15W40 (5 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06176280	TR05530863	TR05246318
Sample Date		Client Info		03 May 2024	14 Apr 2022	14 Apr 2021
Machine Age	hrs	Client Info		6930	5880	5900
Oil Age	hrs	Client Info		300	0	500
Filter Age	hrs	Client Info		300	0	500
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Filter Changed		Client Info		Not Changd	N/A	Not Changd
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	21	67	44
Chromium	ppm	ASTM D5185m	>20	<1	3	2
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	1
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>25	3	5	6
Lead	ppm	ASTM D5185m	>40	<1	1	0
Copper	ppm	ASTM D5185m	>330	<1	2	1
Tin	ppm	ASTM D5185m	>15	0	1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

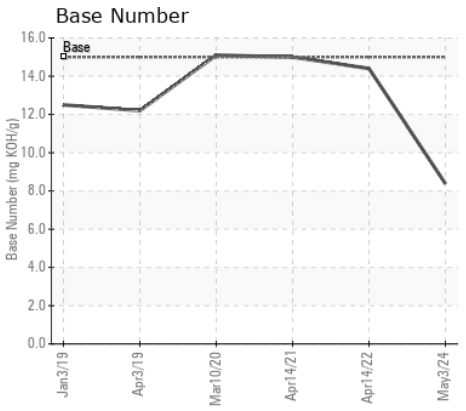
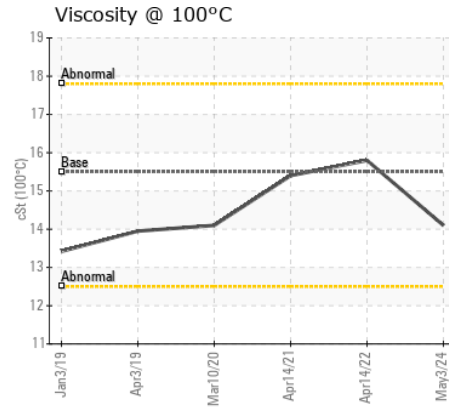
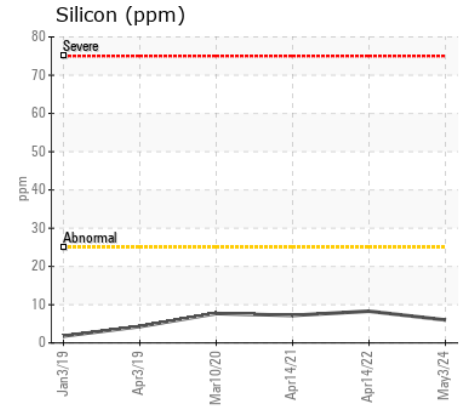
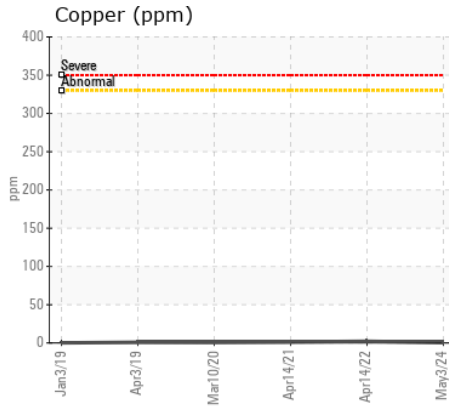
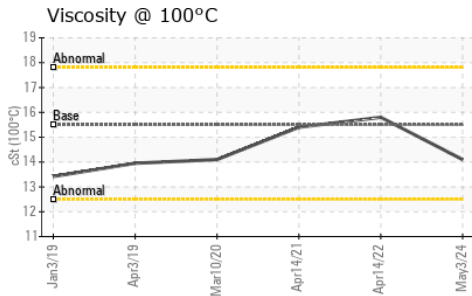
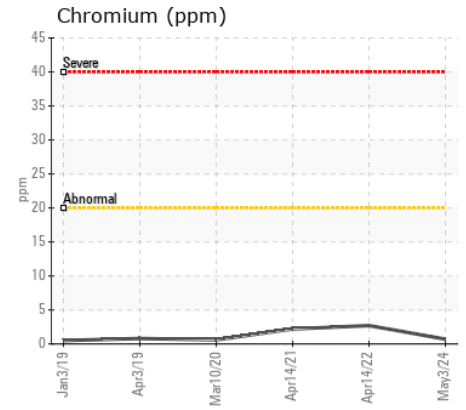
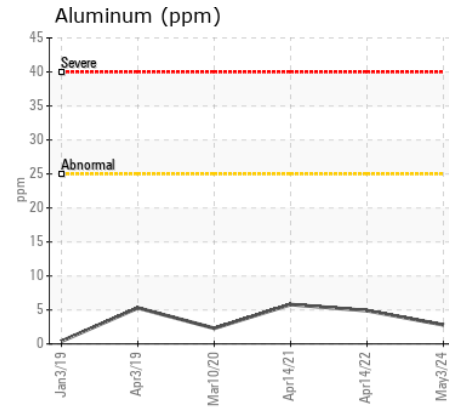
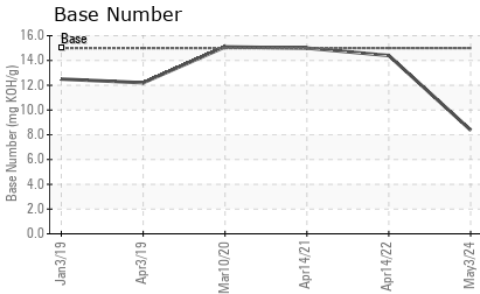
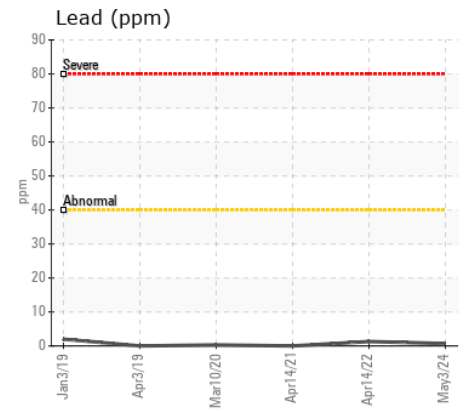
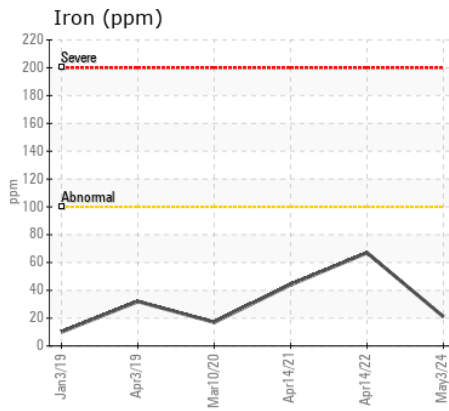
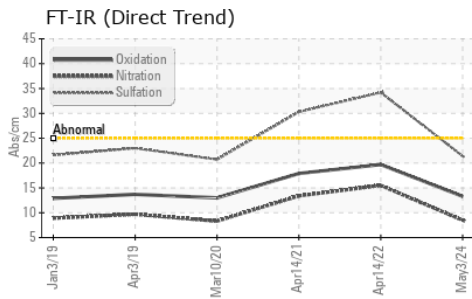
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	7
Potassium	ppm	ASTM D5185m	>20	<1	2	8
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	1.2	▲ 4	▲ 3
Nitration	Abs/cm	*ASTM D7624	>20	8.5	15.5	13.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	34.2	30.3
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		3	0	2
Boron	ppm	ASTM D5185m		220	193	178
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		210	255	232
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		427	546	558
Calcium	ppm	ASTM D5185m	4500	3907	4947	4832
Phosphorus	ppm	ASTM D5185m		900	1047	921
Zinc	ppm	ASTM D5185m	1400	1012	1238	1145
Sulfur	ppm	ASTM D5185m		4293	4037	3316
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.3	19.7	17.9
Base Number (BN)	mg KOH/g	ASTM D2896	15	8.38	14.4	15.0
Visc @ 100°C	cSt	ASTM D445	15.5	14.1	15.8	15.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06176280
Lab Number : 06176280
Unique Number : 11022333
Test Package : MOB 2
Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 2024 - Wes Davis

CANTERBURY TIMBER CO
 57 OLD GILMANTON RD
 CANTERBURY, NH
 US 03224
 Contact: DON PERCY

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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