



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2006 INTERNATIONAL 24
 Component
Diesel Engine
 Fluid
TRC MOLY XL PROSPEC III 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06177401	TR05765302	TR05372840
Sample Date		Client Info		26 Apr 2024	18 Jan 2023	17 Sep 2021
Machine Age	mls	Client Info		238692	219001	201035
Oil Age	mls	Client Info		10086	9583	10069
Filter Age	mls	Client Info		10086	9583	10069
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	29	48	46
Chromium	ppm	ASTM D5185m	>4	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	1	2	2
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	▲ 19	12	9
Lead	ppm	ASTM D5185m	>15	<1	2	2
Copper	ppm	ASTM D5185m	>30	3	2	3
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

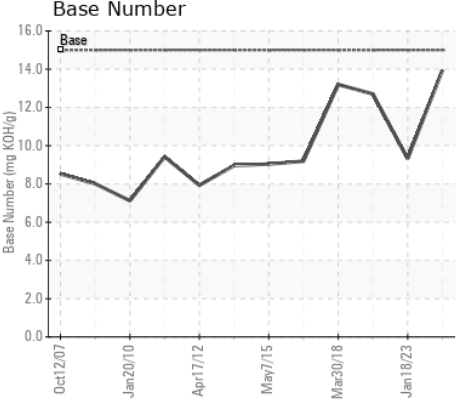
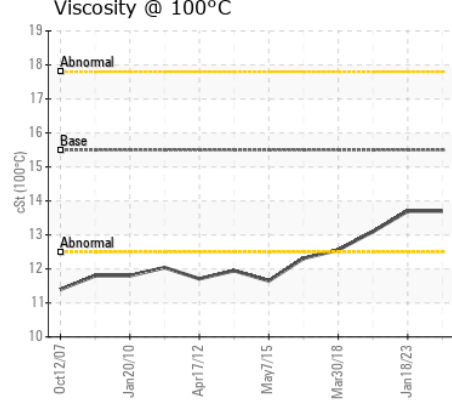
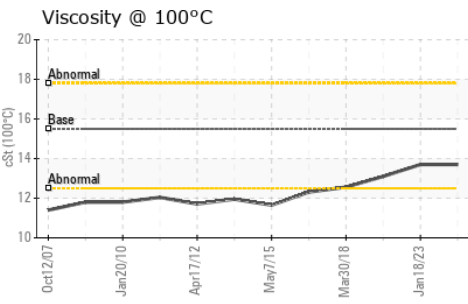
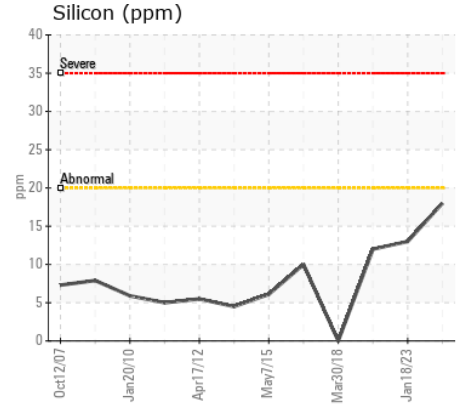
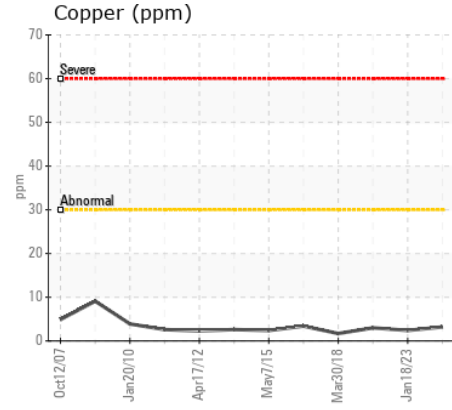
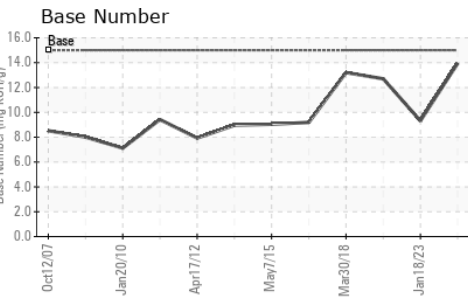
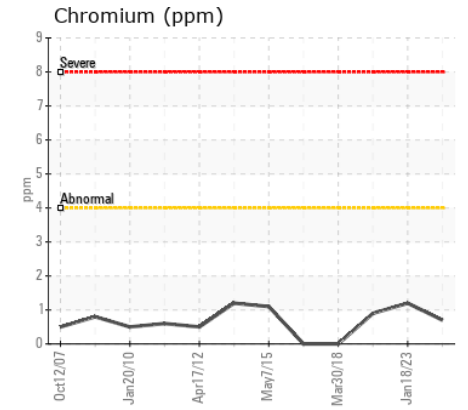
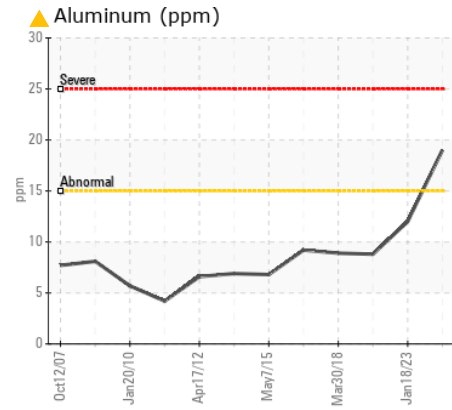
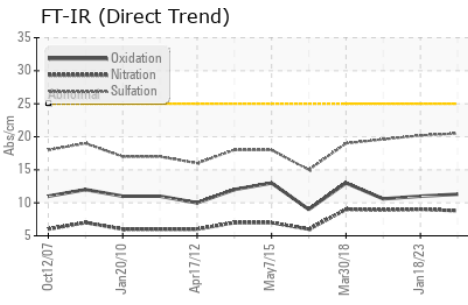
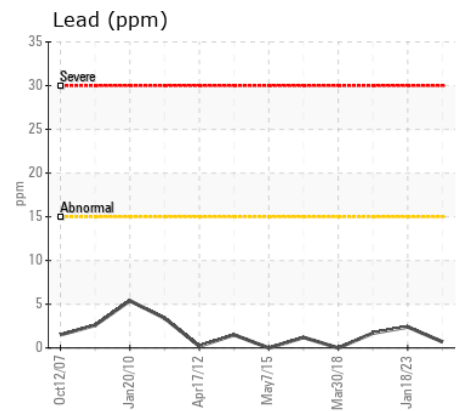
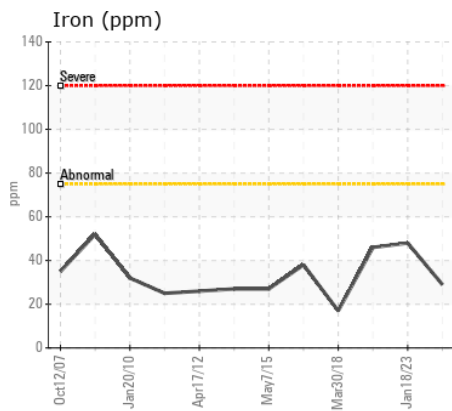
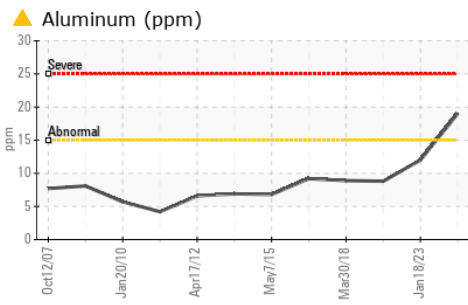
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	18	13	12
Potassium	ppm	ASTM D5185m	>20	4	2	1
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.8	9.0	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	20.2	19.6
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	6	7
Boron	ppm	ASTM D5185m		0	0	3
Barium	ppm	ASTM D5185m		8	4	0
Molybdenum	ppm	ASTM D5185m		1385	1325	754
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		17	23	18
Calcium	ppm	ASTM D5185m	4500	4410	4251	4132
Phosphorus	ppm	ASTM D5185m		1037	810	831
Zinc	ppm	ASTM D5185m	1400	1044	1000	973
Sulfur	ppm	ASTM D5185m		5845	5599	3933
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.3	11.0	10.6
Base Number (BN)	mg KOH/g	ASTM D2896	15	13.94	9.32	12.7
Visc @ 100°C	cSt	ASTM D445	15.5	13.7	13.7	13.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06177401
Lab Number : 06177401
Unique Number : 11023454
Test Package : MOB 2
Received : 13 May 2024
Tested : 14 May 2024
Diagnosed : 15 May 2024 - Don Baldrige

ALEXANDER SCHOOLS
 6091 AYERS RD
 ALBANY, OH
 US 45710
 Contact: DEAN WISE

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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F: