



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

KENWORTH 6

Component

Diesel Engine

Fluid

TRC MOLY XL PRO-SPEC IV XP 15W40 (12 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06218920	TR06100310	TR06045112
Sample Date		Client Info		17 Jun 2024	25 Feb 2024	19 Dec 2023
Machine Age	mls	Client Info		410079	390008	380023
Oil Age	mls	Client Info		10079	30149	20164
Filter Age	mls	Client Info		10079	30149	20164
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	26	59	34
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	8	5
Lead	ppm	ASTM D5185m	>40	3	13	3
Copper	ppm	ASTM D5185m	>330	2	2	0
Tin	ppm	ASTM D5185m	>15	<1	2	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

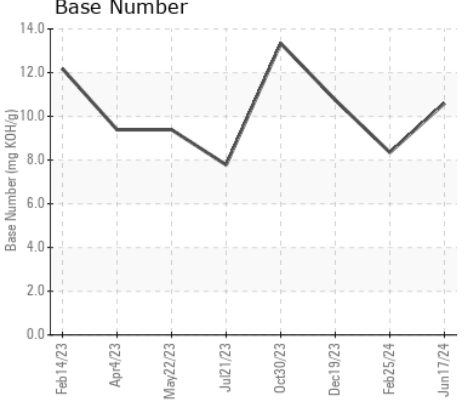
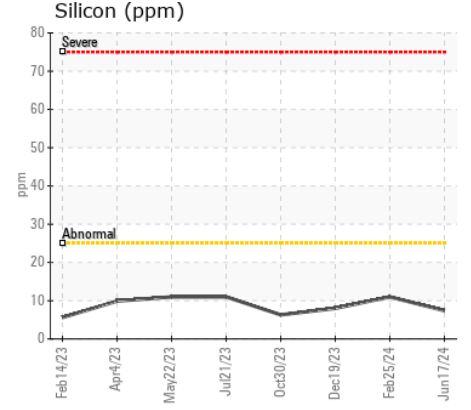
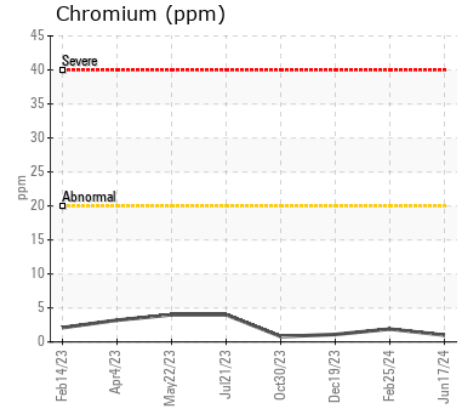
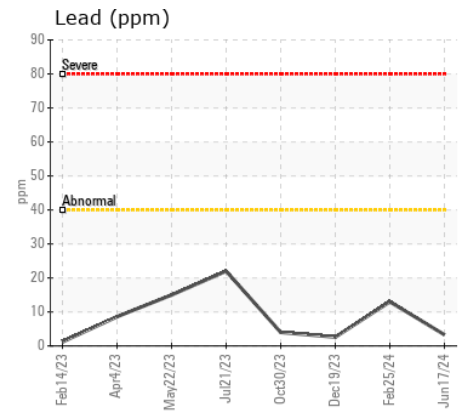
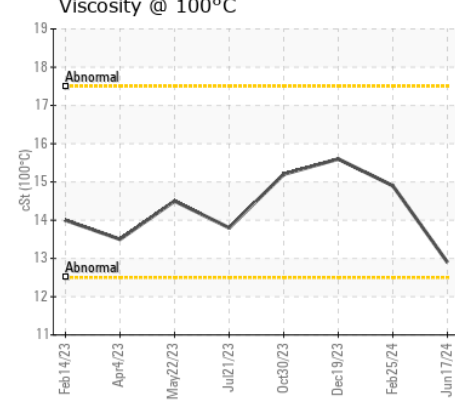
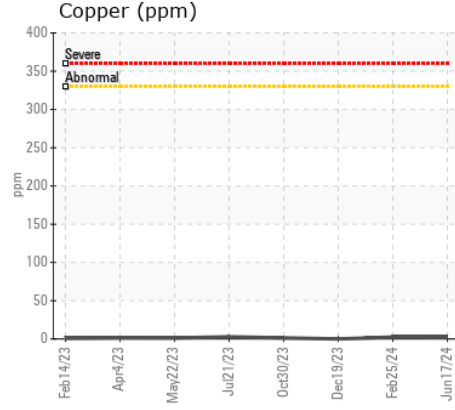
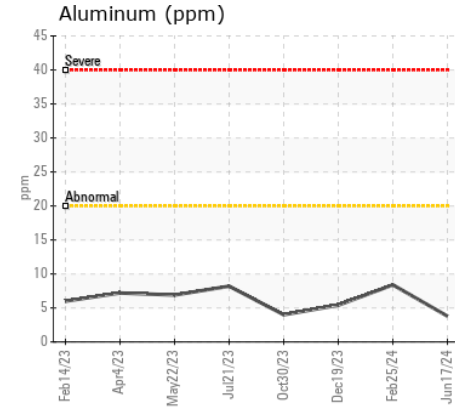
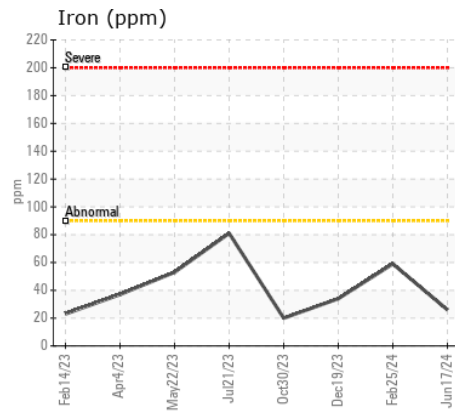
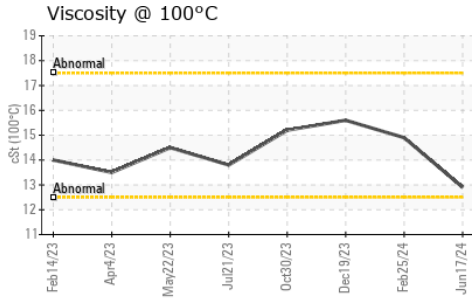
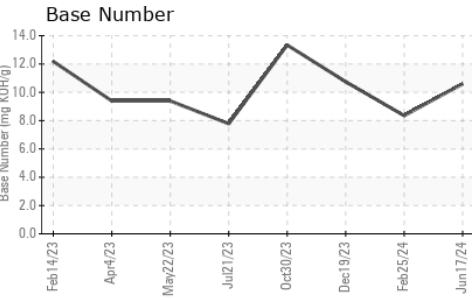
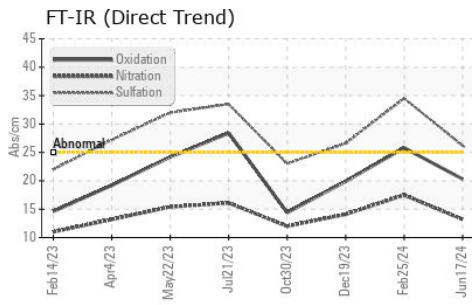
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	11	8
Potassium	ppm	ASTM D5185m	>20	15	19	9
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.4	1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	13.2	17.5	14.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.2	34.5	26.6
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		4	5	<1
Boron	ppm	ASTM D5185m		0	3	2
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		107	15	12
Manganese	ppm	ASTM D5185m		1	1	<1
Magnesium	ppm	ASTM D5185m		18	34	33
Calcium	ppm	ASTM D5185m		4095	4520	4211
Phosphorus	ppm	ASTM D5185m		1017	917	960
Zinc	ppm	ASTM D5185m		1049	1153	1093
Sulfur	ppm	ASTM D5185m		4514	4215	4101
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	25.8	19.9
Base Number (BN)	mg KOH/g	ASTM D2896		10.60	8.35	10.75
Visc @ 100°C	cSt	ASTM D445		12.9	14.9	15.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06218920
Lab Number : 06218920
Unique Number : 11097117
Test Package : MOB 2

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

VAUGHN TRUCKING
 90911 LEWIS AND CLARK RD
 ASTORIA, OR
 US 97103
 Contact: JEFF WARREN

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: