



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KENWORTH T-800 BOB (S/N 127941)

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		TR05861427	TR05861429	TR05653355
Sample Date		Client Info		06 May 2023	19 Oct 2022	29 Jul 2022
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		24029	18882	25183
Filter Age	mls	Client Info		24029	18882	25183
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	>90	21	31	29
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	4	7
Lead	ppm	ASTM D5185m	>40	4	5	14
Copper	ppm	ASTM D5185m	>330	<1	<1	2
Tin	ppm	ASTM D5185m	>15	0	<1	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

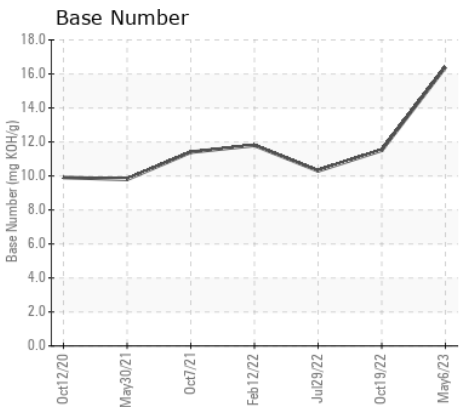
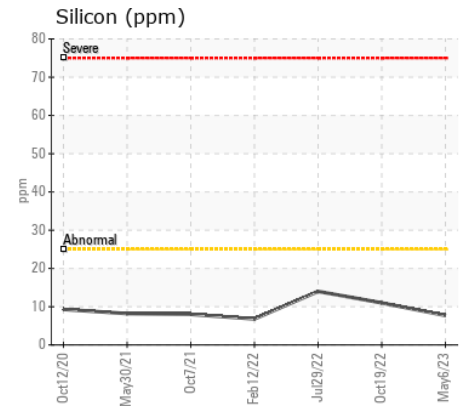
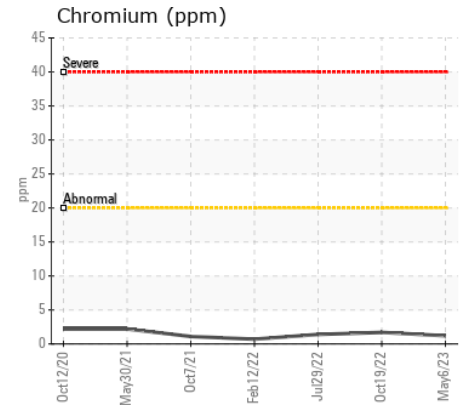
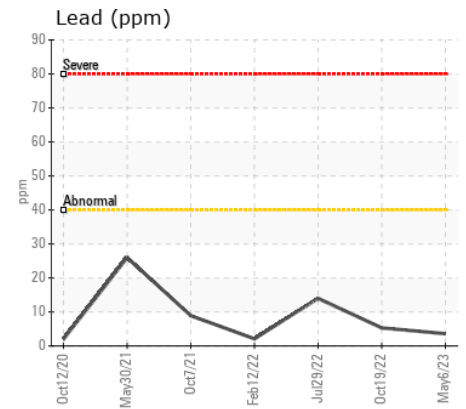
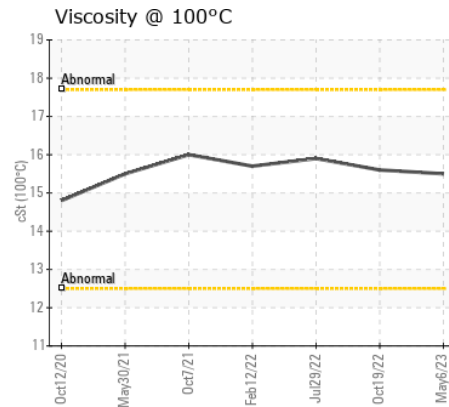
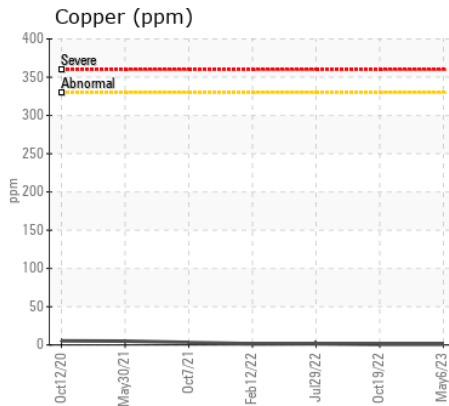
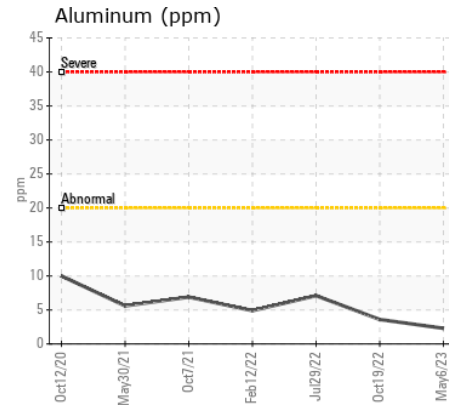
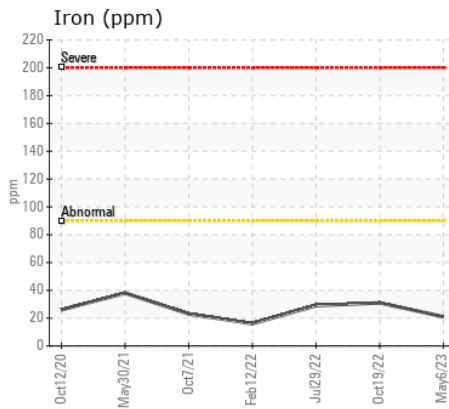
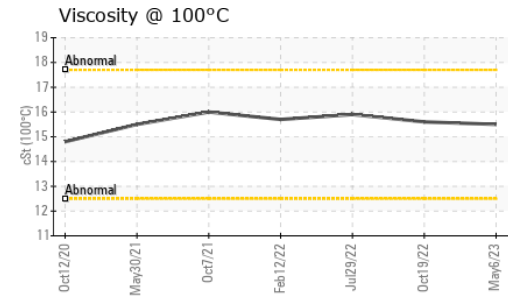
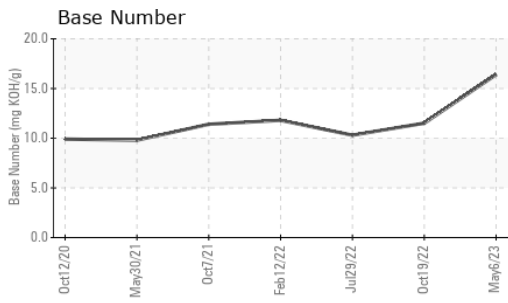
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	11	14
Potassium	ppm	ASTM D5185m	>20	3	7	10
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	0.3	0.4	0.7
Nitration	Abs/cm	*ASTM D7624	>20	12.4	13.0	14.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.8	27.9	31.8
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	2	4
Boron	ppm	ASTM D5185m		2	2	5
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		137	140	136
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		22	22	23
Calcium	ppm	ASTM D5185m		4927	4979	4811
Phosphorus	ppm	ASTM D5185m		984	989	947
Zinc	ppm	ASTM D5185m		1186	1184	1143
Sulfur	ppm	ASTM D5185m		5307	5258	5247
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	16.2	18.0
Base Number (BN)	mg KOH/g	ASTM D2896		16.40	11.51	10.3
Visc @ 100°C	cSt	ASTM D445		15.5	15.6	15.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05861427 **Received** : 31 May 2023
Lab Number : 05861427 **Diagnosed** : 01 Jun 2023
Unique Number : 10495892 **Diagnostician** : Wes Davis
Test Package : MOB 2

HANNEMAN FOREST PRODUCTS
 13551 GREENWOOD RD
 GLEN ALLEN, VA
 US 23059
 Contact: TIM SMITH

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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