



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**KENWORTH T880 478 - 433447**

Component  
**Diesel Engine**

Fluid  
**TRC PRO-SPEC IV SYNTHETIC BLEND 15W40 (11 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06228142	TR05462748	TR05388993
Sample Date		Client Info		22 Jun 2024	31 Dec 2021	25 Sep 2021
Machine Age	mls	Client Info		321000	149995	124248
Oil Age	mls	Client Info		25000	25747	24123
Filter Age	mls	Client Info		25000	25747	24123
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	9	13	9
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	4	6
Lead	ppm	ASTM D5185m	>40	<1	1	2
Copper	ppm	ASTM D5185m	>330	2	2	2
Tin	ppm	ASTM D5185m	>15	<1	1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

**CONTAMINATION**

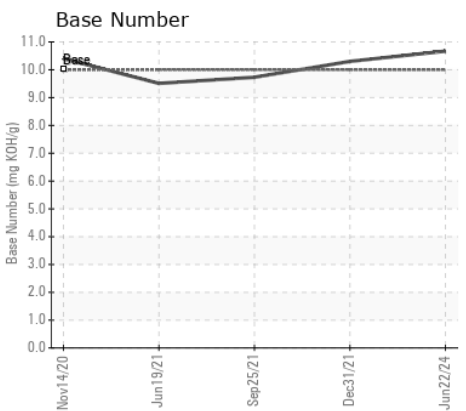
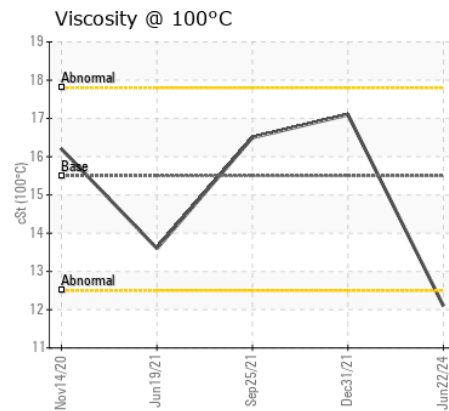
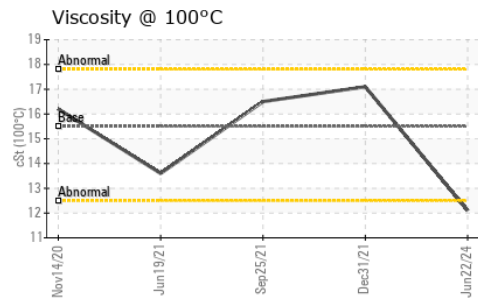
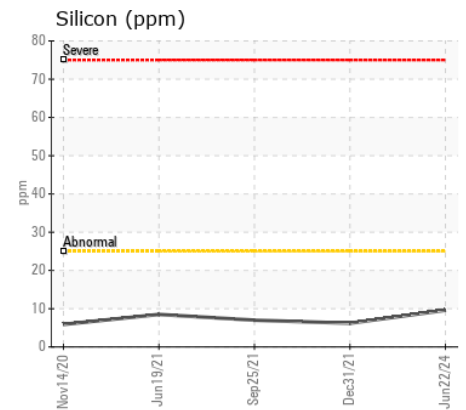
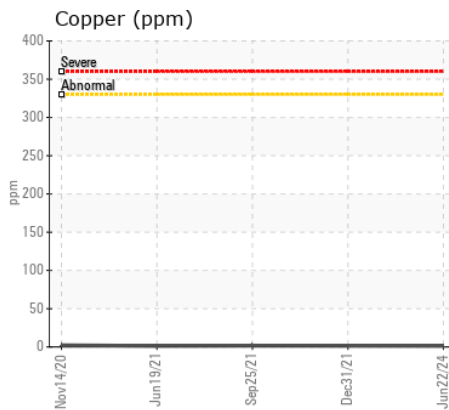
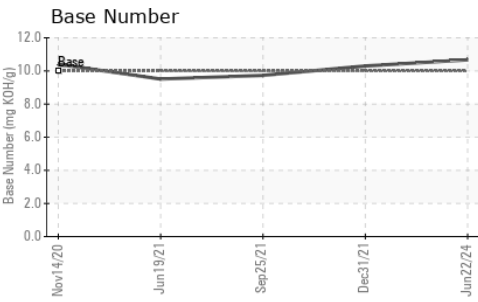
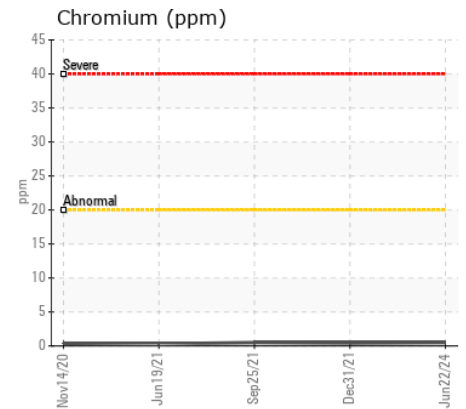
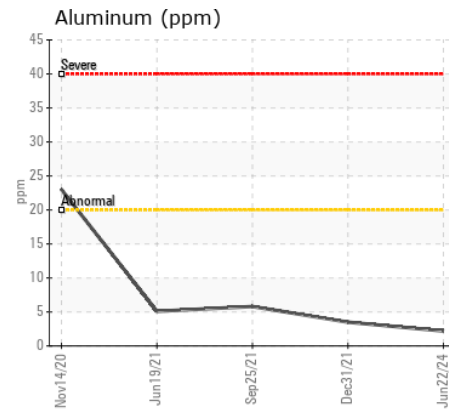
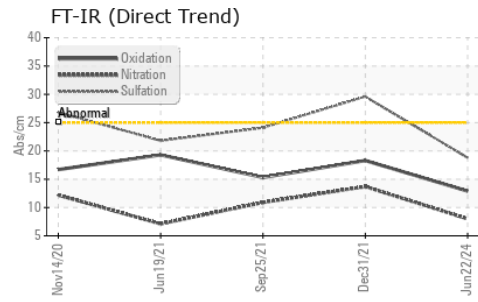
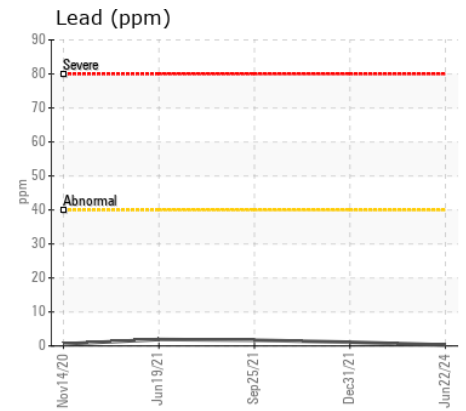
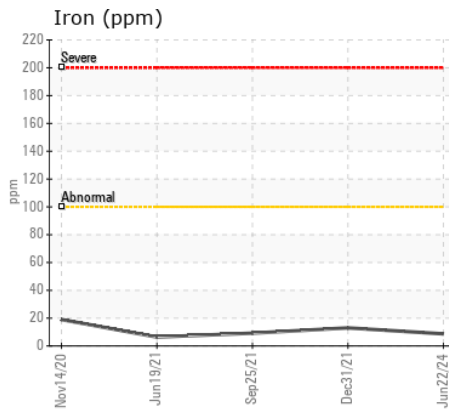
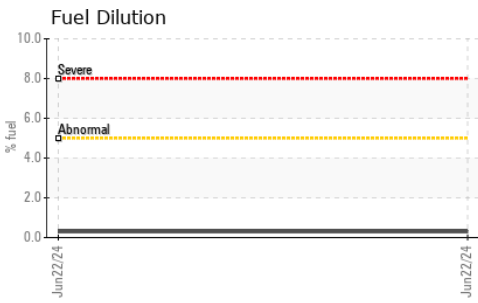
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	10	6	7
Potassium	ppm	ASTM D5185m	>20	5	5	14
Fuel	%	ASTM D3524	>5	0.3	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.0	13.7	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	29.6	24.1
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	1	3
Boron	ppm	ASTM D5185m		91	3	3
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		1	38	6
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		689	31	58
Calcium	ppm	ASTM D5185m	2300	1952	4801	3678
Phosphorus	ppm	ASTM D5185m		737	965	800
Zinc	ppm	ASTM D5185m	1200	922	1097	1074
Sulfur	ppm	ASTM D5185m		3244	3557	2948
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.9	18.3	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.67	10.3	9.73
Visc @ 100°C	cSt	ASTM D445	15.5	12.1	17.1	16.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06228142 **Received** : 03 Jul 2024  
**Lab Number** : 06228142 **Tested** : 09 Jul 2024  
**Unique Number** : 11111635 **Diagnosed** : 09 Jul 2024 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**ZACHRY FARMS**  
 15231 COUNTY FARM RD  
 CARLYLE, IL  
 US 62231  
 Contact: CHARLES FLATT

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)

T:  
F: