



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**KENWORTH 801**  
 Component  
**Diesel Engine**  
 Fluid  
**TRC MOLY XL PROSPEC III 15W40 (40 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06233432	TR06208025	TR06180336
Sample Date		Client Info		03 Jul 2024	08 Jun 2024	26 Apr 2024
Machine Age	mls	Client Info		12251	294807	0
Oil Age	mls	Client Info		34197	23535	12073
Filter Age	mls	Client Info		34197	23535	12073
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

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	31	32	19
Chromium	ppm	ASTM D5185m	>6	1	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	3	3	3
Lead	ppm	ASTM D5185m	>10	1	2	0
Copper	ppm	ASTM D5185m	>150	5	4	2
Tin	ppm	ASTM D5185m	>4	<1	<1	0
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.

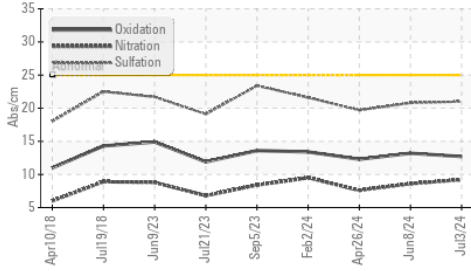
Silicon	ppm	ASTM D5185m	>20	8	7	6
Potassium	ppm	ASTM D5185m	>20	4	2	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.6	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.2	8.6	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	20.8	19.7
Silt	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

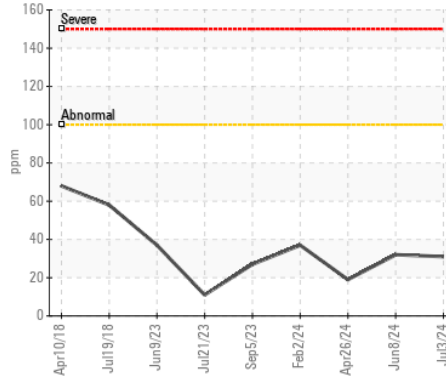
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	<1	<1
Boron	ppm	ASTM D5185m		130	192	216
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		192	209	187
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		324	484	441
Calcium	ppm	ASTM D5185m	4500	3994	4469	3790
Phosphorus	ppm	ASTM D5185m		898	1017	874
Zinc	ppm	ASTM D5185m	1400	1065	1221	1035
Sulfur	ppm	ASTM D5185m		3674	4894	4134
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.7	13.2	12.3
Base Number (BN)	mg KOH/g	ASTM D2896	15	13.29	11.54	13.52
Visc @ 100°C	cSt	ASTM D445	15.5	14.4	14.2	14.2

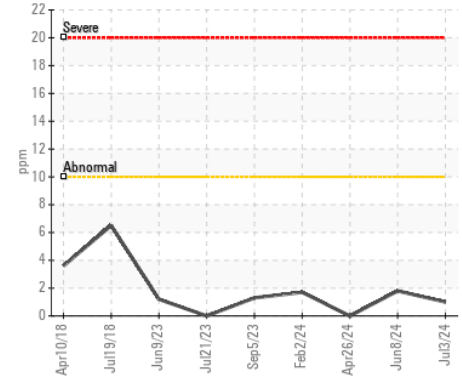
**FT-IR (Direct Trend)**



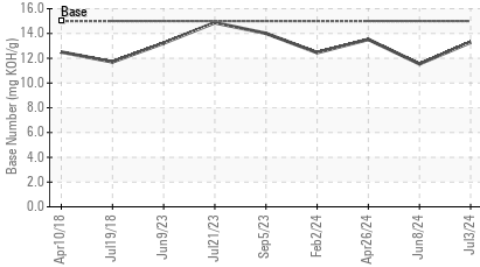
**Iron (ppm)**



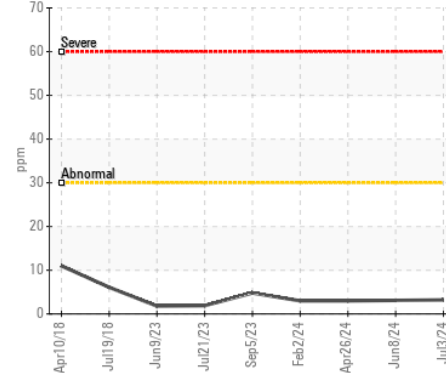
**Lead (ppm)**



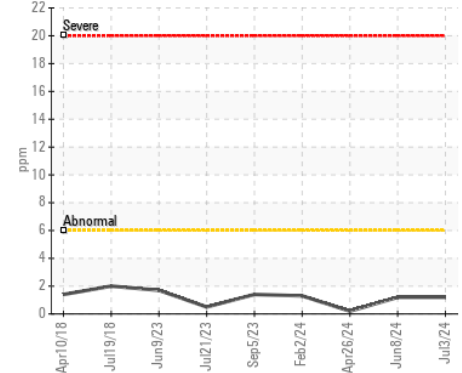
**Base Number**



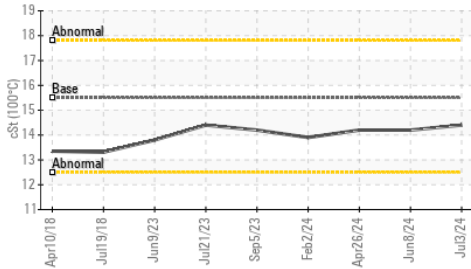
**Aluminum (ppm)**



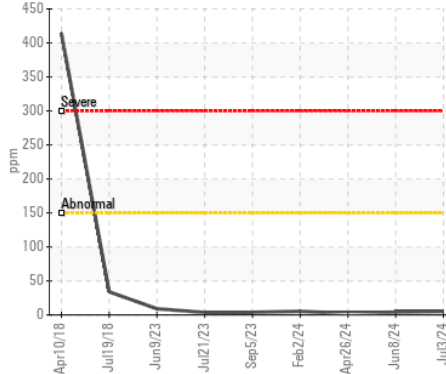
**Chromium (ppm)**



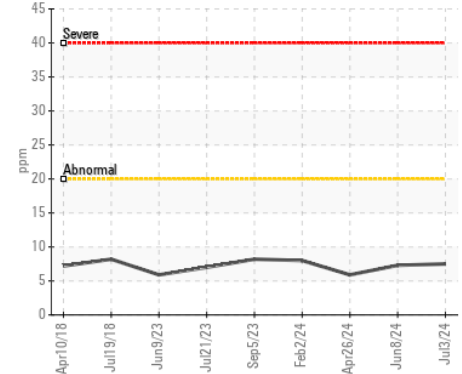
**Viscosity @ 100°C**



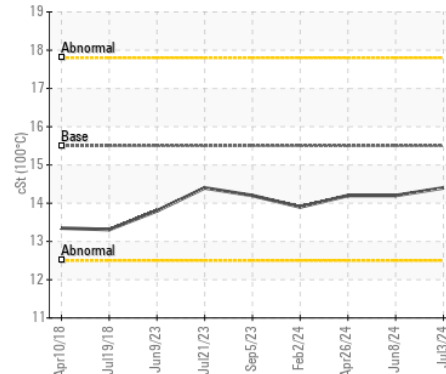
**Copper (ppm)**



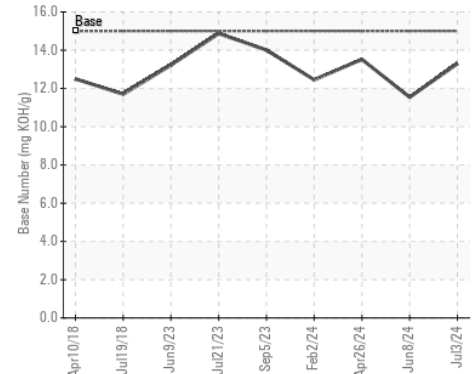
**Silicon (ppm)**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06233432  
**Lab Number** : 06233432  
**Unique Number** : 11116925  
**Test Package** : MOB 2  
**Received** : 11 Jul 2024  
**Tested** : 12 Jul 2024  
**Diagnosed** : 12 Jul 2024 - Wes Davis

**FOURTH ARROW TRUCKING**  
 31 RED PINE WAY  
 ROWLEY, MA  
 US 01969  
 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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F: