TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT TK21
Component
Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC III SYNTHETIC15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

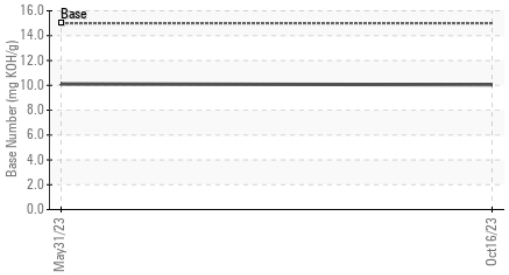
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

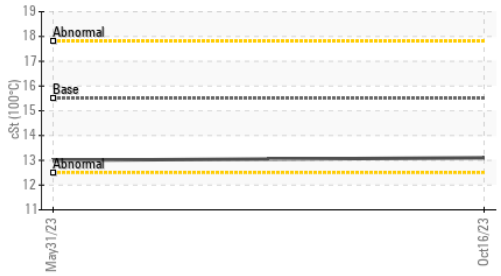
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06055547	TR05879067	---
Sample Date		Client Info		16 Oct 2023	31 May 2023	---
Machine Age	mls	Client Info		83872	50388	---
Oil Age	mls	Client Info		33484	40000	---
Filter Age	mls	Client Info		33484	40000	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---
Iron	ppm	ASTM D5185m	>110	60	101	---
Chromium	ppm	ASTM D5185m	>4	4	4	---
Nickel	ppm	ASTM D5185m	>2	0	1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	40	43	---
Lead	ppm	ASTM D5185m	>45	<1	0	---
Copper	ppm	ASTM D5185m	>85	2	10	---
Tin	ppm	ASTM D5185m	>4	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>30	11	18	---
Potassium	ppm	ASTM D5185m	>20	104	69	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.5	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	11.6	12.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.9	26.8	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---
Sodium	ppm	ASTM D5185m		4	0	---
Boron	ppm	ASTM D5185m		117	130	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		170	196	---
Manganese	ppm	ASTM D5185m		1	2	---
Magnesium	ppm	ASTM D5185m		424	485	---
Calcium	ppm	ASTM D5185m	4500	3622	3861	---
Phosphorus	ppm	ASTM D5185m		876	831	---
Zinc	ppm	ASTM D5185m	1400	1040	1017	---
Sulfur	ppm	ASTM D5185m		3485	3820	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.9	23.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	10.05	10.11	---
Visc @ 100°C	cSt	ASTM D445	15.5	13.1	13.0	---

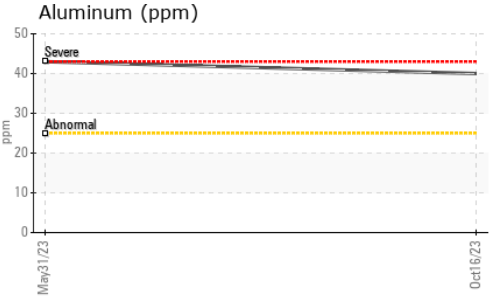
Base Number



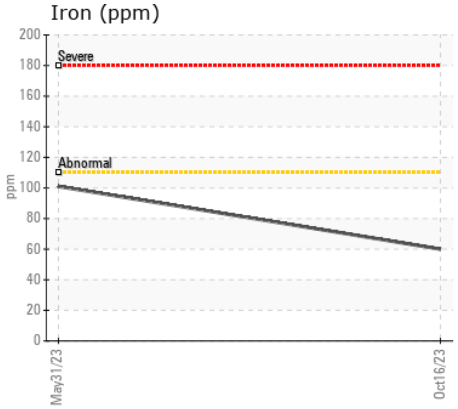
Viscosity @ 100°C



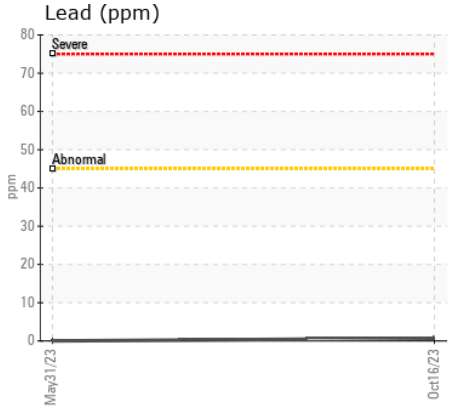
Aluminum (ppm)



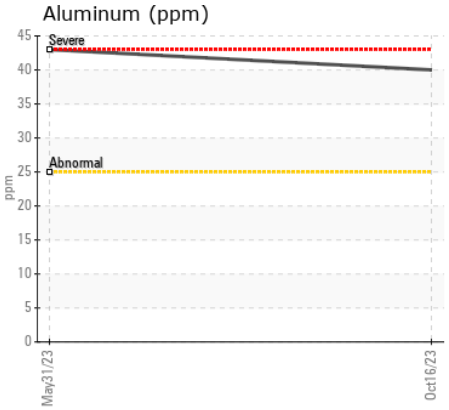
Iron (ppm)



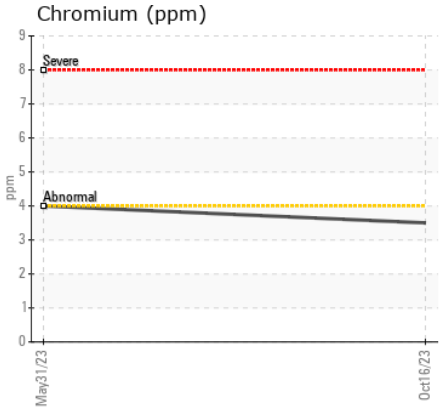
Lead (ppm)



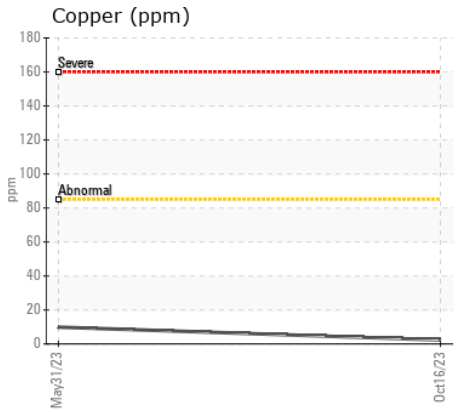
Aluminum (ppm)



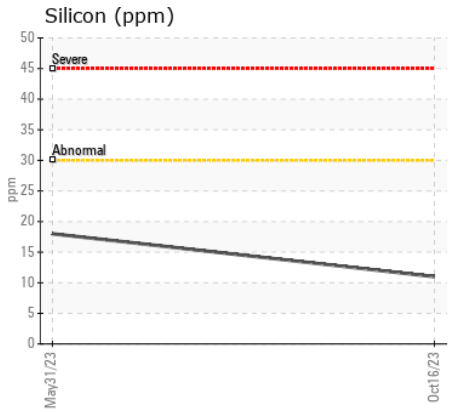
Chromium (ppm)



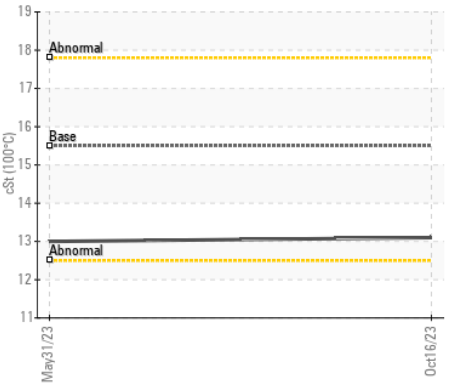
Copper (ppm)



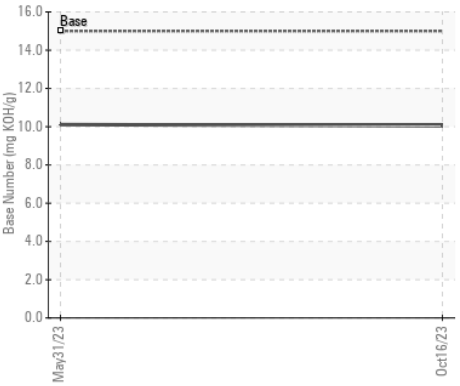
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06055547
Lab Number : 06055547
Unique Number : 10821496
Test Package : MOB 2

Recieved : 09 Jan 2024
Diagnosed : 10 Jan 2024
Diagnostician : Wes Davis

COPPLES WRECKER SERVICE
8775 W ST RD 252
EDINBURGH, IN
US 46124
Contact: MARC DEMOTT

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: