



OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Williams Village NC
 Machine Id
KENWORTH TRUCK 145
 Component
Diesel Engine
 Fluid
GUARD PLUS 15W40 CK9 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0917086	---	---
Sample Date	Client Info	08 May 2024	---	---
Machine Age	mls Client Info	25886	---	---
Oil Age	mls Client Info	4500	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		NORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	---	---
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	61	---	---
Chromium	ppm ASTM D5185m >20	2	---	---
Nickel	ppm ASTM D5185m >4	<1	---	---
Titanium	ppm ASTM D5185m	<1	---	---
Silver	ppm ASTM D5185m >3	<1	---	---
Aluminum	ppm ASTM D5185m >20	56	---	---
Lead	ppm ASTM D5185m >40	<1	---	---
Copper	ppm ASTM D5185m >330	14	---	---
Tin	ppm ASTM D5185m >15	2	---	---
Vanadium	ppm ASTM D5185m	<1	---	---
Cadmium	ppm ASTM D5185m	<1	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	39	---	---
Barium	ppm ASTM D5185m	4	---	---
Molybdenum	ppm ASTM D5185m	22	---	---
Manganese	ppm ASTM D5185m	2	---	---
Magnesium	ppm ASTM D5185m	726	---	---
Calcium	ppm ASTM D5185m	1432	---	---
Phosphorus	ppm ASTM D5185m	801	---	---
Zinc	ppm ASTM D5185m	863	---	---
Sulfur	ppm ASTM D5185m	3192	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	14	---	---
Sodium	ppm ASTM D5185m	2	---	---
Potassium	ppm ASTM D5185m >20	160	---	---
Fuel	% ASTM D3524 >5	<1.0	---	---

INFRA-RED

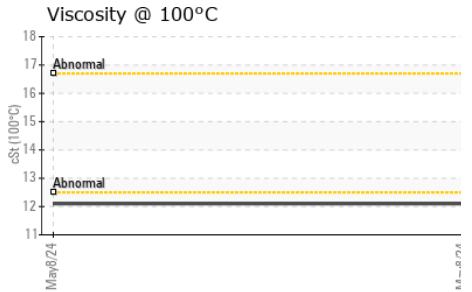
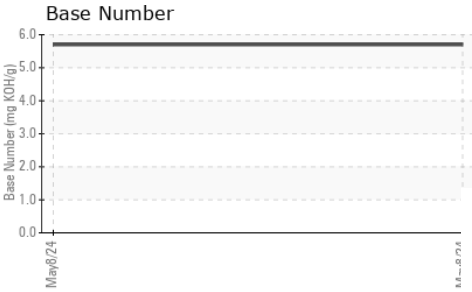
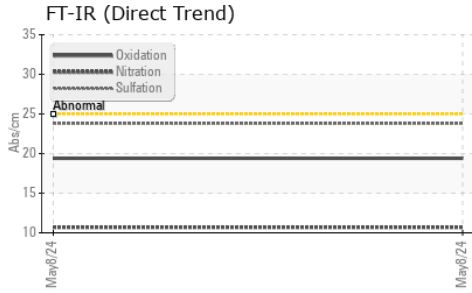
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.3	---	---
Nitration	Abs/cm *ASTM D7624 >20	10.7	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	23.8	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.4	---	---
Base Number (BN)	mg KOH/g ASTM D2896	5.7	---	---



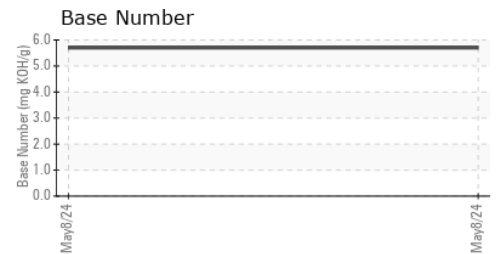
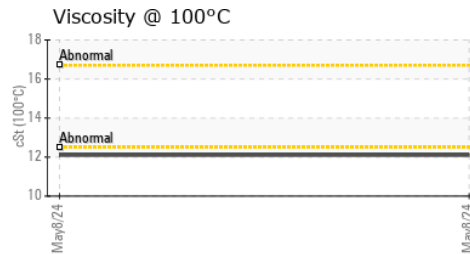
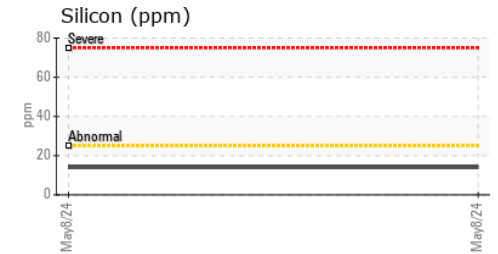
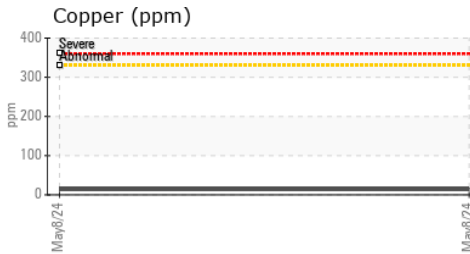
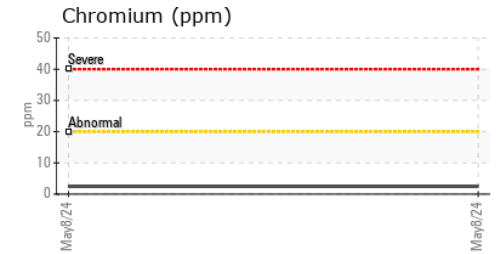
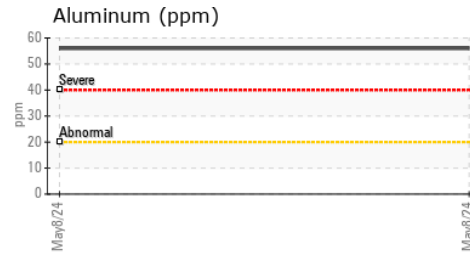
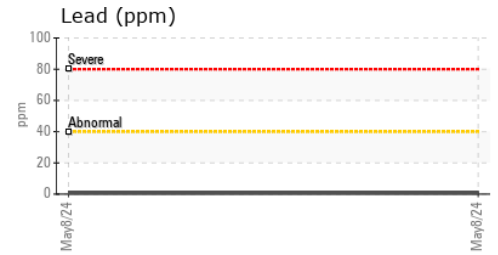
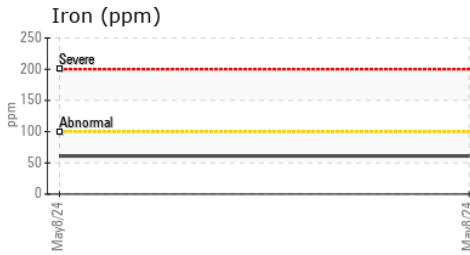
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.1	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0917086 **Received** : 10 May 2024
Lab Number : 06176576 **Tested** : 13 May 2024
Unique Number : 11022629 **Diagnosed** : 14 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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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