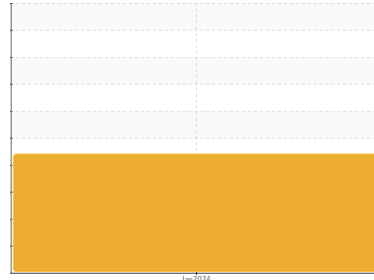




# OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id  
**KENWORTH T800 1568 (S/N KCB53035)**

Component  
**Diesel Engine**

Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### ▲ Wear

Piston and cylinder wear is indicated.

### ▲ Contamination

Sodium and/or potassium levels are high. Elemental level of silicon (Si) above normal indicating ingress of seal material. Test for glycol is negative.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0850988</b>	---	---
Sample Date	Client Info		<b>12 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>420236</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>▲ 162</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>7</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>3</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>▲ 41</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>25</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>24</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>3</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 316	<b>8</b>	---	---
Barium	ppm	ASTM D5185m 0.0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 1.2	<b>59</b>	---	---
Manganese	ppm	ASTM D5185m	<b>2</b>	---	---
Magnesium	ppm	ASTM D5185m 24	<b>790</b>	---	---
Calcium	ppm	ASTM D5185m 2292	<b>1265</b>	---	---
Phosphorus	ppm	ASTM D5185m 1064	<b>993</b>	---	---
Zinc	ppm	ASTM D5185m 1160	<b>1212</b>	---	---
Sulfur	ppm	ASTM D5185m 4996	<b>2551</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 32</b>	---	---
Sodium	ppm	ASTM D5185m	<b>14</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>▲ 129</b>	---	---
Glycol	%	*ASTM D2982	<b>NEG</b>	---	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.7</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.7</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>24.8</b>	---	---

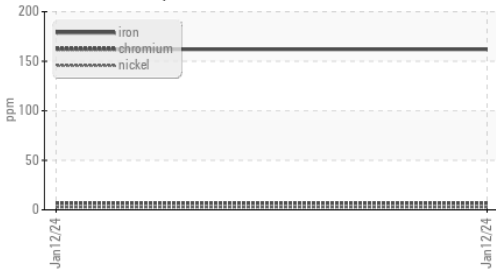
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.3</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 10.1	<b>5.0</b>	---	---

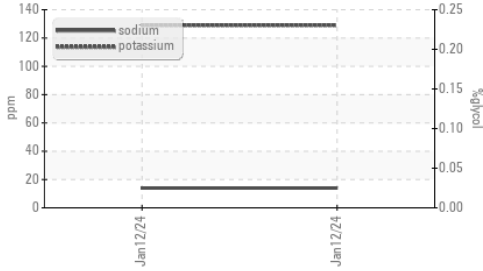


# OIL ANALYSIS REPORT

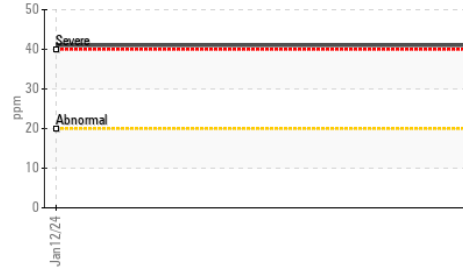
### ▲ Ferrous Alloys



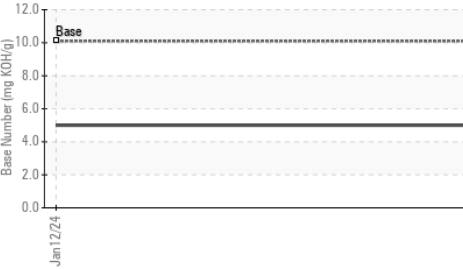
### ▲ Glycol Contamination



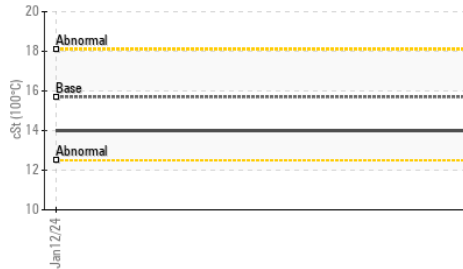
### ▲ Aluminum (ppm)



### Base Number



### Viscosity @ 100°C

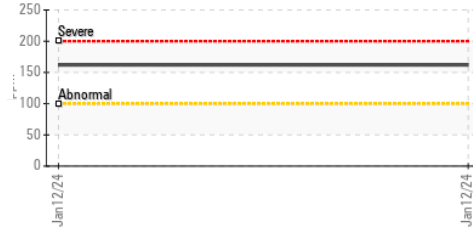


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

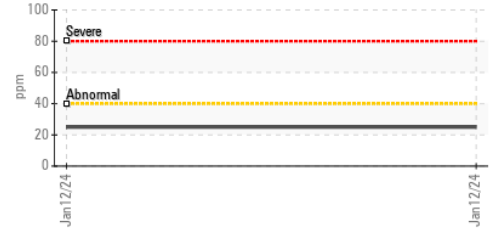
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	14.0	---

### GRAPHS

#### ▲ Iron (ppm)



#### Lead (ppm)



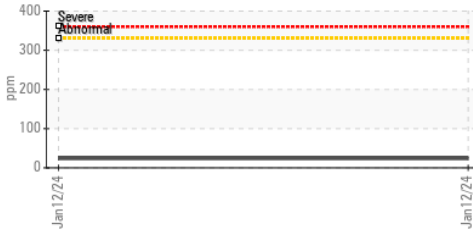
#### ▲ Aluminum (ppm)



#### Chromium (ppm)



#### ▲ Copper (ppm)



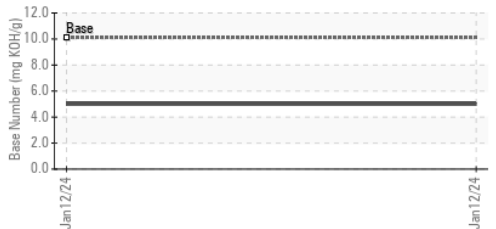
#### ▲ Silicon (ppm)



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0850988 **Received** : 17 Jan 2024  
**Lab Number** : 06063370 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834752 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: Glycol, 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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