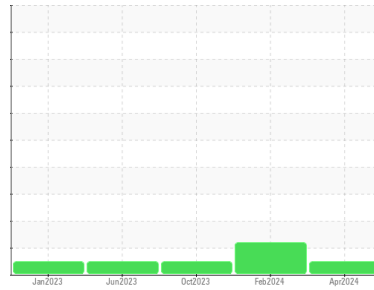




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**KENWORTH T880 912 (S/N 1NKZLP0X36J427612)**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- QTS)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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			<b>WC0878961</b>	WC0878919	WC0822273
Sample Date	Client Info			<b>11 Apr 2024</b>	12 Feb 2024	25 Oct 2023
Machine Age	mls	Client Info		<b>178789</b>	170017	155040
Oil Age	mls	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>13</b>	19	21
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	5	10
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	316	<b>11</b>	11	14
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>25</b>	39	54
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>255</b>	400	594
Calcium	ppm	ASTM D5185m	2292	<b>2141</b>	1713	1570
Phosphorus	ppm	ASTM D5185m	1064	<b>902</b>	922	989
Zinc	ppm	ASTM D5185m	1160	<b>1154</b>	1131	1279
Sulfur	ppm	ASTM D5185m	4996	<b>3878</b>	3546	2903

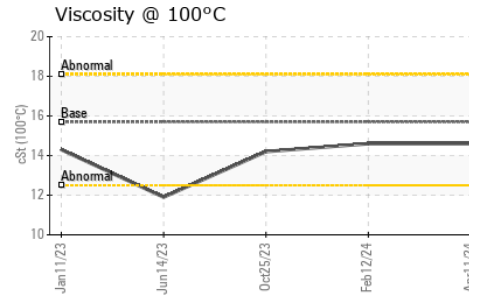
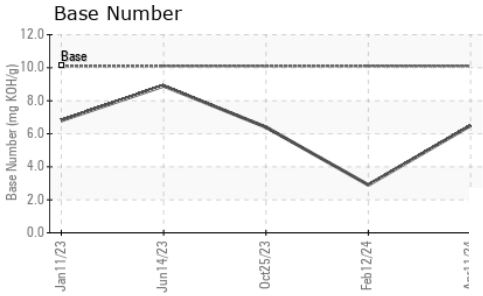
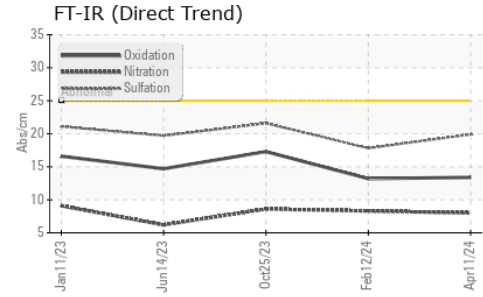
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	9	11
Sodium	ppm	ASTM D5185m		<b>2</b>	0	1
Potassium	ppm	ASTM D5185m	>20	<b>18</b>	13	24

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	8.3	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.9</b>	17.8	21.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.4</b>	13.2	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>6.5</b>	▲ 2.9	6.4



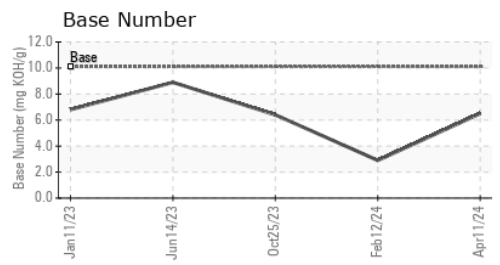
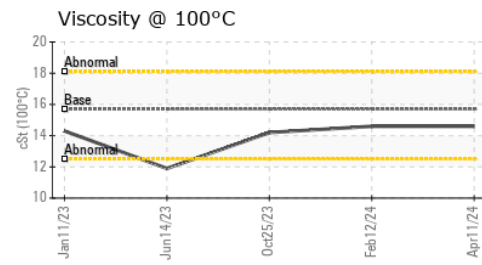
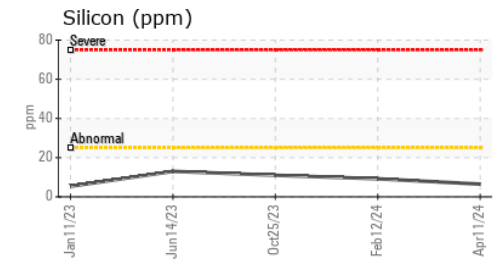
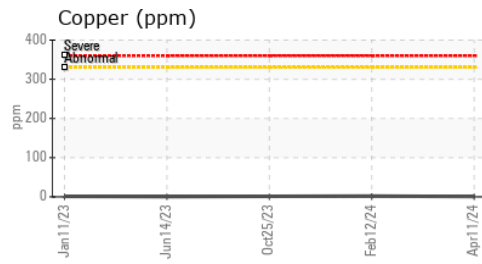
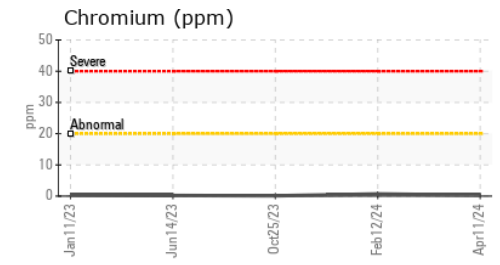
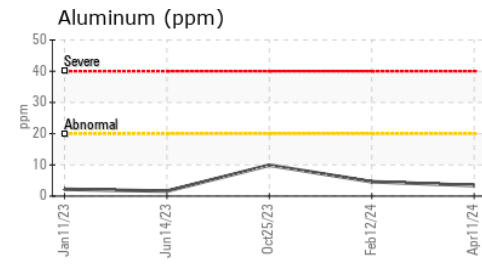
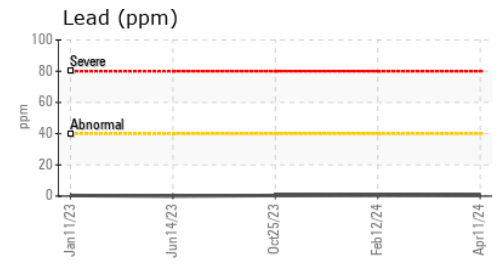
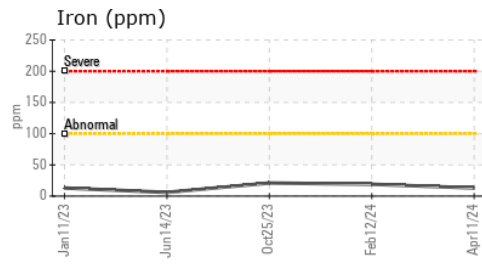
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	14.6	14.2

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0878961      **Received** : 16 Apr 2024  
**Lab Number** : **06151017**      **Tested** : 17 Apr 2024  
**Unique Number** : 10981095      **Diagnosed** : 19 Apr 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**JOHNSON BREEDERS**  
 3425 HWY 117N  
 ROSE HILL, NC  
 US 28458  
 Contact: GREG JONES  
 gregory.jones@houseofraeford.com

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)