



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**L070141596**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0010066</b>	KL0003922	CU0007562
Sample Date		Client Info		<b>22 Aug 2022</b>	29 Aug 2020	28 Sep 2013
Machine Age	hrs	Client Info		<b>541</b>	483	363
Oil Age	hrs	Client Info		<b>58</b>	73	82
Filter Age	hrs	Client Info		<b>58</b>	73	82
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	<b>4</b>	6	6
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	3	1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

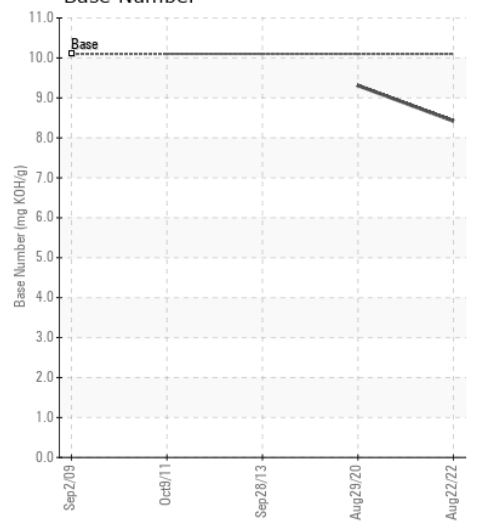
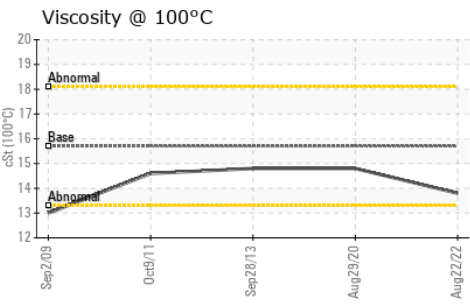
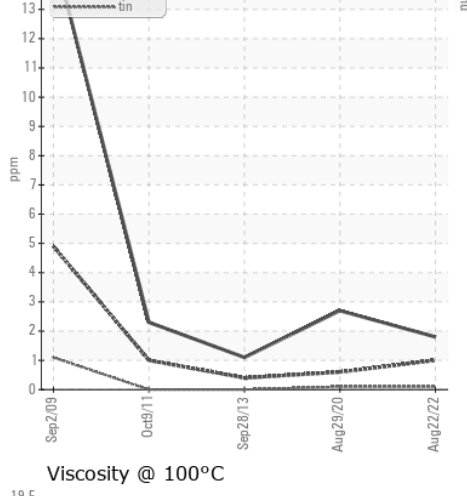
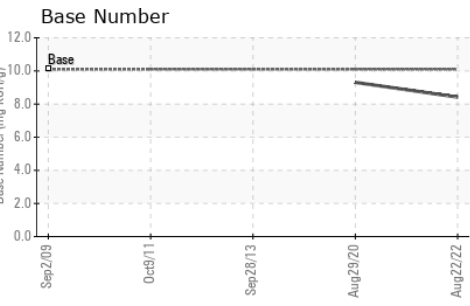
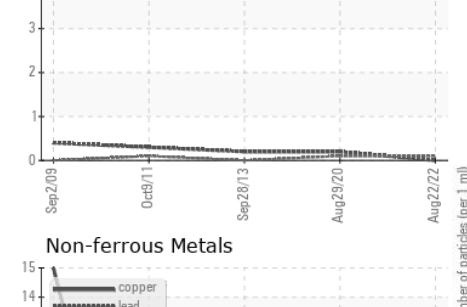
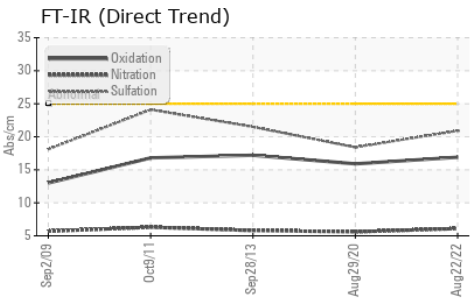
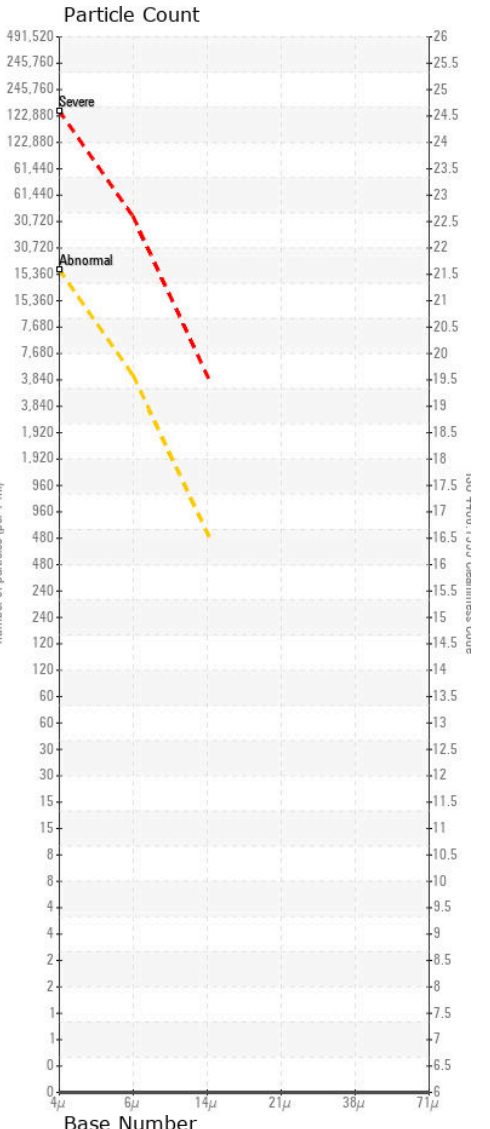
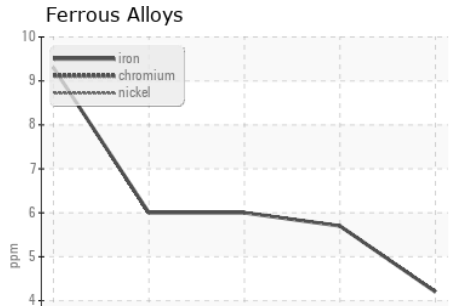
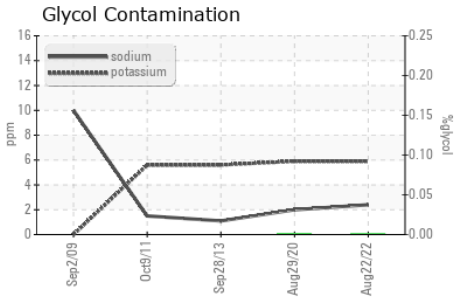
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	5	5
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	6	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.1</b>	5.6	5.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.9</b>	18.4	21.5
Particles >4µm		ASTM D7647	>20000	<b>---</b>	▲ 94718	---
Particles >6µm		ASTM D7647	>5000	<b>---</b>	3375	---
Particles >14µm		ASTM D7647	>640	<b>---</b>	234	---
Particles >21µm		ASTM D7647	>160	<b>---</b>	100	---
Particles >38µm		ASTM D7647	>40	<b>---</b>	2	---
Particles >71µm		ASTM D7647	>10	<b>---</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>---</b>	▲ 24/19/15	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	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 D5185(m)		<b>2</b>	2	1
Boron	ppm	ASTM D5185(m)	35	<b>159</b>	40	32
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	2	<1
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	10	<b>13</b>	11	14
Calcium	ppm	ASTM D5185(m)	2340	<b>2146</b>	2277	2446
Phosphorus	ppm	ASTM D5185(m)	1110	<b>951</b>	978	1086
Zinc	ppm	ASTM D5185(m)	1210	<b>1108</b>	1141	1515
Sulfur	ppm	ASTM D5185(m)	3890	<b>3097</b>	3254	4686
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.9</b>	15.9	17.2
Base Number (BN)	mg KOH/g	ASTM D2896*	10.1	<b>8.42</b>	9.31	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	<b>13.8</b>	14.8	14.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : KL0010066 **Received** : 26 Aug 2022  
**Lab Number** : 02507290 **Tested** : 29 Aug 2022  
**Unique Number** : 5448260 **Diagnosed** : 29 Aug 2022 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: Glycol, PrtCount )

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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.