



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id  
**46853351**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

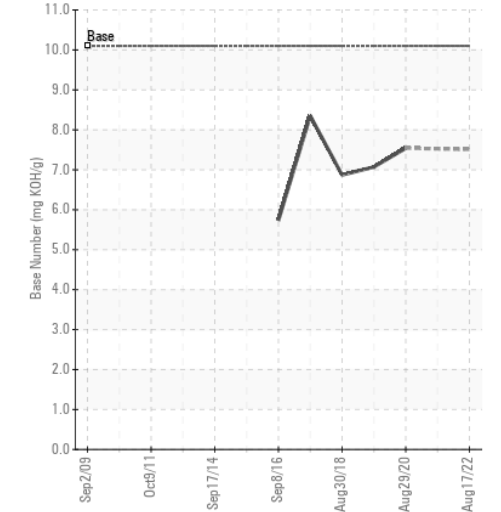
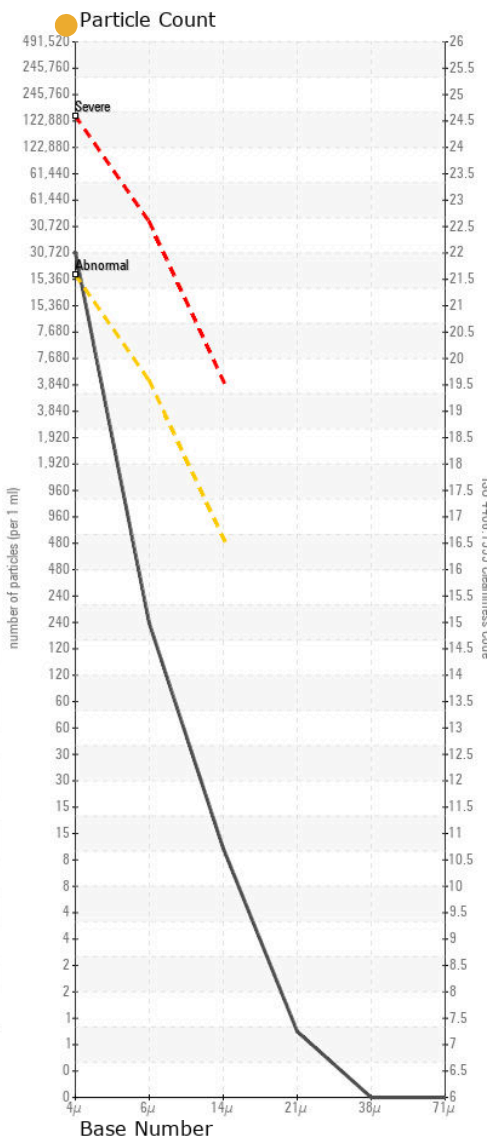
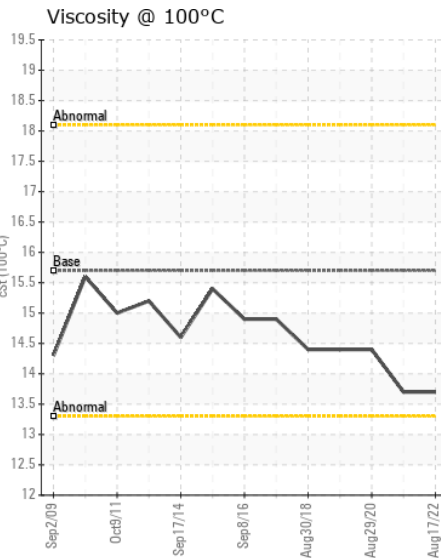
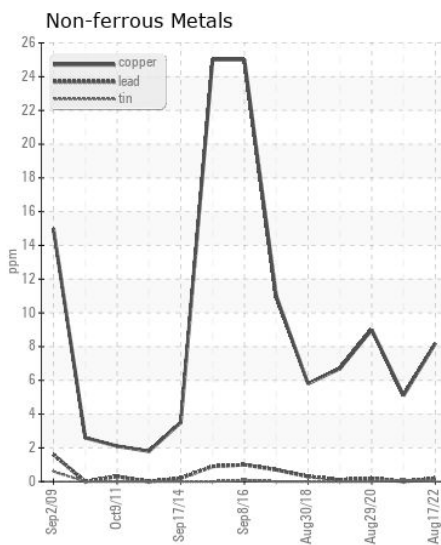
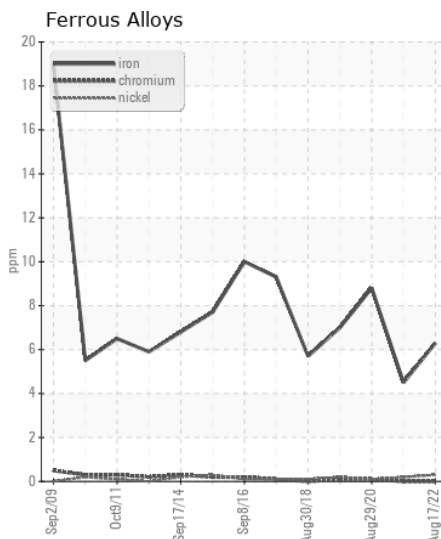
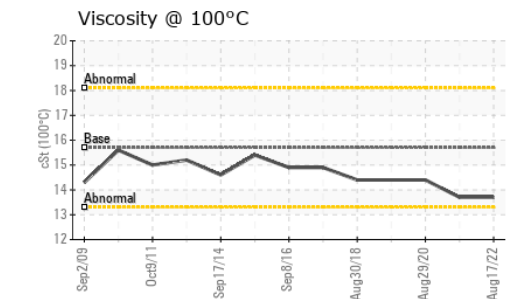
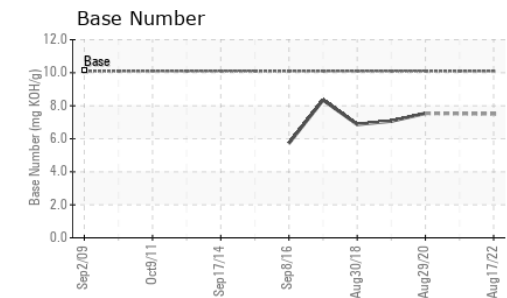
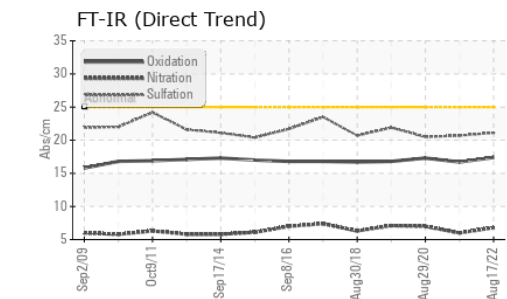
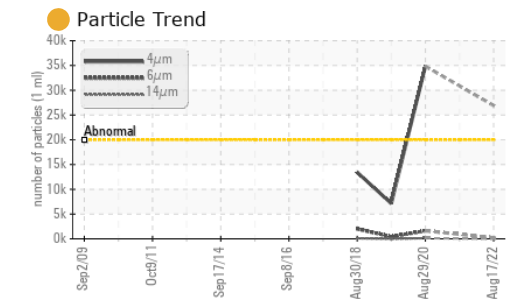
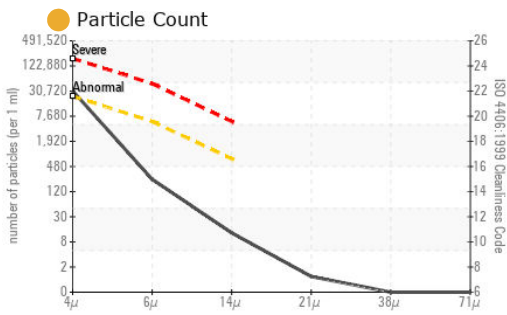
## CONTAMINATION

There is a light amount of silt (particulates < 14 microns in size) present 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		<b>KL0010065</b>	CU0009607	KL
Sample Date		Client Info		<b>17 Aug 2022</b>	07 Sep 2021	29 Aug 2020
Machine Age	hrs	Client Info		<b>2079</b>	1976	1874
Oil Age	hrs	Client Info		<b>205</b>	102	279
Filter Age	hrs	Client Info		<b>205</b>	102	93
Oil Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	NORMAL	ATTENTION
Iron	ppm	ASTM D5185(m)	>90	<b>6</b>	4	9
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>1</b>	<1	2
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>8</b>	5	9
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	2	4
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	2	1
Fuel		WC Method	>3.0	<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
Soot %	%	ASTM D7844*	>6	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.8</b>	6.0	7.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.1</b>	20.7	20.5
Particles >4µm		ASTM D7647	>20000	<b>26921</b>	---	34848
Particles >6µm		ASTM D7647	>5000	<b>209</b>	---	1619
Particles >14µm		ASTM D7647	>640	<b>11</b>	---	130
Particles >21µm		ASTM D7647	>160	<b>1</b>	---	30
Particles >38µm		ASTM D7647	>40	<b>0</b>	---	2
Particles >71µm		ASTM D7647	>10	<b>0</b>	---	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>22/15/11</b>	---	22/18/14
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	<1
Boron	ppm	ASTM D5185(m)	35	<b>122</b>	144	105
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	10	<b>9</b>	9	9
Calcium	ppm	ASTM D5185(m)	2340	<b>2111</b>	2104	2132
Phosphorus	ppm	ASTM D5185(m)	1110	<b>954</b>	1044	1019
Zinc	ppm	ASTM D5185(m)	1210	<b>1129</b>	1144	1178
Sulfur	ppm	ASTM D5185(m)	3890	<b>3125</b>	3084	3122
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.4</b>	16.7	17.3
Base Number (BN)	mg KOH/g	ASTM D2896*	10.1	<b>7.51</b>	---	7.54
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	<b>13.7</b>	13.7	14.4



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : KL0010065  
**Lab Number** : 02507291  
**Unique Number** : 5448261  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

**Received** : 26 Aug 2022  
**Tested** : 26 Aug 2022  
**Diagnosed** : 26 Aug 2022 - Wes Davis

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.

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