



# OIL ANALYSIS REPORT

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

Machine Id  
**AL-290**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0007298</b>	KL0007305	KL0007295
Sample Date		Client Info		<b>06 Jan 2024</b>	13 Sep 2023	12 May 2023
Machine Age	mls	Client Info		<b>242310</b>	228429	213919
Oil Age	mls	Client Info		<b>13881</b>	32893	18383
Filter Age	mls	Client Info		<b>13881</b>	32893	18383
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>11</b>	49	23
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	0	3
Lead	ppm	ASTM D5185m	>40	<b>8</b>	14	5
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	6	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	2	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

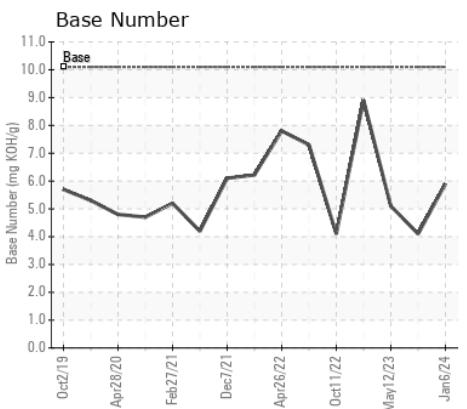
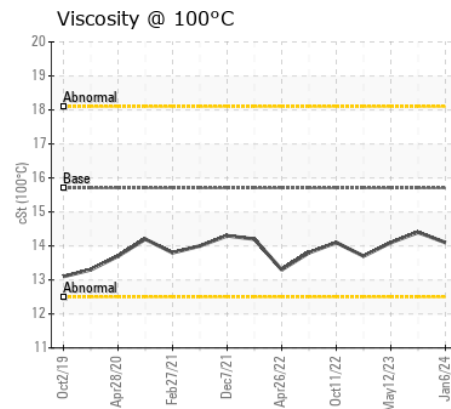
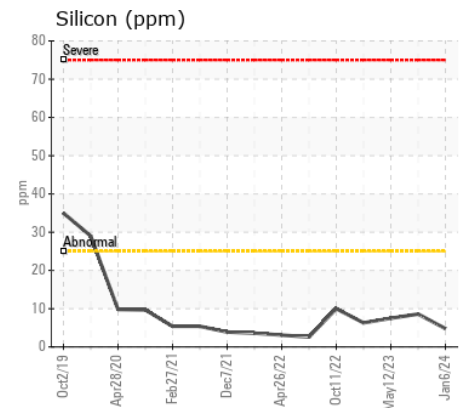
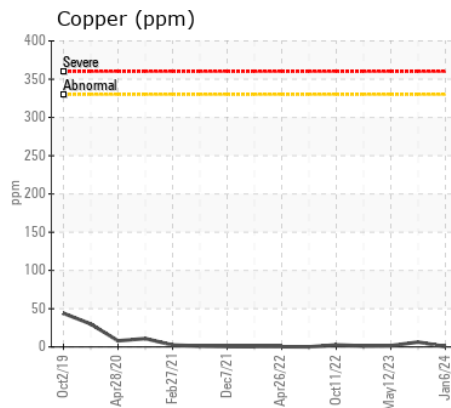
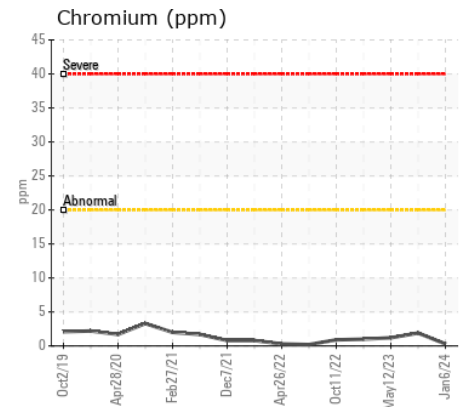
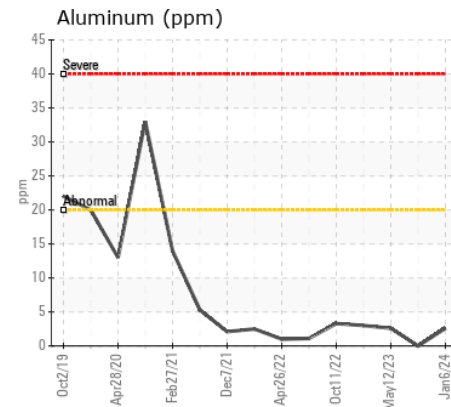
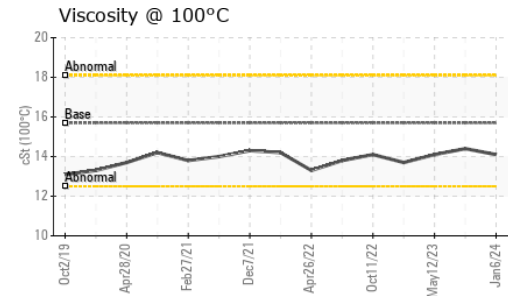
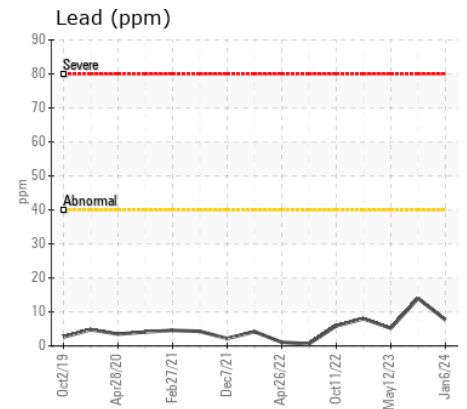
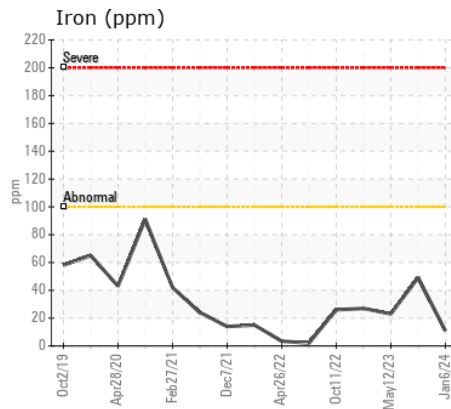
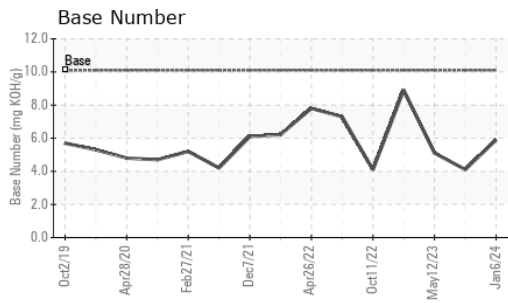
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	9	8
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	23	2
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
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.1</b>	11.4	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.5</b>	25.7	25.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
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 D5185m		<b>2</b>	26	4
Boron	ppm	ASTM D5185m	316	<b>29</b>	37	15
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>62</b>	208	262
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	24	<b>545</b>	857	925
Calcium	ppm	ASTM D5185m	2292	<b>1605</b>	1615	1442
Phosphorus	ppm	ASTM D5185m	1064	<b>1054</b>	1240	1262
Zinc	ppm	ASTM D5185m	1160	<b>1280</b>	1402	1432
Sulfur	ppm	ASTM D5185m	4996	<b>2796</b>	3520	4228
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.3</b>	27.2	23.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>5.9</b>	4.1	5.1
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.1</b>	14.4	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0007298 **Received** : 16 Jan 2024  
**Lab Number** : 06060928 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10832310 **Diagnostician** : Wes Davis  
**Test Package** : MOB1+

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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