



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SOLD LOCATIONS - LESCAM - CAMBRIDGE

Machine Id

1078

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		LEC0050628	LEC0049221	LEC0029573
Sample Date		Client Info		15 May 2024	04 Apr 2024	23 May 2022
Machine Age	hrs	Client Info		29862	29422	28957
Oil Age	hrs	Client Info		400	400	400
Filter Age	hrs	Client Info		400	400	400
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	16	26	20
Chromium	ppm	ASTM D5185m	>20	2	2	<1
Nickel	ppm	ASTM D5185m	>4	1	2	0
Titanium	ppm	ASTM D5185m		2	2	<1
Silver	ppm	ASTM D5185m	>3	1	<1	0
Aluminum	ppm	ASTM D5185m	>20	3	4	3
Lead	ppm	ASTM D5185m	>40	3	6	▲ 67
Copper	ppm	ASTM D5185m	>330	5	19	20
Tin	ppm	ASTM D5185m	>15	2	3	3
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

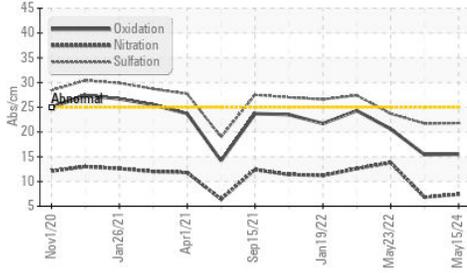
Silicon	ppm	ASTM D5185m	>120	13	▲ 30	8
Potassium	ppm	ASTM D5185m	>20	4	6	▲ 787
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	▲ 0.12
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.4	6.8	13.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	21.7	23.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

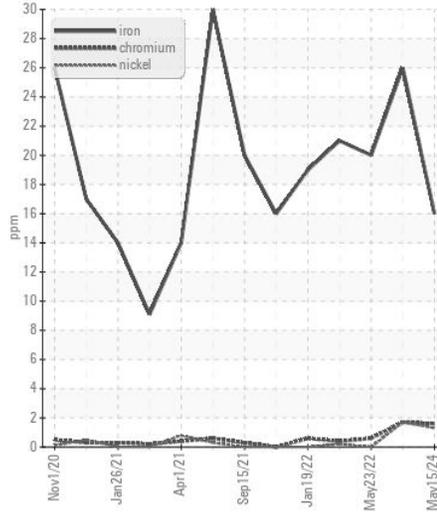
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	3	▲ 299
Boron	ppm	ASTM D5185m	316	373	417	40
Barium	ppm	ASTM D5185m	0.0	<1	14	0
Molybdenum	ppm	ASTM D5185m	1.2	88	95	195
Manganese	ppm	ASTM D5185m		2	6	<1
Magnesium	ppm	ASTM D5185m	24	456	524	334
Calcium	ppm	ASTM D5185m	2292	1469	1712	1956
Phosphorus	ppm	ASTM D5185m	1064	998	913	929
Zinc	ppm	ASTM D5185m	1160	1188	1124	1138
Sulfur	ppm	ASTM D5185m	4996	3708	3286	3656
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	15.4	20.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.0	8.2	12.1
Visc @ 100°C	cSt	ASTM D445	15.7	12.9	13.0	17.0

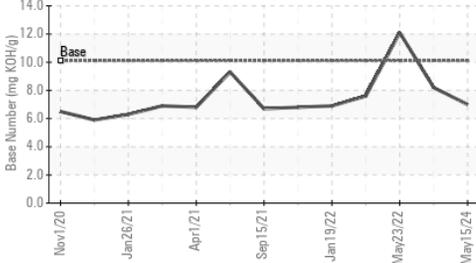
FT-IR (Direct Trend)



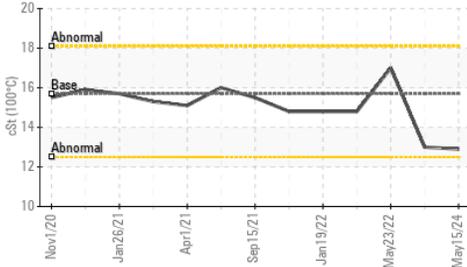
Ferrous Alloys



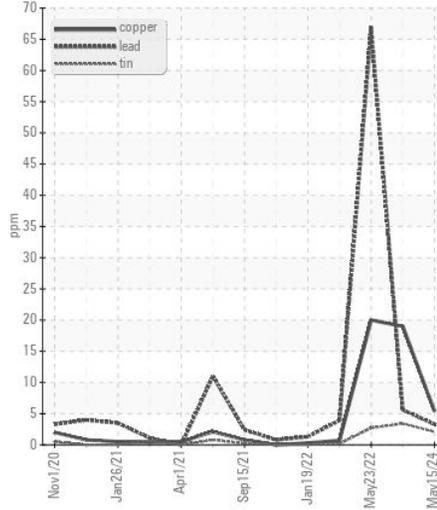
Base Number



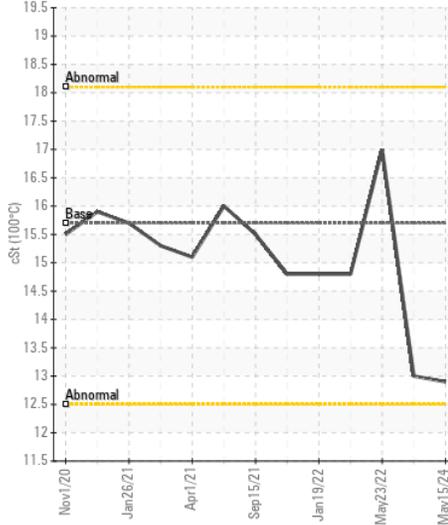
Viscosity @ 100°C



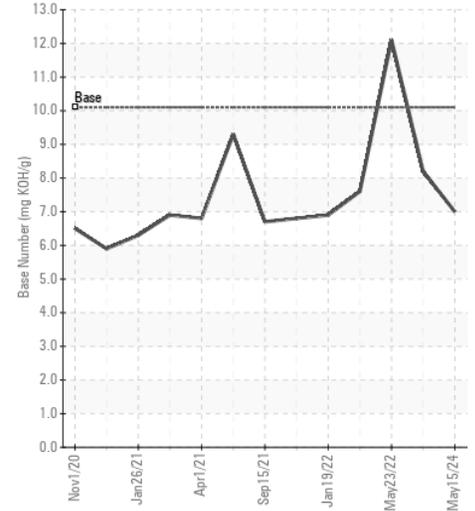
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0050628 **Received** : 29 May 2024
Lab Number : 06193633 **Tested** : 30 May 2024
Unique Number : 11050385 **Diagnosed** : 30 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

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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)