



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
NORMAL
NORMAL

Area
Store 9 - Marietta

Machine Id
1095

Component
Diesel Engine

Fluid
SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0048373	LEC0045875	LEC0045987
Sample Date		Client Info		15 Mar 2024	09 Jan 2024	03 Nov 2023
Machine Age	mls	Client Info		257549	247177	232352
Oil Age	mls	Client Info		10000	10000	10000
Filter Age	mls	Client Info		10000	10000	10000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

An increase in the iron level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	94	36	19
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	6	6
Lead	ppm	ASTM D5185m	>40	2	7	2
Copper	ppm	ASTM D5185m	>330	<1	0	0
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

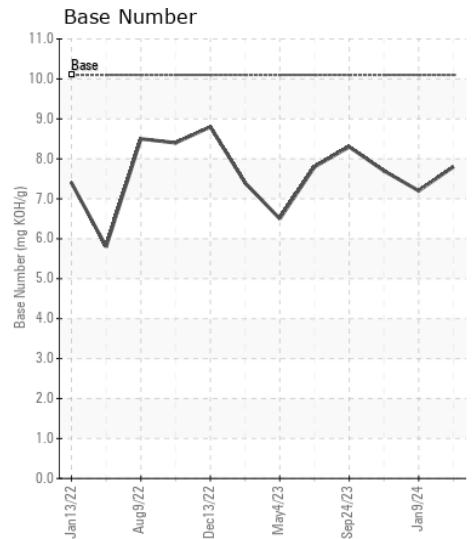
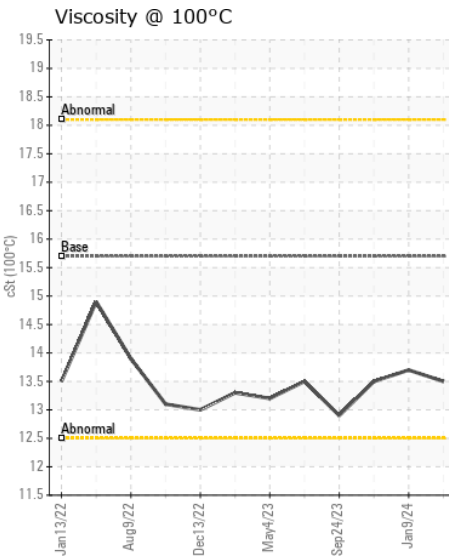
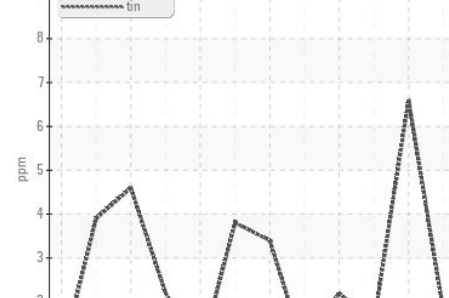
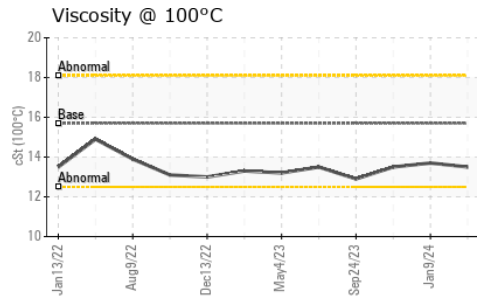
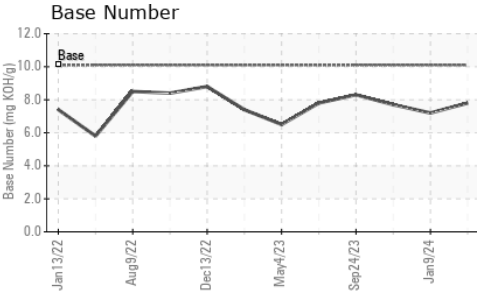
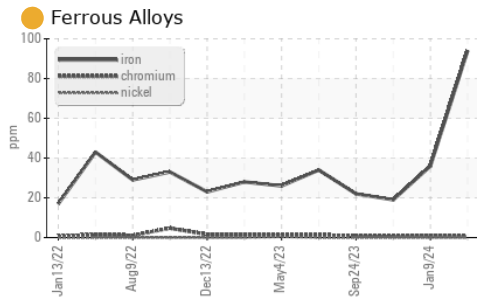
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>120	8	7	7
Potassium	ppm	ASTM D5185m	>20	12	5	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	1.3	0.8
Nitration	Abs/cm	*ASTM D7624	>20	11.5	12.4	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.5	29.5	26.8
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		3	2	<1
Boron	ppm	ASTM D5185m	316	224	167	206
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	142	138	131
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	755	714	670
Calcium	ppm	ASTM D5185m	2292	1855	1633	1528
Phosphorus	ppm	ASTM D5185m	1064	821	796	606
Zinc	ppm	ASTM D5185m	1160	1010	925	883
Sulfur	ppm	ASTM D5185m	4996	3180	2475	2351
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.7	24.1	21.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.8	7.2	7.7
Visc @ 100°C	cSt	ASTM D445	15.7	13.5	13.7	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0048373 **Received** : 20 Mar 2024
Lab Number : 06123345 **Tested** : 21 Mar 2024
Unique Number : 10937496 **Diagnosed** : 22 Mar 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)