



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta

Machine Id

1115

Component

Diesel Engine

Fluid

SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0048263	LEC0047090	LEC0047107
Sample Date		Client Info		02 Apr 2024	05 Mar 2024	24 Jan 2024
Machine Age	hrs	Client Info		19356	18938	18454
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				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	19	27
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		2	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	4
Lead	ppm	ASTM D5185m	>40	<1	3	3
Copper	ppm	ASTM D5185m	>330	0	0	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

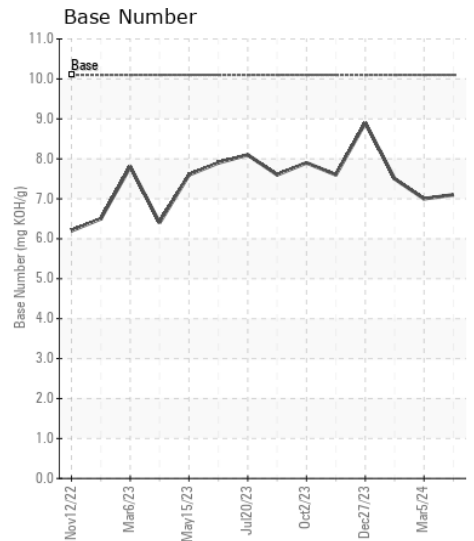
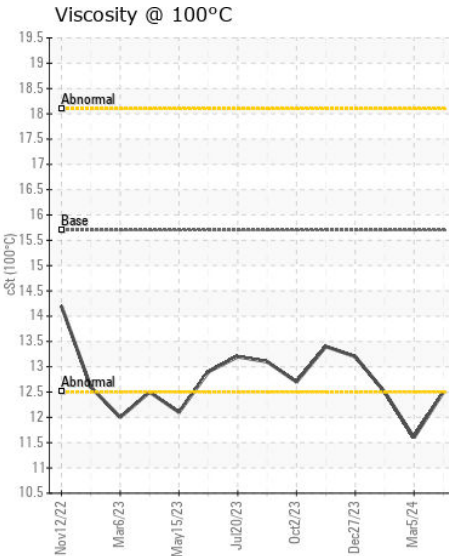
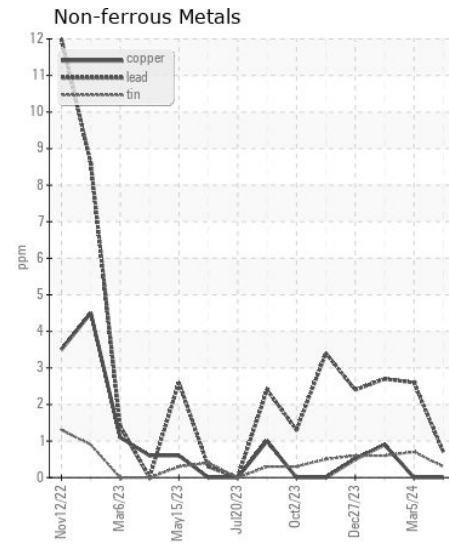
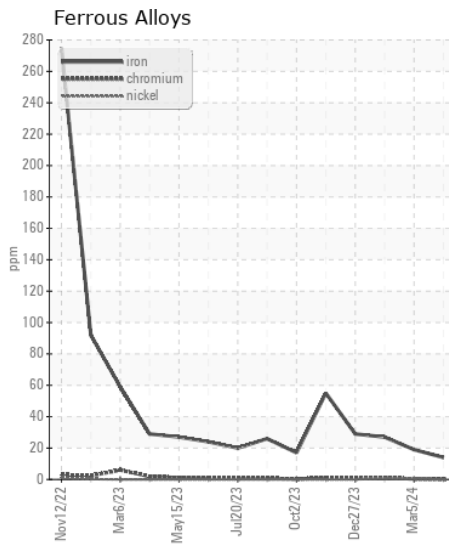
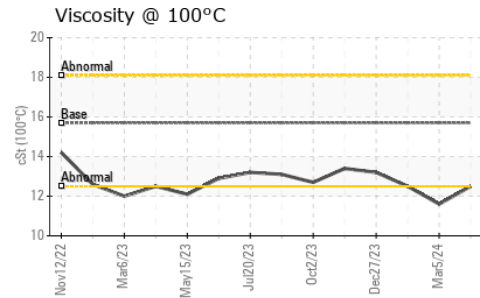
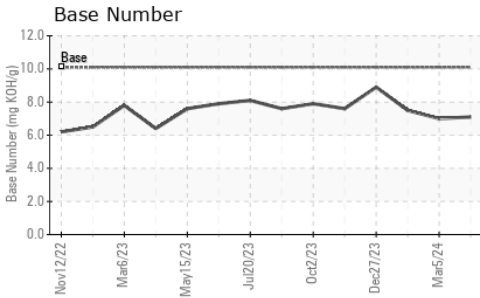
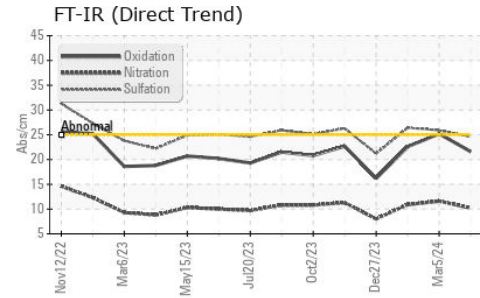
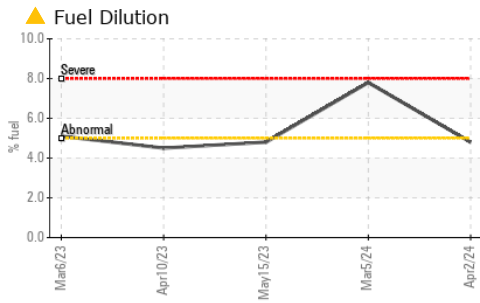
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>120	6	6	8
Potassium	ppm	ASTM D5185m	>20	<1	2	2
Fuel	%	ASTM D3524	>5	▲ 4.8	▲ 7.8	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.5	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.2	11.6	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	25.9	26.4
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		0	1	0
Boron	ppm	ASTM D5185m	316	255	184	221
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	96	111	131
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	24	550	636	668
Calcium	ppm	ASTM D5185m	2292	1449	1365	1406
Phosphorus	ppm	ASTM D5185m	1064	842	662	696
Zinc	ppm	ASTM D5185m	1160	1031	809	875
Sulfur	ppm	ASTM D5185m	4996	3020	2252	2306
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.6	25.2	22.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.1	7.0	7.5
Visc @ 100°C	cSt	ASTM D445	15.7	12.5	▲ 11.6	12.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0048263
Lab Number : 06151717
Unique Number : 10981795
Test Package : CONST (Additional Tests: PercentFuel, TBN)

Received : 17 Apr 2024
Tested : 22 Apr 2024
Diagnosed : 22 Apr 2024 - Jonathan Hester

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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)