



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
Store 9 - Marietta

Machine Id
1108

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. We recommend an early resample to monitor this condition. Note that there appears to be a discrepancy in the total time on this component, when compared to the historical data.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0050624	LEC0048269	LEC0045859
Sample Date		Client Info		14 May 2024	08 Apr 2024	26 Feb 2024
Machine Age	mls	Client Info		250564	8558	8139
Oil Age	mls	Client Info		5000	400	400
Filter Age	mls	Client Info		5000	400	400
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ATTENTION	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	16	13	10
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		2	2	3
Silver	ppm	ASTM D5185m	>3	1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	4
Lead	ppm	ASTM D5185m	>40	3	1	3
Copper	ppm	ASTM D5185m	>330	1	0	0
Tin	ppm	ASTM D5185m	>15	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

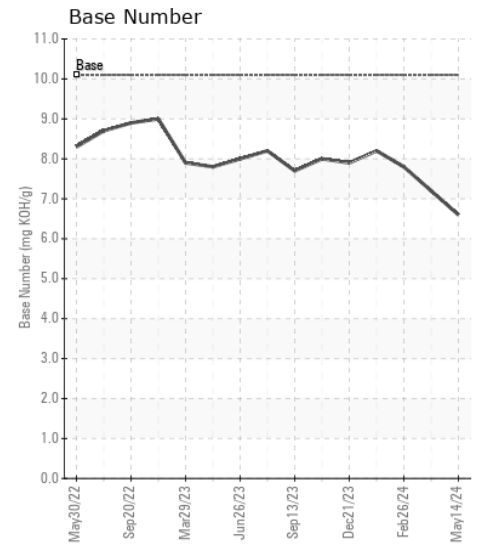
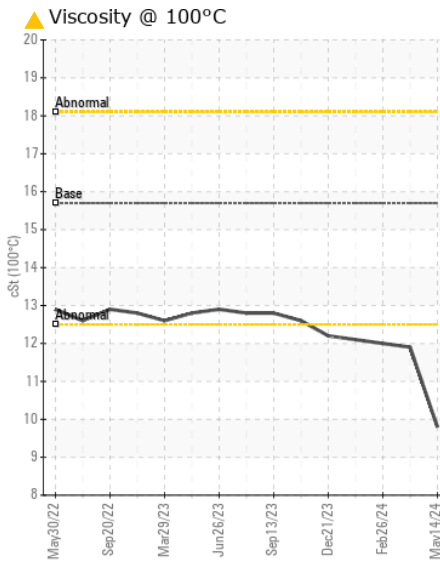
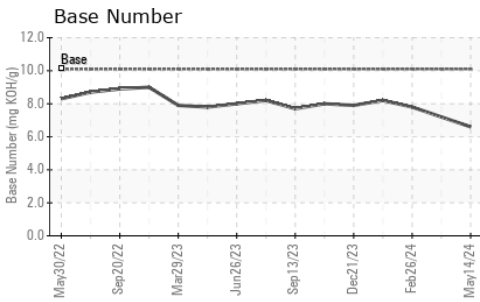
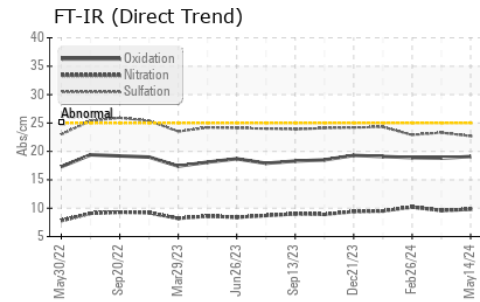
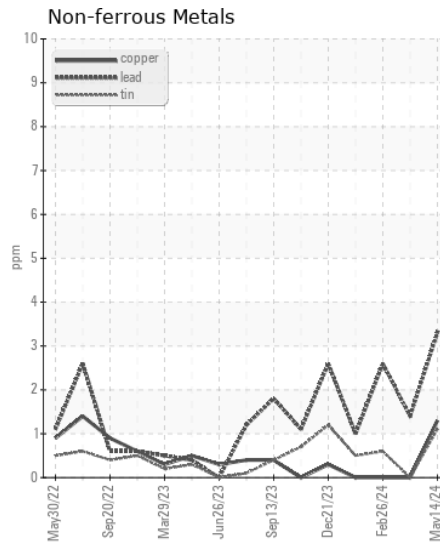
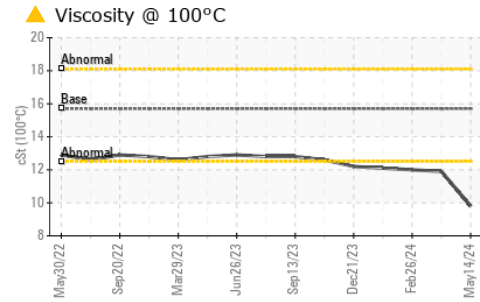
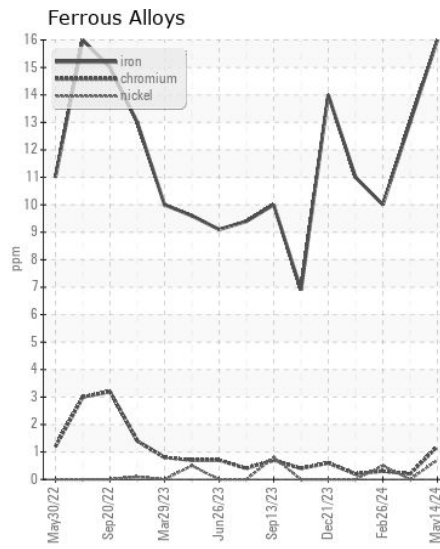
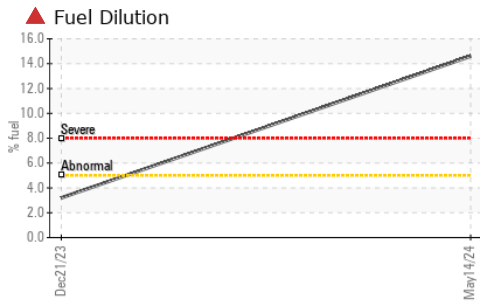
There is a high amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>120	6	5	5
Potassium	ppm	ASTM D5185m	>20	4	4	4
Fuel	%	ASTM D3524	>5	▲ 14.6	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.8	9.6	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	23.3	22.9
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

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<1	<1	2
Boron	ppm	ASTM D5185m	316	246	237	190
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	76	92	97
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	24	377	502	665
Calcium	ppm	ASTM D5185m	2292	1232	1439	1382
Phosphorus	ppm	ASTM D5185m	1064	808	931	681
Zinc	ppm	ASTM D5185m	1160	993	1067	825
Sulfur	ppm	ASTM D5185m	4996	2875	2860	2451
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.1	18.8	18.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.6	7.2	7.8
Visc @ 100°C	cSt	ASTM D445	15.7	▲ 9.8	● 11.9	● 12.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0050624 **Received** : 29 May 2024
Lab Number : 06193630 **Tested** : 31 May 2024
Unique Number : 11050382 **Diagnosed** : 31 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, 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)