



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta

Machine Id
1108

Component
Diesel Engine

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

RECOMMENDATION

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		LEC0046149	LEC0045850	LEC0043683
Sample Date		Client Info		21 Dec 2023	05 Nov 2023	13 Sep 2023
Machine Age	hrs	Client Info		7276	187019	6319
Oil Age	hrs	Client Info		400	5000	400
Filter Age	hrs	Client Info		400	5000	400
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	7	10
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	5	8
Lead	ppm	ASTM D5185m	>40	3	1	2
Copper	ppm	ASTM D5185m	>330	<1	0	<1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

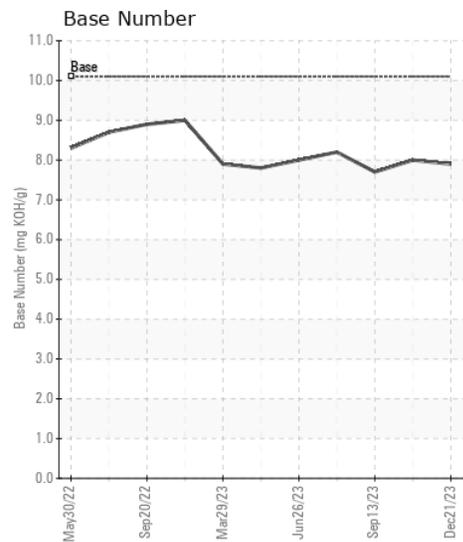
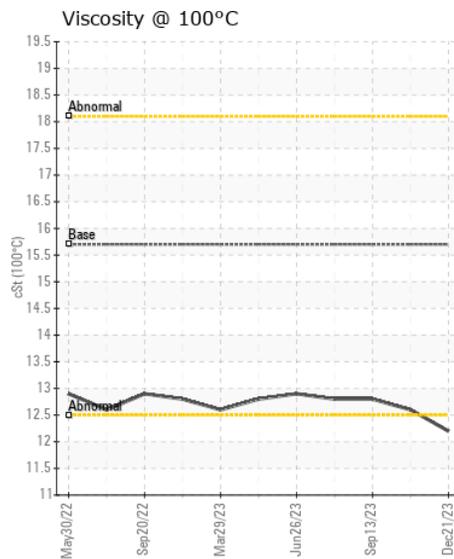
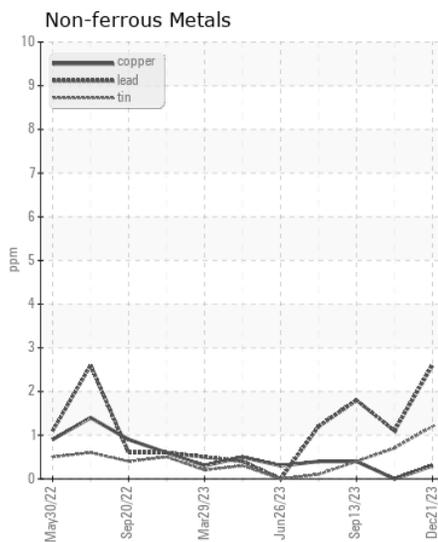
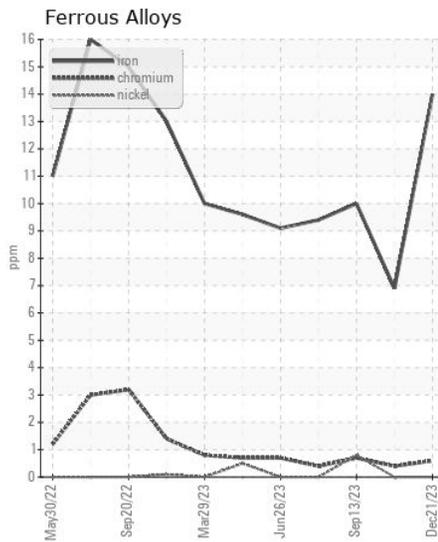
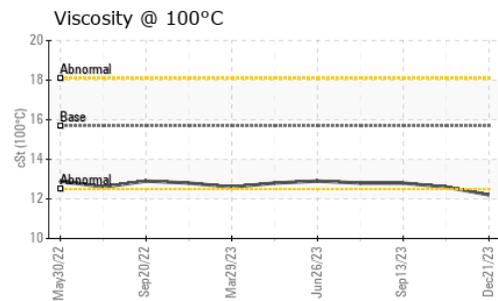
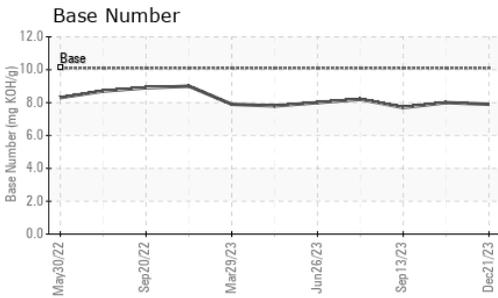
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>120	6	6	6
Potassium	ppm	ASTM D5185m	>20	17	5	11
Fuel	%	ASTM D3524	>5	3.2	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.4	8.9	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	24.1	23.9
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

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		1	0	<1
Boron	ppm	ASTM D5185m	316	224	235	210
Barium	ppm	ASTM D5185m	0.0	<1	0	2
Molybdenum	ppm	ASTM D5185m	1.2	159	123	128
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	686	660	629
Calcium	ppm	ASTM D5185m	2292	1628	1468	1479
Phosphorus	ppm	ASTM D5185m	1064	776	735	682
Zinc	ppm	ASTM D5185m	1160	900	879	859
Sulfur	ppm	ASTM D5185m	4996	2672	2425	2807
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.3	18.5	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.9	8.0	7.7
Visc @ 100°C	cSt	ASTM D445	15.7	12.2	12.6	12.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0046149 **Received** : 29 Dec 2023
Lab Number : 06047519 **Diagnosed** : 08 Jan 2024
Unique Number : 10808127 **Diagnostician** : Doug Bogart
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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Certificate L2367
 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)