



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta

Machine Id

1115

Component

Diesel Engine

Fluid

SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

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		LEC0049549	LEC0048263	LEC0047090
Sample Date		Client Info		06 May 2024	02 Apr 2024	05 Mar 2024
Machine Age	hrs	Client Info		19828	19356	18938
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				MARGINAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	22	14	19
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		1	2	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	4
Lead	ppm	ASTM D5185m	>40	2	<1	3
Copper	ppm	ASTM D5185m	>330	0	0	0
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

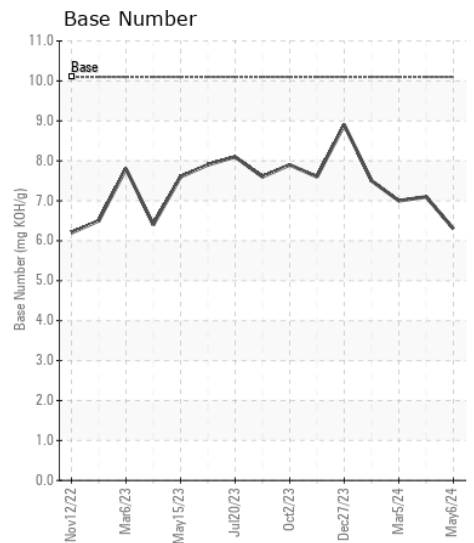
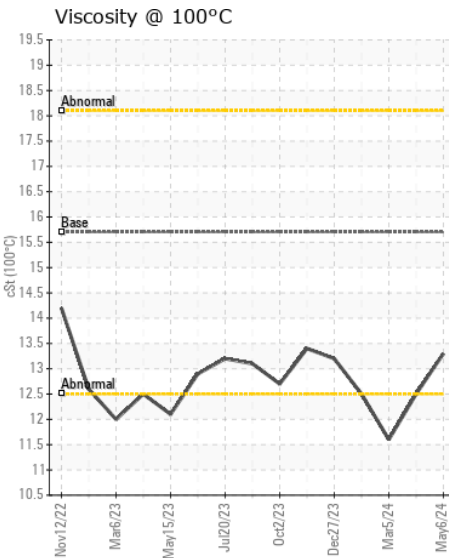
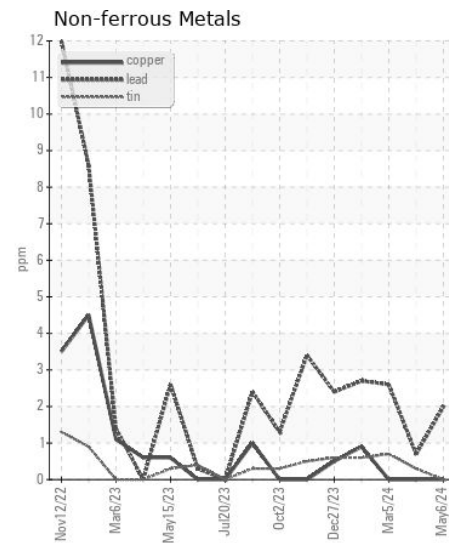
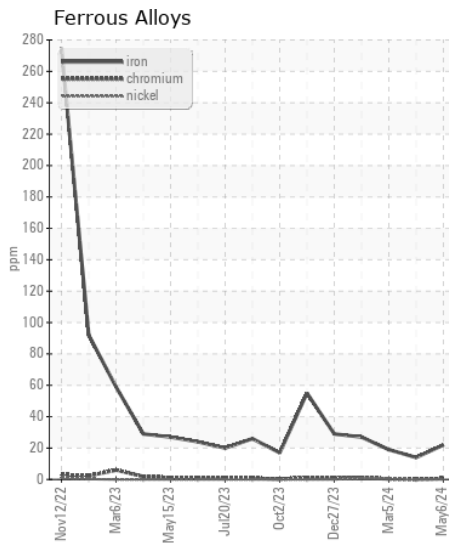
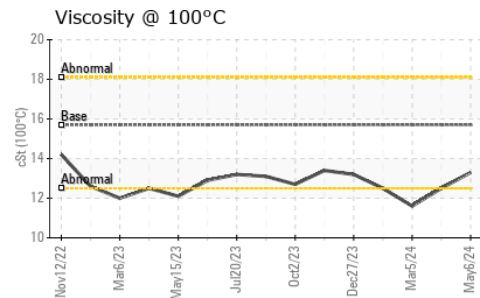
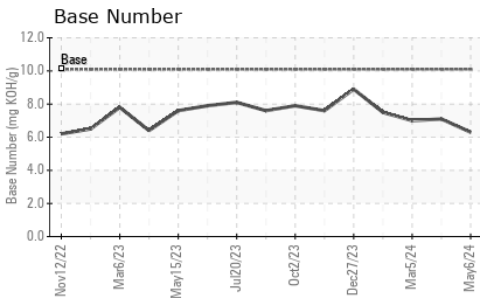
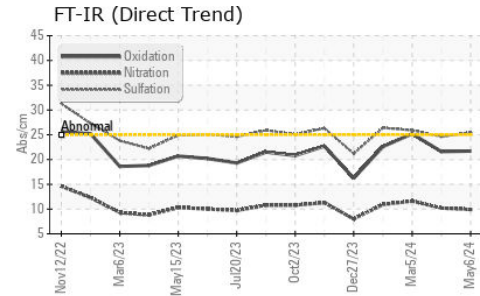
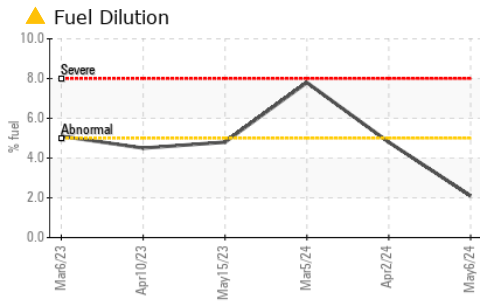
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>120	7	6	6
Potassium	ppm	ASTM D5185m	>20	17	<1	2
Fuel	%	ASTM D3524	>5	▲ 2.1	▲ 4.8	▲ 7.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.9	10.2	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.5	24.6	25.9
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 suitable for further service.

Sodium	ppm	ASTM D5185m		5	0	1
Boron	ppm	ASTM D5185m	316	218	255	184
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	91	96	111
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	24	461	550	636
Calcium	ppm	ASTM D5185m	2292	1536	1449	1365
Phosphorus	ppm	ASTM D5185m	1064	991	842	662
Zinc	ppm	ASTM D5185m	1160	1221	1031	809
Sulfur	ppm	ASTM D5185m	4996	3387	3020	2252
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.7	21.6	25.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.3	7.1	7.0
Visc @ 100°C	cSt	ASTM D445	15.7	13.3	12.5	▲ 11.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049549 **Received** : 13 May 2024
Lab Number : 06176992 **Tested** : 17 May 2024
Unique Number : 11023045 **Diagnosed** : 17 May 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: 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)