



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta

Machine Id
1069

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0049563	LEC0050202	LEC0048658
Sample Date		Client Info		24 Jun 2024	17 May 2024	12 Apr 2024
Machine Age	hrs	Client Info		33543	32987	32401
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	21	19	14
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		1	2	2
Silver	ppm	ASTM D5185m	>3	0	1	0
Aluminum	ppm	ASTM D5185m	>20	4	4	3
Lead	ppm	ASTM D5185m	>40	7	8	6
Copper	ppm	ASTM D5185m	>330	1	2	0
Tin	ppm	ASTM D5185m	>15	0	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 no indication of any contamination in the oil.

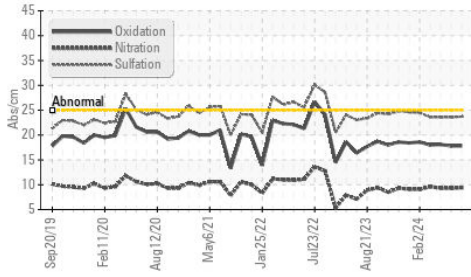
Silicon	ppm	ASTM D5185m	>120	5	6	5
Potassium	ppm	ASTM D5185m	>20	2	3	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	9.4	9.3	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.7	23.6	23.6
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

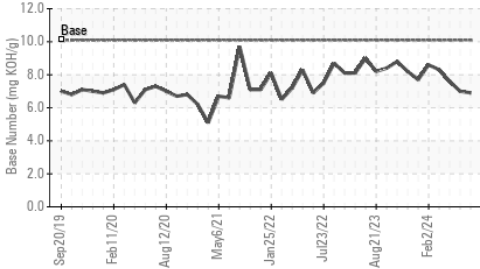
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	0
Boron	ppm	ASTM D5185m	316	194	249	256
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	89	86	101
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	24	464	482	584
Calcium	ppm	ASTM D5185m	2292	1573	1487	1546
Phosphorus	ppm	ASTM D5185m	1064	1047	1066	923
Zinc	ppm	ASTM D5185m	1160	1263	1245	1082
Sulfur	ppm	ASTM D5185m	4996	3649	3999	3323
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	17.8	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.9	7.0	7.6
Visc @ 100°C	cSt	ASTM D445	15.7	13.4	13.6	13.6

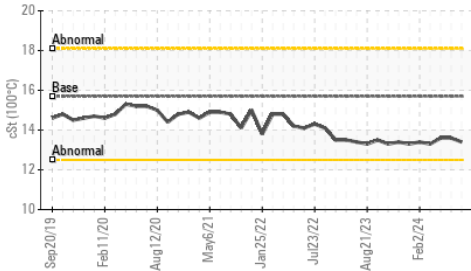
FT-IR (Direct Trend)



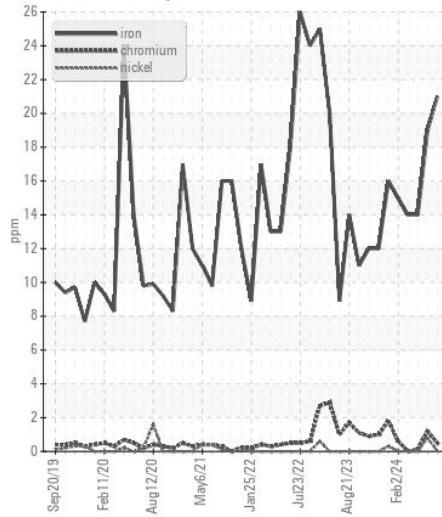
Base Number



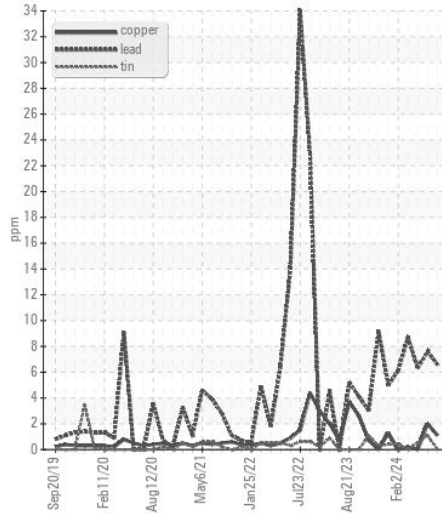
Viscosity @ 100°C



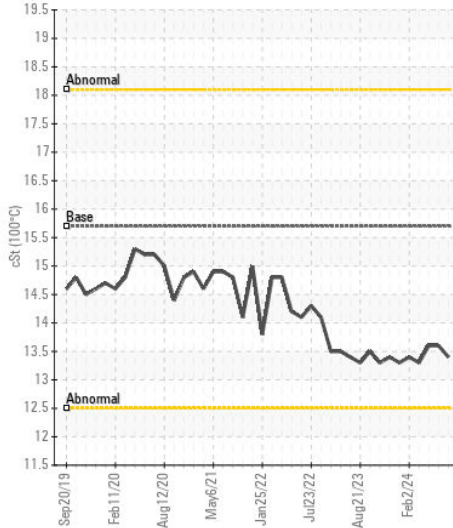
Ferrous Alloys



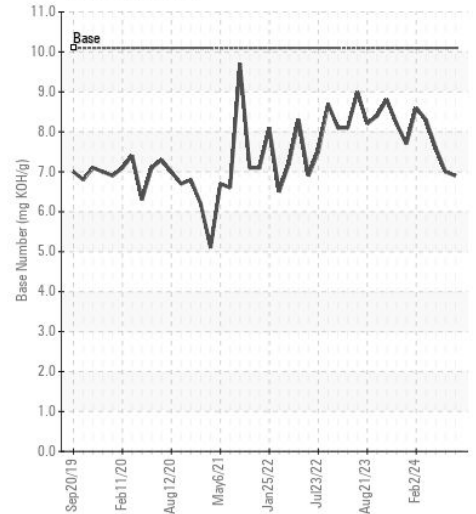
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049563 **Received** : 11 Jul 2024
Lab Number : 06233108 **Tested** : 12 Jul 2024
Unique Number : 11116601 **Diagnosed** : 12 Jul 2024 - Don Baldrige
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)