



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Store 9 - Marietta
Machine Id
MACK 42 - 002931
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0048266	LEC0048077	LEC0045863
Sample Date		Client Info		06 Apr 2024	11 Feb 2024	27 Oct 2023
Machine Age	mls	Client Info		539045	528113	517054
Oil Age	mls	Client Info		10000	10000	10000
Filter Age	mls	Client Info		10000	10000	10000
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	>120	14	19	19
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>2	3	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	3
Lead	ppm	ASTM D5185m	>40	11	14	14
Copper	ppm	ASTM D5185m	>330	1	2	1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	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 component.

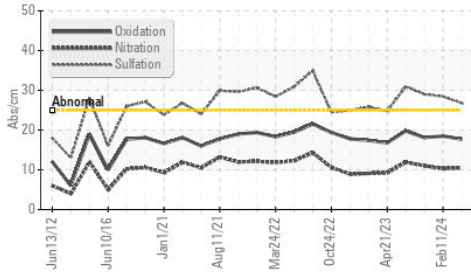
Silicon	ppm	ASTM D5185m	>120	5	6	5
Potassium	ppm	ASTM D5185m	>20	4	3	3
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	2.7	2.7	3.5
Nitration	Abs/cm	*ASTM D7624	>20	10.5	10.3	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.8	28.4	29.0
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

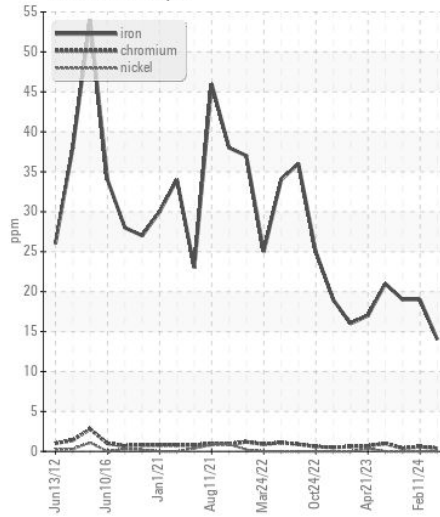
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	1	2
Boron	ppm	ASTM D5185m	316	202	226	241
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	116	130	119
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	24	674	671	583
Calcium	ppm	ASTM D5185m	2292	1608	1544	1381
Phosphorus	ppm	ASTM D5185m	1064	778	724	639
Zinc	ppm	ASTM D5185m	1160	898	918	781
Sulfur	ppm	ASTM D5185m	4996	2619	2455	2136
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	18.5	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.1	8.1	7.4
Visc @ 100°C	cSt	ASTM D445	15.7	14.3	14.1	14.9

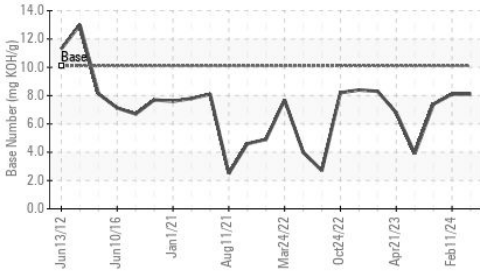
FT-IR (Direct Trend)



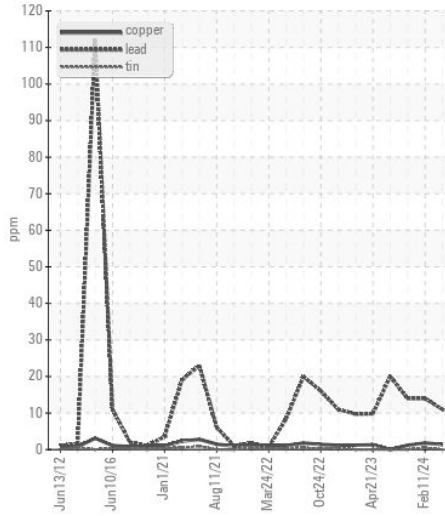
Ferrous Alloys



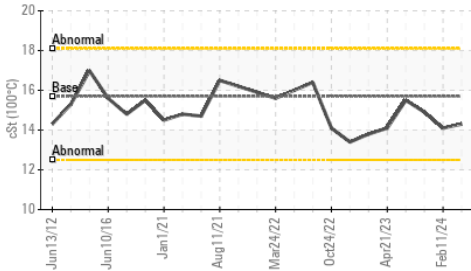
Base Number



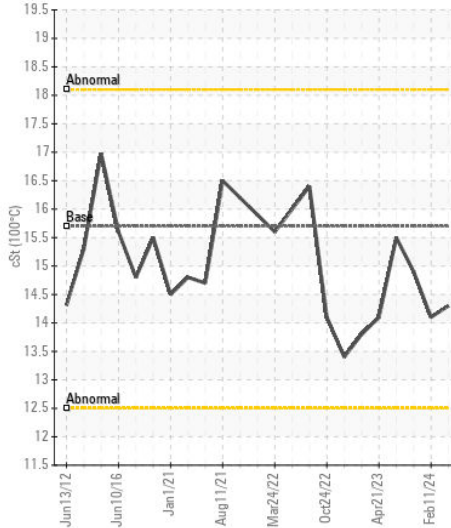
Non-ferrous Metals



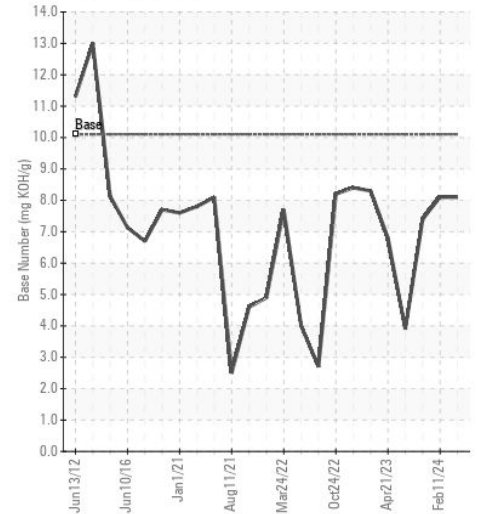
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0048266 **Received** : 17 Apr 2024
Lab Number : 06151740 **Tested** : 18 Apr 2024
Unique Number : 10981818 **Diagnosed** : 19 Apr 2024 - Sean Felton
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)