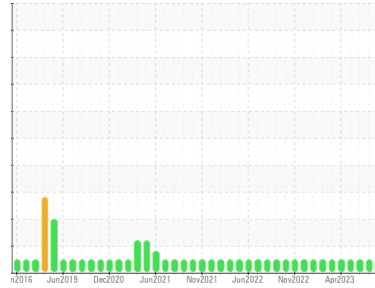




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
GEORGIA
 Machine Id
2015 MACK 2543

Component
Diesel Engine
 Fluid
 DIESEL ENGINE OIL SAE 15W40 (40 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0754717	WC0754697	WC0820356
Sample Date	Client Info			01 Aug 2023	06 Jun 2023	01 Jun 2023
Machine Age	mls Client Info			167721	166149	165298
Oil Age	mls Client Info			0	0	0
Oil Changed	Client Info			Not Changed	Not Changed	Not Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>3.0	<1.0	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	25	25	22
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	2	1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	2
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	6	6	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	41	50	52
Barium	ppm	ASTM D5185m	10	<1	0	2
Molybdenum	ppm	ASTM D5185m	100	24	23	21
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	211	221	226
Calcium	ppm	ASTM D5185m	3000	1731	1886	1807
Phosphorus	ppm	ASTM D5185m	1150	832	889	874
Zinc	ppm	ASTM D5185m	1350	1063	1109	1094
Sulfur	ppm	ASTM D5185m	4250	3175	2965	3176

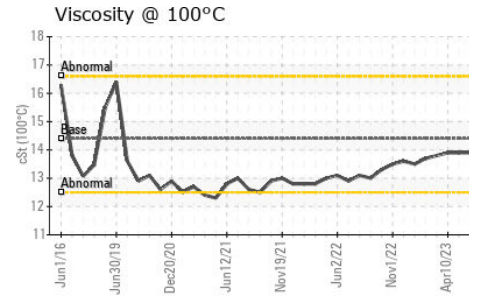
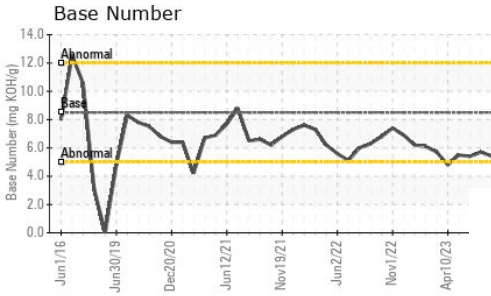
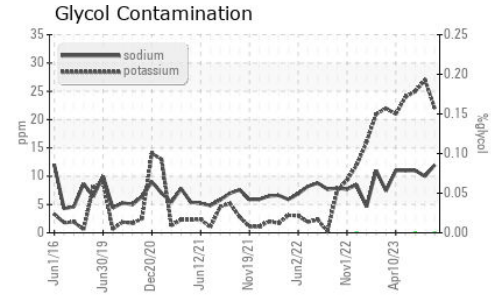
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	14	14	13
Sodium	ppm	ASTM D5185m	>158	12	10	11
Potassium	ppm	ASTM D5185m	>20	22	27	25
Glycol	%	*ASTM D2982		0.0	NEG	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.4	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.8	10.7	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	25.1	25.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	20.0	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.4	5.7	5.4



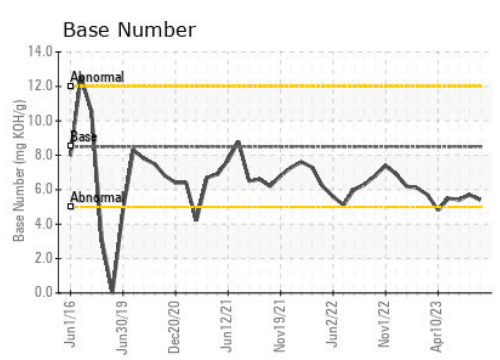
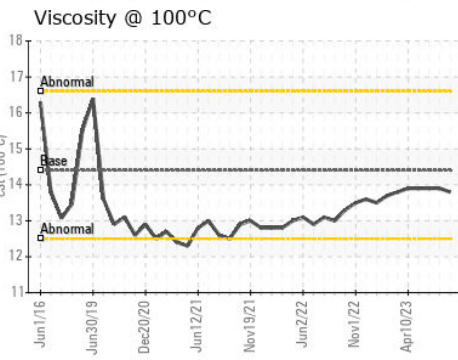
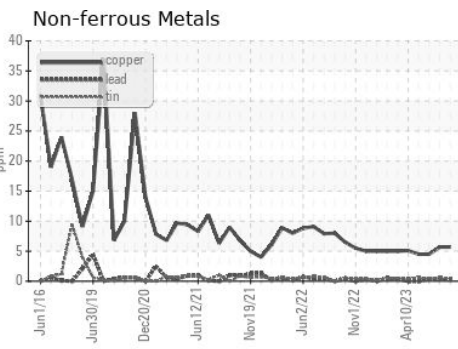
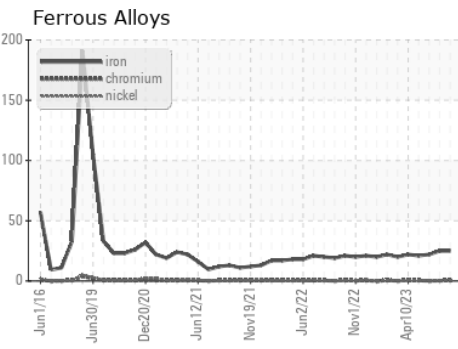
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	13.9

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0754717 **Received** : 30 Aug 2023
Lab Number : 05938751 **Diagnosed** : 01 Sep 2023
Unique Number : 10629363 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

LIBERTY DISPOSAL
 6401 S EASTERN AVE
 OKLAHOMA CITY, OK
 US 73149
 Contact: Loran Cottle
 l.cottle@ldi89.com
 T: (910)970-0291
 F: x:

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)