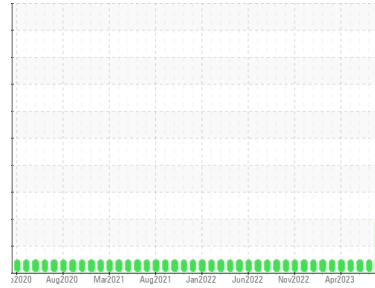




PROBLEM SUMMARY

Area
GEORGIA
 Machine Id
2015 MACK 5561
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

Sample Rating Trend

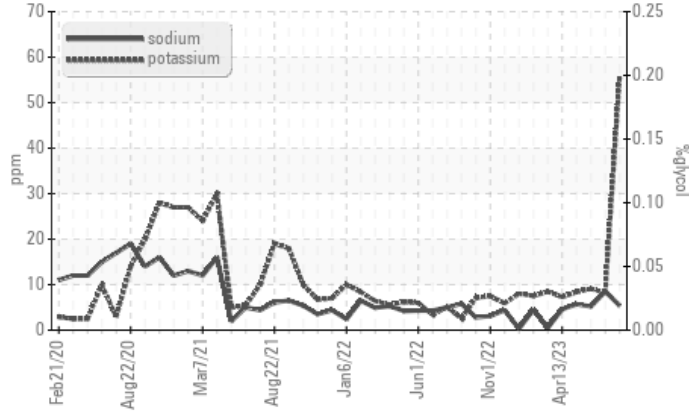


GLYCOL

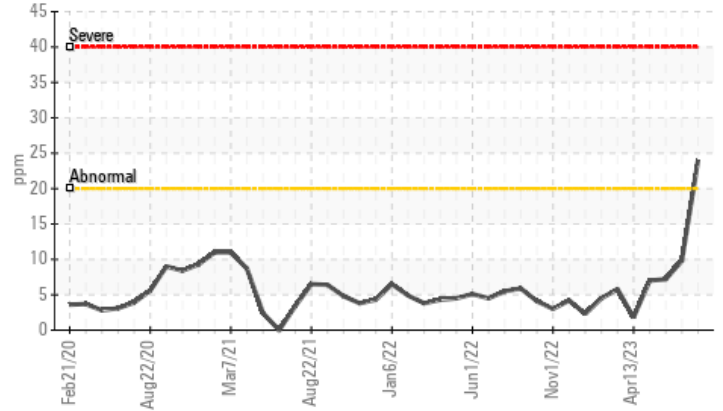


COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



▲ Aluminum (ppm)



RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Aluminum	ppm	ASTM D5185m	>20	▲ 24	10	7
Potassium	ppm	ASTM D5185m	>20	▲ 56	8	9

Customer Id: SEAOKL
 Sample No.: WC0857181
 Lab Number: 05964078
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

01 Aug 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



01 Jun 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



16 May 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report





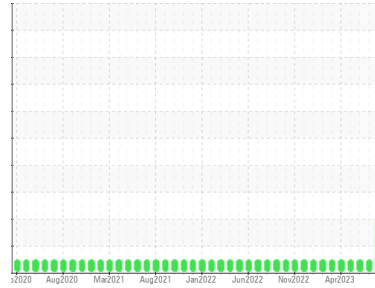
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL

Area
GEORGIA
Machine Id
2015 MACK 5561

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



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear

The aluminum level is abnormal. All other component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

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			WC0857181	WC0754719	WC0820359
Sample Date	Client Info			04 Sep 2023	01 Aug 2023	01 Jun 2023
Machine Age	mls	Client Info		291776	287418	283750
Oil Age	mls	Client Info		0	0	0
Oil Changed	Client Info			Not Chngd	Not Chngd	Not Chngd
Sample Status				ABNORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>5	<1.0	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	21	17	12
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ 24	10	7
Lead	ppm	ASTM D5185m	>40	<1	3	2
Copper	ppm	ASTM D5185m	>330	4	2	2
Tin	ppm	ASTM D5185m	>15	<1	2	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	2	19	24
Barium	ppm	ASTM D5185m	10	0	0	2
Molybdenum	ppm	ASTM D5185m	100	62	19	20
Manganese	ppm	ASTM D5185m		2	<1	<1
Magnesium	ppm	ASTM D5185m	450	1006	215	190
Calcium	ppm	ASTM D5185m	3000	1086	1926	1850
Phosphorus	ppm	ASTM D5185m	1150	1048	868	831
Zinc	ppm	ASTM D5185m	1350	1281	1108	1019
Sulfur	ppm	ASTM D5185m	4250	3394	3934	3177

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	7	12	10
Sodium	ppm	ASTM D5185m	>158	5	8	5
Potassium	ppm	ASTM D5185m	>20	▲ 56	8	9
Glycol	%	*ASTM D2982		NEG	NEG	NEG

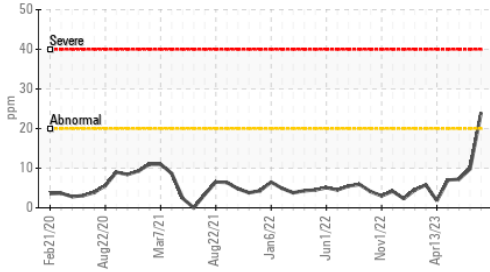
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.7	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	11.1	11.5	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.1	28.2	25.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.2	23.1	20.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	3.5	4.4	5.7



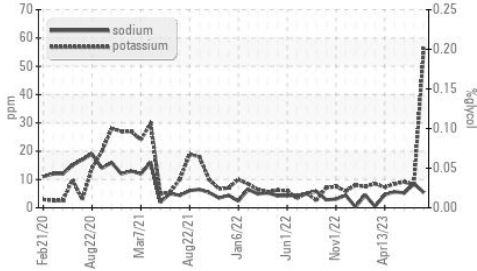
OIL ANALYSIS REPORT

▲ Aluminum (ppm)



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

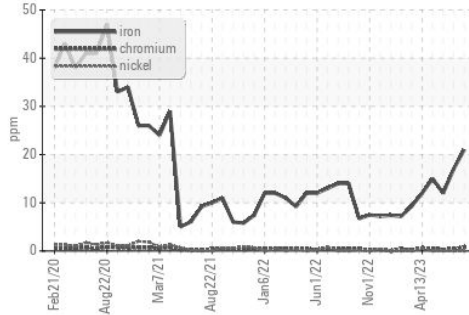
Glycol Contamination



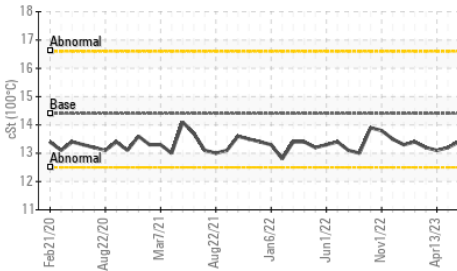
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.6	13.4

GRAPHS

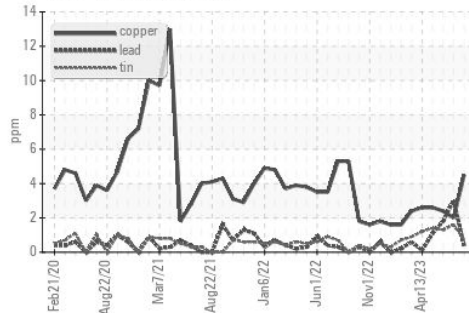
Ferrous Alloys



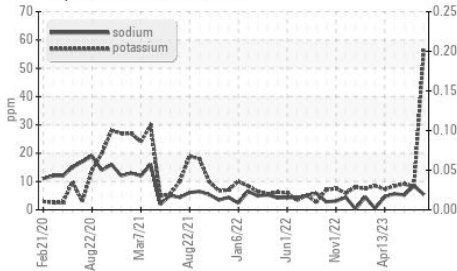
Viscosity @ 100°C



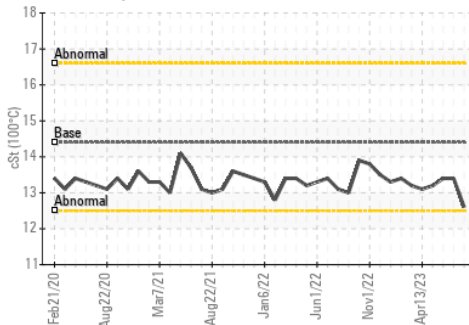
Non-ferrous Metals



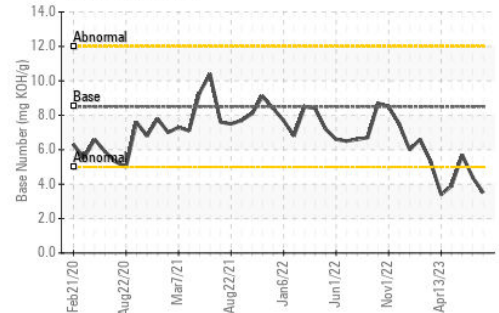
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0857181 **Received** : 28 Sep 2023
Lab Number : 05964078 **Diagnosed** : 02 Oct 2023
Unique Number : 10670629 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: GLYCOL)

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)

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