

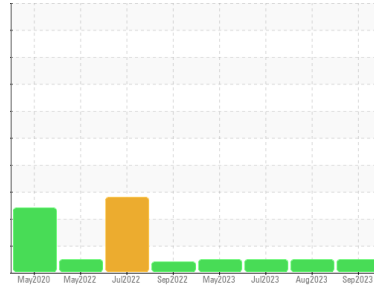


OIL ANALYSIS REPORT



Area
Action Newark
Machine Id
CATERPILLAR 5582
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

Sample Rating Trend



NORMAL

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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	WC0850717	WC0774703	WC0831077
Sample Date	Client Info	28 Sep 2023	15 Aug 2023	24 Jul 2023
Machine Age	hrs	28355	28151	27926
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	9	7	8
Chromium	ppm	ASTM D5185m >20	<1	0	0
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	0	<1	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	3	<1	<1
Lead	ppm	ASTM D5185m >40	1	<1	<1
Copper	ppm	ASTM D5185m >330	<1	4	1
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 250	6	13	10
Barium	ppm	ASTM D5185m 10	0	0	0
Molybdenum	ppm	ASTM D5185m 100	65	65	55
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m 450	847	819	715
Calcium	ppm	ASTM D5185m 3000	1170	1283	1168
Phosphorus	ppm	ASTM D5185m 1150	1006	941	881
Zinc	ppm	ASTM D5185m 1350	1205	1159	1106
Sulfur	ppm	ASTM D5185m 4250	3281	3642	3790

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	4	4	3
Sodium	ppm	ASTM D5185m >158	0	3	<1
Potassium	ppm	ASTM D5185m >20	1	6	<1

INFRA-RED

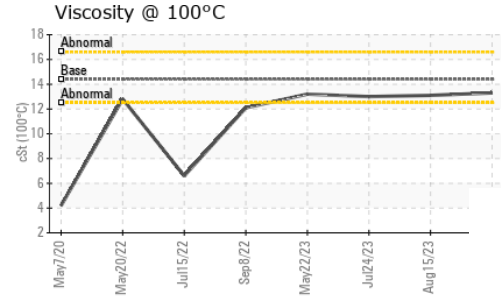
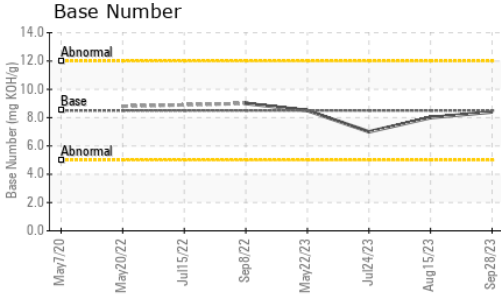
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.3	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	6.7	6.7	6.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.9	18.7	17.5

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.5	14.6	13.2
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	8.4	8.0	7.0



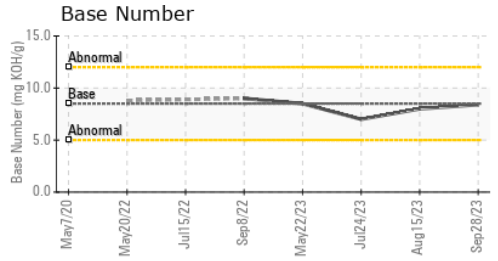
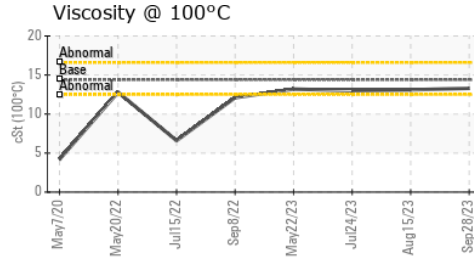
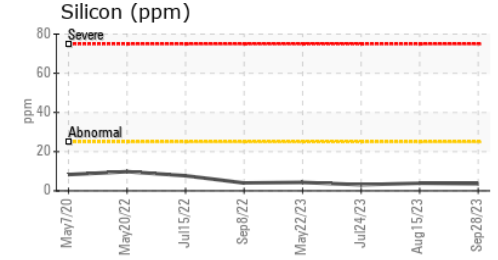
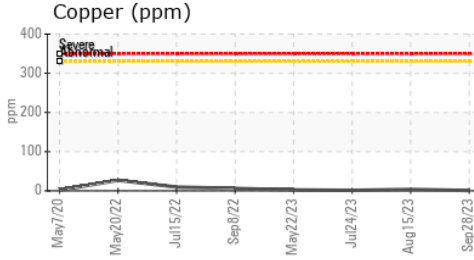
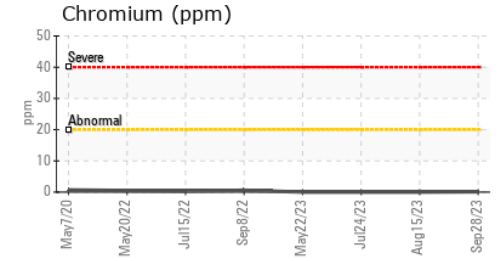
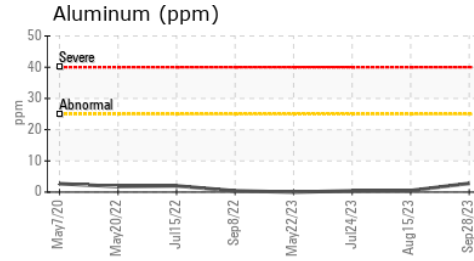
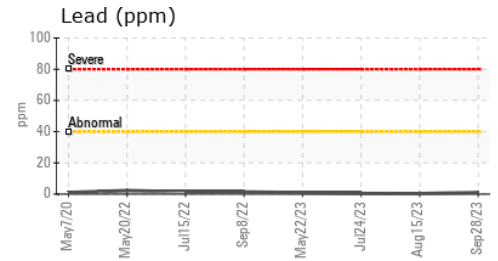
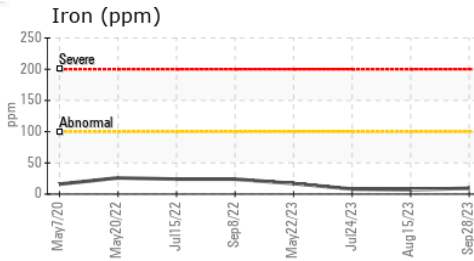
OIL ANALYSIS REPORT



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	13.3	13.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0850717 **Received** : 03 Oct 2023
Lab Number : 05967348 **Diagnosed** : 04 Oct 2023
Unique Number : 10673899 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

INTERSTATE WASTE-NEWARK
 110 EVERGREEN AVE, BAY 3
 NEWARK, NJ
 US 07114
 Contact: Robert Witynski
 RWitynski@interstatewaste.com

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)

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