

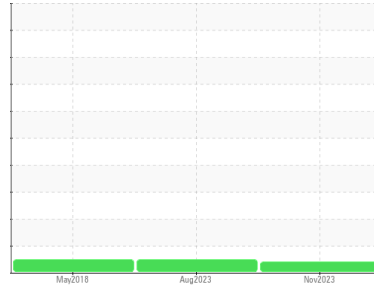


PROBLEM SUMMARY



Area
MINING
 Machine Id
ME-60 CATERPILLAR 982M MK800210
 Component
Diesel Engine
 Fluid
CAT DIESEL ENGINE OIL 15W40 (10 GAL)

Sample Rating Trend

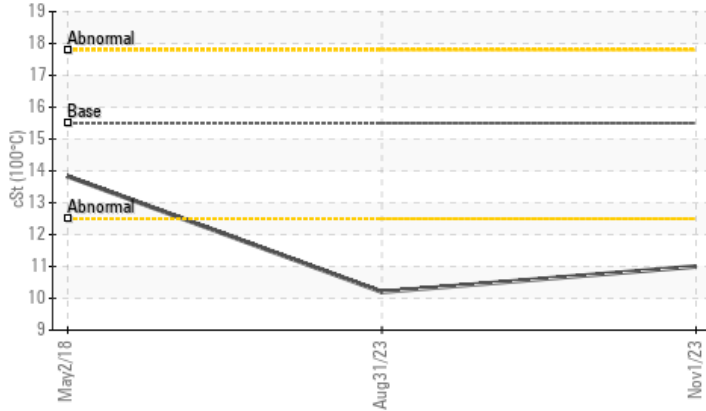


VISCOSITY



COMPONENT CONDITION SUMMARY

▲ Viscosity @ 100°C



RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	NORMAL	NORMAL
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 11.0	10.2	13.83

Customer Id: COVCAMTN
 Sample No.: WC0866087
 Lab Number: 06000322
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

31 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



02 May 2018 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report



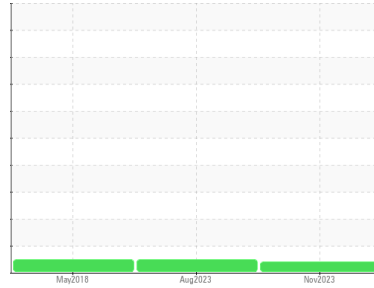


OIL ANALYSIS REPORT



Area
MINING
Machine Id
ME-60 CATERPILLAR 982M MK800210
Component
Diesel Engine
Fluid
CAT DIESEL ENGINE OIL 15W40 (10 GAL)

Sample Rating Trend



VISCOSITY



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0866087	WC0850307	WCMC175351
Sample Date	Client Info		01 Nov 2023	31 Aug 2023	02 May 2018
Machine Age	hrs	Client Info	0	9302	9862
Oil Age	hrs	Client Info	500	0	0
Oil Changed	Client Info		N/A	Changed	N/A
Sample Status			ATTENTION	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	12	32	17
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	<1
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	0	2
Lead	ppm	ASTM D5185m >40	<1	2	1
Copper	ppm	ASTM D5185m >330	<1	10	4
Tin	ppm	ASTM D5185m >15	0	<1	0
Antimony	ppm	ASTM D5185m	---	---	20
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	61	11	10
Barium	ppm	ASTM D5185m	5	0	0
Molybdenum	ppm	ASTM D5185m	44	45	50
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	482	500	810
Calcium	ppm	ASTM D5185m	1653	1732	1057
Phosphorus	ppm	ASTM D5185m	948	901	863
Zinc	ppm	ASTM D5185m 1460	1116	1121	1040
Sulfur	ppm	ASTM D5185m	2824	3232	2319

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	8	4
Sodium	ppm	ASTM D5185m	0	26	3
Potassium	ppm	ASTM D5185m >20	2	2	4
Fuel	%	ASTM D3524 >5	0.1	<1.0	<1.0

INFRA-RED

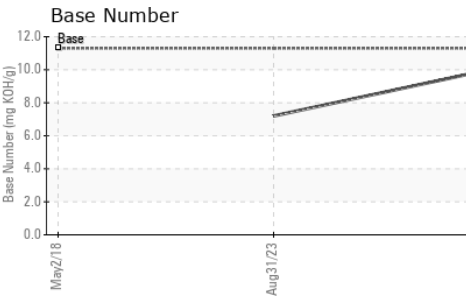
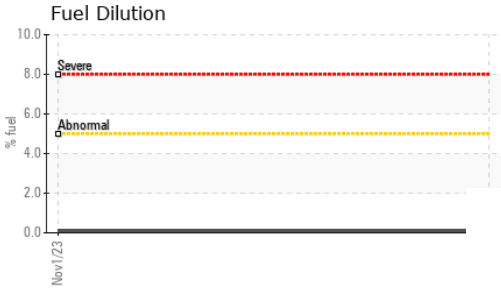
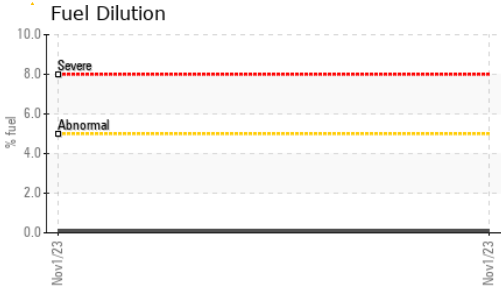
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.8	0.4
Nitration	Abs/cm	*ASTM D7624 >20	6.3	10.6	10.
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.2	23.3	23.

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.8	22.1	19.
Base Number (BN)	mg KOH/g	ASTM D2896 11.3	10.0	7.2	---



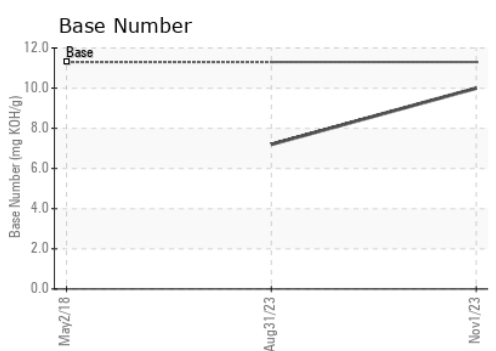
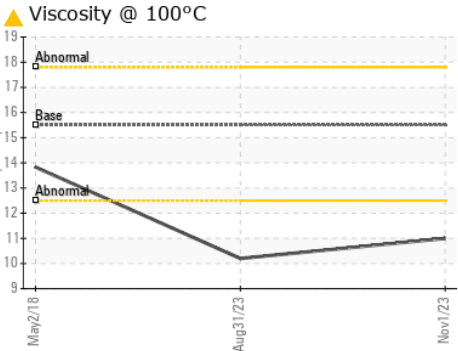
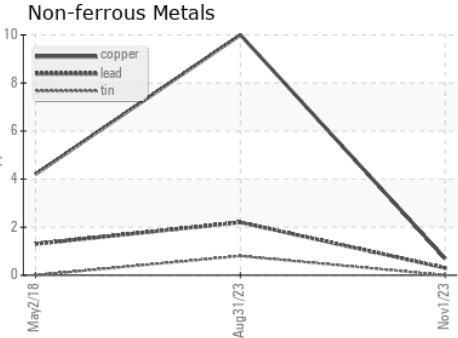
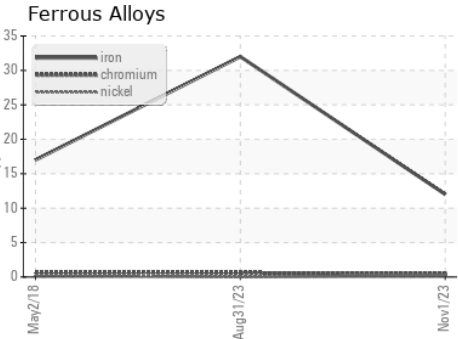
OIL ANALYSIS REPORT



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	15.5	▲ 11.0	10.2 13.83

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0866087 **Received** : 07 Nov 2023
Lab Number : 06000322 **Diagnosed** : 08 Nov 2023
Unique Number : 10728682 **Diagnostician** : Don Baldridge
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

COVIA - CAMDEN
 1700 SAND MILL RD
 CAMDEN, TN
 US 38320
 Contact: TRACY KEE
 tracy.kee@coviacorp.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)