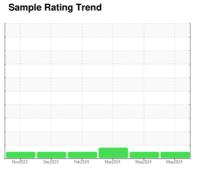


OIL ANALYSIS REPORT



MINING ME-60 CATERPILLAR 982M MK800210

Hydraulic System CAT HYDO (43 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

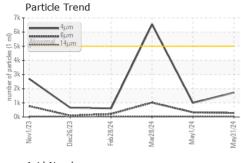
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

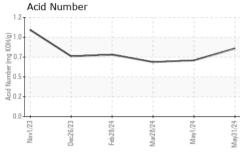
		Nov2023	Dec2023 Feb2024	Mar2024 May2024	May2024	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0910910	WC0910931	WC0909681
Sample Date		Client Info		31 May 2024	01 May 2024	28 Mar 2024
Machine Age	hrs	Client Info		12840	12420	11887
Oil Age	hrs	Client Info		2000	1500	1000
Oil Changed		Client Info		Changed	Not Changd	N/A
Sample Status				NORMAL	NORMAL	ATTENTION
CONTAMINATION	J	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	2	2
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	2	2
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	<1	1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		1	0	0
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		0	2	1
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		9	10	9
Calcium	ppm	ASTM D5185m		190	220	196
Phosphorus	ppm	ASTM D5185m	1100	740	849	651
Zinc	ppm	ASTM D5185m	1210	915	965	876
Sulfur	ppm	ASTM D5185m		1987	1968	1638
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	1	3	3
Sodium	ppm	ASTM D5185m		<1	0	0
Potassium	ppm	ASTM D5185m	>20	0	2	1
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4μm		ASTM D7647	>5000	1730	992	6546
Particles >6µm		ASTM D7647	>1300	283	325	1019
Particles >14μm		ASTM D7647	>160	22	34	45
Particles >21µm		ASTM D7647	>40	5	8	14
Particles >38μm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/15/12	17/16/12	20/17/13
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	140111	10T11 D00:-			0.00	

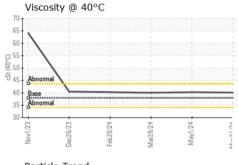
Contact/Location: TRACY KEE - COVCAMTN

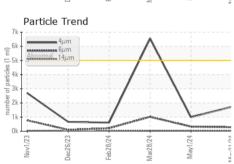


OIL ANALYSIS REPORT









VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	TES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	37.9	40.1	40.3	40.0
SAMPLE IMAGES	6	method	limit/base	current	history1	history2

no image

no image

Ferrous Alloys Particle Count 491,520 122,880 8evere 30,720 7,680 Abnormal FEZIVANI Viscosity @ 40°C Particle Count 491,520 122,880 8evere 30,720 7,680 Abnormal 1,920 480 480 Viscosity @ 40°C Acid Number FEZIVANI FE	122,880 122,880 30,720 7,680 Abnormal 120
Non-ferrous Metals Severe 30,720 7,680 Abnormal 1,920 120	7,680 Abnomal 7,680 Abnomal 7,680 Asnomal 7,680 Asnomal 1,920 9,000 Asnomal 1,920 1,92
Non-ferrous Metals Non-ferrous Metals Viscosity @ 40°C Abnormal Abnormal Abnormal Abnormal Base Buttonimal Abnormal	7,680 Abnormal 7,680 Abnormal 7,680 Abnormal 1,920 1,9
Non-ferrous Metals Non-ferrous Metals 1,920	F2/1820 H2/18 H2/1
Non-ferrous Metals Non-ferrous Metals 1,920	F2/1820 H2/18 H2/1
Viscosity @ 40°C Abnormal Base Shoromal	8
Viscosity @ 40°C Abnormal Base Shoromal	8
Viscosity @ 40°C Abnormal Abnormal Base Bothomal	8
Viscosity @ 40°C Abnormal Base Shoromal	8
Viscosity @ 40°C Abnormal Base Babonimal	The state of the s
Viscosity @ 40°C Abnormal Base Babonimal	The state of the s
Viscosity @ 40°C Acid Number Abnormal Base Buttonmat Approximate Part P	
Viscosity @ 40°C Acid Number Abnormal Base Buttonian Application (Application of the content	258/2 e28/2 e3/1/2 e4/1/2 e3/1/2 e3/1
Abnormal	$^4\mu$ $^6\mu$ $^14\mu$ $^21\mu$ $^38\mu$ 7
Abnormal Base Buriomar	Acid Number
Abnomal	₹1.0 ▼1.0
Base 9 0.0 V	€0.7
723 - Acid - Aci	10ma 18 20 0 7
	TO A A
1,00	¥0.0 + + + + + + + + + + + + + + + + + +





Certificate 12367

Laboratory

Sample No. : WC0910910 Lab Number : 06201916 Unique Number : 11069377 Test Package : CONST

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 06 Jun 2024 **Tested** : 18 Jun 2024

: 18 Jun 2024 - Jonathan Hester Diagnosed

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Color

Bottom

* - 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)

COVIA - CAMDEN - 094

1700 SAND MILL RD CAMDEN, TN US 38320

Contact: TRACY KEE tracy.kee@coviacorp.com

T: F: