



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 972K 001857 (S/N Z4W00391)
 Component
Diesel Engine
 Fluid
CASTROL VECTON 15W40 CK4 (9 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0856300	WC0823982	WC0823836
Sample Date		Client Info		25 Mar 2024	02 Nov 2023	16 Aug 2023
Machine Age	hrs	Client Info		24224	23446	22949
Oil Age	hrs	Client Info		778	497	681
Filter Age	hrs	Client Info		778	497	681
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	9	11	16
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>25	6	6	7
Lead	ppm	ASTM D5185m	>40	2	<1	3
Copper	ppm	ASTM D5185m	>330	2	2	1
Tin	ppm	ASTM D5185m	>15	2	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

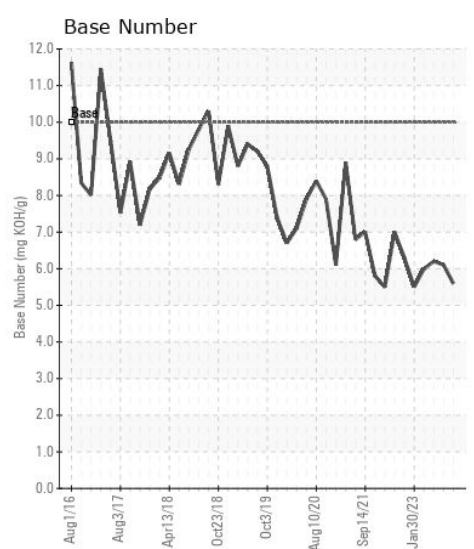
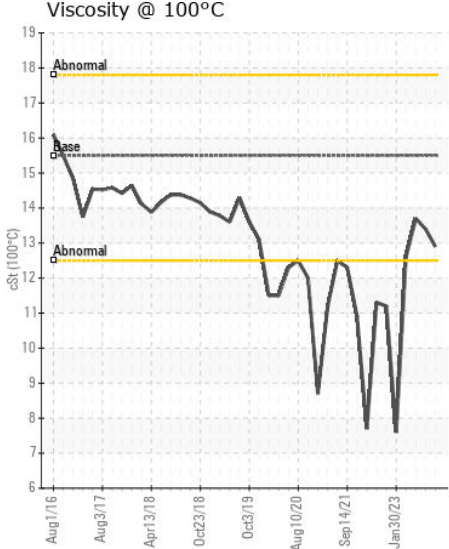
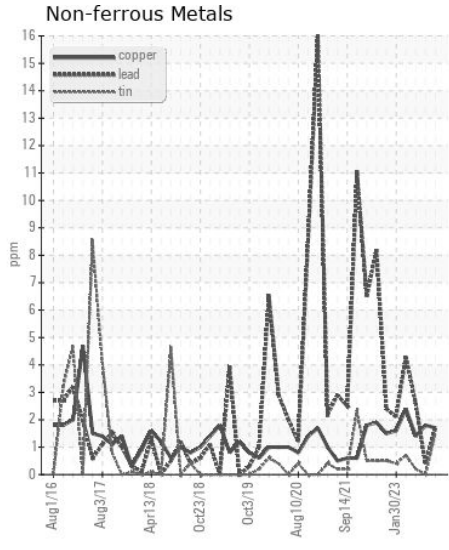
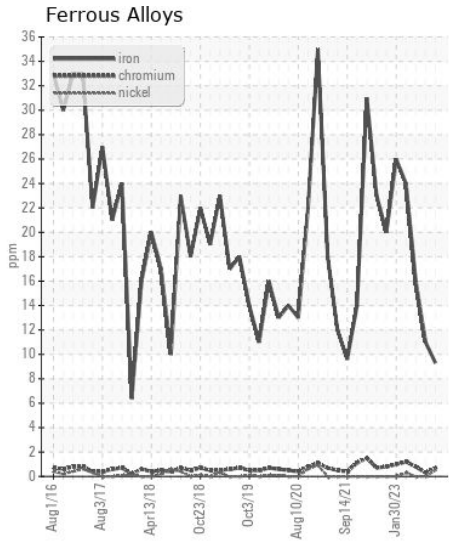
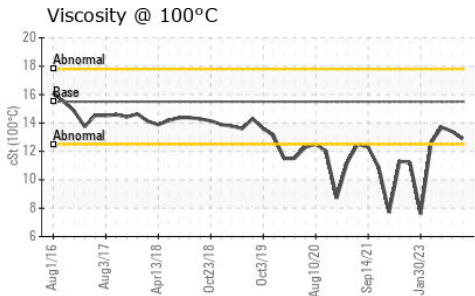
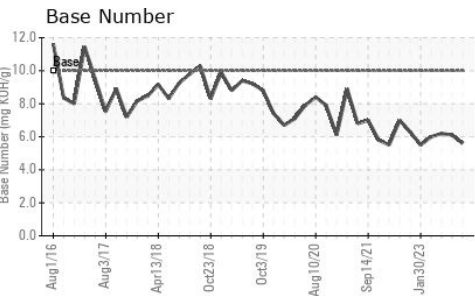
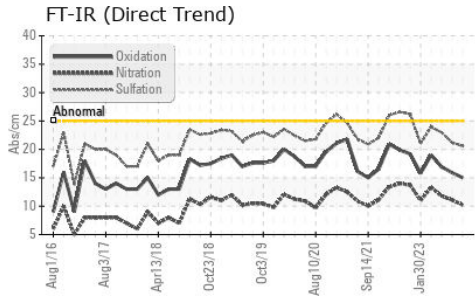
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	5	11
Potassium	ppm	ASTM D5185m	>20	2	0	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	1.3	1.5
Nitration	Abs/cm	*ASTM D7624	>20	10.2	11.1	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	21.2	23.0
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	>0.2	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m		4	3	4
Boron	ppm	ASTM D5185m		31	24	33
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		83	84	96
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		82	81	107
Calcium	ppm	ASTM D5185m		2122	2165	2206
Phosphorus	ppm	ASTM D5185m		1068	969	1068
Zinc	ppm	ASTM D5185m		1098	1131	1256
Sulfur	ppm	ASTM D5185m		3790	3507	4369
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	15.9	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	5.6	6.1	6.2
Visc @ 100°C	cSt	ASTM D445	15.5	12.9	13.4	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0856300 **Received** : 12 Apr 2024
Lab Number : 06147946 **Tested** : 15 Apr 2024
Unique Number : 10978024 **Diagnosed** : 15 Apr 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

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)

CJ MILLER LLC
 2903 DEDE RD
 FINKSBURG, MD
 US 21048
 Contact: JOE ROSS
 jross@cjmillerllc.com
 T: (410)239-8006
 F: (410)239-1051