

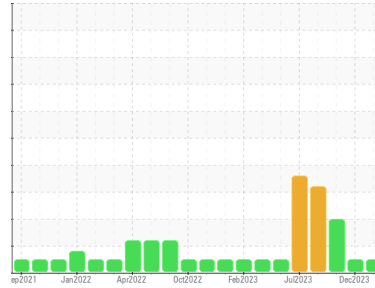


OIL ANALYSIS REPORT



Area
GUAY SON/Yavaros [CONHER]
Machine Id
CATERPILLAR Pacifico Ind Admiralty MP
Component
Center Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (160 LTR)

Sample Rating Trend



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. The amount and size of particulates present in the system are acceptable.

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		KL0013458	KL0013441	KL0013390
Sample Date	Client Info		04 Jan 2024	21 Dec 2023	17 Nov 2023
Machine Age	hrs	Client Info	0	0	5481
Oil Age	hrs	Client Info	247	255	77
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			NORMAL	NORMAL	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	13	10	6
Chromium	ppm	ASTM D5185m >20	<1	0	<1
Nickel	ppm	ASTM D5185m >2	0	0	<1
Titanium	ppm	ASTM D5185m >2	0	0	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	3	3	3
Lead	ppm	ASTM D5185m >40	1	3	1
Copper	ppm	ASTM D5185m >330	109	86	25
Tin	ppm	ASTM D5185m >15	0	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	247	232	306
Barium	ppm	ASTM D5185m	2	0	1
Molybdenum	ppm	ASTM D5185m	136	141	130
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m	653	733	637
Calcium	ppm	ASTM D5185m	1515	1671	1462
Phosphorus	ppm	ASTM D5185m 1360	711	761	661
Zinc	ppm	ASTM D5185m 1480	832	925	808
Sulfur	ppm	ASTM D5185m	2483	2499	2495

CONTAMINANTS

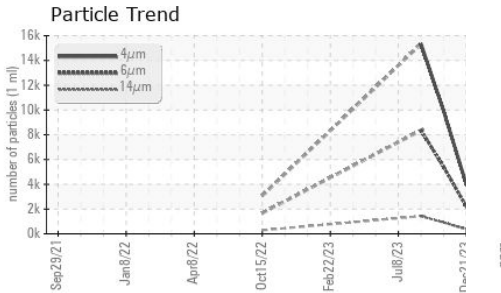
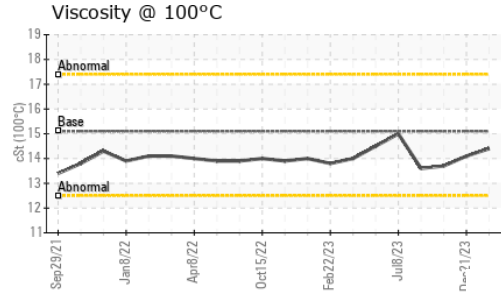
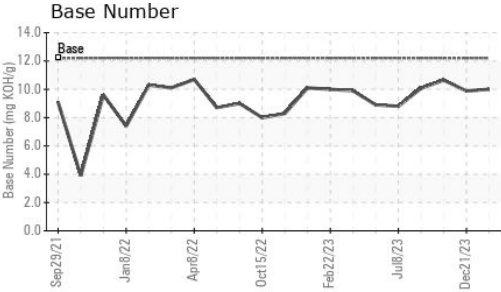
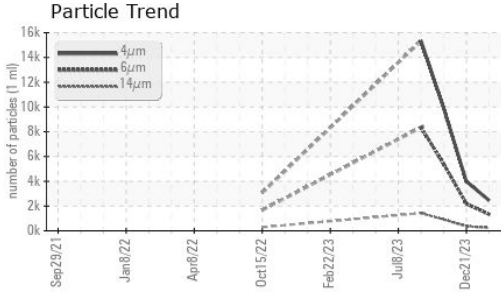
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	8	7
Sodium	ppm	ASTM D5185m	44	65	49
Potassium	ppm	ASTM D5185m >20	2	0	2

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	9.8	10.1	6.7
Sulfation	Abs./1mm	*ASTM D7415 >30	25.9	26.1	23.2



OIL ANALYSIS REPORT



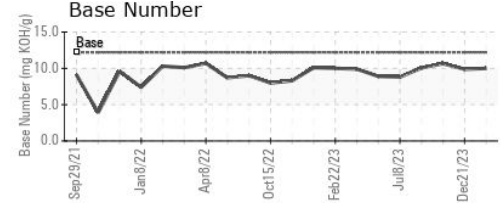
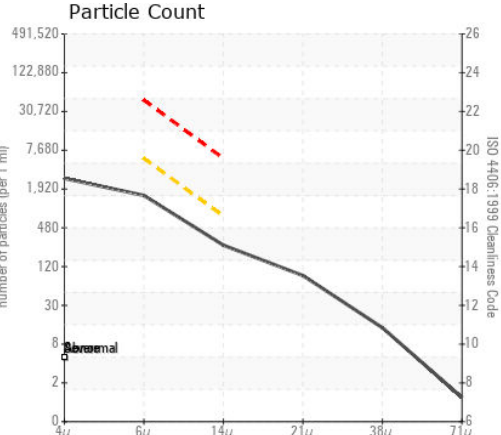
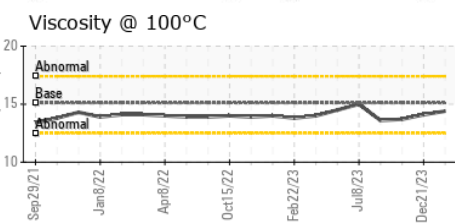
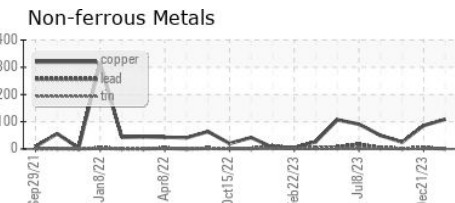
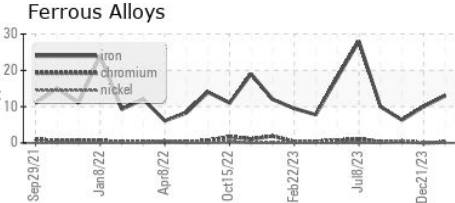
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		2453	3993	9900
Particles >6µm	ASTM D7647	>5000	1336	2175	▲ 5393
Particles >14µm	ASTM D7647	>640	227	370	▲ 918
Particles >21µm	ASTM D7647	>160	77	125	▲ 309
Particles >38µm	ASTM D7647	>40	12	19	▲ 48
Particles >71µm	ASTM D7647	>10	1	2	5
Oil Cleanliness	ISO 4406 (c)	>19/16	18/15	18/16	▲ 20/17

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	>25	22.3	22.4	16.9
Base Number (BN)	mg KOH/g ASTM D2896	12.2	10.00	9.88	10.65

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	>0.2	NEG	NEG	NEG
Free Water	scalar *Visual		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445	15.1	14.4	14.1	13.7

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013458 **Received** : 30 Jan 2024
Lab Number : 06074991 **Diagnosed** : 02 Feb 2024
Unique Number : 10857082 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

CONOR
 JUAREZ 348
 HERMOSILLO,
 MX 83140
 Contact: EDUARDO GARCIA
 egarcia.comsa@gmail.com
 T: (526)622-1581 x:81
 F: x:

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)