

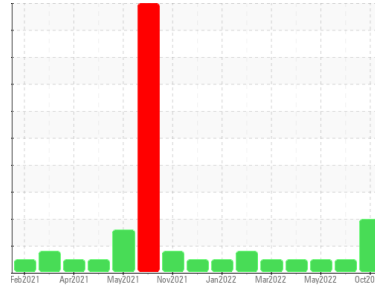


OIL ANALYSIS REPORT



Area
GUAY SON/Yavaros [CONHER]
Machine Id
CATERPILLAR Pacifico industrial PISA2 MP
Component
Diesel Engine
Fluid
CHEVRON DELO 400 SDE SAE 15W40 (100 LTR)

Sample Rating Trend



ISO



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates present 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		KL0011191	KL0010185	KL0009245
Sample Date	Client Info		16 Oct 2022	13 Jun 2022	01 May 2022
Machine Age	hrs	Client Info	35980	0	35660
Oil Age	hrs	Client Info	320	0	350
Oil Changed	Client Info		Not Chngd	N/A	N/A
Sample Status			ATTENTION	NORMAL	NORMAL

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	21	53	19
Chromium	ppm	ASTM D5185m >20	2	2	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	1	<1	<1
Aluminum	ppm	ASTM D5185m >25	3	3	3
Lead	ppm	ASTM D5185m >40	<1	3	<1
Copper	ppm	ASTM D5185m >330	8	7	4
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	356	53	205
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	120	71	88
Manganese	ppm	ASTM D5185m	2	<1	<1
Magnesium	ppm	ASTM D5185m	670	421	594
Calcium	ppm	ASTM D5185m	1595	1405	1553
Phosphorus	ppm	ASTM D5185m 760	686	552	693
Zinc	ppm	ASTM D5185m 800	851	681	745
Sulfur	ppm	ASTM D5185m 3000	2846	2154	2201

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	8	7
Sodium	ppm	ASTM D5185m	2	<1	<1
Potassium	ppm	ASTM D5185m >20	1	2	0

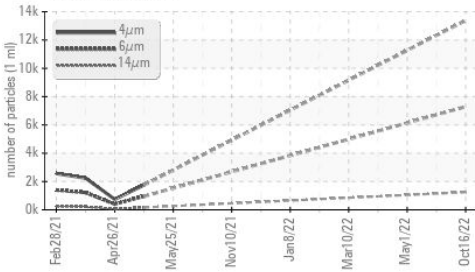
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.1	1.8	0.8
Nitration	Abs/cm	*ASTM D7624 >20	7.9	10.4	6.5
Sulfation	Abs./1mm	*ASTM D7415 >30	26.3	25.6	22.5

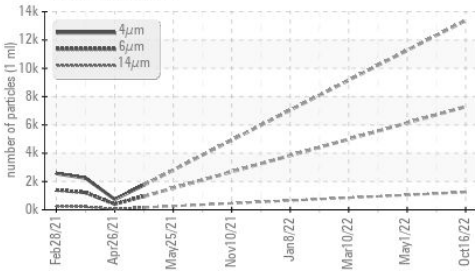


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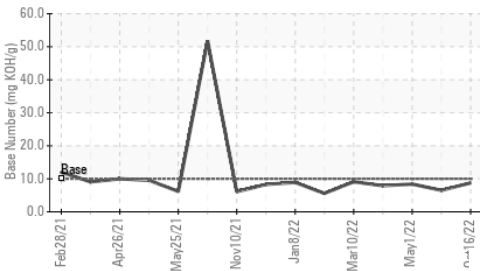
▲ Particle Trend



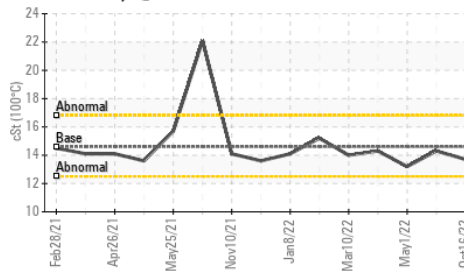
▲ Particle Trend



Base Number



Viscosity @ 100°C



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		13380	---	---
Particles >6µm	ASTM D7647	>5000	▲ 7289	---	---
Particles >14µm	ASTM D7647	>640	▲ 1240	---	---
Particles >21µm	ASTM D7647	>160	▲ 418	---	---
Particles >38µm	ASTM D7647	>40	▲ 65	---	---
Particles >71µm	ASTM D7647	>10	7	---	---
Oil Cleanliness	ISO 4406 (c)	>19/16	▲ 20/17	---	---

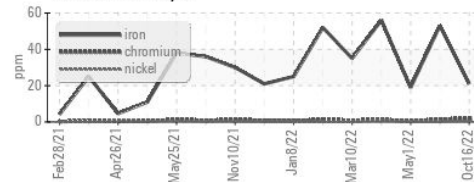
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	>25	17.8	17.0	14.4
Base Number (BN)	mg KOH/g ASTM D2896	10	8.76	6.5	8.4

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

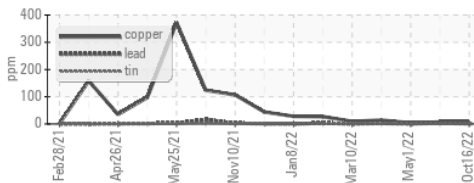
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445	14.6	13.7	14.3	13.2

GRAPHS

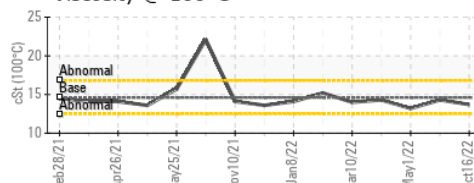
Ferrous Alloys



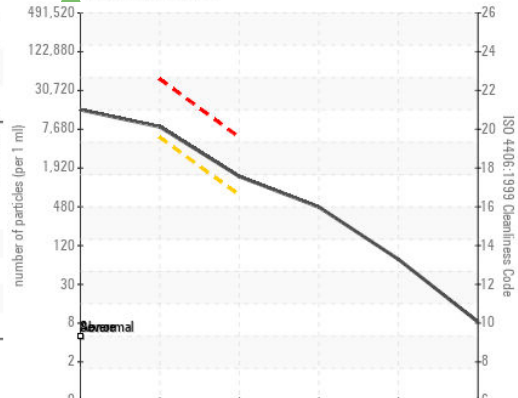
Non-ferrous Metals



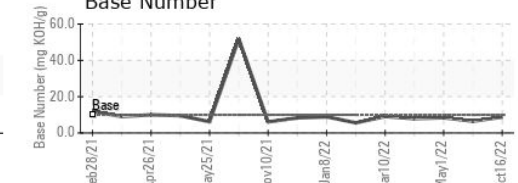
Viscosity @ 100°C



▲ Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011191 **Received** : 31 Oct 2022
Lab Number : **05681225** **Tested** : 02 Nov 2022
Unique Number : 10195796 **Diagnosed** : 02 Nov 2022 - Doug Bogart
Test Package : MOB 2 (Additional Tests: PrtCount)

CONOR
 JUAREZ 348
 HERMOSILLO,
 MX 83140
 Contact: EDUARDO GARCIA
 egarcia.comsa@gmail.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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