



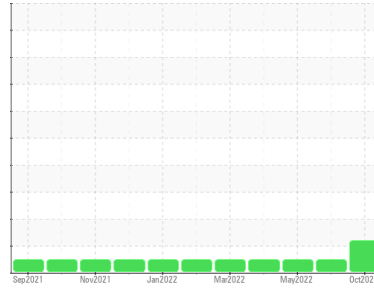
OIL ANALYSIS REPORT

Sample Rating Trend

ISO



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



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		KL0011180	KL0010181	KL0009240
Sample Date	Client Info		16 Oct 2022	13 Jun 2022	01 May 2022
Machine Age	hrs	Client Info	3891	3641	3269
Oil Age	hrs	Client Info	250	722	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	13	24	8
Chromium	ppm	ASTM D5185m >20	1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	<1
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	1	<1	<1
Aluminum	ppm	ASTM D5185m >25	3	4	4
Lead	ppm	ASTM D5185m >40	1	3	2
Copper	ppm	ASTM D5185m >330	30	11	3
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	393	173	320
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	108	87	115
Manganese	ppm	ASTM D5185m	2	<1	<1
Magnesium	ppm	ASTM D5185m	545	469	727
Calcium	ppm	ASTM D5185m	1452	1461	1575
Phosphorus	ppm	ASTM D5185m 1360	623	607	746
Zinc	ppm	ASTM D5185m 1480	776	758	849
Sulfur	ppm	ASTM D5185m	2664	2311	2331

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	15	8	4
Sodium	ppm	ASTM D5185m	9	6	5
Potassium	ppm	ASTM D5185m >20	3	2	<1

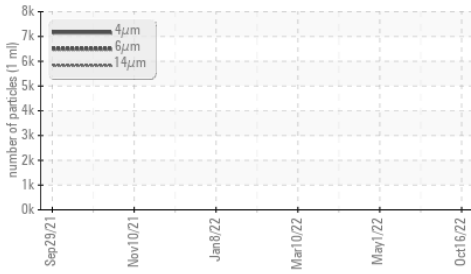
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.2	0.4	0.2
Nitration	Abs/cm	*ASTM D7624 >20	8.5	10.0	6.9
Sulfation	Abs/1mm	*ASTM D7415 >30	26.1	24.3	23.5

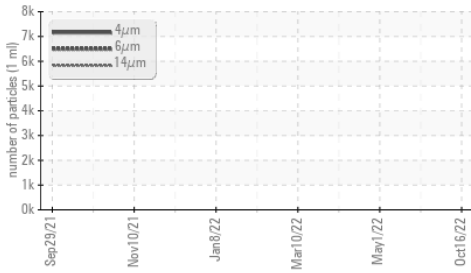


OIL ANALYSIS REPORT

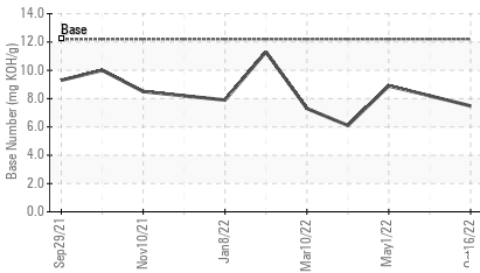
▲ Particle Trend



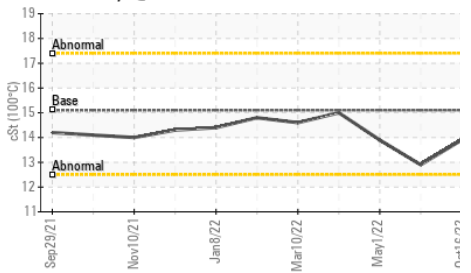
▲ Particle Trend



Base Number



Viscosity @ 100°C



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		7851	---	---
Particles >6µm	ASTM D7647	>5000	4277	---	---
Particles >14µm	ASTM D7647	>640	▲ 728	---	---
Particles >21µm	ASTM D7647	>160	▲ 245	---	---
Particles >38µm	ASTM D7647	>40	38	---	---
Particles >71µm	ASTM D7647	>10	4	---	---
Oil Cleanliness	ISO 4406 (c)	>19/16	▲ 19/17	---	---

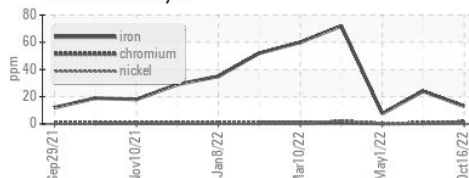
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm *ASTM D7414	>25	19.3	18.9	17.0
Base Number (BN)	mg KOH/g ASTM D2896	12.2	7.48	8.2	8.9

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

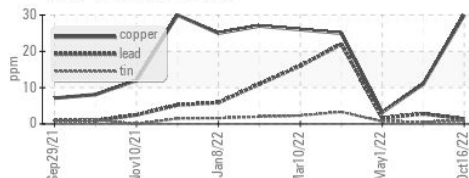
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445	15.1	13.9	12.9	13.9

GRAPHS

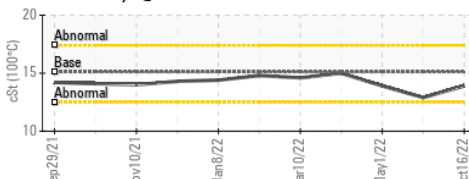
Ferrous Alloys



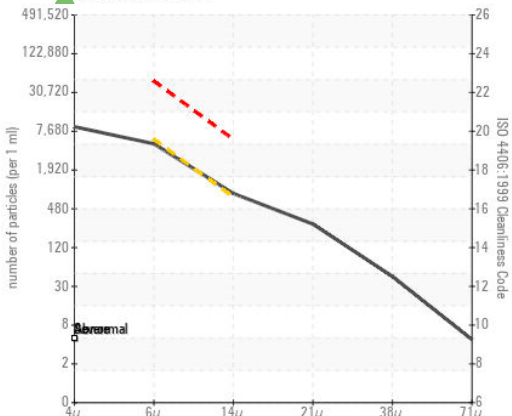
Non-ferrous Metals



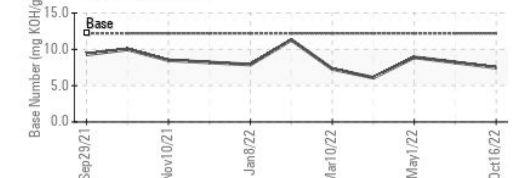
Viscosity @ 100°C



▲ Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011180 **Received** : 31 Oct 2022
Lab Number : **05681222** **Tested** : 02 Nov 2022
Unique Number : 10195793 **Diagnosed** : 02 Nov 2022 - Doug Bogart
Test Package : MOB 2 (Additional Tests: PrtCount)

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)

CONOR
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 MX 83140

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