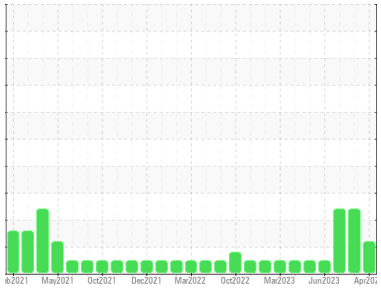
OIL ANALYSIS REPORT

Area
GUAY SON/Yavaros [CONHER]
Machine Id
CATERPILLAR Flota Barda - Barda1 Aux
Component
Diesel Engine
Fluid
TOTAL FINA RUBIA TIR 7900 15W40 (30 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		**KL0014575**	KL0014118	KL0013394
Sample Date		Client Info		**19 Apr 2024**	02 Feb 2024	17 Nov 2023
Machine Age	hrs	Client Info		**5552**	0	3274
Oil Age	hrs	Client Info		**0**	1	0
Oil Changed		Client Info		**N/A**	Not Changd	N/A
Sample Status				**ATTENTION**	ABNORMAL	ABNORMAL

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

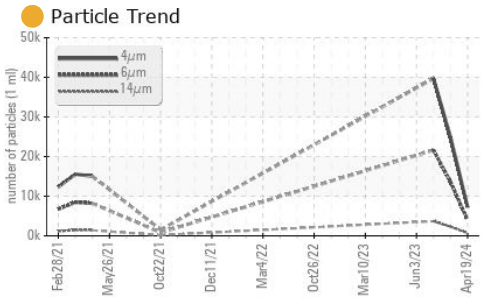
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>105	**6**	7	20
Chromium	ppm	ASTM D5185m	>5	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**3**	3	3
Lead	ppm	ASTM D5185m	>15	**1**	1	1
Copper	ppm	ASTM D5185m	>140	**2**	2	11
Tin	ppm	ASTM D5185m	>4	**1**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	<1

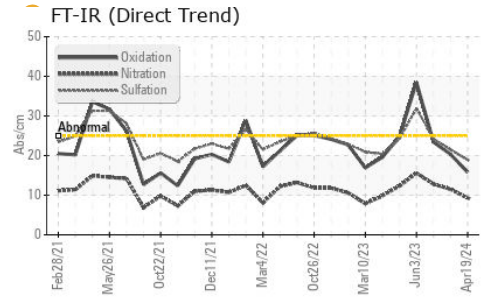
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**101**	43	50
Barium	ppm	ASTM D5185m		**0**	0	1
Molybdenum	ppm	ASTM D5185m		**150**	95	116
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**47**	42	36
Calcium	ppm	ASTM D5185m	3290	**3435**	2196	2504
Phosphorus	ppm	ASTM D5185m	1200	**1684**	984	1115
Zinc	ppm	ASTM D5185m	1400	**1854**	1204	1357
Sulfur	ppm	ASTM D5185m	4000	**6506**	3270	4167

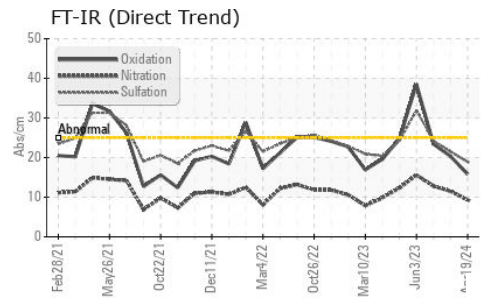
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**7**	5	8
Sodium	ppm	ASTM D5185m		**2**	2	5
Potassium	ppm	ASTM D5185m	>20	**3**	<1	3

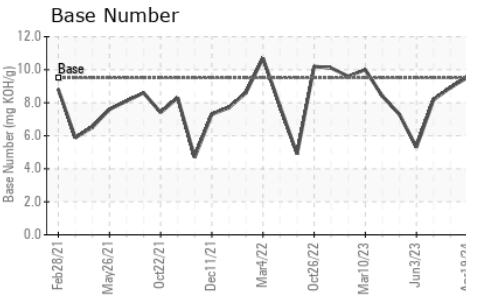
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**9.3**	11.5	12.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.9**	21.5	24.2

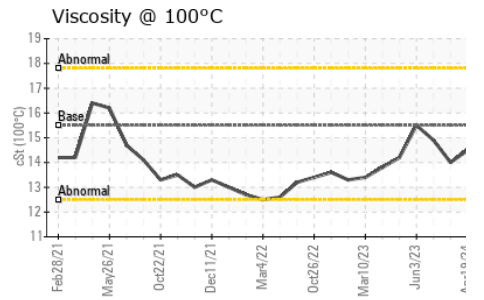
OIL ANALYSIS REPORT











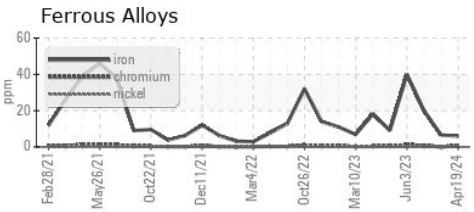
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**7229**	24907	39688
Particles >6µm		ASTM D7647	>5000	**3938**	▲ 13568	▲ 21620
Particles >14µm		ASTM D7647	>640	● **670**	▲ 2309	▲ 3680
Particles >21µm		ASTM D7647	>160	● **226**	▲ 778	▲ 1239
Particles >38µm		ASTM D7647	>40	**35**	▲ 120	▲ 191
Particles >71µm		ASTM D7647	>10	**4**	▲ 12	▲ 20
Oil Cleanliness		ISO 4406 (c)	>19/16	● **19/17**	▲ 21/18	▲ 22/19

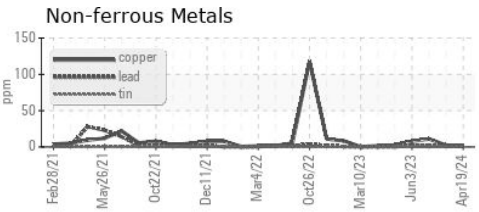
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.8**	20.3	23.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	**9.54**	8.92	8.18

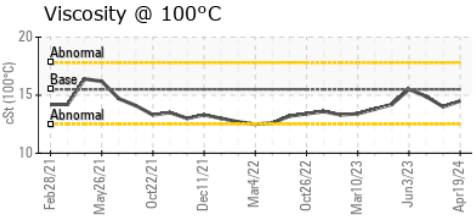
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

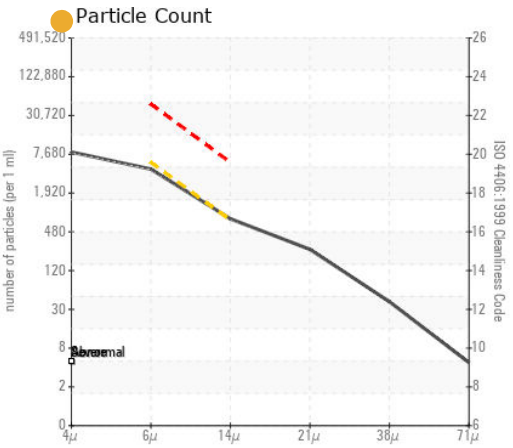
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	**14.5**	14.0	14.9

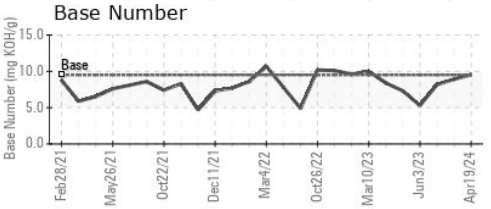
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014575
Lab Number : 06174061
Unique Number : 11020114
Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 09 May 2024
Tested : 10 May 2024
Diagnosed : 12 May 2024 - Don Baldridge

Certificate L2367

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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Report Id: CONHERKL [WUSCAR] 06174061 (Generated: 05/12/2024 10:18:44) Rev: 1

Submitted By: EDUARDO GARCIA