WEAR CONTAMINATION FLUID CONDITION

NORMAL ATTENTION NORMAL



[CONHER]

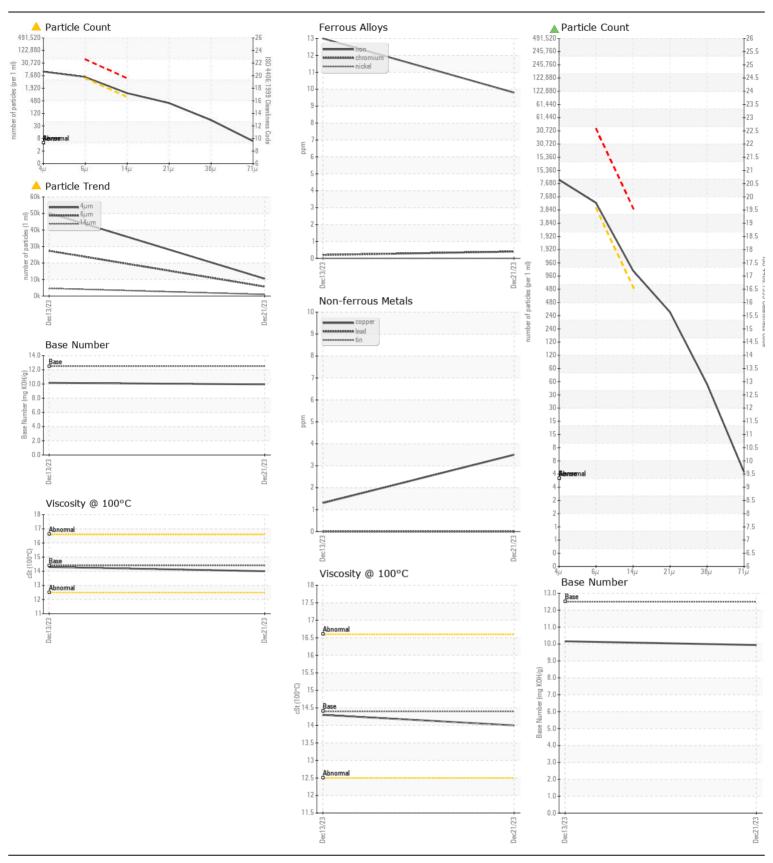
CATERPILLAR Pisa 4 Aux-1 - Pacifico Industrial

Component Diesel Engine

CHEVRON DELO 400 MULTIGRADE 15W40 (30 LTR)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
TIEGOWIWENDATION	Sample Number		Client Info		KL0013448	KL0013447	
No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Date		Client Info		21 Dec 2023	13 Dec 2023	
	Machine Age	hrs	Client Info		0	0	
	Oil Age	hrs	Client Info		3	0	
	Filter Age	hrs	Client Info		3	0	
	Oil Changed		Client Info		Not Changd	Changed	
	Filter Changed		Client Info		Not Changd	Changed	
	Sample Status				ATTENTION	ABNORMAL	
WEAR	Iron	ppm	ASTM D5185m	<105	10	13	
WEAR	Chromium	ppm	ASTM D5185m		<1	<1	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	
	Titanium	ppm	ASTM D5185m		0	0	
	Silver	ppm	ASTM D5185m		Ö	0	
	Aluminum	ppm	ASTM D5185m		1	1	
	Lead	ppm	ASTM D5185m	>15	0	0	
	Copper	ppm	ASTM D5185m	>140	4	1	
	Tin	ppm	ASTM D5185m	>4	0	0	
	Vanadium	ppm	ASTM D5185m		0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	\25	7	14	
	Potassium	ppm	ASTM D5185m		1	2	
There is a moderate amount of particulates present in the oil.	Fuel	ррпп		>5	<1.0	<1.0	
	Water		WC Method		NEG	NEG	
	Glycol		WC Method	7 0.2	NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.1	0.1	
	Nitration	Abs/cm	*ASTM D7624		4.1	3.9	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	14.7	13.6	
	Particles >4µm		ASTM D7647		10475	50241	
	Particles >6µm		ASTM D7647	>5000	5706	<u>^</u> 27369	
	Particles >14µm		ASTM D7647		971	<u>4658</u>	
	Particles >21µm		ASTM D7647		▲ 327	1569	
	Particles >38µm		ASTM D7647		<u>▲</u> 50	<u>4</u> 242	
	Particles >71µm Oil Cleanliness		ASTM D7647 ISO 4406 (c)		5 2 0/17	△ 25 △ 22/19	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
ELLUD COMPITION			AOTA DESO				
FLUID CONDITION	Sodium	ppm	ASTM D5185m	1 - 1	3	5	
The BN result indicates that there is suitable alkalinity remaining in the	Boron	ppm	ASTM D5185m		41	3	
oil. The condition of the oil is suitable for further service.	Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m		0 32	0 19	
	Manganese	ppm	ASTM D5165III	200	0	0	
	Magnesium	ppm	ASTM D5185m	0	916	930	
	Calcium	ppm	ASTM D5185m	2046	1608	1602	
	Phosphorus	ppm	ASTM D5185m		938	952	
	Zinc	ppm	ASTM D5185m	943	1100	1121	
	Sulfur	ppm	ASTM D5185m	5012	3390	3477	
	Oxidation	Abs/.1mm	*ASTM D7414		8.4	7.2	
	Base Number (BN)	mg KOH/g	ASTM D2896	12.5	9.94	10.16	
	Viaa (a) 10000	~ £ 34	ACTE DATE	1/1/	440	1/1/	

Visc @ 100°C cSt ASTM D445 14.4

14.3





Certificate L2367

Laboratory Sample No. Lab Number

: KL0013448 : 06055992 : 10821941 **Unique Number**

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 09 Jan 2024 Diagnosed : 11 Jan 2024 Diagnostician : Don Baldridge

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)

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