



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**CATERPILLAR 324E EC-882 (S/N PNW00822)**  
Component  
**Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 46 (45 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment: Customer requests id change to EC 822 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0857790</b>	WC0779701	WC0393248
Sample Date		Client Info		<b>08 Feb 2024</b>	10 Feb 2023	09 Oct 2019
Machine Age	hrs	Client Info		<b>4024</b>	3407	3132
Oil Age	hrs	Client Info		<b>617</b>	3107	262
Filter Age	hrs	Client Info		<b>617</b>	275	262
Oil Changed		Client Info		<b>Not Changed</b>	Filtered	Not Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Not Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>1</b>	4	5
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>1</b>	1	<1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>75	<b>2</b>	4	4
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

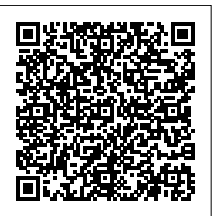
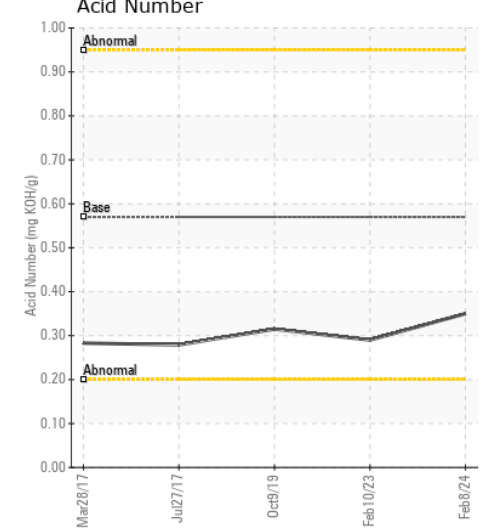
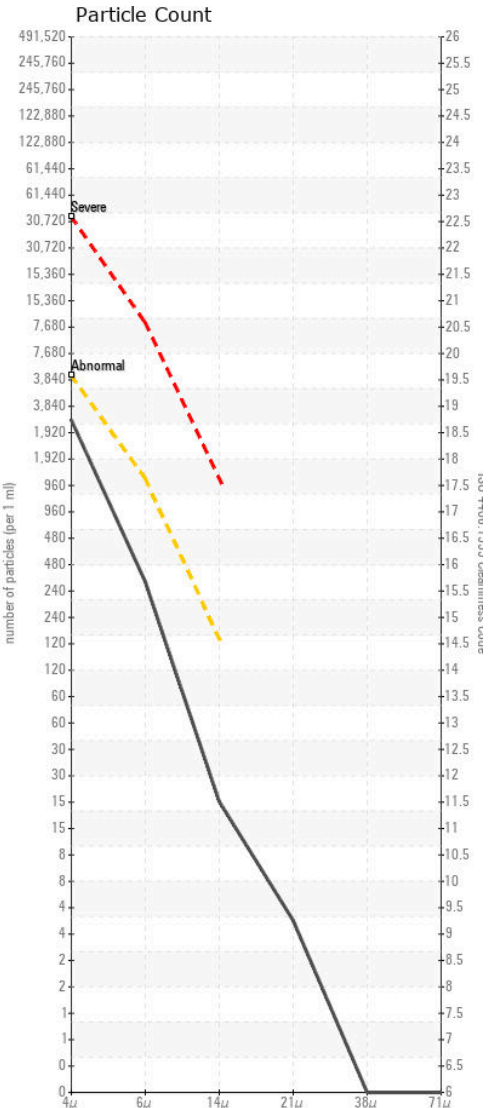
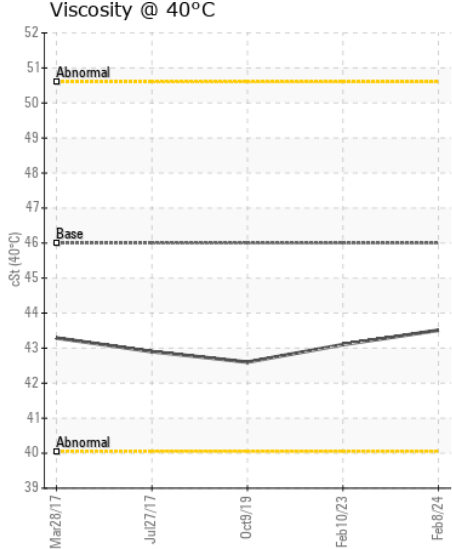
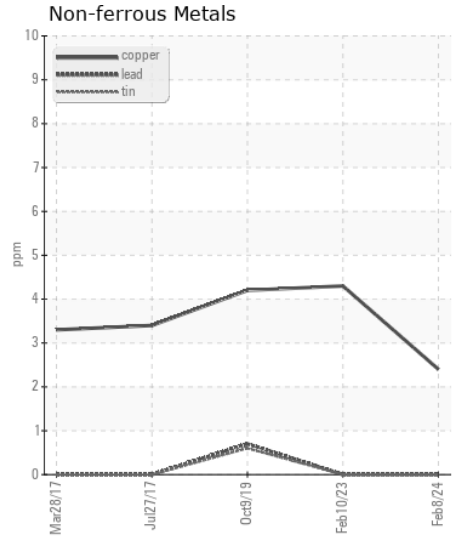
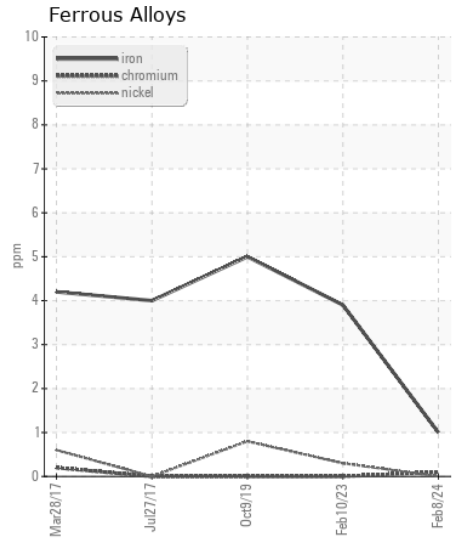
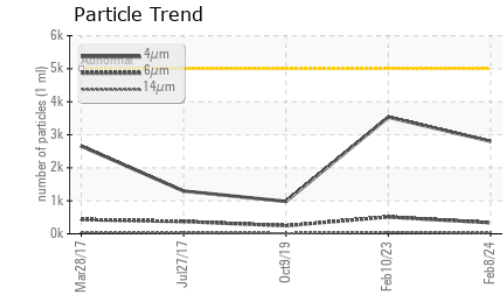
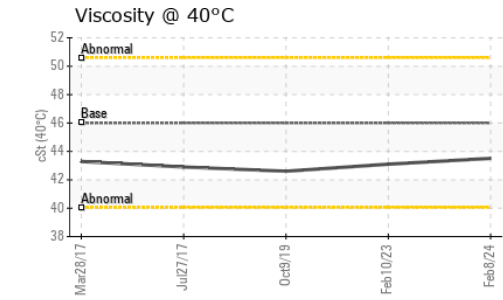
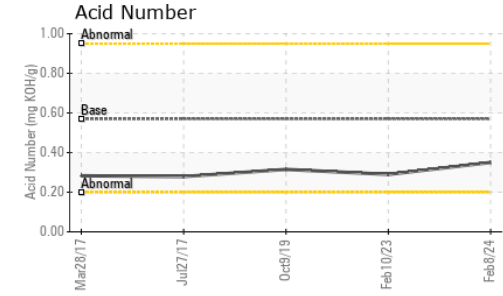
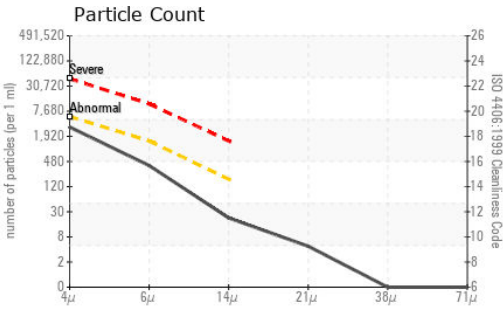
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>2802</b>	3534	982
Particles >6µm		ASTM D7647	>1300	<b>337</b>	510	245
Particles >14µm		ASTM D7647	>160	<b>19</b>	40	16
Particles >21µm		ASTM D7647	>40	<b>4</b>	13	5
Particles >38µm		ASTM D7647	>10	<b>0</b>	1	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/16/11</b>	19/16/12	17/15/11
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	0	<1
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	<1
Barium	ppm	ASTM D5185m	5	<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	25	<b>1</b>	<1	2
Calcium	ppm	ASTM D5185m	200	<b>21</b>	38	70
Phosphorus	ppm	ASTM D5185m	300	<b>314</b>	412	427
Zinc	ppm	ASTM D5185m	370	<b>261</b>	221	227
Sulfur	ppm	ASTM D5185m	2500	<b>870</b>	1242	918
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.35</b>	0.29	0.315
Visc @ 40°C	cSt	ASTM D445	46	<b>43.51</b>	43.1	42.6



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0857790 **Received** : 14 Feb 2024  
**Lab Number** : 06089534 **Tested** : 19 Feb 2024  
**Unique Number** : 10876979 **Diagnosed** : 19 Feb 2024 - Jonathan Hester  
**Test Package** : MOB 2

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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)