



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 420E 4006 (S/N DAN00263)
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- QTS)

RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		CL0005557	CL0004439	CL0003372
Sample Date		Client Info		11 Jun 2024	29 Jun 2023	09 Jul 2022
Machine Age	hrs	Client Info		6225	5810	5325
Oil Age	hrs	Client Info		6225	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	8	9	7
Chromium	ppm	ASTM D5185m	>10	<1	1	1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>10	6	5	4
Lead	ppm	ASTM D5185m	>10	2	3	2
Copper	ppm	ASTM D5185m	>75	4	4	4
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

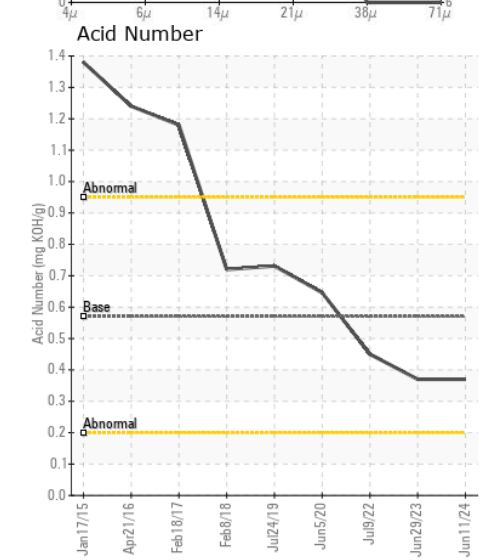
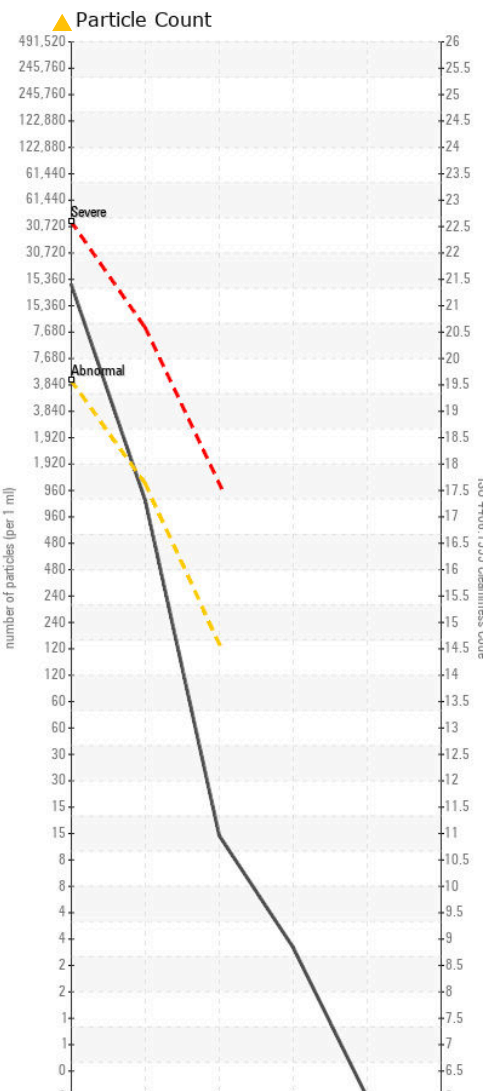
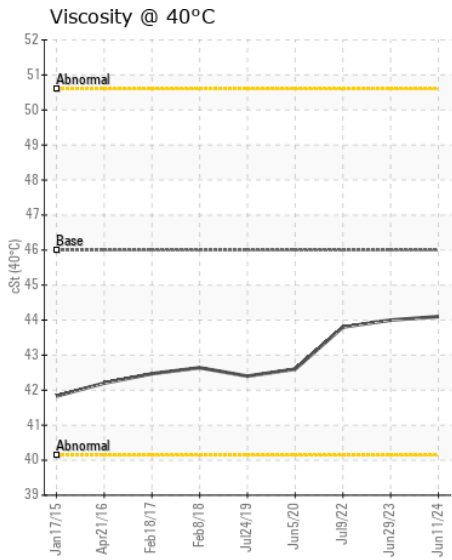
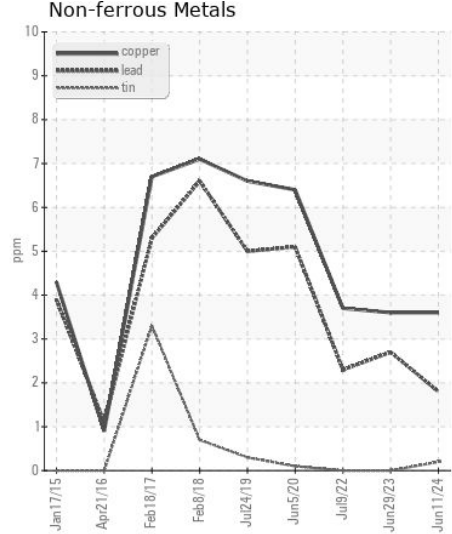
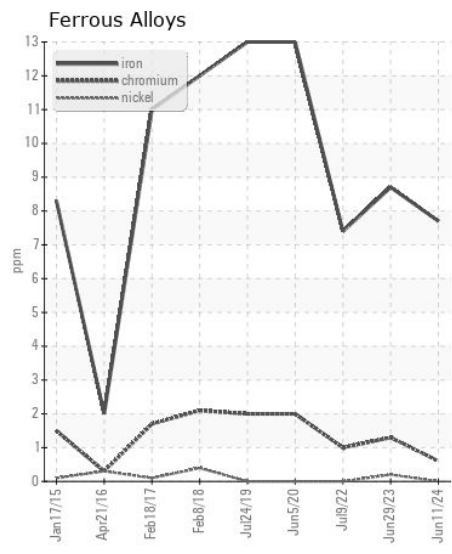
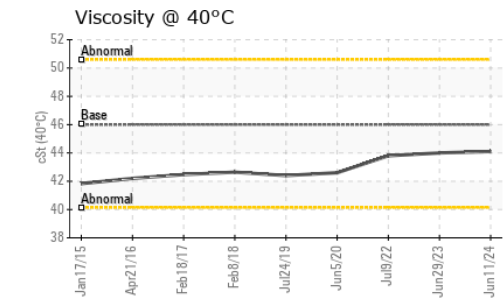
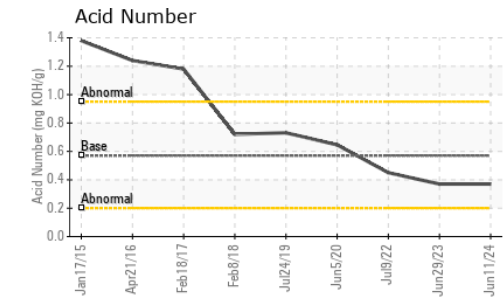
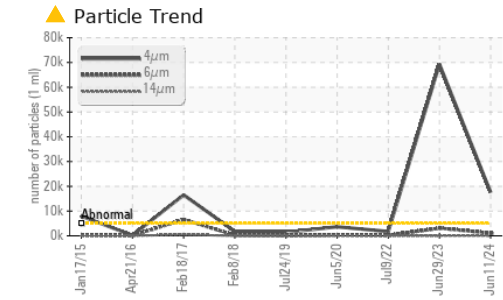
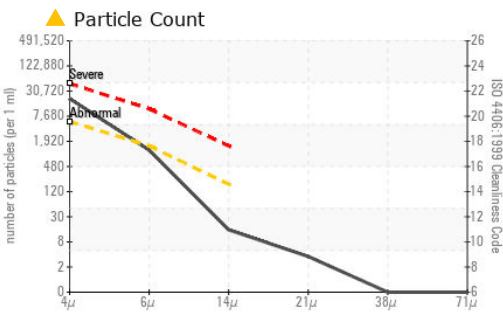
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	9	8	6
Potassium	ppm	ASTM D5185m	>20	2	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 17568	▲ 69312	1734
Particles >6µm		ASTM D7647	>1300	1043	▲ 3107	173
Particles >14µm		ASTM D7647	>160	13	8	18
Particles >21µm		ASTM D7647	>40	3	1	3
Particles >38µm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/17/11	▲ 23/19/10	18/15/11
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		2	1	<1
Boron	ppm	ASTM D5185m	5	1	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	<1	<1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	25	5	5	7
Calcium	ppm	ASTM D5185m	200	212	218	278
Phosphorus	ppm	ASTM D5185m	300	406	372	429
Zinc	ppm	ASTM D5185m	370	496	483	518
Sulfur	ppm	ASTM D5185m	2500	1647	1444	1521
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.37	0.37	0.45
Visc @ 40°C	cSt	ASTM D445	46	44.1	44.0	43.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : CL0005557
Lab Number : 06218116
Unique Number : 11096313
Test Package : CONST
Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

PURCELL CONSTRUCTION
 3100 HIGH RIDGE RD
 CHARLOTTE, NC
 US 28270
 Contact: BEN MILKE
 ben@purcellconst.com
 T:
 F:

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)