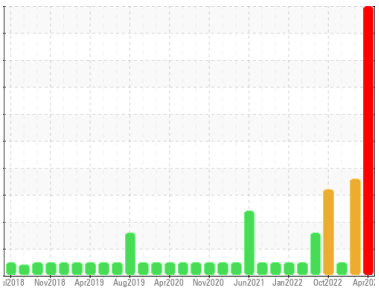
PROBLEM SUMMARY

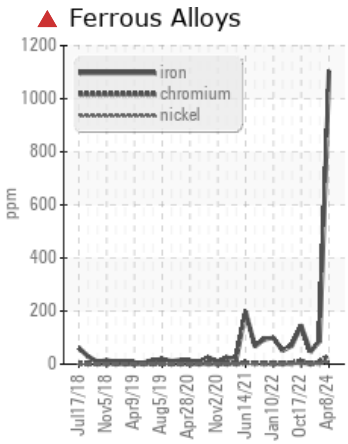
Sample Rating Trend

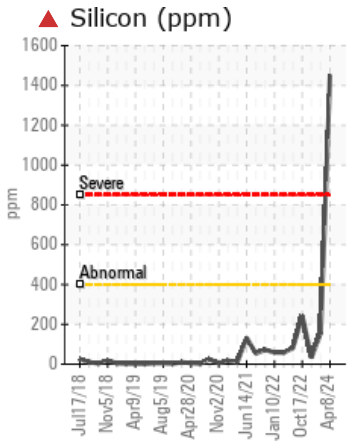


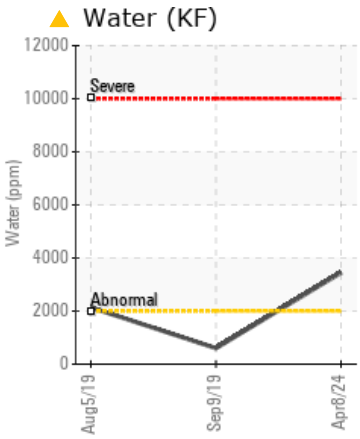
WEAR

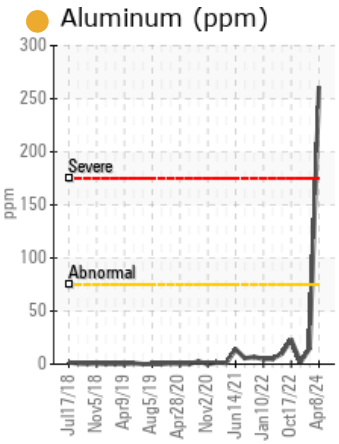
Machine Id
CATERPILLAR D6T 8170 (S/N JML00456)
Component
Left Final Drive
Fluid
TDTO FLUID SAE 30 (--- GAL)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>800	▲ **1104**	87	47
Chromium	ppm	ASTM D5185m	>10	▲ **34**	8	1
Silicon	ppm	ASTM D5185m	>400	▲ **1451**	▲ 158	33
Water	%	ASTM D6304	>0.2	▲ **0.345**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **3450**	---	---

Customer Id: TRANEW
Sample No.: WC0913177
Lab Number: 06147680
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

DIRT

15 May 2023 Diag: Don Baldridge
We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

view report

NORMAL

12 Dec 2022 Diag: Don Baldridge
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report

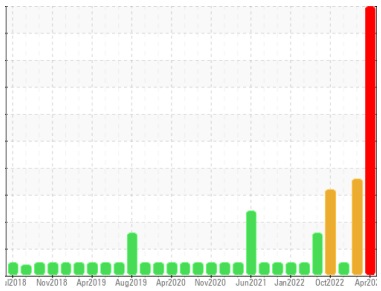
DIRT

17 Oct 2022 Diag: Don Baldridge
We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.The chromium level is abnormal. All other component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
CATERPILLAR D6T 8170 (S/N JML00456)
Component
Left Final Drive
Fluid
TDTO FLUID SAE 30 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear
Gear wear is indicated.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a moderate concentration of water present in the oil.

Fluid Condition
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0913177**	WC0790961	WC0755130
Sample Date		Client Info		**08 Apr 2024**	15 May 2023	12 Dec 2022
Machine Age	hrs	Client Info		**15227**	14605	14138
Oil Age	hrs	Client Info		**622**	467	480
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>800	▲ **1104**	87	47
Chromium	ppm	ASTM D5185m	>10	▲ **34**	8	1
Nickel	ppm	ASTM D5185m	>5	**8**	1	<1
Titanium	ppm	ASTM D5185m	>15	**28**	2	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>75	● **261**	● 15	2
Lead	ppm	ASTM D5185m	>10	**0**	0	0
Copper	ppm	ASTM D5185m	>75	**<1**	0	0
Tin	ppm	ASTM D5185m	>8	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

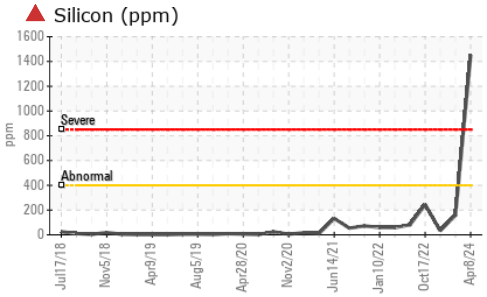
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	37	**150**	150	94
Barium	ppm	ASTM D5185m	7	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	5	**7**	2	<1
Manganese	ppm	ASTM D5185m		**12**	1	0
Magnesium	ppm	ASTM D5185m	40	**18**	2	6
Calcium	ppm	ASTM D5185m	2650	**150**	● 232	1553
Phosphorus	ppm	ASTM D5185m	1050	**354**	● 375	563
Zinc	ppm	ASTM D5185m	1075	**31**	● 50	440
Sulfur	ppm	ASTM D5185m	5750	**1814**	2328	2317

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>400	▲ **1451**	▲ 158	33
Sodium	ppm	ASTM D5185m		**13**	2	<1
Potassium	ppm	ASTM D5185m	>20	**37**	5	1
Water	%	ASTM D6304	>0.2	▲ **0.345**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **3450**	---	---

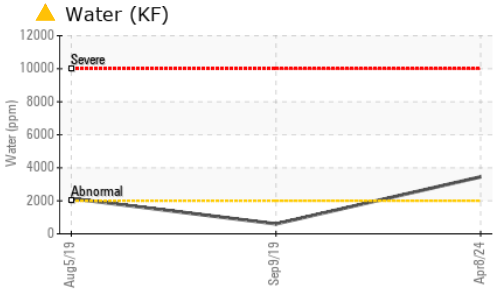
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**MODER**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	**0.2%**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

OIL ANALYSIS REPORT

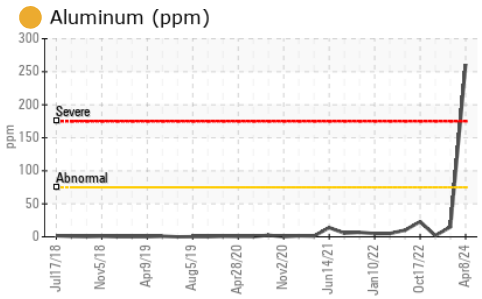
Silicon (ppm)



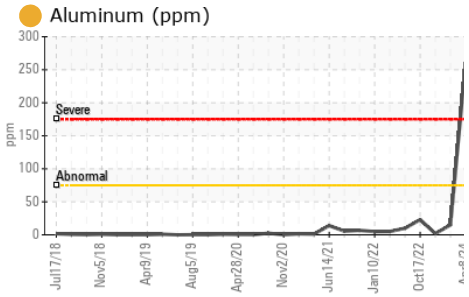
Water (KF)



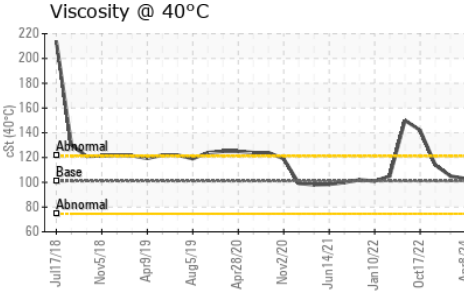
Aluminum (ppm)



Aluminum (ppm)



Viscosity @ 40°C

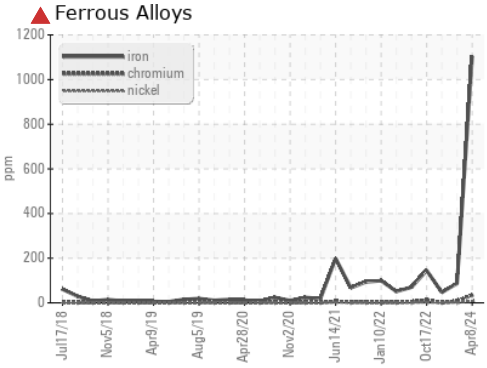


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	101	**103**	105	114

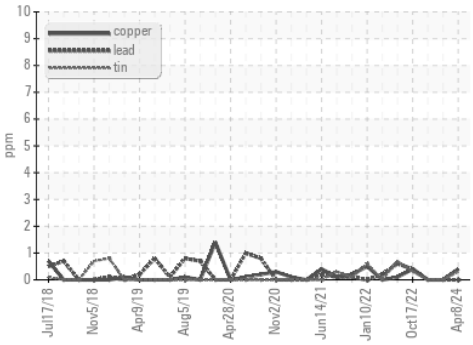
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

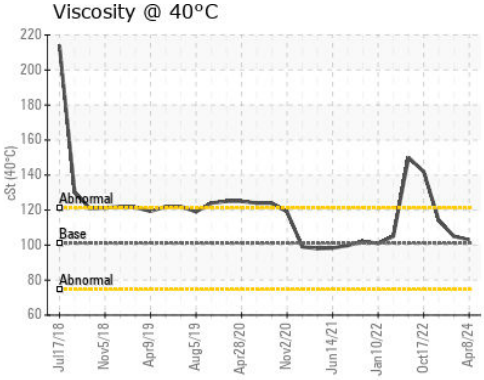
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0913177
Lab Number : 06147680
Unique Number : 10977758
Test Package : CONST (Additional Tests: KF)

Received : 12 Apr 2024
Tested : 16 Apr 2024
Diagnosed : 16 Apr 2024 - Jonathan Hester

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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