

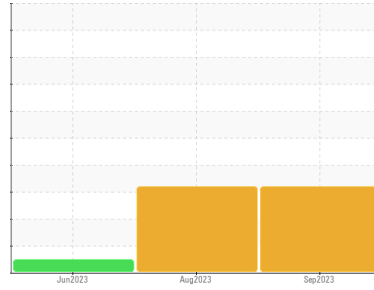


PROBLEM SUMMARY



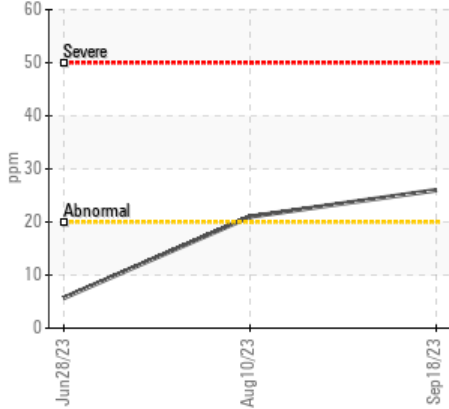
Machine Id
CATERPILLAR D6 LGP 10039 (S/N KEW01125)
 Component
Hydraulic System
 Fluid
NOT GIVEN (--- GAL)

Sample Rating Trend

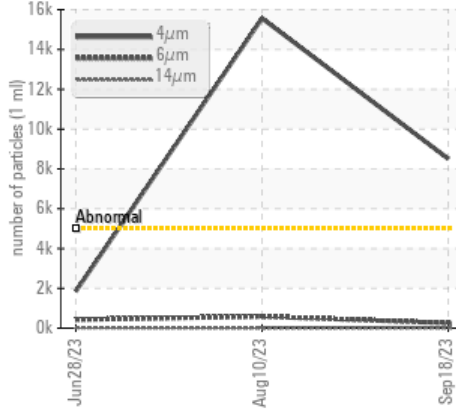


COMPONENT CONDITION SUMMARY

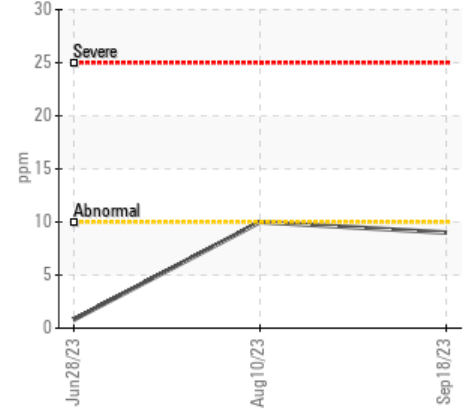
▲ Silicon (ppm)



▲ Particle Trend



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	NORMAL
Aluminum	ppm	ASTM D5185m	>10	▲ 9	▲ 10	<1
Silicon	ppm	ASTM D5185m	>20	▲ 26	▲ 21	6
Particles >4µm		ASTM D7647	>5000	▲ 8511	▲ 15568	1856
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/15/11	▲ 21/16/10	18/16/12

Customer Id: TRANEW
 Sample No.: WC0831341
 Lab Number: 05965317
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

10 Aug 2023 Diag: Jonathan Hester

DIRT



We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 6 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



28 Jun 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

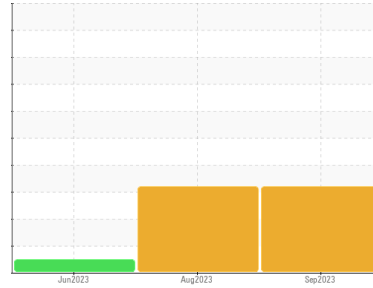
view report





OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
CATERPILLAR D6 LGP 10039 (S/N KEW01125)
 Component
Hydraulic System
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0831341	WC0837186	WC0816244
Sample Date	Client Info		18 Sep 2023	10 Aug 2023	28 Jun 2023
Machine Age	hrs	Client Info	1701	1207	558
Oil Age	hrs	Client Info	1701	1207	558
Oil Changed	Client Info		Not Chngd	Changed	Not Chngd
Sample Status			ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	21	16	8
Chromium	ppm	ASTM D5185m >10	2	2	1
Nickel	ppm	ASTM D5185m >10	0	0	<1
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >10	▲ 9	▲ 10	<1
Lead	ppm	ASTM D5185m >10	2	2	2
Copper	ppm	ASTM D5185m >75	16	15	10
Tin	ppm	ASTM D5185m >10	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	0
Barium	ppm	ASTM D5185m	0	1	0
Molybdenum	ppm	ASTM D5185m	0	0	<1
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	6	4	1
Calcium	ppm	ASTM D5185m	173	177	169
Phosphorus	ppm	ASTM D5185m	673	712	711
Zinc	ppm	ASTM D5185m	904	932	935
Sulfur	ppm	ASTM D5185m	1739	1956	1838

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	▲ 26	▲ 21	6
Sodium	ppm	ASTM D5185m	1	0	0
Potassium	ppm	ASTM D5185m >20	<1	2	<1

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 8511	▲ 15568	1856
Particles >6µm	ASTM D7647	>1300	254	586	430
Particles >14µm	ASTM D7647	>160	14	7	23
Particles >21µm	ASTM D7647	>40	4	2	6
Particles >38µm	ASTM D7647	>10	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 20/15/11	▲ 21/16/10	18/16/12

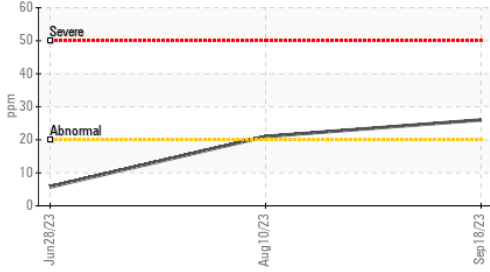
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.09	1.028	1.13

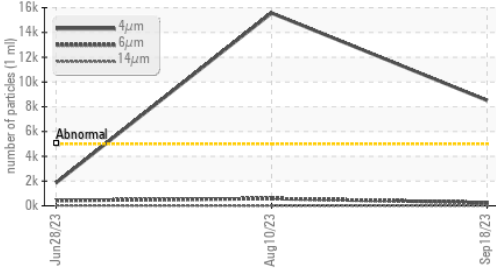


OIL ANALYSIS REPORT

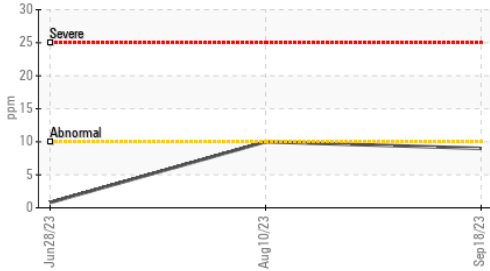
▲ Silicon (ppm)



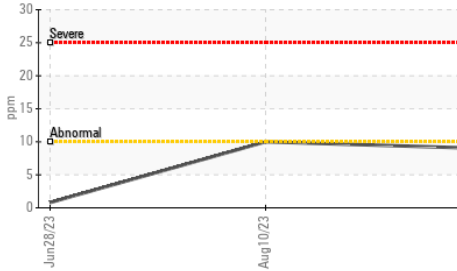
▲ Particle Trend



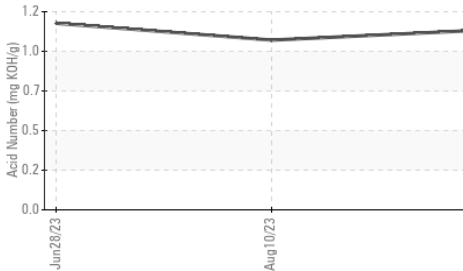
▲ Aluminum (ppm)



▲ Aluminum (ppm)



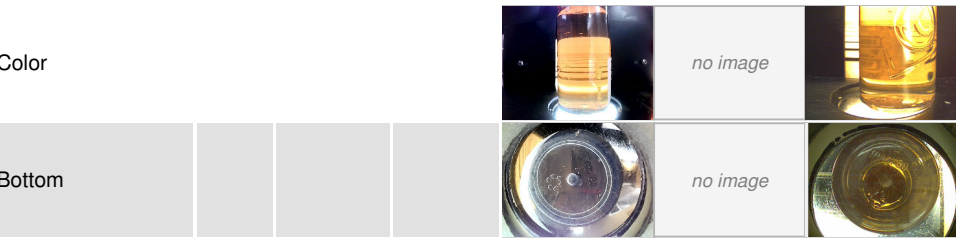
Acid Number



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

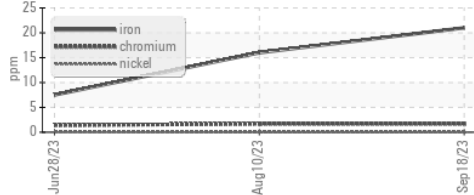
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	40.3	40.4	40.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
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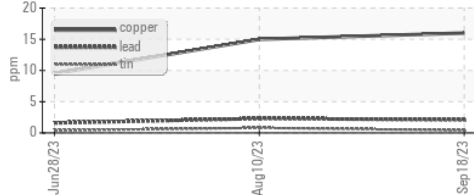


GRAPHS

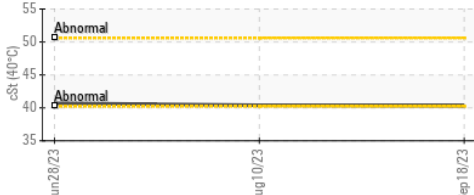
Ferrous Alloys



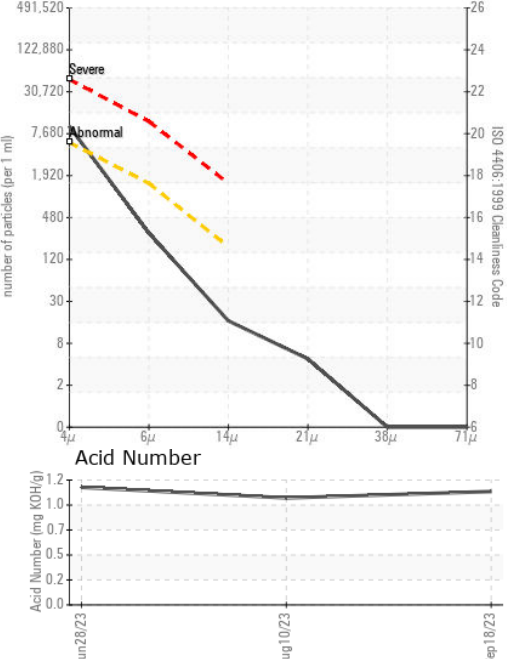
Non-ferrous Metals



Viscosity @ 40°C



▲ Particle Count



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0831341 Received : 29 Sep 2023
 Lab Number : 05965317 Diagnosed : 02 Oct 2023
 Unique Number : 10671868 Diagnostician : Don Baldrige
 Test Package : CONST

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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)